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THE ROY G. NEVILLE HISTORICAL CHEMICAL LIBRARY

An Annotated Catalogue
of Printed Books on
Alchemy, Chemistry, Chemical Technology,
and Related Subjects

by Roy G. Neville

In Two Volumes

VOLUME II

L-Z, APPENDIX

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Major References Cited

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A catalogue of printed books in the Wellcome Historical Library. London, 1962.

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Catalogue of the Wheeler Gift of books pamphlets and periodicals in the Library of the American Institute of Electrical Engineers. New York, 1909.

WING

Short-title catalogue of books printed in England, Scotland, Ireland, Wales, and British America and of English books printed in other countries, 1641–1700. New York, 1982.

LABORIE, Louis Guillaume, CADET DE VAUX, Antoine Alexis, and PARMENTIER, Antoine Augustin

Observations sur les Fosses d'Aisance, & moyens de prévenir les inconvénients de leur vuïdange. Par MM. Laborie, Cadet le jeune, & Parmentier, . . . Imprimé par ordre & aux frais du Gouvernement.

Paris: De l'Imprimerie de Ph.-D. Pierres, Imprimeur du Collège Royal de France, rue Saint-Jacques. 1778.

First edition. 8vo. 109, (3) pp. (last leaf blank). Fine copy, uncut with wide margins, in marbled boards antique, gilt-lettered brown morocco label.

TO STUDY the ill effects resulting from the emptying of the cesspits of Paris, the French government appointed Laborie (d. 1800), Cadet de Vaux (1743–1828), and Parmentier (1737–1813). Their findings (pp. 5–47), in which they recommended the use of quicklime, a ventilator, and furnaces, were presented by Cadet de Vaux in 1778 to the Royal Academy of Sciences and published in the present volume. The second part (pp. 48–108) contains the extensive and favorable report by Lavoisier, de Milly, and Fougereux de Bondaroy, who had been nominated by the academy to evaluate this memoir. The referees have added an account of their own experiments on the effectiveness of various chemical disinfectants. They conclude that Laborie, Cadet de Vaux, and Parmentier “have used the most efficient means . . . which chemistry and physics combined have to offer so far” (Duveen & Klickstein). They emphasize that cesspits should not be emptied into the Seine, as that water is used as drinking water in Paris. The copy of this classic book on eighteenth-century sanitation chemistry described by Duveen and Klickstein lacked signatures G7 and G8: i.e., the certificate signed by Condorcet (p. 109) and the final blank leaf. (Blake, 250; D.S.B., III, 7; Duveen & Klickstein, No. 323; Poggendorff, I, 358; Wellcome, III, 424)

LA CHASTRE, René de

Le Prototype ou Tres Parfait et Analogique Exemplaire de l'Art Chemicq; a la phisique ou philosophie de la science Naturelle. Contenant les causes principes & demonstrations scientifiq; de la certitude dudit Art. Par René de la Chastre Gentil homme Berroyen. . . .

Paris: Pour Jean Anthoine Joallin dans la court du Palais, pres la barriere du Thresor. 1620.

First edition. 8vo. 4 leaves, 136 pp., 8 leaves (last blank). Ornamental woodcut headpieces and historiated capitals. Fine copy, with wide fore- and lower margins, in nineteenth-century boards, gilt-lettered blue morocco label. From the library of Louis Cardinal Dubois of Rouen, with armorial bookplate.

ONE OF the rarest alchemical treatises, according to Dorbon. It is dedicated to the queen mother (Marie de Médicis). “Contient les principes fondamentaux du Grand Oeuvre” (Caillet). “A rare book” (Duveen). Hoefer (II, 323) mentions it, and Ferchl states that another edition appeared in 1635. Nothing appears to have been recorded of the life of La Chastre (or La Châtre). Unknown to Bolton, Ferguson, Guaita, Mellon, Partington, Thorndike, etc. (Caillet, 5899; Dorbon, *Bibliotheca Esoterica*, 6082; Duveen, 331; Edelstein, 1337; Ferchl, 92; Ferguson Coll., 382; Goldsmith, L128; Neu, 2196; Smith, 276; Wellcome, I, 3606)

LACINIO, Giano

Pretiosa Margarita Novella de Thesauro, ac Pretiosissimo Philosophorum Lapide. Artis huius divinae typus, & methodus: collectanea ex Arnaldo, Rhaymundo, Rbasi, Alberto, & Michaele Scoto; per Janum Lacinium Calabrum nunc primum, cum lucupletissimo indice, in lucem edita. . . . (Colophon:) Venice: Apud Aldi Filios. 1546.

First edition. 8vo. 20 leaves (unpaginated), “202,” (1) (recte, 201; pp. 70–201 misnumbered “71–202”), 16 leaves (unpaginated). Italic letter. Woodcut Aldine anchor device on title and verso of final leaf; 22 allegorical text woodcuts. Top margin of title and following leaf repaired (not affecting text), few slight stains, and occasional neat sixteenth-century annotations; otherwise fine, crisp copy in contemporary vellum.

ONE OF the earliest collections of alchemical writings, a beautiful specimen of typography by the Aldus press edited by Lacinio (Lacinius, fl. 1546). The *Pretiosa margarita novella* (“New pearl of great price”) is a version of an introduction to alchemy supposedly written by Petrus Bonus, 1330–1339. “The oldest source to treat specifically of the [alchemical] stone’s connection with Christ [is] the *Margarita pretiosa*” (Jung, *Psychology and Alchemy*, p. 358). Renouard, the bibliographer of Aldus, states that this book is rare and is almost always found in dilapidated condition. The present copy is in excellent condition and is thus very rare. A milestone of early chemical literature, which is discussed extensively by Read and Thorndike. Not in Cole, D.S.B., Guaita, Partington, Waller, etc. (Bolton, 1024; Brunet, III, 728; Caillet, 5910; Durling, 2697; Duveen, 332; Edelstein, 1339; Ferchl, 290; Ferguson, I, 115, II, 2; Ferguson Coll., 383; Heym, *Ambix*, I [1937], 56; Hoover, 498; Mellon, no. 17; Neu, 2197; Osler, 3142 [imperf.]; Read, *Prelude to Chemistry*, pp. 55–58; Renouard, 135; Rosenthal, 502; Smith, 276 [imperf.]; Thorndike, III, 151; Waite, 290; Watt, II, 580t; Wellcome, I, 3607)

HAE C est arbor tertia, cuius cortex est corvosa & ma
gnum quid deligno & extremitas frondis basis arboris intra
bat per medium eius, & paruum quid eminebat ad altam
partem.

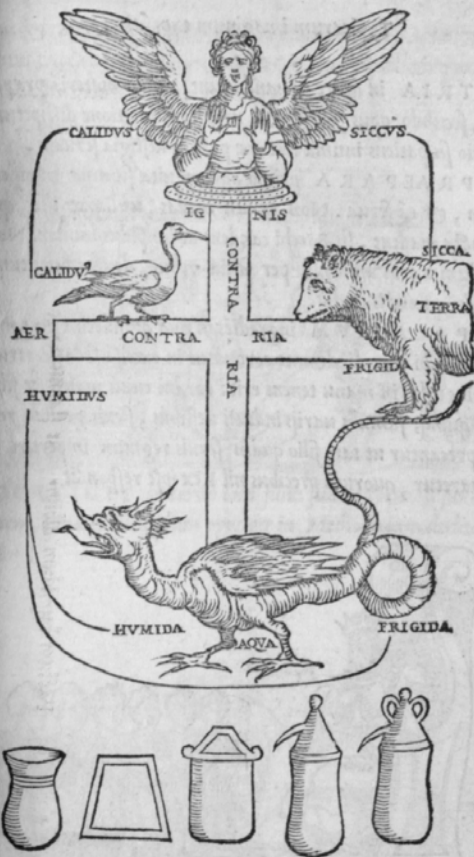
Calidum humidum croceum sanguineum.

Calidum siccum rubrum sicut as igneam.



Factum humidum album sicut flammum.

Factum siccum nigrum sicut plumbum.



Lacino. Pretiosa Margarita Novella. Venice, 1546.

LACQUIR-KUNST

Neu entdeckte Lacquir-Kunst, oder Gründliche Anweisung wie man nicht nur unterschiedliche bisher geheim gehaltene kostbare Lacquen, insonderheit den so genannten Eisen- und raren weissen Lacq ohne grosse Mühe und Unkosten verfertigen, sondern auch den biss jetzo unbekanntten Gummi Copal leichtlich und bald auflösen könne, nebst einen Anhang unterschiedlicher curieuser und nützlicher Kunst-Stücke, heraus gegeben von einem Curiosorum Experimentorum Amatore.

Dresden: Bey Joh. Christoph Zimmermanns seel. Erben, und Joh. Nicolaus Gerlachen. 1731.

Third edition. 8vo. 112 pp. Paper lightly embrowned; otherwise good copy, in gilt-ruled unlettered quarter calf antique, marbled boards. Bound with: Becher, Johann Joachim, *Chymischer Rosen-Garten* (Nuremberg, 1717), and 2 other works.

A VERY RARE book of secrets, of chemical interest, describing a collection of recipes for making various types and colors of lacquers, varnishes, and other protective coatings for wood, metals, glass, etc. The techniques needed to achieve different finishes and designs on a variety of materials are discussed. The first edition appeared in 1709 and the second in 1724. Nowhere in the book is there any indication of the identity of the author. Very rare. Not in the usual bibliographies.

LA FAYE, P. de

Recherches sur la Préparation que les Romains donnoient à la Chaux dont ils se servoient pour leurs constructions, & sur la composition & l'emploi de leurs Mortiers. Par M. De La Faye, Trésorier général des Gratifications des Troupes. Paris: De l'Imprimerie Royale. 1777.

First edition. 8vo. vi, 83, (1), xi, (1) pp. Fine crisp copy, in original marbled calf gilt, maroon label gilt. Bound with: D'Arcet, Jean, *Memoire sur l'action d'un feu egal* (Paris, 1766); and *ibid.*, *Second mémoire* (Paris, 1771).

AN IMPORTANT work on cement and mortars, their preparation from different types of limestone, their physical and chemical properties, etc. La Faye (or De La Faye), of whom nothing appears to be recorded, was paymaster general of the French Army. In the present work he gives an account of the use of lime in the preparation of Roman mortars for construction, based on the writings of Vitruvius and Pliny. For further information on Roman mortars, see M. E. Weeks (*Discovery of the Elements*, Easton, Pa., 1956, p. 506). The second edition appeared the same year. Not in Blake, or the usual early chemical bibliographies. (Sotheran, Cat. 734 [1913], 10393 ["Rare"]; Watt, I, 359a)

LA GARAYE, Claude Toussaint Marot

Chymie Hydraulique, pour extraire les Sels essentiels des Végétaux, Animaux & Minéraux, avec l'eau pure. Par M. L.D.C.D.L.G.

Paris: Chez Jean-Thomas Herissant. 1746.

First edition. 12mo. xi, (1) pp., 2 leaves, 390 pp. With 2 folding copperplates of apparatus. Page 149 wrongly numbered 14. Fine copy in original speckled calf, gilt, maroon morocco label. Bookplate: Paul Gavelle.

LA GARAYE (1675–1755), a Breton nobleman and philanthropist, was a diligent chemist who devised a novel method of preparing medicines from minerals by long maceration with neutral salt solutions. He also extracted a number of principles from plants, as from Peruvian bark, the extract of which became known as the "essential salt of Garaye." "He devised a rapid method for making black oxide of iron, and prepared an ammoniacal chloride of mercury called 'Tinctura mercurialis'" (Ferguson). This copy has a cancel title page, dated 1746, with the Herissant imprint. Some copies have the title page dated 1745, with a Jean-Baptiste Coignard imprint, but the two states have identical collation and pagination. The book was translated into German as *Chymia hydraulica* (Frankfort & Leipzig, 1749; 2nd ed., 1755). A posthumous second French edition, edited by Parmentier, also appeared (Paris, 1775). The copies described in Duveen and Neu are imperfect. (Bolton, 598; Caillet, 5975; Duveen, 391 [under "Marot"]; Ferchl, 171 [under "Garaye"], 291 [under "Lagaraye"]; Ferguson, II, 78 [not in Young Coll.]; Hoover, 500; Neu, 2204; Partington, III, 89; Poggendorff, I, 1342; Wellcome, III, 432)

LA GARAYE, Claude Toussaint Marot

Chymie Hydraulique, pour extraire les Sels essentiels des Végétaux, Animaux & Minéraux, par le moyen de l'eau pure. Par M. la Comte De La Garaye. Nouvelle Édition, revue, corrigée et augmentée de notes, par M. Parmentier, . . . Paris: Chez Didot le jeune. 1775.

Second edition. 12mo. xxi, (1) pp., 1 leaf, 512 pp., 4 leaves. Fine copy in original mottled calf, gilt, tan morocco label.

THE REVISED, updated, and greatly enlarged posthumous second edition of this interesting work, carefully edited by the celebrated pharmaceutical chemist Antoine Augustin Parmentier (1737–1813), who has supplied extensive footnotes throughout and has given scientific explanations of processes and products where necessary. Parmentier refers to numerous works by chemists who were not mentioned in the first edition or who wrote after its appearance. "Cette édition donnée par le grand Parmentier, ne comporte pas

de planches" (Caillet, with long notes on this edition). Not in Blake, Edelstein, Ferguson Coll., Hoover, Smith, Sondheimer, Waller, etc. (Bolton, 598; Caillet, 5976; Duveen, 391; Ferchl, 171 [under "Garaye"], 291 [under "Lagaraye"]; Ferguson, II, 78 [not in Young Coll.]; Neu, 2205; Partington, III, 89; Poggendorff, I, 1342; Wellcome, III, 432)

LAMARCK, Jean Baptiste Pierre Antoine de Monet de

Recherches sur les Causes des Principaux Faits Physiques, et particulièrement sur celles de la Combustion, de l'Élévation de l'eau dans l'état de vapeurs; de la Chaleur produite par le frottement des corps solides entre eux; de la Chaleur qui se rend sensible dans les décompositions subites, dans les effervescences et dans le corps de beaucoup d'animaux pendant la durée de leur vie; de la Causticité . . . de l'Origine des composés et de tous les minéraux; enfin de l'Entretien de la vie des têtes organiques . . .

Paris: Chez Maradan, Libraire, rue du Cimetière-André-des-Arts, no. 9. (1794).

First edition. 2 vols., 8vo., in 1. I: xvi, 375, (1) pp. Engraved plate of evaporating particles facing page 201. II: 2 leaves, 412 pp. Folding table (origins of minerals) facing page 366 and woodcut diagram on page 174. Fine copy in half calf antique, marbled boards, maroon morocco label, spine dated.

THE GREAT biologist Lamarck (1744–1829) opposed Lavoisier's antiphlogistic theory, and in this speculative work, his first on chemistry, he proposed a new "pyrotic theory" to counter the "pneumatic theory" of the modern chemists. He "assumed as elements a vitrifiable earth, water, fire and light" (Partington). Apart from expounding his bizarre chemical theories, the book is important for his later views on biology and geology. Of interest is the section "Recherches sur les têtes organiques," which sets out his ideas on the origin of life before he abandoned his belief in a fixed species and became an evolutionist. Begun in 1776 and completed in 1780, it was submitted to, but rejected by, the Academy of Sciences owing to its "old fashioned" approach. (Blake, 253; Cole, 739; D.S.B., VII, 593; Duveen, 334; Neu, 2208; Norman, 1260; Partington, III, 490; Poggendorff, I, 1353; Wellcome, III, 435)

LAMARCK, Jean Baptiste Pierre Antoine de Monet de

Refutation de la Théorie Pneumatique, ou de la Nouvelle Doctrine des Chimistes Moderns, présentée, article par article, dans une suite de réponses aux principes réassembles et publiés par le citoyen Fourcroy, dans sa Philosophie chimique; précédée d'un Supplement Complementaire de la théorie exposée dans l'ouvrage intitulé: Recherches sur les causes des principaux faits physiques, auquel celui-ci fait suite et devient nécessaire. Par J. B. Lamarck, . . .

Paris: Chez l'auteur, au Muséum d'histoire naturelle; Agasse, libraire, rue des Poitevins. (1796).

First edition. 8vo. 2 leaves, 484 pp. Folding table (forms of fire in nature) facing page 36. Very fine copy in original quarter calf, spine richly gilt, marbled boards, green morocco label.

THE FIRST sixty-one pages comprise a supplement to the *Recherches sur les causes des principaux faits physiques* (Paris, 1794), with additions to and a clarification of Lamarck's "pyrotic theory," which he sought to promote. Then follows his refutation of Fourcroy's *Philosophie chimique*, which supported Lavoisier's antiphlogistic theory. The complete text of the second edition of Fourcroy's work is printed and answered paragraph by paragraph on opposite pages. Lamarck chose to express his views in this manner because he considered that the *Philosophie chimique* contained "the most complete, most precise and best developed" account of the pneumatic theory. He refers to the "pretended existence of a material called oxygen which the pneumatic chemists have never seen nor studied, and the existence of which they imagine to explain the effects of fixed acidific fire" (Bolton). (Bolton, 129–130; Cole, 740; D.S.B., VII, 593; Duveen, 334–335; Ferguson, II, 5 [not in Young Coll.]; Neu, 2209; Partington, III, 490; Poggendorff, I, 1353; Smeaton, *Fourcroy*, No. 36)

LA MARTINIÈRE, Pierre Martin de

Tombeau de la Folie. Dans lequel se void les plus fortes raisons que l'on puisse apporter pour faire connoître la réalité & la possibilité de la Pierre Philosophale, & d'autres raisons & expériences qui en font voir l'abus & l'impossibilité. Par le Dr. De La Martiniere, Medecin & Operateur ordin. Du Roy. Paris: Chez l'Auteur rue de la Coûtellerie au grand Dauphin Royal. Avec privilege du Roy. N.D. (ca. 1675).

First edition. 12mo. 6 leaves, 128 pp. Copperplate portrait of the author on verso of title page. Fine copy, in contemporary gilt-ruled calf, all edges gilt.

"A RARE AND unusual diatribe directed against the frauds and puffers of the period, it contains many amusing anecdotes. . . . The author ascribes Flamel's wealth to traffic

with the Jews at the time of their exile. Though the book is not dated it is usually ascribed to about 1660 and shows that this theory of the Flamel case was current at that period" (Duveen). The date 1660 cannot be even approximately correct, however, as the author was born in 1634, and the caption under his portrait states that he began writing his medical works at age twenty-eight (making this book 1662, and probably much later). Wellcome suggests the date of publication as ca. 1675. Not in British Library, Cushing, Mellon, Partington, Thorndike, Verginelli, etc. (Caillet, 6020; Duveen, 335; Edelstein, 1342; Ferchl, 343; Ferguson, II, 81; Ferguson Coll., 386; Guaita, 455, 1510; Neu, 2210; Smith, 278; Waite, 293; Wellcome, III, 436)

LAMBERT, Claude François

Bibliothèque de Physique, et d'Histoire Naturelle, contenant la Physique générale, la Physique particulière, la Mécanique, la Chimie, l'Anatomie, la Botanique, la Médecine, l'Histoire naturelle des Insectes, des Animaux & des Coquilages . . .
Paris: Chez la Veuve David jeune, Quai des Augustins, près le Pont S. Michel, au Saint Esprit. 1758.

First edition. Four vols. in 5 (vol. I in 2 parts), 12mo. I: 6 leaves, 420 pp., 2 leaves. II: 2 leaves, 320 pp. III: 2 leaves, 394 pp. IV: 2 leaves, 415, (1) pp. V: 2 leaves, 432 pp. Very fine set in mint condition, in original mottled calf, spines richly gilt, maroon and dark-green labels.

A COLLECTION OF articles, many of chemical interest, taken from European scientific journals and reprinted or translated into French. In addition to contemporary subjects, some articles deal with scientific discoveries originally published in the second half of the seventeenth century. The numerous contributors include Boerhaave, Bourguet, Boyle, Derham, Gorter, Homberg, Huygens, Mead, Musschenbroek, Reaumur, Simonet, Whiston, and Woodward. The compiler of this rare work, the Abbé Lambert (ca. 1705–1765), a Jesuit born at Dôle, taught at Rouen. A posthumous fifth volume (not present) was published eleven years later (Paris, 1769). Lambert also compiled a work (Paris, 1749; 4 vols., 12mo.) on the customs, languages, religion, arts, and sciences of Africa, Asia, and America, an English translation of which appeared (London, 1751; 2 vols., 8vo.; Wellcome, III, 437). (Bolton, *Catalogue of Scientific & Technical Periodicals 1665–1882*, Washington, 1885, no. 934; Poggendorff, I, 1355)

LAMBOTTE, Henri

Établissements de Produits Chimiques. Considérations sur les émanations qui s'en échappent, sur la manière dont elles se disséminent dans l'atmosphère suivant les conditions météorologiques, et sur la part d'influence qu'elles peuvent exercer sur les êtres exposés à leur action. . . .

Brussels: Établissement Typogr. De Henri Samuel. 1855.

First edition. 8vo. 188 pp. Folding table facing page 32 and numerous tables in the text. Mint copy, uncut, in maroon half morocco antique, marbled boards, spine lettered and dated in gilt, with original printed blue wrappers bound in.

THE EARLIEST scientific study of industrial air pollution and a landmark work in the history of environmental chemistry. Lambotte (dates unknown) was a professor of metallurgy and mineralogy at the University of Liège and later at the Royal Athenaeum at Namur. He published *Nouvelle théorie de chimie organique basée sur les lois de la composition binaire* (Brussels, 1840) and contributed articles to chemical journals. Although John Evelyn's *Fumifugium* (London, 1661) is considered to be the earliest book on air pollution, because he complained about the smoke from London chimneys, this work by Lambotte deals with the modern problem—the fallout from factory chimneys and its effects on the countryside, people, animals, and vegetation. In six chapters the author defines the chemical nature of the problem and covers the effects produced by acidic and alkaline gases vented to the atmosphere by chemical industries. The chemistry of air pollution was later studied in England by Robert Angus Smith (*Air and Rain*, London, 1872). Bolton (p. 599) mentions another edition (Brussels, 1856, 12mo.), but no bibliographical reference to the first edition has been found.

LA METHERIE, Jean Claude de

Essai Analytique sur l'Air Pur, et les différentes espèces d'air. Par M. de la Metherie . . .

Paris: Rue et Hôtel Serpente. 1785.

First edition. 8vo. 3 leaves, 474 pp., 1 leaf. Woodcut ornament on title page. Few minor foxmarks; otherwise fine copy printed partly on bluish paper, in original mottled calf, spine richly gilt, maroon morocco label.

AN INTERESTING and curious work, published in the midst of the Chemical Revolution, on oxygen, hydrogen, carbon dioxide, and other gases. A nonpracticing physician, La Metherie (1743–1817) was a staunch opponent of Lavoisier's theories, but he was impartial enough to publish an extract of the new *Nomenclature chimique* in the influential *Observations sur la Physique* (later *Journal de Physique*), of

which he became the editor. In the present work he discusses the chemical theories and experimental discoveries of Lavoisier, Priestley, Scheele, and others and asserts correctly (contrary to Lavoisier) that all acids do not necessarily contain oxygen. He maintains that all combustibles contain inflammable air (hydrogen), which he identifies with phlogiston and believes is a constituent of all metals as they release it on contact with acids. La Metherie's interpretation of chemical reactions is discussed by Partington. As the *Journal de Physique* opposed the new doctrines of Lavoisier, in 1789 he and his associates founded the *Annales de Chimie*, in which papers based on the new antiphlogistic chemistry were published. (Blake, 253; Bolton, 599; Cole, 742; D.S.B., VII, 604; Duveen, 335; Ferchl, 292; Partington, III, 494; Poggendorff, I, 1360; Smith, 278; Wellcome, III, 438)

LA METHERIE, Jean Claude de

Essai Analytique sur l'Air Pur, et les différentes espèces d'air: par M. de la Metherie, . . . Seconde édition. . .
Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1788.

Second edition. 2 vols., 8vo. I: viii, 447, (1) pp. II: vi, 604 pp., 2 leaves (privilege and errata). Very good copy in original marbled calf, spines richly gilt, brown morocco labels.

THE REWRITTEN, revised, and considerably enlarged second and final edition, in which La Metherie relates how he has repeated many of his experiments and somewhat modified the views he expressed in the first edition (Paris, 1785). In addition to discussing gases (as in the first edition), he includes new chapters on the nature of fire, light, heat, cold, and phlogiston, as well as oils, salts, waxes, and other products from plants, the respiration of animals, fermentation, etc. This book, La Metherie's most important on chemistry, summarizes his opinions on the subject. Although he tenaciously believed that hydrogen and phlogiston are identical, he was a good chemist but often drew the wrong conclusions from his experiments. Partington describes La Metherie as "obviously a very able man." His views on biology, mineralogy, and natural philosophy met with greater (though not universal) acceptance by his contemporaries than his views on chemistry. (Bolton, 599; Cole, 743; D.S.B., VII, 604; Duveen, 335; Neu, 2212; Partington, III, 494; Poggendorff, I, 1360; Watt, II, 667b)

LA METTRIE, Julien Offray de

Abregé de la Theorie Chymique. Tiré des propres Ecrits de M. Boerhaave. Par M. De La Metrie. Auquel on a joint le Traité du Vertige, par le même.

Paris: Rue S. Jacques, Chez Lambert & Durand, Libraires, à S. Landry, à la Sagesse & au Griffon. 1741.

First edition. 12mo. 4 leaves, 301, (3) pp. Fine copy in original marbled calf, spine richly gilt, brown morocco label.

THE FAMOUS materialist philosopher La Mettrie (1709–1751) studied medicine at the University of Paris (1728–33) and graduated M.D. at Rheims. He completed his training after another year at Leiden under Herman Boerhaave, whose influence on him was decisive. He published several works by Boerhaave in French, including the present abridgement of Boerhaave's great *Elementa Chemiae* (1732), which occupies the first part (pp. 1–159) of this rare volume. Only the physical and chemical properties of the four Aristotelian elements (air, earth, fire, water) of Boerhaave's treatise are covered. The remainder of the volume contains La Mettrie's work on vertigo, the description of a case of hysterical catalepsy, and a letter to the physician Jean Astruc on venereal disease. The collation of this copy agrees with that given by Lindeboom, but the imprint is different. Some copies have "P. M. Huart" (e.g., Lindeboom) and others "Antoine-Claude Briasson" (e.g., Duveen, Neu) in the imprint. (D.S.B., VII, 605; Duveen, 336; Ferchl, 292; Lindeboom, *Bibliographia Boerhaaviana*, No. 475; Neu, 2213; Partington, II, 744)

LAMPADIUS, Wilhelm August

Grundriss des Systems der Chemie, oder klassische Aufstellung der einfachen und gemischten Körper, vorzüglich nach Lavoisier und Berzelius, so wie nach eigenen Erfahrungen, von W. A. Lampadius . . .
Freiberg: bey Craz und Gerlach. 1822.

First edition. 8vo. lxxv, (1), 360 pp. Small blank portion of title page cut away; otherwise very fine copy, in original patterned boards, gilt-lettered orange lettering label on spine.

AN ENCYCLOPEDIA work on inorganic chemistry in which all the known metals, nonmetals, and their compounds are listed and briefly described, together with some of their physical and chemical properties. References to original literature are cited. "A basic textbook following the classifications of Lavoisier and Berzelius" (Cole). This copy is complete with the two-leaf signature Y (i.e., four pages of book advertisements with pages misnumbered 357–360 for 337–340), which is missing in the copy described by Cole. The catalogue of books lists fourteen works by Lampadius. Very rare. Unknown to Ferchl and Poggendorff and the usual bibliographies. (Cole, 744; Smith, 278)

LAMPADIUS, Wilhelm August

Kurze Darstellung der vorzüglichsten Theorien des Feuers dessen Wirkungen und verschiedenen Verbindungen von W. A. E. Lampadius Mitglied der physikalischen Privatgesellschaft in Göttingen.

Göttingen: bey Johann Christian Dieterich. 1793.

First edition. 8vo. xii + 179 pp. Fine, crisp copy, in contemporary half calf, marbled boards, spine gilt-ruled. From the library of Professor Franz Sondheimer (1926–81), with his bookplate on the front pastedown endpaper.

LAMPADIUS (1772–1842) was first a pharmacist in Göttingen (1785–91), but then became professor of chemistry and mineralogy in the Mining Academy of Freiberg. He is best known for his accidental discovery of carbon disulfide in 1796 by distilling iron pyrites with moist charcoal. Lampadius published several works on the chemical analysis of minerals, a list of which is given by Partington. The *Kurze Darstellung* is his first book, and in it he discusses theories of combustion from Stahl to Lavoisier. He is not altogether convinced of the validity of the antiphlogistic system of Lavoisier and inclines toward the theory of De Luc, which retains phlogiston. In 1795, shortly after the appearance of this book, he published his *Sammlung praktisch-chemischer Abhandlungen und vermischter Bemerkungen* (3 vols., 1795, 1797, 1800). In volume I (p. 131) he explained that although previously an opponent of the antiphlogistic system, he now made it the basis of his lectures. Very rare. Not in Duveen, Ferguson, Morgan, Neu, Smith, Waller, Watt, Wellcome, etc. (Bolton, 600; Edelstein, 1343; Ferchl, 292; Partington, III, 597; Poggendorff, I, 1362)

LAMPADIUS, Wilhelm August

Sammlung practisch-chemischer Abhandlungen und vermischter Bemerkungen, von W. A. Lampadius . . .

Dresden: In der Waltherschen Hofbuchhandlung. 1795–1800.

First edition. 3 vols., 8vo., in 1. I (1795): 6 leaves, 235, (1) pp. II (1797): 4 leaves, 233, (1) pp. III (1800): 2 leaves, 250, (2) pp. With 2 folding engraved plates and 5 folding printed tables. Fine copy in original patterned boards, spine gilt-ruled.

ONE OF the earliest publications by Lampadius, in which he first declares that he supports the antiphlogistic theory of Lavoisier (vol. I, p. 131 et seq.), although he had previously opposed it. From this time onward, Lampadius made the antiphlogistic theory the basis of his lectures. He analyzed numerous minerals, including honeystone (aluminum mellitate), which he found to contain over 85 percent carbon, with alumina, silica, and water (vol. II, pp. 51–52,

135–144). In the third volume Lampadius describes the deflagration that occurs when charcoal is added to fused caustic alkali (sodium hydroxide), which he attributed to reduction and reoxidation. Kopp (*Geschichte der Chemie*, 1847, IV, 11) states that the deflagration was due to the liberation of sodium metal, which immediately caught fire on exposure to the atmosphere. In this collection of his miscellaneous researches, Lampadius first demonstrates that elementary phosphorus does not luminesce in perfectly dry air. The final volume of this very rare work remained unknown to Poggendorff, who cites only the first two volumes. (Bolton, 600; Harvey, 440, 635; Partington, III, 597; Poggendorff, I, 1362; Smith, 279)

LAMY, Guillaume

Dissertation sur l'Antimoine. Par Monsieur Lamy, Docteur en Medecine de la Faculté de Paris.

Paris: Chez Lambert Roulland. 1682.

First edition. 12mo. 50 pp., 5 leaves, 183, (1) pp., 3 leaves. Woodcut ornament on title. Fine copy in the original speckled calf, gilt inner dentelles, maroon leather label, spine richly gilt.

A COMPREHENSIVE MONOGRAPH on antimony compounds, their preparation, and uses in medicine, of considerable chemical interest. Compounds discussed include antimony sulfide, oxide, and trichloride. Metallic antimony is also described. Lamy (fl. 1650–1680) maintained that, used in moderation, antimony compounds are not poisonous like those of mercury, arsenic, or lead. He also describes the preparation and medicinal properties of other compounds (e.g., fulminating gold, silver nitrate, and mercuric chloride). Lamy believed that salts of mercury are the most dangerous of all to employ in medicine. Chapter 15 (pp. 169–175) refutes the statements of Basil Valentine, Paracelsus, Helmont, et al., that antimony compounds are poisonous. In the final chapter Lamy contends that antimony compounds have an important place in the materia medica. Rare. Not in Bolton, Cushing, Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Neu, Partington, Poggendorff, Smith, Waller, etc. (D.S.B., VII, 612; Goldsmith, L311; Waring, 236; Wellcome, III, 440)

LANCILOTTI, Carlo

Der brennende Salamander, oder Zerlegung, der zu der Chimie gehörigen Materien, so da ist ein Wegweiser oder Unterricht sich in allen Arbeiten der Scheid-Kunst zu üben: Benebenst dem auffgeweckten Chimisten, samt beygefügter Anleitung von Erwehlung des Vitriols: In Druck gegeben durch Carl Lancilot, Medicum und Chemicum, erst aus dem Italiänischen ins Holländische: Nun aber aus der Holländischen in die Hochteutsche Sprache übersetzt durch J. L. M. C. In Verlegung Samuel Ottens und Johann Wiedemeyers, Buchhändler in Lübeck.

Frankfurt am Mayn: Druckts Johann Haass, im Jahr 1681.

First edition in German. 8vo. 7 leaves, 305 pp., 4 leaves. With 4 finely engraved plates of chemical symbols, apparatus, and furnaces. Fine, crisp copy, in contemporary unlettered vellum.

THE FIRST translation into German, by Johann Lange, from the Dutch edition (*De brandende Salamander*, Amsterdam, 1680), itself translated by Jacob Leeuw from the Italian edition (*Nuova Guida alla Chimica*, Venice, 1677). Other German editions appeared: Frankfurt, 1684 (Caillet, 6062), and Lübeck, 1697 (Ferguson, II, 6; Smith, 279). The present edition was also published with a Lübeck imprint in 1681, with identical pagination. In addition to its iatrochemical content, the book is of alchemical interest. Rare. Not in Bolton, D.S.B., Edelstein, Waite, Waller, Wellcome, etc. (Duveen, 336–337; Ferchl, 293; Ferguson, II, 6 [not in Young Coll.]; Ferguson Coll., 388 [imperf.]; Kopp, *Die Alchemie* [1886], II, 380; Neu, 2216; Partington, III, 27; Watt, II, 584w)

LANCILOTTI, Carlo

Il Chimico Disvellato, che chiaramente dimostra il modo di conoscere le falsità, che far si possono in molti Medicamenti Spargirici, e l'elezione di loro. In questa terza Edizione aggiuntovi molte particolarità curiose, che nelle altre vi mancavano. Opera bellissima, e curiosissima del Signor Carlo Lancillotti, Medico Chimico, e Cittadino Modonese. . . .

Modena: Per il Soliani Stamp. Duc. 1677.

Third edition. 12mo. 81, (1) pp., 1 leaf (blank). Very fine copy in pristine condition, in the original white pasteboards.

A RARE IATROCHEMICAL book by Lancillotti (fl. 1672), “chemical physician” of Modena, who published several alchemical works. Ferguson describes the *Opusculi Diversi del Lancillotti* (Modena, 1677, 12mo.) in four parts, each with separate title pages, of which this is the third part. Each part was also published separately (as here). Not in Edelstein, Ferchl, Ferguson Coll., Neu, Poggendorff, Waite, Watt, etc. Not in the British Library. Bolton (II, 258) lists

another edition (Milan, 1673, 12mo.). (Duveen, *Supplement*, 214; Ferguson, II, 6; Partington, III, 27; Smith, 279; Wellcome, III, 441)

LANCILOTTI, Carlo

Guida alla Chimica Che per suo mezzo conduce gl'Affetionati alle Operationi sopra ogni Corpo misto Animale, Minerale, ò Vegetabile. . . . Et in quest'ultima Impressione ampliata di nuove aggiunte, & figure. Opera utilissima à Medici, Speciali, Alchimisti, Pittori, Orefici, & altre persone curiose. . . .

Venice: Per Iseppo Prodocimo. 1697.

12mo., 3 parts in 1 vol. I: 12 leaves, 188 pp. II: 6 leaves, 126 pp. III: 8 leaves, 226 pp. 10 woodcuts of chemical equipment and furnaces, and 3 blank leaves. Each part has a separate title page, but signatures are continuous. Very fine copy, in pristine condition, in original white pasteboards.

THE LAST and most complete edition of this popular chemical compendium, containing much of alchemical interest. The first part deals with fire, furnaces, operations, oils, tinctures, vitriol, sulfur, antimony, mineral bezoar, etc.; the second with metals; and the third part with the animal kingdom. Less complete editions appeared at Modena (1672, 1679) and Venice (1674, 1680, 1681). This edition is not in the usual chemical libraries. (Partington, III, 27; Thorndike, VIII, 144; Wellcome, III, 441)

LANCILOTTI, Carlo

Vaglio Chimico. In cui si cribano molti Medicamenti Spargirici. Diviso in due Parti Nella I. si nota la proprietà di molti medicamenti colle dosi loro, è Auttori. Nella II. si separano li buoni da falsi, e si rigettano alcune erronee opinioni circa i Sali fissi. Con alcune bellissime ricette non più vedute. Con Tavola copiosissima, & Indice della Infermità. . . .

Venice: Appresso Gil. Francesco Valuasense. 1682.

First edition. 12mo. 6 leaves, 240 pp., 12 leaves (last blank). Woodcut on title page, woodcut capitals, head- and tailpieces. Fine copy in original speckled sheep, spine richly gilt, maroon morocco label.

A VERY RARE iatrochemical work, divided into three parts. The first (pp. 1–136) covers chemical preparations; the second (pp. 137–168) discusses useful (and useless) medicines; and the third part (pp. 169–240) gives accounts of medical cases cured by various spagyric mixtures. There is a comprehensive index. The copy in the British Library is imperfect. An interesting book dedicated to the anatomist Giacomo Grandi (1646–1691). The sheets of this edition were twice reissued: with reset title page (Venice: G. F. Valuasense, 1700), including the Grandi dedication (Venice:

Lorenzo Basegio, 1701). Not in the usual chemical and medical bibliographies. (British Library, *17th Century Italian*, 466; Partington, III, 27; Wellcome, III, 441)

LANCILOTTI, Carlo

Il Vaglio ovvero Secreti Chimici di Carlo Lancilotti Professore Celeberrimo di Medicina, e di Chimica, Utilissima, e Necessaria ad ogni Medico, Chimico, e Curioso di conoscere li veri da supposti, ed Equivoci Medicamenti. Seconda Impressione. Venice: Appresso Lorenzo Basegio. 1701.

First edition, third issue. 12mo. 2 leaves, 240 pp., 12 leaves (last blank). Large woodcut printer's device on title. Very good copy in contemporary vellum, old ink lettering on spine.

ALTHOUGH STATED to be the second edition in the title, this is the third issue of the first edition, made up from the same sheets with a new half title and title page. The dedication to G. Grandi (who had died in 1691) is omitted. Lancilotti refers to the works of many earlier and contemporary chemists (e.g., Becher, Beguin, Cross, Kunckel, and Sennert). Very rare. Not traced in the usual bibliographies.

LANDERBECK, Nicolaus

Dissertation Physica, de Campana Urinatoria, . . . praeside Mag. Samuele Duræo, . . . publice ventilandam sistit . . . Nicolaus Landerbeck, Calmariensis . . . XXII. Junii Anni MDCCLXIII. Uppsala. (1763).

First edition. 4to. 2 leaves, 11, (1) pp. Fine copy: Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

THE DOCTORAL dissertation of Landerbeck (1735–1810), celebrated professor of mathematics at the University of Uppsala, on the physical principles involved in the construction of diving bells. The author discusses the work of Torricelli, Cotes, Desaguliers, 's Gravesande, Halley, Muschenbroek, Schott, et al. On pages 9–10 he gives a mathematical analysis of the subject. Poggendorff lists twelve papers by Landerbeck, including this, his first publication, but he erroneously gives the author's Christian name as Nils. Watt (II, 585c) mentions Landerbeck and his mathematical papers in the *Philosophical Transactions of the Royal Society* but not this rare work. (Poggendorff, I, 1365)

LANDGREBE, Georg

Ueber das Licht vorzugweise über die chemischen und physiologischen Wirkungen desselben. Ein Versuch von Dr. Georg Landgrebe in Marburg.

Marburg: Druck und Verlag von N. G. Elwert. 1834.

First edition. 8vo. x, 602 pp. Fine copy in contemporary marbled boards.

LANDGREBE (b. 1802), doctor of philosophy and *privat-docent* at the University of Marburg, became a proprietor of a chemical factory in Kassel. The present work is important as it discusses the chemical action of light on inorganic and organic compounds. A long section on the action of light on silver chloride and silver iodide (pp. 4–56), including Arago's researches, anticipates the discovery of photography. Other subjects covered include the electrical and magnetic action of light, photosynthesis in plants, and the behavior of animals toward light. Landgrebe also published works on other chemical topics, on which see Poggendorff. Bolton describes this as "an extensive monograph for the period." It is a milestone work in photochemistry and the history of photography. "Very scarce" (Sotheran). Not in Duveen, Ekelöf, Harvey, Partington, Smith, Sondheimer, Waller, Wellcome, Wheeler Gift, etc. (Bolton, 601; Edelstein, 3220; Ferchl, 294; Poggendorff, I, 1365; Sotheran, Cat. 789 [1924], 5377)

LANDI, Ortensio

Incerti Authoris Brevis Elucubratio Nuper Inventa, de his morbis, a quibus humana corpora ingestari, corrumpique solita sunt.

Venice: Apud Gabrielem Jolium de Ferrariis et Fratres. 1553.

First (sole) edition. 8vo. 39 folios, 1 leaf. Woodcut printer's device on title page, historiated capitals, large woodcut tailpiece on final leaf. Italic letter. Old stamp (Medical Society of London) on title page (not touching text) and release stamp of Wellcome Library on verso. Fine copy in old vellum, morocco label gilt.

THE ITALIAN humanist Ortensio Landi (ca. 1512–ca. 1560) is mainly remembered for his satirical writings, although he was a physician by profession. Of iatrochemical interest, this book is written in the form of a dialogue between Landi and a learned physician, Marullus, whom Landi asks to explain the medical terms for many diseases, which are listed in alphabetical order for the use of medical students. Marullus then describes the pharmaceutical chemicals and other medicaments in his pharmacy and shows Landi his library of works by the Greek and Roman authors who have written on medicine. The dialogue ends with a section entitled

Medicinae laus, which is followed by a short defense of medicine against its adversaries. Bongi (*Annali di Giolito*, I, 389–390) describes this book at some length and says that he succeeded in finding a copy only after a very long search. He describes it as being “rarissima.” Extremely rare. Not in British Library. Only one copy listed in N.U.C. (N.L.M.). (Durling, 2719; Wellcome, I, 3398)

LANDRIANI, Marsilio

Opusculi Fisico-Chimici del Cavaliere Marsilio Landriani.
Milan: Nelle Stampe di Gaetano Pirola presso il Teatro Grande. 1781.

First edition. 8vo. 2 leaves, pp. (1)–190, 1 leaf (errata). With 5 beautifully engraved headpieces (pp. 21, 51, 59, 81, 151) and 1 folding copperplate. Extremely fine copy, in mint condition with wide margins, bound in contemporary mottled calf, rebounded, with original gilt-ruled spine laid on, maroon morocco label gilt.

IN ADDITION to his important work on the analysis of gases using the eudiometer, Landriani carried out research in other areas of chemistry, physics, and meteorology, which are described in the present volume. Included are 1) *Descrizione del chronhyometro ossia di una nuova macchina metereologica* (pp. 21–49, dedicated to De Saussure); 2) *Del modo di dare la vernice alle farfalle e ad altri insetti* (pp. 51–58, dedicated to Giovanni Scopoli); and 3) *Intorno alla conversione degli acidi in un acido solo* (pp. 59–79, dedicated to Giambatista Beccaria). Landriani planned to publish two further volumes, but they never appeared. Not in Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Osler, Smith, Sondheimer, Waller, Wellcome, etc. (Blake, 254–255; Bolton, 601; D.S.B., VII, 621; Ferchl, 294; Partington, III, 323; Poggendorff, I, 1366; Watt, II, 585k)

LANDRIANI, Marsilio

Ricerche Fisiche intorno alla salubrità dell'aria. . . .
Milan: (G. Marelli). 1775.

First edition. 8vo. 1 leaf, xiii, (1) pp., 1 leaf, 92 pp. With engraved title page containing large vignette, 2 engraved headpieces (pp. 1 and 75), and 3 folding engraved plates (by G. Cattaneo). Very fine copy, uncut and unpressed, in original limp citron boards.

AN IMPORTANT work in the history of chemistry, in which Landriani (1751–1815) introduced the term *eudiometer* for the apparatus he had devised to measure the purity of the air. The eudiometer is described and illustrated (plates I and II). “Landriani’s name is repeatedly linked to Volta’s inventions (from the electrophorus to the pile) and especially to the eudiometer. The term . . . was first used by Landriani in the *Ricerche*. . . . The method had been intro-

duced in 1772 by Joseph Priestley, who had proposed measuring the ‘different disposition of airs for breathing’ by means of the $\text{NO} + \text{O}_2$ reaction: ‘nitrous air’ (nitrogen oxide) plus the gas of common air, which Priestley himself obtained in 1774 and called ‘dephlogisticated air’ (later named oxygen by Lavoisier). By means of this reaction reddish vapors (higher oxides of nitrogen) are formed; being strongly water soluble, they are removed by water, in the presence of which the reaction is carefully performed. The reaction thus indicates the consumption of oxygen, or of part of common air. The greater the reduction in volume that the latter undergoes, the richer in oxygen it is and hence the healthier. . . . In 1777 the eudiometer entered the history of science as a valued instrument for analyzing gases” (D.S.B.). German translations appeared (Basel, 1778; Bern, 1792). Very scarce. Not in Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Osler, Smith, Waller, Watt, etc. (Blake, 255; Bolton, 601; D.S.B., VII, 620–621; Ferchl, 294; Partington, III, 323; Poggendorff, I, 1366; Wellcome, III, 443)

LANG, Josephus Antonius

Dissertatio Inauguralis Chémico-Médica de Spiritibus Chémicis, quam annuente inclýta facultate médica . . . Universitate Vindobonensi publicae disquisitioni submittit Josephus Anton. Lang Wolfsbergo-Carinthus . . . disputabitur . . . die (blank) mensis Augusti MDCCLXXVII.
Vienna: Literis Geroldianis. (1777).

First edition. 8vo. 80 pp. Title slightly soiled; otherwise very good copy in the original green and red painted wrappers, bound in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A SUBSTANTIAL THESIS on the preparation and medicinal uses of various volatile inorganic and organic compounds (e.g., nitric acid, hydrochloric acid, ammonia, alcohol, acetic acid, esters, and ether), as known at the time of publication. Very rare. Not in the usual bibliographies.

LANGE, Johann Christian

Dissertatio Inauguralis Chémico-Médica, sistens Tractationem Generalem de Acidorum Natura et Virtutibus, nec non de Acido Aereo insonte . . . praeside . . . Balth. Joanne de Buchwald . . . pro summis in medicina honoribus obtinendis ad diem (blank) April, 1754. . . . Autor Joannes Christianus Lange, M. C. Lubecensis.

Copenhagen: Typis haeredum Berlingianorum excudebat Ludolph. Henr. Lillie. (1754).

First edition. 4to. 2 leaves, 40 pp. Light water stain on first few leaves; otherwise good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A RARE AND important doctoral dissertation on the chemical nature and medicinal properties of acids, presented by Lange (fl. 1750) of Lubeck under the direction of Balthazar Johann de Buchwald (1697–1763), professor of medicine at the University of Copenhagen. In thirty-five paragraphs (including descriptions of five experiments on the preparation of various salts), Lange discusses the subject in depth. The work is well documented with references to the writings of Becher, Boerhaave, Boyle, Cramer, Glauber, Henckel, F. Hoffmann, Kunckel, Lemery, Neumann, Stahl, Wedel, et al. (Waring, 101)

LANGELOTT, Joel

Epistola ad Praecellentissimos Naturae Curiosos. De quibusdam in Chymia praetermissis, quorum occasione Secreta haud exigui momenti proque; non-Entibus hactenus habita, candidè deteguntur & demonstrantur.

Hamburg: Apud Gothofredum Schultzen. Prostant & Amsterdam: Apud Joannem Janssonium à Waesberge. 1672.

First edition. 8vo. 32 pp. Fine folding copperplate of the philosophical mill and engraving of a mortar in text. Immaculate copy, uncut with wide margins, in blind-ruled morocco antique, spine gilt-lettered and dated.

LANGELOTT (1617–1680) studied medicine at Jena, Rostock, Copenhagen, and Leiden and received a call to Gottorp as chemist. He traveled to England and became court physician in 1647 to Frederick IV, Duke of Holstein-Gottorp. The present work was “addressed to the German Academy of the Curious as to Nature,” and it concerns “matters passed over in chemistry, including secrets of no slight moment hitherto regarded as non-entities. . . . It was praised by the members of the Royal Society . . . [and] included the treatment of gold by a ‘philosophical mill-stone,’ the fermentation of tartar, the spirit of its volatile salt, essence of opium, eduction of mercury from antimony, and the analysis of coral into a rubicund mucilage” (Thorndike). Morhof was very impressed, and Langelott persuaded him to write a book on the means by which metals can be transmuted. This Morhof did in his well-known work *De metallorum transmutation ad Joelem Langelottum epistola* (Hamburg, 1673). A German translation of the present Latin edition appeared (Nuremberg, 1672). (Caillet, 6085; Duveen, 337; Edelstein, 1346; Ferchl, 295; Ferguson, II, 8 [not in Young Coll.]; Ferguson Coll., 390; Krivatsy, 6663; Neu, 2227; Thorndike, VIII, 370; Watt, II, 586c; Wellcome, III, 444)

LANGRISH, Browne

The Modern Theory and Practice of Physic. Wherein the antecedent causes of diseases . . . and the true methods of cure, are explained, according to the established laws of nature, . . . Together with a chemical analysis of the urine, and a statical examination of the blood, in every stage of each distemper where blood could be drawn with safety. . . .

London: Printed for L. Hawes, W. Clarke, and R. Collins. 1764.

Third edition. 8vo. lix, (1), 371, (1) pp. Date on title page neatly altered to 1794. Lacks blank leaf before title; otherwise very good copy in half calf antique, marbled boards, 2 green morocco labels gilt.

DESCRIBED BY Munk as an “excellent practical physician,” Langrish (d. 1759) was first a surgeon in Petersfield, Hampshire, and later in Winchester and Basingstoke. Admitted extra-licentiate of the Royal College of Physicians in 1734, he was elected F.R.S. the same year (see D.N.B.). A pioneering treatise in biochemistry and clinical pathology, the present work is a reprint of the first and second editions (London, 1735 and 1738). Langrish, who was well versed in chemistry, was the first to analyze the blood and urine of his patients. His chemical analyses of blood and urine are described on pages 80–83 and 91–105, respectively. The author states in the preface (pp. xxxv–xxxvi): “Chemistry is highly advantageous both to the Theory and Practice of Physic; . . . it . . . instructs us how to make many noble Medicines, [and] also lets in a vast deal of Light towards investigating the Causes and Natures of Diseases.” Partington (III, 301) states: “An improved distillation apparatus described by Langrish was a fore-runner of Woulfe’s.” Watt (II, 587b) lists the first and second editions, and Munk (II, 130) the first edition. Ferchl and Neu list other works by Langrish. Rare, not in the usual early chemical libraries. (Reynolds, 2389; Wellcome, III, 446)

LA PEYRÈRE, Isaac de

Prae-Adamitae. Sive Exercitatio super Versibus duodecimo, decimotertio, & decimoquarto, capitis quinti Epistolae D. Pauli ad Romanos. Quibus inducuntur Primi Homines ante Adamum conditi. (Systema Theologicum, ex Praeadamitarum Hypothesi. Pars Prima.)

(Leyden): Anno Salutis, 1655.

First edition. 12mo. 2 parts in 1 vol. Part I: 52 pp. Part II: 7 leaves, 260 pp., 4 leaves. With engraved map of the Holy Land (numbered “Fol. 53”) at the end of part I (edges of map frayed). Apart from minor worming of the inner margins of a few leaves in part I (slightly affecting text), a very good copy in contemporary overlapping vellum. Bound with: *Theatrum*

Sympatheticum (Nuremberg, 1660). From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

A CURIOUS WORK by La Peyrère (1594–1676), in which he attempts to prove that there had been two creations. From the first creation the Gentiles were supposed to have descended, and at a much more recent period there was a so-called second creation from which the Jews descended. The Jews alone were descended from Adam and Noah. The author was imprisoned, and his book condemned to be burned, but La Peyrère retracted these opinions and renounced Calvinism. The promised second part was never published. The book was translated into English and appeared with the title *Men before Adam. Or a Discourse upon the 12th, 13th, and 14th Verses of the 5th Chapter of the Epistle of the Apostle Paul to the Romans. By which are prov'd, that the first Men were created before Adam* (London, 1656, sm. 8vo.). The translator was Whitford. Rare. (Watt, II, 751r; Wellcome, III, 449)

LAPOSTOLLE, Alexandre Ferdinand Léonce

Traité de la Carie ou Bled Noir, dans lequel on prouve, par une suite d'Expériences & par l'Analyse Chimique, que la Chaux est le principal remede pour détruire cette Maladie. Par M. Lapostolle, Apothicaire du Roi, Membre de l'Académie des Sciences, Belles-Lettres & Arts d'Amiens, Professeur de Chimie au Jardin du Roi, Professeur & Démonstrateur du Cours de Meunerie & de Boulangerie. Amiens: J. Bapt. Caron l'ainé. 1787.

First edition. 8vo. 154 + vi pp. Some marginal staining (not affecting text); otherwise a crisp copy in contemporary mottled calf, spine gilt, maroon morocco label. Bound with: Sage, Balthazar Georges, *Analyse des blés* (Paris, 1776).

AS STATED in the title, Lapostolle (1749–1831) held several important posts, and he was acquainted with many important chemists of the time. In this work he describes his attempts to discover why wheat and other cereals rot and turn black when stored. The “black rot” (aspergillus?) was collected and subjected to numerous chemical treatments with acids, alkalies, salts, etc. He concluded that black rot can be prevented, or minimized, by storing wheat (mixed with powdered chalk to absorb moisture) in sacks that are separated from each other and kept in a well-ventilated place. An important early work on agricultural chemistry, which is not mentioned by C. A. Browne. The *Extrait des registres de l'Académie d'Amiens* (pp. iv–vi) is dated 1787, confirming that this is the first edition. An edition, “Amiens, 1783,” listed by Ferchl is a ghost. Lapostolle also published *Plan d'un cours de chimie expérimentale* (Amiens, 1777) and *Traité des parafoudres et des paragrêles en cordes de paille*

(Amiens, 1820). Although he was a competent chemist, Lapostolle had a difficult life. For details, see Nicole Sossa, *Histoire de la pharmacie dans la ville d'Amiens* (Paris, 1939, pp. 47–48). A rare book. Not in Blake, Bolton, Cushing, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Partington, Smith, Waller, Watt, Wellcome, etc. (Ferchl, 296; Poggendorff, I, 1378)

LA PRIMAUDAYE, Pierre de

Nuova Academia Francese nella quale si discorre della creazione del Mondo, & di tutte le sue Parti, Angioli, Ciel, Piseneti, Moti, Influenze, & effetti loro, della natura di tutti gli Elementi, & qualita di essi, de gli animali volatici, acquatici, e terrestri, di tutte le Piante & Herbe, Metalli, & Pietre Pretiose con le proprieta, & virtu, che in quelle si contengono, & della Generatione, & corruzione di tutte le cose, & della vera essenza, & virtu Divina, & eterna. . . . Venice: Appresso Sebastiono Combi. 1610.

First Italian edition. 4to. 20 leaves, 343, (1) pp. Large woodcut printer's device on title page. Ornamental woodcut capitals, head- and tailpieces. Small repair to title (affecting 1 word, *curiosita*) and inner blank margins of several leaves strengthened; otherwise very good copy in original vellum.

LA PRIMAUDAYE (ca. 1545–1584), an Angevin lord and gentleman-in-ordinary to the French king, published *Academie françoise* (Paris, 1580) in three volumes, which were followed by a fourth volume, *Suite de l'academie françoise* (Paris, 1583). The work was well received, and several editions in French appeared (e.g., Paris, 1581, 1587, 1613). The four volumes comprise erudite discourses on 1) the institution of manners and callings of all estates; 2) the soul and body; 3) the description of the whole world; and 4) Christian philosophy. The third volume, complete in itself, was translated into Italian by Alessandro Raverio of Cesena, who died in 1609. His brother, Francesco, published the present work (preface dated 10 February 1610). The “*auttori famosi in scienze*” lists 134 names, including several alchemists. Of American interest are discussions of products from North, Central, and South America, including medicines and tobacco. Very rare. Not in the British Library or the usual bibliographies. (Brunet, III, 837)

LAROUVIERE, Jean

Nouveau Système des Eaux Minerales de Forges, où l'on découvre par plusieurs experiences quelle est la nature de ces Eaux, & à quelles maladies elles conviennent. Avec plusieurs Observations de personnes qui ont été guéries par leur usage. . . .

Paris: Chez Laurent d'Houry, rue Saint Jacques, devant la Fontaine S. Severin, au Saint Esprit. 1699.

First edition. 12mo. 12 leaves, 251, (1) pp. Woodcut on title page and 3 copperplates of the mineral baths. Fine copy in original speckled calf, spine richly gilt, brown morocco label.

LAROUVIÈRE (fl. 1690) was one of the physicians to Louis XIV and superintended the spa waters at Forges, in Normandy. In this work on the chemical and medicinal properties of the three mineral springs, medical case histories are discussed with the cures effected by drinking the waters. Larouvière describes the chemical analyses he carried out and refers to relevant investigations by other chemists. The book is dedicated to Fagon, first physician to Louis XIV. (Duveen, 338; Ferchl, 297; Goldsmith, L448; Krivatsy, 6678; Wellcome, III, 451)

LASSAIGNE, Jean Louis

Dictionnaire des Réactifs Chimiques employés dans toutes les expériences faites dans les cours publics et particuliers, les recherches médico-légales, les expertises, les essais, les analyses qualitatives et quantitatives des corps simples et de leurs composés utiles, soit dans les arts, soit en médecine; par J.-L. Lassaigne, . . .

Paris: Béchét Jeune, Libraire de la Faculté de Médecine, 4, Place de l'École-de-Médecine. 1839.

First edition. 8vo. 4 leaves, iv, 780, (2), 781–800, (2) pp. + (32 + 4 pp., advertisements). Woodcut text figures and 13 hand-colored plates (chemical precipitates) on 8 leaves of brownish paper. Minor foxing of several leaves, and preface (iv pp.) bound between pages 774–775; otherwise fine copy, uncut with wide margins, in crimson half morocco antique, marbled boards, spine richly gilt and dated, with original printed wrappers bound in.

LASSAIGNE (1800–1859), professor of chemistry and physics at the Royal Veterinary School in Alfort, is immortalized in the minds of chemists for his well-known test for the presence of nitrogen in organic compounds. In the Lassaigne test nitrogen is detected by fusing the organic compound with metallic sodium to produce sodium cyanide; ferrous ion is then added to form ferrocyanide, followed by ferric ion to make Prussian blue. This chemical dictionary describes all the reagents then known, and the apparatus and techniques used in the analysis of inorganic and organic compounds. A milestone of chemical literature, it is described by Zeitlinger as “the first dictionary of chemical reagents, and still of value.” Other editions: French (Brussels, 1840), Italian (Mantua, 1840–42), Spanish (Pamplona, 1846). (Cole, 752; Ferchl, 297; Poggendorff, I, 1381; Smith, 280; Sotheran, Cat. 773 [1919], 2551)

LASTEYRIE-DUSAILLAIN, Charles Philibert de

A Treatise on the Culture, Preparation, History, and Analysis of Pastel, or Woad: the different methods of extracting the coloring matter, and the manner of using it, and indigo, in dyeing. By C. P. De Lasteyrie. To which is added, information upon the art of extracting indigo, from the leaves of pastel. Published by order of His Excellency, Montalivet, Count of the Empire, Minister of the Interior. Paris: 1811. . . . Translated from the French, by H. A. S. Dearborn.

Boston: Printed by Rowe and Hooper. 1816.

First edition in English. 12mo. xii, pp. 13–140. Good copy, uncut, in contemporary blue boards, rebacked in calf antique, maroon morocco label gilt, spine dated.

THE EARLIEST American work on indigo, being the English translation by Henry Alexander Scammell Dearborn (1783–1851) of *Du Pastel de l'Indigotier* (Paris, 1811), an important treatise on woad, from which the naturally occurring blue dye, indigo, was obtained. Lasteyrie-Dusailain (1759–1849) successfully extracted indigo from woad grown in France during the Napoleonic wars, when importation from other countries was prohibited. The chemistry of woad extraction is described with its application in dyeing. Pages 127–140, with separate title page, comprise a translation of *Information upon the Art of Extracting Indigo* (Paris, 1811), published by order of Montalivet. Before the discovery of coal-tar dyes, indigo was one of the principal blue dyes employed to color cotton and other materials used in the manufacture of fabrics. A milestone work in the chemistry of dyeing, surprisingly, not in the Edelstein Collection. Not mentioned by the usual early chemical bibliographies. Very rare. (Smith, 281)

LAUGIER, Marie, BERTHOLLET, Claude Louis, and TISSOT

Instruction sur l'emploi de la Lie de vin, rédigée par la Commission d'Agriculture et des Arts, en exécution de l'arrêté du Comité de Salut public, du 14 Vendémiaire, an 3e de la République Française, une et indivisible. (N.p. [Paris], 1794).

First edition. 8vo. 2 leaves. Good copy in contemporary vellum. Bound with: Lavoisier, A. L., *L'art de fabriquer le salin et la potasse* (Paris, 1779), and other works.

A THREE-PAGE TRACT, signed by Laugier, Bertholet [*sic*], and Tissot, on the preparation of saltpeter from the lees of wine. The authors state that as the lees contain “une quantité considérable de potasse” they could be a valuable resource

to the glassmaking, soap, and other manufacturing industries. At the time the lees were discarded as a useless by-product of winemaking. Brief instructions are given on the purification of lees by roasting to produce impure potassium carbonate, from which by reaction with nitric acid, saltpeter can be made. Extremely rare. Unrecorded by the usual bibliographers.

LAURENT, Auguste

Méthode de Chimie, par Auguste Laurent, . . .

Paris: Mallet-Bachelier, Gendre et Successeur de Bachelier . . . 1854.

First edition. 8vo. xxii, 464 pp. With 13 diagrams in text. Exceptionally fine copy in original gilt-ruled quarter calf, marbled boards. From the library of Professor Francois Joseph Jerome Nicklès (1820–1869), with his bookstamp on half title.

A CLASSIC BOOK in the history of organic chemistry, in which Laurent sets forth his important substitution (or nucleus) theory. In 1843 he first clearly distinguished between atomic, molecular, and equivalent weights (terms then hopelessly confused) and stated that the substitution of chlorine for hydrogen in an organic compound does not materially alter its structure or properties. This axiom formed the basis of Gerhardt's theory of types, which overthrew the dualistic theory of Berzelius. Laurent's early recognition of the hexagonal structure of benzene (pp. 408–411) is especially significant, as it parallels Kekulé's later views. Gmelin (1788–1853), in his *Handbook of Chemistry*, adopted Laurent's classification, and later Beilstein used it as the basis for arranging organic compounds in his famous *Handbuch der organischen Chemie*. This is an important association copy, as Nicklès edited the manuscript of this book after Laurent died and saw it through the press with J. B. Biot, who wrote the preface. Rare. (Bolton, 605; Cole, 759; De Milt, *Chymia*, IV [1953], 111; D.S.B., VIII, 60–61; Leicester & Klickstein, *Source Book in Chemistry* [1952], 345; Partington, IV, 378; Thornton & Tully, 220)

LAURENT, Auguste

Chemical Method, Notation, Classification, & Nomenclature, by Auguste Laurent, . . . Translated by William Odling, . . . (London:) Printed for the Cavendish Society, by Harrison and Sons, St. Martin's Lane. 1855.

First English edition. 8vo. xxiii, (1), 382 pp., 1 leaf (blank). With 13 woodcut diagrams in text. Very good copy, top edge gilt, fore- and lower edges uncut, in modern green buckram, spine gilt-lettered and dated. Signature in ink (ca. 1930) of Henry Terrey (Department of Chemistry, University College, London) in blank top margin of title page.

THE ENGLISH translation by William Odling (1829–1921) of Laurent's great *Méthode de Chimie* (Paris, 1854). In his preface Odling discusses Laurent's postulates in terms of chemical equivalents, the atomic system of Berzelius, and the four- and two-volume system of Gerhardt. The two-volume system was adopted by Laurent. Odling states: "The collection of materials for this work extended over a considerable period of time, the subjects were arranged by the author on his death bed." Odling has corrected minor discrepancies in order to achieve a rigid uniformity of presentation. This English edition served to extend and popularize Laurent's basic concepts, which are still valid today. (Bolton, 605; Cole, 760; D.S.B., X, 178; Duveen, 338; Morgan, 448; Partington, IV, 378; Smith, 281)

LAURENT, Auguste

Précis de Cristallographie suivi d'une Méthode simple d'Analyse au Chalumeau d'après des leçons particulières de M. Laurent . . .

Paris: Victor Masson. 1847.

First edition. 12mo. 2 leaves, 104 pp. With 175 figures in text. Fine copy in contemporary quarter calf, marbled boards. Bound with: Gerhardt, Charles, *Aide-Mémoire pour l'Analyse Chimique* (Paris, 1852). Bookplate: Franz Sondheimer.

LAURENT (1807–1853), professor of chemistry at Bordeaux, was one of the most important chemists of the nineteenth century, yet his life was plagued with rejection and disappointments. Partington (IV, 376) traces his history, which ended with him working in a cold cellar for the Paris Mint. His work in the unheated damp laboratory led to a severe illness, from which he died at the early age of forty-five. Laurent, gentle, shy, and not aggressive, was well liked by those who knew him. Owing to poor funding of his researches, he worked with minimal quantities of chemicals and apparatus, yet made major advances in organic and inorganic chemistry. This treatise on crystallography, a summary of his lectures at the University of Bordeaux, is the only publication in book form published during his lifetime. The famous and important work *Méthode de Chimie* (1854) was not published before Laurent's death. (D.S.B., VIII, 61; Edelstein, 1351; Partington, IV, 391)

LAURENT, Christian

Disputatio Physica de Generatione, . . . praeside M. Joh. Andrea Lucio, Dresd. Publicae disquisitioni sistit Christianus Laurentius, Dresd. In auditorio minori, ad diem 1 Febr. Horis matutinis.

Wittenberg: Typis Johannis Röhneri Acad. Typogr. 1650.

First edition. 4to. 10 leaves, unpaginated. Fine, crisp copy, in maroon quarter morocco, marbled boards, spine gilt-lettered and dated.

A DOCTORAL DISSERTATION on the generation of all matter mineral, vegetable, and animal, presented by Laurent of Dresden and presided over by Johann Andrea Lucius, also of Dresden, at the University of Wittenberg. Laurent discusses the “seeds” of minerals, metals, gems, etc., with references to Sennert et al. Plants and animals are also discussed, with references to Aristotle, Scaliger et al. Laurent concludes (sig. B4, verso) that all matter, nonliving and living, comes from “seeds”: “Minerale generat minerale, planta plantam, brutum brutum, homo hominem.” A very rare dissertation of interest to the history of the development of seventeenth-century concepts of the atom. No references have been found to Lucius or his pupil Laurent. Unknown to the bibliographers.

LAURENTIUS, Christianus

Disputation Physica de Aere, quam D.O.M.A. in celeberrima Academia Wittenbergensi praeside M. Joh. Andrea Lucio, Dresd. Habebit publicè ad defendet Christianus Laurentius, Dresd. In auditorio minori, ad diem XXIX. Junii horis antemerid.

Wittenberg: Typis Johannis Röhneri, Acad. Typogr. 1650.

First edition. 4to. 10 leaves (unpaginated). Fine copy in modern boards. Bound with: Laurentius, C., *De aqua* (1650); Pistorius, I., *De terra et igne* (1650); and Scultetus, A., *De elementis* (1649).

PRESENTED AT the University of Wittenberg under Professor Lucius of Dresden, this dissertation by Laurentius (dates unknown) discusses the Aristotelian element air. The physical and chemical properties of air are covered, with quotations from the works of Aristotle, Magnenus, Scaliger, Sperling, et al. The final three pages cover the relationship of music to the quality of the air. Very rare. No bibliographical references to Lucius or Laurentius have been found.

LAURENTIUS, Christianus

Disputation Physica de Aqua, quam D.O.M.A. in celeberrima Academia Wittenbergensi praeside M. Joh. Andrea Lucio, Dresd. Publicè ad ventilandam proponit Christianus Laurentius, Dresd. In auditorio minori, ad diem VI Julii horis antemerid.

Wittenberg: Typis Johannis Röhneri, Acad. Typogr. 1650.

First edition. 4to. 12 leaves (unpaginated). In the title, the “VI” and “antemerid” have been crossed out, with “3” and “pomerid” written in ink. Fine copy in modern boards. Bound with: Laurentius, C., *De aere* (1650); Pistorius, I., *De terra et igne* (1650); and Scultetus, A., *De elementis* (1649).

A DISSERTATION ON the Aristotelian element water presented at Wittenberg under the direction of Professor Lucius as a sequel to the dissertation *De aere*, which was given on 29 June 1650. Laurentius covers the known physical and chemical properties of all types of water, with references to the works of Aristotle, Georgius Agricola, Scaliger, Seneca, Sperling, et al. Salts contained in sea and mineral waters are discussed, as are various minerals and their water content. Two laudatory poems, one by Lucius and the other by Michael Bohemus, conclude this rare work to which no bibliographical reference has been found.

LAUSBERG, Johann

Dissertation Inauguralis Medica de Tenesmo Haemorrhoidalium quam praeside . . . Joanne Junckero . . . Pro gradu doctoris legitime obtinendo ad D. (blank) Octobr. Anno MDCCXLIV. Publico . . . submittit . . . Joannes Lausberg Elberfelda-Montensis.

Halle: Typis Joannis Christiani Hilligeri, Acad. Typogr. (1744).

First edition. 4to. 27, (1) pp., 2 leaves. Fine, crisp copy, in maroon quarter cloth antique, marbled boards. Bound with: Pfeiffer, Michael, *Propempticon . . . de arcano tartari* (Jena, 1745).

THE DOCTORAL DISSERTATION of Lausberg (dates unknown), on the history causes and treatment of hemorrhoids. The praeses was the famous pupil of Stahl, Johann Juncker (1679–1759), professor of medicine at Halle. There are sections of chemical and pharmacological interest, with references to Barholin, Hoffman, Sennert, Stahl, Teichmeyer, Wedel, et al. Very rare. Not located in available bibliographies.

LAVATTER, Diethelm

Dissertation Inauguralis Chémico-Médica de Antimonio variisque eius Tincturis cum alcalinis Menstruis factis. . . . Praeside Andrea Elia Büchnero . . . XVIII April. . . . MDCCCLXVII. Publico sistet examini Diethelms Lavatterus Thuricensis Helvetus.

Halle: Typis Jo. Christ. Hendelii Vidvae. (1767).

First edition. 4to. 44 pp. Good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL DISSERTATION of the Swiss physician Lavatter (dates unknown) on the preparation of tincture of antimony for medicinal uses, with numerous references to the works of earlier and contemporary chemists (e.g., Paracelsus, Basil Valentine, Kunckel, Becher, Stahl, and Boerhaave). The praeses, Andreas Elias Büchner (1701–1769), professor of

medicine and natural philosophy at Halle, published an important book on teaching the deaf to hear, which was translated into English (London, 1770; Wellcome, II, 266). Rare. Not in the usual chemical and medical bibliographies. (Ferchl, 76; Waring, 237)

LAVOISIEN, Jean François

Dictionnaire Portatif de Médecine, d'anatomie, de chirurgie, de pharmacie, de chymie, d'histoire naturelle, de botanique et de physique; qui contient les termes de chaque art, leur étymologie, leur définition & leur explication, tirés des meilleurs auteurs. Avec un vocabulaire Grec & un Latin, à l'usage de ceux qui lisent les auteurs anciens. Ouvrage utile à qui pratiquent ces arts, & nécessaire aux étudiants. Paris: Aux dépens de P. Fr. Didot le jeune. 1764.

First edition, first issue. 2 vols., 8vo., in 1. I: vi, 453, (1) pp., 1 leaf (blank). II: 1 leaf, 354 pp., 1 leaf. Small stains to edges of several leaves in volume II; otherwise very good copy in contemporary calf, gilt, dark-green morocco label.

A SCIENTIFIC DICTIONARY giving definitions of terms and practices then in use, with much of interest relating to chemistry and pharmacy. Latin-French and Greek-French vocabularies are at the end of the second volume. Another, slightly different issue also appeared in 1764 (see Wellcome). Revised editions were published in 1781 and 1793. Lavoisien (fl. 1760), a military surgeon, dedicated this work to Morand, who was a member of the Académie Royale des Sciences and fellow of the Royal Society (London) and was associated with other European societies. Scarce. Not in the usual chemical bibliographies. (Blake, 258; Eales, 1822; R. G. Neville and W. A. Smeaton, *Annals of Science*, 38 [1981], 614; Waller, 5642; Wellcome, III, 460)

LAVOISIEN, Jean François

Dictionnaire Portatif de Médecine, d'anatomie, de chirurgie, de pharmacie, de chymie, d'histoire naturelle, de botanique et de physique, . . . Nouvelle édition, corrigée & augmentée. . . Paris: Chez Théophile Barrois le jeune. 1793.

Fourth edition. 8vo. iv, 716 pp. Very fine copy, in original speckled calf, spine gilt-ruled, dark-blue morocco label.

A GREATLY ENLARGED (and possibly final) edition of this useful dictionary, the first published in one volume, with augmented Latin-French and Greek-French vocabularies at the end. Scarce. Not in the usual chemical bibliographies. (Blake, 258; R. G. Neville and W. A. Smeaton, *Annals of Science*, 38 [1981], 614; Wellcome, III, 460)

LAVOISIER, Antoine Laurent

L'Art de Fabriquer le Salin et la Potasse, Publié par ordre du Roi, Par les Régisseurs-Généraux des Poudres & Salpêtres. Paris: De l'Imprimerie Royale. 1779.

First edition. 8vo. 1 leaf, viii, (2), 84 pp. Woodcut on title page. With folding printed table and 4 folding plates of equipment (de la Gardette del. et sculp.). Very good copy in old vellum. Bound with: Laugier, M., Berthollet, C. L., & Tissot, *Instruction sur l'emploi de la lie de vin* (Paris, 1794), and several other works on salt-peter.

A COMPREHENSIVE DIGEST of information on the most economical large-scale preparation of soda (sodium carbonate) and potash (potassium carbonate) from plant ashes. "The régisseurs généraux des Poudres & Salpêtres issued in 1779 an anonymous work entitled *L'Art de Fabriquer le salin et la Potasse*, which was unquestionably written by Lavoisier. The régisseurs at this time were Lefaucheux, Clouet, Lavoisier, and Barbaut de Glatigny" (Duveen & Klickstein). General methods for making salts, the merits of the several processes based on actual experiments, and terms employed are discussed. Ten tables of useful data in the text include yields obtained by burning different kinds of wood, with subsequent lixiviation of the ashes. Detailed descriptions of the equipment used are given, and the copperplates by De la Gardette illustrate the equipment. A flattering report of the work at the end is signed on behalf of the Académie by Macquer and Cadet. (Duveen & Klickstein, 213; Neu, 2249)

LAVOISIER, Antoine Laurent

Collection de Divers Ouvrages d'Arithmétique Politique, par Lavoisier, Delagrangé, et autres.

Paris: De l'Imprimerie des CC. Corancez & Roederer. An IV. (1796).

Second edition. 8vo. 64 pp. Title page dusty; otherwise very good copy, uncut, in quarter calf antique, marbled boards, spine gilt-lettered and dated.

LAVOISIER'S CLASSIC statistical study of the agricultural resources of France, of chemical interest, first published as *Résultats extraits d'un ouvrage intitulé: de la richesse territoriale du royaume de France* (Paris, 1791). The present is the second and most complete edition of this important work. It contains an anonymous critique of the *Résultats*, together with an essay by the famous scientist Lagrange (pp. 49–56) on political economy and another essay on the same subject by Diannyère (pp. 57–61). "Although the collection . . . was published soon after Lavoisier's execution, the preface by Roederer eulogizes him, extols his ability, and claims the credit for having sponsored his original memoir. . . ."

Lavoisier's reputation must have been very great, judging from Roederer's prefatory remarks" (Duveen & Klickstein). Very rare. Not in the usual bibliographies. (Duveen & Klickstein, no. 265)

LAVOISIER, Antoine Laurent

Essays on the Effects Produced by Various Processes on Atmospheric Air; with a particular view to an investigation of the Constitution of the Acids. By M. Lavoisier, . . . Translated from the French, by Thomas Henry, F.R.S. . . .

Warrington: Printed by W. Lyres, for J. Johnson, No. 72, St. Paul's Church-Yard, London. 1783.

First edition. 8vo. xx, 142 pp., 1 leaf (advertisements). Foxing of several preliminary leaves (as usual); otherwise fine copy with the half title, in contemporary quarter calf, marbled boards, spine gilt-ruled and dated.

THE FIRST collected edition of Lavoisier's writings in English, of which there is no equivalent French collected edition. Thomas Henry translated these nine papers from the *Mémoires de l'Académie Royale des Sciences*, 1776–78 (published 1779–81). In the preface Henry discusses the general concept of phlogiston, as well as the theories and controversies of Lavoisier, Priestley, and Kirwan. Far from being an antiphlogistonist, Henry states (p. ix): "The existence of phlogiston, however, has not only been proved, but Dr. Priestley has clearly shewn that phlogiston and inflammable air (i.e., hydrogen) are the same thing . . ." The first essay, on the respiration of animals, marks the beginning of Lavoisier's serious study of this subject. Other essays deal with combustion, mineral acids, alum, iron pyrites, and sulphides, the nature and properties of fire, etc. In the eighth essay (pp. 96–118) of this important work, Lavoisier proposes his theory that oxygen (dephlogisticated air) is an essential constituent of all acids. Henry has added a number of valuable footnotes to these essays. (Blake, 258; Bolton, *First Supplement*, 262; Cole, 761; D.S.B., VI, 283; Duveen, 340; Duveen & Klickstein, 336; Partington, III, 371; Watt, I, 485a)

LAVOISIER, Antoine Laurent

Instruction sur l'Établissement des Nitrières et sur la Fabrication du Salpêtre, Publiée par ordre du Roi. . . .

Paris: De l'Imprimerie Royale. 1777.

First edition. 4to. 2 leaves, 83, (1) pp. With 4 folding copperplates (de la Gardette Sculp.). Large woodcut on title page and on verso of second leaf. Pristine copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

PRINTED UNDER the sponsorship of the Régisseurs généraux des Poudres & Salpêtres, in this important work Lavoisier gives detailed instructions on all phases of saltpeter manufacture. As it is the main ingredient of gunpowder, the shortage of saltpeter in France had caused serious concern, and under Turgot the Régie des Poudres was established to conduct investigations into the matter. On the advice of Lavoisier the Académie des Sciences announced a prize for the best essay on making saltpeter, which was won by the Thouvenel brothers. Lavoisier's continued interest in the saltpeter problem was largely responsible for much of the improvement achieved in the French national supply, which became of immense value during the revolutionary and imperial wars. By 1794 this edition had become so rare that the text was reprinted in octavo format. (Cole, 762; Duveen, 340; Duveen & Klickstein, 207; Partington, III, 466)

LAVOISIER, Antoine Laurent

Instruction sur l'Établissement des Nitrières, et sur la Fabrication du Salpêtre.

Paris: Chez Cuchet, Libraire, rue & maison Serpente. An II de la République, une et indivisible. (1794).

Second edition. 8vo. viii, 96 pp. With 4 folding copperplates (gravé par Delettre). Woodcut on title page and woodcut headpiece on page 1. Near-fine copy, uncut and unpressed, in half vellum antique, patterned boards, spine unlettered.

AS STATED by Cuchet in the *avertissement* to this first octavo edition of the *Instruction*, the handsome quarto edition of 1777 had become so rare by 1794 that the present printing was called for. The text is identical, apart from the omission of article XVI (pp. 64–66 of the 1777 edition). The plates, reengraved by Delettre, are not quite as good as the originals by de la Gardette in the quarto edition. Plate IV is on bluish paper. This edition has also become rare. (Cole, 763; Duveen & Klickstein, 208)

LAVOISIER, Antoine Laurent

Mémoires de Chimie.

N.p., n.d. (Paris, 1805).

First (only) edition. 2 vols., 8vo. I: 2 leaves, 416 pp. II: 1 leaf, 413, (1); 64 pp. Fine set in gilt-ruled modern red quarter morocco, marbled boards. An important association copy, from the library of Lavoisier's friend Michel Adanson (1727–1806), with marginal annotations by him.

IN 1792 LAVOISIER decided to prepare a complete edition of his publications, which was to fill eight volumes and contain as yet unpublished researches. This project was interrupted by his imprisonment and execution in 1794. The

Mémoires contain, therefore, only the greater part of volume I, the whole of volume II, and a small part of volume IV. This work was evidently printed in 1803, as Berthollet quotes it by volume and page in his *Essai de Statique Chimique* (1803). The unpublished sheets remained with Mme. Lavoisier, who published the *Mémoires* in 1805 with a brief introduction of her own. The volumes have only half titles to designate them, with no indication of publisher, place of printing, or date. Never offered for sale, the *Mémoires* were presented by Mme. Lavoisier to Lavoisier's former friends and a selected number of institutions. Consequently, the book is of great rarity. Remaining sets were sold as one lot from Mme. Lavoisier's library in 1836. The *Mémoires* were not reprinted in the *Oeuvres*. This choice copy came from the archives of the celebrated naturalist and friend of Lavoisier, Michel Adanson, who contributed several articles to the great *Encyclopédie* and was a member of the Académie Royale des Sciences. The contents of this important and final work by Lavoisier are discussed in detail by Duveen and Klickstein. (Bolton, 605; D.S.B., VIII, 87; Duveen & Klickstein, 186–200; Partington, III, 371; Thornton & Tully, 168)

LAVOISIER, Antoine Laurent

Mémoires de l'Académie Royale des Sciences.
Paris: Imprimerie Royale. 1778–1780.

First editions. 4to. 10 important papers extracted from the *Mémoires* for 1774–1777. Fine copies in half calf antique, marbled boards, maroon morocco label. Bound with: Sage, B. G., *Expériences propres à faire connoître que ce qu'un nomme acide phosphorique concret . . .* (*Mémoires*, Paris, 1780).

THE TEN papers are as follows: I. Premier essai du grand verre ardent de M. Trudaine (*Mémoires*, 1774 [1778], 62–72; Duveen & Klickstein, 22). II. Mémoire sur la calcination de l'étain dans les vaisseaux fermés; et sur la cause de l'augmentation de poids qu'acquiert ce métal pendant cette opération (*Mémoires*, 1774 [1778], 351–367; Duveen & Klickstein, 28). III. Mémoire sur l'existence de l'air dans l'acide nitreux, et sur les moyens de décomposer & de recomposer cet acide (*Mémoires*, 1776 [1779], 671–680; D. & K., 33). IV. Sur la combustion du phosphore de Kunckel, et sur la nature de l'acide qui résulte de cette combustion (*Mémoires*, 1777 [1780], 65–78; D. & K., 35). V. Analyse de quelques eaux rapportées d'Italie par M. Cassini le fils (*Mémoires*, 1777 [1780], 92–98; D. & K., 36). VI. Expériences sur la cendre qu'emploient les salpêtriers de Paris (*Mémoires*, 1777 [1780], 123–136; D. & K., 37). VII. Mémoire sur la dissolution du mercure dans l'acide vitriolique (*Mémoires*, 1777 [1780], 324–328; D. & K., 40). VIII. Expériences sur la combinaison de l'alun avec les matières

charbonneuses (*Mémoires*, 1777 [1780], 363–372; D. & K., 41). IX. Mémoire sur la vitriolisation des pyrites martiales (*Mémoires*, 1777 [1780], 398–400; D. & K., 42). X. De la combinaison de la matière du feu avec les fluides évaporables, et de la formation des fluides élastiques aëriiformes (*Mémoires*, 1777 [1780], D. & K., 43). Each paper is discussed in detail by Duveen and Klickstein.

LAVOISIER, Antoine Laurent

Oeuvres de Lavoisier publiées par les soins de son Excellence le Ministre de l'Instruction Publique et des Cultes. . .
Paris: Imprimerie Impériale. 1862–1893.

First edition. 6 vols., royal 4to. I (1864): 2 leaves, xi, (1), 728 pp. With frontispiece portrait of Lavoisier (engraved by Levasseur after a painting by David), and 16 folding plates. II (1862): 2 leaves, 828 pp. With 8 plates (2 folding). III (1865): 2 leaves, 795, (1) pp. With 12 plates (8 double page, and 2 folding). IV (1868): 2 leaves, 775, (1) pp. With 4 folding plates. V (1892): 2 leaves, iii, (1), 749, (1) pp. With 12 folding plates. VI (1893): 2 leaves, iii, (1), 717, (1) pp. With 2 plates. Very fine set, all edges gilt, in crimson quarter morocco, cloth boards, prize binding stamped in gilt on front covers: Académie de Paris. Prix du Concours Général. Volume II not quite uniform, in crimson quarter sheep, marbled boards, edges not gilt.

THE NATIONAL edition of the collected writings of Lavoisier, rarely found complete in the six volumes. All of his published and unpublished works, memoirs, and papers are reprinted. The tremendous undertaking of collecting and publishing Lavoisier's voluminous writings was entrusted by the French government to the distinguished chemist J. B. A. Dumas (1800–1884), president of the Académie des Sciences. In 1862, nineteen years after the project had first been proposed, volume II was finally published. After volume IV appeared in 1868, the death of Dumas delayed the publication of the last two volumes. Edited by Édouard Grimaux (1835–1900), volumes V and VI appeared in 1892 and 1893. This truly monumental work is described in detail by Duveen and Klickstein (pp. 374–456). (Bolton, 605; D.S.B., VIII, 87; Duveen & Klickstein, 338–690; Partington, III, 374; Smith, 281)

LAVOISIER, Antoine Laurent

Opuscules physiques et Chymiques, par M. Lavoisier, . . . Tome Premier.

Paris: Chez Durand neveu, Libraire, rue Galande. Didot le jeune, quai des Augustins. Esprit, au Palais Royal. 1774.

First edition, first issue. 8vo. 1 leaf, xxx, (2), 436 pp. With 3 folding copperplates of apparatus (de la Gardette del. et Sculp.). Fine copy in original mottled calf, spine richly gilt, maroon morocco label.

A FOUNDER OF modern chemistry and universally acknowledged as the greatest French chemist of the eighteenth century, Lavoisier (1743–1794) was educated as a lawyer. After attending the chemical lectures of G. F. Rouelle (1768), he began his researches in 1772 on combustion and calcination, experimenting with carbon (diamond), phosphorus, sulphur, and the conversion of calces into metals. “In 1774 Lavoisier published the first and only volume of his *Opuscules physiques et chimiques*, a pioneer work in which he gives a historical survey of previous workers’ efforts and then describes his own experiments on gases and the conclusions to be derived from them” (Duveen & Klickstein). Some of the experiments deal with the composition of the atmosphere and with oxygen. Published the same year as the first volume of Priestley’s *Experiments and observations on air* (1774), it exerted a tremendous influence on Continental chemists and set the stage for Lavoisier’s overthrow of the phlogiston theory. Partington (pp. 388–393) analyzes the contents and describes this work as “an advance over anything which had gone before.” A “very important book” (Duveen), one of Lavoisier’s four major works, and a milestone of chemical literature. (Bolton, 605; Cole, 769; D.S.B., VIII, 74; Duveen, 339; Duveen & Klickstein, 121; Norman, 1288; Partington, III, 372; Smith, 283; Wellcome, III, 460)

LAVOISIER, Antoine Laurent

*Opuscules Physiques et Chimiques, par A. L. Lavoisier . . .
Seconde Édition.*

Paris: Chez Deterville, Libraire, rue du Battoir, No. 16, quartier de l’Odéon. An IX (1801).

Second edition. 8vo. xxx, (2), 443, (1) pp. With 3 folding copperplates of apparatus (Gravé par Tardieu l’aîné Rue de Sorbonne No. 385). Very fine copy in pristine condition, in original mottled calf, gilt dentelles on covers, spine richly gilt, green leather label. Presentation copy to an unknown recipient, with 4-line legend in gilt on front cover stating that this was a prize awarded at the École Centrale de Rouen at the end of the course in l’An XI (i.e., 1803).

THE GENUINE second edition in which Deterville has reprinted the entire book with the errata corrected in the text and with the plates reengraved by Tardieu senior. Another so-called *seconde édition* published in 1801 is merely a reissue of the first edition, with the replacement of the dedication leaf to Trudaine de Montigny by a half title and a new title page, and with the same plates as the 1774 issue. The present edition is the first new printing of the *Opuscules* since Lavoisier’s death in 1794. It is complete by itself but is sometimes found as a third volume of the third edition of the *Traité élémentaire de chimie* (Paris: Deterville, 1801), with which it is uniform in size, title page, format, and type.

(Cole, 770; Duveen & Klickstein, 123; Edelstein, 1365; Morgan, 453; Partington, III, 372; Smith, 283; Wellcome, III, 460)

LAVOISIER, Antoine Laurent

Essays Physical and Chemical, by M. Lavoisier, . . . Volume the First. Translated from the French, with Notes, and an Appendix, by Thomas Henry, F.R.S.

London: Printed for Joseph Johnson, No. 72, St. Paul’s Church-Yard. 1776.

First English edition. 8vo. xxxii, 475, (1) pp. + 1 leaf (advertisements). With 3 folding copperplates of chemical apparatus. Fine copy in calf antique, maroon morocco label.

DEDICATED TO the president of the Royal Society, Sir John Pringle, this translation of the *Opuscules physiques et chimiques* was carried out by Thomas Henry with the assistance of John Aikin. A close version of the French original, omitting only the *Rapport*, it contains a laudatory preface by Henry and footnotes he added throughout the text. The important appendix (pp. 405–428) is the first English edition of the first version of Lavoisier’s famous 1775 memoir, in which he correctly explained the composition of the atmosphere and the role of oxygen in the calcination of metals and respiration (see Garrison-Morton, 922). It is followed by Henry’s account of Priestley’s opinions on his discovery of oxygen and its reaction with metals to form calces. Although the title states that this is the first volume, no others appeared. Duveen and Klickstein do not mention the advertisement leaf, present in this and other copies. Duveen describes this English edition as “rare.” (Blake, 258; Bolton, 606; Cole, 771; Cushing, L88; D.S.B., VIII, 87; Duveen, 339–340; Duveen & Klickstein, 124; Partington, III, 372; Smith, 282)

LAVOISIER, Antoine Laurent

Rapport des Commissaires chargés par le Roi de l’Examen du Magnétisme Animal. Imprimé par ordre du Roi.

Paris: Chez les Marchands de Nouveautés. 1784.

First 8vo. edition. 2 leaves, 66 pp. Large woodcut of royal arms on title page and woodcut headpiece on page 1. Top edge gilt, fore- and lower edges uncut. Near-fine copy, in early-nineteenth-century quarter calf, marbled boards.

AN ENTIRELY unrecorded edition with different collation and pagination from the two octavo reprints of the official quarto edition (Garrison-Morton, 4992.2) of the same year (i.e., Duveen & Klickstein, 224 and 224a). The *Rapport* is signed (on p. 62) by B. Franklin, Majault, Le Roi, Sallin, Bailly, Darcet, De Bory, Guillotin, and Lavoisier and is dated

(as in all editions) 11 August 1784. The colophon (p. 66) reads: “Imprimé en vertu d’un Décret exprès de de [sic] la Faculté, Pourfour-du-Petit, Doyen.” This work “dealt the death blow to animal magnetism in Paris, which soon ceased to be the fashion, and Mesmer left the city” (Duveen & Klickstein [pp. 249–253], who fully discuss the claims of Franz Anton Mesmer [1734–1815], regard Lavoisier as the author of the *Rapport*, as it is written in his style and “a slightly differing version which exists is actually in his handwriting”). Not in Duveen and Klickstein or the Duveen *Supplement*.

LAVOISIER, Antoine Laurent

Recueil de Mémoires et d’Observations sur la formation & sur la fabrication du Salpêtre. Par les Commissaires nommés par l’Académie pour le jugement du Prix du Salpêtre. Paris: Chez Lacombe, Libraire, rue Christine. 1776.

First edition, first issue. 8vo. 55, (1), 622 pp., 1 leaf. With 3 folding copperplates (De la Gardette Sculp.). Woodcut diagram on page 364. Complete with cancel leaf *Hh3 and original Hh3 (pp. 485–486), and page 491 in 2 states (text identical, different woodcut ornament). Very fine copy in original calf, all edges gilt, covers with triple-gilt fillets and inner gilt dentelles, rebacked spine richly gilt, original maroon morocco label. On the front pastedown endpaper is a label printed in red of the eighteenth-century bookseller Mozard.

A VALUABLE COLLECTION of memoirs on the production of saltpeter for the manufacture of gunpowder. This extensive survey of the literature comprises extracts from the earlier works of Glauber and Stahl, as well as more recent papers by Lavoisier, Louis Lemery, Pourfour-du-Petit, Pietch, Bertrand, Neuhaus, Ducoudray, Desmazis, Simon, Clouet, Bowles, and others. Also included are instructions on the construction and operation of nitrate works by the Swedish Ministry of War. Lavoisier was a member of the commission appointed to gather the information together, and he contributed a paper of his own on the composition of nitric acid. The commission also included d’Arcy, Baumé, Macquer, Montigny, and Sage. Étienne Mignot de Montigny (1714–1782) edited this work, examined each of the papers, and oversaw publication for the Académie Royale des Sciences. Duveen and Klickstein (p. 222), who make no mention of the cancel leaves (present in this copy), state that “it is difficult not to ascribe this volume chiefly to Lavoisier.” “A rare book” (Duveen, who lists it under Montigny.) The second issue appeared in 1779 with a cancel title page. (Cole, 772; Duveen, 404; Duveen & Klickstein, 203; Ferchl, 300; Neu, 3439; Partington, III, 411; Smith, 2 & 334)

LAVOISIER, Antoine Laurent

Raccolta di Memorie e di Osservazioni sulla Formazione, e fabbricazione del Salnitro fatta Da’ Commissari nominati dall’Accademia di Parigi per dare il giudizio intorno al premio del Salnitro. Traduzione dal Francese. Napoli: Nella Stamperia Reale. 1794.

First Italian edition. 8vo. 2 leaves, 434 pp., 1 leaf (Estratto). 3 folding copperplates. Few leaves at beginning slightly browned; otherwise a fine, crisp copy, with wide margins, in the original full vellum, spine gilt-lettered and numbered “Tom. I.”

“THIS IS A full Italian translation of the *Recueil de Mémoires et d’Observations sur la formation & sur la fabrication du Salpêtre* (Duveen & Klickstein 203), including even a translation of the original imprint, dated 1776. The memoir, ‘Sur l’existence de l’Air dans l’Acide nitreux, et sur les moyens de décomposer & de recomposer cet acide’ (Duveen & Klickstein, 204), which Lavoisier had contributed to the collection, appears here on pp. 421–432. The translator was Gioacchino Granito, who states in the dedicatory letter signed by him that he undertook the work by royal command. He obviously did not know that Lavoisier had edited the original volume in its entirety. The 3 folding plates at the end are re-engraved after de la Gardette’s originals” (Denis I. Duveen, No. 755 [see *Supplement to a Bibliography of the Works of A. L. Lavoisier*, London, 1965, pp. 47–48]). An extremely rare book, the existence of which was unknown to Duveen and Klickstein (*Bibliography of . . . Lavoisier*, London, 1954). Its description was given only in Duveen’s *Supplement (op. cit.)*. Although complete by itself, this book forms volume I of a two-volume set, the second volume being the *Raccolta delle Cinque Memorie sulla . . . Salnitro* (Naples, 1795), issued one year later. Not listed by any of the early chemical bibliographies.

LAVOISIER, Antoine Laurent

Raccolta delle Cinque Memorie sulla Formazione, e fabbricazione del Salnitro le quali A giudizio de’ Commissarij destinati dall’Accademia delle Scienze di Parigi riportarono il premio Traduzione dal Francese. Tom. II. Napoli: Nella Stamperia Reale. 1795.

First Italian edition. 8vo, 4 leaves, 448 pp. Some leaves very slightly browned; otherwise a fine, crisp copy, with wide margins, in the original full vellum, spine gilt-lettered and numbered “Tom. II.”

A COMPANION VOLUME to the *Raccolta di Memorie . . . sulla . . . Salnitro* (Naples, 1794) and bound uniformly with it. “One year after the publication of the above volume (i.e., *Raccolta*, 1794), Granito issued a complementary second volume on the same subject. . . . This contains Italian

versions of the prize essays submitted by the Thouvenel brothers, Lorgna, Gavinet and Chevrard, de Beunie and Thomassin de Saint-Omer, whose texts were included in the *Recueil de Mémoires et de Pièces sur la formation et de la fabrication du Salpêtre*, Paris, 1786 (Duveen & Klickstein, No. 237) on pp. 56–166, 167–267, 268–370, 371–398, 399–502 respectively” (Denis I. Duveen, No. 755 [see *Supplement to a Bibliography of the Works of A. L. Lavoisier*, London, 1965, p. 48]). Although Duveen gives the title of this extremely rare book, his discussion suggests that he had not actually seen a copy. He does not give a bibliographical description of it, as he does for the *Raccolta* (Naples, 1794). Not listed by any of the early chemical bibliographies.

LAVOISIER, Antoine Laurent

Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes . . . Par M. Lavoisier, . . .

Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1789.

First edition, second issue. 2 vols., 8vo. I: xlv, 322 pp. II: viii, pp. 323–653, (3). With 2 folding printed tables in volume I and 13 folding copperplates in volume II (drawn and engraved by Paulze Lavoisier, i.e., Madame Lavoisier). Small woodcut vignette on each title page, woodcut head- and tailpieces. Fine copy, with both half titles, in original tree calf, rebacked, spines gilt and dated, 2 black morocco labels on each volume. Contemporary signature in ink on half titles: “Ce livre appartient à Mr. Thoelden, Rue et hôtel Richelieu.”

ONE OF the great milestones in the history of chemical literature. By common consent modern chemistry begins with this work, “which finally freed the science from its phlogiston chains and formed the starting point of its modern progress. It may be said to have done almost as much for chemistry as Newton’s *Principia* did for physics” (Zeitlinger). Lavoisier used the balance to demonstrate the weight of matter at every chemical change, defined the terms *element* and *compound*, explained combustion and the rusting of metals as a chemical combination with oxygen, and through his concept of the conservation of matter developed methods of chemical analysis. The book contains the first list of twenty-three chemical elements and their compounds. An incomplete first issue in one volume (known in only about three copies) was circulated by Lavoisier, but he quickly decided that the book should be in two volumes, as here. Full details are given by Duveen & Klickstein (pp. 154–173). Clearly this is the form in which Lavoisier wished his great book to go forth to the world. (Blake, 258; Bolton, 606; Cole, 775; Dibner, 43; D.S.B., VIII, 87; Duveen, 340; Duveen & Klickstein, 154; Horblit, 64; Partington, III, 373; P.M.M., 238; Sparrow, 127; Wellcome, III, 460)

LAVOISIER, Antoine Laurent

Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes, par M. Lavoisier. Nouvelle édition, à laquelle on a joint la Nomenclature Ancienne & Moderne, pour servir à l'intelligence des Auteurs; différens Mémoires de MM. Fourcroy & Morveau, & le Rapport de MM. Baumé, Cadet, Darcet & Sage, sur la nécessité de réformer & de perfectionner la Nomenclature Chimique. . . .

Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1789.

Nouvelle (i.e., second) edition. 3 vols., 8vo. I: xlv, 322 pp. With 2 folding printed tables. II: viii, 326, (2) pp. With 13 folding copperplates (Paulze Lavoisier, Sculptit). III: iv, 259, (1) pp. With large folding printed table. Very fine copy, uncut and unpressed, in full calf antique, spines richly gilt and dated, 2 maroon morocco labels on each volume.

IN THIS “nouvelle” edition of the *Traité* the type has been completely reset, the misprints corrected, and for the first time each volume is separately paginated. A close paginary reprint of the original edition published earlier in 1789, it includes for the first time as the third volume the third printing of the *Nomenclature Chimique* (Duveen & Klickstein, 131). The dated colophon of the first edition of the *Traité* (vol. II, p. 653) states that Chardon was the printer. On the corresponding page of the present edition (vol. II, p. 326) there is no colophon or printer’s name. The thirteen plates have also been reengraved (albeit they are signed by Mme. Lavoisier). It is probable that this is a pirated reprint (possibly by Chardon), as suggested by Duveen (*Supplement*, pp. 112–113). This three-volume set is the first complete edition to unite Lavoisier’s two major works. (Blake, 258; Cole, 776; Duveen, 340–341; Duveen & Klickstein, 155; Ferguson, II, 12; Partington, III, 373; Smith, 283; Wellcome, III, 461)

LAVOISIER, Antoine Laurent

Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes; avec Figures. Par M. Lavoisier, . . . Seconde édition, . . .

Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1793.

“Seconde” edition. 2 vols., 8vo. I: xlv, 322 pp. With 2 folding printed tables facing pages 203 and 295 (in this copy the second table faces p. 215). II: viii, 327, (1) pp. With 13 folding copperplates (unsigned). Fine copy, with both half titles, in original mottled calf, spines gilt, crimson morocco labels (surface of covers and spines worn).

THE SO-CALLED second edition, but actually the third printing of this work. In a letter dated 6 January 1793 Lavoisier wrote to Robert Kerr (the translator of the *Traité* into

TRAITÉ
ÉLÉMENTAIRE
DE CHIMIE,
PRÉSENTÉ DANS UN ORDRE NOUVEAU
ET D'APRÈS LES DÉCOUVERTES MODERNES;
Avec Figures :

*Par M. LAVOISIER, de l'Académie des
Sciences, de la Société Royale de Médecine, des
Sociétés d'Agriculture de Paris & d'Orléans, de
la Société Royale de Londres, de l'Institut de
Bologne, de la Société Helvétique de Basle, de
celles de Philadelphie, Harlem, Manchester,
Padoue, &c.*

TOME PREMIER.



A PARIS,
Chez CUCHET, Libraire, rue & hôtel Serpente.

M. DCC. LXXIX.

*Sous le Privilège de l'Académie des Sciences & de la
Société Royale de Médecine.*

English) complaining that another edition of his *Traité* had recently been published in Paris without his knowledge or consent. Although Cuchet's name appears on the title pages, the printer was not Chardon but de Boiste (see vol. II, p. 327). The physical appearance of these volumes closely resembles that of the first edition of 1789, but different type and good quality paper are still used. The woodcut title-vignettes and head- and tailpieces are different. The errata of the first edition are corrected only in part, and other small errors are made in the text and the plates, details on which are given by Duveen and Klickstein and by Cole. The existence of three "second" editions all with Cuchet titles, but two with de Boiste imprints and one with a Chardon imprint, has never been satisfactorily explained. It seems likely that Cuchet employed de Boiste, who was supplied with plates signed by Mme. Lavoisier and unsigned plates, as mixed copies exist (e.g., copy offered by Dawson's of Pall Mall, Cat. 149, item 729, December, 1965). Only volume II is in the Wellcome Library. (Cole; 777; Duveen & Klickstein, 156; Wellcome, III, 461)

LAVOISIER, Antoine Laurent

Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes; avec Figures: par M. Lavoisier, . . . Seconde édition. . . .
Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1793.

"Seconde" edition. 2 vols., 8vo. I: xlv, 322 pp. With 2 folding printed tables facing pages 203 and 295. II: viii, 331, (1) pp. With 13 folding copperplates (Paulze Lavoisier Sculpsit). Fine copy, with both half titles, in original speckled calf, spines gilt, crimson morocco labels.

ALTHOUGH DESIGNATED the "seconde" edition, it is in fact the fourth printing of the *Traité*. Lavoisier probably urged Cuchet to publish this (third authorized) edition to counteract the distribution of the (presumably) pirated "seconde" edition printed by de Boiste and published under Cuchet's name. Printed by Chardon (see vol. II, p. 331), no significant additions or changes have been made to the text of the first edition of the *Traité*, but the errata are corrected. The title-vignettes and head- and tailpieces are the same as those in the first edition, as are the plates (but with minor reworking by Mme. Lavoisier). (Cole, 778; Duveen & Klickstein, 157)

LAVOISIER, Antoine Laurent

Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes; avec Figures: par M. Lavoisier, . . . Seconde édition. . . .
Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1793.

"Seconde" edition. 2 vols., 8vo. I: xlv, 322 pp. With 2 folding printed tables facing pages 203 and 295. II: viii, 327, (1) pp. With 13 folding copperplates (Paulze Lavoisier Sculpsit). Fine copy with both half titles, partly printed on bluish paper, all edges gilt, in speckled calf antique with gilt inner dentelles, spines gilt-ruled and dated, red morocco labels. From the library of Gabriel Gustav Valentin (1810–1883), with neat signature ("Valentin") and small woodcut stamp ("G. Valentin") on each title page.

THE FIFTH printing of the *Traité*, the second by de Boiste (see vol. II, p. 327) of the so-called *seconde édition*. The type used is slightly smaller than that of the earlier (pirated) de Boiste printing, but all the misprints and errata have now been corrected. The original plates signed by Mme. Lavoisier are used. The woodcut headpiece on the first page of text in each volume is identical to that of the "seconde" edition printed by Chardon. "It might be conjectured that the pirated edition had so quickly sold out that the forger felt encouraged to repeat his fraud. It is likewise thinkable that Cuchet forced de Boiste to print again, to make all the necessary corrections and to use the original plates because he did not want to have circulated under his name books which were so obviously fraudulent" (Duveen & Klickstein). Valentin, the former owner of this copy, was professor of physiology at Bern and published works on this and other subjects (see Poggendorff, II, 1165). (Cole, 779; Duveen & Klickstein, 158; Wellcome, III, 461)

LAVOISIER, Antoine Laurent

Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes; avec Figures: par M. Lavoisier, . . . Troisième édition, corrigée et augmentée de plusieurs Mémoires nouveaux. . . .
Paris: Chez Deterville, Libraire, rue de Battoir, no. 16, quartier de l'Odéon. An X. 1801.

"Troisième" edition. 2 vols., 8vo. I: xlv, 386 pp. With 2 folding printed tables facing pages 203 and 295. II: vii, (1), 377, (1) pp. With 13 folding copperplates (Paulze Lavoisier Sculpsit). Bound without half titles; otherwise fine copy in contemporary gilt-ruled half calf, marbled boards, maroon morocco labels. Early-nineteenth-century signature ("Henryson") at foot of each title page.

THE SO-CALLED *troisième édition*, the sixth printing of the *Traité* but the first to be printed by Crapelet and published by Deterville after Lavoisier's death in 1794. For the first time, the first two of the three papers Lavoisier wrote on respiration are reprinted in this work, as well as his two memoirs on transpiration, the second of which had not been previously published. Copies are known with "An 9" instead of "An IX" in the imprint and a Deterville catalogue

(pp. 16) at the end of volume II (e.g., Wellcome). (Bolton, 606; Cole, 780; Duveen & Klickstein, 159; Partington, III, 373; Wellcome, III, 461)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr Lavoisier, . . . Translated from the French, by Robert Kerr, . . .

Edinburgh: Printed for William Creech, and sold in London by G. G. and J. J. Robinsons. 1790.

First English edition. 8vo. 50, 511, (1) pp. With 2 folding printed tables facing pages 185 and 267, and 13 folding copperplates (reengraved by D. Lizars after the originals by Mme. Lavoisier). Plates I, XI, and XIII are unsigned. Half title not present; otherwise very good copy in original calf, rebacked, spine gilt-lettered and dated. From the library of the zoologist and surgeon Edward Turner Bennett (1797–1836), a founder of the Entomological Society (1832) and author of zoological works (see D.N.B.), with his signature in pencil on title page.

THE ENGLISH translation of the first edition of the *Traité* (Paris, 1789) and the only one on which all English and American editions are based. This careful translation introduced English-speaking chemists to Lavoisier's epoch-making theories. The Scottish translator Robert Kerr (1755–1813), an ardent supporter of Lavoisier's antiphlogistic chemistry, states in his advertisement (p. viii): "A few explanatory notes are added [and] some parenthetical expressions, only relative to the subject, which, in their original place, tended to confuse the sense." Some alterations have been made in the tables in the appendix to accommodate the English reader: e.g., rules for converting French weights and measures are added and temperatures are given in degrees Fahrenheit. (Blake, 258; Bolton, 606; Cole, 782; D.S.B., VIII, 87; Duveen, 341; Duveen & Klickstein, 163; Partington, III, 373; Watt, II, 591x)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr. Lavoisier, . . . Translated from the French by Robert Kerr, . . . Second edition, with notes, tables, and considerable additions.

Edinburgh: Printed for William Creech; and sold in London by G. G. and J. J. Robinsons. 1793.

Second English edition. 8vo. xlvii, (2), 50–592 pp. With 2 folding printed tables facing pages 255 and 338 and 13 folding copperplates (by D. Lizars after the originals by Mme. Lavoisier). Plates XI and XIII are unsigned. Half title not present; otherwise very good copy in blind-ruled calf antique, green morocco label. From the library of the chemist Sir Henry

Enfield Roscoe (1833–1915), with neat signature ("H. Roscoe") in ink on flyleaf and several marginal annotations in pencil.

THE SECOND edition of the Kerr translation, with an additional eighty-one pages of new material and the type completely reset. It was published because the first edition of 1790 was exhausted. The "Advertisment" [*sic*] has been rewritten, but the substance of the text is the same as in the earlier edition. The plates are identical to those of the 1790 edition, but the impressions are not as sharp. An important change has been made in plate XI (discussed by Duveen & Klickstein); the appendix is increased to thirteen tables, weights are converted throughout to their English equivalents, and temperatures are given in degrees Fahrenheit (not in Reaumur, as in Lavoisier's original). This copy has a distinguished provenance, having belonged to the celebrated chemist H. E. Roscoe, who studied under Thomas Graham, Alexander W. Williamson, and Robert W. Bunsen. Roscoe succeeded Sir Edward Frankland as professor at Owens College, Manchester (later the University of Manchester), where he established an important research school. An excellent teacher, Roscoe collaborated with Carl Schorlemmer, his assistant (who became the first professor of organic chemistry in England), in writing the inorganic part of the well-known *A Treatise on Chemistry*. (Cole, 783; Duveen & Klickstein, 166)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr Lavoisier, . . . Translated from the French by Robert Kerr, . . . Third edition, with notes, tables, and considerable additions.

Edinburgh: Printed for William Creech; and sold in London by G. G. & J. Robinsons, and T. Kay. 1796.

Third English edition. 8vo. xlvii, (2), 50–592 pp. With 2 folding printed tables facing pages 255 and 338, and 13 folding copperplates (by D. Lizars after the originals by Mme. Lavoisier). Plates XI and XIII are unsigned. Mainly marginal foxing of plates; otherwise very good copy with half title, in contemporary tree calf, both covers with elaborate gilt dentelles, rebacked, with ornamental gilt spine.

A CLOSE PAGINARY reprint from a new setting of type of the second Kerr translation (Edinburgh, 1793). In the added "Postscript to this Third Edition" (pp. x–xi) Kerr laments the execution of Lavoisier: "Had Lavoisier lived, as expressed in a letter received from him by the Translator a short while before his massacre, it was his intention to have republished these *Elements* in an entirely new form, composing a Complete System of Philosophical Chemistry: And, as a mark

of his satisfaction with the fidelity of this translation, he proposed to have conveyed to the Translator, sheet by sheet as it should come from the press, that new and invaluable work, alas! now for ever lost." (Cole, 784; Duveen & Klickstein, 167; Smith, 282)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr Lavoisier, . . . Translated from the French by Robert Kerr, . . . Fourth edition, with notes, tables, and considerable additions.

Edinburgh: Printed for William Creech; and sold in London by G. G. & J. Robinson, and T. Kay. 1799.

Fourth English edition. 8vo. xlvii, (2), 50–592 pp. + 2 leaves (advertisements). With 2 folding printed tables facing pages 255 and 338, and 13 folding copperplates (by D. Lizars after the originals by Mme. Lavoisier). Plates XI and XIII are unsigned. Mild water staining of plates; otherwise good copy with half title, in modern gilt-ruled half calf, cloth boards. Signature (R. L. Taylor) in ink on title page.

A CLOSE PAGINARY reprint from a new setting of type of the third English edition (Edinburgh, 1796). The American editions of 1799 and 1801 were based on the present printing. This copy belonged to the late-nineteenth to early-twentieth-century English chemist R. L. Taylor, the author of several textbooks for the use of students. Bolton lists six titles by Taylor published between 1886 and 1901. (Blake, 258; Bolton, 606; Cole, 785; Duveen & Klickstein, 168; Osler, 1208; Wellcome, III, 461)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr Lavoisier, . . . Translated from the French by Robert Kerr, . . . Fifth edition, with notes, tables, and considerable additions. In two volumes.

Edinburgh: Printed for W. Creech; and sold in London by G. & J. Robinson, and T. Kay. 1802.

Fifth English edition. 2 vols., 8vo. I: xlvii, (2), 50–417, (3) pp. With 2 folding printed tables facing pages 301 and 385. II: viii, 276 pp. With 14 folding copperplates (by D. Lizars after the originals by Mme. Lavoisier). Plates XI, XIII, and XIV are unsigned. Fine copy in original tree calf, spines gilt-ruled, red morocco labels.

THE FINAL edition in English by Kerr, dedicated to his brother Charles Kerr, of Calder-Bank. So many additions were made to the book that it was necessary to divide it into two volumes. Based on the third edition, this printing is the first with an index to the whole work. The appendix and addenda (pp. 226–255) contain most of the new material, including a translation of a paper by Hassenfratz and

Adet for the first time: "New System of Chemical Characters, adapted to the New Nomenclature, by Messrs Hassenfratz and Adet: with some Alterations by the Translator" (pp. 226–242). Bound after the thirteen plates of the *Traité*, plate XIV illustrates the chemical symbols created by Hassenfratz and Adet. The addenda contain details on the newly discovered element columbium (i.e., niobium), carbon monoxide, nitrous oxide, and lactic acid, taken from *A System of Chemistry* (Edinburgh, 1802) by Thomas Thomson. (Bolton, 606; Cole, 786; Duveen & Klickstein, 169; Morgan, 449; Smith, 282; Wellcome, III, 461)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr Lavoisier, . . . Translated from the French, by Robert Kerr, . . . Fourth edition, with notes, tables, and considerable additions.

Philadelphia: Printed for Mathew Carey, Decem. 12, 1799.

First American edition. 8vo. (in 4s). xliii, (1), (49)–592 pp. (pp. 45–48 omitted from pagination, but text complete). With 2 folding printed tables (facing pp. 255 and 338) and 13 folding copperplates (after the originals by Mme. Lavoisier). Occasional light foxing (characteristic of American paper of the period); otherwise very good copy in calf antique, maroon morocco label, spine dated. From the library of Washington Lemuel Atlee (1808–1878), pioneer American surgeon and professor of medical chemistry, with his signature in ink in top blank margin of title page, and 4-line note on page 189.

AN AMERICAN reprint of the fourth English edition, with the pagination following closely that of the Kerr "fourth" edition (Edinburgh, 1799). According to Duveen and Klickstein (p. 187): "All thirteen plates are signed R. Scot sc. and . . . the first five plates . . . have added the line, 'Sold by M. Carey, No. 118 Market St. Philad^a.'" The present copy has only plates II and IV signed "R. Scot sc.," and plates I through V have the Carey imprint. All the other plates are blank in the lower margins. The lower right-hand margin of plate XII is very faintly inscribed "Tiebout Sculp." This copy thus has plates in a different state from those described by Duveen and Klickstein. (Blake, 258; Cole, 787; Duveen & Klickstein, 170; Edelstein, 1352; Smith, 282)

LAVOISIER, Antoine Laurent

Elements of Chemistry, in a new systematic order, containing all the modern discoveries. . . . By Mr. Lavoisier. . . . Translated from the French by Robert Kerr, . . . From the fifth Edinburgh edition. With notes, tables, and considerable additions. In two volumes.

New York: Printed for Evert Duykinck, No. 110 Pearl-Street, and James and Thomas Ronalds, No. 188 Pearl-Street. 1806.

Second American edition. 2 vols., 8vo. in 1. I: xxxvi, (37)–355, (1) pp. With 2 folding printed tables (facing pp. 245 and 325). II: vii, (1), (9)–243, (1) pp. With 14 folding engraved plates (13 of apparatus after the originals by Mme. Lavoisier and 1 of chemical symbols by Hassenfratz & Adet). Very good copy in original tree calf, spine gilt-ruled, maroon morocco label.

THE FIRST American reprint of the two-volume Edinburgh (1802) edition. The third appearance of the English translation by Kerr in America, it was preceded by the two issues of the fourth English translation (Edinburgh, 1799), published in Philadelphia (1799) and New York (1801). Duveen and Klickstein (p. 189) state that all the plates are signed “R. Scot sc.,” but in this copy only plates II and IV are thus signed; the others are unsigned. (Bolton, 606; Cole, 788; Duveen & Klickstein, 172; Edelstein, 1353; Morgan, 450; Smith, 282)

LAVOISIER, Antoine Laurent

Trattato Elementare di Chimica. Con nuovo metodo esposto dopo, le scoperte moderne; e con figure dal Sig. Lavoisier, . . . Tradotto in Italiano per use del Corpo Regale dell'Artigliera di Napoli.
(Naples:) Presso Donato Campo. 1791, 1792.

First Italian edition. 2 vols., 8vo. I (1791): xxxiv, 320 pp., 1 leaf (errata). With 3 folding printed tables (facing pp. 189, 225, and 280) and 2 folding copperplates (Cimarelli Incise). II (1792): xvi, 326 pp., 1 leaf (blank). With 5 folding plates (III and IV signed “Cimarelli Incise”; I, II, and V not signed). Very fine, essentially pristine copy, in original full vellum, red and grey leather labels.

IN THE first volume of this Italian edition of the *Traité* (Paris, 1789) the dedication is signed by Luigi Parisi and dated 30 January 1791, clearly indicating that the translation (in collaboration with the professor of chemistry Gaetano La Pira) was done in 1790. Almost simultaneously with this translation there appeared another, by Vincenzo Dandolo (Venice, 1791). It has been pointed out by A. G. Debus (*Ambix*, 1963, XI, 155–156) that the 30 January 1791 date is “so early in the year that it is likely that this first volume of the Neapolitan edition was in print prior to Dandolo’s translation.” A delay in printing the second volume resulted in it not appearing until 1792. In the meantime, Dandolo had seen the first volume and attacked it publicly. Parisi and La Pira state in the second volume that they had repeated Lavoisier’s important experiments and claim that the Venice translation contains many errors which Dandolo had promised to correct in a second edition. The Naples translation was made for the use of the royal artillery and engineering corps stationed there. The plates contain fewer figures than in Mme. Lavoisier’s originals.

Duveen and Klickstein were unaware of the existence of this Naples edition. Of great rarity, only three copies have been traced: Debus, Cole (now at Wisconsin), and this copy. (Cole, 791; Duveen, *Lavoisier Supplement*, 737)

LAVOISIER, Antoine Laurent

Trattato Elementare di Chimica presentato in un ordine nuovo dietro le scoperte moderne; con figure: del Sig. Lavoisier . . . Recato dalla Francese nell’Italiana favella e corredato di annotazioni da Vincenzo Dandolo Veneto edizione seconda corretta, ed ampliata di due Dissertazioni inedite dell’Autore sulla respirazione e sulla traspirazione, e di nuove annotazioni del Traduttore. . . .
Venice: Dalla Stampe di Antonio Zatta e Figli. 1792.

Second Dandolo edition. 4 vols., 8vo. I: 399, (1) pp. With 2 folding printed tables (facing pp. 265 and 361). II: viii, 305, (3, blank). With 13 folding copperplates (unsigned, after the originals by Mme. Lavoisier). III: viii, 296 pp. IV: viii, 234; (2), 3–46 pp. Occasional very minor marginal foxing; otherwise fine set with all half titles, in original half calf, speckled boards, spines gilt-ruled, tan leather labels.

PUBLISHED WITHIN four months of the first Dandolo edition (Venice, 1791), the translator has added more notes and corrected errors brought to his attention by Parigi and La Pira in their translation (Naples, 1791, 1792) of the *Traité* (Paris, 1789). Volume III, entitled *Esame delle Affinità Chimiche*, is Dandolo’s Italian translation of parts of the essay on chemical affinity by Guyton de Morveau in the *Encyclopédie Methodique* (see W. A. Smeaton, *Ambix*, 1957, VI, 28–29). Volume IV is Dandolo’s Italian adaptation of the “Synonymie” and the “Dictionnaire” of the *Nomenclature Chimique* (Paris, 1787). The two dissertations (on respiration and transpiration in animals) by Seguin and Lavoisier are described by Duveen and Klickstein (nos. 102 and 106). They are included at the end of volume IV. (Bolton, 606; Cole, 793; Duveen & Klickstein, 150, 181; Ferguson, I, 196–197; Partington, III, 373)

LAVOISIER, Antoine Laurent

System der antiphlogistischen Chemie von Anton Lorenz Lavoisier . . . Aus dem Französischen übersetzt wie auch mit Anmerkungen und Zusätzen begleitet von D. Sigismund Friedrich Hermbstädt . . . Zweite durchaus verbesserte Ausgabe. . . .
Berlin und Stettin: bei Friedrich Nicolai. 1803.

Second German edition. 2 vols., 8vo. in 1. I: xxxvi, 420 pp. With unsigned engraved portrait frontispiece of Lavoisier (conjugate with title page) and 6 folding printed tables (facing pp. 262, 266, 273, 276, 278, 290). II: 1 leaf, 303, (1) pp. With

10 folding copperplates (reengraved versions of those by Mme. Lavoisier). Fine copy in original half calf, speckled boards, spine gilt-ruled, orange morocco label.

THE SECOND and best German edition (first: Berlin & Stettin, 1792) of the *Traité* (Paris, 1789), translated by Sigismund Friedrich Hermbstädt (1760–1833), the first German chemist to support Lavoisier's antiphlogistic theory. Extensive additional notes and comments attacking the phlogistonists have been supplied by Hermbstädt, as well as a portrait and biography of Lavoisier, translated from the French of Jérôme Lalande (*Notice sur la vie et des ouvrages de Lavoisier, Magasin encyclopédique*, I, 1795). The plates are identical to those of the 1792 first German edition. The first three plates of the French original are omitted, and the remainder are somewhat modified and less elegantly drawn than those by Mme. Lavoisier. (Bolton, 606; Cole, 790; Duveen & Klickstein, 176; Partington, III, 373; Waller, 11176)

LAVOISIER, Antoine Laurent, and MACQUER, Pierre Joseph

Prix Extraordinaire Proposé par l'Académie Royale des Sciences, Pour l'Année 1778.

(Colophon: A Paris, de l'Imprimerie Royale. 1775.)

First edition. 4to. 10 pp., 1 leaf (blank). Drop title with ornamental woodcut headpiece. Lower blank margin of each leaf carefully repaired (nowhere near text); otherwise fine copy with wide margins, in quarter calf antique; marbled boards, spine gilt-lettered and dated.

AN EXTREMELY rare work, issued by the Académie des Sciences, concerning increasing the national output of saltpeter, the essential ingredient of gunpowder. "On Lavoisier's advice, Turgot directed the Académie to announce that a prize would be awarded in 1778 for the best essay on making saltpeter. . . . A committee, consisting of Macquer, Sage, Baumé, Montigny, d'Arcy and Lavoisier, was promptly appointed. Within a month a program (the present work), drawn up by Macquer, was printed in 2000 copies" (Duveen & Klickstein, p. 220). For many years Duveen and Klickstein were unaware that copies of this pamphlet had survived; see their bibliography, p. 267).

LEBLANC, Nicolas

Description de divers Procédés pour extraire la Soude du Sel Marin, faite en exécution d'un arrêté du Comité de Salut public du 8 Pluviose, an 2 de la République Française. . . .
Paris: De l'Imprimerie du Comité de Salut Public. An 3 de la République Française. (1794).

First edition. 4to. 1 leaf, 80 pp. With 11 folding engraved plates (plans, furnaces, and equipment). Very fine copy, uncut with wide margins, in marbled boards antique, dark-brown morocco label. Unobtrusive eighteenth-century stamp on title page: République Française École du Genie.

A MILESTONE TEXT in the history of chemistry and chemical technology, being the earliest account of the discovery in 1789 by the chemist Leblanc (1742–1806) of the conversion of sea salt into soda on a commercial scale. Salt was first converted to sodium sulphate (by heating with sulphuric acid), and this was roasted with limestone and coal to produce a mixture of soda and calcium sulphide called "black ash." The soda was extracted with water, leaving a residue of insoluble calcium sulphide. Almost the entire alkali industry of the nineteenth century rested upon this important discovery, when that was the largest single chemical industry. Although Leblanc did not publish the details of his process, in 1790 he formed a company with Dizé and Henri Shée and started to produce soda (1791–93), but in 1793 work was abandoned owing to the wartime shortage of sulphuric acid. Early in 1794 the Committee of Public Safety appointed Jean D'Arcet, Alexandre Giroud, Claude-Hugues Lelievre, and Bertrand Pelletier to examine and publish all known processes for making soda. Published in November 1794, this report is the result, and it "remains the most important source of knowledge of the Leblanc process" (Gillispie, *Isis*, 1957, p. 152). Scarce. (Cole, 369; D.S.B., VIII, 113; Duveen, 169; Partington, III, 563; Singer, *History of Technology*, IV, 239)

LE BRETON, Jean Baptiste

Les Clefs de la Philosophie Spagyrique, qui donnent la connoissance des Principes & des véritables Operations de cet Art dans les Mixtes des trois genres, . . .

Paris: rué S. Jacques, Chez Claude Jombert, au coin de la rué des Mathurins, à l'Image Nôtre-Dame. 1722.

First edition. 16mo. 4 leaves, 398 pp., 1 leaf (advertisements). Very fine copy, in original mottled calf, spine richly gilt. This copy has a copperplate frontispiece tipped in, which is not part of the book. The plate depicts a draped woman holding an open book on which the word "Physica" is written; above her head are the sun and moon, and at her feet there is a rustic scene. The plate is dated at Paris, "Apud Georgium Iosse . . . MDCLIII" (i.e., 1654).

LE BRETON (d. ca. 1715) was a physician in the faculty of medicine at Paris, as stated on the title, but no details of his life have been recorded. Divided into two parts, this alchemical treatise was much in demand by those who wished to pass from the theory to the practice of the hermetic art. The author describes the main operations and processes of practical chemistry, as well as the philosopher's stone and transmutation. Ferguson attributes this work to Charles Le Breton, author of a treatise on surgical remedies (1716) but states that he does "not know for certain if he be the same as the chemist." There is an interesting note on the works attributed to J. B. Le Breton in the Wellcome Catalogue. Another edition (or issue) appeared in 1725. (Caillet, 6315; Duveen, 344; Ferchl, 303; Ferguson, II, 15; Ferguson Coll., 395; Guaita, 1528 ["Rare"]; Kopp, *Die Alchemie*, 1886, II, 364; Mellon, 151; Neu, 2261; Verginelli, 177; Wellcome, III, 467)

LE CLERC, Charles Gabriel

La medecine aisée, contenant plusieurs remedes faciles & expérimentez pour toute sorte de maladies internes & externes: avec une petite pharmacie commode & facile à faire à toute sorte de personnes, par Mr Le Clerc, Conseiller Médecin du Roy.

Paris: Estienne Michallet. 1697.

First edition. 12mo. 8 leaves, 360 + 56 pp. Good copy in contemporary calf, spine richly gilt, maroon morocco label. Bound with: Digby, Kenelm, *Remedes souverains et secrets experimentez* (Paris: Guillaume Cavalier, 1689).

LE CLERC (1644–ca. 1700), an eminent French physician and surgeon, was the author of several important works, of which the Wellcome Library possesses about twenty editions. His most important work was *La chirurgie complète* (Paris, 1695) (Garrison-Morton, 5574). *La medecine aisée* first appeared (Paris: E. Michallet, 1696) a year earlier, but as the imprint of this copy differs only in the date, it is probably the second issue of the first edition. The book describes the preparation of various types of medicine and is of pharmaceutical chemical interest. In the "petite pharmacie" (the last fifty-six pages) the preparations of pharmaceutical chemicals are described, many of them being derived from plants and animals. Goldsmith (no. 659) erroneously ascribed this title and *La chirurgie complète* to Daniel Le Clerc (1652–1728), who was an entirely different French physician. Rare. This title is not mentioned by Cole, Ferchl, Garrison and Morton, Kremers and Urdang, Neu, Osler, Waller, Watt, etc. (Wellcome, III, 470 [1696 ed.]

LE CLERC, Jean

Joan. Clerici Physica sive de Rebus Corporeis Libri Quinque. In quibus, praemissis potissimis Corporearum Naturarum phaenomenis & proprietatibus, Veterum & Recentiorum de eorum causis celeberrimae conjecturae traduntur. . . .

London: Impensis A. Swall & T. Childe, ad Insigne Monocerotis in Coemeterio D. Pauli. 1696.

First English edition. 12mo. 12 leaves, 492 pp., 2 leaves. With 3 folding engraved plates (containing 17 figures), facing pages 26, 402, and 454. Lacks 2 leaves (signatures B6 and B7; pp. 35–38), which appear to have become detached at an early period; otherwise a very good copy, in contemporary unlettered paneled calf.

LE CLERC (1657–1736), a theologian and brother of the celebrated Swiss physician Daniel Le Clerc (1652–1728), was born in Geneva and died in Amsterdam. His *Physica* first appeared at Amsterdam in 1696 in 12mo. and was evidently well received, as a sixth edition was published in 1705. This work is divided into five books, which cover the universe, land and water, air and meteors, plants and animals, and bodies in general. Although he makes numerous references to the works of Boyle, Newton, Grew, Huygens, et al., his conclusions are not always consistent. Chemical references include discussions of fire, metals, salts, acids, alkalies, earths, etc. Magnets and magnetism are discussed on pages 125–133, but the book is not included in the Wheeler Gift collection. Thorndike (VIII, 614–617) comments on the contents of this work. Le Clerc published several other works that are enumerated by Caillet. Newton corresponded with Le Clerc on theological matters (see Gray, 338). This title is not mentioned by Harrison in his catalogue of Le Clerc's works in Newton's library. Very rare. Not in Osler, Partington, Poggendorff, Waller, Watt, etc. (Wellcome, III, 470; Wing L823A [2 copies only: Michigan & Yale])

LECOQ DE BOISBAUDRAN, Paul Émile

Spectres Lumineux. Spectres prismatiques et en longueurs d'ondes destinés aux recherches de chimie minérale. . . .
Paris: Gauthier-Villars, Imprimeur-Libraire. 1874.

First edition. 2 vols., royal 8vo. I (Text): vi, 207, (1) pp. II (Atlas): vi pp. + 29 plates (Dulos sc.). Very fine copy, uncut with wide margins, in crimson half morocco antique, marbled boards, spines gilt-lettered and dated, original printed yellow wrappers bound in.

THE MAJOR work of Lecoq de Boisbaudran (1838–1912), a largely self-taught French chemist who "ranks with Bunsen, Kirchoff, and Crookes as one of the founders of the science of spectroscopy" (Weeks). He discovered gallium,

samarium, and dysprosium and perfected methods of separating the rare earths, the spectra of which elements he studied for several decades. The author is best known for employing the spectroscope in the analysis of inorganic compounds, and the present treatise reports the results of extensive and refined spectral examinations of thirty-five elements. The research was undertaken to test several generalizations relating spectral wavelength to atomic weight. This work appeared a year before Lecoq de Boisbaudran discovered gallium (by spectroscopic analysis), the first of Mendeleev's predicted elements, thus providing experimental confirmation of the validity of the periodic table. (Bolton, 608; D.S.B., II, 254; Poggenorff, III, 788; Weeks, *Discovery of the Elements*, 1960, p. 671)

LECOQ DE BOISBAUDRAN, Paul Émile

Sur un Nouveau Métal, le Gallium.
(Paris, 1877).

First separate edition. 8vo. 42 pp. With 1 colored plate of spectra. Several leaves with minor foxing; otherwise good copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with original blue wrappers bound in. Presentation copy to the eminent French chemist Charles Adolph Wurtz (1817–1884), inscribed in ink on verso of front wrapper "A Monsieur Wurtz. Hommage tres respectueux de l'auteur L. de B."

IN THIS rare offprint from the *Annales de Chimie et de Physique*, (5), vol. 1, 100–141 (January 1877), Lecoq de Boisbaudran announced his discovery (by spectroscopic analysis) of the new element gallium. Mendeleev had first predicted its existence and had named it eka-aluminium. The discovery was made in the author's private laboratory, in a specimen of zinc blende from the Pierrefitte mine in the Argeles Valley in the Hautes Pyrénées. He describes (p. 4) how on the evening of 27 August 1875 he detected the existence of this new element, which he named "gallium" in honor of France (Gallia). The plate shows the two spectral lines of gallium, which are distinct from those of other elements (indium and potassium) in the same region of the spectrum. A month later he "performed in Wurtz's laboratory in Paris . . . a series of experiments to prove that gallium . . . is a true element" (Weeks). He discusses how he eventually isolated small amounts of pure metallic gallium and determined its physical and chemical properties. The paper first describes gallium compounds (e.g., ammonium gallium alum, chloride, oxide, and sulphate). An important association copy, having been presented by the author to Wurtz, in whose laboratory he had worked on gallium. (D.S.B., II, 255; Partington, IV, 897; Weeks, *Discovery of the Elements* [1960], 671–677)

LE DROU, Noël Théodore

Demonstrations mechaniques des operations et effets, que les eaux minerales chaudes d'Aix La Chapelle produisent par leur usage interieur & exterieur dans le corps humain, soutenües & appuyées des loix du mouvement relatif aux ingrédients, qui y sont concentrés, & la methode par leur usage modifié, de conserver non seulement long téms le corps en santé, mais aussi de le guérir d'une infinité de maladies opiniatres & rebelles, . . .

Aix La Chapelle: Chez J. G. F. Muller Imprimeur de la Ville. 1749.

First edition. Sm. 4to. 22 leaves, 310 pp., 5 leaves, 144 pp. Full-page armorial plate (Paul. Maassen sculp.) following title. Very fine, crisp copy, in original marbled boards, crimson morocco label, gilt.

A COMPREHENSIVE WORK on the mineral waters of Aix La Chapelle, of considerable chemical interest and importance for the information it contains on the analytical reagents and techniques of the time. Chapter XV (pp. 274–291) discusses salts, and chapter XVI (pp. 292–310) concerns salt-peter. Le Drou (1699–1752), a doctor in philosophy and medicine, practiced at the famous mineral baths at Spa, on which he published two books (see Duveen, 345; Wellcome, III, 473). Rare. Not in the usual chemical and medical bibliographies. (Blake, 262)

LE FÈVRE, Nicolas

A Discourse Upon Sr Walter Rawleigh's Great Cordial; by N. le Febvre, Royal Professor of Chymistry, and Apothecary in Ordinary to his Maiesty's most Honourable Houshold. Rendred into English by Peter Belon, Student in Chymistry. London: Printed by J. F. for Octavian Pulleyn Junior, and are to be sold at the Sign of the Bible in S. Paul's Church-yard near the little North door. 1664.

First edition. 8vo. 10 leaves, 110 pp. Lacks blank leaf before title (sign. A1), but complete with imprimatur leaf (sign. A8) and the 2 leaves (sign. a1 and a2) listing components of the *Cordiale Regium*. Title within double-rule border (small repairs to corners, not touching text). Occasional very minor stains; otherwise near-fine copy, in speckled calf antique, maroon morocco label, spine dated. From the library of Professor Franz Sondheimer, with bookplate.

WHILE IMPRISONED in the Bloody Tower after having been found "guilty of compassing the death of the King" (James I), Raleigh was allowed into the tower garden and there in a laboratory performed chemical and philosophical experiments. Among his compounded drugs was the "Great Cordial," or "Elixir," of which the original prescription is not extant. Le Fèvre compounded the mixture in the presence

of Charles II on 20 September 1662 and published this account in 1664. A French translation appeared, with the title *Discours sur le grand cordial de Sr Walter Rawleigh* (London: Octavian Pulleyn Junior, 1665; Wing, L927). The "Great Cordial" was a concoction of materials from the animal, vegetable, and mineral kingdoms. Le Fèvre claimed that it was efficacious "to preserve and maintain Health, or to repair and restore it when it is altered or lost" (p. 107). Very rare. Not in Wellcome. (D.S.B., VIII, 131; Ferguson, II, 18 [not in Young Coll.]; Ferguson Coll., 396; Krivatsy, 6796; Partington, III, 19; Sondheimer, 876; Watt, I, 359p)

LE FÈVRE, Nicolas

Traicté de la Chymie. . . . Qui servira d'instruction & d'introduction, tant pour l'intelligence des Auteurs qui ont traité de la theorie de cette science en general: que pour faciliter les moyens de faire artistement & methodiquement les operations qu'enseigne la pratique de cet Art, sur les animaux, sur les vegetaux & sur les mineraux, sans la perte d'aucune des vertus essentielles qu'ils contiennent. . . .
Paris: Chez Thomas Jolly, Libraire Juré. 1660.

First edition. 2 vols., 8vo. I: 1 leaf (engraved title), 14 leaves, 510 pp., 1 leaf (blank). With full-page engraved dedication to Antoine Vallot and 6 double-page copperplates (5 of apparatus, 1 of chemical symbols). II: 1 leaf, pp. (1), "510-1092" (i.e., 512-1094), 9 leaves (index). With 2 double-page copperplates (1 of apparatus, 1 of chemist calcining antimony). Fine, complete copy, all edges gilt, in contemporary mottled calf, rebaked, double maroon morocco labels gilt, spines gilt. From the library of John Stuart, third earl of Bute (1713-1792), secretary of state to George III and patron of Dr. Samuel Johnson and of science. Purchased at Sotheby auction, 4 July 1961 (lot 307)

A GREAT LANDMARK of chemical literature, which did much to popularize the science of chemistry in the seventeenth century. This textbook "achieved a wide and lasting reputation. For the next hundred years it ranked as a standard treatise on chemistry, an augmented French edition in five volumes being published so late as 1751. It was also translated into German, Latin, and English" (J. Read, *Humour and Humanism in Chemistry* [1947], pp. 101-114). Partington discusses Le Fèvre (c. 1610-1669) and this important work. The author was "chymist" to Charles II (1660-69) and was elected F.R.S. in 1663. Rare. Not in the British Library or Bibliothèque Nationale. Not in Cushing, Goldsmith, Hoover, Morgan, Sondheimer, Waller, Watt, etc. (Bolton, 610; Caillet, 6388; D.S.B., VIII, 130; Duveen, 345-346; Edelstein, 1397; Ferchl, 304; Ferguson, II, 17 [not in Young Coll.]; Ferguson Coll., 396; Neu, 2277; Partington, III, 17; Poggendorff, I, 1404; Smith, 286; Sotheran, Cat. 832 [1932], 5441 ["Rare"]; Thorndike, VIII, 130; Wellcome, III, 478)

LE FÈVRE, Nicolas

Traité de la Chymie. . . . Seconde Edition, reveuë, corrigée & de beaucoup augmentée de bon nombre d'excellens remedes, par l'Autheur.
Paris: Chez Thomas Jolly, au Palais, . . . 1669.

Second edition. 2 vols., 12mo. I: 1 leaf (engraved title), 6 leaves, 389 pp., 3 leaves. With full-page engraved coat of arms of Charles II and 6 folding copperplates (5 of apparatus, 1 of chemical symbols). II: 441 pp., 5 leaves. With 2 folding copperplates (1 of apparatus, 1 of chemist calcining antimony). Fine copy in contemporary speckled calf, spines richly gilt.

THE FIRST edition in 12mo. format, dedicated to Charles II, enlarged by the author shortly before he died in the spring of 1669. The wording of the titles of this and the first edition of 1660 are identical. Partington gives the imprint as "Paris, Chez Tho. Jolly and J. d'Houry, 1669." D'Houry is not mentioned in the imprint of this copy. The "Aux Lecteurs" is signed from Le Fèvre's laboratory in St. James's Palace, London, 1669, and the privilege states that the book was printed "le dernier Decembre 1668." The present edition was reprinted and published by Doude at Leiden in 1669 (see Duveen, Partington, Wellcome). Not in Bolton, Caillet, Duveen, Edelstein, Ferguson Coll., Neu, Smith, Sondheimer, Thorndike, Waller, etc. (D.S.B., VIII, 131; Ferchl, 304; Ferguson, II, 17 [not in Young Coll.]; Goldsmith, 710; Partington, III, 17; Watt, I, 359q; Wellcome, III, 478)

LE FÈVRE, Nicolas

A Compleat Body of Chymistry: Wherein is contained whatsoever is necessary for the attaining to the Curious Knowledge of this Art; Comprehending in General the whole Practice thereof: and Teaching the most exact Preparation of Animals, Vegetables and Minerals, so as to preserve their Essential Vertues. Laid open in two Books, and Dedicated to the Use of all Apothecaries, &c. By Nicasius le Febure, Royal Professor in Chymistry to His Majesty of England, and Apothecary in Ordinary to His Honourable Houshold [sic]. Rendred [sic] into English, by P.D.C. Esq; one of the Gentlemen of His Majesties Privy-Chamber. Part I. With Additions.
London: Printed for O. Pulleyn Junior, and are to be sold by John Wright at the Sign of the Globe in Little-Brittain, 1670.

Second English edition, first issue. 2 vols., 4to. in 1. Vol. I: 6 leaves, 286 pp., 3 leaves. With 6 folding engraved plates. Vol. II: 1 leaf (title page to "The Second Part"), pp. 3-36, 29-320 pp., 4 leaves (N.B. Pagination skips, but collation complete). With 2 nonfolding engraved plates, which form part of the pagination (viz. pp. 214 and 302). Neatly written marginal notes in ink on some leaves, by an unidentified seventeenth-

century English chemist who refers frequently to Lemery's *Course of Chymistry*. Fine, crisp copy in contemporary blind-ruled mottled unlettered calf, with later maroon gilt-lettered morocco label on spine. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

THE FIRST English edition appeared in 1664. This second English edition is corrected and contains additions from the "late French copy" (i.e., Paris, 1669). It is the most complete of the two English editions and is discussed by Read (*Humour and Humanism in Chemistry* [London, 1947], pp. 101–114) and Partington (III, pp. 18–24). One of the great classics of seventeenth-century chemistry. Rare. (Bolton, 610; D.S.B., VIII, 131; Duveen, 346; Ferguson, II, 18 [not in Young Coll.]; Ferguson Coll., 397 [2 copies, both imperf.]; Neu, 2280; Partington, III, 18; Smith, 286 [imperf.]; Thorndike, VIII, 131; Wellcome, III, 479; Wing L926)

LE FÈVRE, Nicolas

A Compleat Body of Chymistry: Wherein is contained whatsoever is necessary for the attaining to the Curious Knowledge of this Art; Comprehending in General the whole Practice thereof: and Teaching the most exact Preparation of Animals, Vegetables and Minerals, so as to preserve their Essential Vertues. Laid open in two Books, and Dedicated to the Use of all Apothecaries, &c. By Nicasius le Febure, Royal Professor in Chymistry to His Majesty of England, and Apothecary in Ordinary to His Honourable Houshold [sic]. Fellow of the Royal Society. Rendred [sic] into English, by P.D.C. Esq; one of the Gentlemen of His Majesties Privy-Chamber. Part I. Corrected and amended; with the Additions of the late French Copy.

London: Printed for O. Pulleyn Junior, and are to be sold by John Wright at the Sign of the Globe in Little-Brittain, 1670.

Second English edition, second issue. 2 vols., 4to in 1. Vol. I: 6 leaves, 286 pp., 3 leaves. With 5 folding engraved plates (N.B. The plate that should face page 228 is missing in this copy). Vol. II: 1 leaf (title page to "The Second Part"), pp. 3–36, 29–320 pp., 4 leaves (N.B. Pagination skips, but collation complete). With 2 nonfolding engraved plates, which form part of the pagination (viz. pp. 214 and 302). Fine, crisp copy in contemporary blind-ruled mottled calf, rebounded, with brown gilt-lettered morocco label, spine dated in gilt. Early-eighteenth-century signature in ink of Sylvanus Colvill on page 45 and signature in ink on title page of J. W. Fleming, F.R.C.S., eminent nineteenth-century military surgeon.

THE TITLE page of part I of this second issue is identical to that of the first issue, with the exception that the words "Fellow of the Royal Society" follow "Houshold" and "With Additions" of the first issue has been amplified to "Cor-

rected and amended; with the Additions of the late French Copy." The title page of this issue is attached to the stub of the title page of the first issue. Many copies of the second issue lack one or more plates, and it is possible that the printer ran out of the plates and issued the books without them. The running title of both issues is "A Compendious Body of Chymistry." The title pages of "The Second Part" of both issues are identical.

LE FÈVRE, Nicolas

Chymischer Hendleiter, und Guldnes Kleinod: Das ist Richtige Anführung, und deutliche Unterweisung, so wol, wie man die Chymische Schriffthen, welche von Chymischer Wissenschaft ins gemein handeln, recht verstehen, als Wie man, nach ihrer Ordnung, soche Chumische Kunst, durch wirkliche Operation, leicht und glücklich practiciren, die Vegetabilia, Animalia, und Mineralia, ohne Einbuss ihrer wesentlichen Kräfte bereiten; auch die Fehler, welche in den heutigen gemeinen Apotheken, begangen warden, meiden, und Verbesserung schaffen möge, &c. Zum gemeinen Nutzen, und Beförderung menschlicher Gesundheit, aufgesetzt, und verfertigt, durch N. Le Febure . . .

Nuremberg: In Verleg. Christoph Endters, Buchhandl. 1676.

First Doude edition (possible later issue). 8vo. 17 leaves, 867, (1) pp., 28 leaves (last 2 blank). Title page in red and black. With engraved frontispiece of a chemical laboratory (P. Troschel sc.) and 13 (of 14) full-page engraved plates (including 1 double page). Small piece of lower corner of D6 lacking (with loss of few words of text), and outer half of folding plate in facsimile; otherwise very good copy in original vellum, with old ink-lettering on spine. At the end are 32 leaves of notes and chemical prescriptions in a contemporary German hand.

THE FIRST translation into German by Arnold Doude (fl. seventeenth century) of Le Fèvre's *Traicté de la Chymie*. The date of the first issue is variously given as 1672 (by Hoefer, II, 278), as 1675 (by Ferguson), both possibly in error, and as 1676 by Bolton, who erroneously describes this work as duodecimo. According to Bolton the title has "Aus dem franzosischen von Arnold Doude," but in this copy Doude is not mentioned in the title. His name appears only at the end of the dedication to C. D. Macts. The text of this translation by Doude is different from that of Cardilucius (Nuremberg, 1685). Very rare. (Bolton, 610; Caillet, 6388; D.S.B., VIII, 18; Ferchl, 304; Ferguson, II, 17 [not in Young Coll.]; Neu, 2281; Partington, III, 18; Schelenz, 487)

LE FÈVRE, Nicolas

Neuvermehrter Chymischer Handleiter, und Guldnes Kleinod: das ist, Deutliche Unterweisung, wie man die von Chymischer Wissenschaft ins gemein handelnde Schrifften recht verstehen; und nach Ordnung der Spagyrischen und Apotheckerischen Bereit-Kunst die darzu erforderte würckliche Operation gebührlich verrichten, die Vegetabilia, Animalia, und Mineralia, ohne Einbusz ihrer wesentlichen Kräfte bereiten . . . müsse. Vormals treufleissigst in Frantzösischer Sprache beschrieben, durch N. Le Febure . . . Anitzo aber auf Ersuchen guter Freunde aufs Neue durchaus in vielem noch mehr erläutert, und mit häuffigen Secreten und nützlichen Artzneystücken vermehrt, und zum andern mal durch den Druck publiciret von Joh. Hiskia Cardilucio. . . . Nuremberg: In Verlegung Joh. Andreae Endters Sel. Söhne. 1685.

First Cardilucius edition, first issue. 8vo. 26 leaves, 1149, (1) pp., 9 leaves (index). Title page in red and black. With engraved frontispiece of a chemical laboratory (P. Troschel sc.) and 14 engraved plates (1 folding, 1 double page). Fore-edge of one leaf (pp. 881–882) frayed (with slight loss of a few letters); otherwise good copy, in early-eighteenth-century quarter vellum, oak boards covered with dark-patterned paper.

THE FIRST translation into German, by Johann Hiskias Cardilucius (fl. seventeenth century), of Le Fèvre's *Traicté de la Chymie*. The present is the second German version of the *Traicté*, the first having been the translation carried out by Arnold Doude (Nuremberg, 1675). This German edition has more plates than the French and English editions. The plates are of particular interest as they show a wide range of chemical apparatus of the time. An appendix (pp. 1071–1149) is followed by a comprehensive index. The copy described by Krivatsy has a variant title page with different wording. The sheets of this edition were reissued three years later (Nuremberg, 1688; Bolton, 610). Rare. (D.S.B., VIII, 131; Ferchl, 304; Ferguson, II, 17 [imperf.]; Krivatsy, 6794; Neu, 2282 [imperf.]; Partington, III, 18; Rosenthal, 512)

LE GALLOIS, Pierre

Conversations de l'Academie de Monsieur l'Abbe Bourdelot, Contenant diverses Recherches, Observations, Experiences, & Raisonnemens de Physique, Medecine, Chymie, & Mathématique. Le tout recueilly par le Sr Le Gallois. Et le Parallele de la Physique d'Aristote, & de celle de Mons. Des Cartes, Leu dans ladite Academie.

Paris: Chez Thomas Moette, au bas de la ruë de la Harpe, à Saint Alexis. 1675.

First edition, second issue. 12mo. 9 leaves, 76, 350 pp. Small wormhole (pp. 309–339) affecting a few letters (but not

legibility); otherwise good copy in original speckled calf, gilt, rebaked with old spine laid on.

AN IMPORTANT book that gives an insight into the introduction and dissemination of modern scientific ideas in France in the seventeenth century. Le Gallois (fl. 1672), editor of the *Journal des Savants* and secretary of the Académie des Sciences, edited this work (first issue: 1672) on the Academy of Bourdelot, which had become a public institution in 1670. The Abbé Pierre Bourdelot (1610–1685; i.e., Pierre Michon) established a Cartesian society about 1664, which lasted until 1685. "They discussed water and salt as primary substances, salt being volatile or composed of fire. Volatile salt has perfectly round particles, salt composed of fire having elongated and square atoms. The theory of acids and alkalis, and the origin of diseases, were explained on those principles. There are two kinds of water, sulphur and mercury, the first derived from several materials and the second containing aqueous particles" (Partington). Scientists who participated in the biweekly meetings included Borelli, Gassendi, Glaser, Mariotte, Pascal, Steno, and many others. The periodical literature of the period refers to the meetings, but Le Gallois' notes included in this volume are the only record of the discussions. (H. Brown, *Scientific Organizations in 17th Century France* [1934], 231–253; Caillet, 1540; D.S.B., II, 354; Duveen, 346; Goldsmith, L727; Krivatsy, 1617; Neu, 2283; Partington, II, 441; Waller, 10752; Wellcome, III, 479)

LEGATI, Lorenzo

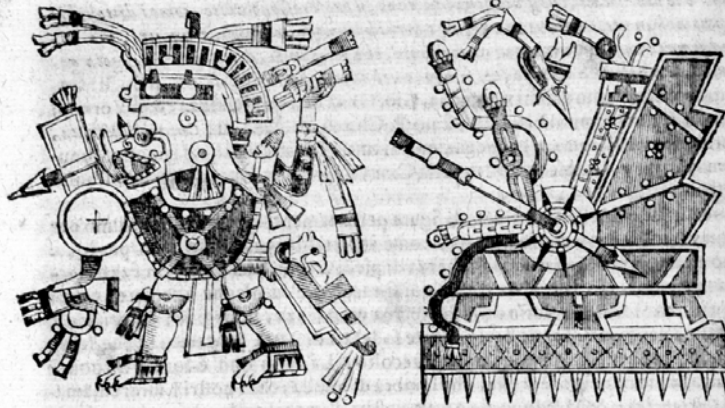
Museo Cospiano annesso a quello del famoso Ulisse Aldrovandi e donato alla sua patria dall'illustrissimo signor Ferdinando Cospi . . . march. di Petriolo . . . Descrizione di Lorenzo Legati . . . Al serenissimo Ferdinando III. principe di Toscana.

Bologna: per Giacomo Monti. 1677.

First edition. Folio. 12 leaves, 532 pp. Title in red and black, with large woodcut vignette. Woodcut initials, head- and tailpieces. Fine full-page copperplate portrait of Ferdinando Cospi (by Adrianus Halluech after Justus Supterman) and double-page folding engraving (by G. Mitelli) of the museum. Few leaves lightly embrowned; otherwise fine copy, in original overlapping vellum. Neat contemporary signature on half title; Fratris Laurentii Marie Vanocuccius Empuriensis.

A SUMPTUOUSLY PRINTED and illustrated work describing the natural history objects; metallurgical and mineral specimens; Egyptian, Aztec, and other antiquities; medals; coins; and curiosities in the Cospiano Museum. Upon his death Ulisse Aldrovandi (1522–1605) bequeathed his natural history museum, library, and unpublished manuscripts to his native city of Bologna. They were acquired by the Bolognese

192 MUSEO COSPIANO



Ne' margini poi delle sudette undici pagine egli segnò alcuni Geroglifici Minimi, che parimente sembrano spiegazione de' Geroglifici Massimi, a' quali fanno corona. Ad ognuno de' quali Geroglifici Massimi sottoscritti si mirano alcuni caratteri neri rotondi, che sembrano zeri, divisi a due a due, riga per riga con una linea sola; e condue, quando sono ad uno ad uno, come qui si vede.



○ ○	○ ○	○
○ ○	○ ○	○
○ ○	○ ○	○
○ ○	○ ○	○

To. de Zan.
l. 5. e 10. de
Script. Ind.
Occident.
Vorm. l. 4.
M. f. c. 12.
p. 383, 384.

17 Che cosa significhino, non m'è noto, nè sò che sia noto ad altri nell' Europa: non havendo per anco trovato chi li mentovi, e ne dia lume alcuno: e posso dirne con l'eruditissimo Vormio, il quale nel suo Museo publicò, mà non ispiegò (e così pure haveva fatto il *de Laët*) una Tavola di simil Caratteri *HIEROGLYPHICA MEXICANA*, miris constantia figuris vario colorum genere depictis, ex quibus vix quispiam quidquam collegerit. Sò che s' accingerebbe ad una bella, e curiosa impresa, chi prendesse ad illustrare le tenebre di questi misterii letterarii, non per anco spiegati nell' Europa.

18 Serbasi questo singolarissimo libro in una cassa quadrata di nobile artificio, con il coperchio di cristallo, essendone li XVI. Dicembre del MDCLXV. stato fatto un regalo al Museo dalla mano cortese del virtuosissimo Sig. Co. Valerio Zani, Nipote di Monsignor Costanzo Zani Vescovo d'Imola, e Ristotatore dell' Accademia de' Gelati (di cui ne raccolse, e publicò le Memorie. & un Volume di Profe, mentre n' era Principe gli anni MDCLXX. e LXXI.) il quale donò poi al Museo dell' Aldrovandi quella Verga di legno, che vi si vede con la superficie tutta figurata di simili geroglifici con particolare industria intagliati, in ogni sua parte indorata.

19 VOLUME di SCORZA INTERIORE d' ALBERO, forsi di Tiglia, scritto con caratteri Barbari, di notabile antichità, i quali però tengono qualche simiglianza co' Latini. Si distende a pochi palmi, mancandoli il fine. Per essere fatto di quella materia, che dicevamo chiamarsi da Latini propriamente *Liber*, poteva, con molto maggior ragione, che i nostrali, chiamarsi *Libro*. Contuttociò non è per lui nome improprio quello di *Volume*, che li conviene

adlai

Senator Ferdinando Cospi (1609–after 1677), who incorporated them into his own collection. The present work is the only record of Aldrovandi's famous museum, upon which he based his well-known series of folios. Cospi's museum contained paintings and sculptures by Andrea del Sarto, Primaticcio, Michelangelo, and other famous artists. There is a section on luminescence (pp. 178–180), with descriptions of the Bolognian phosphor. Legati (d. 1675) of Cremona, who catalogued the museum before he died, was a physician and professor at the University of Bologna. (Brunet, III, 934; Harvey, 101; Krivatsy, 6797; Thorndike, VII, 615; Watt, II, 596g)

LE GIVRE, Pierre

Arcanum Acidularum Novissime proditum. Principiorum Chymicorum disquisitionis auxilio, in quo communis opinio de Aquarum Mineralium aciditate convellitur. Additae sunt Epistolae multorum Illustrium Medicorum cum ejusdem responsis. . . .

Amsterdam: Apud Janssonio-Waesbergios. 1682.

First Amsterdam edition. 12mo. 4 leaves, 366 pp., 3 leaves. Fine copy in original unlettered vellum.

LE GIVRE (1618–1684), a physician at Provins, carried out many chemical analyses of the different mineral waters of France, which are described in this book. He defends his analyses against the results obtained by other physicians, whose letters to him, together with his replies, are printed at the end. "Effervescent waters (containing carbon dioxide) were regularly called 'acidulous' (acidulae). Peter Le Givre . . . was apparently, the first to notice that they had an alkaline reaction towards indicators, and ascribed the acid taste to 'spirits'" (Partington). The original edition in French appeared as *Le secret des eaux minerales acides* (Paris: Jean Ribou, 1667; Goldsmith, L746), which was translated into Latin as *Arcanum acidularum principiorum chymicorum* (Paris, 1670). The present is the final and best edition. (Duveen, 250; Ferchl, 186; Hoefler, II, 242; Neu, 2286; Partington, II, 694; Wellcome, III, 480)

LE GRAND, Antoine

An Entire Body of Philosophy, according to the Principles of the Famous Renate Des Cartes, in Three Books: I. The Institution, in X Parts; 1. Logick. 2. Natural Theology. 3. Daemonology . . . 4. General Physicks . . . 5. Special Natural Philosophy . . . 6. The Four Great Bodies, Earth, Water, Air and Fire . . . Metals and Meteors. 7. Of Living Things in general . . . Plants and Animals. 8. Man, in respect of his Body. 9. Man, as to his Mind or Soul. And, 10. Ethicks, or Moral Philosophy . . . II. The History of Nature . . . Variety of Experiments relating thereto . . . Bodies . . . Qualities . . . Earth and Heaven . . . Earth, Water, Fire and Air . . . Things dug out of the Earth . . . Meteors . . . Plants . . . Animals . . . Man. III. A Dissertation of the Want of Sense and Knowledge in Brute Animals . . . Written Originally in Latin by the Learned Anthony Le Grand. Now carefully translated . . . By Richard Blome.

London: Printed by Samuel Roycroft, and sold by the Undertaker Richard Blome, etc. 1694.

First edition. Folio. 15 leaves, 403, (2), 263, (1) pp. With fine engraved frontispiece (by J. Kip) and 98 full-page plates (by J. Kip and M. Vander Gucht), some printed on both sides of sheet. Very good copy in original calf, rebounded, green morocco labels. From the library of the celebrated physicist E. N. da C. Andrade, with his bookplate.

AN ENCYCLOPEDIA of science and medicine, the chief work of Le Grand. The three parts appeared earlier in Latin. The curious plates are almost all symbolic and emblematic, and, excepting the eight near the beginning, most are dedicated by Richard Blome (d. 1705) to the "Benefactors" (who include Samuel Pepys). Three plates illustrate concepts of experiments described in the text, and five consist of arms. A folding plate (facing p. 297) depicts Morden College, Kent. Le Grand doubted that gold can be made from mercury (p. 195) and describes numerous topics of chemical interest throughout. (Eales, 1085; Harvey, 141, 320; Krivatsy, 6807; Wellcome, III, 480; Wing, L950)

LE GRAND, Antoine

Historia Naturae, variis Experimentis & Ratiociniis elucididata. Secundum Principia Stabilita in Institution Philosophiae Edita ab eodem Authore.

London: Apud J. Martyn, Regalia Societatis Typographum, in insigne Campanae in Coemeterio Divi Pauli. 1673.

First edition. 8vo. 12 leaves, 416 pp., 8 leaves. Engraved title page (by William Faithorne) and numerous woodcut figures in text. Few tiny marginal wormholes (not affecting text) in several leaves; otherwise near-mint copy in original calf, rebounded with original blind-tooled spine laid on, maroon morocco label.

A COMPREHENSIVE TREATISE on the physical and natural sciences, of chemical interest, in which the author reduced the Cartesian method to the use of the schools. The French philosopher and Franciscan friar Le Grand (d. 1699), who was born at Douai, spent most of his life in England as a priest and teacher. He was a zealous follower of Descartes, and his system of reducing the Cartesian method earned him the surname "Abbreviator of Descartes." Dedicated to Robert Boyle, this work is in nine parts: 1. Arguments against a vacuum; 2. Qualities (properties) of atoms and corpuscles; 3. History of the Universe; 4. Earth, water, fire, air; 5. Metals, salts, sulphur, magnetism; 6. Wind, rain, meteorological phenomena; 7. Plants; 8. Animals; 9. Man and his senses. There are references to glass lenses, Galileo, telescopes (pp. 124, 191), lightning and thunder (p. 266), heart and circulation, etc. A second London edition appeared in 1680, as well as editions at Nuremberg in 1678 and 1702. (Fulton, *Bibliography of Boyle*, No. 273; Thorndike, VIII, 286; Wing, L951)

LEHMANN, Carl Gotthelf

Physiological Chemistry. By Professor C. G. Lehmann. Translated . . . by George E. Day, M.D., F.R.S. London: Printed for the Cavendish Society. 1851, 1853, 1854.

First English edition. 3 vols., 8vo. I: xii, 455, (1) pp. II: xi, (1), 465, (3), 6 pp., 1 leaf. III: xii, 579, (1) pp. Fine copy, top edges gilt others uncut, in original publisher's blind-stamped green cloth, gilt medallions on each cover.

THE ENGLISH translation of Lehmann's classic biochemical treatise, *Lehrbuch der physiologischen Chemie* (Leipzig, 1841–1852). The first volume of this English translation is made from the updated second edition of the *Lehrbuch* (Leipzig, 1850). Lehmann (1812–1863), a distinguished professor of chemistry at Jena, made "important original investigations on the nature of the albumens and the ferments of digestion" (Zeitlinger). He "believed that what little hydrochloric acid he found in the stomachs of fasting dogs came from the action of lactic acid on calcium chloride in the diet" (H. M. Leicester, *Development of Biochemical Concepts from Ancient to Modern Times* [1974], p. 164). The present work provides an excellent and comprehensive review of biochemical knowledge in the mid-nineteenth century. The final four pages of the second volume comprise the *Report of the Fifth Anniversary Meeting of the Cavendish Society*, with Thomas Graham presiding. The translator, George Edward Day (1815–1872), was a fellow of the Royal College of Physicians and professor of medicine at the University of St. Andrews (see *Munk's Roll*, IV, 49). An *Atlas of Physiological Chemistry*, a supplement to the present

work, was published by Otto Funke (London: Cavendish Society, 1853). Not in D.S.B., Duveen, Edelstein, Ferchl, Morgan, Partington, Poggendorff, Waller, etc. (Bolton, 612; Smith, 286; Sondheimer, 879; Sotheran, Cat. 734 [1913], 10691)

LEHMANN, Johann Gottlob

Cadmiologia, oder Geschichte des Farben-Kobolds nach seinen Nahmen, Arten, Lagerstätten, darbey brechenden Metallen, Mineralien, Erzten und Steinen, wie auch dessen Verhältniss nach der Probier-Kunst, dessen Gebrauch und andern dabey vorfallenden Umständen; nebst Beschreibung derer darzu gehörigen Oefen, Maschinen und Arbeiten . . . Königsberg (& Leipzig): verlegts seel. Gebh. Ludwig Woltersdorfs Wittwe. 1761, 1766.

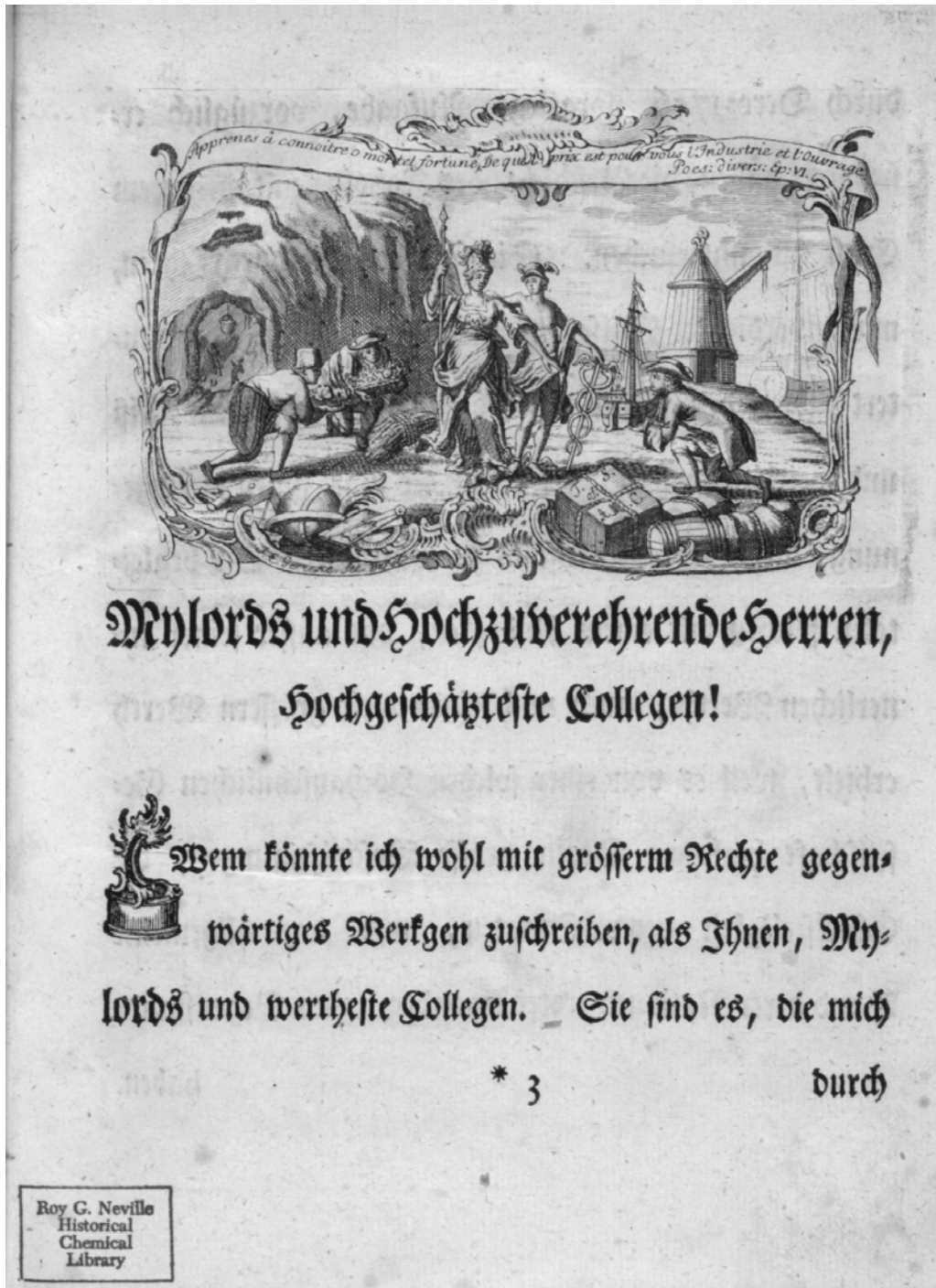
First edition. 2 vols., 4to. in 1. I (1761): 14 leaves, 100 pp., 2 leaves (index). II (1766): 2 leaves, 115, (1) pp. With 9 folding engraved plates (by J. E. Gericke) of furnaces, machinery, assaying equipment, etc. Fine copy in contemporary patterned calf, spine richly gilt.

A SCARCE AND important early work on cobalt, in which Lehmann discusses the occurrence, mineralogy, and chemistry of its ores and the technology employed in their mining and commercial use. "In his *Cadmiologia* he describes a large number of experiments with cobalt minerals without arriving at a very definite conclusion, but he proved that the arsenic contained in them was not the cause of the blue colour of smalt, the manufacture of which he describes in detail. He thought that metallic cobalt . . . is a compound of copper, iron, and arsenic, which might contain other impurities" (Partington). As director of the Bureau of Mines in Hasserode, Lehmann established a smelter and factory for manufacturing blue pigment from cobalt from a neighboring mine. (D.S.B., VIII, 147–148; Ferchl, 305; Ferguson, II, 19 [not in Young Coll.]; Hoover, 520; Partington, II, 712; Poggendorff, I, 1409; Wellcome, III, 482)

LEHMANN, Johann Gottlob

Traité de Physique, d'Histoire Naturelle, de Mineralogie et de Métallurgie. Vol. I: L'Art des Mines ou Introduction aux Connoissances nécessaires pour l'Exploitation des Mines Métalliques . . . Vol. II: Traité de la Formation des Metaux et de leurs Matrices ou Minieres . . . Vol. III: Essai d'une Histoire Naturelle de Couches de la Terre . . . Paris: Chez Jean-Thomas Hérisant, rue S. Jacques, à S. Paul & à S. Hilaire. 1759.

First edition. 3 vols., 12mo. I: 2 leaves, xvi, 419, (1) pp. Engraved frontispiece (by Patte) and 3 plates. II: 2 leaves, pp. vii–xvi, 402 pp., 1 leaf (errata); 1 folding plate. III: xxviii, 498



Lehmann, Johann. Cadmiologia. Königsberg, 1761, 1766.

pp., 3 leaves (last blank); 6 plates (5 folding). Fine set, complete with half titles, in contemporary mottled calf. Engraved armorial bookplate (by R. Cooper), dated 1724, in each volume: Hon. George Baillie.

BORN IN Germany, Lehmann (1719–1767) made notable contributions to chemistry, metallurgy, mineralogy, and geology and was the founder of stratigraphy. The present work comprises a selection of his writings on these subjects, translated from the German by Baron d'Holbach (1723–1789), with additional notes. "Lehmann's work in chemistry . . . constituted the greatest part of his researches. In his studies of rocks and ores he sought to determine their composition and metallurgical properties, and he suggested a system of classification based on chemical composition. . . . An uncompromising empiricist [he] advocated the establishment of specialized research institutions [and] was rewarded in his efforts by the founding of the Freiberg Bergakademie in 1765" (D.S.B., VIII, 147). In a section on earthquakes (vol. III, pp. 419–483), Lehmann speculates on the possible causes of such events (e.g., subterranean fires and waters, violent chemical reactions). The set of this work described by Cole had only ten plates. (Adams, 374; Cole, 796; Partington, II, 712; Ward & Carozzi, 1357; Watt, II, 596n; Wellcome, III, 482)

LEICHTER, Joannes Augustinus

Specimen Inaugurale Chemicum de Salibus, . . . publicae disquisitione submisit Joann. Augustinus Leichter Sterzinganus Tyrolensis . . . Disputabitur in Domo Universitatis die (blank) Mensis Julii Anno MDCCLXVIII.

Oeniponti: Typis Joann. Thomas nob. de Trattnern. (1768).

First edition. 8vo. 33, (3) pp. Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN INTERESTING doctoral dissertation summarizing contemporary knowledge on the preparation and properties of inorganic salts, presented at the University of Vienna by the Tyrol physician Leichter (dates unknown). The works of Boerhaave, Crantz, Vogel, et al., are cited. Very rare. Not listed in available chemical and medical bibliographies.

LEIDENFROST, Johann Gottlob

De Aquae Communis nonnullis qualitibus tractatus.

Duisburg: Impensis Hermannii Ovenii, Univers. Biblioplae. 1756.

First edition. 8vo. 4 leaves, 150 pp., 1 leaf (errata). Lower blank margin of title page with early stamp (Société de Lecture de Geneve); otherwise fine copy in contemporary half vellum, marbled boards, old ink-lettering on spine.

A TREATISE ON the physical (and some chemical) properties of liquids and gases, describing numerous experiments that Leidenfrost (1715–1754) attributed to Boyle, Boerhaave, Descartes, Helmont, Huygens, Newton, and others. Included are theories on the conversion of liquid water to the gaseous and solid states; the elasticity of water; objections to Boyle, Guericke, and de la Hire; and observations on the properties of water when mixed with alcohol, oils, salts, etc. Also covered are the elasticity of ice and combustion resulting from mixing water with various solids. The work is of particular interest for disseminating an account of Boerhaave's experiment concerning the spheroidal shape of liquid drops, which came to be known as Leidenfrost's phenomena. The author was a noted professor of theoretical medicine at the University of Duisburg. This is his only work exclusively on physics and chemistry, and Poggendorff remarks on its importance. Some of the material in this book appeared in a posthumous medical work by Leidenfrost: *Opuscula physico-chemica et medica* (Duisburg, 1797, 2 vols.; Blake, 263). A portion of the present work was translated into English by Carolyn Wares and appeared as *On the fixation of water in diverse fire* (Oxford, 1966; Roller & Goodman, II, 94). Rare. N.U.C. locates only the Yale copy. (Darmstaedter, 200; Ferchl, 306; Hirsch, III, 730; Poggendorff, I, 1416; Wellcome, III, 483)

LEIGH, Charles

The Natural History of Lancashire, Cheshire, and the Peak, in Derbyshire: with an Account of the British, Phoenician, Armenian, Gr. and Rom. Antiquities in those Parts. . . .

Oxford: Printed for the Author; and to be had at Mr. George West's, and Mr. Henry Clement's, Booksellers there; Mr. Edward Evet's, at the Green-Dragon, in St. Paul's Churchyard; and Mr. John Nicholson, at the King's-Arms, in Little-Britain, London. 1700.

First edition. Folio, 3 parts in 1 vol. I: 12 leaves, 196 pp., 1 leaf (pagination erratic). II: 97, (1) pp., 1 leaf (errata). III: 112 pp., 18 leaves, 4 pp. (list of subscribers), 2 leaves (errata). Frontispiece portrait of Leigh (by J. Savage after W. Faithorne), 2 engraved plates (depicting 112 coats of arms), folding map (colored in outline) by H. Moll, dated 1700, and 22 copperplates. Fine, large-paper copy, in original blind-ruled calf, rebaked, spine unlettered.

AN ENCYCLOPEDIA work describing numerous natural rarities and phenomena associated with the English counties of Lancashire, Cheshire, and Derbyshire and surrounding areas. There are many references to chemical experiments carried out by the author. The plates depict various types of scientific instruments, as well as minerals, living and fossil animals and plants, etc. According to Upcott (I, 455), this

is the first book on Lancashire. Leigh (1662–ca. 1717), physician and naturalist educated at Oxford and Cambridge, F.R.S. (1685), published various small tracts on medicine and on mineral waters (several in the *Philosophical Transactions of the Royal Society*). The present is his most important work. (Freeman, 2211; Parkinson & Lumb, 1431; Partington, II, 514; Poggendorff, I, 1416; Ward & Carozzi, 1359; Watt, II, 596u; Wellcome, III, 483; Wing, L975)

LEMERY, Louis

Traité des Aliments, où l'on trouve par ordre, et séparément la différence & le choix qu'on doit faire de chacun d'eux en particulier; les bons & les mauvais effets qu'ils peuvent produire; les principes en quoy ils abondent; le temps, l'âge & le temperament où ils conviennent. Avec des Remarques à la suite de chaque Chapitre, où l'on explique leur nature & leurs usages, suivant les principes Chymiques, & Mécaniques. . . . Paris: Chez J.B. Cusson & P. Witte, rue S. Jacques, au Nom de Jesus & au Bon Pasteur, vis à vis la rue du Plâtre. 1702.

First edition. 12mo. 28 leaves, 541, (3) pp. Narrow strip cut from blank top margin of title page; otherwise fine copy, in original gilt-ruled calf, maroon morocco label, gilt spine neatly repaired at head and foot.

LEMERY (1677–1743), eldest son of the famous chemist Nicolas Lemery, was a physician (M.D., Paris, 1698). He gave a course of lectures on chemistry at the Jardin du Roi in 1708 and was demonstrator in 1731. “His *Traité des alimens* (1702) is a dictionary of edibles with a description of their nutritional value in terms of chemico-mechanical principles” (D.S.B.). This celebrated work on foods, which became the leading book on the chemistry of dietetics, was translated into English and Italian, and updated French editions appeared in 1705, 1709, and 1755 (2 vols.). “Ouvrage estimé, souvent réédité, contenant d'intéressants chap. sur le vin, la bière, le chocolat, le thé et le café” (Caillet, who cites only the 1705 and 1755 editions). (Blake, 263; Bolton, 615; D.S.B., VIII, 171; Neu, 2292; Partington, III, 41; Poggendorff, I, 1418; Vicaire, 514; Watt, II, 598f; Wellcome, III, 486)

LEMERY, Louis

A Treatise of Foods, In General: First, The Difference and Choice which ought to be made of each Sort in particular. Secondly, The Good and Ill Effects produced by them. Thirdly, The Principles wherewith they abound. And, Fourthly, The Time, Age and Constitution they suit with. To which are added, Remarks upon each Chapter; wherein their Nature and Uses are explained, according to the Principles of Chymistry and Mechanism. Written in French . . . Now done into English.

London: Printed for John Taylor, at the Ship in St. Paul's Church-yard. 1704.

First English edition, first issue. 8vo. 10 leaves, xx, 320 pp., 4 leaves. No imprimatur leaf and leaves characteristically lightly embrowned; otherwise very good copy, in original paneled calf, rebacked, green morocco label.

THE FIRST English translation, by D. Hay, of the *Traité des alimens* (Paris, 1702). “The Machine of Man's Body, ought to be considered as a wonderful Complication of several sorts of Parts . . . Each of these parts . . . undergo a continual dispersion of their substance, and consequently, stand in absolute need of Foods, to repair and restore them. . . . All which being set together, we may easily see, that the Ground work of our Preservation, consists chiefly in a Knowledge of suiting Foods to every Constitution . . . and so the Knowledge we ought to be most desirous of, should be that of Foods” (Lemery's preface [in translation]). This now very scarce edition enjoyed a great vogue in England when it appeared. Not in the usual chemical bibliographies. (Blake, 263; Vicaire, 514; Watt, II, 598f; Wellcome, III, 486)

LEMERY, Louis

A Treatise of all Sorts of Foods, Both Animal and Vegetable: also of Drinkables: Giving an Account How to chuse the best Sort of all Kinds; Of the good and bad Effects they produce; the Principles they abound with; the Time, Age and Constitution they are adapted to. The Whole divided into one Hundred seventy-six Chapters. . . . Translated by D. Hay, M.D. . . .

London: Printed for T. Osborne in Gray's-Inn. 1745.

Third English edition, first issue. 12mo. xii, 372 pp., 12 leaves (index). Title in red and black. Woodcut tailpieces. Fine copy in unlettered, gilt-ruled sheep, with imprimatur leaf facing title.

AN UNCHANGED reprint of the first (London: J. Taylor, 1704) and second (London: Andrew Bell, 1706) editions. The present edition was so much in demand that a second issue (London: W. Payne, 1745) and a third issue (London: W. Innys, T. Longman and T. Shewell, 1745) appeared

the same year. (Blake, 263; Partington, III, 41; Vicaire, 514; Wellcome, III, 486)

LEMERY, Nicolas

An Appendix to a Course of Chymistry. Being Additional Remarks to the former Operations. Together with the Process of the Volatile salt of Tartar, and some other Useful Preparations. Writ in French by Monsieur Nicholas Lemery. Translated by Walter Harris Doctor of Physick.

London: Printed for Walter Kettilby at the Bishop's Head in St. Paul's Church-Yard. 1680.

First edition. 8vo. 8 leaves, 140 pp., 6 leaves. Fine copy. Bound with: Lemery, Nicolas, *A Course of Chymistry* (London, 1680). Bookplate: Franz Sondheimer.

PUBLISHED TO update information provided in the London (1677) edition, the *Appendix* was translated by Harris from additions made to the second (1677) and third (1679) French editions with which Lemery had supplied him. In his preface Harris refers to the intriguing question of the augmentation of the weight of metals on calcinations: "If you Calcine Lead in a Crucible, although you see a great many Vapours arise out of the matter during the Calcination, yet the Calx being at last weighed, will be found considerably heavier than the Lead was at first, which the wit of man can never explicate, but by admitting the reception of fiery parts into the Calx." Like Boyle, Lemery believed that the increased weight of the calx was due to the absorption of fire "particles." Air was then thought to be an undecomposable element. Harris describes several other quantitative experiments on the calcination of metals and nonmetals. (Bolton, 614; Cole, 805; Duveen, 348; Ferguson Coll., 400; Krivatsy, 6853; Neu, 2301; Partington, III, 30; Smith, 288; Wing, L1037A)

LEMERY, Nicolas

Cours de Chymie contenant la maniere de faire les Operations qui sont en usage dans la Medecine, par une Methode facile: avec des raisonnemens sur chaque Operation, pour l'Instruction de ceux qui veulent s'appliquer à cette Science. Par Nicolas Lemery . . .

Paris: Chez l'Autheur, ruë Galande, à la Porte Dorée proche la Place Maubert. 1675.

First edition. 12mo. 6 leaves, 534 pp., 7 leaves. Very minor water staining on some leaves; otherwise fine copy in contemporary mottled calf, spine richly gilt. Early engraved bookplate on front pastedown endpaper: Bernard de Noblet Chevalier Comte de Chenelette Lieutenant des Mareschaux de France. Modern bookplate: H. F. Norman.

ONE OF the most influential chemists of his time, Lemery (1645–1715) condemned the obscure alchemical mysticism of contemporary authors. He gave lectures on the principles of chemistry in a clear and simple way, including experimental demonstrations, from his manufacturing laboratory in Paris. The lectures were attended by crowds of people from Paris, other parts of France, and abroad. The *Cours de Chymie*, the textbook of his course of lectures, enjoyed unprecedented success for a work of its kind. Although based on the *Traité de la chymie* (Paris, 1663) of Christophle Glaser and the *Pratique de chymie* (Montpellier, 1671) of Sebastien Matte La Faveur, both of whom were former teachers of Lemery, he nowhere acknowledges their works. The first and earlier editions of the *Cours* were sold by Lemery from his house in Paris and are now very rare. He was careful to revise, correct, and update at least eleven editions himself, the last appearing in 1716. Posthumous editions were published until 1756, each keeping current with new material. This copy belonged to the celebrated psychiatrist Haskell F. Norman (1915–1996). (Cole, 797; D.S.B., VIII, 172–174; Norman, 1329; Partington, III, 29; Poggendorff, I, 1417; Smith, 288)

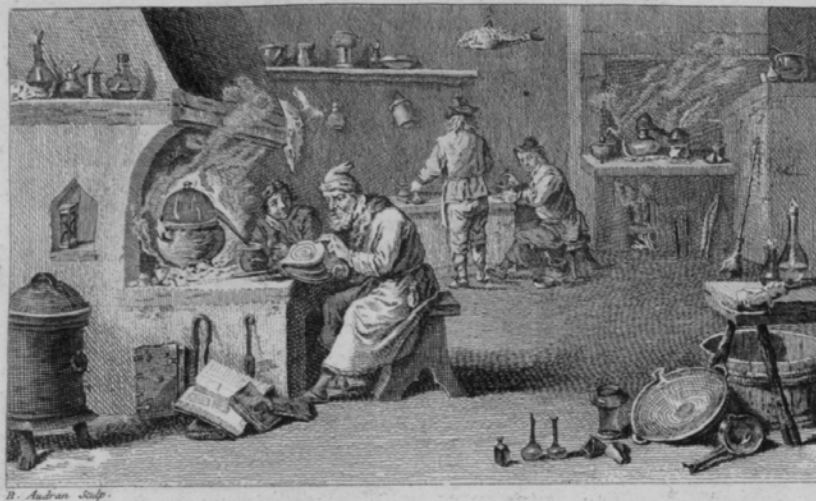
LEMERY, Nicolas

Cours de Chymie, contenant la maniere de faire les Operations qui sont en usage dans la Medecine, par une Methode facile. Avec des raisonnemens sur chaque Operation, pour l'Instruction de ceux qui veulent s'appliquer à cette Science. Par Nicolas Lemery . . . Troisième édition. Reveuë, corrigée & augmentée par l'Autheur.

Paris: Chez l'Autheur, ruë Galande, proche la Place Maubert. 1679.

Third edition. 12mo. 16 leaves, 659, (1) pp., 7 leaves. Fine copy in gilt-ruled half calf antique, marbled boards, maroon label.

THE REVISED and corrected third edition (second: Paris, 1677; Duveen, 347), to which Lemery has added further information to keep the work up-to-date. The book is divided into four sections: chemical principles, minerals, vegetables, and animals. An immensely popular textbook, translations into Dutch, English, German, Italian, Latin, and Spanish appeared. Read (*Humour and Humanism in Chemistry*, 1947, pp. 116–123) and Partington discuss the contents in detail. (Bolton, 614; D.S.B., VIII, 174; Ferchl, 307; Krivatsy, 6844; Partington, III, 29)



COURS DE CHYMIE.

DE LA CHYMIE EN GENERAL.



Le nom de *Chymie* vient du mot Grec $\chi\eta\mu\acute{o}\varsigma$, c'est-à-dire *Suc*, ou du Verbe $\chi\acute{\epsilon}\iota\upsilon$, qui signifie *fondre*, parce qu'elle enseigne à séparer les Substances les plus pures des Mixtes, lesquelles on appelle quelquefois *Sucs*, & qu'elle donne le moyen de mettre les corps les plus solides en fusion. Quelques-uns veulent qu'il vienne du nom Hébreu *Chema*, qui signifie *Constellation chaude*; mais cette étymologie me semble tirée de bien loin. Les Chymistes ont ajouté la particule Arabe *Al* au mot de *Chymie*, quand ils ont voulu exprimer la plus sublime, comme celle qui enseigne la transmutation des Métaux, quoiqu'*Alchymie* ne signifie autre chose que la Chymie. On l'appelle *Spargirie*, & ce mot est composé des Verbes $\sigma\pi\acute{\alpha}\rho\alpha\iota$ & $\sigma\pi\acute{\alpha}\rho\alpha\iota$, qui signifient *séparer* & *ramasser*, parce qu'elle nous enseigne à séparer les Substances utiles de chaque Mixté d'avec les inutiles,

Etymologies du mot *Chymie*.

A

LEMERY, Nicolas

Cours de Chymie. Contenant la maniere de faire les Operations qui sont en usage dans la Medecine, par une Methode facile. Avec des raisonnemens sur chaque Operation, pour l'instruction de ceux qui veulent s'appliquer à cette Science. . . .
Paris: Chez Jean-Baptiste Delespine, ruë saint Jacques, à l'Image Saint Paul, près la Fontaine Saint Severin. 1713.

"Tenth" edition. 8vo. 12 leaves, 938 pp., 29 leaves. Fine portrait frontispiece of Lemery (from a painting by L. Ferdinand: C. Vermeulen Sculpit), 7 engraved plates of apparatus, and folding engraved plate of chemical symbols. Very good copy, in original calf, spine richly gilt, brown morocco label.

ONE OF the last editions of this celebrated book to be updated by Lemery before he died. It was preceded by Paris editions of 1675, 1677, 1679, 1681, 1682, 1683, 1687, 1690, 1693, 1696, 1697, 1698, 1701, 1703, and 1712. Although designated the "tenth" edition on the title page (and also in the *Extrait du Registre de l'Académie Royale des Sciences*, 19 July 1711), this is more likely the fifteenth or sixteenth Paris edition to appear from a separate setting of type. Duveen (p. 348) describes another so-called tenth edition, with a Lyons imprint, the date given as "MDDCIII," and an entirely different pagination from the present copy. (Bolton, 614; Caillet, 6474; Ferchl, 307; Partington, III, 30; Poggen-dorff, I, 1417; Smith, 288)

LEMERY, Nicolas

Cours de Chymie contenant la maniere de faire les operations qui sont en usage dans la Médecine, par une Méthode facile. Avec des raisonnemens sur chaque Operation, pour l'Instruction de ceux qui veulent s'appliquer à cette Science. . . .
Nouvelle édition, revue, corrigée & augmentée d'un grand nombre de Notes, & de plusieurs préparations Chymiques qui sont aujourd'hui d'usage, & dont il n'est fait aucune mention dans les Editions de l'Auteur, par M. Baron, Docteur en Médecine, & de l'Académie Royale des Sciences.

Paris: Chez Jean-Thomas Herissant, rue Saint Jacques, à Saint Paul, & à Saint Hilaire. 1756.

First Baron edition. 4to. 3 leaves, xxiii, (1), 945, (1) pp. With 9 folding engraved plates (7 of apparatus, 2 of chemical symbols) and finely engraved vignette (B. Audran Sculp.) of a chemist's laboratory after David Teniers the younger (p. 1). Very fine copy, with wide margins, in original mottled calf, richly gilt spine, maroon morocco label.

THE PENULTIMATE edition and the first in quarto format, edited and greatly enlarged by Theodore Baron d'Henouville (1715–1768), "who added many notes in an effort to update it in conformity with current phlogistic theory" (D.S.B.). Some copies omit J.-T. Herissant and instead have the name Charles Maurice d'Houry père in the imprint

(e.g., Smith copy), while other copies have Laurent-Charles d'Houry fils (e.g., Wellcome copy). The present is by far the most beautiful and complete of all the editions of Lemery's *Cours*. The second and final edition edited by Baron was published the following year (1757) by Laurent-Charles d'Houry in quarto format but in smaller type and with different pagination (see Cole, 803). (Blake, 264; Bolton, 614; Caillet, 6474; Cole, 802; D.S.B., VIII, 174; Duveen, 349; Ferchl, 307; Ferguson, II, 22 [not in Young Coll.]; Neu, 2297; Partington, III, 30; Poggen-dorff, I, 1417; Smith, 288; Wellcome, III, 486)

LEMERY, Nicolas

Corso Chimico del Signor Nicolo' Lemery. Che contiene il modo di fare l'operationi, che sone in uso nella Medicina, con metodo facile, e ragionamenti sopra ciascheduna operatione per istruttione di coloro, che vogliono applicarsi a questa Scienza. Tradotto dall'idioma Francese in Italiano. Da Claudio Franc: Iobelot Medico Fisico, e Chimico. Consagrato al Merito singolare del molto illustre Sign. Andrea Battimelli uno degli Otto nell'almo Collegio degli Aromatari di questa Fedelissima Città. Ottava, et ultima edizione.

Naples: Nella nuova Stampa del Gramignani. Con licenza de' Superiori, e Privilegio. Stampato à spese del Traduttore. 1695.

First Italian edition. 8vo. 14 leaves, pp. 1–319, 318–319, 320–334, 337–472; 1–176, 193–273, (1); 11 leaves (last blank).

Pagination erratic, but text complete. With 3 woodcut plates of chemical apparatus (facing pp. 52, 54, 56). Some embrowning of leaves; otherwise very good copy, in original vellum with old ink-lettering on spine.

THE FIRST edition in the Italian language, translated by the physician and chemist Claudio Francesco Jobelot from the eighth French edition (Paris, 1693). The permission to publish is dated 15 December 1694 (sign. a8r), and the dedication is dated 20 July 1695. Jobelot dedicated the work to the famous physician Andrea Battimelli, who published the *Auctuarium*, which was added to Mynsicht's *Thesaurus* (Geneva, 1701). A very rare book, printed at the expense of the translator (Jobelot) in a small number of copies. Not in the usual bibliographies. (Cole, 810; Krivatsy, 6855)

LEMERY, Nicolas

Corso di Chimica del Signor Nicolo' Lemery. Ch'insegna il modo di fare l'Operationi, che sono usuali nella Medicina con Metodo facilissimo, et Ragionamenti sopra ciascuna Operatione. Tradotto dall'ultima Editione Francese da Nathan Lacy di Londra Medico Fisico.

Turin: A Spese di Gio: Giacomo Hertz, Libraro in Venetia. 1695.

Second Italian edition. 8vo. 12 leaves, pp. 1–448, 489–512, 8 leaves. Woodcut of ship on title and 3 full-page woodcuts of chemical apparatus (in Xerox facsimile, taken from the Venice, 1697, edition). Good copy in eighteenth-century quarter morocco, marbled boards.

TRANSLATED FROM the eighth French edition (Paris, 1693) by the English physician Nathan Lacy (ca. 1656–after 1700), of whom nothing appears to have been recorded. This Turin edition was published at the expense of Hertz in a very small number of copies. Comparison of this edition with the typographically very similar Venice (1697) edition of Hertz reveals that the 1697 edition is a close paginary reprint of the 1695 edition, using the same type font, woodcut initials, head- and tailpieces. There are, however, numerous minor differences in the line endings on any given page of the two editions, but the text on every page of the two editions corresponds word for word. Other differences noted: a) 1695 edition, H2 correctly signed; 1697 edition, H2 signed G2; b) 1695 edition, no catchword on page 448; 1697 edition, *vir* on p. 448; c) pagination skips from 448 to 489 in each edition, but collation is complete. There are different woodcut *Ms* on page 489; d) 1695 edition, page 512 has no catchword; 1697 edition, page 512 has catchword *Ta*. The page permitting publication of the 1697 Venice edition is dated 6 December 1696, which clearly establishes the priority of publication of the Turin (1695) edition. Extremely rare. (Krivatsy, 6856)

LEMERY, Nicolas

Corso di Chimica del Signor Nicolo' Lemery. Ch'insegna il modo di fare l'Operationi, che sono usuali nella Medicina con Metodo facilissimo, et Ragionamenti sopra ciascuna Operatione. Tradotto dall'ultima Edizione Francese da Nathan Lacy di Londra Medico Fisico.

Venice: Per Gio: Giacomo Hertz. 1697.

Third Italian edition. 8vo. 12 leaves, pp. 1–448, 489–512, 8 leaves. Woodcut of ship on title (identical to that in Turin, 1695, edition) and 3 full-page woodcuts of chemical apparatus. Minor stain in lower margin at beginning of volume; otherwise fine copy, in eighteenth-century half morocco, marbled boards, maroon label. Bound with: Lemery, N., *Nuove operatione chimiche* (Venice, 1700).

THE SECOND printing of the Nathan Lacy translation, the first edition with a Venice imprint, and a close paginary reprint of the Hertz (Turin, 1695) edition. Hertz reprinted the text two years later (Venice, 1699) as the fourth Italian (third Nathan Lacy) edition (Cole, 811; Krivatsy, 6857). N.U.C. lists only one copy of this Venice (1697) edition (University of California, Los Angeles). Not in British Library, National Library of Medicine, Wellcome, etc. Unrecorded by the usual bibliographers.

LEMERY, Nicolas

Corso di Chimica del Signor Nicolo' Lemery, ch'insegna il modo di fare l'Operazioni, che sono usuali nella Medicina, con metodo facilissimo, e Ragionamenti sopra ciascuna Operatione. Tradotto dall'ultima Edizione Francese, la qual è stata molto aumentata dall'Autore, ed in quest'ultima edizione Veneta aggiuntovi il Trattato dall'Antimonio, e li segreti Medicinali. Arrichita di Figure in Rame.
Venice: Appresso Gio: Gabriele Hertz. 1719.

Eighth Italian edition. 8vo. 12 leaves (including engraved title and letterpress title), 782 pp. Folding engraved table (chemical symbols) and 7 full-page copperplates (chemical apparatus). Very fine copy, in original vellum, spine gilt-lettered.

APPARENTLY THE eighth separate edition of Lemery's *Corso di Chimica* in Italian, and the fourth with a Venice imprint. It was preceded by the following Italian editions: Naples, 1695; Turin, 1695; Venice, 1697–1700; Venice, 1699; Venice, 1700; Bologna, 1700; and Naples, 1705. Later editions: Venice, 1732, and Venice, 1763. The present volume is bound uniformly with a separate volume, comprising the Italian translation of Lemery's treatise on antimony. The license leaf (sign. **4v), referring to the *Corso . . . con l'Aggiunte* (i.e., *Trattato dall'Antimonio*) is dated 24 July 1700. The *Antimonio*, printed in 1717, was published separately (see Neu, 2323). When the *Corso* (1719) was printed, Hertz probably had a number of copies of the *Antimonio* still unsold, so he made these the second volume of a two-volume set, adding a half title to volume 2 reading “Corso di chimica . . . tomo secondo” and suitably adjusting the title of the *Corso*. A different translation of Lemery's *Corso* was included in the second part of the *Prospectus pharmaceuticus* (Milan, 1698), by Giovanni Onorato Castiglione. N.U.C. lists only one copy of the present 1719 edition. (Blake, 263)

LEMERY, Nicolas

Corso di Chimica del Signor Niccolo' Lemery, che insegna il modo di fare le Operazioni, che sono usuali nella Medicina. Con metodo facilissimo, e Ragionamenti sopra ciascuna Operatione. Tradotto dall'ultima Edizione Francese, la qual è stata molto aumentata dall'Autore, . . .
Venice: Per Gio: Gabriel Hertz. 1732.

Ninth Italian edition. 8vo. 10 leaves, 642 pp., 7 leaves. Folding engraved table (chemical symbols) on a separate leaf and 7 full-page copperplates (chemical apparatus). Very good copy in original vellum, fore-edges worn.

DATED 14 July 1731, the license leaf (facing p. 1 of text) states that this is a reprint of the 1719 edition printed in Venice by Giovanni Gabriel Hertz. The copperplates and

table have been completely reengraved for this edition. They are close copies of those in the 1719 Hertz edition. Complete by itself, this volume was issued with a reprint of the *Trattato dell'Antimonio* (Venice: G. G. Hertz, 1732), not present here, as the second volume of the set as stated on the half title. (Bolton, 615; Partington, III, 30; Wellcome, III, 487)

LEMERY, Nicolas

Cours de Chymie, oder: der vollkommene Chymist, welcher die in der Medicin gebräuchlichen Chymischen Prozesse auff die leichteste und heilsamste Art machen lernt, und mit den scharffsinnigsten Anmerckungen und Urtheilen über ieden Process die Liebhaber dieser Wissenschaft weiter anführet: . . . Aus der Neunten Frantzösischen Edition . . . ins Teutsche übersetzt.

Dresden: Bey Johann Jacob Wincklern. 1698.

First German edition. 8vo. 12 leaves, 652, 388 pp., 20 leaves (Register), 28 leaves (Anhang). With 6 engraved plates of apparatus (between pp. 62–69) and 1 folding engraved plate of chemical symbols (facing p. 79). Title page in red and black. Paper lightly browned (as usual); otherwise fine copy in original unlettered vellum.

THE FIRST translation into German, by Adam Zahn (who signed the dedication), from the ninth French edition (Paris, 1697). Other German editions (1713, 1726, 1734), with additions, continued to appear until the fifth and last was published in Dresden (1754). Not in Duveen, Ferguson, Ferguson Coll., etc. (Bolton, 615; Ferchl, 307; Krivatsy, 6854 [imperf.]; Neu, 2302; Partington, III, 30; Wellcome, III, 487)

LEMERY, Nicolas

Cours de Chymie, oder: der vollkommene Chymist, welcher die in der Medicin gebräuchlichen Chymischen Prozesse auff die leichteste und heilsamste Art machen lernt, und mit den scharffsinnigsten Anmerckungen und Urtheilen über jeden Process die Liebhaber dieser Wissenschaft weiter anführet: . . . Aus der neuesten Frantzösischen Edition ins Teutsche übersetzt, und bey jetziger dritten Auflage aufs neue und correcteste revidiret.

Dresden: Bey Joh. Jacob Wincklers sel. Wittib. 1726.

Third German edition. 8vo. 28 leaves, 652, 390 pp., 22 leaves (index). With 7 engraved plates of apparatus (between pp. 68–73 and facing p. 326) and 1 folding engraved plate (facing p. 84). Title page in red and black (mounted). Paper lightly browned (as usual); otherwise very good copy in original unlettered half calf, marbled boards.

THE ENLARGED third German edition, translated from the “newest” (i.e., tenth) French edition (Paris, 1713), the last to appear in Lemery’s lifetime. Ferguson (II, 20) describes the fourth German edition (Dresden and Leipzig: Raphael Christian Saueressig, 1734), with identical pagination to the present edition. Rare. Not in Bolton, Duveen, Ferchl, Ferguson Coll., Partington, Wellcome, etc. (Blake, 264)

LEMERY, Nicolas

Cursus Chymicus, oder Vollkommener Chymist, welcher die in der Medicin vorkommenden Chymischen Praeparata und Processus auff die vernünftigste, leichteste und sicherste Art zu verfertigen lehret. Aus dem Frantzösischen übersezt und bey dieser fünfften Auflage aufs neue durchgesehen, corrigirt und mit Zusätzen vermehret, von D. Johann Christian Zimmermann. . . .

Dresden: Im Verlag der Waltherischen Buchhandlung. 1754.

Fifth German edition. 8vo. 4 leaves, 978 pp., 23 leaves (Register), 46 pp. (Anhang). With fine engraved frontispiece portrait of Lemery (Sysang sc.), 6 folding engraved plates of apparatus (between pp. 64–65), and 1 folding engraved plate of chemical symbols (facing p. 84). Paper lightly browned (as usual); otherwise very good copy, in original calf, richly gilt spine, tan morocco label.

THE FINAL German edition, edited by Johann Christian Zimmermann. In the preface Zimmermann states that he has not only correlated the text of this edition with that of the fourth German edition (Dresden, 1734) but has also added information from the French edition of 1744. In addition, further updated information has been supplied by Zimmermann himself, thus making this the most complete of Lemery’s text in German. (Blake, 264; Bolton, 615; Duveen, *Supplement*, 221; Ferchl, 307; Ferguson, II, 20–21; Neu, 2304; Partington, III, 30; Wellcome, III, 487)

LEMERY, Nicolas

A Course of Chymistry. Containing the Easiest Manner of performing those Operations that are in Use in Physick. Illustrated with many Curious Remarks and Useful Discourses upon each Operation. Writ in French by Monsieur Nicholas Lemery. Translated by Walter Harris, Doctor of Physick.

London: Printed for Walter Kettilby at the Bishop’s Head in St. Paul’s Church-Yard. 1677.

First English edition, first issue. 8vo. 16 leaves, 323, (1) pp., 10 leaves. Minor outer marginal damp stain on first few and last few leaves; otherwise very good copy, in original blind-ruled calf, rebacked, with original spine laid down.

THE ENGLISH translation of the first French edition (Paris, 1675), by Walter Harris (1647–1732), who had lived with and studied under Lemery. Physician to Charles II and William III, Harris graduated M.D. at Bourges and Cambridge, was F.R.C.P. (1682), and attended Queen Mary on her deathbed in 1694 (see D.N.B.). Dedicated to James, duke of York (later James II); in his preface Harris states: “I had seen several Courses of Chymistry under this Author . . . and I thought my self so much edified in his plain, easie, pertinent Lectures, that I long’d to see one Course more . . . and this I conceived could not be more effectually done, than by thus clothing it in English.” After first discussing the aims of chemistry, its principles, apparatus, and technical terms, the book is divided into descriptions of the properties and reactions of minerals, vegetables, and animals (i.e., inorganic, organic, and biochemistry). Lemery was instrumental in clearing “the ground for the science we now know as chemistry” (Farber, *Great Chemists* [1961], p. 159). Not in Edelstein, Ferguson, Krivatsy, etc. (Bolton, 614; Cole, 804; D.S.B., VIII, 174; Duveen, *Supplement*, 217; Ferchl, 307; Ferguson Coll., 400; Neu, 2298; Partington, III, 30; Smith, 288; Thorndike, VIII, 152; Watt, II, 598g; Wellcome, III, 486; Wing, L1038)

LEMERY, Nicolas

A Course of Chymistry. Containing the Easiest Manner of performing those Operations that are in Use in Physick. Illustrated with many Curious Remarks, and Useful Discourses upon each Operation. Together with Additional Remarks to the former Operations, the Process of the Volatile salt of Tartar, and some other Useful Preparations by Way of Appendix. Writ in French by Monsieur Nicholas Lemery. Translated by Walter Harris, Doctor of Physick.
London: Walter Kettlby. 1680.

First edition, second issue. 8vo. 16 leaves, 323 pp., 10 leaves (index and advertisements). Bound with: Lemery, Nicolas, *An Appendix to a Course of Chymistry* (London, 1680). Fine, crisp copy, bound in contemporary speckled calf, rebaked, with gilt-lettered maroon morocco label.

THE HITHERTO unrecorded second issue of the first edition in English. The first issue appeared in 1677. This second issue has a completely reset title page but is otherwise identical to the first issue of 1677. The publisher probably had some remaining sheets of the 1677 edition, so decided to print the reset title page (as above) and issue these sheets bound with the *Appendix* (London, 1680). It is probable that very few copies were thus bound with the *Appendix*. This second issue is not mentioned by Wing and appears to be unknown to all bibliographers of early chemistry, except Partington, who had never seen a copy, as he states:

“Some eds. apparently have the Course dated 1680.” Extremely rare. (Partington, III, 30)

LEMERY, Nicolas

A Course of Chymistry. Containing an easie Method of Preparing those Chymical Medicins which are used in Physick. With Curious Remarks and Useful Discourses upon each Preparation, for the benefit of such who desire to be instructed in the Knowledge of this Art. By Nicholas Lemery, M.D. The Second Edition very much Inlarged. Translated from the Fifth Edition in the French, by Walter Harris, M.D. Fellow of the College of Physicians.
London: Printed by R. N. for Walter Kettlby, at the Bishop’s-Head in S. Paul’s Church-yard. 1686.

Second English edition. 8vo. 14 leaves, 548 pp., 7 leaves. With 3 full-page engraved plates of chemical equipment and 3 leaves of explanation of the plates (between pp. 32 and 33). Few old marginal tears neatly repaired; otherwise fine copy, in original paneled calf, rebaked, with old unlettered spine laid down.

THE GREATLY enlarged second edition in English, translated by Walter Harris from the fifth French edition (Paris, 1683). It is the first English edition to contain illustrations of chemical apparatus and the first to describe experiments on the preparation and properties of elementary phosphorus and other luminescent materials (pp. 523–541). This edition not in Duveen, Ferguson, Ferguson Coll., Morgan, etc. (Bolton, 614; Cole, 806; Cushing, L138; D.S.B., VIII, 174; Ferchl, 307; Harvey, 143; Krivatsy, 6851; Neu, 2299; Partington, III, 30; Smith, 289; Wellcome, III, 486; Wing, L1039)

LEMERY, Nicolas

A Course of Chymistry, containing an easie Method of Preparing those Chymical Medicins which are used in Physick. With Curious Remarks and Useful Discourses upon each Preparation, for the benefit of such as desire to be instructed in the Knowledge of this Art. By Nicholas Lemery, M.D. The Third Edition, translated from the Eighth Edition in the French, which is very much enlarged beyond any of the former.

London: Printed by R. N. for Walter Kettlby, at the Bishop’s-Head in S. Paul’s Church-yard. 1698.

Third English edition. 8vo. 12 leaves, 815, (1) pp., 8 leaves. With 6 full-page woodcut plates of apparatus, 6 facing leaves of explanation of the plates, and 5 pages of chemical symbols (between pp. 44 and 45); also a woodcut plate (facing p. 704) of a furnace and 4 specimens of phosphorescent materials. Fine copy, in modern brown cloth, maroon label, gilt.

THE FIRST English edition to be edited by the physician James Keill, M.D. (1673–1719), based on the eighth French edition (Paris, 1697). The text follows the Walter Harris translation closely but with the addition of much later material. Keill had attended Lemery's lectures, and in his preface he gives a day-by-day syllabus of the thirty-four day course. This edition contains "a really extensive account (pp. 684–732) of phosphorus, as well as Homberg's, the Bolognian and the Balduinian phosphors" (E. N. Harvey). Cole notes that there is another state of the title page in which the imprint reads: "Printed for W. Kettlby, and Sold by James Bonwicke at the Hat and Star in St. Paul's Church-yard, 1698" (Morgan, 474; Wing, L1040A). Not in Duveen, Ferguson, Neu, Smith, Watt, etc. (Bolton, 614; Cole, 807; Cushing, L139; D.S.B., VII, 275, VIII, 175; Ferchl, 307; Ferguson Coll., 400; Harvey, 143; Krivatsy, 6852; Partington, III, 30; Wellcome, III, 487 [imperf.]; Wing, L1040)

LEMERY, Nicolas

A Course of Chymistry: containing an easie Method of Preparing those Chymical Medicines which are used in Physick. With Curious Remarks upon each Preparation, for the Benefit of such as desire to be instructed in the Knowledge of this Art. By Nicholas Lemery, M.D. and Fellow of the Royal Academy of Sciences. The Fourth Edition. Translated from the Eleventh Edition in the French, which has been revised, corrected, and much enlarged beyond any of the former, by the Author.

London: Printed for A. Bell, at the Cross-Keys and Bible in Cornhill; D. Midwinter, at the Three Crowns in St. Paul's Church-Yard; W. Taylor, at the Ship in Pater-Noster-Row; and John Osborn, at the Oxford-Arms in Lombard-Street. 1720.

Fourth English edition. 8vo. xvi, 543, (1) pp. Copperplate frontispiece (depicting "Nature" as a woman sitting in a laboratory, holding an inset portrait of Lemery, together with 3 cherubs and a chemist working in the background). With 8 full-page woodcut plates of apparatus and phosphorescent materials. Few minor damp stains; otherwise fine copy, in dark-brown calf antique, original maroon label, gilt.

THE FINAL English edition, and the second edited by James Keill, based on the eleventh French edition (Lyons, 1713; Blake, 264). In his preface Keill states that the third English edition (London, 1698) had "become so scarce, as not to be met with in the Shops a long Time past." By the eleventh French edition Lemery had added "such Enlargements and Alterations" that this translation was about one-third larger than the 1698 edition. The table of "Chymical Characters" (pp. 40–43) has woodcuts of the symbols and the names set in type. The section on phosphorus and other

luminescent materials (pp. 476–504) contains a little more information than was given in the 1698 edition. (Blake, 264 [imperf.]; Bolton, 615; Cole, 808; Duveen, 349; Ferchl, 307; Neu, 2300; Partington, III, 30; Smith, 289; Wellcome, III, 487)

LEMERY, Nicolas

Cursus Chymicus continens Modum parandi Medicamenta Chymica Usitatoria brevi & facili Methodo, una cum Notis & Dissertationibus super unamquamque Praeparationem. . . . Ex ultima Editione Gallica Latine versus. A. I. C. De Rebecque, M.D.

Geneva: Apud Joannem Pictetum. 1681.

First Latin edition. 12mo. 5 leaves, 664 pp., 7 leaves. Fine copy, in original unlettered vellum (fore-edges neatly repaired). Signature on first free endpaper of James Augustus Grant (1827–1892), explorer in Africa (see D.N.B.).

THE FIRST edition in Latin of this famous textbook, translated by A. I. C. de Rebecque from the third French edition (Paris, 1679). This translation was important as it enabled chemists in other European countries (who could not read French) to become acquainted with Lemery's clear manner of teaching chemistry and thus spread his influence on the Continent. Ferguson mentions the Latin translation but gives no details. Very rare. Not in Caillet, Cole, Duveen, Ferguson Coll., Wellcome, etc. (Bolton, 615; Ferchl, 307; Krivatsy, 6849; Partington, III, 30; Watt, II, 598)

LEMERY, Nicolas

Het Philosophische Laboratorium, of der Chymisten Stook-Huys. Leerende alle gebrukelyke Medicamenten kort en ligt op de Chymische wyse te bereiden; met naukeurige aanmerkingen over yder preparatie. . . . Vertaalt na 't laatste France Exemplaer, en met Aanteikening verrykt. Den Vierden Druk, Naukeutig oversien.

Amsterdam: By Nicolaas ten Hoorn, Boekverkoper, over 't Oude Heeren Logement. 1725.

Fourth Dutch edition. 8vo. 6 leaves, 520 pp., 4 leaves. With fine engraved frontispiece (depicting a chemist and 4 helpers with apparatus in a laboratory) and 3 engraved plates (chemical equipment, between pp. 33–35). Small piece cut from first free endpaper and minor stain on first several leaves; otherwise very good copy, in original calf, gilt, maroon morocco label.

THE FOURTH (and possibly final) edition of the Dutch translation of the *Cours de chymie*, made from the latest French edition (Lyons, 1724). This edition is not mentioned by Partington (III, 30), who briefly cites the first (Amsterdam, 1683) and third (1698) Dutch editions. Wellcome (III,

487) lists the second Dutch (Amsterdam, 1691) and the present fourth edition (1725), but the Wellcome copy lacks the beautiful frontispiece (here present). All of the Dutch editions are rare. Unknown to the usual bibliographers.

LEMERY, Nicolas

Dizionario ovvero Trattato Universale delle Droghe Semplici. In cui si ritrovano i loro differenti nomi, la loro origine, la loro scelta, i principj, che hanno, le loro qualita, la loro etimologia, e tutto cio, che v'ha di particolare negli Animali, ne' Vegetabili, e ne' Minerali. Opera dipendente dalla Farmacopea Universale scritta in Francese dal Sig. Niccolo' Lemery . . .

Venice: Appresso Gio: Gabriel Hertz. 1721.

First Italian edition. Folio. 6 leaves, 390 pp., 23 leaves + 25 engraved plates (each with 16 figures), 1 leaf (blank). Large woodcut on title page and historiated woodcut capitals. Fine copy, in original vellum. From the Surgeon General's Office Library (withdrawn), with bookplate.

THE ITALIAN translation of Lemery's *Traité universelle des drogues simples* (Paris, 1698). The French edition was reprinted several times (see Partington, III, 30–31), and this Italian translation appeared in at least three later editions (Venice, 1737, 1751, 1766). Arranged alphabetically, this dictionary contains much of chemical interest. The preparation, properties, and pharmaceutical uses of acids, alkalis, salts, and organic compounds from animals, plants, and minerals are described in detail. Lemery gathered a vast amount of information for this book, and the original source works he consulted are listed on five closely printed pages. References include works by most of the great scientists and physicians of the sixteenth and seventeenth centuries. The four hundred figures (on twenty-five plates) depict the animals, plants, and minerals from which the substances described were derived. Unknown to the usual bibliographers. (Blake, 264; Neu, 2321; Wellcome, III, 488)

LEMERY, Nicolas

Nuove Operationi Chimiche, Aggiunte intrinsecamente dal Signor Nicolo' Lemery al suo Corso di Chimica, e disposte in questa, à cui si dà il Titolo di Seconda Parte, conforme la Pagina seguente mostra. Arricchita d'VIII Figure in Rame. Venice: Appresso L'Hertz. 1700.

First edition. 8vo. 10 leaves, 236 pp. Large folding engraved table (chemical symbols) and 7 full-page copperplates (chemical apparatus). Woodcut title ornament, headpieces, and initials. Fine copy. Bound with: Lemery, N., *Corso di chimica* (Venice, 1697).

A SEQUEL TO the *Corso di chimica* (Venice: G. G. Hertz, 1697), in which the additions of the French edition (Paris, 1697) are presented. The additions are coordinated with the text of the *Corso*. This translation is the first in Italian to contain Lemery's long discussion (pp. 178–197) on luminescent materials, including details on the preparation of the famous Bolognian stone (i.e., naturally occurring barium sulphate calcined with charcoal to produce barium sulphide). Four specimens of the stone are illustrated in plate 7. The physical and chemical properties of elementary phosphorus (obtained from urine) and the Bolognian stone are compared. Extremely rare. Not in British Library, Cole, Krivatsy, etc. (Wellcome, III, 487)

LEMERY, Nicolas

Pharmacopée Universelle, contenant toutes les compositions de pharmacie qui sont en usage dans la Médecine, tant en France que par toute l'Europe; leurs Vertus, leurs Doses, les manieres d'operer les plus simples & les meilleures. Avec un lexicon pharmaceutique, plusieurs remarques nouvelles, et des Raisonemens sur chaque Operation. . . . Seconde edition. Revûe, corrigée & augmentée.

Paris: Chez Laurent d'Houry, Imprimeur-Libraire, rue de la Harpe, vis à vis la rue S. Severin, au Saint-Esprit. 1725.

Second Paris edition. 4to. 1 leaf, 16 pp. + 1092 (i.e., 1094) pp. 22 leaves (last blank). With extra leaf *956–7 in text. Title page in red and black. Formulae in text in Latin. Index in Latin and French. Woodcut, ornament on title, woodcut initials, head- and tailpieces. Fine copy, in original calf, spine richly gilt, brown morocco label.

A FAMOUS PHARMACOPOEIA (first: Paris, 1697), containing the latest revisions and additions made by Lemery before he died in 1715. Dedicated to Guy Crescent Fagon (1638–1718), first physician to Louis XIV, it is one of the most important works of its type of the time. Many editions in French appeared, and it was translated into Italian. Although the title designates this as the "seconde edition," earlier printings subsequent to the first of 1697 appeared at Avignon (1716) and Amsterdam (1717). (Blake, 264; Caillet, 6476)

LEMERY, Nicolas

Pharmacopée Universelle, contenant toutes les compositions de pharmacie qui sont en usage dans la Médecine, tant en France que par toute l'Europe . . . Nouvelle edition.

Paris: Chez Claude-Jean-Baptiste Bauche, Libraire, Quay des Augustins, à l'Image Ste. Geneviève, & à S. Jean dans le Désert. 1754.

Fourth (?) Paris edition. 4to. 1 leaf, 16 pp. + 1092 (i.e., 1094) pp., 22 leaves (last blank). With extra leaf *956–7 in text. Title page in red and black. Formulae in text and index in French. Woodcut ornament on title, woodcut initials, head- and tail-pieces. Fine copy, in original calf, spine richly gilt (head and foot repaired), maroon morocco label.

ESSENTIALLY A PAGINARY reprint of the Paris (1725) edition but omitting the Latin text. Still dedicated to Guy Crescent Fagon (even though he had died thirty-six years earlier), the book describes many laboratory techniques and processes, as well as the preparation of numerous pure chemical compounds. Editions subsequent to the Paris (1725) printing: La Haye, 1729; Amsterdam, 1748; Paris, 1734, 1761, 1763–64. Rare. The present edition of 1754 has not been traced in the usual bibliographies.

LEMERY, Nicolas

Traite de l'Antimoine, contenant l'Analyse Chymique de ce Mineral, & un recueil d'un grand nombre d'operations rapportées à l'Academie Royale des Sciences, avec les raisonnemens qu'on a crus necessaires. Ouvrage utile aux Physiciens & à tous ceux qui pratiquent la Medecine. . . . Paris: Chez Jean Boudot, Imprimeur ordinaire du Roy, & de l'Academie Royale des Sciences, ruë S. Jaques au Soleil d'Or. 1707.

First edition. 12mo. 14 leaves, 620 pp., 12 leaves. Minor marginal damp stain on first several leaves; otherwise fine copy, in original speckled calf, gilt, maroon morocco label. From the library of the marquis of Bute, prime minister to George III (Sotheby auction, 4 July 1961, lot 309).

A SYSTEMATIC TREATISE on the chemical and medicinal properties of antimony and its compounds, dedicated to Jean Paul Bignon, president of the Royal Academy of Sciences. It contains all that was then known on the subject. "His last major work . . . which contained the results of his investigation into the properties and preparations of mineral antimony, his chosen topic of research on admission to the Academy of Sciences in 1699" (D.S.B.). Partington describes it as "a tedious collection of experiments, showing little advance over Basil Valentine's Triumphal Chariot." Nevertheless, the book was considered to be of sufficient importance to be translated into German by Johann Andreas Mahlern (Dresden, 1709) and Italian by Selvaggio Canturani (Venice, 1717). (Blake, 264; Bolton, 615; Ferguson Coll., 401; Partington, III, 31; Waring, 236; Wellcome, III, 488)

LEMERY, Nicolas

Trattato dell'Antimonio, che contiene l'Analisi Chimica di questo Minerale, e una Raccolta dig ran numero d'Operazioni, referite all'Accademia Reale delle Scienze, co I Ragionamenti creduti necessarj. Opera utile a I Fisici e coloro che mettono in pratica la Medicina, . . . Traduzione dal Linguaggio Francese nell'Italiano di Selvaggio Canturani. Venice: Appresso Gio. Gabbriello Ertz. 1717.

First Italian edition. 8vo. 12 leaves, 454 pp., 13 leaves. Fine copy, in original vellum, spine gilt-lettered.

THE RARE first Italian edition of the *Traité de l'antimoine* (Paris, 1707), translated by Selvaggio Canturani (i.e., Arcangelo Agostini). The license leaf (sign. a12v) is dated 8 April 1717. This volume is bound uniformly with the *Corso di chimica* (Venice: G. G. Hertz, 1719), and the half title is printed: *Corso di chimica del Signor Niccolò Lemery tomo secondo*. Another edition of the S. Canturani translation appeared the same year (Bologna: Longhi, 1717; Cole, 813), with identical pagination. Other Italian editions appeared in Venice, 1732 and 1763. (Blake, 264; Neu, 2323; Smith, 289)

LEMNIUS, Levinus

De Habitu et Constitutione Corporis, . . . Complexionem vocant, Libri II, . . . Nunc vero ab innumeris mendis, quibus passim scatebant, vindicati, formaq; commodiore in lucem editi. . . .

Frankfurt: Typis Nicolai Hofmanni, sumtibus Ionae Rhodii. 1604.

Third Frankfurt edition. 16mo. 8 leaves, 185, (1) pp., 4 leaves (index). First leaf of text misnumbered 3. Woodcut printer's device on title page. Fine copy, in modern boards.

THE FIRST edition to be printed by N. Hofmann of Frankfurt, preceded by the Frankfurt editions of J. Wechel (1591) and P. Fischer (1596). A reprint of one of the author's main works (first: Antwerp, 1561), the dedication is dated January 1561. An Italian translation appeared, *Della complessione del corpo humano libri due* (Venice: D. Nicolino, 1564), as well as an English version, *The touchstone of complexions* (London: T. Marsh, 1565; S.T.C., 15455). (Ferchl, 308; Ferguson, II, 22; Ferguson Coll., 401; Krivatsy, 6867; Neu, 2324)

LEMNIUS, Levinus

The Touchstone of Complexions Expedient and profitable for all such as bee desirous and carefull of their bodily health: Containing most ready tokens, whereby every one may perfectly try, and thorowly know, as well the exact state, habit, disposition, and constitution of his body outwardly: as also the inclinations, affections, motions, and desires of his minde inwardly. Written in Latine by Levine Lemnie, and now Englished by T. N.

London: Printed by E. A. for Michael Sparke, and are to be sold at his house in Greene Arbour, at the Signe of the blue Bible. 1633.

Fourth English edition. 4to. 4 leaves, 248 pp., 6 leaves (last blank lacking). Woodcut initials and headpieces. Top corner of title torn and repaired, with one-half of letter *O* and 2 letters *NE* of "Touchstone" in facsimile on seventeenth-century paper. Piece from bottom margin of Kk4 missing (no loss of text); otherwise good copy in contemporary calf, rebacked, maroon morocco label, gilt, spine dated.

THE FINAL English edition of this famous work, preceded by those of London, 1565, 1576, and 1581. It is a translation by Thomas Newton (ca. 1542–1607; see D.N.B.) of *De habitu et constitutione corporis, . . . complexionem vocant, libri duo* (Antwerp, 1561), of which several Latin editions subsequently appeared. The "complexions" is a compendium on the preservation of physical and mental health. "It behoveth . . . every man . . . perfectly and thorowly to know the habit and constitution of his owne body . . . by this meanes shall he be a great deale better able to keepe himselfe in health, and to withstand sicknesse . . . naturall health is nothing else but a right constitution and state of the body, and all the parts thereof" (Chapter I, pp. 1–2). Of medical, pharmacological, and biochemical interest, the book contains much sound advice that can still be read with profit. Extremely rare: only the Huntington Library copy listed in America by the S.T.C. (Blocker, 237; Ferguson, II, 23 [not in Young Coll.]; Ferguson Coll., 401; S.T.C. 15458; Watt, II, 598; Wellcome, I, 3715)

LEMNIUS, Levinus

De Miraculis Occultis Naturae, Libri IIII: Item De Vita cum animi et corporis incolumitate recte instituenda, liber unus. . . . Francofurdi (Frankfurt): Ex officina typographica Ioannis Wecheli. 1593.

First Frankfurt edition, second issue. 16mo. 8 leaves, 582 pp., 28 leaves (last blank). Woodcut printer's device on title page. Woodcut capitals, head- and tailpieces. Roman letter. Few headlines shaved, title page worn; otherwise good copy in contemporary blind-ruled, unlettered calf, rebacked.

A REISSUE (or possibly reprint) of the Frankfurt, 1590, edition (in 16mo.) of this famous book. At the end (pp. 471–582) is the *Exhortatio ad vitam optime instituendam . . .* of Lemnius, followed by copious indexes to both parts. Ferguson (*Books of Secrets*, I, pt. 3, pp. 31–32) mentions the Frankfurt, 1590, printing but not this, which has identical pagination. The Wellcome Library Catalogue lists copies of both issues in 16mo. (i.e., 1590 and 1593). Not in Ferchl, Guaita, Neu, Osler, Watt, etc., or the usual chemical bibliographies. (British Library, *S.T.C. German Books, 1455–1600*, p. 493; Durling, 2775; Partington, II, 113; Thorndike, VI, 393; Wellcome, I, 3703)

LEMNIUS, Levinus

Occulta Naturae Miracula, ac varia rerum documenta, probabiliter atque artificij conjectura explicata. Quibus preter priores fusissimè recognitos ac multis in locis locupletatos, accesserunt Libri duo novi, mira rerum ac sententiarum varietate exornati, qui studioso avidoque Lectori usui sunt futuri, & oblectamento. Elenchus operis, & capitum enumeratio, omnium gustum exhibebunt.

Antwerp: Apud Guilielmum Simonem. 1567.

Second edition in 4 books. 8vo. 8 leaves, 473, (1) pp., 11 leaves. Woodcut title-vignette, full-page woodcut portrait of Lemnius on verso of fifth leaf, woodcut initials. Text printed mainly in italic. Very good copy, in early-eighteenth-century gilt-ruled mottled calf, maroon morocco label. From the library of the Marquis of Bute, prime minister to George III, auctioned by Sotheby, 4 July 1961 (lot 310).

THE ORIGINAL edition of the *Occulta naturae miracula* (Antwerp, 1559) contained only two books. The present edition, beautifully printed by Christopher Plantin (see colophon), is the second to contain the four books (first: Antwerp, 1564) and is in the form that Lemnius (who died in 1568) wished to see his most important work. Numerous later editions and translations appeared, some of which are listed by Thorndike. Ferguson (*Books of Secrets*, II, 3rd suppl., 31) mentions this edition, stating that he had not seen it. The portrait of Lemnius at age sixty in cap and gown is the earliest extant of the author. A very rare edition. The book was placed on the Roman Index in 1583, where it remained until 1900. Not in the usual chemical and medical bibliographies. (British Museum, *S.T.C. Dutch and Flemish Books, 1470–1600*, p. 115; Partington, II, 113; Thorndike, VI, 393; Watt, II, 598h)

LEMNIUS, Levinus

Les Occultes Merveilles et Secretz de Nature, avec plusieurs enseignemens des choses diverses tant par raison probable que par conjecture artificielle: exposées en deux livres de non moindre plaisir que prouffit au lecteur studieux. . . . Avec deux tables, l'une des argumens des chapitres, l'autre singulieres matieres d'iceux.

Paris: Par Pierre du Pré, Libraire juré en l'université. 1567.

First Paris edition. 8vo. 14 leaves, 402 pp., 17 leaves. Historiated woodcut initials, head- and tailpieces. Good copy in original limp vellum, sixteenth-century lettering on spine.

THE ORIGINAL Latin edition, *Occulta naturae miracula . . . duobis libris explicata* (Antwerp, 1559), was first translated into French by Antoine du Piret (Lyon: Jean Frellon, 1566), described by Caillet as “extrêmement rare.” The present edition is the first to be translated by Jacques Gohory (1520–1576), a scholar versed in alchemy, natural history, and medicine, who was “an early disseminator of Paracelsian ideas in France” (D.S.B., V, 448). One of the earliest and most famous of the books of secrets that were so popular in the sixteenth, seventeenth, and eighteenth centuries, it is important for the beliefs (both fact and fiction) of the sixteenth-century mind. There is much of interest on alchemy, chemistry, metallurgy, and related subjects. Writing in 1894, Ferguson (*Books of Secrets*, II, 3rd suppl., 32) describes this as a “very rare volume.” Duveen (p. 349) and Neu (no. 2328) list a French edition (Orleans, 1568), and Wellcome (I, 3708) a later edition (Paris, 1574). Lemnius (1505–1568), a physician of Zierikzee, Zeeland, was a pupil of Vesalius, Gesner, and Dodoens. Very rare. This edition is not in the usual chemical and medical bibliographies. (Caillet, 6481; Durling, 2777 [imperf.]; Ferguson, II, 24 [not in Young Coll.]; Ferguson Coll., 402; Guaita, 652; Partington, II, 113)

LEMNIUS, Levinus

The Secret Miracles of Nature: In Four Books. Learnedly and Moderately treating of Generation, and the Parts thereof; the Soul, and its Immortality; of Plants and living Creatures; of Diseases, their Symptoms and Cures, and many other Rarities not treated of by any Author Extant; whereof see more in the Table of the Contents. Whereunto is added one Book containing Philosophical and Prudential Rules how Man shall become Excellent in all conditions, whether high or low, and lead his Life with Health of Body and Mind. Fit for the use of those that practise Physick, and all Others that desire to search into the Hidden Secrets of Nature, for increase of Knowledge. Written by that Famous Physitian Laevinus Lemnius.

London: Printed by Jo. Streater, and are to be sold by Humphrey Mosely . . . John Sweeting . . . John Clark . . . and George Sawbridge . . . 1658.

First (only) English edition. Folio (in 4s). 8 leaves, 398 pp. Title page in red and black. Very good copy in paneled calf antique, gilt-lettered crimson morocco label.

THE RARE English translation of this famous book of secrets, which deals with chemical, physical, medical, moral, religious, and other topics. Partington (II, 113) discusses its chemical importance, citing references to distillation, metallic mercury and its salts, alum, saltpeter, potable gold, the manufacture of salt, soap, potash, etc. The first edition (*Occulta naturae miracula*, Antwerp, 1559), published in two books, was expanded to four books in the 1564 edition and appeared with the hygienic treatise at the end in 1581. Many Latin editions were published in the sixteenth and seventeenth centuries, with translations into Italian (1560), French (1566), and German (1586), as well as this English translation. Not in Cushing, Duveen, Osler, Poggendorff, Smith, Waller, etc. (Blocker, 237; Edelstein, 1411; Ferchl, 308; Ferguson, II, 23; Ferguson Coll., 402; Ferguson, *Books of Secrets*, I, 10; Neu, 2327; Partington, II, 113; Watt, II, 598; Wellcome, III, 489; Wing, L1044)

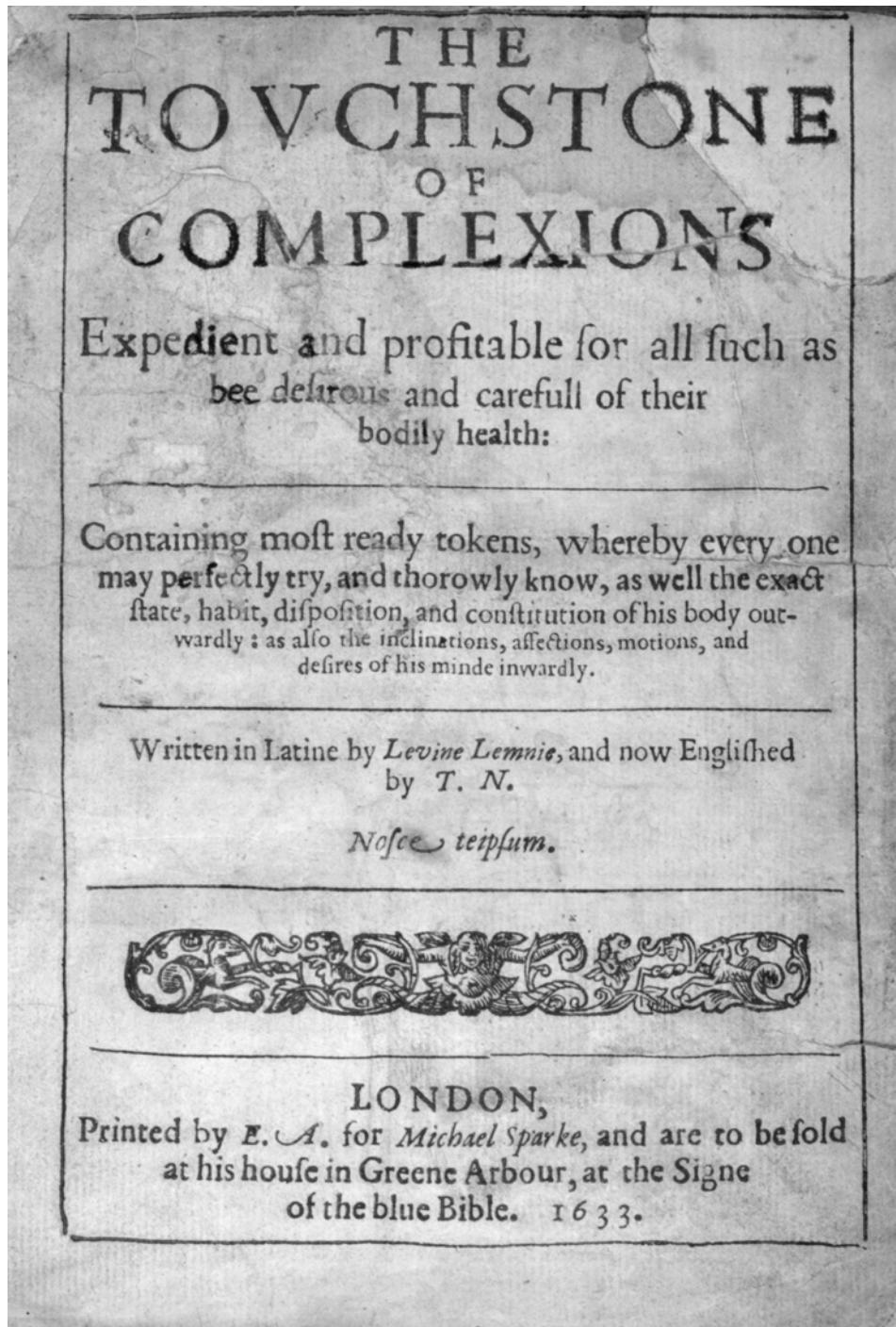
LEMOINE, Clement Georges

Études sur les Équilibres Chimiques . . .

Paris: Dunod, Éditeur. 1881.

First edition. 8vo. 2 leaves, 330 pp. Numerous figures and diagrams in text. Fine copy in original quarter morocco, marbled boards.

A CLASSIC WORK on physical chemistry—the most comprehensive of its kind to date—dealing with all known equilibrium reactions and chemical kinetics. The first part describes experiments, and the second discusses the general laws based on the data obtained. In the third and fourth parts, the laws governing rates of reaction and equilibria are reduced to mathematical equations. Lemoine (1841–1922), professor of chemistry at the Catholic University of Paris (1875–1881), carried out extensive research on the reaction of hydrogen with iodine to form hydrogen iodide. He showed that an equilibrium always exists between reactants and product, regardless of the concentrations of hydrogen and iodine. This and many other equilibrium reactions are fully covered herein. The text of this volume formed the basis of the article on theories of chemical equilibria in Fremy's *Encyclopédie de Chimie* (1882). (Bolton, 52; Duveen, 350; Partington, IV, 595)



Lemnius. Touchstone of Complexions. London, 1633.

LE MORT, Jacob

Jacobi le Mortii Med. Doct. &c. Idea Actionis Corporum. Motum intestinum Praesertim Fermentationem Delineans.
Leyden: Fredericum Haaring, 1693.

First edition. 12mo. 4 leaves, 172 pp. Fine copy in quarter maroon morocco antique, marbled boards, spine gilt-lettered and dated.

LE MORT (1650–1718) was born in Haarlem, the son of an apothecary. At first he worked with Maets but in 1672 opened a laboratory in Leiden. In 1675 he also opened a pharmacy and gave private lessons in chemistry, pharmacy, and medicine. He became M.D. of Utrecht in 1676 and about 1694 received permission to teach chemistry publicly in Leiden. In 1702 he was made a professor in the faculty. Le Mort was familiar with the works of Boyle and taught the atomic theory, attaching importance (like Descartes) to the supposed shapes of particles. In the present work he discusses the so-called intestine motion (i.e., molecular motion) of substances, including the process of fermentation. The text throws much light on the chemical and physical theories of the time, particularly those concerning acids, alkalies, salts, etc. Rare. Not in Bolton, Cushing, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Poggendorff, Smith, Sondheimer, Waller, Watt, etc. (Ferchl, 308; Partington, II, 737; Wellcome, III, 489)

LE MORT, Jacob

Jacobi Le Mortii, M. D. P. E. C. Chymiae Verae Nobilitas & Utilitas, in Physica Corpusculari, Theoria Medica, ejusque Materia et Signis, Ad majorem perfectionem deducendis. Comprehendens opera ejus omnia, hucusque typis commissa. Quibus seorsim excusa Collectanea, Maetsiana & Marcgraviana, Bibliopolae subjunxerunt.
Leyden: Apud Fredericum Haaring, Cornelium Boutesteyn, 1696.

First collected edition. 4to. 5 leaves, 150 pp., 7 leaves; 1 leaf, 237 pp., 5 leaves; 1 leaf, 173 pp., 9 leaves; 2 leaves, 228 pp., 6 leaves (final blank). Main title in red and black, and with woodcut printer's device; separate divisional titles to each part. With 2 copperplates of chemical apparatus (1 facing main title page, the other facing p. 26 of second part). An excellent, crisp copy, in contemporary vellum. From the library of Dr. John Bostock (1773–1846), physician, chemist, and friend of John Dalton, with signature in ink on main title.

THE IMPORTANT first collected edition of the chemical and pharmaceutical writings of Le Mort, comprising the following titles: 1) *Chymiae verae nobilitas & utilitas*; 2) *Chymia medico-physica, ratione & experientia*; 3) *Pharmacia medico-physica, ratione & experientia nobilitata*; and 4) *Collectanea*

chymica Leidensia Maetsiana & Marcgraviana. The final work was first published in Leiden, 1684, and edited by Christopher Love Morley. "All the tracts in this important early handbook for pharmacists have separate signatures and pagination" (Duveen). Very scarce. Not in Cushing, Edelstein, Osler, Poggendorff, Smith, Sondheimer, Waller, etc. (Bolton, 616; Duveen, 351; Ferchl, 308; Ferguson, II, 24; Ferguson Coll., 403; Neu, 2332; Partington, II, 737; Watt, II, 686r; Wellcome, III, 489)

LENA, Innocenzo della

A Dissertation, on the Extraordinary Attributes, and Inherent Virtues of Fixed Phlogistic Earth, first discovered at Venice by Doctor Innocenzo della Lena of Lucca: but neither fellow or member of any academy. Submitted to the Royal Society of Arts, and Sciences of London, for the purpose of undergoing a chymical Analysis and public Trial, as an universal and infallible Remedy in every Distemper, External or Internal, Acute, or Chronic, incident to the Human Frame. To which is added, a succinct Memorandum, presented to the Medical Society, on the same subject. . . .
London: Printed by W. Glindon, Rupert-Street, Hay-Market. (1801).

First edition. 8vo. 1 leaf, vii, (1), 3–16, 16*, 17*, 17–64 pp. Fine copy in crimson quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A RARE TRACT on a mysterious type of earth described as a "fixed phlogistic vegetable substance, possessing peculiar physical, chymical and medicinal qualities and virtues, indestructible and unalterable, by the most violent action of fire" (p. iv). Lena, physician to the marquis de las Casas, Spanish ambassador in London, berates the Royal Society and Medical Society for not taking him seriously. At the end Lena states that he demonstrated his discovery in 1794 before a group of noted chemists in Berlin, including the celebrated Klaproth and Hermbstädt. The preface is dated: Soho, Feb. 1801. Ferchl (p. 308) lists an Italian title (Venice, 1782) by Lena on a similar subject. (Ferguson Coll., 403; Wellcome, III, 490)

LENGLET DUFRESNOY, Nicolas

Histoire de la Philosophie Hermetique. Accompagnée d'un Catalogue raisonné des Ecrivains de cette Science. Avec le Véritable Philalethe, revû sur les Originiaux.
Paris: Chez Coustelier, Libraire, Quay des Augustins. 1742.

First edition, first issue. 3 vols., 12mo. I: xxiii, (1), 486 pp., 10 leaves. II: xxxii, 120, 360 pp. With 2 woodcuts (alchemical medals, pp. 8 and 36). III: 11 leaves, 432 pp. Very good copy in original mottled calf, gilt, maroon labels.

FIRST ISSUE, without the author's name, of a rare history of alchemy and hermetic philosophy of fundamental importance. Volume I comprises a detailed history of alchemy (including Arabic, Chinese, Egyptian, and Greek), as well as individual experimenters (e.g., Geber, Roger Bacon, Albertus Magnus, Flamel, Agrippa, Paracelsus, and Kelly). There are sections on the Rosicrucians, alchemy in the seventeenth century, and its practice in various countries, including America. At the end is a chronology of alchemical authors from Hermes to 1739 (pp. 459–486). Volume II contains a history of the transmutation of metals and works on that subject by Lull, Sendivogius, Kircher, and others. Most of this volume comprises one of the best translations of the *Secrets Revealed* by Eirenaeus Philaletha, with Latin and French versions on facing pages. Volume III comprises an excellent bibliography of alchemy (listing about 1,500 titles with interesting notes), plus an index of authors. "This bibliography is the best published to that date" (Bolton). Duveen (p. 351) lists only the second edition (Paris: Nyon fils, 1744). Born at Beauvais, Lenglet Dufresnoy (1674–1755) "was a voluminous writer on historical subjects, and was possessed of a prodigious memory . . . [He] did not believe in alchemy" (Ferguson). (Bolton, 131; Caillet, 6496; Ferchl, 308; Ferguson, II, 25; Heym, *Ambix* [1937], 48; Smith, 290; Verginelli, 181–183; Wellcome, III, 490)

LENGLET DUFRESNOY, Nicolas

Histoire de la Philosophie Hermétique. Accompagnée d'un Catalogue raisonné des Ecrivains de cette Science. Avec les Véritables Philalethes; revû sur les Originiaux.
Amsterdam: Chez Pierre Marteau. 1744.

First Amsterdam edition. 3 vols., 1 2mo., in 1. I: 1 leaf, xxiii, (1), 486 pp., 10 leaves. II: 1 leaf, xxxii, 120, 360 pp. With 2 woodcuts (alchemical medals, pp. 8 and 36). III: 1 leaf, 11 leaves, 432 pp. Fine copy in original blind-ruled calf, spine richly gilt, tan morocco label.

A LATER ISSUE of the first edition, comprising the identical sheets of the Paris first issue but with reset title pages. Half titles have also been added to this issue (not required in the first issue). The woodcut vignettes and imprint on the titles are different from those in the first issue; both issues are otherwise the same. A second issue of the first Paris edition appeared with a variant imprint (La Haye, 1742; Blake, 264; Watt, II, 598t). Caillet (no. 6496) lists another edition (or possibly issue) of 1744 from Paris, with a Barrois imprint. Duveen (p. 351) describes a Paris 1744 edition (or issue) with a Nyon fils imprint, in which the half titles are blank. The present rare issue with the Amsterdam imprint is not mentioned in the usual bibliographies.

LE NORMAND, Louis Sébastien

L'Art du Distillateur des Eaux-de-Vie et des Esprits, dans lequel on a donné la description des nouveaux appareils de distillation.

Paris: Imprimerie de Chaigneau Aîné. 1817.

First edition. 2 vols., 8vo. I: lxxii, 486 pp., 1 leaf (errata). II: 558 pp., 1 leaf (errata). 12 folding plates (by Le Normand, engraved by Moisy, of laboratory-scale and industrial-scale distillation equipment). Very good copy in original speckled half calf gilt, marbled boards. From the library of Dr. Ladislao Reti (1901–1973), industrial chemist, chemical engineer, historian of chemistry, and bibliophile.

ONE OF THE most important and comprehensive works to appear at the beginning of the nineteenth century on distillation, tracing in detail its history from earliest times and the various techniques used. Le Normand (1757–1839), born at Montpellier, was chief assistant to Lavoisier. During the revolution he was in charge of niter production for the manufacture of gunpowder. Later he became professor of chemistry at the École Centrale, Paris. "[O]ne of the most fruitful inventors in chemical technology in his days. Le Normand's book is full of, illustrations. . . . Through him we learn many details of the early distilling apparatus of his century and his book is indispensable for anyone who desires to study the art in France in this period" (Forbes). Another edition appeared in 1824. Scarce. Not in D.S.B., Duveen, Ferguson Coll., Morgan, Partington, Rosenthal, Smith, Sondheimer, Waller, etc. (Bolton, 616; Edelstein, 1414; Ferchl, 308; Forbes, *History of Distillation*, 290; Pogendorff, I, 1422; Wellcome, III, 491)

LEONARDI, Camillo

Speculum Lapidum Clarissimi Artium et Medicine Doctoris Camilli Leonardi Pisarenensis. . . .

(Colophon:) Venice: per Melchiorrem Sessam & Petrum de Ravanis sociis. 20 Novembris, 1516.

Second edition. 4to. 66 folios. Large woodcut printer's device on title page. Woodcut capitals. Roman letter. Few headlines and numerals slightly shaved and occasional neat sixteenth-century marginal notes; otherwise fine copy in modern vellum.

THE LAST of the medieval and "one of the most widely read lapidaries of the time" (Adams, *The Development of the Geological Sciences*, pp. 155–159). This beautifully printed second edition, almost unknown, is even rarer than the very rare first edition (Venice: J. B. Sessa, 1502). The first part covers the nature and origins of stones, their beauties, colors, and medicinal properties, including a section on amber. The second part is an account of 279 minerals and is a more complete listing than any previous attempt. The third

Speculum Lapidum Clarissimi Artium
Et Medicine Doctoris Camilli
Leonardi Pisarenensis.

CValerii Superchij Pisarenensis Physici Epigramma.

Quicquid in humanos gemmarum parturit usus
Terra parens: uasti quicquid & unda maris,
Quolibet exiguo claudis Leonarde libello
Mirandum/ & seræ posteritatis opus,
Quod positus Cæsar interdum perlegat armis:
Seruariq; suas imperet inter opes
Et tibi pro meritis æquos decernar honores:
Consulat & famæ tempus in omne tuæ.

alias quod cesar positus
nam uersus est et ad
rimis quoniam tenuis
in .i. ut aiunt ultra
brauem habent.



Leonardi. Speculum Lapidum. Venice, 1516.

part, on engraved gems and stones, is a valuable contemporary source of information on several great Italian artists: e.g., Leonardo da Vinci, Giovanni Bellini, Piero della Francesca, Melozzo da Forlì, Pietro Perugino, and especially Andrea Mantegna, whose drawings are highly praised. First described in this work is the filar suspension of magnets, mentioning the lodestone, and it is quoted as a source by Gilbert in his *De magnete*, 1600. Adams states that Leonardi “shows some indications of having come under the influence of the newer methods of study which were about to be advocated by Agricola and his followers, in that he treats of certain physical properties of minerals.” Partington (II, 101) discusses this work but does not mention the 1516 edition. Leonardi (or Lunardi, fl. 1500), of Pesaro, was physician to Cesare Borgia, to whom the book is dedicated. (British Library, *S.T.C. Italian Books, 1465–1600*, Supplement, p. 47; Ferchl, 309; Ferguson, II, 27 [not in Young Coll.]; Ferguson Coll., 405; Hoover, 524; Mottelay, 626; Thorndike, VI, 301; Ward & Carozzi, 1367)

LEONARDI, Camillo

The Mirror of Stones; in which the Nature, Generation, Properties, Virtues and various Species of more than 200 different Jewels, precious and rare Stones, are distinctly described. Also certain and infallible Rules to know the Good from the Bad, how to prove their Genuineness, and to distinguish the Real from Counterfeits. Extracted from the Works of Aristotle, Pliny, Isidorus, Dionysius Alexandrinus, Albertus Magnus, &c. By Camillus Leonardus, M.D. . . . Now first Translated into English.

London: Printed for J. Freeman in Fleet-street. 1750.

First English edition. 8vo. “240” pp. (recte 160 pp.; i.e., pp. xiv, 15–119, 200–240. Pagination skips: H4 recto, p. 119, verso p. 200). Very good copy in unlettered calf antique.

THE ENGLISH version of the *Speculum Lapidum*, by an anonymous translator (possibly John Hill). Book III on the magical powers of engraved stones is omitted from this edition. In the preface the translator states that this work is made from an octavo edition of 244 pages (i.e., the Paris, 1610 edition), omitting the second part by Petrus Arlensis. Even before 1750, the Paris edition “was a scarce Book . . . valued at 100 Pistoles. A certain Nobleman . . . sought for it in vain in the most noted Libraries in England; but being determined to have it . . . sent a Gentleman to France. . . . After a long and expensive Search, he at last [found] two of them, which he purchased . . . at an exorbitant Price, and brought them to his Noble Master, who . . . not only paid him generously . . . but, over and above . . . presented him with . . . 30 pounds.” Pages 62–“240” comprise an alpha-

betical description of minerals, including the lodestone, filar suspension of magnets, and the compass. Rare. (Blake, 265; Duveen, 352; Ferchl, 309; Ferguson, II, 27 [not in Young Coll.]; Ferguson Coll., 450; Hoover, 527; Mottelay, 626; Neu, 2338; Partington, II, 101; Thorndike, VI, 302; Ward & Carozzi, 1368; Watt, II, 599; Wellcome, III, 493; Wheeler Gift, 83a)

LEONARDI, Camillo, and PETRUS ARLENSIS DE SCUDALUPIS

Speculum Lapidum Camilli Leonardi. Cui accessit Sympathia Septem Metallorum ac septem selectorum Lapidum ad Planetas. D. Petri Arlensis de Scudalupis Presbyteri Hierosolimitani.

Paris: Apud Carolum Sevestre, & Davidem Gillium . . . et Joannem Petitpas. 1610.

Fourth Latin edition. 8vo. 22 leaves, 499, (1), (i.e., 503) pp., 18 leaves. With copperplate title page, portrait of the Duc de Nivernois and of Petrus Arlensis, both engraved by Thomas de Leu, one full page (p. 259) and one smaller woodcut (p. 458) in text. Fine copy in contemporary limp vellum.

THE FIRST edition of Leonardi in 8vo. format. It is also the first to contain the lapidary of Petrus Arlensis (fl. 1600), with separate title page (pp. 343–499), “on the sympathy of the seven metals and the select stones with the seven planets. . . . Petrus Arlensis, who is styled a priest of Jerusalem, while condemning the ‘false magic’ of the Arabs, approves of natural magic [which] is ‘the contemplation of secret things in their natures, properties, powers, qualities, substances and virtues’” (Thorndike). Both works deal with the magnet in great detail. Caillet describes this edition as very rare, as most copies were suppressed owing to the secrets they divulge. Leonardi’s work in Latin was published in 4to. format: Venice, 1502 and 1516, and Augsburg, 1533. Octavo Latin editions appeared: Paris, 1610, and Hamburg, 1717. An Italian translation by Lodovico Dolce (Venice, 1565, 8vo.) was reprinted (Venice, 1617, 8vo.). An English version also appeared (London, 1750). Thorndike conjectures that “the work owed its long continued popularity to its astrology, magic, and other superstition and not to its mineralogy.” (Caillet, 6544; Duveen, 351; Ferchl, 309; Ferguson, II, 26–27; Ferguson Coll., 405; Goldsmith, L933 [imperf.]; Hoover, 526; Neu, 2336; Partington, II, 101; Rosenthal, 518; Schlosser, *Kunsliteratur*, 94; Thorndike, VI, 301; Waite, 291; Watt, II, 599; Wellcome, I, 3731; Wheeler Gift, 83)

LEONHARD VON ALTENBURG

Delarvatio Tincturae Philosophorum, das ist: Kurtze und einfältige Erklärung des Lapidis Benedicti, worinnen die Hieroglyphica Nomina Philosophorum obscura, welche die Philosophi aenigmatisch beschrieben, klar und deutlich gemacht, durch einen, der wahren Philosophie Liebhabern entdeckt und erkläret, der in der Wahrheit Genuine Feuer-Arbeit Liebet, und da es wohl heissen mag, Aut hic, aut nusquam.

Ober- und Nieder-Wasserberg; gedruckt durch Mercurium Schwefelmann. 1747.

First edition. 8vo. 8 leaves, 94 pp., 5 leaves (index). Inscription in ink dated 1766 on title page. Light damp stain on lower part of text; otherwise good copy, in original unlettered flexible boards.

A RARE ALCHEMICAL text on the philosopher's stone. Nothing is known about the author, whose name nowhere appears. Ferguson states: "The author is Leonhard von Altenburg, according to the *Hermetisches A.B.C.*, 1799, iv, p. 122." A second edition, with engraved frontispiece, appeared in 1769 (Wellcome, II, 37; under Altenburg). Both editions have the same false imprint and fictitious printer. There is no evidence that the first edition ever had a frontispiece. The text was reprinted in *ABC vom Stein der Weisen* (Berlin, 1782; Bolton, 946). Only the second edition (1769) is cited by Blake, Edelstein, Ferguson, Ferguson Coll., Smith, Wellcome, etc. (Caillet, 2905; Duveen, 352–353; Ferguson, II, 27; Kopp, *Die Alchemie*, 253; Neu, 2339)

LE PELLETIER, Jean

L'Alkaest ou le dissolvant universel de Van-Helmont, revelé dans plusieurs traités qui en découvrent le secret.

Rouen: Guillaume Behourt. 1704.

First edition. 12mo. 2 leaves, 256 pp., 2 leaves. Fine copy in contemporary marbled boards.

LE PELLETIER (1633–1711), a celebrated French alchemist, was born in Rouen. The present work is the French translation of extracts from the writings of Eirenaeus Philaletha and George Starkey, with additional commentary from certain works of Van Helmont. Pages 1–106 comprise a long preface by Le Pelletier in which the merits of works by Philaletha, Starkey, and Van Helmont are set out. Pages 107–124 contain extracts from the eleventh chapter of *Secrets Reveal'd* (London, 1669) of Philaletha. Pages 125–137 discuss in question-and-answer form the alkahest (or immortal liquor) of Philaletha. Pages 138–187 comprise a discussion of the ninth to thirteenth chapters of the second part of *Pyrotechny Asserted* (London, 1657) of George Starkey, on the alkahest of Van Helmont. Pages 189–231 are a

translation (with additions) of *Liquor Alkahest* edited by J. Astell (London, 1675). This section has a divisional title page followed by a dedication to Robert Boyle (pp. 191–192) (see Fulton, 275, for the English edition; this French edition is not mentioned by Fulton). Pages 232–256 comprise a summary of the preparation of the alkahest by the several methods described by Starkey. Bibliographically this book is interesting because it exists in two distinct issues. In the first issue (as here), at the foot of the table, the author promises to publish a sequel work on the volatilization of alkalies if the present work meets with the acceptance of the public. *L'Art ou la maniere de volatiliser les alcalis* was in fact published at Rouen in 1706, and the remaining copies of this 1704 edition were bound with it (as in Duveen, 353) as the second issue of the first edition. Lenglet Dufresnoy says of the 1704 edition: "Ouvrage curieux & fort estimé," writing in 1742. Barrett, in 1814, called this work "esteemed." Very rare. (Caillet, 6550; Duveen, 353; Guaita, 1551; Lenglet-Dufresnoy, III, 259; Neu, 2341; Smith, 290; Wellcome, III, 494)

LE PILEUR D'APLIGNY

L'Art de la Teinture des Fils et Étoffes de Coton, précédé d'une théorie nouvelle des véritables causes de la fixité des couleurs de bon teint, et suivi des cultures du pastel, de la gaude et de la garance.

Paris: Chez Moutard. 1776.

First edition. 2 vols., 12mo., in 1. xvi, 204, 63, (1) pp., 1 leaf. Fine, crisp copy, in original mottled calf, gilt, maroon morocco label.

AN EXCELLENT and authoritative book on dyeing, mentioning the earlier works of Hellot and Macquer. "L'Art de la Teinture est peut-être celui qui dépend le plus de la Physique & de la Chymie, & le plus éloigné de sa perfection" (Preface, p. vii). The author, a noted French industrial chemist, adopts a physical, as opposed to a chemical, theory of dyeing: i.e., explaining the attachment of dyes to fibers by physical forces of attraction, rather than by reaction of the dyes with the substrate. The second volume, with separate title page and pagination, is entitled *Cultures du pastel, . . . a l'usage des cultivateurs et des manufactures* (Amsterdam & Paris: Moutard, 1776). The approbation, dated 23 May 1775, is signed by Adanson of the Académie Royale des Sciences. In the *privilege du roi*, dated 21 July 1775, the author's name is given as d'Apligny. The work appeared in two formats in 1776: one in folio (166 pp.; Lawrie, 408), the other in 12mo. (as here). Several editions followed: Paris, 1779, 1786, 1798, 1801, 1807 (see Ferchl, 11; Lawrie, 408; Wellcome, III, 494). Rare. Not in the usual chemical bibliographies. (Edelstein, 3232; Ferguson Coll., 407; Partington, III, 515)

LE PILEUR D'APLIGNY

Traité des Couleurs Matérielles, et de la maniere de colorer, relativement aux différens arts et métiers.

Paris: Chez Saugrain & Lamy, et Barrois aîné. 1779.

First edition. 12mo. xii, 342 pp., 2 leaves. Woodcut on title page. Excellent copy in original tree calf, gilt, red morocco label.

AN IMPORTANT work on the chemical and physical processes of coloring, dealing with the preparation and compounding of various natural dyestuffs and inorganic pigments and their application to many different substances (e.g., cloth fabrics, wood, marble, stone, enamel, glass, and porcelain). There are long sections on the preparation of varnishes; the technique of gilding; oil, fresco, and encaustic painting; etc. Rare. The Wellcome copy apparently lacks the *avertissement* (pp. xii), here present. Not in Edelstein, Lawrie, or the usual chemical bibliographies. (Partington, III, 515; Wellcome, III, 494)

LE RATZ DE LANTHENÉE, Jean Francois

Examen et Refutation de Quelques Opinions, sur les causes de la réflexion & de la réfraction de la Lumiere, répanduës dans l'Ouvrage de M. Bannieres [sic], contre la Philosophie de Newton, par M. de Voltaire. Par M. Le Ratz de Lanthenée. Avec un Essai sur l'Impulsion appliquée aux Phénomènes de la Lumiere & à quelques autres attribéues à l'attraction.

Paris: Ches Chaubert, à l'entrée du Quai des Augustins, du côté du Pont Saint Michel, à la Renommée & à la Prudence. 1739.

First edition. 8vo. 2 leaves, 50 pp., 1 leaf. Bound with 5 folding engraved plates belonging to the companion volume by Banieres, Jean, *Examen et réfutation des elemens de la philosophie de Neuton* (Paris, 1739). Fine copy in calf antique, red morocco label.

A COUNTERBLAST to the work of Banieres (*Examen et réfutation*, Paris, 1739), by a protagonist of the Newtonian theory of light. The *Essai sur l'impulsion appliquée aux phénomènes de la lumiere & à quelques autres attribéues à l'attraction* is of interest in the history of physics and chemistry for the supposed explanation of the interaction of light in crystals. A very rare work: Wallis located only two copies (Douai Municipal Library, France, and University of California, Berkeley). Not in Babson or Gray. (Wallis, 221.011)

LE ROY, Charles

Mélanges de Physique et de Médecine. Par M. Le Roi, Professeur en Médecine au Ludovicée de Montpellier, Membre de la Société Royale de Londres, Correspondant de l'Académie Royale des Sciences.

Paris: Chez P. G. Cavelier. 1771.

First edition in book form. 8vo. 6 leaves, 400 pp. With 1 copperplate facing page 122. Fine, crisp copy, in contemporary quarter calf, marbled boards, spine gilt, with gilt-lettered green morocco label.

LE ROY (1726–1779) was professor of chemistry and medicine at Montpellier. The present *Mélanges* contain *Mémoires* on both subjects, which had appeared between 1751 and 1769 in the transactions of the Académie Royale des Sciences and as separate publications. Topics of chemical importance include the evaporation of water into the air; the mineral waters of Balaruc; sulphurous mineral waters that occur naturally and the preparation of imitation sulphurous mineral waters by chemical means; and other types of mineral waters (e.g., saline, ferruginous, and carbonated) and their chemical and physical analysis. The book is almost entirely chemical in content, with references to contemporary chemists and their writings (e.g., Monnet, Venel, Carrere, Hoffmann, and Bayen). The medical portion is on vision (with plate), fevers, and scurvy. There are several references to Le Roy in Partington, volume III, but not to this work. Duveen does not mention the plate, which was missing in his copy. Scarce. Each gathering is signed "Tome I," but no further volumes appeared. Not in Caillet, Cushing, Edelstein, Ferguson, Morgan, Osler, Partington, Smith, Waller, Watt, etc. (Bolton, II, 267; D.S.B., VIII, 256; Duveen, 354; Ferchl, 310; Neu, 2349; Poggendorff, I, 1432; Wellcome, III, 496)

LESCHEVIN DE PRÉCOUR, Philippe Xavier

Mémoire sur le Chrome Oxydée Natif du Département de Saône et Loire. Par M. Leschevin . . .

Paris: De l'Imprimerie de Bossange et Masson. 1810.

First separate edition. 8vo. 30 pp. Minor embrowning of title leaf; otherwise fine copy, in original red quarter morocco, deep-orange boards, spine gilt.

AN ACCOUNT of an important new mineral containing aluminum, silicon, and chromium oxides. Chemical analyses are presented, as are those for other chromium ores with which this rich source (approximately 10 percent chromium) is compared. References are made to the researches and analyses of Guyton de Morveau, John, Vauquelin, and others on this subject. The report first appeared in the *Journal*

des Mines (XXVII, 1810). Leschevin de Précour (1771–1814) was born at Versailles, became a supervisor of gunpowder manufacture in 1794 at Colmar, and later was in charge of similar operations at various French locations. He was a member of scientific societies at Dijon, Grenoble, Lille, Paris, Treves, and Turin. (Ferchl, 311; Poggendorff, I, 1434)

LE SEMELIER

Examen Physico-Chimique des Principes de l'Air et du Feu; ou Lettres a Mme. la Mise. de P. M** sur la Chaleur du Globe. Par M. Le Semelier. . . .*

Amsterdam & Paris: Chez P. F. Didot jeune, Imprimeur, quai des Augustins. P. Théophile Barrois jeune, Lib. rue du Hurepoix. Croullebois, Libraire, rue des Mathurins. 1788.

First edition. 2 parts in 2 vols., 8vo. I: xxxiv, (6), 444 pp. II: 3 leaves, pp. 443–816. Large woodcut headpiece (by Beugnet) on first page of main text in each volume. Very fine copy in original quarter calf, spines richly gilt, marbled boards.

A TREATISE OF considerable chemical interest, representing one of the “last gasps” of the phlogiston hypothesis. It is dedicated to “La Marquise de P*. M**.” and is written in the form of six long letters: I) “Examen physico-chimique des principes de l’air et du feu”; II) “De la chaleur, & des causes qui la produisent”; III) “Des principes du feu”; IV) “De l’électricité & du magnétisme”; V) “De l’affinité”; and VI) “Sur les évaporations de la terre, & la cause de ces évaporations.” Le Semelier refers to the works of many contemporary chemists and physicists but omits mentioning the researches of Lavoisier and his circle. Nothing appears to be recorded of the author and this very rare work.

LESLIE, John

An Experimental Inquiry into the Nature, and Propagation, of Heat. By John Leslie.

London: Printed for J. Mawman, No. 22 Poultry; sold also by Bell and Bradfute, Edinburgh. 1804.

First edition. 8vo. xv, (1), 562 pp., 1 leaf (advertisements). With 9 engraved plates (4 folding) by Lowry. Old withdrawal stamp (Trinity College, Dublin) on title; otherwise near-fine copy in contemporary gilt-ruled half calf, marbled boards, rebounded, red morocco label.

THE MOST important work by Leslie (1766–1832), natural philosopher and professor of mathematics at Edinburgh. In this classic book of twenty-one chapters, Leslie describes the fifty-eight significant experiments he carried out during the years 1801–1804 on the physical nature and chemical properties of heat. The *Experimental Inquiry* (1804) established several fundamental laws of heat radiation: that

the emissivity and absorptivity for any surface are equal, that the emissivity of a surface increases with the decrease of reflectivity, and that the intensity of heat radiated from a surface is proportional to the sine of the angle of the rays to the surface. The book also played a major role in the early-nineteenth-century argument about whether heat was a form of matter or a mode of motion. “Since Leslie embraced a corpuscular theory, he incorrectly interpreted the apparent blockage of heat radiation as evidence that heat was composed of particles much larger than those of light” (D.S.B.). He describes three types of photometer, which are illustrated in plates VI–IX. For this work Leslie was awarded the Rumford Medal of the Royal Society in 1805. The book is dedicated to his friend Thomas Wedgwood, son of the famous potter Josiah Wedgwood. (D.S.B., VIII, 261; Middleton, *A History of the Thermometer*, 163; Poggendorff, I, 1436; Roberts & Trent, 203; Roller & Goodman, II, 102; Sotheran, Cat. 676 [1907], 2563 [“Scarce”]; Watt, II, 600t)

LESLIE, John

A Short Account of Experiments and Instruments, depending on the Relations of Air to Heat and Moisture. By John Leslie. . . .

Edinburgh: Printed for William Blackwood, and J. Ballantyne & Co.; and for Longman, Hurst, Rees, Orme, & Brown; and John Murray, London. 1813.

First edition. 8vo. iv, 178, (2) pp. With engraved plate containing 10 figures (J. Grant sculpt.). Neat inscription in ink on verso of title: “To the Greenock Library of Arts and Sciences founded by the late Dr. Jas. Watt from Willm. Heron. Greenock 1820.” Old stamp on recto and verso of title (Greenock Scientific Library); otherwise fine copy, uncut and unpressed, in original boards with printed paper spine label.

AN IMPORTANT work announcing Leslie’s discovery of artificial refrigeration. “In 1810 he successfully applied the absorbent powers of sulphuric acid to freeze water under the receiver of the air-pump. This is the first recorded achievement of artificial congelation. [This book] contains a description of this experiment, and it is full of important and original work” (D.N.B.). Leslie’s experiment is described (pp. 140–146) and illustrated in the plate (figures 9 and 10). Also described are the author’s inventions of the dry-and-wet-bulb thermometer and altometer (figures 1 and 8). “This work is a sequel to the author’s *Experimental Inquiry into the Nature and Propagation of Heat* and establishes several important laws of heat radiation governing the relation between the intensity of radiated heat and its absorption and emission from a surface” (Roberts & Trent). (D.S.B., VIII, 262; Partington, III, 697; Poggendorff, I,

1436; Roberts & Trent, 203–204; Sotheran, Cat. 676 [1907], 2570 [“Scarce”]; Watt, II, 600u)

LESLIE, John

Treatises on Various Subjects of Natural and Chemical Philosophy. By Sir John Leslie . . . With a biographical memoir. Republished from the Encyclopaedia Britannica. Edinburgh: Adam and Charles Black, North Bridge, Booksellers to Her Majesty for Scotland. 1838.

First edition. 8vo. vi, (2), 537, (1) pp. With 7 engraved plates containing 67 figures (E. Mitchell sc.). Fine copy in contemporary half calf, patterned cloth, rebacked, black morocco label.

“THIS VOLUME contains all the more important Articles and Treatises, not already republished separately, which were contributed by the late Sir John Leslie to the *Supplement* to the former editions of the *Encyclopaedia Britannica*” (advertisement). The text is preceded by a detailed forty-six-page biography of Leslie, by Macvey Napier (1776–1847), editor of the *Edinburgh Review* (1829). Leslie’s researches are summarized in nine chapters: achromatic glasses, acoustics, aeronautics, barometer, barometrical measurements, climate, cold and congelation, dew, and meteorology. There are numerous woodcut figures and tables in the text. (Roller & Goodman, II, 103)

LESLIE, Patrick Dugud

A Philosophical Inquiry into the Cause of Animal Heat: with Incidental Observations on Several Phisiological and Chymical Questions, connected with the Subject. By P. Dugud Leslie . . .

London: Printed for S. Crowder, Paternoster-Row; and J. Robson, New Bond-Street. A. Gordon, and C. Elliot, Edinburgh. 1778.

First edition. 8vo. in 4s. viii, 362 pp. Few leaves with minor foxing; otherwise very good copy in original calf, gilt, maroon morocco label. Presentation copy inscribed in ink on verso of title: “To Mr. Stout from his friend & humble servant the Author”; and beneath: “From Thos. Stout Durham Battalion, to Mrs. James Benning Junr., Surgeon at Barnard Castle.”

THE GREATLY enlarged and only English version of *Dissertatio physica, inauguralis, de caloris animalium causa* (Edinburgh, 1775), by Patrick Dugud (ca. 1755–1783), who changed his name to Leslie. In this work he further develops his ideas on the origin and maintenance of animal heat, ascribing it to the presence of phlogiston. The second and major part (pp. 91–352) discusses the nature and properties of phlogiston, with good accounts of the theories of animal heat by Black, Cullen, Hales, Lavoisier, Priestley,

and others. The importance of this book in the history of chemistry is discussed by Partington and McKie (*Annals of Science*, 2 [1937], 384–387). Elected F.R.S. (1781), Leslie practiced as a physician in Durham but died prematurely at age twenty-eight. (Blake, 266; Blocker, 239; Cole, 821; Duveen, 650; Eales, 1947; Partington, III, 614; Watt, II, 600v)

LEURECHON, Jean

Mathematical Recreations: or, a Collection of many Problems extracted out of the Ancient and Modern Philosophers: as, Secrets and Experiments in Arithmetick, Geometry, Cosmography, Horologigraphy, Astronomy, Navigation, Musick, Opticks, Architecture, Statick, Mechanicks, Chymistry, Water-Works, Fire-Works, &c. Not vulgarly manifest till now. Written first in Greek and Latin, lately compil’d in French by Henry van Etten, and now in English, with the Examinations and Augmentations of divers Modern Mathematicians. Whereunto is added, the Description and Use of the Double Horizontal Dyal, and the General Horological Ring: invented and written by William Oughtred.

London: Printed for William Leake, and John Leake, at the Crown in Fleet-street, between the Two Temple-Gates. 1674.

Third (final) English edition. 2 vols., 8vo., in 1. I: 20 leaves, 282 pp. II: 1 leaf (divisional title), 19, (1) pp. Engraved title page (shaved), facing leaf (poem by W. S.), and many engravings in text. Fine copy, in half calf antique, marbled boards, black morocco label.

LEURECHON (1591–1670) taught mathematics, philosophy, and theology at Bar-le-Duc, Lorraine. His chief work is this collection of secrets, published under the pseudonym Hendrik van Etten. The first edition appeared as *La récréation mathématique* (1624; D.S.B., VIII, 271). Many editions and translations followed. The first in English, by William Oughtred, was *Mathematicall recreations* (London, 1633; S.T.C. 15530), with a second edition (1653) augmented by Oughtred’s *Double horizontal dyal*. The present is a reprinting of the 1653 edition. Leurechon here first used the term *thermometer* (pp. 110–113), with illustrations. Rare. (Ferguson Coll., 216; Ferguson, *Books of Secrets*, 6th suppl., 68; Middleton, 20; Philip, 53; Wellcome, III, 506; Wheeler Gift, 93c; Wing, L1791)

LEVADE, Louis

Observations et réflexions sur quelques matieres de Médecine. Par Lavade . . .

Vevey: Chez Chenebié & Lörtscher, Libraires & Imprimeurs. 1777.

First edition. 12mo. vi, 183, (1) pp. Woodcut ornament on title page. Very good copy in early half calf, marbled boards, brown morocco label. Bound with: Corvinus, Johann Friedrich, *Deux memoires sur les gas* (Lausanne, 1782), and Amburger, Johann Andreas August, *Les eaux de Geilnau* (Offenbach, 1819).

LEVADE (1748–1839), a physician at Vevey, herein describes and deplors the fraudulent medicines given to children and adults by physicians and pharmacists of the time. He lists a number of maladies and the sometimes dangerous medicines prescribed for their cure. Included are discussions of mineral waters, wine, coffee, tea, chocolate, and preparations containing salts of copper, iron, lead, and tin. Rare. Not in the usual bibliographies.

LEVEL, Johan Adolph

Dissertatio Pharmaceutica de Stibio Tartarizato, quam . . . Publico Examini Submittunt, Praeses Mag. Torbernus Bergman, . . . Respondens . . . Johannes Adolphus Level, Smolandus. In Auditorio Gustaviano, die 22 Dec. 1773. . . . Uppsala: Apud Joh. Edman, Reg & Acad. Typogr. (1773).

First edition. 4to. 2 leaves, 19, (1) pp. Very fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation on the history, preparation, and pharmaceutical uses of tartar emetic (antimony potassium tartrate), presented by Level (fl. 1770) under the direction of the great Swedish chemist Torbern Olof Bergman. Several methods are described for preparing this compound, which is still employed in veterinary medicine and as a mordant for dyes in the textile and leather industries. A revised version was published by Bergman in his *Opuscula physica et chemica* (Stockholm, 1779, vol. I, pp. 338–364). This copy contains a leaf on the recto of which is a dedication by Level to Sir John Leven in English, and on the verso is a laudatory poem in Swedish by Sven Anders Hedin. This leaf is mentioned by Moström but is lacking in the Cole and Wellcome copies. (Cole, 96; Hoefler, II, 448; Moström, 86; Partington, III, 182; Waring, 240; Wellcome, III, 508)

LEVENS, Peter

A Right profitable Booke for all diseases, called, The Pathway to Health. Wherein are to be founde most excellent & approved Medicines of great vertue: as also notable potions and drinks, and for the distilling of divers precious waters, and making of Oyles, and other comfortable receipts for the health of the body, never before imprinted. First gathered by Peter Levens, Master of Art of Oxford, and student in Phisicke and Surgery: and now newly corrected and augmented. . . .

London: Printed by I. Roberts for Edward White, and are to be solde at the little North doore of Paules Church, at the signe of the Gun. 1596.

Second edition. 4to. (2), 114, (4) leaves (last blank). Title within ornamental woodcut border. Colophon dated 1597. Very fine copy in later limp vellum (by Riviere), with gilt cypher (AWA) on each cover, all edges gilt, spine gilt-lettered and dated. Housed in a fleece-lined folding box of black quarter morocco over marbled boards (by Carolyn Horton). From the library of the Chicago meatpacking Armour family, with engraved armorial bookplate of Jean S. Armour and A. Watson Armour III, grandson of Andrew Watson Armour (1829–1892).

THE “NEWLY corrected and augmented” edition of a medical and iatrochemical book of great rarity. Only one copy is recorded of the first edition (London, 1587; S.T.C. 15533) (Cambridge University). The present edition is not in S.T.C. or the British Library. “The book had . . . a long and apparently successful career” (Ferguson, who also lists editions of 1608, 1632, 1644, 1654, and 1664.) The work is discussed by Ferguson in detail. Born in Yorkshire, Levens (or Levins, ca. 1540–ca. 1587) graduated at Oxford (B.A., 1556; M.A., 1559), then practiced medicine. He also published *Manipulus Vocabulorum. A Dictionarie of English and Latine Wordes* (London, 1570), “valuable as evidence of contemporary pronunciation” (D.N.B.). Apart from Anthony Wood’s brief account of Levens, there is almost no other biographical information on him. N.U.C. cites only one copy (N.L.M.). (Durling, 2804; Ferguson, *Books of Secrets*, II, 5th Suppl., 15–18; Watt, II, 602o; Wood, *Athenae Oxon.*, 1721, I, 237–238)

LEWIS, William

Commercium Philosophico-Technicum; or, the Philosophical Commerce of Arts: designed as an attempt to improve Arts, Trades, and Manufactures. By W. Lewis, M.B. and F.R.S. . . . London: Printed by H. Baldwin, for the Author; and Sold by R. Willock, at Sir Isaac Newton's Head in Cornhill. 1763, 1765.

First edition, first issue. 2 vols., 4to. I: 2 leaves (title, dedication), iv (contents), 314 pp.; folding frontispiece (S. Wale del., P.C. Canot sculp.) and 4 copperplates (chemical apparatus). II: Title page (*The Philosophical Commerce of Arts: Designed as an Attempt to Improve Arts, Trades, and Manufactures*) dated 1765; followed by a second title page (*Commercium Philosophico-Technicum . . . Vol. II*) also dated 1765; 8 leaves (preface, numbered iii–xviii), 3 leaves (contents, numbered v–x), pp. 315–646, 7 leaves (index), and 1 copperplate (blowing machine). (N.B. In this copy there are 2 identical sets of the Aaa gathering.) Fine copy with wide margins, in original half calf, marbled boards, rebacked, with maroon and black morocco labels.

DEDICATED TO George III, this classic treatise on applied chemistry and metallurgy contains chapters on the history of gold and platinum and the conversion of glass into porcelain, furnaces, colors, dyes, inks, etc. Originally intended in 1748 to be a periodical appearing annually in six parts, four parts were issued in 1763 and the rest in 1765. "At a time when English chemists were dominated by the mechanical outlook promulgated by Newton, Lewis was quite clear that chemistry is a distinct science, in which such speculations are of very little relevance or value" (Partington). The spectacular frontispiece illustrates a chemical laboratory of the period. A translation by de Rusieux into French appeared (Paris, 1768–69), and parts were translated into German by J. H. Ziegler (Zurich, 1764–66). (Cole, 822; Duncan, 7871; Duveen, 355; McDonald & Hunt, 40; Partington, II, 762; Poggendorff, I, 1443; Ron, 676; Smith, 292; Wellcome, III, 512)

LEWIS, William

Commercium Philosophico-Technicum; or, the Philosophical Commerce of Arts: designed as an attempt to improve Arts, Trades, and Manufactures. Vol. I. By W. Lewis, M.B. and F.R.S. . . .

London: Printed for the Author; and Sold by R. Willock, at Sir Isaac Newton's Head in Cornhill. 1765.

First edition, second issue. 2 vols., 4to. in 1. xviii (title page, preface), x (contents), 136 pp., 4 leaves (license leaf to "George R" signed "Egremont"; title page of first issue dated 1763; dedication; contents of the first part, from pp. 1–127), pp. 137–646, 7 leaves (index); folding frontispiece (S. Wale del., P.C. Canot sculp.) and 5 copperplates. Very fine copy with wide margins, in original gilt-ruled speckled calf, rebacked, maroon morocco label, spine dated in gilt.

THE SECOND issue of this important work, with the main title page numbered "Vol. I," dated 1765, and with "London, Printed for the Author." In the first issue the main title page is not numbered, and the imprint reads "London, Printed by H. Baldwin, for the Author." In this copy, bound between pages 136–137, is the earlier title page (i.e., first issue, dated 1763), the privilege to the king (dated 8 February 1762), and two other leaves ("Contents of the First Part," listing contents of pp. 1–127). Although the main title page is numbered "Vol. I," copies published in one volume (as here) were issued without a second title page. The privilege leaf is usually lacking, and this complete copy is in essentially pristine condition. See Cole (no. 822) for a discussion of the variations in the issues of this work. The plates in all issues are identical.

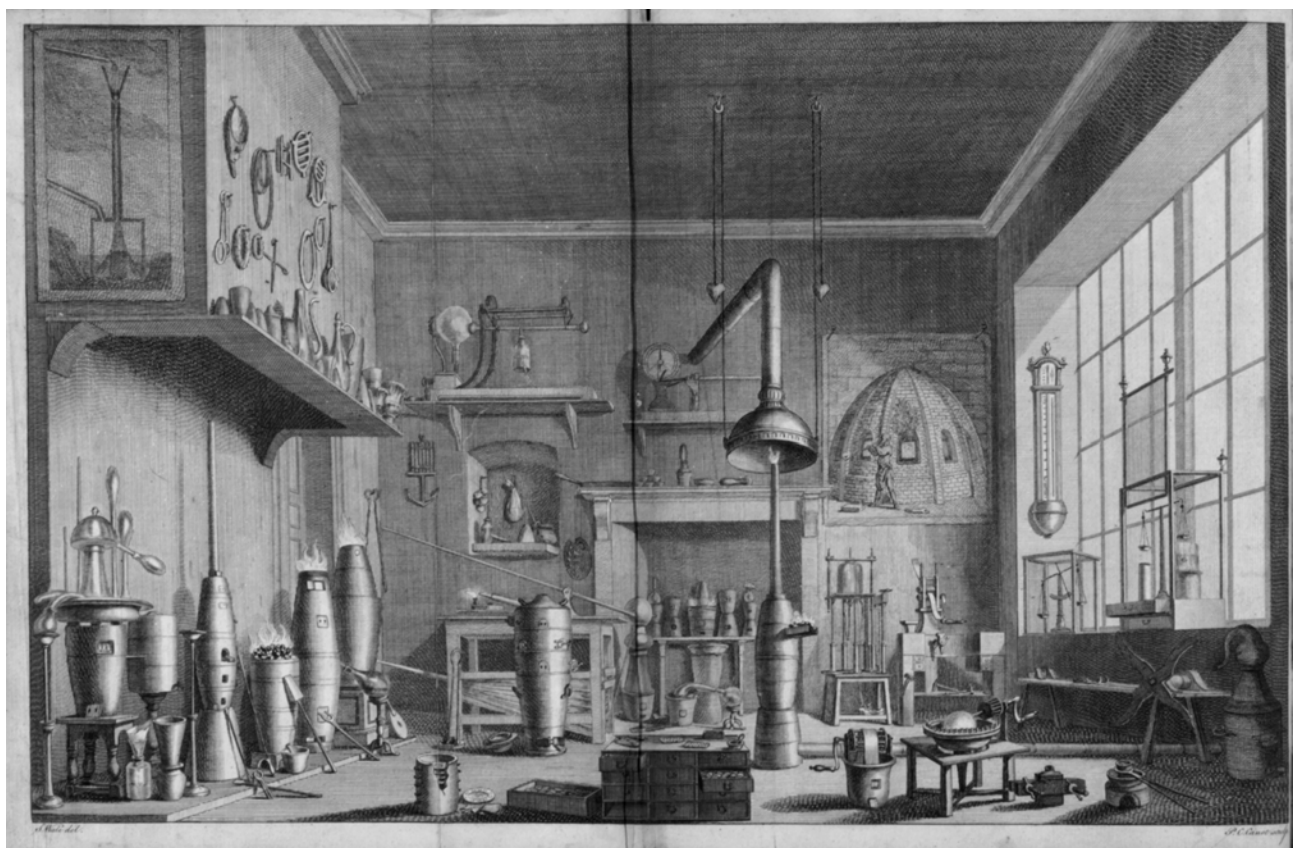
LEWIS, William

A Course of Practical Chemistry. In which are contained All the Operations Described in Wilson's Complete Course of Chemistry. With Many new, and several uncommon Processes. To each Article is given, The Chemical History, and to most, an Account of the Quantities of Oils, Salts, Spirits, yielded in Distillation, &c. From Lemery, Hoffman, the French Memoirs, Philosophical Transactions, &c. and from the Author's own Experience. With Copper Plates. By William Lewis, M.B. R.S.S.

London: Printed for J. Nourse, at the Lamb, against Katherine-street, in the Strand. 1746.

First edition. 8vo. 10 leaves, 432 pp., 19 leaves + 2 leaves (advertisements). With 9 engraved plates (chemical symbols and apparatus). Neat old signature and stamp on title page; otherwise very good copy in original gilt-ruled calf, rebacked, crimson morocco label.

AFTER STUDYING medicine at Oxford and Cambridge, Lewis (1708–1781) became a physician at Kingston-on-Thames, F.R.S. (1745) and lectured to the prince of Wales at Kew. An important figure in the history of English chemistry between Boyle and Black, in this "interesting and remarkable book" (Duveen) he updated and revised George Wilson's *A compleat course of chymistry* (first: London, 1698), adding new information and valuable notes. In the face of Newtonian mechanistic theories, Lewis established chemistry as a separate science governed by distinct laws. Careful and systematic both in his experimental work and in his expositions of chemical operations, he stood at the forefront of eighteenth-century experimental chemistry. (Blake, 270; Bolton, 620–621; Cole, 823; D.S.B., VIII, 298; Duveen, 354; Ferchl, 312; Ferguson, II, 30 [not in Young Coll.]; Neu, 2367; Partington, II, 762; Poggendorff, I, 1443; Smith, 292; Watt, II, 604h)



Lewis. *Commercium Philosophico-Technicum*. London, 1763, 1765.

LEWIS, William

An Experimental History of the Materia Medica, or of the Natural and Artificial Substances made use of in Medicine: containing a Compendious View of their Natural History, an account of their pharmaceutic properties, and an Estimate of their Medicinal Powers, so far as they can be ascertained by Experience, or by rational Induction from their sensible Qualities. By William Lewis, M.B. F.R.S. The third edition, with numerous additions and corrections by John Aikin. . . . London: Printed for J. Johnson, in St. Paul's Church-Yard; and R. Baldwin, in Paternoster-Row. 1784.

Third (first Aikin) edition. 4to. xxiii, (1), 691, (1) pp., 16 leaves. Fine copy, in contemporary blind-ruled calf, rebacked, original maroon label preserved.

A MAJOR CONTRIBUTION to the literature of the materia medica (first: London, 1766), which went through several editions and was translated into German (1771) and French (1775). The second edition (London, 1768), the last written entirely by Lewis, has here been edited and enlarged "from some marginal notes in Dr. Lewis's own copy of his work" (advertisement) by John Aikin (1747–1822; M.D., Leyden). A good chemist, Aikin was a friend of Erasmus

Darwin, Joseph Priestley, and other scientists. This edition is the first to contain the Linnaean name of every plant described in the text. Fourth (second Aikin) and fifth (third Aikin) editions, each in two octavo volumes, appeared in 1791 and 1810, respectively. (Blake, 270; Neu, 2376; Partington, II, 762 [wrong date: 1785]; Watt, II, 604h; Wellcome, III, 512)

LEWIS, William

The New Dispensatory: containing I. The Theory and Practice of Pharmacy. II. A Distribution of Medicinal Simples, according to their Virtues and sensible Qualities; the Description, Use, and Dose of each Article. III. A full Translation of the London and Edinburgh Pharmacopoeias; with the Use, Dose, &c. of the several Medicines. IV. Directions for Extemporaneous Prescription; with a select Number of elegant Forms. V. A Collection of Cheap Remedies for the Use of the Poor. The Whole interspersed With Practical Cautions and Observations. Intended as a Correction, and Improvement of Quincy.

London: Printed for J. Nourse, opposite Catharine Street in the Strand. 1753.

First edition. 8vo. xii, 32, 664 pp. Very good copy, in original gilt-ruled calf, rebacked, crimson morocco label.

JOHN QUINCY (d. 1722) first published his well-known *Pharmacopoeia Officinalis & Extemporanea: or, A Compleat English Dispensatory* in London (1718). After passing through several editions it was brought up-to-date by Lewis and appeared as *The New Dispensatory*. In addition to pharmaceutical prescriptions, this deservedly famous work contains much on pure chemistry, with descriptions of chemical preparations of compounds; methods of extraction from minerals, plants, and animals; etc. The pharmacopoeia of Quincy and Lewis was one of the most important books of its kind and was diligently consulted throughout the eighteenth century. Its sections are well organized, usually alphabetically, and its clear descriptions enable the modern reader to identify chemicals unambiguously in many cases. (Blake, 270; Ferchl, 312; Ferguson, II, 30 [not in Young Coll.]; Neu, 2379; Partington, II, 762–763; Poggendorff, I, 1443; Watt, II, 604h; Wellcome, III, 511)

LEWIS, William

Remarks on Mr. Robert Dossie's Institutes of Experimental Chemistry, in a Letter Addressed to the Authors of the Review, &c.

London: Printed for S. Hooper. 1760.

First edition. Sm. 4to. 2 leaves, 18 pp., 1 leaf (blank). Few page numerals just touched by the binder; otherwise fine copy in half calf antique, marbled boards, crimson morocco label, gilt. Bound with: Dossie, R., *A Refutation of the Remarks on the Institutes . . .* (London, 1760).

A SEVERE ATTACK on Dossie's *Institutes of Experimental Chemistry* (London, 1759), by an anonymous critic, generally believed to have been William Lewis. In the Duveen copy a contemporary manuscript note on the title page reads: "By Dr. Lewis." Page 18 of this little work is signed "A. Z." An analysis of the contents of this attack on Dossie, and of Dossie's *Refutation*, with illustrations of the title pages of each work, has been published by F. W. Gibbs. Rare. Not in the usual bibliographies. (Duveen, 354; F. W. Gibbs, *Annals of Science*, VII [1951], pp. 157–158; Neu, 4417)

LEYBOURN, William

Pleasure with Profit: Consisting of Recreations of Divers Kinds, viz. Numerical, Geometrical, Mechanical, Statical, Astronomical, Horometrical, Cryptographical, Magnetical, Automatical, Chymical, and Historical. . . . To this Work is also Annexed, a Treatise of Algebra, according to the late Improvements, applied to Numerical Questions and Geometry . . . by R. Sault, Master of the Mathematick School in Adam's Court . . .

London: Printed for Richard Baldwin, and John Dunton; near the Oxford-Arms in Warwick-Lane; and at the Raven in the Poultry. 1694.

First edition, first issue. Folio. 1 leaf, vi pp., 2 leaves, 56, 86, 31, 24, 63, 28, 13, 10, 9, 12, 27 pp.; 2 leaves, 52 pp. With 2 folding copperplates, 5 engravings, and numerous text woodcuts. Very good copy in contemporary calf, rebacked, maroon label.

AN EXTENSIVE work on recreative experiments, including sections on chemistry and magnetism. Leybourn (1626–1701), a teacher of mathematics and professional land surveyor in London, started his career as a printer. The most important book he printed was Thomas Salusbury's *Mathematical Collections and Translations* (1661–65), which contained the first appearance of any of the works of Galileo in English. In the present work he reprinted some of these texts without acknowledging Salusbury. The section on "Statical Recreations" (chapter III), headed "Of the Ballance of Signeur Galileo Galilei," is Salusbury's translation of Galileo's "La Bilancetta." It is followed by excerpts from Archimedes as translated by Salusbury from the Italian version of *Tartaglia*. The section "Mechanical Recreations" contains the treatise of Descartes on mechanics, originally written in the form of a letter and published in English by Salusbury before there was a French edition. Salusbury's English translation of a part of Galileo's *Mechanics* is included, without attribution to Galileo or Salusbury. Wellcome (III, 513) lists the second issue with cancel title dated 1695. (Wheeler Gift, 207; Wing, L1931)

L'HÉRITIER, Sébastien Didier

Traité de Chimie Pathologique ou recherches chimiques sur les solides et les liquides du corps humain, dans leurs rapports avec la physiologie et la pathologie. . . .

Paris: Chez J.-B. Bailliére. 1842.

First edition. 8vo. viii, 744 pp. With large folding engraved frontispiece (by F. D. Chotomski). Mint copy, unpressed and uncut, in brown quarter morocco antique, marbled boards, spine gilt-ruled and dated, with original printed wrappers bound in.

A COMPREHENSIVE BIOCHEMICAL treatise covering contemporary research on the chemistry of blood, lymph, urine, digestion, metabolism, respiration, etc. Chemical activity in all parts of the human body is discussed. L'Héritier (b. 1809), an eminent physician, was professor of *materia medica* in the faculty of medicine at Paris. An excellent and rare work. Not mentioned by the usual chemical and medical authorities. (Bolton, 621)

LIBAVIUS, Andreas

D.O.M.A. Alchemia . . . operâ e disperses passim optimorum autorum, veterum & recentium exemplis potissimum, tum etiam praeceptis quibusdam operosè collecta, adhibitisque ratione & experientia, quanta potuit esse, methodo accuratâ explicata, & in integrum corpus redacta. Accesserunt tractatus nonnulli physici chymici . . .

Frankfurt: Excudebat Iohannes Saurius, impensis Petri Kopffii. 1597.

First edition. Two parts in 1 vol., 4to. I (*Alchemia*): 9 leaves, 424 pp., 11 leaves (last blank). II (*Commentationum*): 4 leaves, 392 pp. (dedication dated: Epiphanius, 1597). Woodcut device on both title pages. Neat contemporary annotations on verso of first title (minor repairs to inner margin); otherwise fine copy, free from the usual browning of the paper, in contemporary vellum. Bound with: *D.O.M.A. Commentationum metallicarum libri quatuor de natura metallorum, mercurio philosophorum, azotho, et lapide seu tinctura physicom conficienda, è rerum natura, experientia, et autorum praestantium fide. . .*

THE FIRST chemical textbook in the modern sense. Libavius (c. 1560–1616), one of the founders of chemical analysis, had a laboratory in his own house, in which he carried out experiments. The *Alchemia* is “an excellent practical textbook in the sense that the author shows a full mastery of his sources and a clear, concise and sensible style, entirely different from the rambling, bombastic, and obscure verbosity of Paracelsus or the alchemical authors” (Partington, who devotes twenty pages to his analysis of this important work). As far as its rarity is concerned, Duveen states that it is “extremely rare” and reproduces the title. Partington writes that it is “much rarer than the first editions of Newton’s *Principia* or Boyle’s *Sceptical Chemist*.” The *Commentationum* comprises six treatises whose titles are listed on the verso of the title page to the *Alchemia*. Despite this, it is missing from some copies. (D.S.B., VIII, 310; Duveen, 355; Ferguson, II, 31; Partington, II, 247; Wellcome, I, 3771–2)

LIBAVIUS, Andreas

D.O.M.A. Alchymia . . . recognita, emendata, et aucta, tum dogmatibus & experimentis nonnullis; tum commentario medico physico chymico: qui exornatus est variis instrumentorum chymicorum picturis; partim aliunde translatis, partim plane novis . . .

Frankfurt: Excudebat Joannes Saurius, impensis Petri Kopffii. 1506 (i.e., 1606).

Second (best) edition. Folio, 3 parts in 1 vol. I (*Alchymia*): 10 leaves, 196 pp., 6 leaves. With large engraved title border (by G. Keller, 1605) depicting portraits of Galen and Aristotle and chemical operations. II (*Commentariorum alchymiae pars prima, sex libris declarata*): 5 leaves, 402 pp. (leaves Tt2 and Tt5 in duplicate). With printer’s device on title and many woodcuts of furnaces and chemical apparatus in text. III (*Commentariorum alchymiae pars secunda*): 192 pp., 6 leaves (last blank). Paper slightly browned as usual; otherwise a handsome copy in contemporary vellum, from the celebrated Hopetoun library with armorial bookplate, and inscription in ink by John Hope (Lord Linlithgow) dated 11 October 1672, on verso of leaf facing title.

THE *Alchemia* (Frankfurt, 1597, 4to., without illustrations) was the first chemical textbook in the modern sense, and Partington gives an extensive analysis of its contents. “Considered the greatest and most beautiful . . . of all books on chemistry in the seventeenth century . . . with more than 200 designs and pictures of various sorts of chemical glassware, vessels, . . . and furnaces, as well as architectural plans for the building of a chemical laboratory” (D.S.B. [referring to this edition]). The alchemical woodcuts are reproduced and discussed by John Read (*Prelude to Chemistry*, pp. 214–221), who describes the book as “a truly monumental work.” The three parts were issued together. Rare. (Bolton, 622; D.S.B., VIII, 310; Duveen, 357; Ferguson, II, 31; Ferguson Coll., 409; Neu, 2386; Partington, II, 248–249; Poggendorff, I, 1449; Smith, 293; Thorndike, VI, 242; Thornton & Tully, 119; Watt, II, 605k; Wellcome, I, 3776)

LIBAVIUS, Andreas

D.O.M.A. Commentationum metallicarum libri quatuor de natura metallorum, mercurio philosophorum, azotho, et lapide seu tinctura physicom conficienda, e rerum natura, experientia, et autorum praestantium fide . . .

Frankfurt: In Officina Typographica Johannis Saurii, impensis Petri Kopffii. 1597.

First edition. 4to. 4 leaves, 392 pp. (dedication dated: Epiphanius, 1597). Woodcut device on title page. Roman and italic letter. Neat contemporary annotations on page 49; otherwise fine copy. Bound with: Libavius, A., *Alchemia* (Frankfurt, 1597).



Libavius. D.O.M.A. Alchymia. Frankfurt, 1506 (i.e., 1606).

THE IMPORTANT sequel to the *Alchemia* (1597), comprising six treatises that discuss the nature and composition of metals; the mercury, azoth, permanent water, and philosopher's stone of the alchemists; the analysis of ores; and chemical analysis in general. The titles of the six treatises are printed on the verso of the title page of the *Alchemia*. Based on this fact, Duveen states that the *Alchemia* and the *Commentationum* were issued together, since some copies (as here) in contemporary bindings contain both works. Partington asserts, however, that these works were "certainly issued separately." To support his claim, Partington indicates that the British Library has a copy of the *Commentationum* but no copy of the *Alchemia*, and it is not found in some copies of the *Alchemia* in contemporary bindings (e.g., the Honeyman, Partington, and Young Collection copies). Not in Bolton, Cole, Durling, Mellon, Smith, etc. (British Library, *S.T.C. German Books, 1455–1600*, p. 496; D.S.B., VIII, 310; Duveen, 356; Ferguson, II, 32; Neu, 2388; Partington, II, 247; Thorndike, VI, 243; Wellcome, I, 3772)

LIBAVIUS, Andreas

D.O.M.A. Novus de Medicina Veterum tam Hippocratica, quam Hermetica Tractatus. In cuius priore parte dogmatica plaera(ue) inter utriusque Professores recentes controversa, adversus ultimum per Iosephum Michelium Paracelsitarum conatum discutiuntur; in posteriore Universale Alchymistarum, autoribus Lullio & Arnaldo, quam liquidissime exponitur. Aspersa sunt passim Peripateticorum dogmata nonnulla & à corruptelis vindicata, . . .

Frankfurt: Excudebat Ioannes Lechlerus, impensis Petri Kopffij. 1599.

First edition. 8vo. 8 leaves, 567, (1) pp. Woodcut printer's device on title page. Signature Q1 (pp. 241–242) is a divisional title page, with same woodcut device as main title page. Few small marginal wormholes (repaired); otherwise very good copy in old calf, gilt. From the library of Pierre Paulmier, with his neat signature in ink on title page.

AN IMPORTANT iatrochemical work, forming a sequel to the famous *Alchemia* (1597). It contains much on alchemy and transmutation (pp. 198–225), as well as detailed discussions on the medicinal properties of numerous pharmaceutical preparations. The second part, with divisional title page (*D.O.M.A. Medicinae Hermeticae Artificibus Catholicae ad Hominis Sanitatem . . . hydrargyrum, imperfectaque metalla in aurum vel argentum transmutanda . . .*), comprises commentaries by Libavius on the *Clavis* of Raymund Lully (pp. 253–440) and the *Rosarium* of Arnald of Villanova (pp. 456–567). The present copy has an important provenance, as it belonged to Pierre Paulmier (1568–1610), the celebrated Paris physician who had "attacked Paracelsus and

Libavius and ostensibly supported the old medicine and pharmacy of the Paris school" (Partington, II, 269). This copy contains several neat marginal notes and underlinings by Paulmier. One of the rarest works of Libavius. Not in the usual chemical and medical libraries. (British Library, *S.T.C. German Books, 1455–1600*, p. 497; Durling, 2810; Ferchl, 313; Partington, II, 251; Rosenthal, 527; Wellcome, I, 3773)

LIBAVIUS, Andreas

D.O.M.A. Singularium Andreae Libavii . . . Pars Prima (secunda, tertia, quarta) . . .

Frankfurt: Impressa typis Joannis Saurii, impensis Petri Kopffii. 1599, 1599, 1601, 1601.

First edition. 4 vols., 8vo., in 3. I: 375, (1) pp. II: 524 (misnumbered 324) pp. III: 1015 (misnumbered 2015), (5) pp. IV: 704 pp., 8 leaves. Volumes I and II (dated 1599) bound together. Printer's woodcut device on each title page, 1 folding woodcut plate (facing p. 424) in volume IV. Very fine set in original vellum, with remains of green silk ties. From the Fugger library.

AN EXTREMELY rare complete set of the *Singularium*, "a collection of essays on 'Singularities' in four parts. . . . Libavius discusses a range of subjects with considerable learning: the nature and transmutation of metals, amber, fossil teeth, the magistery of Paracelsus, . . . poisons, manna and honey, mumia, asphalt, bitumen, naphtha, petroleum, coal, turf and belemnites. The chapters on amber include general, medicinal, and chemical information. . . . The work also discusses the antipathy between parents and children, spermaceti, astrology and comets, the golden tooth . . . zoo-phytes, silkworms, the intellect of beasts, mineral waters, frogs and toads, and other matters. The essays probably reproduce Libavius's lectures and may have been used as a school manual: they are of considerable interest in the history of science" (Partington). Libavius was one of the founders of chemical analysis, and in the present work he paid particular attention to the analysis of mineral waters, investigating those in the environs of Rothenburg. Each volume has different wording on the title page. Only volume I is listed by Caillet, and Duveen, Mellon, and Neu list only volumes I and II. Not in Durling, Krivatsy, etc. (British Library, *S.T.C. German Books, 1455–1600*, p. 497; Caillet, 6662; D.S.B., VIII, 309; Duveen, 356; Ferchl, 313; Ferguson, II, 34 [not in Young Coll.]; Ferguson Coll., 410; Mellon, 54; Neu, 2391; Partington, II, 246; Poggendorff, I, 1449; Watt, II, 605k)

LIBAVIUS, Andreas

Neoparacelsica. In quibus vetus medicina defenditur adversus (in Greek) teretismata. Tum Georgii Amwald, cuius liber de Panacea excutitur; doceturque quid sit panacea, quomodo paretur, et quae eius vires: tum Johannis Gramani, olim Theologi, nunc Pseudochymici: qui omnes Medicos acerbissima charta est insectatus. Servata vera verae Chymiae laude. . . . Frankfurt: Excudebat Johannes Saur, impensis Petri Kopffii. 1594.

First edition. 8vo. 12 leaves, 783, (1) pp. Roman and italic letter. Very fine copy, in original blind-ruled vellum, ties gone. From the Fugger library (celebrated German bankers).

ONE OF the most important German physicians of the later sixteenth century, Libavius (Libau or Liebau, ca. 1540–1616) possessed an excellent knowledge of chemistry and described chemical reactions in plain language. He criticized some of the absurdities of Paracelsus but believed in transmutation. “As a physician, Libavius defended his use of chemical remedies against the prohibition of the medical faculty of Paris. . . . In his writings [he] has the outlook of the university professor rather than that of the practical alchemist” (Partington). In the present book Libavius attacks the Paracelsian writings of Georg am Wald (Amwald, fl. 1581) and especially his *Kurzer Bericht . . . Panacea* (Frankfurt, 1591), in which Amwald describes his “universal medicine” (actually cinnabar). “Libavius . . . claimed that Amwald’s drug contained not gold but mercury, and presented harsh criticism of Amwald [whose] medicine was quackery” (D.S.B.). Libavius also strongly criticizes the Paracelsian physicians Johann Graman of Erfurt and Joseph Michelius of Lucca in the long section entitled *Antigramania*. At the end, with separate divisional title page, is *Anatome tractatus Neoparacelsici, de pharmaco cathartico*, a diatribe against physicians who only use Galenic medicines and avoid iatrochemical preparations. Very rare. (D.S.B., VIII, 310; Durling, 2809; Ferchl, 313; Partington, II, 251; Smith, 293; Thorndike, VI, 242; Wellcome, I, 3768a)

LIBAVIUS, Andreas

Praxis Alchymiae, hoc est, doctrina de artificiosa praeparatione praecipuorum medicamentorum chymicorum: duobis libris explicata: quorum primus de destillatione aquarum et oleorum: de salium & extractorum, quintar: essentiarum, aquarum vitae, florum & balsamorum, &c. . . . ab autore anonymo . . . conscriptus est: alter de lapide philosophorum agit . . . Uterque correctus, & declaratus opera Andreae Libavii . . . Nunc ex Germanico idiomate in Latinum traductus. Annexus est libellus Jacobi Bessoni de absoluta ratione extrahendi olea & aquas . . .

Frankfurt: Excudebat Joannes Saurius, impensis Petri Kopffii. 1604.

First Latin edition. 8vo. 680 pp. (pagination irregular), 10 leaves (index). Many woodcuts in text. Few leaves slightly browned; otherwise very good copy in blind-ruled calf antique, spine gilt-lettered and dated. From the famous Hopetoun library and Dr. Ladislao Reti (bookplates not present; removed during rebinding).

THE FIRST abbreviated version of the celebrated *Alchemia* (1597). “Libavius’ chief work was *Alchemia*, which, together with the separately published *Commentationum metallicarum* (1597), appeared in a shortened form in German as *Alchymistische Practic* (1603) and in Latin as *Praxis alchymiae* (1604)—and, significantly enlarged, as *Alchemia* (1606)” (D.S.B.). The translator was Leonhardus Doldius. On practical chemistry, it covers distillation, sublimation, etc. The *Ars hermetica* (pp. 504–640) contains extracts from an unknown Belgian alchemical work, with commentary by Libavius. Pages 641–680 comprise the Latin translation of about one-half of the *Art et moyen parfait de tirer huyles et eaux* (Paris, 1573) by Jacques Besson. Libavius (ca. 1546–1616), one of the most important chemists of the period, “was not a blind follower of Paracelsus, but of moderate and independent views, [who] carried on controversies both with the Paracelsists and Galenists” (Ferguson). Very rare. The book was reprinted in 1605 and 1607. (Bolton, 622; D.S.B., VIII, 310; Duveen, 356; Neu, 2389; Partington, II, 250; Smith, 293; Wellcome, I, 3775)

LIBAVIUS, Andreas

Rerum Chymicarum Epistolica Forma Philosophos et Medicos quosdam in Germania excellentes descriptarum Liber primus (et Secundus) in quo tum rerum quarum am naturalium continentur explicationes ingeniosae; tum Chymiae disciplina pyronomica, sceuastica & vocabularia cum quib edam inter arcana habitis declarantur fideliter. . . .

(Vols I & II) Frankfurt: Excudebat Joannes Saurius, impensis Petri Kopffii. 1595, 1595. (Vol. III) Frankfurt: In officina Typographica Joannis Lechleri, impensis Petri Kopffii. 1599.

First edition. 3 vols., 8vo., in 1. I: 16 leaves, 300 pp., 2 leaves (1 p. errata, 3 pp. blank). II: 16 leaves (last blank), 615, (1) pp. III: 8 leaves, 448 pp. Woodcut device on each title page. Roman and italic letter. Very fine copy, in original vellum with contemporary manuscript title on spine.

A COMPLETE SET of chemical lectures (dating from 1591) written in the form of letters to well-known physicians and alchemists whose opinions Libavius attacks or comments upon, including J. Stupanus, F. Platter, M. Ruland, and J. Camerarius. Volume I contains philosophical discussions,

criticisms of Paracelsus, the definition of chemistry, explanations of obscure terms, etc. Volume II describes chemical operations, processes, and analyses, with quotations from earlier and contemporary authors. Volume III covers the theory and practice of alchemy, the philosopher's stone, dyes and pigments, potable gold and silver, preparation of inorganic and organic compounds, etc. Alchemical symbols are illustrated on pages 348–349. The third volume is entitled *D. O. M. A. Epistolarum Chymicarum . . . de Variis artis Chymicae magisteriis*. A predecessor of the famous *Alchemia* (1597), this work was already a textbook on chemistry. Complete sets are very rare. Ferguson, Smith, and Wellcome list only volumes I and II. (Bolton, 622; British Library, *S.T.C. German Books, 1455–1600*, 497; D.S.B., VIII, 310; Duveen, 355; Ferchl, 313; Ferguson, II, 33; Ferguson Coll., 410; Partington, II, 246; Smith, 294; Wellcome, I, 3770)

LIBAVIUS, Andreas

Syntagmatis selectorum undiquaque et perspicue traditorum Alchymiae Arcanorum, tomus primus. . .
Frankfurt: Excudebat Nicolaus Hoffmannus, Impensis Petri Kopffii. 1615.

Bound with: *Syntagmatis arcanorum chymicorum, ex optimis autoribus scriptis, impressis, experientiaque artifice collectorum, tomus secundus. . .*
Frankfurt: N. Hoffmannus, Impensis Petri Kopffii. 1613.

Bound with: *Appendix necessaria syntagmatis arcanorum chymicorum . . . In qua praeter arcanorum nonnullorum expositionem & illustrationem, quorundam item Medicorum Hermeticorum, & mysticorum descriptionem, . . .*
Frankfurt: N. Hoffmannus, Impensis Petri Kopffii. 1615.

Followed by: *Examen philosophiae novae, quae veteri abrogandae opponitur. . .*
Frankfurt: Impressum . . . Petri Kopffii. 1615.

Followed by: *Analysis confessionis Fraternalitatis de Rosea. Cruce . . .*
Frankfurt: Impressum . . . Petri Kopffii. 1615.

First collected edition. Folio. I (*Syntagmatis selectorum*): 6 leaves (including engraved title), 480 pp., 4 leaves. II (*Syntagmatis arcanorum*): 6 leaves (including engraved title), 453 pp., 7 leaves. Separate unnumbered leaf with woodcut between pp. 306–307. III (*Appendix necessaria*): 6 leaves, 279 pp., 6 leaves (last blank). IV (*Examen philosophiae*): 306 pp., 6 leaves. V (*Analysis confessionis*): 28 pp. Paper browned as usual; otherwise a fine and absolutely complete copy in contemporary vellum. Numerous woodcuts.

IN 1597 LIBAVIUS published *Commentationum metallicarum*, his commentary on the *Alchemia* (1597). The enlarged *Alchymia* (1606) was published with two commentaries (*Commentationum alchymiae, pars prima et secunda*). The present work comprises the three final commentaries on

the *Alchymia*, his most important book, and they are a necessary adjunct to it. Here he expounds on medical and alchemical topics. The *Syntagmatis selectorum* is the second issue (first: 1611) of the first edition. Very rare. (D.S.B., VIII, 311; Ferchl, 313–314; Ferguson, II, 33–34; Ferguson Coll., 410; Partington, II, 249; Wellcome, I, 3778, 3779)

LICETI, Fortunio

Litheosphorus, sive de Lapide Bononiensi Lucem in se conceptam ab ambiente claro mox in tenebris mire conservante . . .
Udine: Ex Typographia Nicolai Schiratti. 1640.

First edition. 4to. 4 leaves, 280 pp. Woodcut printer's device on title page. Very fine copy, in near pristine condition, in original vellum with contemporary ink-lettering on spine.

THE MOST impressive book on phosphorescence, and the origin of the famous controversy between Galileo and Liceti concerning the light of the moon. Galileo was one of the first to become acquainted with the Bolognian stone or Bolognian phosphor (i.e., calcined naturally occurring barium sulphate that gives barium sulphide). One of the most important discoveries in the history of inorganic luminescence, this stone would “imbibe” daylight and later gradually emit it in the dark—the earliest example of the storage of light. In an effort to explain the phenomenon, “Liceti went so far in his enthusiasm as to declare that the faint light of the new moon's disk was due to a phosphorescence like that of the Bolognian stone and was not, as Galileo believed, a reflection of sunlight from the earth to the moon. . . . It is no exaggeration to claim that the Bolognian phosphor, after more than three hundred years, through the invention of the fluorescent lamp, finally revolutionized the lighting industry and made the development of television possible” (Harvey). Liceti (1577–1657), professor of philosophy at Padua and later at Bologna, published works on astronomy, circulation of the blood, physics, and other subjects. Some copies were published with an inserted frontispiece portrait of Liceti (dated 1639). This copy, in pristine condition, never had the portrait, like the copies described by Duveen, Hoover, et al., which also had no portrait. (Duveen, 358; Ferchl, 314; Ferguson Coll., 411; Harvey, 94, 311; Hoover, 537; Neu, 2396; Partington, II, 337; Pogendorff, I, 1451)

LICETI, Fortunio

De Lucernis Antiquorum Reconditis Libb. Sex . . . Explicatis diligenter abditissimis Questionibus De Ignium causis, origine, varietate, duratione, motu, & extinctu: De Antiperistasi, Fumo, Cinere, Lentore, Mistis incombustibilibus, Brutorum Funeribus, & aliis Naturae Arcanis. . .
Udine: Ex Typographia Nicolai Schiratti. 1653.

Second edition. Folio. 8 leaves, "3-4" pp., 5-1280 columns, 14 leaves. Large engraved vignette on title page, over 100 engravings in text (some full page), and large woodcut printer's device on verso of last leaf. Fine, crisp copy, with wide margins, in contemporary overlapping vellum, brown morocco label.

THE GREATLY enlarged, and copiously illustrated, second and best edition in six books; the first (Venice, 1621; Duveen, 358) contains only four books and is very sparsely illustrated. An exhaustive and comprehensive treatise on the lamps used by the ancients, in which Liceti seriously contends that the lamps of the vestal virgins were inextinguishable and continued to burn for several centuries without the addition of fuel. Despite his erroneous beliefs, Liceti provides a considerable amount of research of antiquarian and chemical interest. Topics discussed include contemporary theories on fire, the combustibility of inorganic and organic materials, and various types of luminescent substances, including the Bolognian stone. The copperplate illustrations of ancient lamps are of considerable artistic ingenuity and beauty. Many were preserved in contemporary museums and private collections. The Priapus illustrations in this copy are unmutated. Some copies are found with the title page dated 1652. Scarce. Not in Krivatsy, Wellcome, etc. (British Library, *17th Century Italian*, 485; Brunet, III, 1069; Harvey, 311; Partington, II, 337; Watt, II, 605n)

LIEBIG, Justus von

An Address to the Agriculturists of Great Britain, explaining the Principles and Use of his Artificial Manures. . . .

Liverpool: Printed by Thomas Baines, Castle-Street. 1845.

First edition. 8vo. (in 4s). 32 pp. Very good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A LECTURE ON agricultural chemistry addressed to farmers, on the utility and chemical composition of traditional manures from various sources and artificial manures (i.e., fertilizers). Published by Muspratt and Company, the manufacturers of fertilizers, the preface was written by James Sheridan Muspratt (1821-1871), the Irish industrial chemist who had worked with Liebig in Giessen. The first part discusses the "Principles of Artificial Manuring," in which Liebig outlines why the chemicals contained in animal manures are needed to replenish the minerals that plants require for optimal growth. In the second part Liebig describes various chemical fertilizers: e.g., calcium and magnesium phosphates, alkalies (potash and soda), and ammonium compounds. Tables of chemical analyses are given for the ashes of different plants and for cow, horse, and pig urine. The use of guano is also described. (D.S.B., VIII, 347; Paoloni, 428)

LIEBIG, Justus von

Animal Chemistry, or Organic Chemistry in its Applications to Physiology and Pathology. . . . Edited from the author's manuscript by William Gregory, M.D., F.R.S.E., M.R.I.A. . . .

London: Taylor and Walton. 1842.

First English edition. 8vo. xxiv, 354 pp. Very fine copy, crisp and spotless, in contemporary half calf, marbled boards, spine stamped in blind, gilt-ruled, and gilt-lettered.

TRANSLATED AND edited from Liebig's manuscript by Gregory (1803-1858), a pupil of Liebig in 1835, and published almost simultaneously with the German edition. It contains Liebig's dedication to the British Association for the Advancement of Science, dated Giessen, 3 June 1842. A slightly enlarged second edition of 384 pages (London: Taylor and Walton, 1843) is listed by Duveen. This edition is not in Duveen, Edelstein, Ferchl, Ferguson Coll., Morgan, Osler, Poggendorff, Waller, etc. (Bolton, 630; Browne, 281; Cushing, L218; D.S.B., VIII, 348; Paoloni, 350; Partington, IV, 298; Smith, 294; Sondheimer, 913; Wellcome, III, 515)

LIEBIG, Justus von

Animal Chemistry, or Chemistry in its Applications to Physiology and Pathology. . . . Edited from the author's manuscript by William Gregory, . . . Third edition, revised and greatly enlarged. Part I. The chemical process of respiration and nutrition. The metamorphosis of animal tissues.

1. *Method to be pursued in the investigation.*

London: Taylor and Walton. 1846.

Third edition (all published). 8vo, xvii, 258 pp., 2 leaves (publisher's catalogue). Fine copy, uncut, in the original blind-stamped purple cloth, spine (faded) gilt-lettered.

"THE PRESENT publication is the first part of a new and greatly enlarged edition of Baron Liebig's *Animal Chemistry*. It contains 'the Chemical Process of Respiration and Nutrition,' along with the first section of 'the Metamorphoses of Animal Tissues.' It will be seen by the author's preface, that this first section is entirely new, and devoted to a consideration of the method which ought to be followed and of the principles which ought to guide us in the investigation of that important subject" (advertisement [sig. a recto]). Unfortunately, this ambitious project was never completed, the present volume being the only one that appeared. It is important, however, as it contains the latest information on the subjects covered. Very scarce. Not in Cushing, Duveen, Edelstein, Garrison-Morton, Morgan, Osler, Partington, Smith, Thornton & Tully, Waller, Wellcome, etc. (Bolton, 630; Paoloni, 454)

LIEBIG, Justus von

Chemische Briefe von Justus Liebig.

Heidelberg: Akademische Verlagshandlung von C. F. Winter. 1844.

First German edition. 12mo. xi, (1), 342 pp. Fine copy in the original blind-stamped cloth, spine gilt-lettered.

THE FIRST edition in book form of this collection of twenty-six letters (in the original German). Their first appearance in print was in the *Augsburger Allgemeine Zeitung*, 1842–44. This original German text was preceded in 1843 by an English and an American edition, each containing sixteen letters. In 1844, preceding the German edition by several months, an Italian translation appeared that contained twenty-one letters. A total of eight editions in German were published between 1844 and 1913, on which see Paoloni. Despite the fact that this was one of Liebig's most popular works, the German first edition is now rare. Not in Cushing, D.S.B., Duveen, Morgan, Smith, Wellcome, etc. (Bolton, 625; Edelstein, 1438; Ferchl, 315; Paoloni, 400; Partington, IV, 298; Poggendorff, I, 1455; Sondheimer, 922; Thornton & Tully, 219; Waller, 11185)

LIEBIG, Justus von

Chemiske Breve af Dr. Justus Liebig. I dansk Oversættelse.
Copenhagen: Hos P. S. Philipsen. 1845.

First Danish edition. 8vo. xii, 271, (1) pp. Fine copy in original half calf gilt, patterned boards.

THE FIRST Danish edition of the second series, containing twenty-six letters. Paoloni (p. 112) lists a completely different work as the first Danish edition (viz. *Rationelle Breve for Landmaend og veterinaerer*, G. Michelsen. Høst. Kjøbenhavn, 1844). The present very rare edition was unknown to Paoloni, who lists only the second edition translated by Jacob Davidsen (Copenhagen, 1846). Not in the usual early chemical bibliographies and apparently unrecorded.

LIEBIG, Justus von

Chemiske Breve af Dr. Justus Liebig. I dansk Oversættelse ved F. Møller Holst. Ny Samling.
Copenhagen: Paa Boghandler P. S. Philipsens Forlag. 1854.

Third Danish edition. 8vo. viii, 376 pp. Fine copy in original half calf gilt, diapered patterned boards.

A RARE DANISH edition, translated by F. Møller Holst, of the first series of sixteen letters. Paoloni (pp. 112, 162) gives the date as 1853. Not in the usual early chemical bibliographies. (Bolton, 625; Paoloni, 579)

LIEBIG, Justus von

Chemistry in its Application to Agriculture and Physiology. Edited from the manuscript of the author by Lyon Playfair, Ph.D. Second edition, with very numerous additions.
London: Taylor & Walton. 1842.

Second edition. 8vo. xii, 409, (1) pp. Fine, crisp copy, in contemporary half calf, cloth boards, spine gilt-ruled, gilt-lettered green leather label. A duplicate from the Radcliffe Library, Oxford, with armorial bookplate on front pastedown endpaper.

THE GREATLY enlarged second edition of this classic work, in which the editor, Playfair, has clarified the more esoteric chemical passages of the first edition (1840), making them intelligible to farmers, gardeners, and non-chemically trained readers. In a supplementary chapter, "On the chemical constituents of soils" (pp. 199–245), numerous analyses of soils are given (e.g., soils from Great Britain, Hanover, Bohemia, Hungary, Belgium, Sweden, and North America). A useful index has also been added that was not in the first edition. This edition is not in Cushing, Duveen, Edelstein, Morgan, Osler, Thornton & Tully, etc. (Bolton, 629; Browne, 263; Paoloni, 353; Partington, IV, 298; Sondheimer, 915; Wellcome, III, 515)

LIEBIG, Justus von

Chimie Organique appliquée à la Physiologie animale et à la Pathologie. . . . Traduction faite sur les manuscrits de l'Auteur par M. Charles Gerhardt . . .

Paris: Fortin, Masson et Cie. Octobre 1842.

First French edition. 8vo. xvi, 360 pp. Very fine, crisp copy in contemporary red half calf, marbled boards, spine richly gilt.

THIS TRULY great book was translated by the illustrious chemist Gerhardt and published within two months of the original German edition. Scarce. This edition is not in Duveen, Edelstein, Morgan, Partington, Waller, Wellcome, etc. (Bolton, 630–631; Paoloni, 349; Sondheimer, 914)

LIEBIG, Justus von

Familiar Letters on Chemistry, and its relation to commerce, physiology, and agriculture. By Justus Liebig, M.D., Ph.D., F.R.S., Professor of Chemistry in the University of Giessen. Edited by John Gardner, M.D. Member of the Chemical Society.

London: Taylor and Walton. 1843.

First English edition. 8vo. xii, 179, (1) pp., + 8 pp. (advertisements). Fine copy in original blind-stamped crimson cloth, spine gilt-lettered. Bookplate on front pastedown endpaper: Lima Foreign Library and Book Club (Peru).

THE FIRST edition of this famous work in book form, containing sixteen letters. Subjects covered include an introduction to chemistry, chemical technology, organic chemistry, biochemistry, and agricultural chemistry. "The Letters contained in this little Volume embrace some of the most important points of the science of Chemistry" (preface, dated Giessen, August 1843). The last chapter announces the author's discovery of the importance of phosphates in agriculture. This English edition preceded the German edition by one year. The translator and editor, John Gardner (1804–1880), received his M.D. at Giessen (see D.N.B.). Very scarce. Not in Cushing, Duveen, Edelstein, Ferchl, Morgan, Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 625; Paoloni, 381; Partington, IV, 298; Sondheimer, 920)

LIEBIG, Justus von

Familiar Letters on Chemistry, . . .
London: Taylor and Walton. 1843.

FIRST ENGLISH edition. Another fine copy, in contemporary full green calf, covers gilt-ruled, spine gilt in compartments, maroon morocco lettering label. Bound with: Liebig, Justus von, *Familiar letters on chemistry. Second series* (London, 1844). Fine association copy, from the library of Edward Strutt (1801–1880), first Baron Belper, authority on free trade, law reform, and education. With armorial bookplate on front endpaper.

LIEBIG, Justus von

Familiar Letters on Chemistry. Second Series. The philosophical principles and general laws of the science. By Justus Liebig, M.D., Ph.D., F.R.S., Professor of Chemistry in the University of Giessen. Edited by John Gardner, M.D., Member of the Chemical Society.
London: Taylor and Walton. 1844.

First English edition. 8vo. xi, (1), 218 pp., + 6 pp. (advertisements). Fine, crisp copy, uncut, in original blind-stamped crimson cloth, spine gilt-lettered.

THE SECOND series of eleven letters (i.e., essays), written as a sequel to the first series of sixteen letters published in 1843. These letters were very important at the time, as they focused the attention of the British and European governments on the numerous benefits to be received by teaching chemistry in the schools and universities. Very scarce. Not in Cushing, Duveen, Edelstein, Ferchl, Poggendorff, Smith, Waller, etc. (Bolton, 625; Morgan, 483; Paoloni, 402; Partington, IV, 298; Sondheimer, 924; Wellcome, III, 516)

LIEBIG, Justus von

Familiar Letters on Chemistry. Second Series. . .
London: Taylor and Walton. 1844.

FIRST ENGLISH edition. Another fine copy, in contemporary full green calf, covers gilt-ruled, spine gilt in compartments, maroon morocco lettering label. Bound with: Liebig, Justus von, *Familiar letters on chemistry* (London, 1843). Fine association copy, from the library of Edward Strutt (1801–1880), first Baron Belper, authority on free trade, law reform, and education. With armorial bookplate on front endpaper.

LIEBIG, Justus von

Familiar Letters on Chemistry, in its relations to physiology, dietetics, agriculture, commerce, and political economy. By Justus von Liebig. Third edition, revised and much enlarged.
London: Taylor, Walton, & Maberly. 1851.

So-called third English edition. 8vo. xx, 536 pp. Very fine copy, top edge gilt, in contemporary crimson half morocco, patterned cloth boards, spine gilt-lettered and dated.

ACTUALLY THE fifth English edition, preceded by those of 1843, 1844 (2 editions), and 1845, all of which contained less than half the number of letters. Edited by Dr. William Gregory, this enlarged edition contains thirty-five letters (all updated by Liebig), plus an appendix (pp. 527–536). Liebig dedicated this edition to Sir James Clark (1788–1870), physician to Queen Victoria and Prince Albert. Not in Cushing, Duveen, Ferchl, Morgan, Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 625; Edelstein, 1443; Paoloni, 553; Partington, IV, 298; Sondheimer, 933)

LIEBIG, Justus von

Introduction à l'Étude de la Chimie, contenant les principes généraux de cette science, les proportions chimiques, la théorie atomique, le rapport des poids atomiques avec le volume des corps, l'isomorphisme, les usages des poids atomiques et des formules chimiques, les combinaisons isomériques, les corps catalytiques, etc.; accompagnée de considérations détaillées sur les acides, les bases et les sels, par M. J. Liebig. Traduite de l'allemand par Ch. Gerhardt; augmentée d'une table alphabétique des matières, présentant les définitions techniques et les relations des corps.

Paris: Librairie Scientifique et Industrielle de L. Mathias (Augustin). 1837.

First French edition. 12mo. 2 leaves, xii, 248 pp. Very good copy in contemporary quarter calf, marbled boards, spine gilt-lettered and gilt-ruled.

ALTHOUGH THE title states that this was translated from the German, it was in fact done from one of Liebig's manuscripts. This is, therefore, the true first edition, as the German text appeared in Geiger's *Handbuch der Pharmacie* (1843). In the *avertissement* the translator, Gerhardt, states that no books then existed in France that set out the general principles of chemistry in a neat and systematic manner. The translation was carefully supervised by Liebig, and there is a useful glossary of chemical definitions (pp. 189–245). An Italian translation (Verona, 1839) also appeared. Not in Cushing, Duveen, Edelstein, Ferchl, Morgan, Osler, Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 628; Paoloni, 238; Partington, IV, 298; Sondheimer, 904)

LIEBIG, Justus von

Instruction sur l'Analyse des Corps Organiques, par M. Le Dr Just [sic] Liebig, . . . Traduit de l'Allemand, par Auguste Schmersabl. (Extrait du Dictionnaire de Chimie, théorique et technologique, publié par MM. les docteurs Just [sic] Liebig et J.-C. Poggendorff.)

Paris: L. Mathias (Augustin). 1838.

First edition. 8vo. 1 leaf, 42 pp., 1 leaf. With folding table and 2 folding plates of chemical apparatus (engraved by Ambroise Tardieu). Fine copy, bound in quarter green morocco, marbled boards, spine gilt. Bound with: Gerhardt, Charles Frédéric, *Precis de Chimie Organique* (vol. II) (Paris, 1845). From the library of Professor Franz Sondheimer (b. 1926), with his bookplate on the front pastedown endpaper.

THIS VERY scarce book was reprinted from the article entitled "Chimie organique" in the *Dictionnaire de Chimie*, edited by Liebig and Poggendorff. It is not mentioned by Partington, Smith, Waller, Wellcome, etc. Bolton, 624, cites this work, but gives a different wording of the title. This is one of the rarest of the works of Liebig.

LIEBIG, Justus von

Instructions for the Chemical Analysis of Organic Bodies. . . . Translated from the German, by William Gregory, . . .

Glasgow: Printed for Richard Griffin & Company, and Thomas Tegg, London. 1839.

First English edition. 8vo. iv, 59, (1) pp. With 43 text woodcuts. Fine copy, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE ENGLISH translation of the important *Anleitung zur Analyse organischer Körper* (Braunschweig, 1837), by Gregory, professor of chemistry at Glasgow. In his preface Gregory states that "for a good many years previous to 1836, no organic analyses were published by any British experimenter. Since that time . . . the researches of Dr. Kane and Mr.

Johnston have appeared; but a large majority of the chemists of this country are still practically strangers to organic analysis." Gregory has added "a few notes, . . . so as to present the reader with a view of the actual state of the method of analysis, some slight improvements having been made since the publication of the original." An updated and enlarged version later appeared as *Hand-Book of Organic Analysis* (London, 1853), edited by A. W. von Hofmann. Very scarce. Not in Cole, Duveen, Edelstein, Morgan, Partington, Smith, Wellcome, etc. (Bolton, 624; Paoloni, 285; Sondheimer, 906; Sotheran, Cat. 800 [1926], 11411)

LIEBIG, Justus von

Lettres sur la Chimie considérée dans ses applications à l'industrie, à la physiologie et à l'agriculture, par M. Justus Liebig, . . . Nouvelle édition française publiée par M. Charles Gerhardt, . . .

Paris: Charpentier, Victor Masson. 1847.

First and only translation by Gerhardt. 12mo. 2 leaves, 284 pp. Fine lithographic frontispiece portrait of Liebig (by A. Artus after a drawing by Engel). Very fine, crisp copy, in contemporary quarter crimson morocco, marbled boards, spine gilt-lettered and gilt-ruled. Bound with: Liebig, Justus von, *Nouvelles lettres* (Paris, 1852).

ACTUALLY THE third French edition, containing twenty-six letters, preceded by the first French translation of G. W. Bichon (Paris, 1845: 2 issues) and the second French translation of F. Beret-Dupiney (Paris, 1845). Not in Cushing, Edelstein, Ferchl, Morgan, Partington, Poggendorff, etc. (Bolton, 626; Duveen, 360; Paoloni, 491; Smith, 295; Waller, 11188; Wellcome, III, 516)

LIEBIG, Justus von

Lettere Prime e Seconde di Giusto Liebig sulla Chimica e sue applicazioni all'agricoltura, alla fisiologia, alla patologia, all'igiene ed alle industrie. Nuova edizione condotta sull'originale tedesco del Dott. Emilio Leone ed annotate dal Prof. F. Selmi.

Torino: Società Editrice della Biblioteca. 1853.

Fifth Italian edition. 8vo. 4 leaves, 519, (1) pp. Very good copy in contemporary quarter calf, patterned boards, spine gilt-ruled, green leather gilt-lettered label.

THE FIFTH and until that time the most complete Italian translation, containing forty-one letters, preceded by the editions translated by G. D. Bruni (Turin, 1844; 21 letters), Carlo Ormea (Turin, 1844; 25 letters), V. Kohler (Naples, 1845; 26 letters), and A. Ranieri (Naples, 1852; 11 letters). Italian editions containing fifty letters appeared

later (Naples, 1859 and 1868). The present edition is important as it contains the Italian translation of Liebig's *Über das Studium der Naturwissenschaften* (pp. 469–485), which was read at the opening of the course of experimental chemistry at the University of Monaco. The annotator of this edition, Francesco Selmi (1817–1881), was professor of chemistry at several Italian universities (see G. Provenzal, *Profili bio-bibliografici di chimici Italiani*, Rome, ca. 1950, pp. 177–191). This edition is not mentioned by the usual bibliographical references checked. (Paoloni, 574)

LIEBIG, Justus von

Letters on Modern Agriculture. By Baron von Liebig. Edited by John Blyth, M.D. . . .
London: Walton and Maberly. 1859.

First English edition. 8vo. xxviii, 284 pp., + 8 pp. (advertisements). Fine copy in original blind-stamped maroon cloth, spine gilt-lettered.

LIEBIG DEDICATED these fourteen long letters (i.e., essays) on agricultural chemistry to Maximilian II, king of Bavaria. John Blyth was professor of chemistry in Queen's College, Cork, and this English translation was overseen by Liebig. Originally published as *Naturwissenschaftliche Briefe über die moderne Landwirthschaft* (Leipzig and Heidelberg, 1859), this important compendium of Liebig's researches and theories on agricultural chemistry is not mentioned by Browne and was apparently unknown to him. Very scarce. Not in Bolton, Duveen, Ferchl, Morgan, Partington, Poggendorff, Smith, Sondheimer, Waller, Wellcome, etc. (Edelstein, 1446; Paoloni, 665)

LIEBIG, Justus von

Liebig's Complete Works on Chemistry. Comprising His Agricultural Chemistry; or, Organic Chemistry in its application to Agriculture and Physiology. Animal Chemistry; or, Organic Chemistry in its application to Physiology and Pathology. Familiar Letters on Chemistry, and its Relations to Commerce, Physiology, and Agriculture. The Origin of the Potato Disease; and Researches into the motion of the Juices in the Animal Body; and Evaporation in Plants. Chemistry and Physics in Relation to Physiology and Pathology, etc. etc. By Justus Liebig, M.D., Ph.D., F.R.S. . . .
Philadelphia: T. B. Peterson and Brothers. N.d. (ca. 1860).

First American edition of Liebig's main chemical works. 8vo. 135, 111, 48, 47, 48 pp. 5 parts in 1 volume, each with separate title page. Fine copy in original blind-stamped, dark-grey, decorative cloth, spine gilt-lettered.

ACCORDING TO Bolton, this collected edition appeared in 1856, but there is no evidence of the date of publication in this volume. Smith (p. 296) describes a similar but distinctly

different work, entitled *Professor Liebig's Complete Works on Chemistry* (Philadelphia, ca. 1850). Not in Cushing, Duveen, Ferchl, Morgan, Partington, Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 627; Edelstein, 1448; Paoloni, 630; Sondheimer, 934)

LIEBIG, Justus von

Les Lois Naturelles de l'Agriculture par le Baron de Liebig . . . Traduit d'après la dernière édition allemande par Ad. Scheler, Professeur à l'Institut agricole de l'État, à Gembloux (Belgique). Édition autorisée et revue par l'auteur. . . .
Paris: Librairie Agricole de la Maison Rustique. N.d. (1863).

First French edition. 2 vols., 8vo., in 1. I: 1 leaf, 184 pp. II: 487, (1) pp. Half titles in each volume. Very good copy, in original green quarter morocco, cloth boards, spine gilt-lettered.

THE FRENCH translation of Liebig's *Die Naturgesetze des Feldbaues* (Braunschweig, 1862), containing the history of agricultural chemistry before and after 1840, the treatment of soils with mineral and organic fertilizers, plants and photosynthesis, etc. Liebig quotes Hales' *Vegetable Statics* (1727) and numerous other writers on the relationship of chemistry to the optimal growth of plants. Chemical experiments conducted between 1857 and 1863 are described (pp. 400–476). This translation by A. Scheler was made from the manuscript of a forthcoming German edition "que l'auteur a préparée et qui paraîtra prochainement" (*Avis du traducteur*). The last major work by Liebig on agricultural chemistry. This rare French edition was unknown to Liebig's bibliographer, Paoloni, who describes only the Brussels, 1865, edition (Paoloni, 725). The German text in manuscript, from which this translation was made, never appeared. Unrecorded by the usual bibliographers.

LIEBIG, Justus von

Manuel pour l'Analyse des Substances Organiques, par J. Liebig, . . . Traduit de l'allemand par A.-J.-L. Jourdan; suivi de l'examen critique des procédés et des résultats de l'analyse des corps organisés, par F.-V. Raspail. . . .
Paris: J.-B. Baillièrre. 1838.

First French edition. 8vo. 2 leaves, ii, 168 pp. Large folding table and 2 folding copperplates (engraved by Durau). Fine copy in contemporary crimson quarter calf, spine richly gilt. Bound with: J.-B. Baillièrre, *Catalogue des livres de médecine . . . chimie, pharmacie . . .* (Paris: Novembre, 1855).

THE FRENCH translation of the classic *Anleitung zur Analyse organischer Körper* (Braunschweig, 1837) and a milestone work describing methods for analyzing organic compounds, some of which are still in use. This French edition is particularly valuable for the additional information provided by Raspail (pp. 120–163). "Important publication of the

constitution of organic compounds, with descriptions in detail of the modern method of chemical analysis" (Horblit). "Liebig developed a combustion method for determining carbon, nitrogen, and hydrogen in organic compounds, a method still in use" (Dibner). Rare. Only the German edition (1837) is mentioned by Dibner (No. 46), Ferchl (p. 315), Horblit (No. 67), Partington (IV, 238), and Poggendorff (I, 1455). Not in Cushing, Duveen, Edelstein, Morgan, Osler, Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 624; Paoloni, 261; Sondheimer, 905)

LIEBIG, Justus von

The Natural Laws of Husbandry. By Justus von Liebig. Edited by John Blyth, M.D. . . .
London: Walton & Maberly. 1863.

First English edition. 8vo. xx, 416 pp., + 2 leaves, 8 pp. (advertisements). Fine, crisp copy, in original blind-stamped maroon cloth, spine gilt-lettered.

THE FIRST English translation of Liebig's *Die Naturgesetze des Feldbaues*, which comprised the second volume of the seventh edition of *Die Chemie in ihrer Anwendung auf Agricultur und Physiologie* (Braunschweig, 1862). Liebig substantially altered and enlarged this seventh edition, which was one of the most important works on agricultural chemistry and plant physiology ever written. The D.S.B. says of this edition: "The new book was the most comprehensive statement of his views, backed with the most extensive and analytical field data." Not in Bolton, Browne, Cushing, Duveen, Edelstein, Ferchl, Morgan, Osler, Poggendorff, Smith, Sondheimer, Waller, etc. (Paoloni, 704; Partington, IV, 313)

LIEBIG, Justus von

Nouvelles Lettres sur la Chimie considérée dans ses applications à l'industrie, à la physiologie et à l'agriculture par M. Justus Liebig. Édition française publiée par M. Charles Gerhardt.
Paris: Victor Masson. 1847.

First and only translation by Gerhardt. 12mo. xii, 330 pp., 1 leaf (errata). Very fine, crisp copy, in contemporary quarter crimson morocco, marbled boards, spine gilt-lettered and gilt-ruled. Bound with: Liebig, Justus von, *Lettres sur la Chimie* (Paris, 1847).

DEDICATED to the great French chemist Dumas, this continuation volume contains translations of letters 27–37. No other editions of these letters appeared in the French language. Paoloni mistakenly states that this is the fourth French edition, but he has confused it with the French editions containing twenty-six letters. Not in Cushing, Duveen, Edelstein, Ferchl, Morgan, Partington, Poggendorff, Sond-

heimer, Waller, Wellcome, etc. (Bolton, 626; Paoloni, 559; Smith, 295)

LIEBIG, Justus von

Die organische Chemie in ihrer Anwendung auf Agricultur und Physiologie. . . .
Braunschweig: Verlag von Friedrich Vieweg und Sohn. 1840.

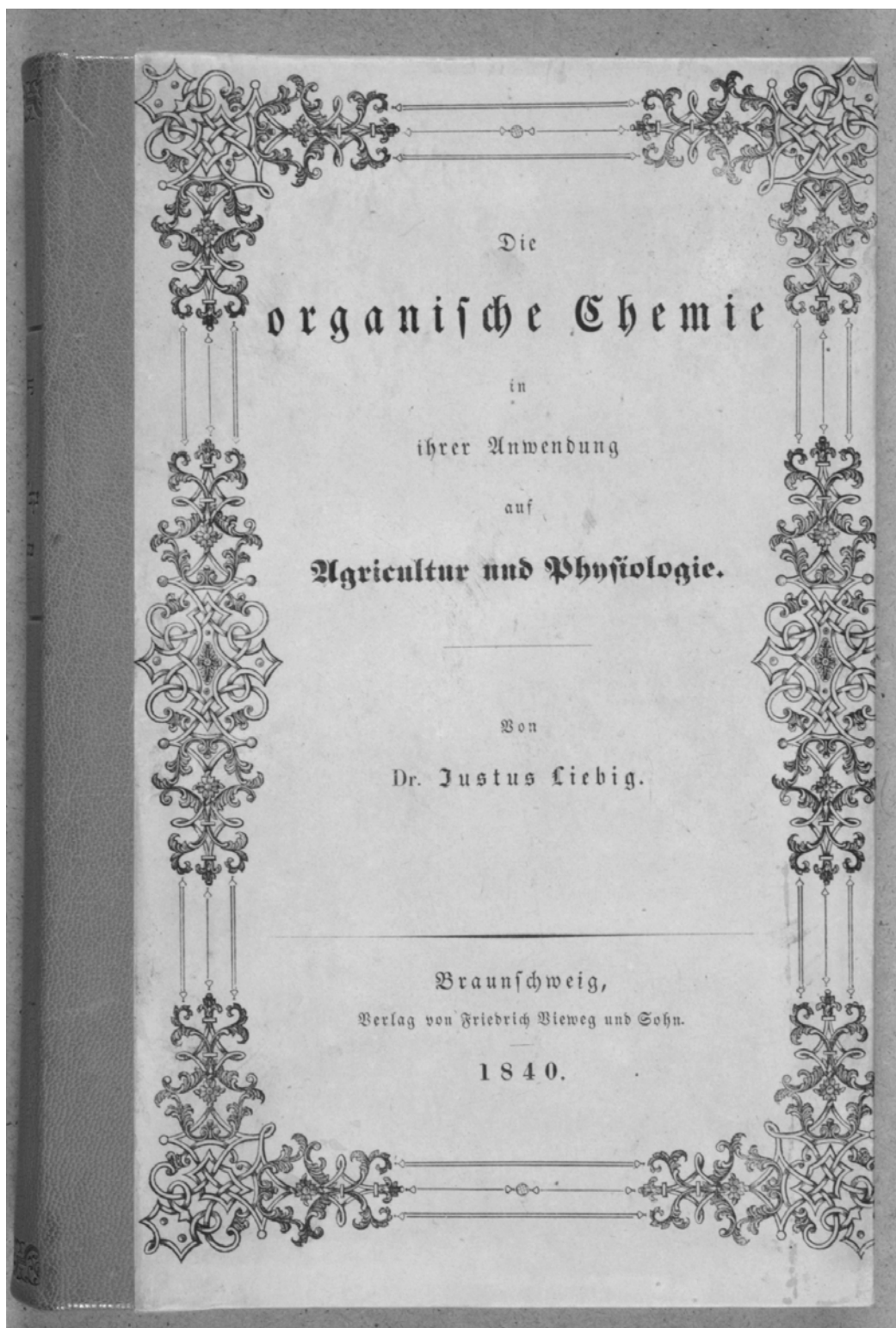
First edition. 8vo. xii, 352 pp., 1 leaf (errata), + 11 leaves (advertisements, dated July 1840, announcing the publication of works by Liebig, Poggendorff, Otto, et al., with woodcuts). An exceptionally fine copy, in mint condition, bound in contemporary printed boards, rebacked in tan morocco.

ONE OF the great books on agricultural chemistry. Liebig was by then a recognized leader in organic chemistry, and his reputation led to an invitation by the British Association for the Advancement of Science to give a report on the state of organic chemistry at its 1840 meeting. The report formed the basis of his famous work "Organic Chemistry in its Applications to Agriculture and Physiology." Immediately successful, the book was quickly translated into English. Its immense popularity is shown by the fact that before 1848 it had passed through seventeen different editions and translations: four in Germany, four in England, two in America, two in France, and one each in Denmark, Holland, Italy, Poland, and Russia. It was constantly revised by Liebig, and the ninth German edition appeared in Brunswick in 1876, three years after the author died. In this work Liebig stated that only the mineral elements of the soil are essential to plant growth and health. We now know that he was wrong in deriding humus. Liebig stressed the importance of artificial fertilizers to replenish the minerals in the soil taken up by plants. The book is dedicated to Alexander von Humboldt, and the preface is dated Giesen, 1 August 1840. This, and the companion work on physiology and pathology (1842), have been styled the "twin constellation" of foundation works in organic chemistry. This edition is not in Duveen, Edelstein, Ferguson Coll., Morgan, Sparrow, Waller, Wellcome, etc. (Bolton, 628; Browne, 263; Cushing, L219; D.S.B., VIII, 345; Ferchl, 315; Paoloni, 300; Partington, IV, 298; Poggendorff, I, 1455; P.M.M., 310a; Sondheimer, 909; Thornton & Tully, 219)

LIEBIG, Justus von

Organic Chemistry in its Applications to Agriculture and Physiology. . . . Edited from the manuscript of the author by Lyon Playfair, Ph.D.
London: Taylor and Walton. 1840.

First English edition. 8vo. xiv, (2), 387, (1) pp., 2 leaves (advertisements). Fine copy in the original green blind-stamped cloth, spine (faded) with gilt-lettering.



Liebig. Die organische Chemie. Braunschweig, 1840.

THE FIRST translation into English (preface dated Giessen, 1 September 1840), containing Liebig's preface for this edition to the British Association for the Advancement of Science. Playfair (1818–1898), the translator and editor, studied chemistry under Thomas Graham and received his Ph.D. from Giessen under Liebig, who acknowledges his "active assistance" in the preface. This edition is not in Cushing, Duveen, Edelstein, Ferchl, Ferguson Coll., Morgan, Poggendorff, Smith, Waller, etc. (Bolton, 629; Browne, 263; D.S.B., VIII, 345; Paoloni, 301; Partington, IV, 298; Sondheimer, 911; Thornton & Tully, 219; Wellcome, III, 515)

LIEBIG, Justus von

Principles of Agricultural Chemistry, with special reference to the late researches made in England. By Justus von Liebig. London: Walton & Maberly. 1855.

First English edition. 8vo. vii, 136 pp., + 4 leaves, 16 pp. (advertisements). Fine, crisp copy, in original blind-stamped green cloth, spine gilt-lettered.

THE TRANSLATOR, William Gregory, professor of chemistry in the University of Edinburgh, states in the editor's advertisement that this is "by far the best of the author's writings on the important subject to which it refers. Apart from all controversy, it contains, in the shape of fifty propositions, a most admirable summary of the true relation between Chemistry and Agriculture." Liebig dedicated this English edition to Dr. Charles Daubeny, professor of chemistry, Oxford University. The first edition appeared earlier the same year with the title *Die Grundsätze der Agricultur-Chemie . . .* (Braunschweig, 1855). Scarce. Not in Browne, Cushing, Duveen, Edelstein, Ferchl, Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 627; Morgan, 484; Paoloni, 608; Partington, IV, 313; Sondheimer, 939)

LIEBIG, Justus von

Die organische Chemie in ihrer Anwendung auf Physiologie und Pathologie. . . .

Braunschweig: Verlag von Friedrich Vieweg und Sohn. 1842.

First edition. 8vo. xvi, (2), 342 pp., 1 leaf (errata). Fine copy in contemporary quarter dark-blue calf, marbled boards, spine richly gilt. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

ONE OF the great books on organic and biochemistry. "Modern views on molecular structure and chemical constitution of organic compounds lead straight back to the 'twin constellation' represented by Liebig's two volumes." (The other is his companion work on agriculture and physiology, of 1840.) "In 1842 . . . he carried his chemical inves-

tigations into the realm of animal physiology. He showed, like Lavoisier, that animal heat is not innate, but the result of combustion; introduced the concept of metabolism; and classified animal foodstuffs as fats, carbohydrates and proteins according to their function. He thus became the founder of the modern science of nutrition" (P.M.M.). Darmstaedter (*Handbuch*, pp. 462–463) describes this as an "epoch-making book." Hermann Kopp (*Geschichte der Chemie*, 1843) devotes thirteen pages to a discussion of Liebig's achievements, particularly emphasizing the importance of this work. Several German editions appeared, and the book was translated into English, French, Dutch, Italian, and Russian, on which see Paoloni. This first edition is dedicated to Berzelius, and the preface is dated Giessen, April 1842. The second German edition appeared with a slightly different title: *Die Thier-Chemie oder die organische Chemie*, etc. (Braunschweig, 1843; see Duveen, p. 359). Very scarce. This edition is not in Duveen, Ferguson Coll., Morgan, Osler, Reynolds, etc. (Bolton, 630; Cushing, L220; D.S.B., VIII, 348; Edelstein, 1450; Ferchl, 315; Garrison-Morton, 677; Paoloni, 348; Partington, IV, 298; Poggendorff, I, 1455; P.M.M., 310b; Smith, 296; Sondheimer, 910; Sparrow, 134; Thornton & Tully, 219; Waller, 5796; Wellcome, III, 515)

LIEBIG, Justus von

Reden und Abhandlungen von Justus von Liebig.

Leipzig & Heidelberg: C. F. Winter'sche Verlagshandlung. 1874.

First edition. 8vo. viii, 334, (2) pp. Fine copy in contemporary gilt-ruled half morocco, speckled boards.

A SUMMARY OF essays and lectures on a variety of topics, presented by Liebig between 1838 and 1871. Subjects include the importance of chemistry in Austria and Prussia, organic chemistry, agricultural chemistry, Liebig's extract of meat, and Francis Bacon and the history of science. (Bolton, 630; Paoloni, 770; Partington, IV, 298; Roller & Goodman, II, 110; Smith, 296)

LIEBIG, Justus von

Researches on the Chemistry of Food. By Justus Liebig, M.D. . . . Edited from the manuscript of the author, by William Gregory, M.D. . . .

London: Taylor and Walton. 1847.

First English edition. 8vo. xx, 156 pp., + 18 pp. (advertisements). Fine copy, uncut, in original blind-stamped, ribbed, grey cloth, spine gilt-lettered. From the Medical Library Society, Bristol, with nineteenth-century bookplate on front pastedown endpaper.

LIEBIG'S IMPORTANT work on the chemistry of food, fats, carbohydrates, proteins, etc., in which he introduces his theory of the formation of fats from carbohydrates. Here for the first time analyses are given of the inorganic salts in the juice of muscles and the first comprehensive investigation of their organic compounds (e.g., lactic acid, inosinic acid, creatine, and sarcosine). The first American edition appeared a year later (Lowell: Daniel Bixby, 1848; see Smith, p. 297). The original German edition appeared with the title *Chemische Untersuchungen über das Fleisch und seine Zubereitung zum Nahrungsmittel* (Heidelberg: C. F. Winter, 1847). Not in Cushing, D.S.B., Duveen, Edelstein, Ferchl, Morgan, Poggendorff, Smith, Waller, etc. (Bolton, 630; Paoloni, 489; Partington, IV, 315; Sondheimer, 926; Wellcome, III, 516)

LIEBIG, Justus von

Researches on the Motion of the Juices in the Animal Body.
By Justus Liebig, M.D. . . . Edited from the manuscript of
the author, by William Gregory, M.D. . . .
London: Taylor and Walton. 1848.

First English edition. 8vo. xiv, 109, (1) pp., + 1 leaf, 16, 8 pp. (advertisements). Good copy in original blind-stamped ribbed cloth, spine gilt-lettered.

AN ACCOUNT of Liebig's important researches on endosmosis, and in particular the diffusion of liquids and nutrients through animal membranes. A pioneering work in physical and biochemistry, which appeared earlier the same year with the title *Untersuchungen über einige Ursachen der Säftebewegung im thierischen Organismus* (Braunschweig, 1848). Referring to this book, Partington says: "Liebig made a careful study of osmosis and the permeability of membranes." Scarce. Not in Cushing, Duveen, Edelstein, Ferchl, Morgan, Osler, Poggendorff, Smith, Waller, etc. (Bolton, 631; Paoloni, 514; Partington, IV, 316; Sondheimer, 929; Wellcome, III, 516)

LIEBIG, Justus von

Traité de Chimie Organique par M. Justus Liebig Professeur à l'Université de Giessen. . . .
Paris: Fortin, Masson et Cie. 1840, 1842, Octobre 1844.

First edition. 3 vols., 8vo. I: 2 leaves, cxv, 611 pp. II: 2 leaves, 664 pp. III: 2 leaves, xi, 528 pp. Fine, crisp copy in contemporary green quarter sheep, marbled boards, spines gilt-lettered and gilt-ruled.

A CLASSIC WORK, being one of the very earliest comprehensive treatises on organic chemistry. It was translated into French by Charles Gerhardt, one of his students, under Liebig's careful supervision, from his various manuscripts.

There was no previous German edition. Dedicated to his friend Gay-Lussac, in the preface Liebig says that this work "est peut-être plutôt un essai d'un nouveau système de chimie organique, qu'un traité complet de cette science." Organic compounds are first classified according to their functional groups (e.g., alcohols, aldehydes, acids, amides, esters, and ethers). Chemical symbols, formulae, and equations are frequently used, which was a departure from most contemporary books on organic chemistry. "The style of Gerhardt's translation is excellent" (Partington). Faraday's copy of this edition (vol. III wanting) is now in the Wellcome Library. A second issue appeared, with identical pagination, in 1841-44. The book was also translated into Italian (Milan, 1844) and Spanish (Madrid, 1847-48). Not in Cushing, Edelstein, Ferchl, Morgan, Poggendorff, Waller, etc. (Bolton, 631; Duveen, 359; Paoloni, 299; Partington, IV, 298; Smith, 297; Sondheimer, 912; Wellcome, III, 515)

LIEBIG, Justus von

Trattato di Chimica Organica di Giusto Liebig Professore nell'Università di Giessen prima versione sull'ultima edizione francese di Bruxelles di Giovanni Vanzani Dottore in Medicina e Chimico Farmacista. Dedicata al Nobile Cavaliere Antonio De Gröller. . . .
Milano: Presso la Ditta Angelo Bonfanti. 1844.

First Italian edition. 4to. viii, 559 pp., 6 leaves (index, misnumbered 523-534, and misbound between pp. 544-545). Fine copy in contemporary quarter brown calf, marbled boards, spine gilt-lettered and gilt-ruled.

THE ITALIAN translation of the *Traité de chimie organique* (Paris, 1840, 1842, 1844), by Giovanni Vanzani, made from the Brussels (1843) edition. As in the original French edition, the preface is dated Giessen, 10 April 1840. Paoloni does not mention the six leaves of index, present in this copy. Rare. Not in Cushing, Duveen, Edelstein, Ferchl, Morgan, Osler, Partington, Poggendorff, Smith, Sondheimer, Waller, Wellcome, etc. (Bolton, 631; Paoloni, 407)

LIEBIG, Justus von

Ueber das Studium der Naturwissenschaften und über den Zustand der Chemie in Preussen. . . .
Braunschweig: Friedrich Vieweg and Sohn. 1840.

First edition. 8vo. 47 (1) pp., 11 leaves (advertisements, dated July 1840, of works by Liebig, Poggendorff, Otto, et al.). Very good copy, uncut, in original printed wrappers, bound in maroon quarter morocco antique, marbled boards, spine gilt-lettered. From the library of the chemists Adolphe Clément and Herbert McLean Evans (discoverer of vitamin E), with their bookplates on the front pastedown endpaper.

AN IMPORTANT early work, in which Liebig asks the government of Prussia to establish laboratories for teaching chemistry. He comments on the poor state of science, and especially chemistry, in Prussia and is "concerned with the lack of provision for practical work and research" (Partington). In this essay Liebig states (in translation): "I myself spent a portion of my student days at a university where the greatest philosopher and metaphysician of the century charmed the thoughtful youth around him into admiration and imitation; who could at that time resist the contagion? I, too, have lived through this period—a period so rich in words and ideas and so poor in true knowledge and genuine studies; it cost me two precious years of my life." Liebig rescued himself by going in search of chemistry where, at that time, it flourished most brilliantly: to Paris, where Gay-Lussac, Thenard, et al., were hard at work. Not in Bolton, Cushing, D.S.B., Duveen, Morgan, Osler, Smith, Waller, Wellcome, etc. (Edelstein, 1451; Ferchl, 315; Meyer, *A History of Chemistry* [London, 1906, p. 274]; Paoloni, 302; Partington, IV, 300; Poggendorff, I, 1455; Sondheimer, 908)

LIEBIG, Justus von, and KOPP, Hermann Franz Moritz

Annual Report on the Progress of Chemistry, and the allied sciences, physics, mineralogy, and geology; including the applications of chemistry to pharmacy, medicine, agriculture, the arts and manufactures. By Justus Liebig, M.D. Professor of Chemistry in the University of Giessen, and H. Kopp, Professor of Physics and Chemistry, in the University of Giessen. With the cooperation of H. Buff, E. Dieffenbach, C. Ettlting, F. Knapp, H. Will, F. Zamminer, professors in the University of Giessen. Edited by A. W. Hofmann, Ph.D., and W. De La Rue. . . .

London: Taylor, Walton, and Maberly. 1849–1853.

First English edition. 4 vols., 8vo. I: xv, (1), 516 pp., 2 leaves, + 4 folding tables. II: xviii, 585, (1) pp., + 6 folding tables. III: xix, (1), 627, (1) pp., + 4 folding tables. IV: xvi, 624 pp., + 2 folding tables. Fine copy in contemporary half morocco, marbled boards, spines gilt-lettered and gilt-ruled.

ALL PUBLISHED of the English translation of the *Jahresbericht über die Fortschritte der reinen, pharmaceutischen und technischen Chemie, Physik, Mineralogie und Geologie* (Giessen, 1849–57, 11 vols.). This translation covers the important years of 1847 through 1850. Bolton mistakenly states that seven volumes were published during the years 1849–55; however, both Paoloni and the British Union Catalogue describe four volumes (as above), which is the correct number. Partington (IV, 299) mentions the *Jahresbericht* but evidently did not know of this English translation. Scarce. Not in Cushing, D.S.B., Edelstein, Ferchl, Morgan, Partington,

Poggendorff, Smith, Waller, Wellcome, etc. (Bolton, 1078; Duveen, 24; Paoloni, 529; Sondheimer, 930)

LIEFHEBBER DER KONSTEM

De Geheime Illumineer-Konst. Bebelzende: I. Hoe men allerlei soorten van Verwen . . . II. Het maken van allerlei soorten van Chineesche en andere Vernissen en Verlakkingen . . . III. Eene duidelyke Onderrichting, om allerlei Voorwerpen . . . IV. Van de Schilderkonst in Miniatuur . . . V. Eene Beschryving van het Schilderen der Zwarte Konstprenten . . . VI. Het Vergulden van allerlei Metaalen . . . VII. Allerlei Stoffen te Verwen . . . VIII. Veele fraaye Geheimen om allerlei soorten van Gesteentens door Konst . . . Alles met groote moeite en vlyt by een verzamelt, en ten algemeenten nutte in het licht gegeven, door een Liefhebber der Konsten.

Amsterdam: By Gerrit Bom, Boekverkoper. 1770.

First edition. 3 vols., 8vo., in 1. I: iv, 108 pp., 4 leaves. II: 1 leaf, 118 pp., 4 leaves. III: 1 leaf, 160 pp., 4 leaves + 2 leaves (advertisements). Very good copy, unpressed and uncut with wide margins, in contemporary gilt-ruled quarter calf, speckled boards.

A DUTCH BOOK of trade secrets on the decorative arts, by an anonymous author. The title may be translated as "Secrets of the Arts Revealed" by a "Lover of the Arts." Of practical chemical and technological interest are descriptions of processes for varnishing, mirror making, gilding, miniature painting, dye and pigment preparation, etc. Each volume is divided into eight sections. Very rare. Not traced in the usual bibliographies.

LILGEGREN, Petrus

Dissertatio Physico-Psychologica, de Usu Philosophiae Naturalis in Psychologia, . . . sub praesidio Mag. Samuelis Duraei . . . pro gradu magisterii . . . Petrus Liljegren Vestro-Gothus. . . VI. Febr. Anni MDCCLX. . . .

Holmiae (Stockholm): Apud. Pet. Hesselberg. (1760).

First edition. 4to. 16 pp. Large woodcut tailpiece. Good copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A VERY EARLY work on psychology and the use of the laws of physics in understanding the working of the human mind in the development of scientific theories. The author acknowledges that the brain functions according to chemical and physical principles. He quotes Boyle's *Usefulness of Experimental Philosophy* (p. 4), Newton's *Principia* (p. 7), and works by Francis Bacon, Cudworth, Tschirnhaus, et al. An important work, unknown to historians of psychology, medicine, and science. Unrecorded by the usual bibliographers.

LIMBOURG, Jean Philippe de

*Caracteres des Medecins ou l'idée de ce qu'ils sont communément & celle de ce qu'ils devraient être. D'après Penelope de feu Mr. De La Mettrie. Par ***; D. en M. . . .*

"Paris" (Holland): "Aux dépens de la Compagnie." 1760.

First edition. 12mo. 2 leaves, 299, (1) pp., 5 leaves. Very good copy in contemporary calf, gilt, covers triple gilt-ruled with gilt dentelles, all edges gilt.

A CURIOUS WORK on the ineffectiveness of many of the medical practices of the time. The anonymous author discusses the limitations of anatomy, botany, chemistry, physics, surgery, etc., in medicine. He suggests that more "natural" remedies should be pursued in many cases, such as the calming influences of music, literature, and painting and the study of astronomy. The bathing in and drinking of natural mineral waters is especially recommended. An engraved plate (facing p. 48) of chemical symbols is in a chapter on the (then) "uselessness" of chemistry to cure diseases. The second part (*Caracteres des Medecins*) discusses medical ethics, medical charlatans, the personal character required in a good physician, etc. "La Mettrie's satire, 'Ouvrage de Pénélope, ou Machiavel en médecine,' appeared at Berlin in 1748" (Osler). A contemporary ownership inscription on the title page attributes this work to Limbourg. The Wellcome Catalogue lists the present title under La Mettrie. Not in Blocker, Cushing, Ferchl, Neu, Reynolds, Watt, etc. (Blake, 271; Osler, 3240; Waller, 5825; Wellcome, III, 438)

LIMBOURG, Jean Philippe de

Dissertation de Jean Philippe de Limbourg, Docteur en Medecine, sur les Affinités Chymiques, qui a remporté le prix de Physique de l'an 1758, quant à la partie Chymique, au Jugement de l'Académie Royale des Sciences, belles Lettres & Arts, de Rouen.

Liège: Chez F. J. Desoer, Imprimeur & Libraire, sous la Tour St. Lambert à la Main d'or. 1761.

First edition. 8vo. (in 4s). 87, (1) pp. Large folding copperplate frontispiece ("Nouvelle Table des Affinités Chymiques"). Fine, crisp copy, in contemporary half calf, boards, green gilt-lettered label. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown.

"WRITTEN FOR the prize offered in 1758 by the Academy in Rouen on the theme: Déterminer les affinités, qui se trouvent entre les principaux mixtes, ainsi que l'a commencé M. Geoffroy, et trouver un système physico-mécanique de ces affinités" (Bolton). The Academy of Rouen had divided its chemistry prize for 1758 between G. L. Le Sage and J. P. de Limbourg, because the former had mainly dealt with the second part of the subject, while the latter dealt almost

exclusively with its first part. Limbourg, who was a pupil of Rouelle, criticizes Geoffroy's tables of affinity and gives an extended one in thirty-three columns of symbols. At the end of his book (pp. 79–87), Limbourg presents a resume of Le Sage's theory, which was published under the title *Essai de Chymie Mécanique* (n.p., n.d., ca. 1761). Partington (III, 55), who had not seen this book, mentions a reference to it by Guyton de Morveau in a work of 1786. Very scarce. Not in Duveen, Ferguson, Morgan, Neu, Osler, Waller, Watt, Wellcome, etc. (Bolton, 632; Edelstein, 1462; Ferchl, 317; Ferguson Coll., 414; Poggendorff, I, 1462; Smith, 297; Sondheimer, 957)

LIMBOURG, Jean Philippe de

Traité des Eaux Minérales de Spa, par Jean Philippe de Limbourg, Docteur en Medecine.

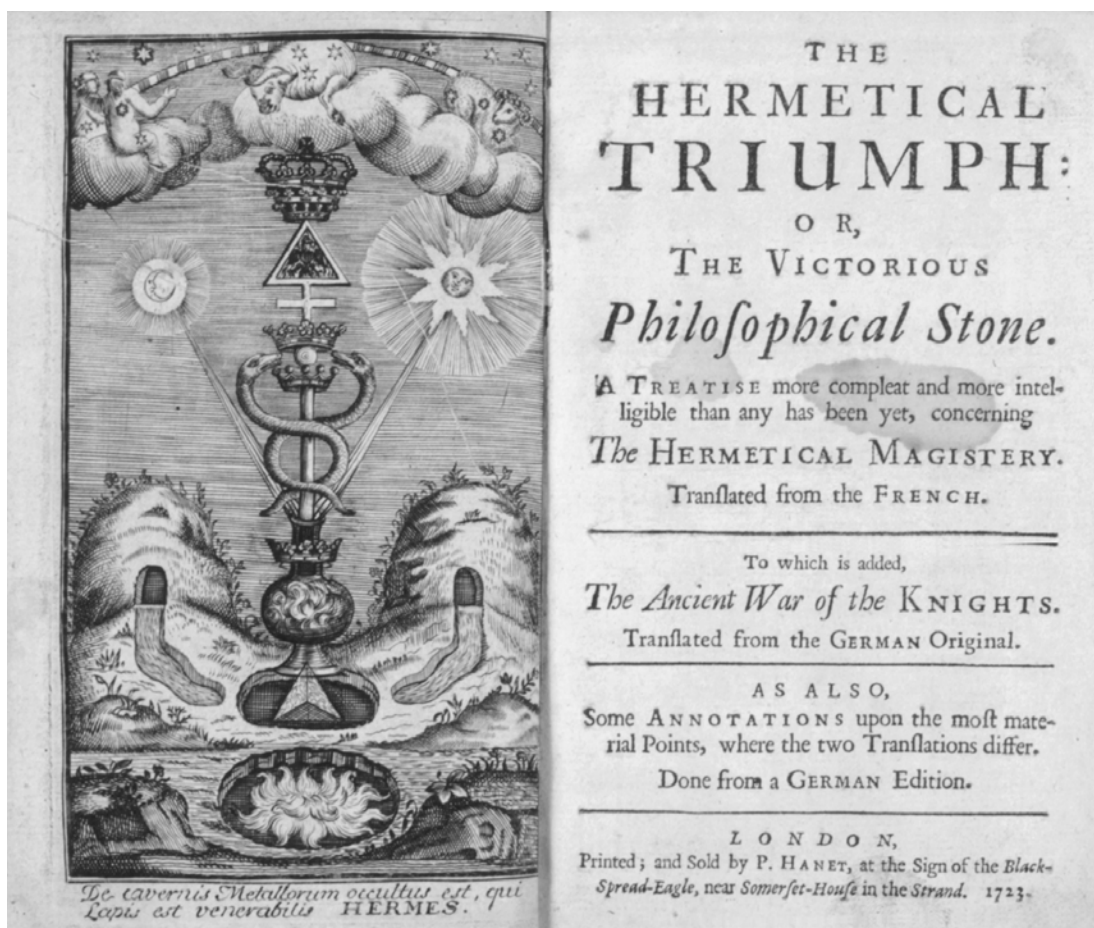
Leyden: De l'Imp. d'Elie Luzac, Fils. 1754.

First edition. 12mo. 8 leaves, 354 pp., 1 leaf (blank). Title in red and black. Fine copy in contemporary speckled calf, spine gilt, maroon morocco lettering label.

ONE OF the earliest works of Limbourg (1726–1811), M.D., a celebrated physician of Lüttich, Theux, and Spa, and senior fellow of the Royal Academy of Sciences at Montpellier. He was a good chemist who studied the effects of oxygen on plants, and, like P. van Musschenbroek (one of the dedicatees of this book), he adopted the theory of ponderous igneous corpuscles. He also extended Geoffroy's affinity tables. This work on the famous mineral waters of Spa is of chemical interest, as it describes various experiments for analyzing the waters, with references to the chemical works of Hoffmann, Moullin de Marguery, Heers, Boerhaave, et al. Pages 26–36 give a useful bibliography of balneological works from the sixteenth century to the date of publication. Pages 37–53 are entirely on chemistry, and there are other discussions of chemical importance throughout the book. Bolton (p. 632), Ferchl (p. 317), and Poggendorff (I, 1462) cite only an edition of Liège, 1756. Not mentioned by Duveen, Edelstein, Ferguson, Neu, Osler, Partington, Smith, Waller, Waring, Watt, et al. Very rare. (Blake, 271; Wellcome, III, 519)

LIMOJON DE SAINT DISDIER, Alexandre Toussaint

The Hermetical Triumph: or, The Victorious Philosophical Stone. A Treatise more compleat and more intelligible than any has been yet, concerning The Hermetical Magistery. Translated from the French. To which is added, The Ancient War of the Knights. Translated from the German Original. As also, Some Annotations upon the most material Points, where the two Translations differ. Done from a German Edition.



Limojon de Saint Disdier. Hermetical Triumph. London, 1723.

London: Printed; and Sold by P. Hanet, at the Sign of the Black-Spread-Eagle, near Somerset-House in the Strand. 1723.

First English edition, first issue. 8vo. xxvi, (2), 147, (1); 39, (1) pp. Emblematic copperplate frontispiece entitled in lower margin: "De cavernis Metallorum occultus est, qui Lapis est venerabilis Hermes." Fine copy, in early-nineteenth-century calf, covers gilt-ruled, spine richly gilt and dated, maroon morocco label. Engraved armorial bookplate: William Charles Caldwell.

BORN IN AVIGNON, Limojon (ca. 1630–1689) was a member of a noble family belonging to Dauphiné and was a knight of Mount-Carmel and of St. Lazarus of Jerusalem. The first three parts of this work are translated anonymously from *Le triomphe hermétique*, (1699). The ancient war of the knights is translated from the French version by Limojon of *Uralter Ritter-Krieg*, made from the Latin translation. The "Letter to the true Disciples of Hermes" (pp. 116–147) is also by Limojon. Ferguson gives a detailed list of the contents. "This English translation is rare" (Duveen). The second issue, undated (but 1723), has in the imprint

"for Thomas Harris" (and omits P. Hanet). In addition the title and prefatory leaves are different, but the contents are identical to those listed by Ferguson. The sheets of the 1723 edition were published as the third issue in 1740, with a new title page inserted under the imprint of F. Noble. (Duveen, 361; Edelstein, 1464; Ferguson, I, 394; Neu, 1920; Smith, 231; Wellcome, III, 519)

LINAND, Barthélemy

*Lettre de M. Barthélemy Linand Docteur en Médecine écrite à M** le 15 Octobre 1696, où il répond à quelques Objections qu'on a faites contre son Livre des Eaux Minérales de Forges.* (1696).

First edition. 8vo. 28 pp. Caption title. Bound with: Linand, B., *Nouveau traité des eaux minérales de Forges* (Paris, 1696).

A LETTER WRITTEN ON 15 October 1696 by Linand in which he defends his *Nouveau traité*, published earlier the same year, against the objection of an unnamed critic, "M**." Not in British Library. (Wellcome, III, 519)

LINAND, Barthélemy

*Nouveau Traité des Eaux Minerales de Forges; de leur vertu, & en quoy elle consiste; à quelles Maladies elles sont propres; comment elles produisent leurs effets; la maniere de les prendre, & les précautions qu'il y faut apporter, &c. Par M. B. L*** Docteur en Medecine.*

Paris: Chez la Veuve de Charles Coignard, ruë de la Bouclerie, au bout du Pont S. Michel, à la Ire chambre dans son Imprimerie. 1696.

First edition. 8vo. 1 leaf, 22 pp. Small wormhole in blank inner margin of several leaves; otherwise very good copy in contemporary calf, gilt, maroon label.

A VERY RARE tract on the chemical composition and medicinal properties of the mineral waters at Forges, Normandy. It was criticized by a certain "M**," to whom Linand replied in a letter dated 15 October 1696. Linand (fl. 1696–1697) was a physician who advised patients on the curative value of these waters. Not in British Library, Krivatsy, Waller, Wellcome, etc.

LINAND, Barthélemy

Nouveau Traité des Eaux Minerales de Forges, ou l'on fait voir dans les nouveaux principes de Physique & de Medecine, quelle est la nature de ces Eaux. En quoy consistent leurs vertus. Dans quelles maladies elles sont bonnes, & comment elles en détruisent les causes. Quelles précautions il faut prendre avant que d'en boire. Quel regime il faut observer en les prenant, & après les avoir prises, &c. Avec un plan des sources, du lieu où elles sont, de l'Enclos & du Bois des R.R. Peres Capucins, & du Bourg de Forges, dessiné sur le lieu. . . Paris: Chez Laurent d'Houry, . . . la Veuve de Charles Coignard, . . . et a Forges, chez Sieur de la Cour. 1697.

Second edition. 8vo. 4 leaves, 135, (1) pp. Large folding copperplate (aerial plan view of Forges and vicinity). With additional publisher's slip facing title page: Chez Pierre Bienfait, 1697.

THE GREATLY enlarged second edition containing more information than the first (1696) on the chemical content of these mineral waters. The privilege is dated 1 August 1697. Ferchl (p. 317), who obviously had not seen the work, mentions it under "Linaud" with an incorrect title ("Nouvelles decouvertes"). (Duveen, 362; Goldsmith, L1482; Krivatsy, 7009; Neu, 2406; Wellcome, III, 519)

LINCK, Johann Wilhelm

Ad Virum Experientissimum atque doctissimum M. Carolum Gottlob Kühnium Epistola. Insunt quaedam de historia, nonnullis que instrumentis Chemiae.

Leipzig: Litteris Breitkopfiis. 1783.

First edition. 4to. 14 pp., 1 leaf (blank). Large floral woodcut on title. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A HISTORY OF the origin and development of different types of chemical furnaces and their uses. Linck (1760–1805), a Leipzig physician, wrote *Grundsätze der Pharmazie* (Vienna, 1800) and other works. Very scarce. Not in Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Smith, Waller, Watt, Wellcome, etc. (Blake, 271; Ferchl, 317; Poggendorff, I, 1464)

LINDBERG, Otto

Dissertatio Physica de Natura Luminis, . . . Fac. Philosophica, in Regia Academia Upsaliensi, praeside Mag. Samuele Duraeo, . . . Publico examini offert Otto Lindberg, Bahusia-Gothoburgensis. In Audit. Gustaviano die XI Aprilis, Anni MDCCLXI.

Uppsala. (1761).

First edition. 4to. 1 leaf, 28 pp. Woodcut diagrams on pages 2 and 5. Large woodcut headpiece and capital. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

A DISSERTATION ON the nature and physical properties of light, presented by Lindberg (dates unknown) under the direction of the professor of physics at Uppsala, Samuel Duraeus (1718–1789). Many subjects in Newton's *Opticks* and Huygens' *De Lumine* are discussed, as are topics in the works of Barrow, Descartes, Euler, Keill, et al. The refraction of light by different substances is covered, and Lindberg advances a theory to account for the translucency and opacity of various materials (e.g., acids, salts, oils, and Iceland spar). Poggendorff (I, 630) lists several works by Duraeus but not the present title. Not found in the usual bibliographies.

LINDBLOM, Nicolaus

Dissertatio Academica, de Analysis Veterum Geometrica, . . . subjiciunt Samuel Duraeus. . . . Atque Nicolaus Lindblom, O. Gothi. . . . 25 Oct. 1746. . . .

Uppsala.

First edition. 4to. 20 pp. With 6 woodcut figures in text. Large woodcut capital and headpiece. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A CRITICAL EXAMINATION of the geometry of the ancients, with particular reference to Apollonius, Archimedes, Euclid, Pappus, et al. The author also discusses the work of Descartes, Kenelm Digby, Halley, Leibnitz, Simson, Snell, Wallis, and others. This is the very rare first publication by Lindblom (1726–1793), the celebrated professor of mathematics in the Swedish Artillery Corps, in Stockholm. Poggendorff (I, 1465) lists other writings by Lindblom but not this.

LINDBLOM, Nicolaus

Dissertation physica, de legibus naturae, quam, suffragante ampliss. Fac. Philos. In Regia Academia Upsaliensi, praeside viro nobilissimo D: no Samuele Klingenstierna, physices professore reg. et S.R.S. et A.S., pro gradu, examini publico modeste submittit alumnus regius, Nicolaus Lindblom Ostro-Gothus. In auditor. Carol. Majori die 16 Maji anni MDCCLII. Horis, ante meridiem, consuetis.
Holmiae (Stockholm): Typis Laurentii Ludovici Grefingii. (1752).

First (only) edition. 4to. 12 pp. Fine copy, unbound.

KLINGENSTIERN (1698–1765) was professor of mathematics at the University of Uppsala. This thesis by one of his students, Nicolaus Lindblom (of whose life and activities nothing appears to have been recorded), is on the laws of nature, with particular reference to the first three laws of motion as enunciated by Newton in his *Principia* (London, 1687). The motion of bodies (from planets to atoms) is discussed, with numerous references to Newton, Galileo, Descartes, Maupertuis, Leibnitz, Huygens, et al. In addition, there are references to heat, fire, light, iron, rust, salts, and other topics of chemical interest. An extremely rare work, apparently unrecorded by the bibliographers.

LINDEMARCK, Johan Magnus

Dissertatio Chemica Animadversiones Celeberrimi Gmelin, in Theoriam Lavoisierianam, de Natura Acidi Sulphurici Examinans. . . Praeside Mag. Joh. Gadolin, . . . pro gradu publicae censurae subjicit Johannes Magn. Lindemarck, Smolandus. Stip. Reg. In Auditorio Majori die III Martii MDCCCII. . .
Åbo: Typis Frenckellianis. (1802).

First edition. 4to. 1 leaf, 18 pp. Mint copy with wide margins, uncut, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. Nature of Acids. 1801–1802.

AN IMPORTANT dissertation on the properties, reactions, and composition of sulphuric acid, presented by Lindemarck under the direction of Gadolin, professor of chemistry at

Åbo. It is one of a series of replies to J. F. Gmelin (1748–1804), who, in Crell's *Annalen* (1796, I, 511), had disagreed with the theory of acids of Lavoisier. References cited include the works of Berthollet, Chaptal, Guyton de Morveau, Lavoisier, Priestley, Richter, Scheele, and Wiegleb. (Partington, III, 235)

LINDEN, Diederick Wessel

An Experimental Dissertation on the Nature, Contents, and Virtues of the Hyde Saline Purging Water, commonly called the Hyde Sparw, near Cheltenham in Gloucestershire. In which is proved from facts, that these waters are of the same nature, and considerably richer in salts than those of Cheltenham: and the various distempers in which they are salutary, fully set forth and demonstrated, to be in every respect superior to the Cheltenham Water, with directions for drinking and bathing. By Diederick Wessel Linden, M.D.

London: Printed by J. Everingham and T. Reynolds . . . and sold by W. Owen, . . . R. Fiddes, . . . and the Booksellers in Town and Country. 1751.

First edition. 8vo. viii, 66 pp., 3 leaves. Copperplate with 2 figures of "Hyde salts" (facing p. 20) and 8 woodcuts of seals used by bottlers of mineral waters on last 3 leaves. An excellent copy, uncut, with wide margins, in crimson quarter morocco antique, marbled boards, spine gilt-lettered and dated.

LINDEN (fl. 1745–1768), a physician of German origin, published a book in German on mineral waters (Amsterdam and Leipzig, 1746), on which see Ferguson. He must have moved to England shortly thereafter, as he then wrote several works on English and Welsh mineral waters. No biographical details on him have been found, although he was obviously a competent physician who possessed considerable chemical knowledge. In the first two parts (pp. 11–50) of this book, Linden describes numerous experiments he carried out on the mineral waters of Hyde Spa and Cheltenham Spa. These carefully documented experiments throw much light on the analytical chemical methods used in the mid-eighteenth century. The final three leaves describe "Mineral Waters of all Kinds, sold Wholesale and Retail, . . . by Richard Fiddes and Elizabeth Jones." Bottled waters from Hyde, Bath, Spa, Pouhon, Shadwell, Pyrmont, Selters, Bristol, Scarborough, etc., are advertised. Duveen, who does not mention the plate, says that this is the "only book on these waters." Not in Bolton, Edelstein, Partington, Smith, etc. (Blake, 272; Duveen, 362; Ferchl, 318; Ferguson, II, 40 [not in Young Coll.]; Ferguson Coll., 415; Neu, 2409; Waring, 793; Watt, II, 608a)

LINDEN, Diederick Wessel

Lettres sur la Minéralogie et la Métallurgie Pratiques. Traduit de l'Anglois de M. Diederick Wessel Linden. . . .
Paris: Chez Durand & Pissot. 1752.

First French edition. 8vo. 11 leaves, 201, (1) pp. Very good copy, in original tree calf, gilt, maroon morocco label.

THE FRENCH version of *Three letters on mining and smelting* (London, 1750; Hoover, 539). In the *avertissement* the anonymous author stresses the importance of mining and metallurgy to the economy of France and urges the founding of a college for the study of these subjects. The first letter reviews the state of mining in North Wales, with suggestions for improvements. Practical metallurgy and means for its advancement are covered in the second letter. The establishment of a rational system of mineralogy and metallurgy is the subject of the third letter. In the final letter the author describes his discovery of a practical method to prevent marine worms from boring into the hulls of wooden ships. He proves that by coating the hulls with pitch containing finely powdered talc, the worms will not attack the wood. Very scarce. (Duveen, 362; Neu, 2411; Wellcome, III, 521)

LINDEN, Diederick Wessel

A Treatise on the Origin, Nature, and Virtues of Chalybeate Waters, and Natural Hot-Baths. With a description of the mineral waters in England and Germany. Likewise directions for the preparation and use of artificial, hot, mineral-water baths. To which is added, an appendix, on the Selter Water; with many remarks, especially on its mixture with Tar-Water. And also a dissertation on Baron Schwanberg's Liquid-Shell; with the process for preparing the same. To which are annexed, occasional remarks and queries on the Glastonbury Waters. . . .

London: Printed for Daniel Browne & John Ward. 1755.

Second edition. 8vo. 1 leaf, xx, 48, 341, (1) pp., 3 leaves. Engraved frontispiece of elaborately carved fountain and folding plate of a man lying in a bath of mineral water heated by steam from a furnace (S. Tibert Inv., R. Ryloet Sculp.). Very good copy in contemporary speckled calf, tastefully rebacked and gilt, covers gilt-ruled, maroon morocco label.

AN UNCOMMON work (first: London, 1748) on the mineral waters listed in the title, with detailed directions for their chemical analysis and other tests. This enlarged edition contains observations on the Glastonbury waters and also gives directions for the preparation of the so-called liquid shell (i.e., a concentrated solution of calcium chloride, made by calcining a mixture of oyster shells and sal ammoniac). The solution was given to patients to dissolve kidney and blad-

der stones, evidently with success. (Blake, 272; Duveen, 362; Ferguson, II, 40 [not in Young Coll.]; Neu, 2412 [wrong pagination]; Waring, 776; Watt, II, 608a; Wellcome, III, 520)

LINDEN, Diederick Wessel

A Treatise on the Three Medicinal Mineral Waters at Llandrindod, in Radnorshire, South Wales. With some remarks on Mineral and Fossil Mixtures, in their Native Veins and Beds; at least as far as respects their Influence on Water. . . .

London: Printed by J. Everingham and T. Reynolds, for the Author: and sold by W. Owen, at Homer's Head, Temple Bar. 1756.

First edition. 8vo. 2 leaves, xlv, 336 pp. Title printed in red and black. Engraved frontispiece of mineral springs in bucolic setting (J. S. Miller del. et sc.). Fine copy in original speckled calf, rebacked, maroon morocco label. Armorial bookplate: Plas Heaton.

AN IMPORTANT monograph on the mineral waters of Llandrindod (viz. saline chalybeate, saline purging, and sulphur water). "Contains details of many chemical tests and experiments made on various waters which take up the greatest part of the book" (Duveen). The list of subscribers includes several famous names (e.g., James Basire, William Fordyce, and Stephen Hales). (Blake, 272; Duveen, 362–363; Ferchl, 318; Ferguson, II, 40 [not in Young Coll.]; Neu, 2413; Waring, 796; Watt, II, 608a; Wellcome, III, 521)

LINDEN, Johannes Antonides van der

De Scriptis Medicis Libri Duo. Editio tertia & tertia auctior.
Amsterdam: Apud Joannem Blaeu. 1662.

Third edition. 8vo. 8 leaves, 755 pp., 18 leaves. Very good copy in contemporary vellum.

VAN DER LINDEN (1609–1664) studied philosophy and then medicine at Leiden. He practiced in Amsterdam after graduation and later became professor of medicine at Leiden from 1651 until his death. His *De Scriptis Medicis* (Amsterdam, 1637) consists of an alphabetical arrangement by first names of authors, with a subject list and an index of last names of authors. A second edition appeared in 1651. The present third edition of 1662 is the last that Linden saw through the press. "Linden is the best-known of seventeenth century bibliographers, and his compilation is still of value" (Thornton). It is particularly useful for tracing titles and editions that are now virtually unfindable. "Van der Linden's book was at the time of its appearance the most complete medical bibliography yet produced. . . . G. A. Mercklin published a considerably expanded version in 1686" (Garrison & Morton). Manget speaks highly of Linden and this

work (see J. J. Manget, *Bibliotheca Scriptorum Medicorum*, Geneva, 1731, II, Part 1, p. 81). (Cushing, L239; Garrison & Morton, 6744; Thornton, *Medical Books, Libraries and Collectors*, 1966, p. 242; Waller, 18670; Watt, II, 927r; Wellcome, III, 521)

LINDERQUIST, Nicolas Peter

Corollaria nonnulla ex Analyti Aquarum Mineralium tam Naturalium, quam Arte Factarum, . . . Praeside . . . Christ. Wollin, . . . pro gradu doctoris eruditorum examini subijcit Nicol. Petr. Linderquist, Smolandus. In Audit. Carol. Maj. die XII Junii MDCCXCIV. . . .
Lund: Typis Berlingianis. (1794).

First edition. 4to. 13, (1) pp. Very good copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Wollin. 2 Dissertations. 1793, 1794.

A DISSERTATION COMPARING naturally occurring and artificially prepared mineral waters, presented by Linderquist under the direction of the professor of chemistry at Lund, Christian Wollin (1730–1798). The author contends that artificially prepared waters containing the same quantities of dissolved salts and gases as those that occur naturally are just as beneficial when imbibed. Chemical works cited include those of Bergman, Elliot, Hoffmann, and Monnet. Not in Blake, Waller, Wellcome, etc. (Ferchl, 588; Poggendorff, II, 1364)

LINTON, William

Ancient and Modern Colours, from the Earliest Periods to the Present Time: with their Chemical and Artistical Properties.
By William Linton.
London: Longman, Brown, Green, and Longman. 1852.

First edition. 8vo. 6 leaves, 80 pp., 3 leaves. Fine copy, uncut, in original blind-stamped mauve cloth, front cover lettered in gilt. Presentation copy inscribed in ink on recto of first free endpaper: "W. F. Witherington Esq. R.A. with the Author's Compliments."

THE CELEBRATED landscape painter Linton (1791–1876) exhibited his paintings at the Royal Academy (1817–1859) and assisted in the formation of the Society of British Artists (1824). He was very knowledgeable about the history and chemical composition of pigments used in ancient, medieval, and modern painting, and his two folio volumes, *Sketches in Italy* (1832), were well received. Dedicated to Prince Albert, consort to Queen Victoria, the present work discusses ancient and modern colors, as well as the chemistry and technology of paints, drying oils, varnishes, waxes and other materials. "A valuable historical account, with copious quotations from Greek and Latin Classics" (Zeit-

linger). The author "was well versed in the chemistry of colours . . . and served as a juror in the chemical class at the first exhibition" (D.N.B.). This copy has a distinguished provenance, as it was given by Linton to William Frederick Witherington (1785–1865), another prominent landscape painter who studied and exhibited at the Royal Academy (1811–1865). (Sotheran, Cat. 734 [1913], 10881)

LISTER, Martin

A Journey to Paris in the Year 1698. By Dr. Martin Lister.
London: Printed for Jacob Tonson at the Judges-Head near the Inner-Temple-Gate in Fleetstreet, and at Gray's-Inn-Gate in Gray's-Inn-Lane. 1699.

First edition, second issue. 8vo. 4 leaves (including blank leaf before title), 245, (3) pp. With 6 copperplates (2 folding). Very good copy in contemporary gilt-ruled calf, rebounded, maroon morocco label gilt. Bookplates: Thomas Brooke, F.S.A., and E. M. Cox.

LISTER (ca. 1638–1712), F.R.S., celebrated zoologist and geologist, accompanied the earl of Portland as physician on his embassy to Paris in 1698, and this work is an account of that visit. Although at the time it was satirized for its attention to detail, Lister's description is now regarded as a valuable source book. His accounts of museums, private collections of minerals and metals, pharmacies and chemical laboratories, etc., are of great historical interest. Two other editions also appeared in 1699. The first issue of the first edition was published by J. Tonson in 1698 (Wing, L2524A: 2 copies). Reprinted in Pinkerton's *General Collection of the Best and Most Interesting Voyages and Travels* (London, 1809), with a revised edition by George Henning, *An Account of Paris at the Close of the Seventeenth Century* (London, 1823), which was translated into French as *Voyage de Lister à Paris* (Paris, 1873). A facsimile reprint of the third edition of 1699, with notes by R. P. Stearns, has also appeared (Urbana, Illinois, 1967). (Cushing, L300; D.S.B., VIII, 417; Munk, I, 445; Osler, 5070; Thornton & Tully, 136; Waller, 19912; Watt, II, 610k; Wellcome, III, 529; Wing, L2525)

LITERARY & PHILOSOPHICAL SOCIETY OF NEWCASTLE-UPON-TYNE

Literary & Philosophical Society. Chemical Lectures. Laws of Chemical Combination, &c.
(Newcastle: W. E. & H. Mitchell. N.d., ca. 1830).

First edition. 8vo. 4 pp. Very good copy. Bound with: Reid, D. B., *Directions for using the improved sliding scale of chemical equivalents* (Edinburgh, 1831).

A SYNOPSIS of the chemical lectures presented before the Literary and Philosophical Society of Newcastle-upon-Tyne, which was founded in 1793 (*Encyclopaedia Britannica*). Dalton's laws of chemical combination are discussed, and a list of the fifty-four then-known elements is given, with their symbols and equivalents (e.g., hydrogen = 1, oxygen = 8). Also described is a primitive symbolism for various inorganic and organic compounds. For further information on this society, see *Remarks on the history of the Literary and Philosophical Society of Newcastle-upon-Tyne* (Newcastle, 1844, 24 pp.), by Robert Mortimer Glover (1816–1859). An extremely rare, ephemeral and possibly unique piece, not traced in any bibliography.

LITSCH, Johann Jacob

Dissertatio Physica Experimentalis De Saliu Effectu Frigorifico in Liquoribus quam praeside Dn. Johanne Philippo Grauel . . . D. 26. Aug. . . . MDCCXLVIII. solenni eruditorum examini submittit Johannes Jacobus Litsch . . .
Strasbourg: Typis Melchioris Pauschingeri. (1748).

First edition. 4to. 1 leaf, 26 pp. Fine copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION on the cold produced by dissolving various inorganic salts in water and on freezing mixtures. No biographical information on Litsch has been found, except that he lived in Strasbourg. Johann Philipp Grauel (1711–1761), the praeses, received his degree in 1738 (see Wellcome, III, 150). Referring to the works of Boyle, Boerhaave, Fahrenheit, Geoffroy, Homberg, Musschenbroek, Reaumur, et al., Litsch gives directions for making many different freezing mixtures from niter, borax, alum, rock salt, sal ammoniac, and other salts, with the lowest temperatures attained by each mixture. Of importance to the history of chemistry and physics, this rare work is unrecorded by the usual scientific bibliographies.

LOBSTEIN, Jean Frédéric Daniel

Researches and Observations on the use of Phosphorus, in the treatment of Various Diseases. . . .

Philadelphia: Printed for the Author, and sold at the principal bookstores in the United States. R. Wright, Printer. 1825.

First English translation. 4to. Pp. (i)–(vi), (2), (vii)–(xii), (13)–114. Fore-margin of 1 leaf of index (pp. 111–112) missing (no loss), usual minor browning of paper; otherwise a very good copy, entirely uncut, in modern buckram, crimson label, gilt.

AN IMPORTANT treatise on the pharmacological uses of the element phosphorus, which originally appeared as *Recherches et observations sur le phosphore . . . dans le traitement de différentes maladies internes* (Strasbourg: F. G. Levrault, 1815). Lobstein (1777–1840), a distinguished French physician, was an honorary member of several American medical societies. “This monograph contains a copious historical notice of phosphorus, its chemical and physical properties, and an account of the diseases in which it had been previously employed, concluding with the author's original remarks and the results of his experience. . . . He administered it in solution in sulphuric ether with the addition of a few drops of an essential oil” (Waring). “The book contains a letter from Lafayette, and was subscribed to by Thomas Jefferson” (E. Newton Harvey). Very scarce. Not in the usual early chemical libraries. Sondheimer (no. 965) and Wellcome (III, 534) list the French edition (1815) only. (Cordasco, 20-0365; E. Newton Harvey, 447; Waring, 613)

LOCATELLI, Lodovico

Theatro d'Arcani del Medico Lodovico Locatelli da Bergamo; nel quale si tratta dell'Arte Chimica, & suoi Arcani. Con gli Afforismi d'Ippocrate Commentati da Paracelso et l'esposizione d'alcune Cifre, & Caratteri oscuri de Filosofi. Con due tavole una de' Capitoli, & l'altra delle Cose piu Notabili.
Venice: Presso Paolo Baglioni. 1667.

Second Italian edition. 8vo. 8 leaves, 392 pp., 11 leaves. Large woodcut ornament on title page, woodcut chemical symbols (pp. 351–355), and woodcut chemical diagram (based on Raymund Lull, p. 359). Occasional contemporary marginal annotations in ink and minor embrowning of several leaves; otherwise very good copy, in pale-green modern boards, spine ink-lettered.

THE FAMOUS physician of Milan, Locatelli (ca. 1600–1657) was a zealous iatrochemist who invented a balsam to heal wounds. He first published this celebrated book of alchemical and chemical secrets in Latin as *Theatrum arcanorum chymicorum, seu de arte chimico-medica tractatus* (Frankfurt, 1636; Bolton, 636; Ferchl, 320). He revised that work and published it in Italian (Milan, 1644; Blocker, 244; Verginelli, 192), of which the present second edition is the first to appear with a Venice imprint. Locatelli “states that there are few chemists in Milan, and that most medical men there are hostile to the art. The arcana include the preparation of the first matter, philosophers' stone, mercury of life, potable gold, transparent vitrified gold, an *Aurum vitae* of Locatelli's own invention as well as three others, a quintessence of silver of his own, and the quintessence of wine of Raymund Lull (really of John of Rupescissa). The arcana

are followed by an exposition of Paracelsus on the Aphorisms of Hippocrates and explanations of the obscure terms of the philosophers and of alchemical characters" (Thorn-dike, VII, 196). Not in British Library. (Duveen, 364; Ferguson Coll., 418; Ferguson, *Books of Secrets*, I, pt. 1, p. 15; Krivatsy, 7074; Neu, 2514; Sudhoff, 397; Wellcome, III, 534)

LOCHNER, Zacharias

Probiere Büchlein. Auff alle Metall, so die Ertzt und Bergwerck des hochloblichen Teütschen Landts geben, &c. Allen Müntzmeystern, Wardeyen Goldwercken, Bergkleüten und Kaufleüten der Metall. Durch Zachariam Lochner A.M. zu nutz mit fleys zusammen getragen in Ingolstatt.
Augsburg: Getruckt durch Mattheum Francken. 1565.

First Augsburg edition. 4to. 50 leaves (unpaginated). Black letter. Title page in red and black. Contemporary pen strokes on every leaf; otherwise very good copy in original blind-stamped pigskin over oak boards, with 1 (of 2) clasps and catches. Bound with: Paracelsus, *Archidoxorum* (Basel, 1572).

THE SECOND edition to be edited by Lochner (d. 1608), whose first edition appeared in an octavo format of seventy-nine leaves (Nuremberg, 1564). The *Probiere Büchlein* was the first printed work on any aspect of metallurgy. It is of immense importance for the history and development of mineral chemistry. This work "is a notebook, a compilation of accepted practices and recipes culled from various manuscripts of the type that the more learned artisans would be expected to seek, enlarge upon, and exchange with each other, and covers everything from making touch needles, furnaces, crucibles, cupels, and weights to compounding fluxes and reagents and prescriptions for their use" (Sisco & Smith, p. 8). Agricola plagiarized whole sections from this work for his *De Re Metallica*. The *Probiere-büchlein*, an anonymous compilation covering principally the assaying of silver and gold, was written mostly for the goldsmith and jeweler. This text was very popular, and the survival rate of copies is very low. The dates of the earliest editions of this text are uncertain. The first dated edition was printed at Magdeburg in 1524, but there are several undated editions of which two probably antedate the Magdeburg edition by several years. Lochner was the first to put his name on the title page as editor. This copy has ink lines crossing out the page, as if this were the copy used for a later edition by a typesetter. The lines do not obscure the text. Of the greatest rarity. Not in N.U.C., OCLC, or RLIN. (Sisco & Smith, *Berwerck- und Probierebüchlein*, p. 175)

LOCKE, John

An Essay Concerning Humane Understanding. In Four Books. . . . The Fourth Edition, with large Additions. . . .
London: Printed for Awnsham and John Churchill, at the Black-Swan in Pater-Noster-Row; and Samuel Manship, at the Ship in Cornhill, near the Royal-Exchange. 1700.

Fourth edition. Folio. 20 leaves, 1–90, 93–96, 95–96, 97–226, 233–379, 390–391, 382–438 pp., 6 leaves (pagination erratic, text complete). With engraved portrait of Locke (Sylvester Brounower ad vivum delin.; P. Vanderbanck sculp.). Occasional embrowning; otherwise very good, wide-margined copy, in blind-ruled calf antique, spine unlettered. Signature on title page of Dr. Henry Clarke (1743–1818), mathematician (see D.N.B.).

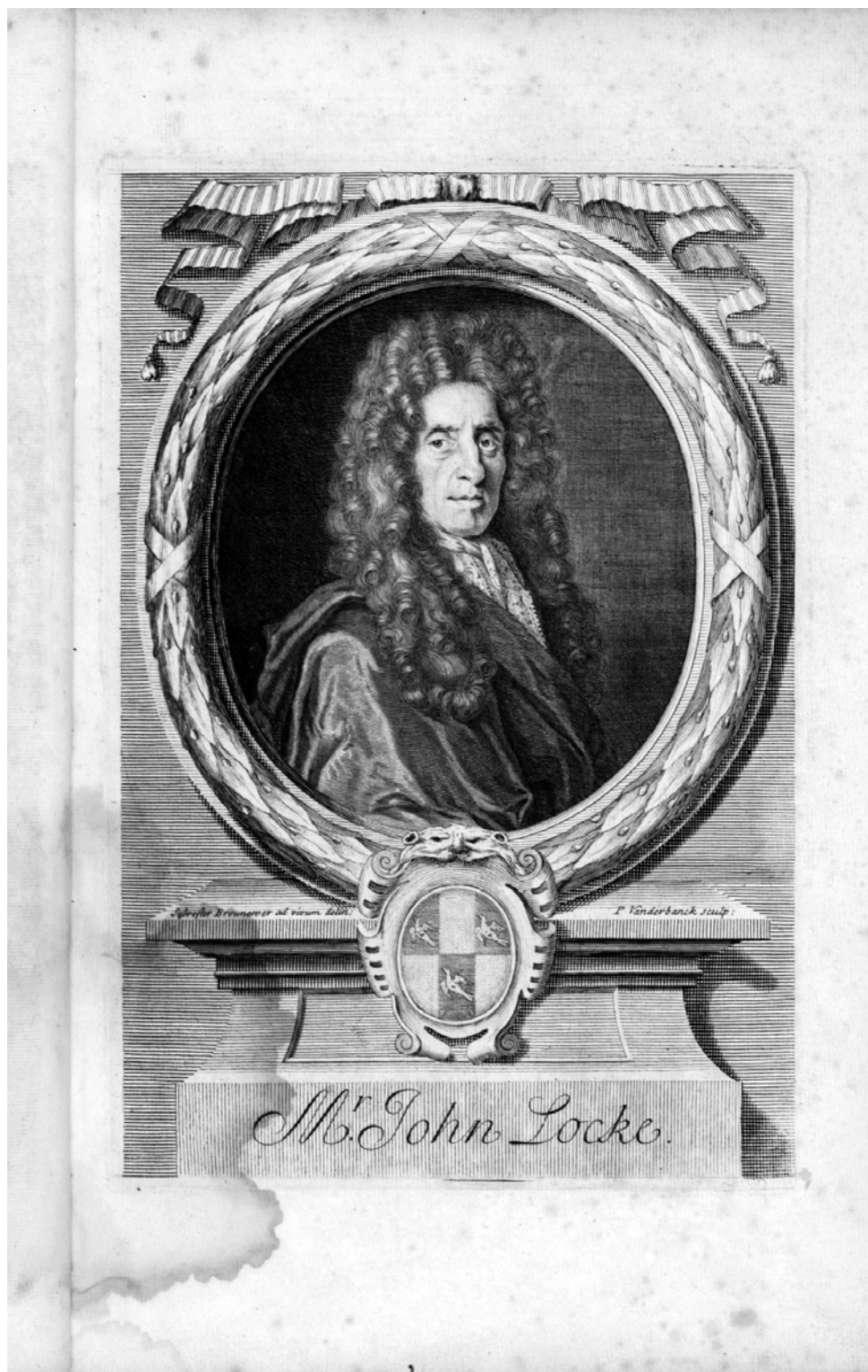
EDUCATED AT Westminster and Oxford, Locke (1632–1704) was "the most important British philosopher of the Age of Reason. If the modern Western world has been shaped by scientists, merchants, statesmen, and industrialists, [he] was the first philosopher to expound their view of life, articulate their aspirations, and justify their deeds. No philosopher has exercised a greater influence" (D.S.B.). By far the most important of his many works, the *Essay* (first: London, 1690) was enlarged with each succeeding edition (1694, 1695, 1700), the present being the last to appear in his lifetime. Locke, who was friends with Boyle, Hooke, Newton, and other scientists, carried out many experiments in chemistry and physics. There are numerous references to these subjects in this classic work. "Locke, a physician, laid the foundation of modern psychology. For two centuries the principles laid down by him were unquestioned. The writing of the *Essay* occupied him on and off for twenty years" (Garrison-Morton, 4967). Partington (II, 470) refers to Locke's interest in alchemy. (Blocker, 244; D.S.B., VIII, 439; Osler, 1031; P.M.M., 164; Watt, II, 613n)

LOCKYER, Joseph Norman

The Chemistry of the Sun. By J. Norman Lockyer. . . .
London: Macmillan and Co. 1887.

First edition. 8vo. xix, (1), 457, (1) pp. With 134 illustrations in text. Very fine, virtually mint copy, in gilt-ruled prize calf, spine richly gilt, maroon morocco label, arms of University of Glasgow in gilt on front cover. Presented by Archibald Barr (1855–1931), professor of engineering, to Andreas Marshall Downie.

ONE OF the most eminent astronomers of the nineteenth century, Sir J. N. Lockyer (1836–1920), F.R.S. (1869), was director of the Solar Physics Observatory and professor of astronomical physics at the Royal College of Science (1890–1911), London. In this book he discusses the "chemistry"



Locke. *Essay Concerning Humane Understanding*. London, 1700.

that occurs in the sun, with descriptions of the many spectroscopic techniques employed to deduce the relative quantities of the chemical elements present. Lockyer discovered the presence of a then-unknown element, helium (which he named), in the sun's spectrum during the solar eclipse of 1868. The first to show that the spectrum of a substance gives an indication of its temperature as well as its constitution, in this work he develops his theory of sunspots, first communicated to the Royal Society in 1886. Archibald Barr, F.R.S. (1923), who inscribed this copy, was the inventor of range finders. With William Stroud, Barr founded the firm that designed naval range finders, height finders, fire control, and other precision instruments (see D.N.B.). (Bolton, 636; D.S.B., VIII, 443; Knight, 236; Partington, IV, 917; Sotheran, Cat. 676 [1907], 2662; Thornton & Tully, 201)

LOCKYER, Joseph Norman

The Sun's Place in Nature. By Sir Norman Lockyer . . .
London: Macmillan and Co. 1897.

First edition. 8vo. xvi, 360 pp. With 82 figures in text. Very good copy, uncut, in original brown pebbled cloth, spine gilt-lettered.

AN IMPORTANT and rare work, a sequel to Lockyer's *The Chemistry of the Sun* (1887), in which he describes his discovery of helium (1868) in the spectrum of light from the sun. He also describes the spectrum of the gas obtained from uraninite (pitchblende, or cleveite), showing it to be helium. Discussions of the spectra of various stars are included, demonstrating that the same chemical elements exist in stars as are found on earth. Many other topics of importance in chemistry, physics, and astronomy are covered. (Thornton & Tully, 201)

LOCQUES, Nicolas de

Elemens Philosophiques des Arcanes et du Dissolvant General, de leurs Vertus, Proprietez, et Effets. Où sont ponctuellement expliquées en general leurs secrettes compositions, & les experiences qui en ont esté faites; l'ordre & la maniere de s'en servir, pour les usages de la Medecine. . . . Livre sixième.

Paris: Chez Geoffroy Marcher, ruë S. Iacques, à la Ville de Rome. 1668.

First edition. 8vo. 12 leaves, 89, (1) pp. (last blank). Few leaves very lightly embrowned; otherwise good copy. Bound with: Locques, N. de, *Les vertus magnetiques du sang* (Paris, 1664), and other works by this author.

THE FINAL iatrochemical work by Locques, in which he describes the preparation and properties of various solvents, elixirs, oils, potable gold, and other mixtures for medicinal

use. At the end (pp. 69–87) is a section on alchemy, in which is discussed the alkahest (universal solvent), with references to Glauber, Hermes, Paracelsus, and Ripley. Preceding the main text is “Apologie aux professeurs de la medecine” by Locques, followed by four laudatory poems praising “l'excellence des remedes chymiques de . . . Locques,” and finally an eleven-page introduction (*au lecteur*), presumably by Locques, which ends in mid-sentence (“ . . . a qui particulierement je les dédie, en qualité de”). Not in Caillet, Guaita, etc. (Bolton, 637; Duveen, 364–365; Ferguson, II, 42; Goldsmith, L1757; Neu, 2516; Partington, III, 26; Thorndike, VIII, 138; Wellcome, III, 535)

LOCQUES, Nicolas de

Propositions touchant la Physique Resolutive. . . .

Paris: Chez Geoffroy Marcher, ruë S. Iacques, à la ville de Rome. 1665.

First edition. 8vo. 39, (1) pp. Woodcut ornament on title page (basket of leaves and fruit). Last leaf somewhat stained, and laid down; otherwise good copy. Bound with: Locques, N. de, *Les vertus magnetiques du sang* (Paris, 1664), and other works by this author.

A BRIEF TRACT in which Locques describes various furnaces and processes for preparing a variety of chemicals. At the end (pp. 36–39) the author gives a *Genealogie des mine-raux, des metaux, & des pierres*, in which he describes about forty naturally occurring substances (mainly metallic ores, salts, and minerals). (Bolton, 637; Caillet, 6739; Duveen, 364–365; Duveen, *Supplement*, 232; Ferguson, I, 42; Goldsmith, L1757; Guaita, 511; Neu, 2518; Partington, III, 26; Thorndike, VIII, 138; Waite, 291; Wellcome, III, 535)

LOCQUES, Nicolas de

Les Rudimens de la Philosophie Naturelle touchant le Systeme du Corps Mixte. . . .

Paris: Chez Geoffroy Marcher, ruë Saint Iacques, à la ville de Rome. 1665.

First edition. 2 vols., 8vo., in 1. I: 11 leaves, 184 pp., 4 leaves. With folding copperplate (engraved by Nicolas Bonart), 2 woodcut diagrams (p. 176), 2 woodcut tables (chemical symbols), and 3 full-page woodcut figures of apparatus. II: 8 leaves, 214 pp., 1 leaf. Title of volume I soiled, occasional contemporary annotations in text and some leaves lightly browned; otherwise good copy. Bound with: Locques, N. de, *Les vertus magnetiques du sang* (Paris, 1664).

THE PRINCIPAL chemical textbook of Locques. After “corps mixte” the title of volume I reads: *Cours theorique, ou sont clairement expliquez les preceptes & les principes de la chymie, qui ont este jusques icy cachez des anciens philosophes*. After “corps mixte” the title of volume II reads: *Cours pratique*.

Ou il est traité des opérations suivant la doctrine de Paracelse; qui n'ont pas jusqu'icy esté connües, que de fort peu de personnes. The first volume is dedicated to Louis XIV and the second to the Duke de Mortemart. Thorndike discusses these volumes at length. At the end of volume II (pp. 197–214) there is a section on alchemy (*Des termes de l'alchymie vulgaire et commune*). “Traités curieux et très rares” (Guaita). The privilege of volume I is dated 17 March 1665 and that of volume II is dated 7 March 1665. Not in Krivatsy, etc. (Bolton, 636; Caillet, 6737, 6740; Duveen, 364–365 [imperf.]; Duveen, *Supplement*, 232 [this copy]; Ferguson, II, 42; Goldsmith, L1757; Guaita, 511; Neu, 2517; Partington, III, 26; Thorndike, VIII, 138–141; Waite, 291; Wellcome, III, 535)

LOCQUES, Nicolas de

Les Rudimens de la Philosophie Naturelle touchant le Systeme du Corps Mixte. De la fermentation, ou on void ce qui se passe interieurement dans les mouvemens divers des substances. . . . Traité second.

Paris: Chez Geoffroy Marcher, ruë S. Iacques, à la ville de Rome. 1665.

First edition. 8vo. 8 leaves, 146 pp., 1 leaf (blank, lacking). Woodcut diagrams (pp. 29 and 108). Neat contemporary underlining in ink on several leaves; otherwise very good copy. Bound with: Locques, N. de, *Les vertus magnetiques du sang* (Paris, 1664), and other works by this author.

THE TITLE page includes the *Traité* [sic] *du sang* and the *Propositions de la chymie resolutive*, which were published at the same time; these three works were issued together as *Traité second*, being the sequel to the *Cours theorique* and *Cours pratique*. It is probable that the work on blood (1664) and the *Propositions . . . chymie resolutive* (1665) were both sold together (i.e., separately from the *Rudimens*), as each work is on a distinct subject and that on blood is dedicated to Monseigneur le Prince. The term *fermentation* in the title refers not only to the biological process as now understood but also to the effervescence and other motions that are observed when metals are dissolved by acids, insoluble precipitates are produced, crystallization occurs, and other physical and chemical phenomena. (Bolton, 637; Caillet, 6738; Duveen, 364–365; Duveen, *Supplement*, 232; Ferguson, II, 42; Goldsmith, L1757; Guaita, 511; Neu, 2518; Partington, III, 26; Thorndike, VIII, 138; Waite, 291; Wellcome, III, 535)

LOCQUES, Nicolas de

Les Vertus Magnetiques du Sang, de son usage interne & externe, pour la guarison [sic] des maladies. . . .

Paris: De l'Imprimerie de Iacques le Gentil ruë des Noyers. Et se vend chez l'Authœur, ruë des Mauvais-Garçons, à l'Image Saint Martin. 1664.

First edition. 8vo. 8 leaves, 54 pp., 1 leaf (privilege, dated 12 Mars 1664). Woodcut ornament (basket of leaves and fruit) on title page. Good copy, in contemporary calf, gilt, joints repaired. Bound with: 5 other works by Locques.

LOCQUES (fl. 1660–1668), an alchemist and iatrochemist, was “spagyric physician” to Louis XIV. In this work on the “magnetic virtue” of human blood he “states that it is double: spirit and body, sympathy and antipathy, curative and morbid. Man, the microcosm, has his pole (balsamic salt) and magnet (the magnetic spirit of blood). But in the present work he will not detail its celestial, astral and magic virtues, of which Paracelsus has spoken amply, nor its secret preparation in quintessence, but only the secret usage which one can make of it in baths” (Thorndike). As can be seen from the imprint, this book was sold by the author from his house. Not in Wellcome. (Bolton, 637; Caillet, 6741; Duveen, 365; Duveen, *Supplement*, 232; Ferguson, II, 42; Goldsmith, L1757; Guaita, 511; Krivatsy, 7077; Neu, 2519; Partington, III, 26; Thorndike, VIII, 138, 141)

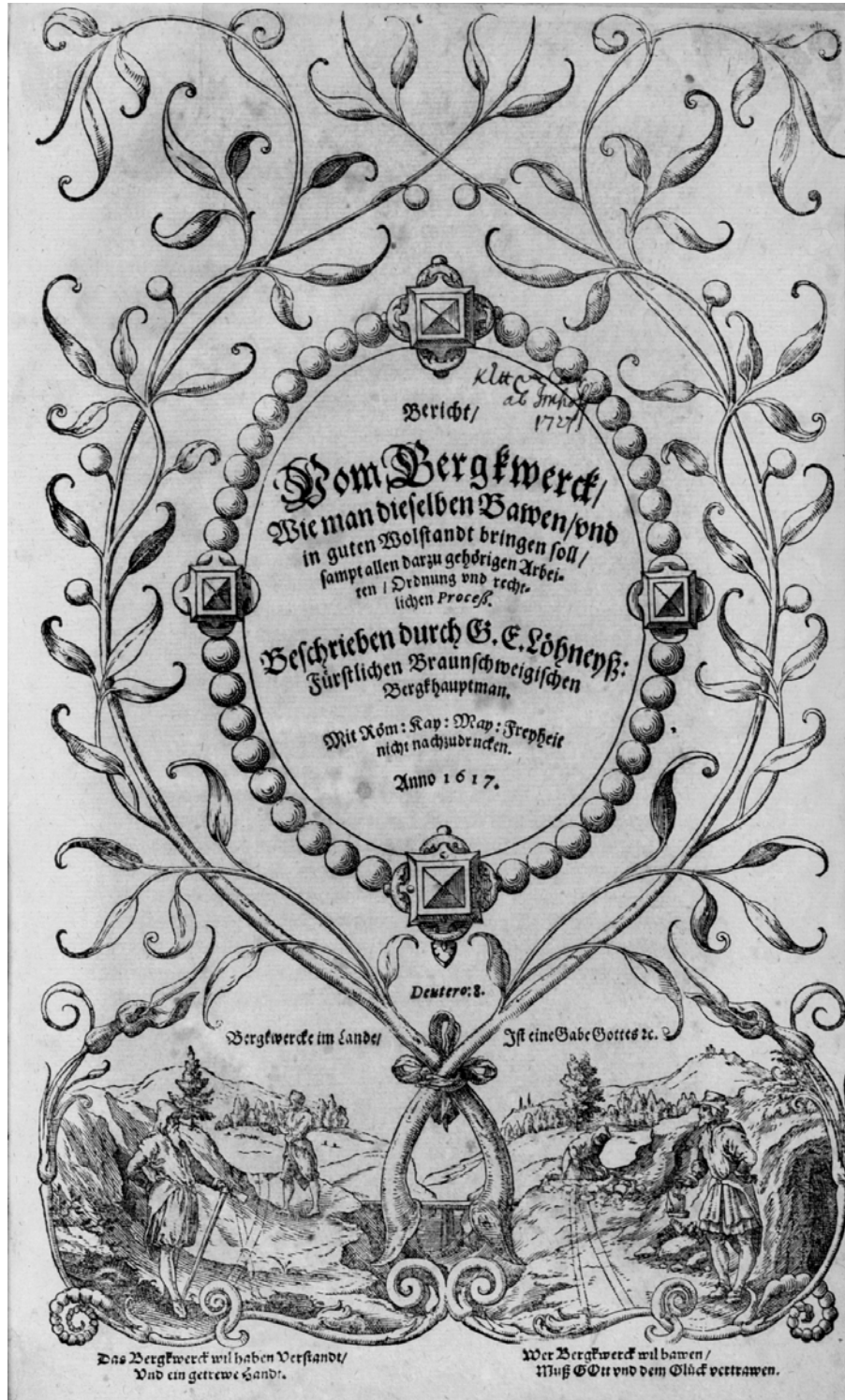
LÖHNEYSS, Georg Engelhard von

Bericht, vom Bergkwerck, wie man dieselben Barwen, und in guten Wolstandt bringen soll, sampt allen darzu gehörigen Arbeiten, Ordnung und rechtlichen Process.

Zellerfeld: Löhneyss. 1617.

First edition, second (best) issue. Folio. 1 leaf (fine wood-engraved title), 10 leaves, 363 pp. (misnumbered 343). With 16 very fine wood-engraved double-page plates (surrounded by ornate borders depicting smelting furnaces, assaying equipment, mining scenes, etc.). Woodcut initials. Several leaves numbered as folios, most as pages. Some leaves browned as usual; otherwise a fine copy in later-seventeenth-century half calf, speckled boards, spine gilt, maroon morocco label gilt. From the library of the distinguished bibliophile Robert Honeyman IV, with his gilt armorial maroon morocco bookplate.

THE EXTREMELY rare, privately printed, second (most complete) issue of the first edition. The first issue had only ten plates. One of the great rarities of early mining and metallurgical literature, ranking in importance with the works of Biringuccio, Agricola, and Ercker. Löhneyss (1552–ca. 1625), a nobleman at the court of the Elector Augustus of Saxony and inspector of mines to the duke of Brunswick-Wolfenbüttel, was an expert in mining, metallurgy, and



Löhneys. Bericht, vom Bergwerck. Zellerfeld, 1617.

geology. He designed the plates, woodcuts, and initials and printed the book at his own press in Zellerfeld. It was the first and only book printed there. The engraver of the cuts was Moses Thym (see Nagler, *Monogr.*, IV, 2187). A masterpiece of typography, almost all copies were destroyed by fire in 1618, during the Thirty Years War (1618–1648). It is estimated that only about a dozen copies have survived. The book gives a complete account of German mining and metallurgical methods of the early seventeenth century. “One of the artistically most precious [and] rarest books on mining” (W. Prandtl, *Zeitschrift für Bücherfreunde*, 39 [1935], pp. 15–22). Second (Hamburg, 1660) and third (Stockholm & Hamburg, 1690) editions appeared. (D.S.B., VIII, 464; Ferchl, 320; Ferguson, II, 43 [not in Young Coll.]; Hoover, 543; Partington, II, 107; Wellcome, I, 3842)

LONGINUS, Caesar

Trinum Magicum, sive Secretorum Magicorum Opus. Continens I. De Magia Naturali, Artificiosa & Superstitiosa Disquisitiones Axiomaticas. II. Theatrum Naturae praeter Curam Magneticam & veterum Sophorum Sigilla & Imagines Magicas, etiam Conclusiones Physicas, Elementales, Coelestes & Infernales exhibens. III. Oracula Zoroastris, & Mystera Mysticae Philosophiae, Hebraeorum, Chaldaeorum, Aegyptiorum, Persarum, & Pythagoricorum. Accessere Nonnulla Secreta Secretorum, & mirabilia Mundi, et Tractatus de Proprii cujusque nati daemonis inquisitione. Editum à Caesare Longino Philo.

Frankfurt: Sumptibus Conradi Eifridi. 1630.

12mo. 12 leaves (last blank), 498 pp., 2 leaves (blank). Some characteristic browning of leaves; otherwise good copy in original vellum.

THE SECOND issue of the Frankfurt (1629) edition, with the date on the title changed to 1630. The third X of M.DC.XXX has been printed slightly further to the right of the second X. An interesting collection of secrets, this edition of which is not in the British Library. The preface is an explanation of the different kinds of magic, defending the art against the charge that it is diabolic. A tract ascribed to M. A. Zimara deals with divination. Other tracts are the *Liber Aggregationis* and *De mirabilibus mundi* of Albertus Magnus, describing the virtues of minerals, metals, plants, and animals, and the *Commentatio de magnetica curatione vulnerum* (one of the earliest tracts on the weapon-salve) of Rudolphus Goelenius (1572–1621), who may have been the editor of the entire book, described in the title as “Caesar Longinus.” The appendix contains several tracts on the transmutation of metals, magnetic cure, etc. Thordike (VI, 599–601) discusses the contents. Editions from Frankfurt in 1609, 1614, 1616, 1629, 1663, and 1673 ap-

peared, and all are rare. (Caillet, 6783; Guaita, 1025; Watt, II, 615w; Wellcome, I, 3852; Wheeler Gift, 100)

LOOS, Onésime Henri de

Le Diadème des Sages, ou Démonstration de la Nature Inférieure; dans lequel on trouvera une analyse raisonnée du Livre des Erreurs & de la Vérite; une Dissertation étendue sur la Médecine Universelle, avec une Allegorie sur cette matiere, traduite de l'Original Anglois: la fausseté du système du Sr. Meyer sur l'Acidum Pingue, ainsi qu'un éclaircissement sur la Végétation, qui donnera des preuves suffisantes contre les erreurs qui se sont glissées à ce sujet. Par Phylantropos, Citoyen du Monde.

Paris: Chez Méricot l'aîné, . . . Lesclapart. 1781.

First edition. 12mo. 240 pp., 4 leaves (last leaf blank, lacking). Fine, crisp, unpressed, wide-margined copy, all edges gilt, in paneled calf antique, gilt-lettered maroon morocco label.

A CURIOUS WORK by the French alchemist Loos (1725–1785), containing an attack (pp. 45–50) on the acidum pingue theory of the German chemist Johann Friedrich Meyer. The book contains (pp. 225–240) a “recipe for the ambrosia served at the table of the gods ‘translated’ from an Anglo-Saxon manuscript in the library of an Anglo-Saxon prince!” (Partington). Also of interest are discussions on the universal medicine, philosopher’s stone, and transmutation. The chapter on “errors and truth” contains critical remarks on the famous work of the theosophist Claude de Saint-Martin (1743–1803). This book was translated into German and appeared with the title *Der Schmuck der Weisen* (Vienna, 1782). Duveen, whose copy lacked the half title (here present), describes this French edition as “extremely rare.” Not in Blake, Ferchl, Ferguson, Poggendorff, Smith, Watt, etc. (Caillet, 6785; Duveen, 366; Edelstein, 1476; Ferguson Coll., 419; Guaita, 516, 1559; Neu, 2533; Partington, III, 152; Wellcome, III, 545)

LORIOT, Antoine Joseph

Mémoire sur une Découverte dans l'Art de Bâtir, faite par le Sr. Loriot, Mécanicien, Pensionnaire du Roi; dans lequel l'on rend publique, par ordre de sa Majesté, la méthode de composer un ciment ou mortier propre à une infinité d'ouvrages, tant pour la construction, que pour la décoration. Prix XXX sols.

Paris: De l'Imprimerie de Michel Lambert. 1774.

First edition. 8vo. 53, (1) pp., 1 leaf (*privilege du roi*). Fine copy in original mottled calf gilt, maroon morocco label gilt. Bound with: Faujas de Saint-Fond, B., *Recherches sur la Pouzzolane* (Paris, 1778); *ibid.*, *Mémoire sur . . . Pouzzolane* (Paris, 1780); and La Faye, P. de, *Recherches sur . . . Chaux* (Paris, 1777).

LORIENT (1716–1782), a chemist and mechanical engineer in Paris, was noted for his ingenious discoveries: the manufacture of waterproof cements and mortars, the preparation of pastels, and the invention of various machines. His life and accomplishments, however, appear to be unknown to historians of science. The present work describes the preparation and chemical properties of a very resistant mortar that Lorient discovered, with suggestions for its use in a variety of applications. The book was considered so useful that it was translated into English the same year and also into Italian. The following year Lorient published *Instruction sur la nouvelle méthode de préparer le mortier* (Paris, 1775, 8vo.). Rare. Not in Blake, D.S.B., or the usual early chemical bibliographies. (Ferchl, 322; Poggendorff, I, 1499)

LORIENT, Antoine Joseph

A Practical Essay on a Cement, and Artificial [sic] Stone, Justly supposed to be that of The Greeks and Romans, lately re-discovered By Monsieur Lorient, Master of Mechanics to His Most Christian Majesty, for the Cheap, easy, expeditious and durable Construction of all Manner of Buildings, and Formation of all Kinds of Ornaments of Architecture, even with the commonest and coarsest Materials. Translated from the French Original, lately published, by the Express Order of the above Monarch . . .

London: Printed for T. Cadell, in the Strand. 1774.

First edition in English. 8vo. 2 leaves, 51, (1) pp. Fine copy in quarter brown morocco antique, cloth boards, spine gilt-lettered and dated. The Kenney copy (Sotheby auction, 25 October 1966, lot 2813), from the library of Robert B. Honeyman (Sotheby auction, 13 May 1980, lot 2046).

THE VERY rare first English edition, by an anonymous translator, of Lorient's *Mémoire sur une découverte dans l'art de bâtir* (Paris, 1774). The new cement or mortar was made by carefully kneading together three parts slaked lime (calcium hydroxide) with one part quicklime (calcium oxide). The mixture became warm and set rapidly. It could be mixed with various inert fillers, such as clean sand, brick dust, and charcoal, to produce a composition that could be molded into useful shapes for architectural ornamentation, lining garden ponds, coating the sides of buildings, etc. A fourth Italian edition (Piacenza, 1800) is listed by Wellcome (III, 547) but not this English edition. Both the French original and this English edition remained unknown to Bolton, Duveen, Ferguson, Neu, Partington, Poggendorff, Smith, Sondheimer, Waller, Wellcome, etc. (Watt, II, 616x)

LORIENT, Antoine Joseph

Memoria utilissima sopra una nuova scoperta nell'arte di fabbricare la quale consiste nella composizione di un cemento o smalto. Adattato ad un'infinita di opere in tal genere, e di una solidità e durata non inferiore a quello dei Romani, ritrovata dal Sig. Lorient meccanico Parigino . . . (Piacenza: Pietro Ghiglioni.) 1800.

Fourth Italian edition. 8vo. 36 pp. Woodcut on title page. Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN ITALIAN translation of the author's *Mémoire sur une découverte dans l'art de bâtir* (Paris, 1774). Not in the usual early chemical bibliographies. (Wellcome, III, 547)

LORME, De

Traité de Chymie, par M. de Lorme . . .

Paris: Chez la veuve Duchesne, Libraire, rue Saint Jacques. Pissot, Libraire, Quai de Conti. Durand neveu, Libraire, rue Galande. Esprit, Libraire, au Palais Royal. 1773.

First edition, first issue. 8vo. 1 leaf, viii, 9–524 pp. With 2 folding copperplates (chemical symbols; solubilities of compounds). Few minor water stains; otherwise fine copy in original unlettered, blue painted boards.

DE LORME (fl. 1770) is described on the title as a “Gentilhomme ordinaire de Sa Majesté, Chevalier de l'Ordre Royal & Militaire de Saint Louis.” “The author . . . tells us that his book makes no claim to be anything more than a compilation from Macquer, Lemery, Baumé, Gellert, and others. It is, however, a well-arranged and systematic work based on the phlogiston theory” (Duveen). The woodcut on the title is a modified mirror-image version of the vignette used on the title of Lavoisier's *Traité Élémentaire de Chymie* (Paris, 1789). The Duveen and Wellcome copies have a half title, title, and 528 pages. The present copy, evidently complete as published, has no half title and 524 pages. The colophon on page 524 reads: “De l'Imprimerie de P. G. Simon, Imprimeur du Parlement, rue Mignon Saint André-des-Arcs.” A rare work, which is not in the Bibliothèque Nationale or British Library. (Blake, 277; Duveen, 367; Edelstein, 1477; Ferchl, 120; Neu, 2535; Wellcome, III, 547)

LORME, De

Traité Élémentaire de Chymie Théorique et Pratique, Composé d'après les expériences des plus célèbres Chymistes, tant anciens que modernes.

Paris: Chez Nyon l'aîné, Libraire, rue du Jardinnet, Quartier Saint André-des-Arcs. 1784.

First edition, second issue. 8vo. 524 pp. With 2 folding copperplates (chemical symbols; solubilities of compounds). Fine copy in contemporary mottled calf, rebacked with original richly gilt spine laid on, maroon morocco label.

APART FROM the preliminary leaves (8 pp.), this edition comprises the sheets of the 1773 first issue: i.e., pages 9–524 are identical in both issues. The only difference is in the first quire: half title, title, *avertissement* (pp. 5–6), errata (pp. 7–8). The first quire of the first issue comprises title (pp. 1–2), *avertissement* (pp. I–vi), *Exposition sommaire du plan de cet Ouvrage* (pp. vii–viii). The plates (identical in both issues) are here bound between pages 44 and 45; in the first issue they occur between pages 506 and 507 (i.e., at the end of the text, immediately before the index). The colophon, *approbation*, and *privilege du roi* are identical in both issues. Between 1773 and 1784 the author changed the title of his book, corrected typographical errors, and added several new facts (listed in the errata). No reference to this very rare issue has been located.

LOVELL, Robert

Panbotanologia (graece). Sive, Enchiridion Botanicum. Or, A Compleat Herball, containing the Summe of Ancient and Moderne Authors, both Galenical and Chymical, touching Trees, Shrubs, Plants, Fruits, Flowers, &c. In an Alphabetical order: wherein all that are not in the Physick Garden in Oxford, are noted with Asterisks. Shewing their Place, Time, Names, Kinds, Temperature, Vertues, Use, Dose, Danger and Antidotes. Together with an Introduction to Herbarisme, &c. Appendix of Exoticks. Universal Index of Plants: shewing what grow wild in England. The Second Edition, with many Additions mentioned at the end of the Preface. . . .
Oxford: Printed by W. H. for Ric. Davis. 1665.

Second edition. 12mo. 1 leaf, 673 pp. (mispaginated 675) + 3 leaves (catalogue of books printed by Richard Davis). Title within decorative woodcut border. Very fine copy, in original blind-ruled speckled calf, with 2 tooled brass clasps (1 lacking), strongly rebacked, maroon morocco label.

THE GREATLY enlarged second, final, and best edition (first: Oxford, 1659) of this famous herbal, which forms an early and important catalogue of the plants grown in the Oxford Physic Garden. Lovell consulted almost 250 authors when preparing this work, and it remains a monument of patience and thoroughness. “The plants are arranged in alphabetical order according to their English names” (Henrey). “An omnium gatherum of herbalist instruction, abounding in detail and information; a mixture of botany and medicine, full of strange names of plants and diseases” (Madan, III, p. 103). The preparations from plants of numerous chemicals of pharmaceutical use are of historical interest. Only the first edition (1659) is mentioned by Arber

(p. 285), Henrey (I, p. 90), and Thorndike (VIII, 18). (Cushing, L365; Ferchl, 322; Ferguson Coll., 420; Freeman, 2321; Hunt, 299; Krivatsy, 7149; Madan, 2706; Neu, 2540 [wrong pagination]; Pritzel, 5638; Rohde, 216; Watt, II, 618k; Wellcome, III, 552; Wing, L3244)

LOVELL, Robert

Panzooryktologia (graece). Sive Panzoologicomineralogia. Or a Compleat History of Animals and Minerals, containing the Summe of all Authors, both Ancient and Modern, Galenicall and Chymicall, touching Animals, . . . and Man . . . With the Anatomy of Man, . . . As also a History of Minerals, viz. Earths, Mettals, Semi-mettals, their Naturall . . . and Artificiall excrements, Salts, Sulphurs, and Stones, . . . Also an Introduction to Zoography and Mineralogy. Index of Latine Names, with their English Names. Universall Index of the Use and Vertues. . . .

Oxford: Printed by Hen. Hall, for Jos. Godwin. 1661.

First edition. 8vo., 2 parts in 1 vol. 48 leaves, 519, (1) pp. + 2 leaves (title and blank), 152 pp. With extra printed leaf (part of the index) inserted between pages 112–113 in the second part, which is almost always missing. Each title within decorative woodcut border. Headband worn; otherwise fine copy, in original blind-ruled calf.

DEDICATED TO Charles II, this curious, fact-filled book contains much of chemical, metallurgical, and mineralogical interest. The second part, *History of Mineralls*, with its own title page, collation, and pagination, is separately listed by Wing. Lovell (ca. 1630–1690) studied botany, zoology, and mineralogy at Oxford, and while still in residence there he wrote his two famous studies in natural history: *Panbotanologia* (1659) and this companion treatise. Madan states: “The whole forms a small encyclopaedia of its subjects.” (Cushing, L366; D.S.B., IX, 441; Eales, 550; Ferchl, 322; Ferguson Coll., 420; Hoover, 546, 547; Krivatsy, 7150; Madan, 2561, 2562; Osler, 3274; Poggendorff, I, 1503; Roller, 358; Smith, 303; Thorndike, VIII, 18; Ward & Carozzi, 1401; Watt, II, 618k; Wellcome, III, 552; Wing, L3245, 3246)

LOWER, Richard

Tractatus de Corde. Item de Motu & Colore Sanguinis, et Chyli in eum Transitu. Authore Richardo Lower, M.D.
Amsterdam: Danielum Elzevirium. 1669.

Second (first Continental) edition. 8vo. 8 leaves, 232 pp.; 7 folding copperplates. Very good copy in the original vellum. From the library of the famous German physiologist and comparative anatomist Johann Friedrich Blumenbach (1752–1840), with his handwritten signature in ink on an engraved bookplate attached to the front pastedown endpaper.

A CHOICE ASSOCIATION copy of this great classic of seventeenth-century medicine and science by Lower (1632–1691). The first edition appeared earlier the same year (London: Typis Jo. Redmayne impensis Jacobi Allestry, 1669). The British Museum copy of the London, 1669, edition bears the signature of Walter Charleton followed by the date 1668; it is possible, therefore, that the book first appeared late in 1668. This great work on the anatomy and physiology of the blood system is a worthy successor to William Harvey's *De Motu Cordis* (Frankfurt, 1628). Lower gives the most accurate description of the heart to date and explores the structure and functions of the veins and arteries. In chapter III Lower records how he injected dark venous blood into the insufflated lungs and concluded that its subsequent bright red color was due to its absorption of some of the air passing through the lungs. The book is of considerable chemical importance, and Partington (II, 568–570) discusses Lower's chemical hypotheses regarding the possible component of the air (i.e., oxygen, then unknown) that is absorbed by the blood and sustains life. In the margin of page 200 of this copy Blumenbach has written the name "Arthur Coga" to identify Lower's reference to "A.C. amabili quadam insania detento." Pages 187–189 comprise a letter to Lower, dated 26 June 1666, from his friend Robert Boyle, on the transfusion of dog's blood. This important letter was not noticed by Fulton, Boyle's bibliographer. Partington points out that Lower gave that part of the air that is absorbed by blood (i.e., oxygen) the name "spiritus aeris nitrosus," and Mayow later called it "spiritus nitroaerei." Blumenbach, from whose library this copy came, proposed one of the earliest racial classifications. Very rare. (Fulton, 6; Neu, 2547; Osler, 3277; Waller, 6047; Wellcome, III, 552; Watt, 618z)

LOWER, Richard

Tractatus de Corde, Item de Motu & Colore Sanguinis, et Chyli in eum Transitu. Cui accessit dissertatio de origine Catarrhi, in qua ostenditur illum non provenire à cerebro. Authore Richardo Lower, M.D. Coll. Med. Lond. Socio. Editio Quarta, ab Authore jam postremò aucta & recognita. London: Typis M.C. impensis J. Martyn, ad Insigne Campanae in Coemeterio D. Pauli, 1680.

Fourth edition. 8vo. 8 leaves, 175, (1) pp. Large folding plate of woodcuts by W. Faithorne (facing p. 52) and 1 small copperplate engraving on page 124. Fine copy in contemporary unlettered paneled calf, rebounded, with the original spine laid on. From the library of Sir Geoffrey L. Keynes, with his signature in pencil on the recto of the first free endpaper.

THE LAST edition of this great classic of cardiology and chemistry to be revised by the author and thus the definitive text. It includes his work on blood transfusion. The

figures in the seven plates of the previous edition were re-engraved onto one plate in this edition. This work contains the third printing of the tract on catarrh, in which Lower (simultaneously with Schneider) proved that nasal secretions originate in the pituitary body and not in the brain, as had been thought previously. The first, second, and third editions were London (1669), London (1670), and Amsterdam (1671). The first edition was reprinted in a Continental edition (Amsterdam, 1669). K. J. Franklin (*Annals of Science*, IV [1940], pp. 283–294) has studied the textual changes in successive editions of this work and notes the following improvements in this fourth edition: 1) improvements in the Latin; 2) improvements in phrasing; and 3) increased picturesqueness in style. The major changes include the introduction of a diagram of the nerve supply to the heart, taken (according to Fulton) from Willis. Also a description of cardiac paralysis and the clotting of blood in the ventricles of the heart and lungs. The fourth English edition is very rare and is not in Cole, Cushing, Neu, Osler, Partington, Watt, etc. (Carter and Muir, *Printing and the Mind of Man*, 149 [1669 ed.]; Fulton, 9; Waller, 6049; Wing, L3312)

LOWRY, Delvalle

Conversations on Mineralogy. With Plates, engraved by Mr. and Miss Lowry, from original drawings. . . . London: Printed for Longman, Hurst, Rees, Orme, and Brown, Paternoster-Row; and sold by J. Mawe, 149, Strand. 1822.

First edition. 2 vols., 12mo. I; xv, (1), 257, (1) pp. II: iv, 282 pp. With beautiful folding engraved frontispiece of mineral specimens, delicately colored, in volume I, and 11 folding engraved plates. Very fine copy, unpressed and uncut with wide margins, in original boards and printed paper labels.

DELVALLE LOWRY (later Varley) was the daughter of the engraver Wilson Lowry (1762–1824), F.R.S. (1812), discoverer of a process for making excellent engravings on steel (see D.N.B.), who also possessed a "good knowledge of general science and prepared illustrations for many scientific books" (Partington, IV, 35). This work on mineralogy is patterned after the enormously successful *Conversations on Chemistry* (London, 1806, 2 vols.) by Mrs. Jane Haldimand Marcet (1769–1858). Thorough and accurate, this introductory text contains much of chemical interest and importance. The conversations are between "Mrs. L." (Lowry) and two teenage ladies ("Frances" and "Mary"). Lowry based her crystallographic observations "on the highly ingenious and scientific theory of Haüy" (Preface) and has added new figures and interpretations. Other editions: London, 1826 and 1837; Philadelphia, 1822, all in two volumes. (Roller & Goodman, 532)

LOYSEL, Jean Baptiste

Essai sur l'Art de la Verrerie. Par le C. Loysel . . .
Paris: An VIII (1800).

First edition. 8vo. 1 leaf, xcvi, 332 pp. With 1 folding copperplate, containing 7 figures. Very good copy in original quarter calf, plain boards, spine gilt-ruled, 2 black morocco labels.

AN IMPORTANT and rare treatise on the chemistry, history, and manufacture of all types of glass, including colored glasses. Detailed directions are included on the preparation of the minerals, salts, pigments, and metals used in making colored glass. The second section (pp. 277–332) comprises a *Rapport fait à l'Académie des Sciences* by d'Arcet, Fourcroy and Berthollet, reprinted from the *Annales de Chimie* (May 1791), on the chemistry of glass and its manufacture. One of the most knowledgeable French technologists of the late eighteenth century, Loysel (dates unknown) was the first to apply the “new chemistry” of Lavoisier et al. to glassmaking. A German translation (Frankfurt, 1802) was later augmented by a second volume (Frankfurt, 1818). (Duncan, 8124; Ferchl, 323; Poggendorff, I, 1506; Wellcome, III, 553)

LUBBOCK, Richard

Dissertatio Physico-Chemica, Inauguralis, de Principio Sorbili, sive communi Mutationum Chemicarum Causa, Quaestionem, an Phlogiston sit Substantia, an Qualitas, agitans; et alteram Ignis Theoriam complectens . . . Pro gradu doctoris . . . Ricardus Lubbock, Anglo Britannus . . .
Ad diem 13. Septemb. . .

Edinburgh: Apud Balfour et Smellie, Academiae Typographos. 1784.

First edition. 8vo. (in 4s). 3 leaves, 137, (1) pp. With half title and errata slip pasted on verso of dedication leaf. Very good copy in modern marbled boards.

THE HISTORICALLY important doctoral dissertation of Lubbock (1759–1808), a pupil of Joseph Black, presented under the aegis of William Robertson, principal of Edinburgh University. Lubbock describes numerous experiments and observations that refute the phlogiston theory, as well as Crawford's theory of animal heat. He examines the theories of Bergman, Black, Hales, Kirwan, Scheele, Stahl, and others on the production of heat and light in combustion and systematically demolishes them. Lubbock puts forward his own theory that oxygen is a compound of “absorbable or common principle” and the “principle proper to air” (i.e., the matter of heat and light). “Combustion, calcination and the formation of acids are explained by substances attracting this absorbable principle” (Cole). Lavoisier's precepts are openly embraced, and Lubbock's explanation of the

emission of light during combustion is more thorough than that of Lavoisier. This work and its contribution toward the overthrow of the phlogiston theory are extensively discussed by Partington and McKie. Lubbock became a successful physician in Norwich. (Cole, 847; D.S.B., VIII, 531; Duveen, 367; Ferchl, 323; Neu, 2549; Partington, III, 489, 627–628; Partington & McKie, *Annals of Science*, III [1938], 356–361; Watt, II, 619v; Wellcome, III, 554; White, *The Phlogiston Theory* [1932], 160–161)

LUCAS, Charles

Cursory Remarks on the Method of Investigating the Principles and Properties of Bath and Bristol Waters. Set forth in Attempts to revive antient Medical Doctrines; and in An Attempt to ascertain and extend the Virtues of these Waters. Both by Alex. Sutherland, M.D. Of Bath and Bristol Hot-Wells. In a Letter to Nathaniel Barry, M.D. . . .
By C. Lucas . . .

Bath: Printed by C. Pope, and sold by S. Leake, Bookseller; and by Messrs. Hawes and Co. in Pater-noster-Row, London. (1764).

First edition. 8vo. (in 4s). 63, (1) pp. Fine copy in modern boards, printed paper label on spine.

A TRACT, ADDRESSED to his friend Dr. Nathaniel Barry, in which Lucas exposes the numerous chemical errors in Alexander Sutherland's *Attempt to Ascertain the Virtues of Bath and Bristol Waters* (London, 1764). Lucas accuses Sutherland of plagiarizing parts of his *An Essay on Waters* (London, 1756), citing relevant passages in Sutherland's work, and offers correct explanations of the chemical reactions erroneously discussed by Sutherland. He describes Sutherland's book as “the most strange, disorderly, immethodical, crude and undigested medley, that ever escaped the pen of a man capable of reading, speaking or thinking” (p. 53). Lucas practiced medicine in Bath from 1752 and was admitted L.R.C.P. in 1759. In 1761 he was elected a member of the Irish House of Commons and died in Dublin in November 1771. (Munk, II, 227; Waring, 782; Watt, II, 620r)

LUCAS, Charles

An Essay on Waters. In three parts. Treating, I. Of Simple Waters. II. Of Cold, medicated Waters. III. Of Natural Baths.
By C. Lucas, M.D. . . .

London: Printed for A. Millar, in the Strand. 1756.

First edition. 3 parts in 3 vols., 8vo. I: xxxv, (5), 232 pp. II: xiv, 274 pp. III: xiii, (3), (3), iv–vii, 8–368 pp. With 2 large folding copperplates (in vols. II and III). Very fine, essentially pristine copy, in contemporary calf, spines richly gilt, red and green morocco labels.

AN IRISH patriot, Lucas (1713–1771) studied medicine in Paris, then Rheims, and graduated M.D. (1752) at Leiden. Originally trained as an apothecary, he was well versed in chemistry, and this, his first major publication, contains much information on the analysis of mineral waters. “A very superior work; in it Lucas displays so much clear sightedness and knowledge of the then state of chemistry that we cannot help regarding him as one of the ablest chemists of that day in Ireland” (Sullivan, *Dublin Quart. Journ. Med. Soc.*, VIII, 477, quoted by Waring). The fine plates depict the “Sea Water Baths at Harwich in the County of Essex” (vol. II) and the “Roman Baths and Stoves discovered under the Abby House at Bath, 1755” (vol. III). This “successful work” (D.N.B.) was translated into French (Liège, 1765) and German (Altenburg, 1768–69). Munk provides details on the political career of Lucas. (Blake, 278; Ferchl, 324; Munk, II, 227; Poggendorff, I, 1508; Waring, 758; Watt, II, 620r; Wellcome, III, 554)

LUCHET, Jean Pierre Louis de la Roche du Maine, Marquis de

Essais sur la Minéralogie et la Métallurgie, . . .
Maastricht: Chez Jean-Edme Dufour & Philippe Roux, Imprimeurs-Libraires, associés. 1779.

First edition. 8vo. 2 leaves, xxvii, (1), 232 pp. Fine copy, in original mottled calf, gilt, dark-green morocco label.

A TREATISE ON mineralogy and metallurgical chemistry, covering the economics of mining, the relative values of different ores, environmental factors, legal requirements, and related matters. The chemical properties of metals, their calcination, reduction, purification, and assay are described, with reference to the works of Cancrinus, Cramer, Lomonosov, Macquer, Monnet, Rouelle, et al. A useful bibliography is at the end (pp. 189–232). The Marquis de Luchet (1740–1792), originally a cavalry officer in the French army, became privy counsellor and librarian to the electorate of Hesse and was later in the retinue of Prince Heinrich of Prussia. (Cole, 850; Ferchl, 324; Hoover, 549; Poggendorff, I, 1509; Ward & Carozzi, 1404; Watt, II, 621f; Wellcome, III, 451)

LUCIO, João Baptista

O Fabricante de Vinhos e Vinagres ou methodo pratico e abreviado, para guia das pessoas que se occupão no fabrico e commercio destes liquidos em Portugal. Com detalhes mui circumstanciados para bem conduzir as operações do fabrico do vinho, e do vinagre, e outras circumstancias necessarias a evitar suas alterações. . . .
Lisbon: Typ. de Francisco Xavier De Souza. 1846.

First edition. 8vo. 104 pp. Fine, crisp copy, in contemporary sheep, spine richly gilt, with two gilt-lettered maroon leather labels. With certification of authenticity printed on verso of half title, signed in ink by the author.

A RARE AND important work covering all aspects of the chemistry and technology of wine and vinegar making in Portugal in the first half of the nineteenth century, with references to Gay Lussac and other chemists. No references to the author or this work have been found in available bibliographies.

LUCKCOCK, Joseph

Essays on the Theory of the Tides, the Figure of the Earth, the Atomical Philosophy, and the Moon's Orbit.

London: Printed for Longman, Hurst, Rees, Orme and Brown, etc. 1817.

First edition. 4to. 1 leaf, iv, 96 pp. Signature G2 omitted, presumably blank. With 5 engraved plates (astronomical figures). Fine copy, uncut with wide margins, in original vellum-backed blue boards, contemporary printed paper label on spine.

FOUR ESSAYS written between 1798 and 1817 by the amateur scientist Luckcock (dates unknown), a resident of Birmingham. The first essay (pp. 1–22) advances a new theory of tides, the second (pp. 25–47) considers the shape of the earth, and the fourth (pp. 89–96) discusses the orbit of the moon. Of particular interest is the third essay (pp. 49–88): “On the Atomical Philosophy.” Luckcock quotes long passages from John Dalton’s “Mechanical Chemistry” and comments on them (pp. 73–88). He attacks Dalton’s atomic theory “on grounds both good and bad. The work is quite amusingly mad, and contrasts with the rather sober and sensible mainstream of popular books and textbooks” (Knight). Watt gives the author’s name as Luccock. Signature G2 (pp. 23–24) was apparently never issued: it is not in the British Library copy or in other known copies. Extremely rare. N.U.C. lists only one copy (Library of Congress). Unknown to Smyth (bibliographer of Dalton). (Knight, *Natural Science Books in English, 1600–1900*, p. 204; Watt, II, 621e)

LUCRETIUS CARUS, Titus

De Rerum Natura Libri VI.

(Colophon:) Impressum Florentiae sumptibus Philippi Giuntae bibliopolae Anno Salutis M.D.XII. Mense Martio. (Florence: Giunta. 1512).

First Giunta edition. 8vo. 8 + 125 + 13 leaves. Woodcut Giunta device on final leaf. Italic letter. Neat repairs to lower outer corners of six gatherings (no loss); otherwise fine, crisp copy in late-sixteenth-century vellum, old ink-lettering on spine.

IMPRESSVM FLORENTIAE SVMP TIBVS
Philippi Giuntæ bibliopolæ Anno
Salutis .M.D.XII.
Mense Mar
tio



Lucretius Carus. De Rerum Natura Libri VI. Florence, 1512.

THE ATTRACTIVE first printing by the famous Giunta press, edited by the prolific humanist scholar Pietro Candido Decembrio (1392–1477). Composed about 57 B.C., by the Roman poet Lucretius (ca. 94–55 B.C.), this work on the “nature of things” is important to the historian of science, as it summarizes the theories then extant on the composition of matter and in particular the atomic theory of Epikouros and Democritos. Partington (I, 139–148) discusses the work in detail. There are “Allusions to the magnet: iron filings in brass basin with movable lodestone underneath; magnetic attraction and repulsion” (Wheeler Gift, 685 [Oxford, 1807 edition]). The undated first printing of *De rerum natura* (Brescia, 1473) was followed by the first dated edition (Verona, 1486). “One of the grandest and most moving poems in the Latin language, Lucretius’ work has delighted inquiring minds in every generation” (P.M.M., 87). (Adams, L1649; British Library, *S.T.C. Italian Books, 1465–1600*, p. 397; Durling, 2863; Stillwell, 672; Watt, II, 622a)

LUCRETIUS CARUS, Titus

De Rerum Natura Libri Sex. Quibus additae sunt Conjecturae & Emendationes Tan. Fabri cum Notulis Perpetuis. . . . Cambridge: Ex Officina Joann. Hayes, Celeberrimae Academiae Typographi. Impensis W. Morden, Bibliopolae Cantab. 1675.

First Cambridge edition. 12mo. 24 leaves, 454 pp., 1 leaf (advertisements). Title page in red and black. Damp stain in fore-margin of several leaves at front and back (not reaching text); otherwise very good copy, in original unlettered blind-stamped paneled calf. Ownership inscription (Eduardi Havers, 1749) on front flyleaf.

THE FIRST edition to be printed in England, including a life of Lucretius by Obertus Giphanius (1534–1604). The poem of 205 pages is followed by the valuable emendations and thoughts of Tannegui Le Fèvre, the Elder (1615–1672), with a very detailed concordance to the *De rerum natura* (pp. 206–454). The commentary by Le Fèvre contains references to alchemy and mentions the works of Joseph Du Chesne (Quercetanus) and others. (Gordon, *Bibliography of Lucretius*, 107; Keynes, 3140; Watt, II, 621u; Wellcome, III, 555; Wing, L3442)

LUCRETIUS CARUS, Titus

De Rerum Natura Libri Sex.

Paris: Apud Hieronymum de Marnef, & Guilielum Cavellat sub Pelicano, Monte D. Hilarii. 1567.

First edition (second issue) of this printing. 16mo. 264 pp., 4 leaves (index). Woodcut printer’s device on title page. Good copy in contemporary limp vellum.

A REISSUE of the sheets of the 1564 edition by the same printers. This edition is not among those listed by Caillet, Durling, Watt, Wellcome, etc. (Adams, L1665; British Library, *S.T.C. French Books, 1470–1600*, p. 291)

LUCRETIUS CARUS, Titus

De Rerum Natura Libri Sex.

Birmingham: Typis Johannis Baskerville. 1772.

First Baskerville edition. 4to. 1 leaf (title), 280 pp. Fine, wide-margined copy, in original calf, rebaced with the original gilt spine laid down, covers with decorative gilt border.

THE BEAUTIFUL Baskerville edition of this classic poem on the atomic theory and laws of nature. John Baskerville (1706–1775), who was born at Wolverley in Worcestershire, became interested in printing about 1750 and spent several years perfecting his own elegant typefaces, a fine black ink, and a smoothly woven paper. With the publication of his *Virgil* quarto in 1757, English printing started to be influential on the continent. The essayist Thomas Macaulay later pronounced it “the first of those magnificent editions that went forth to astonish all the librarians of Europe.” Though greatly admired by connoisseurs, Baskerville’s fifty-six editions were not generally appreciated in his lifetime. Within the next fifty years, however, they became internationally renowned and inspired the typographical innovations of Giambattista Bodoni in Italy and the Didot family in France. “The bold quality of Baskerville’s print derived from his use of a highly glossed paper and from his invention of a really black ink. . . . Baskerville type has been revived, its clarity and balance making it a good type for continuous reading” (*Encyclopaedia Britannica*). Dibdin (II, 203) praised Baskerville’s editions, stating that they are “remarkable . . . for their typographical beauty.” (Brunet, III, 1220; Gaskell, 43; Graesse, IV, 288; Updike, II, 107; Watt, II, 621v)

LUCRETIUS CARUS, Titus

Titi Lucretii Cari Poetae, ac Philosophi Vetustissimi, De Rerum Natura Libri Sex.

Paris: Apud Hieronymum de Marnef, & Guilielum Cavellat. sub Pelicano, Monte D. Hilarii. 1567.

First edition (second issue). Sm. 8vo. 264 pp., 4 leaves (index). Woodcut printer’s device on title. Good copy in contemporary vellum.

A REISSUE of the sheets of the 1564 edition by the same printers. Composed about 57 B.C., by the Roman poet Lucretius (ca. 94–55 B.C.), this work is important to the historian of science as it summarizes the theories then existing on the composition of matter and in particular the atomic

theory of Epikouros and Democritos. Partington (I, 139–148) discusses the work in detail. “One of the grandest and most moving poems in the Latin language, Lucretius’ work has delighted inquiring minds in every generation” (*Printing & the Mind of Man*, No. 87). This edition is not among those listed by Caillet, Cushing, D.S.B., Durling, Osler, Partington, Waller, Watt, Wellcome, etc. Rare. (Adams, L. 1665; British Library, *S.T.C. French Books*, p. 291)

LUCRETIUS CARUS, Titus

Titus Lucretius Carus His Six Books of Epicurean Philosophy, Done into English Verse, with Notes. . . .

London: Printed for Thomas Sawbridge at the Three Flower-de-luces in Little Britain, and Anthony Stephens Bookseller near the Theatre in Oxford. 1683.

Third edition. 8vo. 23 leaves, 223, (1) pp. + 56, 55–60 pp., 3 leaves (index). Engraved frontispiece (by M. Burghers), depicting Lucretius seated on a rock, gazing heavenwards, with rustic background (including an elephant, unicorn, and ram). Very fine, crisp copy, in full calf antique, paneled in blind, spine gilt-ruled and dated.

THE ENGLISH translation by Thomas Creech (1659–1700), whose name is appended to the dedication to George Pitt Junior, of Stratfield-Sea. Containing a life of Lucretius and first published in 1682 at Oxford, this translation vied in popularity with Dryden’s *Virgil* and Pope’s *Homer*. Creech’s translation was expected to attract the public as an exposition of Epicureanism. It had an immediate success, and Creech was subsequently elected as a fellow of All Souls College, Oxford (1683). The volume includes verses praising Creech by John Evelyn, Thomas Otway, and Aphra Behn. (Keynes, 3149; Watt, II, 621x; Wellcome, III, 556; Wing, L3449)

LULL, Ramon

Arbor Scientiae Venerabilis et Caelitus illuminati Patris Raymundi Lullii Maioricensis, Liber ad Omnes Scientias utilissimus. Anno Domini M.D.XV.

(Colophon, p. 682, dated May 4, 1515).

First edition(?) 4to. 3 leaves, 681 pp., 9 leaves. Large woodcut on title (tree of knowledge) and a different version repeated several times (with different wording, depending on the chapter in which it appears) in the text. An exceptionally fine copy, in essentially pristine condition; bound in nineteenth-century quarter calf, marbled boards, spine gilt-lettered.

LULL (ca. 1235–1315), a Catalan encyclopedist, invented an “art of finding truth.” His contributions to science are understandable only when examined in their historical and theological context. In order to organize all fields of knowl-

edge, Lull constructed a diagrammatic “tree of knowledge,” which is depicted in the text and on the title of this edition. The work is a milestone in mankind’s organization of knowledge, and it is of interest in the history of the natural sciences, including chemistry. It is one of the earliest and greatest of the medieval encyclopedias and exerted a profound effect on the philosophical and scientific thinking of readers until approximately the end of the eighteenth century. The final nine leaves comprise Lull’s *Introductorium magnae artis generalis*. Lull was a prolific author, and according to the D.S.B. (VIII, 550) the *Arbor Scientiae* is one of his major works. Thorndike (II, Chap. 69, p. 862 et seq.) discusses Lull’s life and works. Duveen (p. 368) and Wellcome (I, 3894) describe an edition of 224 folios, the colophon of which is dated 4 May 1515; and Caillet (6841) merely cites an edition “s.l., 1515, in-4°.” This edition is not mentioned by Durling, Ferguson, Ferguson Coll., Osler, Smith, Waller, Watt, etc. The only bibliographical reference found to this edition is given by Bolton (p. 1,000), who lists the pagination as pp. (iv)–681–(xix), sm. 4to. Bolton gives the place of publication as Lugdunum, i.e., Lyons, and this is confirmed by the colophon. A very rare and important book.

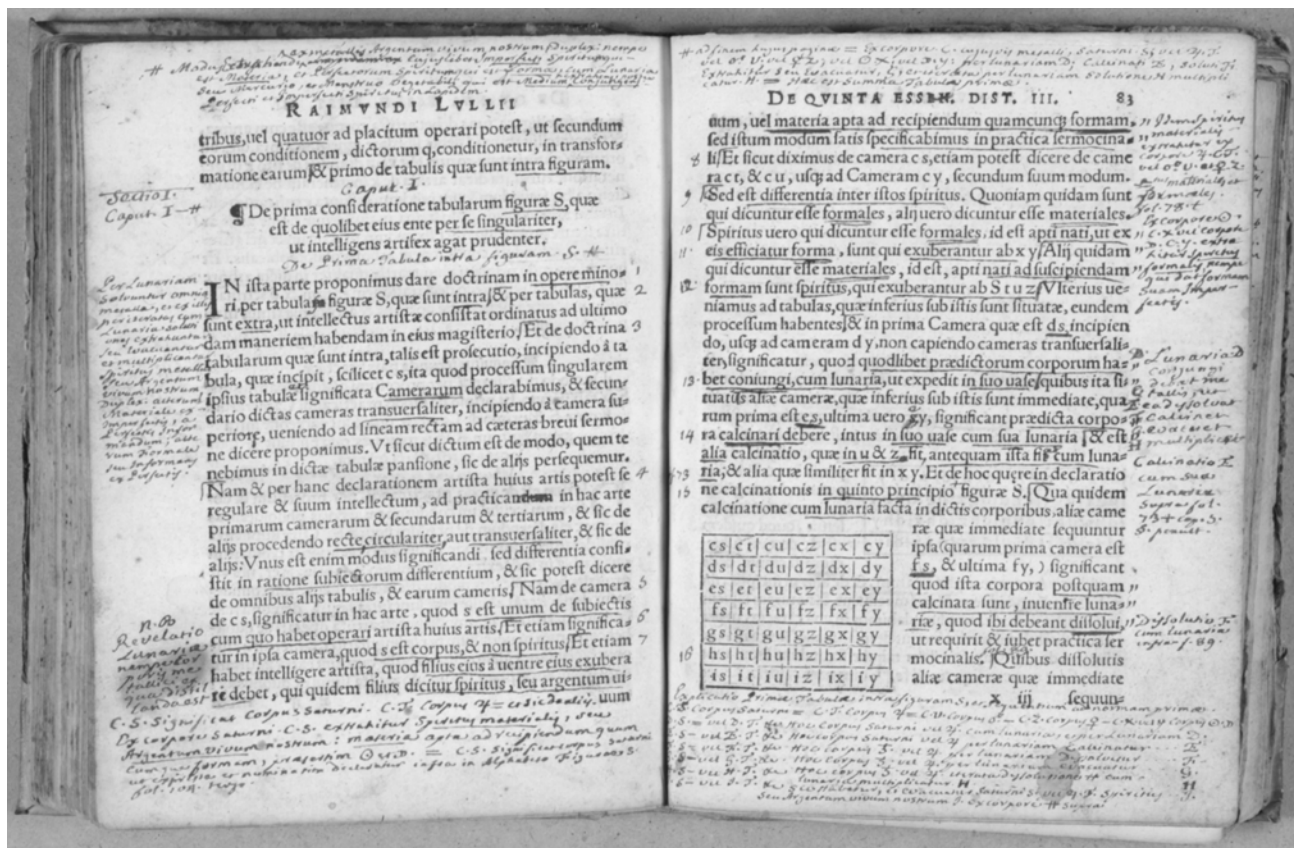
LULL, Ramon

Codicillus seu Vade Mecum Raymundi Lullii Philosophi Doctissimi, in quo fontes Alchimicae artis ac Philosophiae reconditoris uberrimè traduntur. Postrema editio in qua innumerabiles loci multorum exemplarium collatione emendantur, et ad mentem Authoris restituuntur.

Rothomagi (Rouen): Sumptibus Joannis Berthelin, in Area Palatii. 1651.

8vo. 206 pp., 1 leaf (blank). Woodcut vignette on title. Fine, crisp copy, in early-nineteenth-century half calf, cloth, maroon gilt-lettered label, spine gilt-ruled and dated. Bound with: Papin, Nicolas, *De Pulvere Sympathico Dissertatio* (Rouen, 1650).

ONE OF the latest editions of this important alchemical work, in which (as the title states) many errors of former editions have been corrected. The *Codicillus* was reprinted in Manget’s *Bibliotheca Chemica Curiosa* (1702, vol. I, p. 880). Newton had a copy of the Cologne, 1567, edition of this work in his library and evidently studied it carefully, as Harrison (*The Library of Isaac Newton*, 1978, p. 183) points out that there are “many signs of dog-earing” in Newton’s copy. A rare edition, which is not mentioned by Bolton, Duveen, Ferchl, Goldsmith, Neu, Rosenthal, Smith, Waite, Waller, Watt, Wellcome, etc. (Caillet, 6851; Ferguson, II, 54 [not in Young Coll.]; Ferguson Coll., 423)



Lull. De Alchimia Opuscula. Nuremberg, 1546.

LULL, Ramon

De Alchimia Opuscula quae sequuntur. Apertorium, item, Magica Naturalis. Item, De Secretis Naturae, seu de Quinta essentia liber unus. Iam non inutilis, ut in prioribus editionibus omnibus. Adjecimus enim tertiam distinctionem de Transmutatione metallorum, quae plusquam dimidia pars est totius libri.

Nuremberg: apud Johan. Petreium. 1546.

First Nuremberg edition. 4to. 113 folios, 1 blank (lacking). Leaves 73-76 misnumbered 63-66. Historiated woodcut capitals. Woodcut diagrams (folios 83, 84, 85, 93, 94, 97, 103, 104, 105). Very good copy in contemporary half vellum, patterned boards, brown morocco label gilt. Copiously annotated with alchemical commentary on many blank margins in neat late-sixteenth- and seventeenth-century writing in faded brown ink. From the library of Julien Missac (Lot 447, Sotheby auction, 21 December 1965).

A COLLECTION of four alchemical works ascribed to Lull, of which three are printed here for the first time: Apertorium,

Magia naturalis, and Tertia distinctio. The fourth treatise, De secretis naturae, seu de quinta essentia, a Lullian version of the work by Joannes de Rupescissa, had previously been published at Venice and Strassburg (see Rogent & Duràn, Bibliografia de les impressions Lullianes, 94; Palau, 143874). Altogether about eighty alchemical writings are ascribed to Lull; none are now regarded as genuine, and a few have been plausibly ascribed to the converted Jew Raimondo de Tárrega, a near-contemporary of Lull. "A very rare edition" (Duveen). "It was a popular work with the old chemists, for it passed through several editions; and it was upon this quintessence that Weidenfeld wrote his commentary. . . . Of these editions three have come before me . . . Venice, 1542; Nürnberg, 1546; and Cologne, 1567; all of them desirable books" (Ferguson, Books of Secrets, I, Part 2, 51). (Caillet, 6863; Durling, 2870; Duveen, 369; Edelstein, 1485; Ferchl, 327; Ferguson Coll., 423; Neu, 2561; Waite, 291; Wellcome, I, 3903)

LULL, Ramon

De' secreti di natura, ò della quinta essentia. Libri due. Alberto Magno Sommo Filosofo, de cose minerali, & metalliche. Libri cinque. Il tutto Tradotto da M. Pietro Lauro.

Venice: Gioambattista, & Marchio Sessa fratelli. (Colophon: 1557).

First edition in Italian. 8vo. 28 leaves, 152 folios. Large woodcut on title page, and 7 half-page and 1 full-page woodcuts of furnaces and other chemical apparatus. Historiated woodcut initials. Printed in italic throughout. Very fine, crisp copy in original limp vellum. Neat sixteenth-century inscription in ink on first flyleaf: "Di Jacopo Montauti et delli Amici Veri et non finti."

A VERY IMPORTANT edition, being the first translation into a modern language of Lull's *De secretis naturae*. Pietro Lauro, the translator, used the Latin edition (Strassburg, 1541). Folios 48v–152r comprise the first translation into Italian of *De cose minerali, & metalliche* by Albertus Magnus. Not in Bolton, Caillet, Duveen, Edelstein, Ferchl, Ferguson, Ferguson, *Books of Secrets*, Guaita, Mellon, Smith, Waller, Watt, etc. Extremely rare. (Durling, 2874; Ferguson Coll., 424 [imperf.]; Neu, 2564; Rogent & Duràn, 97; Rosenthal, 546; Wellcome, I, 3900)

LULL, Ramon

Opera ea quae ad adinventam ab ipso artem universalem, scientiarum artiumque omnium brevi compendio, firmaque memoria apprehendarum, locupletissimaque vel oratione ex tempore pertractandarum, pertinent. Ut et in eandem quorundam interpretum scripti commentarii: quae omnia sequens indicabit pagina: & hoc demum tempore coniunctim emendatiora locupletioraque non nihil edita sunt. Accessit index cum capitum, tum rerum ac verborum locupletissimus. Argentinae (Strassburg): Sumptibus Lazari Zetzneri. 1598.

First edition. 8vo. 12 leaves, 992 pp., 16 leaves. With 3 folding printed tables (at pp. 1, 44, and 238) and 1 folding woodcut plate (with 6 circular figures, at p. 44). Woodcut on title page and 55 woodcut text diagrams. Margin of title page repaired and corner of second leaf of preface missing (losing about 12 words); otherwise a fine copy in original overlapping vellum.

THE FIRST collected edition, containing eleven of Lull's works as listed by Duveen. "On y trouve réunis la plupart des ouvrages de Lulle relatifs à sa methode, ou à l'Arts Magna, et en outre plusieurs traités de Jordanus Brunus et de Corn. Agrippa qui y ont rapport" (Brunet, III, 1233). It was reprinted by Zetzner (with additions) in 1609, 1617, and 1651. Newton owned a copy of the 1609 edition (Harrison, no. 999). The 1609 edition was the only one

entirely on Lull's works in the Young Collection (Ferguson, II, 49). An important work covering many aspects of Lullian science and philosophy. Despite Ferguson's comment that it is "not about chemistry," there are many references to chemical subjects (e.g., alchemy, Aristotelian elements, minerals, metals, nonmetals, and salts). This copy is absolutely complete with the four folding plates. The Duveen, Gilhofer, and Honeyman copies had only three plates, lacking the woodcut plate with six figures. Very rare. Not in Baumer, Caillet, Durling, Edelstein, Guaita, Mellon, Neu, Rosenthal, Smith, Sondheimer, Waller, etc. (Bolton, 1001; D.S.B., VIII, 551; Duveen, 371; Gilhofer, Cat. 133 [1984], 272; Ferchl, 327; Ferguson Coll., 422 [imperf.]; Honeyman, 2068; Hofer, I, 399; Sotheran, Cat. 800 [1926], 11460 ["Very Rare"]; Watt, II, 623d; Wellcome, I, 3908)

LULL, Ramon

Opusculum Raymundinum de Auditu Kabbalístico: sive ad Omnes Scientias Introductorium, nunc denuò editum. (No place, no printer). Anno Domini 1601.

Sm. 8vo. 117, (1) pp. Woodcut on title page and large woodcuts on pp. 94, 100, 106, 107, 109, 110, and 117. Very good copy in contemporary gilt-ruled speckled unlettered calf, rebaked. Armorial eighteenth-century bookplate on front pastedown endpaper: Boullier.

CAILLET STATES that this is "Le plus rare et le plus recherché des ouvrages de Raymond Lulle, avec une vignette naïvement gravée sur bois et des figures hors texte. Ad. Frank dans son ouvrage sur la Kabbale consacre un long article à R. Lulle et à cet opuscule." See Adolphe Franck, *Mémoire sur la Kabbale, caractère, origine et principaux monuments de la Kabbale* (Caillet, 4178). Duveen (p. 371) lists an edition (Paris, 1578), and Wellcome (I, 3901) an earlier one (Venice, 1518). The present extremely rare edition was unknown to Duveen, Ferguson, and other early chemical bibliographers. Guaita describes it as an "Ouvrage fort rare." (Caillet, 6846; Edelstein, 1488; Guaita, 530, 1565)

LULL, Ramon

Raymundi Lullii Maioricani Philosophi sui Temporis doctissimi libelli aliquot Chemicis: Nunc primum, excepto Vade mecum, in lucem opera Doctoris Toxitae editi. Quorum omnium nomina versa pagina dabit. . . . Basel: Apud Petrum. Pernam. 1572.

First edition edited by Toxites. 8vo. 8 leaves, 480 pp., 16 leaves (index). With full-page woodcut (p. 192) and small woodcut (p. 224). Historiated woodcut capitals. Very fine copy in original ornamental blind-stamped pigskin over oak boards, with remains of brass clasps.

THE FIRST edition of an important collection of alchemical works by Lull. It was edited by Michael Toxites (1515–1581), a physician of Strassburg, and is dedicated to “three men of Bunzlau (in Silesia) who had apparently been fellow students” (Duveen). This volume contains the following texts: 1) *Testamentum novissimum integrum*; 2) *Elucidatio vocabulorum eius*; 3) *Vade mecum*; 4) *Compendium de transmutatione animae metallorum: pro media parte ex antiquo exemplars auctum*; 5) *De compositione gemmarum & lapidum preciosorum*; 6) *Epistola accurtatoria ad regem Neopolitanum*; 7) *Medicina magna*; 8) *Dialogus Demogorgon, qui Lullianis scriptis multam praeclare lucem adfert*. A later reprint appeared (Basel, 1600; Mellon, 58; Wellcome, I, 3910). Sir Isaac Newton owned a copy of the present 1572 edition (see Harrison, no. 1000). Very rare, especially when in such fresh contemporary condition. (Bolton, 1000; British Library, *S.T.C. German Books*, 533 [imperf.]; Duveen, 370; Ferchl, 327; Ferguson, II, 54 [not in Young Coll.]; Ferguson Coll., 422; Neu, 2565; Palau, 143887; Roscoe, 15; Sotheran, Cat. 832 [1932], 5484)

LULL, Ramon

Sacridocoris Raymundi Lullii de secretis nature sive de quinta essentia Libellus.

(Colophon: Excusum Auguste Vindelicorum. Anno Sal. M.D.XVIII. Die vero prima Iulij.) (1518).

First separate edition, and first edition printed in Germany. 4to. 26 leaves (unpaginated). Title page with elaborate woodcut border. Bottom margin of leaf aii repaired; otherwise a fine copy in nineteenth-century boards, lettered in ink on front cover.

THE EARLIEST printed work of the Lullian alchemical corpus. The first appearance in print of this text occupied the last eleven leaves of the *Consiliorum* (Venice, 1514) of Ferrarius de Gradibus. The *De secretis* comprises the preliminary dialogue of Lull with the monk and the “Lullified” version of John of Rupescissa’s work on the fifth essence. It was probably written by members of Lull’s school shortly after Lull died. Numerous later editions appeared, including those of 1521, 1535, 1541, 1542, and 1567. Cushing; Durling; Duveen; Edelstein; Ferguson; Ferguson Coll.; Ferguson, *Books of Secrets*; Neu; Osler; Smith; et al., list some of the later editions. An extremely rare book. (Ferchl, 327; Lenglet Dufresnoy, III, 210; Mellon, No. 8; Palau, 143829; Proctor, 10874; Rosenthal, 541 [“Rare”]; Thorndike, III, 728; Wellcome, I, 3896)

LULL, Ramon

Testamentum Raymundi Lulli Doctissimi et Celeberrimi Philosophi, Duobis Libris Vniuersam Artem Chymicam Complectens. Item Eiusdem Compendium Animae Transmutationis artis metallorum. Secunda aeditio multorum exemplarium collatione infinitis locis castigata.

Coloniae Agrippinae (i.e., Cologne): Apud Ioannem Birckmannum. 1573.

First edition (second issue). 8vo. 4 leaves, 231 folios, 8 leaves. With 2 large alchemical woodcut folding plates (following folios 177 and 184) and 8 alchemical woodcut diagrams in the text (folios 4v, 6v, 10v, 15r, 165r, 165v, 167r, 170r). Historiated woodcut capitals. Occasional tiny worm trails on a few leaves (repaired); otherwise a very good copy in contemporary (probably original) vellum.

DUVEEN (p. 370) states that Birckmann published two editions of this work in 1566, with the same title and contents but printed in a different manner. One (as here) is an 8vo. with the collation: ff. (4), 231, (8), with diagrams in the text and two folding plates. The other (as in Duveen, 369) is an 8vo. with the collation: ff. (4), 240, (8), with diagrams in the text but no folding plates. The *Epistola* of this “second edition” is dated 8 March 1566. Careful comparison of the quality of the paper of the title page of this 1573 edition reveals that the title leaf is printed on slightly different paper than the rest of the book (different chain- and wirelines, for example). Thus, this so-called second edition is, in reality, the second issue of the first edition, with a reset title only. Hitherto this has passed unnoticed by bibliographers. The edition that Duveen describes is probably the second, as it has more pages. It is most unlikely that the publisher, Birckmann, would have produced the edition described by Duveen between 1 January and 8 March 1566, as there would not have been enough time. “Perhaps the author’s most important alchemical work” (Zeitlinger). Contents: “Theorica,” ff. 1–160; “Practica . . . super lapide philosophico,” ff. 161–202; “Transmutationis artis metallorum,” ff. 203–231. Extremely rare. (Ferchl, 327; Sotheran, Cat. 773 [1919], 2575)

LUNARDI, Vincent

An Account of the First Aerial Voyage in England, in a Series of Letters to his Guardian, Chevalier Gherardo Compagni, . . . By Vincent Lunardi . . .

London: Printed for the Author: and sold at the Pantheon, etc. 1784.

First edition. 4to. 2 leaves, 66 pp., 1 leaf (explanation of plates). With fine mezzotint portrait frontispiece of Lunardi (by Richard Cosway, engraved by F. Bartolozzi) and 2 folding engraved plates (apparatus for generating hydrogen, and filled balloon).

Very good copy in modern half morocco, cloth, spine gilt-lettered and dated. Bold signature of Lunardi in ink on half title.

A CLASSIC WORK of early aeronautics and chemical technology. Lunardi (1759–1806), secretary to the Neapolitan ambassador in England, vividly describes in a series of letters how on 15 September 1784, in the presence of about 150,000 spectators, he ascended from Moorfields in London in his balloon (about 33 feet in diameter) filled with hydrogen. Reaching a “great height” he traveled approximately 24 miles in two-and-a-half hours and landed in a field near Ware, in Hertfordshire. Lunardi included oars attached to the gondola of the balloon, in an attempt to control the direction of flight. His aerial journey in the first year of the era of aviation made him a hero to the English public. The hydrogen was generated by the reaction of zinc with dilute sulphuric acid, under the direction of his friend Dr. George Fordyce (1736–1802), whom Lunardi describes (p. 12) as “probably the first chemist in the island.” The “appendix contains attestations by eye witnesses, and a five-page poetical effusion addressed to the author” (Zeitlinger). Inscribed copies complete with the frontispiece are rare. (Honeyman, 2070; Sotheran, Cat. 846 [1936], 20670; Tissandier, *Histoire des Ballons*, 105–114; Watt, II, 623g)

LUNDBORG, Andreas J.

Dissertatio Philosophica, de Usu ac Praestantia Physices, cujus partem primam, . . . praeside . . . Mag. Samuele Duraeo, . . . XII Martii. Anni MDCCLXIII. Pro gradu . . . Andreas J. Lundborg, Vestro-Gothus.
Uppsala. (1763).

First edition. 4to. 1 leaf, 13, (1) pp. Large woodcut head- and tailpieces. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

A PHILOSOPHICAL WORK on the use and merit of physics. The author (dates unknown) demonstrates that the quantitative measurement of the physical and chemical properties of substances is important for understanding the universe, as well as life on Earth. He discusses the size of the solar system, the distances of the planets from the Sun, the then-known five satellites of Saturn, and other astronomical matters. Of chemical interest are his comments on air, water, minerals, metals, salts, etc. No reference to the author or this work has been found.

LUNDEEN, Sven

Specimen Staticum, de Centro Gravitatis, . . . sub praesidio Mag. Samuelis Duraei, . . . dissertatione graduali . . . submit- tet Regius Alumnus Sveno Lundeen Pet. Fil. Smolandus. . . Die X. Junii, Anni MDCCLVIII.

Uppsala: Excud. L.M. Höjer, Reg. Acad. Typogr. (1758).

First edition. 4to. 23, (1) pp. With engraved plate (A. Akerman sc.) depicting 12 geometrical figures. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A MATHEMATICAL DISSERTATION on the determination of the center of gravity of solids of various geometrical shapes. Lundeen (dates unknown) refers to the works of Archimedes, Pappus Alexandrinus, Simon Stevin, John Wallis, Isaac Newton, Huygens, Maclaurin, et al. No reference has been found to the author or this work.

LUNGE, Georg

A Theoretical and Practical Treatise on the Manufacture of Sulphuric Acid and Alkali, with the Collateral Branches. By George Lunge. . .

London: John van Voorst, Paternoster Row. 1879, 1880.

First edition. 3 vols., 8vo. I (1879): xv, (1), 658 pp. + 24 pp. (advertisements). II (1880): xiv, 708 pp. III (1880): xvi, 422 pp. + 1 leaf (advertisements). With several hundred text illustrations (many full page and folding) and numerous tables. Fine set in original gilt-lettered publisher's brown cloth. From the library of the nineteenth-century English chemist John Dale, with pencil note on title page of volume I.

AN IMPORTANT treatise covering all aspects of the chemistry and industrial manufacture of sulphuric acid, alkalies (by the Leblanc process), bleaching powder, sodium carbonate, potassium chlorate, and related compounds. There is a comprehensive index in volume III. John Dale, a former owner of this copy, attempted in 1838 to convert coal-naphtha to wood-naphtha (see Partington, IV, 435). Lunge (1839–1923), born in Breslau, worked in the chemical industry in Germany and England, and in 1875 became professor of technical chemistry at the Federal Polytechnic, Zurich. While in England (1867) he was manager of the Tyne Alkali-Works, South Shields. In 1878 he “invented the nitrometer, named after him” (Partington, IV, 904). Lunge was a prolific author, and this is one of his most important publications. This “standard work” appeared in updated and enlarged editions: second (1891), third (1903–1911), fourth (1913–1917). (Bolton, 643; D.S.B., VIII, 553)

LUNGE, Georg

A Treatise on the Distillation of Coal-Tar and Ammoniacal Liquor, and the separation from them of valuable products.

By George Lunge . . .

London: John van Voorst, Paternoster Row. 1882.

First English edition. 8vo. xi, (1), 383, (1) pp. With 88 woodcut illustrations in text (many full page). Fine copy in contemporary gilt-ruled dark-blue half morocco, cloth. An association copy, inscribed in ink on first free endpaper: "J. Holms Pollak, Royal College of Science, Dublin, 1899" (recto); "Thos. Carnelley, 12 Clarendon Terrace, Dundee" (verso).

THE FIRST monograph in English on the preparation and purification of organic and inorganic chemicals on the industrial scale from coal tar. A sequel work to the author's great treatise on the manufacture of sulphuric acid and alkalies, the original German edition appeared as *Destillation und Ammoniakwasser-Verarbeitung* (Braunschweig, 1882). This exhaustive book on an important branch of chemical technology belonged to two late-nineteenth-century chemists: Pollak specialized in thermochemistry (Partington, IV, 612) and Carnelley in physical chemistry (D.S.B., XIV, 560; Partington, IV, 897). (Bolton, 642; D.S.B., VIII, 553)

LUTTERMANN, Friedrich Bogislaw

Ordinis Medici in Regia Academia Regiomontana . . . Carol. Godofredus Hagen . . . Praemissa Isagoge in Chemiam Forensem Lectiones Cursorias Medicinae Candidati Friderici Bogislawii Luttermann d. d. XI, XII et XIV Maii . . .

Königsberg: Typis Sacr. Reg. Maiest. et Univers. Typograph. G. L. Hartungii. 1789.

First edition. 4to. 12 pp. Woodcut head- and tailpiece. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DISSERTATION of Luttermann (dates unknown) on forensic chemistry, presided over by Karl Gottfried Hagen (1749–1829), professor of chemistry at the University of Königsberg. Mineral, plant, and animal poisons are discussed, with references to Bergman, Gmelin, Metzger, Plenck, et al. Partington (IV, 320) briefly mentions Hagen and his *Grundriss der Experimentalchemie* (Königsberg, 1786) but not this work. Not in Blake, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Smith, Waller, Watt, Wellcome, etc. (Bolton, 508; Ferchl, 210; Poggendorff, I, 992)

LUZ, Johann Friedrich

Vollständige und auf Erfahrung gegründete Anweisung die Thermometer zu verfertigen. Nebst einer Kupferplatte von Johann Friederich Luz, Obercaplan zu Gunzenhausen.

Nuremberg: In der Christoph Weigel, und Adam Gottlieb Schneiderischen, und Buchhandlung. 1781.

First edition. 8vo. 10 leaves, 264 pp. With 1 folding plate (thermometric scales), 2 folding tables, and several tables in text. Fine copy, uncut with wide margins, in original boards, old manuscript title label on spine. Engraved bookplate dated 1773: Berlin Gesellschaft naturforschender Freunde.

DURING THE eighteenth century the thermometer became a more precise instrument. Daniel Gabriel Fahrenheit (1686–1736) introduced his mercury thermometer in 1714, and in 1740 the physician George Martine (1702–1741) published the first important work on clinical thermometry. Nevertheless, a large number of questions remained unresolved by the 1770s. Luz (1744–1827), of Ansbach, dedicated his life to the study and perfection of the thermometer. In this book he presents a good historical survey of the development of thermometry, together with reports of his experiments to determine the best substances to fill thermometers. He tried many substances and gives details of the circumstances in which they were effective. Of chemical, medical, and general scientific interest, this appears to be the earliest comprehensive German book entirely on thermometry. A second edition was published in 1823. In 1784 Luz also published a book on eudiometry and one on the barometer. Rare. Unknown to W. E. Knowles Middleton (*History of the Thermometer*, 1966). Not in D.S.B., Partington, Watt, Wellcome, etc. (Blake, 280; Poggendorff, I, 1522; Roller & Goodman, II, 136)

LYCHNELL, Lars Peter

De Reductione Kalii Dissertatio . . . Praeside Mag. Laur. Petro Walmstedt . . . Pro gradu philosophico p. p. auctor Laur. Petrus Lychnell . . . In Auditorio Gustav. die XI Junii MDCCCXXX.

Uppsala: Excudebant Regiae Academiae Typographi. (1830).

First edition. 4to. 1 leaf, 8 pp. Fine copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of Lychnell, presented under the direction of Lars Peter Walmstedt (1782–1858), professor of mineralogy at the University of Uppsala. The author describes the isolation of metallic potassium by Davy in 1807 and discusses its chemical reactions. The later researches of Berzelius, Gay-Lussac, Lampadius, Tennant,

Thenard, et al., on the isolation of potassium metal are also described. Rare. Unknown to the usual bibliographers.

LYCHNELL, Lars Peter

Dissertatio Chemica de Salibus Nonnullis Duplicibus ex Acido Tartarico, Oxido Stibico et Oxidis Magis Electropositivis . . . p. p. Mag. Elavus Wallquist et Laurentius Petrus Lychnell Gesticio Helsingus. In Audit. Gustav. die XXX Octobr. MDCCCXXII. . . .

Uppsala: Excudebant Reg. Acad. Typographi. (1822).

First edition. 4to. 1 leaf, 10 pp. Very good copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the salts of tartaric acid, especially those of antimony, potassium, and sodium. Analytical data on the salts are given, as well as their reactions with various reagents (e.g., acids, alkalies, hydrogen sulphide, and sulphur dioxide). Presented under the direction of Elof Wallquist (1797–1857), professor of chemistry and pharmacy at the University of Stockholm, Lychnell (1802–1833) first lectured on chemistry at Uppsala and then at Carlsberg. He died at the early age of thirty-one. (Bolton, 902; Ferchl, 566; Poggendorff, I, 1522, II, 1256)

LYNCH, James

Syllabus of a Course of Lectures, in Natural and Experimental Philosophy, for the Year 1802. By James Lynch . . .

Dublin: Printed by Graisberry & Campbell, Back-Lane. 1802.

First edition. 8vo. 2 leaves, 32 pp. Very fine copy. Bound with: Higgins, William, *A Syllabus of a Course of Chemistry* (Dublin, 1801); Wade, Walter, *Syllabus . . . on Botany* (Dublin, 1802); and Peall, Thomas, *Syllabus . . . on the Veterinary Art* (Dublin, 1802).

THE FIRST printed syllabus of the course of physics, mechanics, and hydraulics delivered to the Dublin Society in 1802 by James Lynch, who was appointed professor in 1800. In fifty-one lectures he covers the principal parts of these subjects, emphasizing their practical utility. Lectures 5–9 (electricity and magnetism), 22–28 (hydrostatics and aerostatics), 30 (barometers, thermometers, hygrometers), and 42–50 (optics, telescopes, microscopes) are of particular interest. The important discoveries of Bolton and Watt, Franklin, Galileo, Halley, Hooke, Huygens, Newton, Priestley, Torricelli, and others are noted. Rare. Only one copy in N.U.C. (Desmond J. Clarke, *Royal Dublin Society. A Bibliography*, 1953, 128)

M., A.

A Rich Closet of Physical Secrets, Collected by the Elaborate paines of four severall Students in Physick, and digested together; viz. The Child-bearers Cabinet. A Preservative against the Plague and small Pox. Physicall Experiments presented to our late Queen Elizabeths own hands. With certain approved Medicines, taken out of a Manuscript, found at the dissolution of one of our English Abbies, and supplied with some of his own Experiments, by a late English Doctor. London: Printed by Gartrude Dawson, and are to be sold by [*sic*, rest of imprint and date not printed].

First edition. 4to. 4 leaves, 71, (1) pp. Title page within woodcut border. Woodcut capitals, head- and tailpieces. Few leaves slightly embrowned; otherwise good copy in unlettered calf antique. Bound with: Fioravanti, Leonard, *Three exact pieces* (London, 1652); and M., A., and Edwards, *A treatise concerning the plague and the pox* (London, 1652).

A BOOK OF iatrochemical and medical secrets and receipts by an anonymous author, who signs himself "A. M." at the end of "The Printer to the Reader." Another issue appeared in 1656 with the title *Queen Elizabeths Closset of Physical Secrets*. In the imprint of this copy the words "William Nealand, at the Crown in Duck-Lane. 1652." (which should follow the word "by") are missing, presumably because the type fell out of the form during printing. Wing records only two copies thus: Huntington Library and the present copy. The date is given as 1653 by Wing, probably in error, as there is no evidence that this work was published in that year. There was an issue in 1653, with the imprint "By Gartrude Dawson, to be sold by John Saywell." However, in the present (probably earlier) imprint the words "and are" (following "Dawson") are omitted. Duveen (p. 220) records the 1653 issue. Extremely rare. Not in the usual chemical and medical bibliographies. (Ferguson Coll., 428; Ferguson, *Books of Secrets*, II, 5th suppl., p. 52; Wing, M7B)

M., A., and EDWARDS, Dr.

A Treatise concerning the Plague and the Pox, discovering as well the meanes how to preserve from the danger of these infectious Contagions, as also how to cure those which are infected with either of them.

London: Printed by Gartrude Dawson. 1652.

First edition. 4to. 3 leaves, 65, (1), 97–146 pp., 7 leaves (pagination irregular but complete). Woodcut capitals. Few leaves slightly embrowned, occasional neat seventeenth-century annotations; otherwise good copy in unlettered calf antique. Bound with: Fioravanti, L., *Three exact pieces* (London, 1652); and M., A., *A rich closet of physical secrets* (London, 1652).

AN IATROCHEMICAL work on the plague, smallpox, and other diseases, by an anonymous author who merely gives his initials "A. M." at the end of "The Printer to the Reader." The first section (pp. 65 and 97–104) is by a certain "Doctor Edwards, Doctor in Physick and Chirurgery," otherwise unknown. Next follows "Experiments tried by my selfe" (by "A. M.") and then "The Cure of Diseases in Remote Regions" (pp. 106–146), also by "A. M." The table contains an index for the "Child-bearers Cabinet," the "Cures for severall Diseases," and the "Plague and Small Pox" work. This shows that these parts (with their own pagination) were published together with *A Rich Closet of Physical Secrets* (1652). Wing, who lists the book separately under Edwards, records five copies, with only one in America (Cushing Library, Yale). (Duveen, 220; Ferguson Coll., 428; Ferguson, *Books of Secrets*, II, 5th suppl., p. 52; Wing, E190)

M., W.

The Queens Closet Opened. Incomparable Secrets in Physick, Chirurgery Preserving and Candyng, &c. Which were presented unto the Queen: By the most Experienced Persons of the Times, many whereof were had in esteem, when She pleased to descend to private Recreations. Corrected and Reviewed, with many New and large Additions: together with three exact Tables. Vivit post Funera Virtus.

London: Printed by J. W. for Nath. Brooke, at the Angel in Gresham-College, near the Exchange in Bishops-Gate-Street. 1668.

12mo. 6 leaves (including engraved frontispiece portrait of Queen Henrietta Maria, engraver's name not indicated, merely signed "Sold by Nat: Brooke"), 191 pp., 4 leaves (index). Bound with: *A Queens Delight, or, the Art of Preserving, Conserving, and Candyng. As also, A right Knowledge of making Perfumes, and Distilling the most Excellent Waters. Never before Published* (printed by J. Winter, for Nat. Brook, at the Angel in Gresham-Colledge, 1668). 12mo. 1 leaf, 106 pp., 2 leaves (index). (N.B. In this copy the 4 index leaves of the *Queens Closet* are misbound between pages 102–103 of the *Queens Delight*). Bound with: *The Compleat Cook: Expertly Prescribing The most ready Wayes, Whether Italian, Spanish or French, For dressing of Flesh and Fish, ordering of Sauces, or making of Pastry* (London: Printed by J. Winter, for Nath. Brooke, at the Angel in Gresham-College, 1668). 12mo. 123 pp., 4 leaves (index, 3 leaves, advertisements, 1 leaf). Very good copy, in modern blind-ruled calf antique, spine gilt-ruled.

AN EXTREMELY rare book of secrets, of chemical interest, which is not in Wing. This copy lacks pages 3–18 (8 leaves, signatures A3–A10) of the *Queens Delight*. Ferguson (*Books of Secrets*, II, 6th Supplement, pp. 39–40) describes this edition from a seriously imperfect copy (lacking portrait and pp. 1–46 of the *Queens Delight*) in the British Museum.



M., W. Queens Closet Opened. London, 1668.

Ferguson also describes a copy mentioned by Hazlitt, which had slight differences. It is probable that these three short books were published and sold bound together, as there is a notice on signatures A5 and A6 of the *Queens Closet* to this effect.

MACBRIDE, David

Experimental Essays on the following Subjects. I. On the Fermentation of Alimentary Mixtures. II. On the Nature and Properties of Fixed Air. III. On the respective Powers, and Manner of Acting, of the different Kinds of Antiseptics. IV. On the Scurvy; with a Proposal for trying new Methods to prevent or cure the same, at Sea. V. On the Dissolvent Power of Quick-Lime. . . . By David Macbride. . . .
London: Printed for A. Millar, in the Strand. 1764.

First edition, first issue. 8vo. xiii, (3), 267, (1) pp., 1 leaf (errata), 1 leaf (blank). With 2 folding tables and 4 folding engraved plates of apparatus. Very good copy in modern half morocco, cloth boards.

BORN IN Ballymoney, Antrim, Ireland, Macbride (1726–1778) became a naval surgeon, studied in Edinburgh and London, and practiced medicine in Ballymoney (1749), then in Dublin (1751). His career met with limited success until he published the present book, which secured him a doctorate from Glasgow and a European reputation. “The work dealt with various aspects of a theory that Macbride had developed from Stephen Hales’s concept of air. Hales’s observations of the expulsion of ‘air’ from all kinds of materials, during heating and fermentation, led him to regard air as an essential constituent of all bodies” (D.S.B.). Macbride describes many experiments in which he attempts to prove that fixed air (carbon dioxide) is the cement holding particles together in plants, animals, and even some minerals. In addition to Hales, he cites the researches of Black, Pringle, and others. “An important book from the point of view of chemical ideas previous to Lavoisier” (Duveen). A “postscript” leaf and another errata slip were added to the second issue of 1764. (Blake, 281; Bolton, 644; Cole, 853; D.S.B., VIII, 73, 585; Duveen, 375; Partington, III, 143; Poggendorff, II, 2; Waring, 314; Wellcome, IV, 5)

MACBRIDE, David

Experimental Essays on Medical and Philosophical Subjects: particularly, I. On the Fermentation of Alimentary Mixtures, and Digestion of the Food. II. On the Nature and Properties of Fixed Air. III. On the respective Powers, and Manner of Acting, of the different Kinds of Antiseptics. IV. On the Scurvy; with a Proposal for trying new Methods to prevent or cure the same, at Sea. V. On the Dissolvent Power of Quick-Lime; and a further Investigation of the Properties of Fixed Air. . . . By David Macbride, M.D.

London: Printed for A. Millar and T. Cadell, in the Strand. 1767.

Third (second London) edition. 8vo. xiv, (2), 296 pp. With 2 folding tables and 4 folding engraved plates. Very good copy in original mottled calf, covers gilt-ruled, spine gilt, red morocco label.

THE SECOND edition, corrected and enlarged by additional experiments and text, was published by T. Ewing at Dublin earlier in 1767. It contained a postscript (8 pp.) on the use of wort as an antiscorbutic, following the main text. In the present (second and final) London edition the text of the Dublin edition is reprinted, the errata corrected, and the postscript included in the main pagination. A dedication to Admiral Sir Charles Saunders (ca. 1713–1775) is added (see D.N.B.). Macbride demonstrates in the supplement that sal ammoniac (ammonium chloride) does not contain fixed air (carbon dioxide). The postscript (10 pp.) deals with the health of sailors on a long voyage to the Falkland Islands. The plates are identical to those in the first London edition, a French translation of which by Abbadie appeared (Paris, 1766). Partington covers Macbride’s researches in detail. (Blake, 281; Cole, 854; D.S.B., VIII, 585; Edelstein, 1498; Partington, III, 143; Poggendorff, II, 2; Smith, 307; Wellcome, IV, 5)

MACKAILE, Matthew

The Diversitie of Salts and Spirits Maintained [sic]. Or, the Imaginary Volatility of some Salts and Non-entirety of the Alkali, before Cremation, and Identity of all Alcalies, all Volatil [sic] Salts, and all Vinous Spirits, by an onely Lamp-Furnace resolved into real Improbability. By way of Animadversions, upon Dr. D. C. his 3 Papers, communicated to the R.S. and insert in the 9. Vol. of the P. T. Together, with A New System, of the Order and Gradation, in the Worlds Creation. As also, Scurvie Alchymie discovered. By Matt. Mackaile Apoth. and Chirurg. Alias, Chirurgo-Medicine.
Aberdeen: Printed by John Forbes, Printer to Town. 1683.

First edition. Sm. 8vo. 8 leaves, 145 pp. With folding printed table (“Tabula Salium”), backed in silk, facing page 43. Very

good copy in early-nineteenth-century half calf, marbled boards, top edge gilt, maroon and green morocco labels gilt, spine dated. Neat signature ("Alex Donaldson 1754") in ink on verso of title leaf. From the library of Denis Duveen, with maroon bookplate.

A RARE TREATISE on salts, which Mackaile classifies as fixed, volatile, and illegitimate. Fixed salts include niter (potassium nitrate), common salt (sodium chloride), and vitriolated tartar (potassium sulphate); volatile salts include sal ammoniac (ammonium chloride) and sal volatile (ammonium carbonate); and illegitimate salts include corrosive sublimate (mercuric chloride). "The book is very intricate and difficult to follow: it is full of quotations and complicated arguments" (Duveen). Mackaile refers approvingly to the works of Barlet (from whom he learned chemistry), Boyle, Simpson, Willis, Zwelfer, et al. He severely criticizes Dr. Daniel Coxe and Dr. Gideon Harvey's *New Discovery of Scurvy*. These calumnious statements caused John Forbes, the printer, to be rebuked for having printed the book without authority. Not in Bolton, D.S.B., Ferchl, Ferguson, Osler, Thorndike, Waller, etc. (Duveen, 375–376; Edelstein, 1501; Ferguson Coll., 432; Neu, 2576; Partington, III, 15; Smith, 307; Sondheimer, 986; Watt, II, 630a; Wing, M144)

MACKAILE, Matthew

Moffet-Well: or, a Topographico-Spagyricall description of the Mineral Wells, at Moffet in Annandale of Scotland. Translated, and much enlarged, by the Author Matthew Mackaile, Chyrurgo-Medicine. As also, the Oylly-Well: or, a Topographico-Spagyricall description of the Oylly-well, at St. Catharines Chappel in the Paroch of Libberton. To these is subjoyned, a Character of Mr. Culpeper and his Writings; by the same Author. . . .

Edinburgh: Printed for Robert Brown, and are to be sold at his Shop, at the Sign of the Sun, on the north-side of the Street, over against the Cross, 1664.

First edition. Sm. 8vo. 196 pp. Divisional title pages to *The Oylly Well* (p. 111) and *Culpeper's Character* (p. 145). Few leaves slightly foxed; otherwise good copy in eighteenth-century calf, gilt dentelles. Signature in ink on flyleaf: "James McMillan, Moffat 1859."

THE FRENCH chemist Barlet was the teacher of Mackaile (fl. 1657–1696), an Aberdeen apothecary-surgeon and later physician (M.D. Aberdeen, 1696), who published several medical works (see Wing). Moffat Well was discovered in 1653 by "a valetudenary Rustick" (p. 43), and an account of the waters was published in Latin by Mackaile (*Descriptio topographico-spagyrica fontium mineralium Moffetensium*, Edinburgh, 1659). The present work is a translation to

which Mackaile has added his description of the "Oily Well" and an assessment of Culpeper. "This rare work contains a surprising amount of information regarding contemporary chemical theories and thoughts. The last tract is a violent attack on Culpeper and his writings" (Duveen). "Moffat was famous for its sulfur and saline waters in the middle of the 18th century, and is now a vacation and angling resort" (*Encyclopaedia Britannica*). Not in Bolton, D.S.B., Edelstein, Ferguson, Osler, Smith, Sondheimer, Thorndike, Waller, etc. (Cushing, M32; Duveen, 375; Ferguson Coll., 432; Neu, 2577; Partington, III, 15; Waring, 797; Watt, II, 629z; Wing, M148)

MACKENZIE, Colin

One Thousand Experiments in Chemistry; with Illustrations of Natural Phenomena; and Practical Observations on the Manufacturing and Chemical Processes at present pursued in the Successful Cultivation of the Useful Arts. . . . By Colin Mackenzie. . . .

London: Printed for Sir Richard Phillips and Co. 1821.

First edition. 8vo. xxvii, (1), 427 pp.; *428–*521; pp. 428–528; 29, (1) pp. Frontispiece (laboratory interior), 19 numbered copperplates (chemical apparatus), 1 fine folding colored plate ("Drawing the Retorts at the Great Gas Light Establishment, Brick Lane"). Woodcut plate (locomotive) at page 93, folding woodcut plate (interior of house with central steam heat) at page 95, and numerous woodcuts in text. Fine copy in contemporary calf, rebaked with original spine laid on, original maroon morocco label preserved. Armorial bookplate (nineteenth century): Lord Gray.

AN IMPORTANT and detailed work on early-nineteenth-century chemical technology and industrial chemistry, covering metals, alloys, gases, combustion, explosives, dyeing, bleaching, fermentation, distillation, phosphorescence, crystallization, aerostation, and many other subjects. The introduction includes a history of chemistry and a brief discussion of the discoveries of contemporary chemists. At least four editions in English appeared, as well as a French translation, but no biographical information on the author has been found. An interesting, well-illustrated, and rare work, which has received little critical or historical commentary. Not in D.S.B., Edelstein, Ferchl, Ferguson, Ferguson Coll., Harvey, Morgan, Partington, Poggendorff, Waller, etc. (Bolton, *Second Supplement*, 130; Duveen, 376 [collation omits extra pp. *428–*521]; Smith, 308 [imperf.]; Sondheimer, 987)

MACKENZIE, Colin

One Thousand Experiments in Chemistry; . . . A New Edition Corrected and Improved . . .
London: Printed for Sir Richard Phillips and Co. 1822.

Second edition. 8vo. vi, 29, (1), (v)–xxxii, 46 pp. Engraved frontispiece (laboratory interior), 19 numbered copperplates (chemical apparatus), 1 fine folding colored plate (“Drawing the Retorts at the Great Gas Light Establishment, Brick Lane”). Woodcut plate (locomotive) facing page 93, folding woodcut plate (interior of house with central steam heat) facing page 95 (lacking), and numerous woodcuts in text. Good copy in contemporary half calf, marbled boards, rebacked, maroon morocco label gilt, spine, dated.

THE SCARCELY found, enlarged second edition containing new information and a valuable appendix (pp. 629–646) not in the first edition. The sheets of this edition were re-issued as “third” and “fourth” editions in 1823 and 1824, respectively. Not in the usual early chemical libraries. (Morgan, 506)

MACLAURIN, Colin

An Account of Sir Isaac Newton's Philosophical Discoveries, in Four Books. . . . Published from the Author's Manuscript Papers, by Patrick Murdoch, M.A. and F.R.S.
London: Printed for the Author's Children: and Sold by A. Millar, and J. Nourse, over against Catharine street in the Strand; G. Hamilton and J. Balfour, and A. Kincaid at Edinburgh; J. Barry at Glasgow, and J. Smith at Dublin. 1748.

First edition. 4to. 14 leaves, xx, 392 pp. With 6 folding engraved plates depicting 71 figures. Very fine large paper copy, contents pristine, in original gilt-ruled speckled calf, spine gilt, maroon morocco label (joints repaired). Engraved armorial bookplate of Ambrose Isted, an original subscriber whose name is listed on signature b1 verso.

ONE OF the most popular commentaries on the *Principia*, written by Maclaurin (1698–1746), the great Scottish mathematician, natural philosopher, and friend of Newton. In 1722 Maclaurin went to France and won the prize of the French Academy of Sciences. On the recommendation of Newton he was elected professor of mathematics at the University of Edinburgh and helped to form the Royal Society of Edinburgh. The manuscript of this volume was left unpublished by Maclaurin, who died soon after its completion. The mathematician Patrick Murdoch (d. 1774) supervised the publishing of this book, the proceeds going to Maclaurin's children. A biography of Maclaurin is included, which is still the best authority on him. The work covers Newton's method of proceeding in natural philosophy, his various systems, theory of motion, gravity, etc. The

imprimatur of the Royal Society is on the verso of the half title. (Babson, 85; D.S.B., VIII, 612; Gray, 112; Poggendorff, II, 6; Wallis, 112)

MACLEAN, John

Two Lectures on Combustion: supplementary to a Course of Lectures on Chemistry. Read at Nassau-Hall. Containing an examination of Dr. Priestley's Considerations on the Doctrine of Phlogiston, and the Decomposition of Water. . . .
Philadelphia: Printed by T. Dobson. 1797.

First edition. 8vo. (in 4s). 71, (1) pp. Some browning and staining (typical of American paper of the period); otherwise good copy, in modern linen-backed blue boards, printed label.

AN IMPORTANT work in the overthrow of the phlogiston theory and the first significant American publication in chemistry. Maclean (1771–1814) was the first professor of chemistry in any American college (College of New Jersey, later Princeton) outside of a medical school. For early American chemistry Maclean's work was a major achievement, as he argued effectively against the phlogiston theory, especially as set forth in Priestley's recent *Considerations on the doctrine of phlogiston* (1796). In the late 1780s Maclean, a pupil of Dr. Joseph Black, had traveled from his native Glasgow to Paris, where he met Lavoisier and Berthollet and was converted to the antiphlogistic theory of the “new chemistry.” His arguments in the present work relied heavily on the results of French experiments. Maclean claims that the new chemistry “is dependent on nothing whose existence cannot actually be demonstrated; whose properties cannot be submitted to the most rigorous examination, and whose quantity cannot be determined by the tests of weight and measure.” A “devastating answer to Priestley's arguments” (Edelstein, *Chymia*, 5 [1959], 160–164), with illustration of title page. A reprint appeared in 1929 (Smith, 309; Waller, 11210). (Blake, 282; Bolton, 645; D.S.B., VIII, 612; Edelstein, 1505; Ferchl, 331; Honeyman, 2088; Osler, 1201; Partington, III, 272; Poggendorff, II, 6; Watt, II, 631z)

MACNEVEN, William James

Exposition of the Atomic Theory of Chemistry; and the Doctrine of Definite Proportions. . . . With an Appendix of Chymical Exercises, by the Pupils of the Laboratory, &c.
New York: Printed by Grattan and Banks, Corner of Nassau & Spruce Streets. 1819.

First edition. Sm. 4to. viii, 74 pp., 2 leaves, 29, (1) pp. With errata slip at end. Very good copy in maroon half morocco antique, marbled boards, spine gilt-lettered and dated, with the original printed wrappers bound in. From the library of Professor Franz Sondheimer (1926–1981), with his bookplate on the front pastedown endpaper.

AN EXCELLENT account of the chemical atomic theory of John Dalton and very important as it is the earliest published for American readers. Macneven (1763–1841) was one of the leaders of the abortive Irish rebellion of 1798. He emigrated to the United States in 1803, where he practiced medicine. In 1808 he was appointed professor of midwifery at the College of Physicians in New York. A year later, when the college was reorganized, he became professor of chemistry. Macneven gives some priority and credit for the atomic theory to William Higgins for “a near approach” (p. 9). Due acknowledgement is also made to J. B. Richter. The exposition of the atomic theory ends on page 74, with “Dr. Wollaston’s Numerical Table of Chymical Equivalents.” The appendix (with separate half title and title) then follows and consists mainly of analyses of ores and minerals of the greater New York area. According to E. F. Smith (*Old Chemistries*, 1927, p. 83), Macneven “was a man of mark and great influence in his adopted American home, all of which is amply set forth in the beautiful memorial shaft standing in the yard of old St. Paul’s Chapel, New York City.” On Macneven, see the D.N.B.; also D. Reilly, *Chymia*, 2, 17–26 (1949). Very rare. Not in Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Poggendorff, Waller, Watt, etc. (Bolton, 645; Partington, III, 813; Reilly, 25; Smith, 309; Sondheimer, 988)

MACQUART, Louis Charles Henri

Manuel sur les Propriétés de l’Eau, particulièrement dans l’Art de Guérir. . . .

Paris: Chez Nyon l’aîné, Libraire, rue du Jardinnet, Quartier Saint-André-des-Arts. 1783.

First edition. 8vo. 1 leaf, xxiv, 476 pp. With 2 folding printed tables (facing pp. 118 and 124). Fine copy, with the half title, in original mottled calf, spine richly gilt, maroon label. From the library of the chemist Louis Joseph Proust (1754–1826), with his bold signature on title page.

A TREATISE ON water, of considerable chemical interest, containing much information on contemporary analytical methods. “It contains a list and classification of various spawaters as well as an interesting and very complete account of the properties, chemical and physical, of water, also the medical qualities of various waters” (Duveen). Macquart (1745–1818), educated as a physician, was professor of natural history at the Central School of the Département of the Seine-et-Marne and conservator of the cabinets of Fontainebleau. He also wrote on medical, geological, and mineralogical subjects (see Poggendorff, II, 7). This copy has a distinguished provenance, having belonged to the famous chemist Proust, who first enunciated the law of constant proportions of chemical compounds. Partington (III, 640–

653) discusses Proust’s important researches in detail. (Blake, 282; Blocker, 254; Duveen, 376; Ferchl, 332; Neu, 2579; Waring, 759)

MACQUER, Philippe

Dictionnaire Portatif des Arts et Metiers. Contenant en abrégé l’Histoire, la Description & la Police des Arts et Métiers, des Fabriques et Manufactures de France & des Pays Etrangers. . . .

Paris: Chez Lacombe, Libraire, Quai de Conti. 1766.

First edition. 2 vols., 8vo. I: xxiii, (1), 588 pp. II: 2 leaves, 715, (1) pp. Fine, crisp copy, in original gilt-ruled quarter calf, marbled boards.

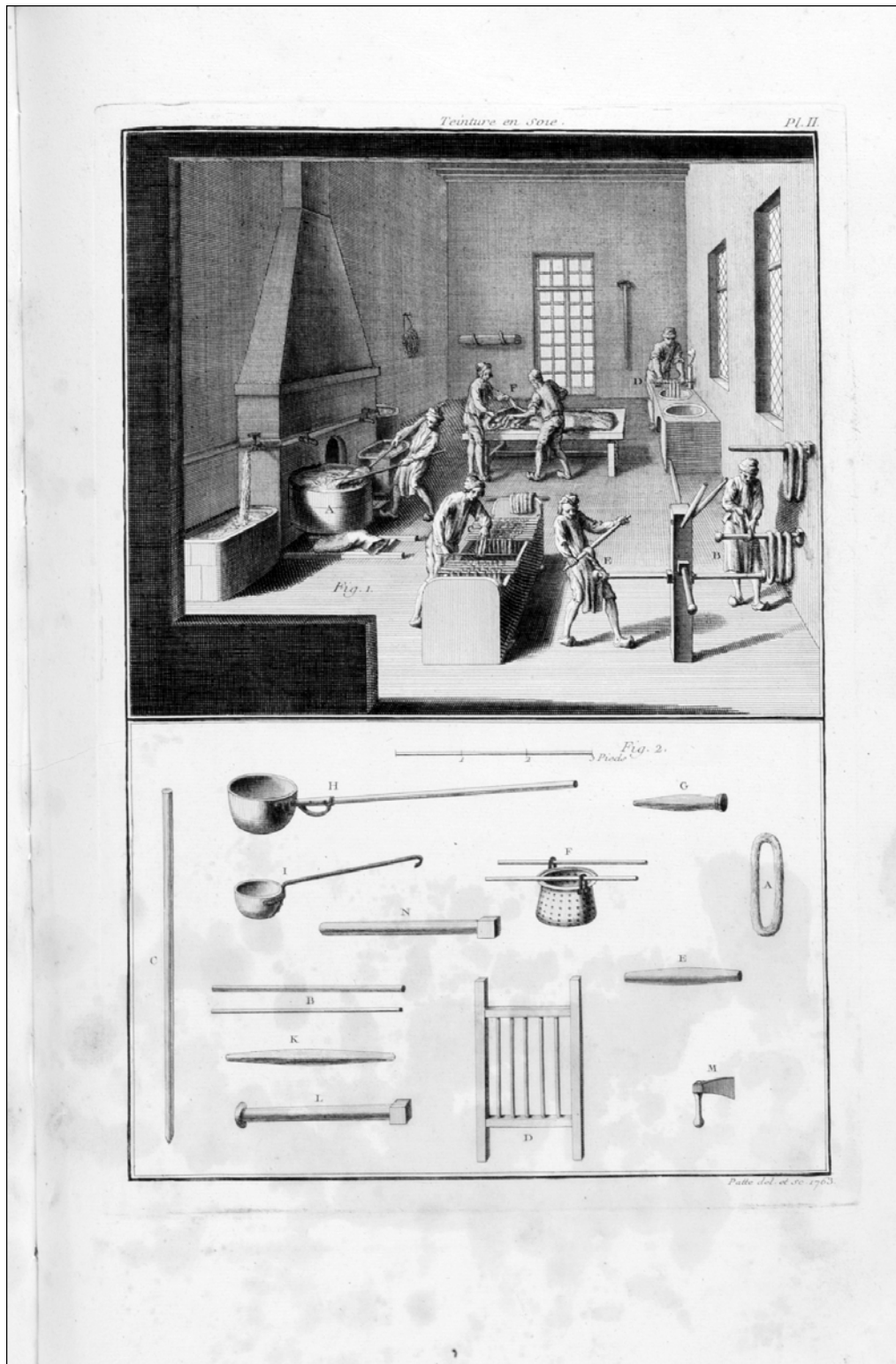
THE YOUNGER brother of the chemist Pierre Joseph Macquer, Philippe Macquer (1720–1770) was an advocate whose poor health made it impossible for him to practice at the bar, but he made a name for himself as a man of letters and historian. He acquired an interest in science from Pierre Joseph, and his contacts with the scientific world enabled him to recruit a number of eminent collaborators (whom he names in the preface of the present work), including the chemist Antoine Baumé, who contributed twenty-seven articles. The *Dictionnaire* is particularly rich in applied chemistry, and undoubtedly Pierre Joseph was consulted while it was being compiled. In the *avertissement* Philippe states that his brother’s *Dictionnaire de chymie* had recently appeared, and he suggests that the present work will form a logical sequel to the *Dictionnaire raisonné d’histoire naturelle* (Paris, 1764) by J. C. Valmont de Bomare. Later editions were edited by P. Jaubert after Philippe died. Rare. Not in Blake, Collison, Watt, or the usual chemical bibliographies. Wrongly ascribed to P. J. Macquer by Ferchl and Poggendorff. (D.S.B., VIII, 619, 622; Ferchl, 332; R. G. Neville & W. A. Smeaton, *Annals of Science*, 38 [1981], 615; Poggendorff, II, 8)

MACQUER, Pierre Joseph

Art de la Teinture en Soie. Par M. Macquer.
(Paris:) 1763.

First separate edition. Elephant folio. ix, (1), 86 pp. With 6 full-page engraved plates (Patte del. et sc. 1763). Few mostly minor stains on plates; otherwise fine copy with wide margins, in quarter calf antique, cloth boards, spine gilt-lettered and dated.

THE FIRST separate edition of Macquer’s classic book on silk dyeing, which appeared at the same time in the *Descriptions des Arts et Metiers* for 1763. There is no indication of the printer, publisher, or place of publication. Macquer



Macquer, Pierre Joseph. *Art de la Teinture en Soie*. Paris, 1763.

was appointed to assist Jean Hellot (1685–1766), director of the dyeing industries, and succeeded him in that post when Hellot died. This important work revealed for the first time many secrets on the dyeing of silk, which had been jealously guarded by those in the French dyeing industry. “In the preface Macquer pointed out that the art of dyeing, although it could be carried out more or less successfully by mere artisans, involved many difficulties and offered many problems which could be solved only with the help of a skilled chemist. He had frequented the workshop of a silk dyer for some time and learned the methods of his craft, and the book consisted of a list of technical processes, illustrated with plates, showing the actual layout of apparatus in a workshop. In an appendix was included a number of processes communicated to Macquer by Hellot” (Coleby). (Bolton, 646 [wrongly states 8vo.]; Brunet, II, 618–619; Coleby, 89–90, 128; D.S.B., VIII, 622; Edelstein, 3262; Ferchl, 332; Ferguson, II, 60 [not in Young Coll.]; Ferguson Coll., 434; Lawrie, 435; Partington, III, 89; Pogendorff, II, 7; Ron, 701)

MACQUER, Pierre Joseph

Die Kunst der Seidenfarberey von Herrn Macquer. (Königsberg: Katner). 1764.

First separate German edition. 4to. 1 leaf, pp. (271)–368. With 6 folding engraved plates (by Schleuer). Fine copy, in gilt-ruled quarter calf antique, marbled boards, gilt-lettered and dated maroon morocco label.

A SEPARATE OFFPRINT from an unnamed scientific journal, this is presumably the first German edition of Macquer’s *Art de la teinture en soie* (1763), by an anonymous translator. The plates are reengraved copies of those in the French edition. Another German edition also appeared (Berlin, Stettin & Leipzig: bey Johann Heinrich Ruedigern, 1764; Edelstein, 3263; Ron, 703). Ferguson (II, 60) mentions a later edition (Leipzig, 1779). Very rare. Not in the usual bibliographies.

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie & la Pratique de cette Science, son application à la Physique, à l’Histoire Naturelle, à la Médecine & à l’Economie animale; avec l’explication détaillée de la vertu & de la maniere d’agir des Médicaments Chymiques. Et les principes fondamentaux des Arts, Manufactures & Métiers dépendans de la Chymie. . . . Paris: Chez Lacombe, Libraire, Quai de Conti. 1766.

First edition, state A. 2 vols., 8vo. I: xxvi, (2), 616 pp. II: (4), 686, (2) pp. Half title in volume II, not called for in volume I. Title page (Paris imprint) of volume I with asterisk under “du”

in bottom line. Fine copy, in late-eighteenth-century quarter calf, gilt, marbled boards, black morocco labels.

AN ENCYCLOPEDIA of all that was then known about chemistry, the *Dictionnaire* is Macquer’s most important work and a milestone of chemical literature. Begun in 1763, Macquer published it anonymously because he was concerned that his reputation might suffer as he had not been able to make it as perfect as he wished. He need not have worried, as the work received very favorable reviews shortly after it appeared. Containing more than five hundred articles in alphabetical order, it was preceded by a brief history of chemistry and set the pattern for many later chemical dictionaries. Neville has discussed the contents in detail (see *J. Chem. Educ.*, 43, [1966], 486–490). The title page of volume I exists in three states, on which see Neville and Smeaton (*Annals of Science*, 38 [1981], 613–662) for the definitive bibliography on the numerous editions of this, the “first modern dictionary of chemistry.” (Blake, 282; Cole, 862; Coleby, 22; Duveen, 377; Edelstein, 1509; Ferchl, 332; Ferguson, II, 60 [not in Young Coll.]; Neu, 2580; Neville & Smeaton, No. 1 [state A]; Partington, III, 81; Smith, 309)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie & la Pratique de cette Science. . . . Paris: Chez Lacombe, Libraire, Quai de Conti. 1766.

First edition, state B. 2 vols., 8vo. I: xxvi, (2), 616 pp. II: (4), 686, (2) pp. Half title in volume II, not called for in volume I. Title page of volume I with “Pari” (for Paris) in the imprint. Fine copy, in original cats-paw calf, spines richly gilt, tan morocco labels.

APART FROM the missing *s* of “Paris” and the presence or absence of asterisks before or after the signature letters, the title wording and texts of this copy and the copy designated state A are identical. Neville and Smeaton (pp. 619–621) discuss the variant states of the first edition, with illustrations. The “Pari” variant was first reported by R. G. Neville (*The Book Collector*, Winter, 1966, pp. 484–485). Cole (No. 863) has made a detailed study of these variants in several libraries. (Neville & Smeaton, No. 1, state B)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie & la Pratique de cette Science. . . . Paris: Chez Lacombe, Libraire, Quai de Conti. 1766.

Second (first pirated) edition. 2 vols., 8vo. I: xxiv, 616 pp. II: 688 pp. Fine copy, in original vellum, crimson and green morocco labels.

A PIRATED REPRINT of the first edition, printed from type that has been entirely reset and in which there are small but significant changes. The setting of the title page is altered, the preliminary discourse occupies pages (v) vi–xxiv, compared with (v) vi–xxvi in the first edition. Although the pagination of the main text in volume I is unchanged, in volume II it runs from pages (3) 4–688 instead of (1) 2–686, as in the original. “There are numerous errors in the running titles as well as misprints in the text, indicating haste in composing” (Cole). Unlike the first edition volume II omits the half title, and the leaf of *Additions et changemens* (following the preliminary discourse in the first edition) is also omitted. The errata of the first edition are omitted, but the necessary corrections have not been made. The approbation and privilege are not included, indicating that this is a pirated reprint. Cole has examined eleven copies of the *Dictionnaire* dated 1766 in U.S. libraries, but none were of this rare pirated reprint. (Cole, 864; Neville & Smeaton, No. 2)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie & la Pratique de cette Science . . .

Paris: Chez Lacombe, Libraire, Quai de Conti. 1769.

Third (second pirated) edition. 2 vols., 8vo. I: xxiv, 616 pp. (p. xxiv misnumbered xviv). II: 688 pp. Fine copy, in original mottled calf, spines richly gilt, brown morocco labels.

THE SECOND pirated edition and the third appearance of the *Dictionnaire*. A close reprint of the first pirated edition of 1766 with completely reset type, it has exactly the same pagination and text. “The same ornament is used at the beginning of the text in each volume, and another ornament is also common to both editions, but neither is found in the original edition; arabic figures are used for the signature numbers; and there are again too many misprints. This must have been copied from the 1766 reprint, probably by the same pirate. The rapid appearance of these pirated reprints . . . shows that the *Dictionnaire* must have been in great demand soon after publication” (Neville & Smeaton). Although Coleby mentions this edition, most bibliographers are unaware of its existence. (Blake, 282; Cole, 866; Coleby, 128; D.S.B., VIII, 623; Ferchl, 332; Neville & Smeaton, No. 3)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie et la Pratique de cette Science, son application à la Physique, à l'Histoire Naturelle, à la Médecine & aux Arts dépendans de la Chymie. Par M. Macquer, . . . Seconde Edition, revue & considérablement augmentée. . . .

Paris: Chez P. Fr. Didot jeune, Libraire de la Faculté de Médecine, Quai des Augustins. 1778.

“Seconde” edition. 4 vols., 8vo. I: xxxvii, (3), 568 pp. II: (4), 208, 207–302, 305–655, (1) pp., 1 leaf (errata). III: (4), 520 pp., 1 leaf (errata). IV: (4), 333, (1), *335–*336, (1), 336–776 pp. Pagination erratic, text complete. Half titles in volumes I, II, and III, not called for in volume IV. Cancels with asterisks: volume I, Hh6 and Ii5; volume IV, A1. The woodcut head-piece in volume I (p. 1) is signed “Beugnet” (i.e., Jean Beugnet, d. 1803). Near-mint set in original mottled calf, spines gilt, maroon morocco labels.

ALTHOUGH DESIGNATED as the second edition on each title page, this is the fifth appearance of the *Dictionnaire* in the French language. It is the genuine second edition as written by Macquer, whose name now appears on the title and whose reputation had by this time greatly increased. An important addition is the 168-page article on gas, a topic that was almost entirely new and had not been mentioned in the first edition. The title has also been abbreviated. While the number of articles remains almost the same, the work is nearly twice as long owing to the inclusion of an up-to-date account of chemistry and much new material. The preparation of a comprehensive index by J. B. Le Febure de Villebrune (1732–1809) in volume IV (pp. 335–776) delayed the publication of that volume until 1780, although the title page is dated 1778. (Blake, 282; Cole, 868; Coleby, 24, 128; D.S.B., VIII, 623; Ferguson, II, 60 [not in Young Coll.]; Ferguson Coll., 434; Neville & Smeaton, No. 5; Partington, III, 81; Smith, 310)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie et la Pratique de cette Science . . .

Paris: Chez P. Fr. Didot jeune, Libraire de la Faculté de Médecine, Quai des Augustins. 1777.

“Seconde” (first pirated) edition. 3 vols., 8vo. I: xxxii, 747, (1) pp. II: 660 pp. III: 510 pp. With “Mr. Macquer” on title pages; half titles not called for. Very fine set in original cats-paw calf, spines gilt, maroon and green morocco labels.

A PIRATED REPRINT of the four-volume second edition of the *Dictionnaire* (Paris, 1778). Published without the index and the account of the order in which the articles should be read but with Didot’s imprint on the title pages. The date is clearly incorrect, for the text is copied from the Didot

octavo and contains a reference to Macquer's observation of 17 March 1778. "The obligatory *privilège* is missing, but an illusion of authenticity is provided by the three *approbations*, which are however printed without their dates. Since the *approbations* were all granted in April 1778, this information would have revealed the falsity of the date on the title-pages. This '1777' reprint must have been pirated, and it was probably the work of the printer who produced the pirated 1766 and 1769 reprints. . . . The ornament at the top of p. 1 of both volumes of the 1766 and 1769 printings re-appears on p. 1 of vols. 1 and 3 of the '1777' reprint, and arabic figures are used in the signature numbers of all three reprints, instead of the more usual roman figures" (Neville & Smeaton). Unknown to Coleby, Ferguson, Partington, et al. (Blake, 282; Cole, 867; D.S.B., VIII, 623; Duveen, 377; Neu, 2582; Neville & Smeaton, No. 8; Thornton & Tully, 159)

MACQUER, Pierre Joseph

Dictionnaire de Chimie, contenant la Théorie et la Pratique de cette Science, son application à la Physique, à l'Histoire Naturelle, à la Médecine & aux Arts dépendans de la Chymie. Par M. Macquer, . . . Seconde Edition, revue & considérablement augmentée. . . .

Paris: De l'Imprimerie de Monsieur. 1778.

"Seconde" edition. 2 vols., 4to. I: lii, 687, (1) pp. II: (4), 856 pp. With the half titles, and identical unsigned engraving on each title page. Headpiece (vol. I, p. 1) is an unsigned engraving of a painting of an alchemist in his laboratory by David Teniers the younger (1610–1690), and the headpiece (vol. II, p. 1) is an engraving of cupids unveiling Nature signed "Cochin filius" (i.e., Charles Nicolas Cochin the younger, 1715–1790). Woodcut headpiece (vol. I, p. 656) signed "B" (i.e., Jean Beugnet, d. 1803). In volume I, pages 71, 297, 299, 365, 371, and 423 are cancels, with asterisks. Very fine copy with wide margins, in original mottled calf, spines richly gilt, maroon morocco labels.

THE ONLY quarto edition of this beautifully printed landmark work, complete with the index (sometimes missing). Volume I appeared in 1778 after volumes I–III of the octavo edition (i.e., Neville & Smeaton, No. 5), but volume II followed volume IV of the octavo printing in 1781. The "Monsieur" imprint does not imply a private press: this quarto edition was printed by P. F. Didot, who was the printer to Louis XVI's brother, the comte de Provence (later Louis XVIII), whose official title was "Monsieur." Neville and Smeaton discuss the textual differences between the octavo and quarto editions of 1778. (Bolton, 68; Cole, 871; Coleby, 128; D.S.B., VIII, 623; Edelstein, 1511; Ferguson, II, 60 [not in Young Coll.]; Neville & Smeaton, No. 9; Partington, III, 81)

MACQUER, Pierre Joseph

Dictionnaire de Chimie, contenant la Théorie et la Pratique de cette Science, son application à la Physique, à l'Histoire Naturelle, à la Médecine & aux Arts dépendans de la Chymie. Par M. Macquer, . . . Seconde Edition, revue & considérablement augmentée. . . .

Paris: Chez Théophile Barrois le jeune, libraire, quai des Augustins; no. 18. 1778.

"Seconde" edition. 4 vols., 8vo. I: lxiv, 505, (3) pp. II: (4), 542, (2) pp. III: (4), 616 pp. IV: (4), 644 pp. Half titles in all volumes. Woodcut tailpieces on pages xiv and lxiv (vol. I) are signed "Beugnet" (i.e., Jean Beugnet, d. 1803). Few quires with minor embrowning; otherwise very good set in original mottled calf, spines gilt, tan morocco labels.

PROBABLY THE tenth appearance of the *Dictionnaire* in French. Although the title pages are dated 1778, internal evidence confirms that this edition cannot have been published before 1781, as it was copied from the two-volume quarto edition. The second volume of the "1778" quarto edition did not appear until July 1781. "Barrois himself published a reprint of the *Dictionnaire* in four octavo volumes, which are not copied from the Didot octavo but from the later quarto edition. The spelling 'chimie' is used; the more informative running headlines are present; the errata have been corrected; 'verniss' and 'verre' are in the correct order. . . . This reprint was almost certainly produced legally; like the Didot octavo and quarto it contains the text of the *privilège*, which shows that Macquer's second edition was printed under the general *privilège* accorded to the Académie des Sciences and its members. . . . Barrois was a bookseller and publisher, but unlike Didot he was not also a printer, and we cannot be certain who printed this edition" (Neville & Smeaton). (Cole, 870; Neville & Smeaton, No. 11)

MACQUER, Pierre Joseph

Dictionnaire de Chimie, contenant la théorie & la pratique de cette science . . .

Yverdon: (No printer or publisher). 1767.

First Swiss edition. 3 vols., 8vo. I: xxx, (2), 582, (2) pp. II: 655, (1) pp. III: 647, (1) pp. Half title in volume I, not called for in volumes II and III. Fine copy, in original mottled calf, spines gilt, each volume with 2 maroon morocco labels. Old stamp ("Bernard Decoutansouze") on each title page.

PRINTED IN French, this Swiss edition is the first to be published outside France. It "was copied from the original Paris edition, and the printer took note of all four substantial alterations listed after the preliminary discourse, making this the only version of the first edition with Macquer's

definitive text. However, the Yverdon printer did not notice the list of errata (at the end of vol. 2 of the Paris edition) until after he had printed the first volume, for the errors are corrected only in vols. 2 and 3" (Neville & Smeaton). The printer and publisher was Fortune-Barthelemy de Felice (1725–1789), and these volumes are printed in larger type than the first edition (Paris, 1766). Unknown to Coleby, Partington, et al. (Cole, 865; D.S.B., VIII, 623; Neu, 2581; Neville & Smeaton, No. 4)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie et la Pratique de cette Science, son application à la Physique, à l'Histoire Naturelle, à la Médecine & aux Arts dépendans de la Chymie. Par M. Macquer, . . . Nouvelle édition, corrigée & augmentée. . .

En Suisse, Chez les Libraires Associés. 1779, 1780.

Second Swiss edition. 4 vols., 8vo. I: xxviii, 580 pp. II: (2), 655, (1) pp. III: (2), 520 pp. IV: (4), 776 pp. With the required half title in volume IV, not called for in volumes I–III. Very fine set, unpressed and uncut, in half calf antique, marbled boards, maroon morocco labels, spines dated.

THE FOUR-VOLUME Didot octavo (Paris, 1778; Neville & Smeaton, No. 5) was reprinted unchanged by Les Libraires Associés (the imprint used by the *Sociétés Typographiques* of Berne, Lausanne, and Neuchâtel in the years 1779–82 for books that they issued in cooperation) and appeared as this second Swiss edition. The first three volumes were published in 1779. The fourth volume, the only one with a half title, was not printed before May 1780, when the Paris edition was available. Ferguson describes the set in the Young Collection, but volume III is of the Paris (Didot) edition, with identical pagination. Coleby and Partington mistakenly describe it as being printed at Yverdon. (Blake, 282; Cole, 872; Coleby, 128; D.S.B., VIII, 623; Ferguson, II, 60; Neville & Smeaton, No. 12; Partington, III, 81; Smith, 310)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie et la Pratique de cette Science. . .

En Suisse, Chez les Libraires Associés. 1779, 1780.

Second Swiss edition. 4 vols., 8vo. I: xxviii, 580 pp. II: (2), 655, (1) pp. III: (2), 520 pp. IV: (2), 776 pp. Volume II, page 655, is not numbered in this copy, and volume IV is bound without the half title; otherwise fine set in original half calf, speckled boards, tan labels. Old stamps on versos of titles and final leaves: Fürstliche Hofbibliothek, Donaueschingen.

ANOTHER SET of the second Swiss edition, with minor differences in pagination. (Neville & Smeaton, No. 12)

MACQUER, Pierre Joseph

Dictionnaire de Chymie, contenant la Théorie et la Pratique de cette Science. . . Par M. Macquer. . . Nouvelle édition corrigée sur les précédentes, avec un Supplément séparé. Neuchâtel: De l'Imprimerie de la Société Typographique. 1789.

Third Swiss edition. 5 vols., 8vo. I: xxviii, 580 pp. II: (2), 655, (1) pp. III: (2), 520 pp. IV: (2), 776 pp. V: (4), 360, 160, "169, 370–382" pp. (pagination erratic, text complete). Volumes I–IV with woodcut headpiece signed "Finck" (i.e., Hieronymus Finck, d. 1780). Fine set in original mottled calf, spines richly gilt, brown and black morocco labels.

THE FINAL edition in French and an exact reprint of the "En Suisse" (1779–1780) edition, with a new fifth volume entitled *Supplément au dictionnaire de chymie* written by Henri Struve (1751–1826), honorary professor of chemistry at the Lausanne Academy. Published to bring the first four volumes up-to-date, Struve added much information to the *Supplément* from Guyton de Morveau's *Encyclopédie méthodique, chymie. . .*, volume I, part 1 (Paris, 1786), and also from the German edition of Macquer's dictionary translated, with notes, by J. G. Leonhardi. Following page 360 (vol. V) are *Additions au supplément du dictionnaire de chymie* (174 pp.), page 161 of which is misnumbered 169, and pages 162–174 are misnumbered 370–382. Duveen gives the wrong pagination for volume V, and Blake lists only four volumes. (Blake, 282; Cole, 873; Coleby, 128; D.S.B., VIII, 623; Duveen, 378; Ferguson, II, 60 [not in Young Coll.]; Ferguson Coll., 435; Neu, 2583; Neville & Smeaton, No. 13; Partington, III, 81; Waller, 11190)

MACQUER, Pierre Joseph

A Dictionary of Chemistry. Containing the Theory and Practice of that Science; its application to Natural Philosophy, Natural History, Medicine, and Animal Economy: with Full Explanations of the Qualities and Modes of Acting of Chemical Remedies: and the Fundamental Principles of the Arts, Trades, and Manufactures, dependent on Chemistry. Translated from the French. With Plates, Notes, and Additions, by the Translator. In Two Volumes. . .

London: Printed for T. Cadell, and P. Elmsly, in the Strand; J. Robson, in Bond-Street; and S. Bladon, in Pater-noster-Row. 1771.

First English edition. 2 vols., 4to. I: (4), vi, (2), xii, 440 pp. II: (4), 441–888 pp. Engraved plate of "Chemical Characters" and 2 plates of apparatus (all signed Westwood Sculp.), and 2 unsigned folding tables (Geoffroy's affinities and Gellert's table of solutions). Very fine copy with both half titles, in original gilt-ruled speckled calf, maroon and green labels. From the library at Ridding Park, with armorial bookplates (eighteenth century) of Joseph Pickford.

BEGINNING HIS chemical career soon after Macquer's *Dictionnaire* appeared, the translator, James Keir (1735–1820) studied the work carefully and started to prepare this annotated English edition as early as 1769. He used the pirated reprint (1766) but later saw the genuine first edition and included most of Macquer's list of alterations in volume II (pp. 859–863). "I believe we may justly affirm that this Dictionary contains more chemical knowledge than any one book extant" (preface). The plates were introduced into this English edition. Some copies were bound in one volume, without the second half title. (Blake, 282; Bolton, 68; Cole, 874; Coleby, 23; D.S.B., VIII, 623; Neville & Smeaton, No. 14; Partington, III, 81; Smith, 309; Thornton & Tully, 159)

MACQUER, Pierre Joseph

A Dictionary of Chemistry. Containing the Theory and Practice of that Science . . . The Second Edition. To which is added, as an Appendix, a Treatise on the Various Kinds of Permanently Elastic Fluids, or Gases. In Three Volumes. . . . London: Printed for T. Cadell, and P. Elmsly, in the Strand. 1777.

Second English edition. 3 vols., 8vo. I: (10), xviii pp., signatures B–Dd⁸, Ee² (unpaginated). Large folding leaf before signature D (Gellert's table of solutions). II: (2) pp., signatures B–Gg⁸, Hh² (unpaginated). III: (2) pp., signatures B–Z⁸ (unpaginated). With 2 folding engraved plates of apparatus (by Westwood) and table of "Chemical Characters." Fine copy in original calf, gilt, maroon morocco labels. Bound with (in vol. I): Keir, James, *A treatise on the various kinds of permanently elastic fluids or gases* (London, 1779); and (in vol. III) Macquer, P. J., *Additions to the dictionary of chemistry* (London, 1779).

THE SECOND English edition, the contents of which do not differ greatly from the first edition. Some of the entries have been updated by Keir from advance sheets of the second French edition sent to him by Macquer. The most important addition is the treatise on gases by Keir at the end of the first volume. The table of chemical symbols and the two plates of apparatus are unchanged from those in the first English edition. (Bolton, *First Supplement*, 18; Cole, 875; Coleby, 23; D.S.B., VIII, 623; Duveen, 377–378; Edelstein, 1510; Ferguson, II, 61 [not in Young Coll.]; Morgan, 508; Neu, 2584; Neville & Smeaton, No. 15; Partington, III, 81; Thornton & Tully, 159)

MACQUER, Pierre Joseph

A Dictionary of Chemistry. Containing the Theory and Practice of that Science . . . The Second Edition. To which is added, as an Appendix, a Treatise on the Various Kinds of Permanently Elastic Fluids, or Gases. In Three Volumes. . . . London: Printed for T. Cadell, and P. Elmsly, in the Strand. 1777.

Second English edition. 3 vols., 8vo. I: (10), xviii pp., signatures B–Dd⁸, Ee² (unpaginated). Large folding engraved plate (Westwood's "Chemical Characters") and large folding leaf before signature D (Gellert's table of solutions). II: (2) pp., signatures B–Gg⁸, Hh² (unpaginated). III: (2) pp., signatures B–Z⁸ (unpaginated). With 2 folding engraved plates of apparatus (by Westwood). Fine copy in original calf, rebaked, spines gilt-ruled, maroon morocco labels. Bound with: Keir, James, *A treatise on the various kinds of permanently elastic fluids, or gases* (London, 1777).

A COPY OF Macquer's *Dictionary*, probably an earlier issue than that published with the *Additions to the dictionary* (London, 1779), and the second edition of James Keir's *Treatise on . . . gases* (London, 1779). Although nowhere specifically stated, the translator was James Keir (1735–1820), F.R.S. (1785), a "glass and chemical manufacturer near Birmingham" (Neville & Smeaton, p. 624).

MACQUER, Pierre Joseph

Additions to the Dictionary of Chemistry. By M. Macquer. M.D. Member of the Royal Academy of Paris, Professor of Chemistry, &c.

London: Printed for T. Cadell, and P. Elmsley, in the Strand. 1779.

First edition. 8vo. 1 leaf (title, unsigned), signatures A1–A3, *A⁸, B–I⁸, K3 (i.e., 79 leaves, unpaginated). Signature A2 is Contents leaf. Fine copy in original calf, gilt. Bound with: Macquer, P. J., *A dictionary of chemistry* (London, 1777, vol. III).

THE TRANSLATION by James Keir, with several short notes, of twenty-six new articles or additions to articles from the advance sheets of the second edition of the *Dictionnaire* (Paris, 1778, vols. 1–3), sent to him by Macquer. There are long entries for combustion, fire, and phlogiston, in which Keir staunchly defends the phlogiston theory, concluding that "phlogiston is nothing but the pure matter of light fixed immediately in bodies, without the concurrence of any intermediate substance." Other articles are on the calxes of metals and their decomposition (including the experiments on mercuric oxide by Bayen and Lavoisier), gold, iron, nickel, niter, phosphorus, platinum, sugar, etc. (Blake, 282; Cole, 876; D.S.B., VIII, 623; Morgan, 508; Neville & Smeaton, No. 18)

MACQUER, Pierre Joseph

Chymisk Dictionnaire. Indeholdende Denne Videnskabs Theorie og Praxin, dens Anvendelse paa Physikken, Naturhistorien, Laegekunsten og den dyriske Forfatning, med omstaendig Forklaring over de chymiske Laegemiddelers Kraft og Virknings Maade, samt de fornemste Grundregler til de Kunster, Fabriker og Haandverker, som haenge af Chymien, med tilføjede Anmerkninger. Af det Franske oversat af H. von Aphelen, Prof. Philosophiae. . . .
Copenhagen: Trykt hos T. L. Borups Esterleverske, boende i store Helliggeiststraede. 1771, 1772.

First Danish edition. 3 vols., 8vo. I (1771): 15 leaves, 622 pp., 1 leaf (blank). II (1771): 591, (1) pp. III (1772): 674 pp., 3 leaves (Fransk Register), 3 leaves (Latinsk Register). On title page of volume III, "Dictionnaire" is followed by a semicolon (;) instead of a period (.), and the imprint is different: *Trykt hos Johan Rudolph Thiele, boende i store Helliggeiststraede*. Fine copy in original gilt-ruled half calf, mottled tan boards, red and green morocco labels.

THE SOLE Danish translation of the anonymous first edition of Macquer's *Dictionnaire de chymie* (Paris, 1766). No Danish version of the second French edition (1778) was made. The translator, Hans von Aphelen (1719–1779), professor of philosophy at Copenhagen, had previously (1767–70) translated into Danish (with additions) the *Dictionnaire d'histoire naturelle* (first published, Paris, 1764) of J. C. Valmont de Bomare. To the present translation Aphelen added his own notes, plus some notes from the first German edition (1767) translated by Pörner. The three volumes form a complete alphabetical sequence in Danish, the title of each article including French and Latin translations in parenthesis. There are French-Danish and Latin-Danish glossaries at the end of volume III. (Bolton, 69; Cole, 877; Coleby, 24; D.S.B., VIII, 619, 623; Ferchl, 332; Ferguson, II, 60 [not in Young Coll.]; Neville & Smeaton, No. 21; Partington, III, 82)

MACQUER, Pierre Joseph

Chymisk Dictionnaire. Indeholdende Denne Videnskabs Theorie og Praxin . . .
Copenhagen: Trykt hos T. L. Borups, etc. 1771, 1772.

First Danish edition. 3 vols., 8vo. Neat contemporary marginal annotations in ink in Danish on page 164 of volume I; otherwise near-fine copy, in original gilt and blind-ruled paneled calf, spines gilt, black labels.

ANOTHER SET of the first Danish edition, with identical pagination. (Neville & Smeaton, No. 21)

MACQUER, Pierre Joseph

Allgemeine Begriffe der Chymie nach alphabetischer Ordnung aus dem Französischen übersetzt und mit Anmerkungen vermehrt von D. Carl Wilhelm Pörner. . . .
Leipzig: bey M. G. Weidmanns Erben und Reich. 1768, 1769.

First German edition. 3 vols., 8vo. I: xiv, (1), xviii–xl, 597, (1) pp. (prelims. wrongly numbered, text complete). II: 704 pp. III: 654 pp., 12 leaves (index). Unsigned engraved frontispiece in volume I depicting 4 small naked boys in a laboratory: 1 attending the furnace, 1 conducting a distillation, and 2 grinding chemicals in a large mortar. Title page of volume III dated 1769. Fine copy in original marbled calf, spines richly gilt, red and green morocco labels.

THE FIRST German edition of the *Dictionnaire*, translated by Carl Wilhelm Pörner (1732–1796), a chemist at the Meissen porcelain works in Saxony (see Ferguson, II, 210). It was made from the three-volume Yverdon (1767) edition, as each of those volumes appeared. Pörner added extensive notes of his own, and there is a separate alphabetical sequence of articles in each volume, as the order of entries was not the same in German after translation from the French. Although he did not know the author's name, the *Dictionnaire* having appeared anonymously, Pörner was enthusiastic about the book but preferred not to call it a dictionary. He regarded it as a useful general guide to chemistry rather than a mere explanation of the meanings of chemical terms and entitled it (in translation) *General conceptions of chemistry, in alphabetical order*. Ferchl gives the wrong date (1767) for volumes I and II. (Bolton, 68; Coleby, 23; D.S.B., VIII, 623; Ferchl, 332; Ferguson, II, 60 [not in Young Coll.]; Neville & Smeaton, No. 20; Partington, III, 81–82; Thornton & Tully, 159)

MACQUER, Pierre Joseph

Herrn Peter Joseph Macquers . . . Chymisches Wörterbuch oder Allgemeine Begriffe der Chymie nach alphabetischer Ordnung. Aus dem Französischen nach der zweyten Ausgabe übersetzt und mit Anmerkungen und Zusätzen vermehrt von D. Johann Gottfried Leonhardi . . . Zweyte verbesserte und vermehrte Ausgabe . . .
Leipzig: in der Weidmannischen Buchhandlung. 1788–1791.

Third (second Leonhardi) German edition. 7 vols., 8vo. I (1788): lxii, 806, (2 blank) pp. II (1788): (2), 853, (1) pp. III (1789): (2), 778 pp. IV (1789): (2), 754 pp. V (1790): (2), 820 pp. VI (1790): (2), 813, (1) pp. VII (1791): (2), 1030, (2 blank) pp. Engraved frontispiece in volume I of a chemist writing at a table in a laboratory, with a boy assisting him, signed "Mechau del., Geyscr sc." (i.e., Jacob Wilhelm Mechau, 1745–1808; and Christian Gottlieb Geyscr, 1742–1803). Occasional minor

foxing; otherwise fine set, uncut, in brown boards antique, gilt-lettered orange labels.

THE SECOND edition of the German translation of the second French edition of the *Dictionnaire* (Paris, 1778), revised by J. G. Leonhardi (1746–1823). Beginning his translation in 1780 while teaching medicine at Leipzig, he completed the work in 1783 after being appointed professor at Wittenberg. Leonhardi was a former pupil of Pörner, the title of whose translation (1768–69) he incorporated into his first edition (Leipzig, 1781–83; 6 vols., 8vo.). To the present edition Leonhardi added numerous notes of his own, plus some from Pörner's German and Keir's English translations and material from the Italian editions of Scopoli and Vairo. In volume VII he also included Italian and English indexes, plus those in French, German, and Latin from his first edition. (Bolton, 68; Cole, 878; Coleby, 24; D.S.B., VIII, 247; Ferchl, 332; Ferguson, II, 60 [not in Young Coll.]; Neville & Smeaton, No. 23; Partington, III, 82)

MACQUER, Pierre Joseph

Neue Zusätze und Anmerkungen zu Macquers Chymischem Wörterbuche erster Ausgabe von D. Johann Gottfried Leonhardi . . .

Leipzig: in der Weidmannischen Buchhandlung, 1792.

First edition. 2 vols., 8vo. I: 2 leaves, 802, (2) pp. II: 2 leaves, 1008 pp. Fine copy in original brown boards, gilt-ruled green leather labels on spines. Old stamp on each title page: Handels Lehr Anstalt zu Leipzig.

FOR THE benefit of those who had purchased the first German edition of Macquer's *Chymisches Wörterbuch* (Leipzig, 1781–83, 6 vols.), Leonhardi published the present two volumes to bring their set up-to-date and make it unnecessary for readers to buy the recently published second edition (Leipzig, 1788–91, 7 vols.). All of Leonhardi's additional articles and notes included in the second edition are reprinted with reference to the relevant volume of the first edition of 1781–83. "The inclusion of foreign-language indexes in Leonhardi's translations suggests that he and his publishers were aiming at a wider public than that in the German-speaking parts of Europe. The fact that the number of languages was increased in 1788–91 probably shows that this policy had justified itself with the earlier edition" (Neville & Smeaton). The preface of the first volume is dated 28 April 1792, while that of the second volume is dated 19 December 1792. It is probable, therefore, that the second volume—which is very large and would have taken the printer a long time to set into type—actually appeared early in 1793, rather than in 1792 as stated on the title page. A rare work, of which Neville and Smeaton

located only one copy, in the Stadtsbibliothek der Stiftung Preussische Kulturbesitz, at Marburg. (Bolton, 68; D.S.B., VIII, 247; Ferguson, II, 28 [not in Young Coll.]; Neville & Smeaton, No. 24; Partington, III, 82)

MACQUER, Pierre Joseph

Dizionario di Chimica del sig. Pietro Giuseppe Macquer . . . Tradotto dal Francese, e corredato di note, e di nuovi Articoli da Giovanni Antonio Scopoli . . .

Pavia: Nella Stamperia del R.I. Monastero di S. Salvatore. Per Giuseppe Bianchi. 1783, 1784.

First Italian (Scopoli) edition, first issue. 9 vols., 8vo. I (1783): 448 pp., 1 leaf (errata) + large folding table: "Tabella delle chimiche affinita." II (1783): 471, (1) pp. III (1783): 493, (1) pp., 1 leaf (blank) + engraved plate (chemical balance) + 2 engraved plates (Caratteri caracteres characteres chymici) 1 on each side of 1 leaf + 2 folding printed tables ("Tabella de' dissolventi chimici . . ." and "Continuazione della tabella . . ."). IV (1783): 547, (1) pp. V (1783): 552 pp., 1 leaf (errata). VI (1784): 453, (1) pp., 1 leaf (blank). VII (1784): 495, (1) pp. VIII (1784): 449, (1) pp. IX (1784): 109, (1) pp. With title page: *Indici di tutte le materie spettanti all chimica . . .* Very fine set in original half calf, speckled boards, spines gilt-ruled, tan and blue labels.

THE ORIGINAL edition of the *Dictionnaire* (1766) did not appear in Italian, but three Italian versions of the second (1778) French edition were published. The first Italian appeared in two distinct issues, both dated 1783–84: one in nine volumes, the other in eleven. The title page and preliminaries up to page 72 (vol. I) are printed from the same type in each issue. The rest of volume I and remaining volumes are from different settings of type. The editor, G. A. Scopoli (1721–1788), added many notes, additions, and two plates of chemical symbols. Some articles were contributed by Volta. The translator is unknown. Volume IX contains five subject indexes for readers interested in chemistry, pharmacy, natural history, medicine, and the applied arts. Rare. (Bolton, 69; Neville & Smeaton, No. 26)

MACQUER, Pierre Joseph

Dizionario di Chimica del sig. Pietro Giuseppe Macquer . . . Tradotto dal Francese, e corredato di note, e di nuovi Articoli da Giovanni Antonio Scopoli . . .

Pavia: Nella Stamperia del R.I. Monastero di S. Salvatore. Per Giuseppe Bianchi. 1783, 1784.

First Italian (Scopoli) edition, second issue. 11 vols., 8vo. I (1783): 1–2, (2, dedication to Prince Ferdinand of Austria), 3–414, 1 leaf (errata) + large folding table: "Tabella delle chimiche affinita." II (1783): 496 pp., 1 leaf (errata). III (1783): 392 pp., 1 leaf (errata) + 2 engraved plates (Caratteri caracteres characteres chymici) one on each side of 1 leaf (facing p. 370) +

engraved plate (chemical balance) at the end. IV (1783): 512 pp., 1 leaf (errata) + 2 folding printed tables (“Tabella de’ dissolventi chimici . . .” and “Continuazione della tabella . . .”). V (1783): 477, (1) pp. VI (1783): 494 pp., 1 leaf (errata). VII (1784): 480, 1 leaf (errata). VIII (1784): 483 pp., 1 leaf (errata). IX (1784): 477, (1) pp. X (1784): 441, (1) pp. XI (1784): 109, (1) pp., 1 leaf (blank). With title page: *Indici di tutte le materie spettanti all chimica* . . . Occasional minor browning of some leaves, and few tiny wormholes (not affecting text); otherwise fine set, in original mottled calf, gilt, maroon and green labels.

THE TITLE page and preliminaries up to page 72 (vol. I) are from exactly the same type as the first issue, with an additional leaf of dedication. From page 73 (vol. I) onwards and the other ten volumes, the setting of type is completely different. The notes by Scopoli and Volta have been somewhat expanded. Another Italian translation by Giuseppe Cerulli appeared (Naples, 1784–86, 10 vols., 8vo.; Cole, 880; Neville & Smeaton, No. 28), in which Scopoli and Volta’s notes are included, plus additions by Giuseppe Melchiorre Vairo. (Cole, 879; Neville & Smeaton, No. 27)

MACQUER, Pierre Joseph

Elemens de Chymie-Pratique, contenant la Description des Opérations fondamentales de la Chymie, avec des Explications & des Remarques sur chaque Opération. Par M. Macquer . . .

Paris: Chez Jean-Thomas Herissant, rue Saint Jacques, à S. Paul & à S. Hilaire. 1751.

First edition. 2 vols., 12mo. I: 2 leaves, xvi pp., 4 leaves, 517, (3) pp. (last blank). II: 8 leaves, 574, (2) pp. (last blank). Copperplate vignette by R. Brunet on each title page (2 cherubs in a laboratory). Very good copy, in original mottled calf, spines richly gilt, tan labels. Signature (eighteenth century) on first flyleaf of each volume: Joseph Xavier Duclaux medicinae doctoris.

WITH THE *Elemens de chymie theorique* (Paris, 1749), this work was intended to contain a complete course of practical chemistry for beginners. Divided into three main parts (mineral, vegetable, and animal substances), the first volume is in three sections: operations on naturally occurring saline minerals (acids, salts, sulphides), metals (gold, silver, copper, iron, tin, lead, mercury), and semimetals (antimony, bismuth, zinc, arsenic). The second volume contains two parts: the first deals with operations on unfermented and fermented vegetable substances, and the second covers operations on animal substances (milk, blood, flesh, excreta) and experiments on ammonia and ammonium salts. “Macquer gave a thorough account of compound substances in [this work], which was no mere laboratory manual” (Smeaton [in D.S.B.]). (Blake, 282; Bolton, 646; Cole, 881; Coleby, 21; D.S.B., VIII, 622; Duveen, 376; Edelstein, 1514; Neville & Smeaton, 616; Partington, III, 80; Watt, II, 632w)

MACQUER, Pierre Joseph

Elemens de Chymie-Pratique contenant la Description des Opérations fondamentales de la Chymie, avec des Explications & des Remarques sur chaque Opération. Par M. Macquer . . .

Paris: Chez Jean-Thomas Herissant, rue Saint Jacques, à S. Paul & à S. Hilaire. 1751.

Second edition. 2 vols., 12mo. I: 2 leaves, xii pp., 4 leaves, 432, 453–458, (2) pp. (last blank). Pagination skips, text complete. II: 8 leaves, 468 pp. Woodcut vignette on each title page (unsigned, 2 cherubs in a laboratory). Fine copy, in original mottled calf, spines richly gilt, maroon and tan labels.

A REPRINT (probably pirated) of the first edition (Paris, 1751), in which the text has been completely reset in smaller type and the errata are corrected. The woodcut vignette on each title page is a copy of the beautiful copperplate vignette by Brunet used in the first edition, and the woodcut initials and head- and tailpieces are different. Bound uniformly with the (probably pirated) *Elemens de chymie theorique* (Paris, 1751), all three volumes show evidence of a hastily reprinted version of the original texts. Even the dates in the privilege have been copied. The mispagination and other points are noted by Cole, with whose description this copy agrees. Coleby, D.S.B., Partington, and the usual bibliographies do not mention this reprinted edition. Very rare. (Cole, 882)

MACQUER, Pierre Joseph

Éléments de Chymie-Pratique, contenant la Description des Opérations fondamentales de la Chymie, avec des Explications & des Remarques sur chaque Opération. Par M. Macquer . . . Seconde Édition, revue & corrigée . . .

Paris: Chez Pierre Francois Didot le jeune, Hôtel de Luynes, Quai des Augustins. 1756, 1754.

Fourth (second authorized) edition. 2 vols., 12mo. I: 2 leaves, lxxiv (misnumbered lxxii), 519, (1) pp. II: 12 leaves, 576 pp. Unsigned copperplate vignette on each title page (4 cherubs in a laboratory). Mint copy, in original mottled calf, spines richly gilt, maroon morocco labels.

THE SO-CALLED “seconde” (actually fourth) French edition, with additions and corrections. The “Avant-Propos” has been expanded, and a long section (“Eclaircissement”) is added in response to criticisms of the first edition (Paris, 1751) by the unknown translator of Cramer’s *Elemental artis docimasticae* and by the editor of Lemery’s *Cours de chymie*, Theodore Baron d’Henouville (1715–1768). The first volume (dated 1756) has “Chymie” in the half title but “Chimie” in the title, and in line 11 an accent has been added to “Edition” in both volumes. The engraving on the title pages is the same as in the “Nouvelle Edition” of

Éléments de chymie-théorique (Paris, 1753). The second volume is dated 1754. Cole describes the third edition (Paris, 1756), published by Jean-Thomas Herissant. Although the Herissant and Didot texts are apparently identical, the Didot printing has been completely reset, and the paper has watermarks dated 1767 and 1768. It is thus the fourth edition, the edition by Herissant being the third printing. (Cole, 883; Smith, 310; Sondheimer, 991)

MACQUER, Pierre Joseph

Elemens de Chymie Theorique. Par M. Macquer . . .
Paris: Chez Jean-Thomas Herissant, rue Saint Jacques, à Saint Paul & à Saint Hilaire. 1749.

First edition. 12mo. xxii, (2), 336 pp., 12 leaves. With 3 folding engraved plates of chemical apparatus and 1 of chemical symbols (Mathey Sc.). Ornamental woodcut on title page. Very fine copy, in original mottled calf, richly gilt spine, tan label.

ONE OF the most influential chemical works of the mid-eighteenth century and a classic in the development of the chemical text. Written before Macquer began to lecture in 1752. "This was a book containing a good introductory account of chemistry for beginners, and presenting it as a subject worthy of study for its own sake and not, as in some earlier textbooks, as an adjunct to medicine" (Neville & Smeaton). He "begins his *Elements of Theory* by considering the four Elements, Earth, Fire, Air, and Water, and . . . the next simplest class, namely, saline substances, including acids, fixed and volatile alkalis, and neutral salts, . . . subdivided according to the nature of the base, whether earth, fixed alkali, volatile alkali, or metal. Next follow chapters on the various metals and semi-metals. A study of oils, vegetable, animal, and mineral, leads on to fermentation, spiritous, acid, and putrid. The final chapters deal with analysis, with an explanation of Geoffroy's Tables of Affinity—this Macquer considered the most fundamental part of the whole book—and with the construction of vessels and furnaces, illustrated by plates" (Coleby). Clearly written, this work superseded the latest editions of Lemery's *Cours de chymie* (Paris, 1730) and J. B. Senac's *Nouveau cours de chymie* (Paris, 1737), which were out of date. Later French editions and translations appeared. (Blake, 282; Bolton, 646; Cole, 884; Coleby, 17; D.S.B., VIII, 619; Duveen, 376; Neville & Smeaton, 616; Partington, III, 80; Smith, 310; Watt, II, 632w)

MACQUER, Pierre Joseph

Elemens de Chymie Theorique. Par M. Macquer . . .
Paris: Chez Jean-Thomas Herissant, rue S. Jacques, à S. Paul & à S. Hilaire. 1751.

Second edition. 12mo. xx, (2), 263, (1) pp., 8 leaves. With 3 folding unsigned engraved plates of chemical apparatus and 1 of chemical symbols. Ornamental woodcut on title page. Fine copy, in original mottled calf, spine richly gilt, maroon and tan labels.

A REPRINT (probably pirated) of the well-received first edition (Paris, 1749) in which the text has been completely reset and the plates have been less elegantly engraved in reverse, omitting the name of the original engraver (Mathey). The text is printed in smaller type than in the genuine first edition, and the woodcut on the title page, headpieces, and initials are different from those in the first edition. This volume is bound uniformly with the two volumes of the (probably pirated) reprint of the author's *Elemens de chymie pratique* (Paris, 1751). Even the dates in the privilege of the original edition have been copied. Not in Cole, but briefly mentioned by him. Very rare. (Coleby, 128; Partington, III, 80)

MACQUER, Pierre Joseph

Elemens de Chymie Theorique. Par M. Macquer . . . Nouvelle Edition.

Paris: Chez Jean-Thomas Herissant, rue S. Jacques, à S. Paul & à S. Hilaire. 1753.

Third edition. 12mo. iii, (2), 355, (1) pp., 13 leaves. With 3 folding copperplates of chemical apparatus and 1 of chemical symbols (Mathey Sc.). Copperplate vignette on title page (4 cherubs in a laboratory). Fine copy, in original mottled calf, spine richly gilt, maroon morocco label.

PRECEDED BY the first edition (1749) and the probably pirated reprint (1751), this "nouvelle edition" is the third, though only the second authorized by Macquer. With minor changes and additions to the text and the final paragraph of the preface shortened, this is essentially a reprint of the first edition. The plates are identical in both editions. (Blake, 282; Cole, 885; Coleby, 128; D.S.B., VIII, 622; Ferguson, II, 60 [not in Young Coll.]; Ferguson Coll., 435; Partington, III, 80; Watt, 632w)

MACQUER, Pierre Joseph

Elemens de Chymie Theorique. Par M. Macquer . . .

Paris: Chez Jean-Thomas Herissant, rue S. Jacques, à S. Paul & à S. Hilaire. 1756.

Fourth edition. 12mo. xxii, (2), 368 pp., 8 leaves (last blank). With 3 folding copperplates of chemical apparatus and 1 of chemical symbols (Mathey Sc.). Copperplate vignette on title page (4 cherubs in a laboratory). Very good copy, in original mottled calf, richly gilt spine, maroon morocco label. From the library of the famous chemist Etienne Mignot de Montigny (1714–1782), with his signature in ink on verso of half title and title page.

THE FOURTH and final French edition of this celebrated work, being a close paginary reprint of the third edition (1753) with the same vignette on the title page and plates identical to those of the first edition. An important association copy. Mignon de Montigny collaborated with Macquer and Lavoisier in their chemical researches. (Blake, 282; D.S.B., VIII, 622; Duveen, 377; Edelstein, 1513; Ferguson, II, 60 [not in Young Coll.]; Ferguson Coll., 435; Partington, III, 80; Smith, 310)

MACQUER, Pierre Joseph

Elements of the Theory and Practice of Chymistry. Translated from the French of M. Macquer . . .

London: Printed for A. Millar, and J. Nourse, in the Strand. 1758.

First English edition. 2 vols., 8vo. I: xx, 419, (1) pp. II: viii, 434 pp. Half title in volume I, not called for in volume II. With 6 engraved plates (4 of chemical apparatus, 2 of chemical symbols). Fine copy in original calf, brown morocco labels.

THE ENGLISH translation, by Andrew Reid (d. ca. 1767), of the *Éléments de chymie théorique* and *Éléments de chymie pratique* (Paris, 1756). Reid published several books on scientific and literary subjects (1728–1767) and dedicated the present work to John Stuart, third Earl of Bute (1713–1792), friend of Dr. Samuel Johnson, and politician under George III. The six plates were engraved by J. Mynde on three copperplates, the last two being “Geoffroy’s Table of the Comparative Affinities observed between sundry Substances.” English readers were thus introduced to Macquer’s excellent textbooks, which had been so well received in France. (Bolton, 646; Cole, 886; D.S.B., VIII, 622; Duveen, 377; Edelstein, 1515; Ferguson, II, 60 [not in Young Coll.]; Morgan, 509; Neu, 2589; Partington, III, 80; Roller, 366; Watt, II, 632)

MACQUER, Pierre Joseph

Elements of the Theory and Practice of Chymistry. Translated from the French of M. Macquer . . . The Second Edition.

London: Printed for A. Millar, and J. Nourse, in the Strand. 1764.

Second English edition. 2 vols., 8vo. I: xx, 419, (1) pp. II: viii, 434 pp. Half title in volume I, not called for in volume II. With 6 engraved plates (4 of chemical apparatus, 2 of chemical symbols). Very good copy in original calf, rebounded, crimson and dark-blue morocco labels. From the library of T. S. Patterson, Gardiner Professor of Organic Chemistry, University of Glasgow, with his signature dated 1947 in each volume. Armorial bookplates (nineteenth century): Abel Smith, Woodhall Park.

A PAGE-BY-PAGE reprint of the London (1758) edition, with the errata corrected and with identical plates at the end of volume I. “The *Elements* were as popular in England as they were in France . . . [and] was used in many European Universities—Black, for example, recommended it at Edinburgh—and it was superseded only when it had become obsolete with the rise of the new theories of Lavoisier” (Coleby). (Blake, 282; Cole, 887; Coleby, 16; D.S.B., VIII, 622; Partington, III, 80; Smith, 310)

MACQUER, Pierre Joseph

Elements of the Theory and Practice of Chymistry. Translated from the French of M. Macquer . . . The Third Edition.

Edinburgh: Printed for Alex. Donaldson, and sold at his Shop (No. 195.) in the Strand, London; and at Edinburgh. 1768.

Third English (first Scottish) edition. 3 vols., 12mo. I: xvi, 301, (1) pp. II: viii, 273, (1) pp. III: vi, 284 pp. With 6 copperplates (4 of chemical apparatus, 2 of chemical symbols) in volume I. Very fine copy in original calf, spines gilt, crimson morocco labels. Neat signature (eighteenth century) in top margin of each title page (“William Cole”) and price (7/6) on flyleaf of volume I in same hand.

THE FIRST edition of the Reid translation to appear from a Scottish press. Signature a2 reads: “To the Students at the University of Edinburgh, and all other Lovers of Chymistry, this new Edition of the celebrated M. Macquer’s *Elements of Chymistry*, is Humbly Dedicated by The Publisher. Edin. Nov. 3, 1768.” The unsigned plates are identical to, but slightly reduced versions of, those in the 1758 and 1764 London editions. (Blake, 282; Cole, 888 [not in Coll.]; Coleby, 16; D.S.B., VIII, 622; Partington, III, 80; Thornton & Tully, 159)

MACQUER, Pierre Joseph

Elements of the Theory and Practice of Chymistry. Translated from the French of M. Macquer . . . The Third Edition.

London: Printed for J. Nourse, W. Strahan, J. and F. Rivington, T. Longman, T. Cadell, and E. Johnston. 1775.

Fourth English edition. 2 vols., 8vo. I: xx, 419, (1) pp. II: viii, 432 pp. Half title in volume I, not called for in volume II. With 6 engraved plates (4 of chemical apparatus, 2 of chemical symbols). Very fine copy in original speckled calf, spines gilt, crimson morocco labels.

THE FOURTH English edition and the third with a London imprint, being an unchanged reprint of the editions of 1758, 1764, and 1768. The plates are identical to those of the earlier London editions. (Blake, 282; Bolton, 646; Cole,

888; Coleby, 16; D.S.B., VIII, 622; Edelstein, 1516; Partington, III, 80; Thornton & Tully, 159)

MACQUER, Pierre Joseph

Elements of the Theory and Practice of Chymistry. Translated from the French of M. Macquer . . . The Fifth Edition.

Edinburgh: Printed for Alexander Donaldson; and sold at his Shop, No. 48, East Corner of St. Paul's Church-Yard, London; and at Edinburgh. 1777.

Fifth English (second Scottish) edition. 8vo. (in 4s). xvi, 620 pp., 10 leaves (explanation of plates and index). With 6 unsigned copperplates (4 of chemical apparatus, 2 of chemical symbols). Very good copy, in original calf, maroon morocco label.

THE FIFTH English edition of the Reid translation, the second with an Edinburgh imprint, and the only edition to appear in one volume. The dedication of the first Edinburgh edition of 1768 has been dropped and the errata corrected; otherwise the text is the same. The plates are identical to those of the first Edinburgh edition. (Blake, 282; Cole, 889; D.S.B., VIII, 622; Partington, III, 80; Thornton & Tully, 159)

MACQUER, Pierre Joseph

Elements of the Theory and Practice of Chymistry translated from the French of M. Macquer . . . The Fourth Edition.

London: Printed for C. Nourse, J. F. and C. Rivington, T. Longman, T. Cadell, W. Otridge, and W. Fox. 1787.

Sixth English edition. 2 vols., 8vo. I: xx, 419, (1) pp. II: viii, 432 pp. With 6 engraved plates (4 of chemical apparatus, 2 of chemical symbols). Half title in volume I, not called for in volume II. Fine copy with wide margins, uncut and unpressed, in quarter calf antique, blue boards, crimson morocco labels, spines dated.

THE SIXTH (fourth London) and final English edition of the Reid translation. A close paginary reprint of the London (1775) edition, it is still based on the theory of phlogiston, and, by the time it appeared, the theoretical treatment was out of date. The new discoveries of Lavoisier were by then rapidly gaining acceptance. "Although Macquer died in 1784 still accepting the phlogiston theory, it was not until three years later that Lavoisier won his first converts, de Morveau, Fourcroy and Berthollet, to a full acceptance of the new ideas" (Coleby, p. 124). Unknown to Coleby and the usual bibliographers, this edition is rare. (Smith, 310)

MACQUER, Pierre Joseph

Anfangsgründe der Theoretischen Chymie, Erster Theil mit Kupfern, aus dem Französischen ins Deutsche übersetzt. . . . Leipzig: bey Johann Friedrich Junius. 1768.

Second German edition. 8vo. 10 leaves, 260 pp., 4 leaves. With 3 folding plates of chemical apparatus engraved by Bruhl and 1 folding plate of chemical symbols. Woodcut ornament on title page. Signatures E and F bound in reverse order, and minor embrowning of paper; otherwise very good copy, in original blue boards, old ink-lettered paper label on spine.

THE SECOND edition in German, by an anonymous translator, of Macquer's *Éléments de chymie théorique* (Paris, 1749). The words "Erster Theil" in the title suggest that this volume was probably intended to accompany the German translation of Macquer's *Éléments de chymie pratique* (Paris, 1751). The present edition appears to be an unchanged reprint of the first in German (Leipzig, 1752). Rare. (Bolton, 646; D.S.B., VIII, 622; Ferchl, 332)

MACQUER, Pierre Joseph

Elementi di Chimica Teorica di Mr. Macquer . . . tradotti dal Francese sull'ultima edizione di Parigi.

Naples: A spese ed appresso Gaetano Castellano, e dal medesimo si vendono nella sua Libreria sotto il Palazzo del Signor Principe della Riccia. 1782.

First Naples edition. 8vo. xii, 228 pp. With 3 folding plates of chemical apparatus engraved by de Grade, and 1 folding plate of chemical symbols. Small ornamental woodcut on title page. Fine copy, in half calf antique, marbled boards, maroon morocco label.

THE ITALIAN translation of the fourth (third authorized) French edition of Macquer's *Éléments de chymie théorique* (Paris, 1756). "A late edition . . . by an unnamed person" (Cole, who also describes an earlier edition [Florence, 1774]). According to Bolton (p. 646), this edition was preceded by the *Elementi di chimica teorica e pratica* (Venice, 1781, 4 vols.). Cole states that the Venice edition is by a different anonymous translator from the Naples edition and that the Venetian printer claims his to be a correct translation, the former being defective. It is not known if this Naples edition was followed by an Italian translation of Macquer's work on practical chemistry. Rare. (Cole, 892)

MACQUER, Pierre Joseph

Elementi di Chimica Teorica, e Pratica del Sigr. Macquer . . . Traduzione dal Francese riscontrata, e corretta sull'ultima edizione di Parigi. . . .

Venice: Nella Stamperia di Giovanni Gatti, a spese di Leonardo Bassaglia, con L. cenza de' Superiori, e Privilegio. 1785, 1786.

Second Venice edition. 4 vols., 8vo., in 1. I (1785): xvi, 230 pp., 1 leaf (blank). II (1785): xvi, 336 pp. III (1786): viii, 271, (1) pp. IV (1786): 4, 114 pp. With 3 folding plates of chemical apparatus and 1 folding plate of chemical symbols (belonging to vol. I) bound at the end of volume IV. Small floral woodcut ornament on each title page. Fine copy, in original gilt-ruled quarter calf, marbled boards, tan label.

THE FIRST Venice edition printed by Giovanni Gatti appeared in 1781 and is described in detail by Cole (No. 893). The cost of printing the present edition by Gatti was borne by Leonardo Bassaglia. It is a close reprint of the 1781 Venice edition, with the mispagination noted by Cole corrected. The printer proudly proclaims in his *avvertimento* that this is the most careful Italian translation of Macquer's textbooks, all earlier translations being deficient and in some cases containing misleading information. The name of the translator is unknown. Very rare. Not traced in the usual bibliographies.

MACQUER, Pierre Joseph

Quaestio Medica . . . An ab imminuta sanguinis velocitate in capillaribus, facilius quaecunque secretio?

(Colophon: Paris: Typis Quillau, Universitatis & Facultatis Medicinae Typographi, 1740).

First editions, 2 works in 1 vol., 4to. I: 44 pp. II: 12 pp. Mint copies, in marbled boards antique, maroon morocco label. Bound with: *An in calculo renum & vesicae, pro natura calculi, aetate, & temperamento aegrotantis; Remedium Alkalino-Saponaceum Anglicum.* (Colophon: Paris: Typis Quillau, Universitatis & Facultatis Medicinae Typographi, 1742).

TWO DISSERTATIONS presented by Macquer (1718–1784) to the Paris Faculty of Medicine for the M.D. degree awarded in 1742. The first dissertation, under the direction of L. A. Vieillard, discusses the flow of blood in the capillaries and is the earliest publication by Macquer. In the second dissertation, presented under the direction of Jacques Albert Hazon (1708–1779), Macquer examines the nature of kidney stones and recommends the use of “alkalino saponaceum Anglicum” (i.e., alkaline English soap) as a remedy. Having been practicing medicine for only a short time, Macquer published very little on this subject. He studied chemistry under G. F. Rouelle, who had begun a course

of lectures at the Jardin du Roi in 1742. Elected to the Academy of Sciences in 1745, Macquer began chemical research on the solubility of various oils in ethyl alcohol and later investigated the solubilities of carefully dehydrated inorganic salts in alcohol. His quantitative results were of value to chemists who used alcohol extraction in the analysis of residues from evaporated mineral waters. One of the most important chemists of the period leading up to the great discoveries of Lavoisier, Macquer is remembered for his excellent textbooks and dictionary of chemistry. Copies of these extremely rare dissertations are in the British Library, but no other bibliographical references have been located.

MACQUER, Pierre Joseph, and BAUMÉ, Antoine

Plan d'un Cours de Chymie Expérimentale et Raisonnée, avec un Discours Historique sur la Chymie. Par M. Macquer . . . & M. Baumé . . .

Paris: Chez Jean-Thomas Herissant, Libraire, rue S. Jacques, à S. Paul, & à S. Hilaire. 1757.

First edition. 12mo. 2 leaves, lxiii, (1), 80 pp. Fine copy, in original mottled calf, richly gilt spine, tan morocco label. Bound with: Roux, Augustin, *Recherches . . . sur les differens moyens . . . pour refroidir les liqueurs* (1758).

IN 1757 MACQUER and Baumé collaborated in teaching a course of chemistry to about fifty or sixty people. It proved to be successful, and the course was taught for sixteen years. The present work gives an outline of the course and is preceded by a sixty-three-page history of chemistry. Partington summarizes the course, which follows approximately the order in Macquer's textbooks. The section on metals does not mention their increase in weight on calcination. Macquer and Baumé were convinced of the validity of Stahl's theory of phlogiston, but in 1783, near the end of his life, Macquer admitted that the many “beautiful experiments” of Lavoisier had given “considerable probability” to the overthrow of the existence of phlogiston. (Bolton, 646; Cole, 894; Coleby, 17; D.S.B., VIII, 619; Duveen, 378; Ferchl, 332; Neu, 2591; Partington, III, 82; Poggendorff, I, 116, II, 7; Sondheimer, 993)

MACRI, Saverio

Elementi di Chimica Teoretica, e Pratica per uso della Reale Accademia Militare. Del Dottor Saverio Macri Professore di detta Facoltà nella medesima Reale Accademia, pubblico Professore di Storia Naturale nella Università de' R. Studj, e Accademico Pensionario della R.A. delle Sc. e B.L. di Napoli ec. Tomo I. (II.)

Naples: Stemperia Simoniana. 1793–1794.

First edition. 2 volumes, 8vo. I: xvi + 328 pp. II: 388 pp. Fine copy, uncut with wide margins, in modern quarter vellum boards. From the library of Giovanni Valentino Mattia Fabbroni (1752–1822), famous Italian chemist, with his small printed label of ownership (“Fabbroni”) on the title page of volume I.

A RARE ITALIAN textbook of chemistry, in the preface of which the author criticizes the new chemical nomenclature of Lavoisier et al. Macri was professor of chemistry at the Royal Military Academy of Naples. Apart from the information given on the title pages of this work, no information on Macri has been found. Ferchl cites another book by this author on the mineral waters of Contursi (*Saggio intorno alle acque minerali di Contursi*, Naples, 1788). Volume II (pp. 345–382) deals with practical organic chemistry (vegetable and animal products). An important association copy, having come from the library of Fabbroni. Not mentioned by Bolton, Duveen, Ferguson, Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Ferchl, 332)

MACVICAR, John Gibson

Inquiries concerning the Medium of Light and the Form of its Molecules. . . .

Edinburgh: Adam and Charles Black, etc. 1833.

First edition. 8vo. viii, 132 pp. With folding engraved frontispiece (containing 42 figures). Fine copy, uncut, in original boards, printed paper label on spine.

EDUCATED AT St. Andrews and Edinburgh universities, Macvicar (1800–1884) was lecturer in natural history at St. Andrews (1827) and later (1839–52) was pastor of the Scottish Church in Ceylon (see D.N.B.). Author of several scientific publications, in the present curious work he attempts to investigate “the nature of the molecules of light, with a view to determine whether they are material or not; and, secondly, to enquire whether the phenomena of nature and chemistry may not be accounted for, by supposing that the molecules of natural and chemical bodies are composed of molecules of ether or light grouped together, so as to constitute little symmetrical solids of various forms” (p. 108). He assumes that light consists of molecules with a crystalline structure, which are emitted from a luminous

body. His hypothesis was put forward in order to explain optical phenomena that were difficult or impossible to account for by the corpuscular theory. Zeitlinger described the book as “scarce” in 1913. (Sotheran, Cat. 734 [1913], 11261)

MADÁCS, Peter

Theoria Affinitatum Chemicarum, quam auctoritate et consensu . . . universitatis rectoris . . . universitatem Tyrnaviensem . . . Mense Februario, Anno M.DCC.LXXIV.

Publicae disquisitioni submittit Petrus Madács, Poloma-Gömöriensis Hungarus, Medicinae Doctor, . . .

Tyrnavu (Trnava): Typis Tyrnaviensibus. (1774).

First edition. 8vo. 29, (1) pp. Fine copy in brown quarter morocco antique, marbled boards, spine gilt-lettered and dated, with the original floral wrappers bound in.

A HUNGARIAN DOCTORAL thesis on the theory of chemical affinity, published in Tyrnavu, which at that time was in Hungary. Tyrnavu is now called Trnava and is part of Slovakia, about thirty miles from the present Hungarian border. Madács discusses chemical affinity in ten distinct sections, with reference to solution, concentration, fusion, vaporization, heat, etc. He describes the formation of metallic alloys, soluble and insoluble salts, acids and alkalis, the production of gases, etc. The work of contemporary chemists (Pott, Gellert, et al.) is mentioned. The newly discovered elements bismuth, cobalt, and nickel are discussed on pages 21–23. A rare and important work. Not in Blake, Duveen, Edelstein, Ferchl, Ferguson, Neu, Partington, Poggendorff, Smith, Waller, etc. (Bolton, 646)

MAFFEI, Giovanni Camillo

Scala Naturale, Overo Fantasia Dolcissima, di Gio. Camillo Maffei, da Solofra. Intorno alle cose occulte, e desiderate nella Filosofia. Di nuovo con quella piu accurata diligentia, the s'è potuto corretta, & ristampata.

Venice: Appresso Lucio Spineda. 1601.

Sm. 8vo. 126 folios + 2 blank leaves. Woodcut printer's device on title, historiated woodcut capitals, head- and tailpieces. Fine, crisp copy, in contemporary pasteboards, with early ink-lettering on spine.

MAFFEI (fl. 1563) lived in Solofra, near Naples. The *Scala Naturale* first appeared in Venice in 1564. Translated, the title reads *The Ladder of Nature, or Sweetest Fantasy Concerning all Things Occult and Desired in Philosophy*. The most recent event mentioned in the text is the earthquake of 1561. Using an edition of 1600, Thorndike observed that the style of the work reminded him of one by Ristoro d'Arezzo on the composition of the world. Maffei cites many ancient

and medieval authors, as well as such sixteenth-century writers as Andrea Mattioli. The rungs of Maffei's natural ladder are the successive spheres of the four elements and ten heavens, on which see Thorndike. Chapters V–VIII are of chemical importance, as they discuss stones, salts, minerals, metals, and alchemy, including the Paracelsian *tria prima* and transmutation. A very rare book. The first edition of 1564 is cited by Rosenthal (no. 2976), Thorndike (VI, 398), and Waite (p. 292). The Wellcome Library catalogue (I, 3937) cites a later edition (Venice, 1573). None of the usual chemical historians mention the author or this work.

MAGALOTTI, Lorenzo

Lettere Scientifiche, ed Erudite del Conte Lorenzo Magalotti . . .

Florence: Per i Tartini, e Franchi. 1721.

First edition. 4to. xxiv, 303, (1) pp. Fine frontispiece portrait of Magalotti (engraved by V. Franceschini after G. D. Ferretti, dated 1721), and copperplate vignette on title. Title page in red and black, woodcut capitals, head- and tailpieces. Very fine and fresh copy with wide margins, in original gilt-ruled calf, rebounded, maroon morocco label.

OF NOBLE Florentine descent (though born in Rome), the celebrated philosopher and mathematician Magalotti (1637–1712) studied with Viviani (one of Galileo's pupils) at Pisa, then the major Italian university, and attended the lectures of Giovanni Alfonso Borelli, Marcello Malpighi, and Carlo Ronalini. Count Magalotti was also a poet, secretary to the Accademia del Cimento, and author of the famous account of the Accademia's experimental treatise, *Saggi di Naturali Esperienze* (Florence, 1666). In the present twenty important scientific letters Magalotti discusses snow and freezing, the circulation of the blood, sense of smell, the comet of 1664, horticulture and the growing of vines, and the researches of Galileo on light, as well as various chemical subjects (e.g., poison of snakes, acids and alkalies, and distillation). Air pressure, magnetism, and electrostatics are also covered. "He has the distinction . . . of having written the best scientific prose in Italian after that of Galileo" (D.S.B.). A friend of Robert Boyle, Magalotti abandoned scientific studies in 1667 and embarked on a diplomatic career in the service of the Medicis. This work is a beautiful example of fine Italian printing and book production of the period. (D.S.B., IX, 3; Ekelöf, 15; Gartrell, 335; Middleton, *The Experimenters* [1971], 399; Poggenдорff, II, 10; Wheeler Gift, 253)

MAGALOTTI, Lorenzo

Lettere Scientifiche, ed Erudite del Conte Lorenzo Magalotti . . .

Venice: A' Spese della Compagnia. 1734.

Second (first Venice) edition. 4to. xxiv, 294 pp., 1 leaf (license, verso blank). Woodcut historiated capitals and tailpieces. Very small piece missing from spine; otherwise fine copy, crisp and unpressed, in original vellum, brown morocco label.

THE FIRST edition of these famous letters to be printed at Venice. Attesting to the popularity of this work, further editions appeared at Venice in 1740, 1756, and 1772. (Blake, 283; Roller, 367; Sotheran, Cat. 780 [1922], 629)

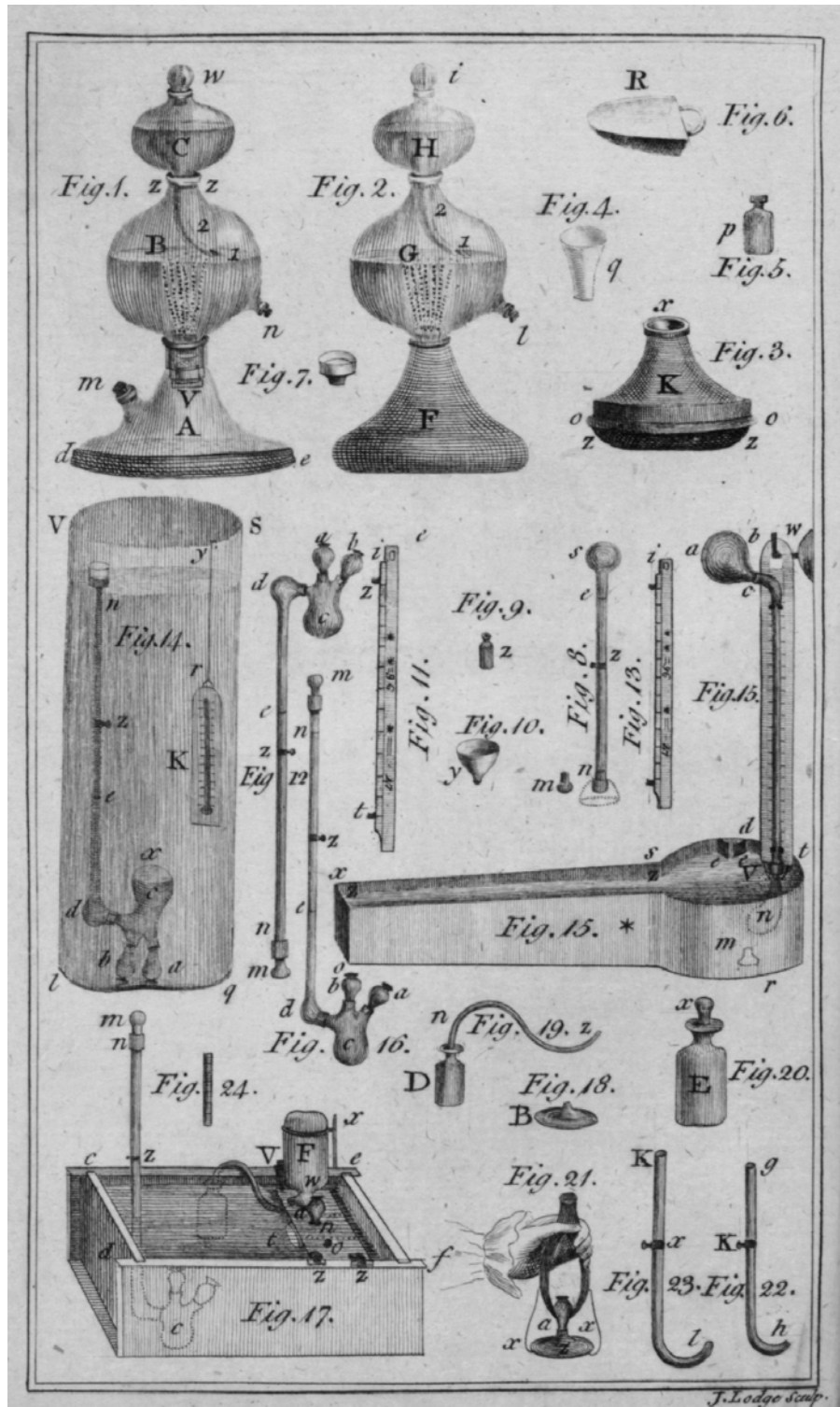
MAGELLAN, Jean Hyacinthe de

Description of a Glass Apparatus, for making Mineral Waters, like those of Pyrmont, Spa, Seltzer, &c. In a few Minutes, and with very little Expense: together with the description of some New Eudiometers, or Instruments for ascertaining the Wholsomeness of Respirable Air; and the Method of using these Instruments: in a letter to the Rev. Dr. Priestley, LL.D. F.R.S. By J. H. De Magellan, F.R.S.

London: Printed for W. Parker . . . J. Johnson . . . and W. Brown . . . 1777.

First edition. 8vo. (in 4s). viii, 47, (1) pp. With engraved frontispiece containing 24 figures of apparatus (by J. Lodge). Fine copy in half calf antique, marbled boards, gilt-lettered and dated maroon morocco label.

BORN IN Lisbon, a descendant of the Portuguese explorer Ferdinand Magellan (1480–1521), Magellan (1722–1790) was an Augustinian prior who emigrated to England and Protestantism in 1764. Elected F.R.S. (1774), he published this account of his researches on gases, addressed to Joseph Priestley. The glass apparatus for impregnating water with fixed air (carbon dioxide) is described in detail. Newly improved by "Mr. Parker," the apparatus was superior to that used by Priestley and described by him in 1772. Carbon dioxide was prepared by dissolving marble (calcium carbonate) in dilute sulphuric acid. Magellan also describes three new types of eudiometer he had designed; these, and the apparatus for making carbonated waters, are illustrated in the frontispiece. An important milestone in the early literature of gas analysis, enlarged second (1779) and third (1783) editions appeared, as well as translations into Dutch (Utrecht, 1779; Amsterdam, 1793) and German by Wenzel (Dresden, 1780). Ferchl and Poggenдорff wrongly give the date as 1770, and Watt as 1778. (D.S.B., IX, 6; Ferchl, 333; Partington, III, 248; Poggenдорff, II, 10–11; Roller & Goodman, 149; Smith, 310; Watt, II, 634h; Wellcome, IV, 24)



Magellan. Description of a Glass Apparatus. London, 1777.

MAGELLAN, Jean Hyacinthe de

Description of a Glass-Apparatus for making in a few Minutes, and at a very small Expence, the Best Mineral Waters of Pyrmont, Spa, Seltzer, Seydschutz, Aix-la-Chapelle, &c. together with the description of two New Eudiometers, or Instruments, for ascertaining the Wholesomeness of Respirable Air, and the Method of using these Instruments, in a Letter to the Rev. Dr. J. Priestley, LL.D. F.R.S. By J. H. de Magellan, F.R.S. The Third Edition, Revised, Corrected, and Enlarged by the Author, with an Examination of the Strictures of Mr. T. Cavallo, F.R.S. upon these Eudiometers.

London: Printed for the Author. 1783.

Third edition. 8vo. (in 4s). viii, 80 pp. With engraved frontispiece containing 24 figures of apparatus (by J. Lodge). Very fine copy in half calf antique, marbled boards, gilt-lettered and dated maroon morocco label.

THE FINAL and most complete edition of Magellan's researches on the preparation of artificial carbonated mineral waters for medicinal use and cordials. "The author repeatedly cites Bergman and his analyses of mineral waters. The last part of the book describes the author's improved eudiometer, giving detailed instructions on its use, emphasizing the elimination of experimental errors. In place of the description of a second eudiometer, which was included in earlier editions, the author inserts his reply to criticisms of his eudiometers made by Cavallo in his *Treatise on the nature and properties of air*, 1781. A description of an inexpensive eudiometer is added at the end" (Cole). The frontispiece is a slightly reworked version of that in the first edition of 1777. Magellan also published useful books on scientific instruments, elementary fire, specific heat, etc., and translations of mineralogical works by Cronstedt et al. (Blake, 282; Cole, 898; Duveen, 379; Neu, 2593; Wellcome, IV, 24)

MAGIRUS, Johann

Physica Peripatetica ex Aristotele, ejusque interpretibus collecta, & in sex libros distincta, in usum Acad. Marburgensis, . . .

Frankfurt: Ex Officina D. Zachariae Palthenii. 1600.

Second edition. 8vo. 8 leaves, 367, (1) pp., 9 leaves; 69, (1) pp. Woodcut printer's device on title page. Fine copy, in original unlettered vellum.

MAGIRUS (d. 1596), professor of medicine at the University of Marburg, was a neoscholastic commentator. In his posthumously published textbook he discusses the philosophy of classical authors (e.g., Aristotle and Plato), as well as the teachings of more recent writers (e.g., Hermolaus

Barbarus and Scaliger). Newton studied this work: "While still an undergraduate, he . . . studied the Aristotelian (or neo-Aristotelian) theory of motion and he is known to have read Magirus' *Physiologiae peripateticae libri sex*. . . Extracts from Magirus occur in a notebook begun by Newton in 1661" (D.S.B., X, 60). The book deals extensively with almost every scientific subject: anatomy, astronomy, botany, physics (lightning, magnetism), meteorology, zoology, etc. Of chemical interest are descriptions of minerals, metals, acids, alkalies, salts, oils, etc. This treatise became essential reading for university students and was highly recommended. The first edition, with slightly different title (*Physiologia peripatetica ex Aristotele ejusque . . . collecta*, Frankfurt, 1597; Poggendorff, II, 12), was followed by the present edition, with dedication signed by Magirus and dated July 1596. At the end is a sixty-nine-page tract on artificial memory, also by Magirus, not mentioned on the title page. The added tract has separate signatures and pagination. Both the first and second editions are very rare, and neither is in the British Library. Thorndike (VII, 417) used a later edition, with preface dated 1 April 1600. Several other editions appeared, for which see Neu, Waller, and Wellcome. No reference to the present (1600) edition has been traced.

MAGNI PHILOSOPHORUM

Magni Philosophorum Arcani Revelator. Quo Hermetis Discipuli, Magnique Scrutatores Operis omnia ad suum laborem necessaria, clarissime explicata invenient. Tractatus contentos proxima indicat pagina.

Geneva: Apud Samuelem De Tournes. 1688.

First edition. 12mo. 1 leaf, (1-8), 9-490 pp., 5 leaves. Woodcut portrait of Hermes Trismegistus on title page, and 1 folding plate of chemical apparatus (facing p. 302). Some early underlining on a few pages; otherwise very good copy, in calf antique, green morocco label.

A RARE COLLECTION of five alchemical tracts, all published here for the first time. They are I. *Pretiosissimi Arcani Arcanorum et Philosophorum Magisterii Verissima ac Purissima Revelatio. De Transmutatione Metallorum* (pp. 1-304); II. *Opus Philosophicum quod Opus Iovis nuncupatur, cum aliis Operibus Particularibus de Transmutatione Metallorum* (pp. 305-367); III. *Liber de Septem Verbis Philosophorum cum explicatione, in quibus totum Opus Philosophicum continetur* (pp. 369-420); IV. *Reverendissimi Archipresbyteri Magistri Antonii de Abatia Epistolae Duae, Scrutoribus Artis Chymicae mandatae* (pp. 421-472); followed by, *Hic quaedam sunt Annotationes in duas Epistolas Reverendissimi Magistri Antonii de Abatia* (pp. 473-482); V. *Arcanum a quodam Philosopho anonymo deductum* (pp. 483-490). (Duveen, 379; Edelstein, 1517; Ferguson, II, 62; Ferguson Coll., 438; Neu, 2598; Waite, 292)

MAIER, Michael

Atalanta Fugiens, hoc est, Emblemata Nova de Secretis Naturae Chymica, . . . Authores Michaelae Majero . . .
Oppenheim: Ex typographia Hieronymi Galleri, Sumptibus Joh. Theodori de Bry. 1618.

First edition, first issue. 4to. 211, (3) pp., 1 leaf (blank). Title within engraved emblematic border. With 50 fine plates (first 10 in contemporary colors), symbolical or illustrating alchemical operations. Musical notation in letterpress. Page 11 blank (as in all copies of first issue). Fine copy in original mottled calf, spine gilt in compartments.

ONE OF the most famous and beautiful works in the history of alchemical literature, and one of the very few copies to survive in its original binding. The first issue of the first edition with the title dated 1617 is described by Duveen as being “of the utmost rarity.” The present copy has the title in the second state, dated 1618, in roman numerals, the final “I” being in slightly heavier type; it is otherwise identical to the first state of the first issue, including the blank page 11. In the second issue of 1618 the blank page 11 has a full-page engraved portrait of Maier. Evidently the portrait was not ready when copies of the first issue were printed: page 12 (the verso of p. 11) is printed with music and text. Duveen describes his copy at length, emphasizing its extreme rarity. The present first issue, with ten plates in contemporary coloring, is also of the greatest rarity and is possibly unique in this respect. The Mellon copy is of the second issue, with the portrait of Maier. The work was reprinted as *Scrutinium Chymicum* (Frankfurt, 1687), omitting the engraved title, music, and part of the text. Not in Cooper, Guaita, Hall, Krivatsy, Verginelli, Waller, etc. (Bolton, 1002; Caillet, 6988; D.S.B., IX, 24; Duveen, 381; Ferchl, 348; Ferguson, II, 62–63; Ferguson Coll., 438; Gardner, I, 428; Mellon, 76; Neu, 2602; Rosenthal, 566; Watt, II, 635f)

MAIER, Michael

Scrutinium Chymicum, per Oculis et Intellectui accurate accommodata, figuris cupro appositissime incisa, ingeniosissima Emblemata, . . . item Epigrammata, Illustratum. . .
Frankfurt: Impensis Georgii Heinrici Oehrlingii, Bibliopolae. Typo Johannis Philippi Andreae. 1687.

Second (first Frankfurt) edition. 4to. 4 leaves, 150 pp., 1 leaf (blank). With 50 beautiful emblematic copperplates (by Johann Theodor de Bry) illustrating mythologically and allegorically various chemical and alchemical processes. Lacking half title; otherwise very good copy in original unlettered vellum.

ONE OF the most remarkable books in the whole of alchemical literature, this is a reprint of *Atalanta Fugiens* (Oppenheim, 1617, second issue, 1618; D.S.B., IX, 24). It

has a differently worded title and omits the engraved title (with Maier’s portrait), the music, the *Epigramma Authoris*, and the *Epistola dedicatoria*. The magnificent series of copperplates appears here in excellent impressions. They are “designed largely to illustrate the supposed relationships between alchemical doctrines and classical mythology. Each engraving is provided with a cryptic title, a discourse, and a Latin epigram written in elegiac couplets” (John Read, who discusses the book in detail and reproduces some of the plates [see *Prelude to Chemistry*, 1936, pp. 236–245]). The original copperplates by de Bry (1561–1623) were preserved long after he died and used in later works (e.g., the present book). Not in Edelstein, Guaita, Partington, Smith, Watt, etc. (Bolton, 1003; Brunet, III, 1313; Caillet, 6996; Cole, 900; Duveen, 384; Ferchl, 348; Ferguson, II, 64; Ferguson Coll., 439; Hall, 103; Krivatsy, 7277; Neu, 2609; Rosenthal, 571; Thorndike, VII, 172; Verginelli, 209; Waller, 11191)

MAIER, Michael

Viatorium, hoc est, de Montibus Planetarum, septem seu Metallorum; Tractatus tam utilis, quam perspicuus, quo, ut Indice Mercuriali in triviis, vel Ariadne filo in Labyrintho, seu Cynosura in Oceano Chymicorum errorum immenso, quilibet rationalis, veritatis amans, ad illum, qui in montibus sese abdidit De Rubea-petra Alexicacum, omnibus Medicis desideratum, investigandum, uti poterit.

Rouen: Sumpt. Joannis Berthelin, in area Palatii. 1651.

Second (first Rouen) edition. 8vo. 224 pp. With engraved title page in compartments (incorporating portrait of Maier, and gods and goddesses representing the 7 metals), and 7 large engravings in text. Alchemical woodcut on letterpress title. Minor browning of some leaves; otherwise fine copy, uncut with wide margins (thus rare), in eighteenth-century quarter vellum, marbled boards.

MAIER (1568–1662), a physician in the service of Emperor Rudolf II and of the landgrave of Hesse, became interested in Rosicrucian alchemy. All of his books on this subject appeared between 1616 and 1619, with later reprints. His *Viatorium* (first: Oppenheim, 1618, 4to.; D.S.B., IX, 24) is here reprinted in 8vo. format with the plates reengraved. The book deals with the seven metals, according to their planetary symbols, from the alchemical and Rosicrucian standpoint. It is one of his most important works, “in which he deliberates why lead and copper weigh more after being roasted (as Lazarus Ercker had observed). . . . The writings of Maier were highly valued and popular among alchemists” (D.S.B.). The author’s works are extensively discussed by John Read (*Prelude to Chemistry*, London, 1936, pp. 228–246). All of his books are now rare. Not in Krivatsy, Mellon, Partington, Watt, etc. (Bolton, 1004; Caillet, 7006; Duveen, 383; Ferchl, 348; Ferguson, II, 65; Ferguson Coll., 441;

Guaita, 544; Hall, 111; Neu, 2616; Rosenthal, 579; Smith, 312; Verginelli, 208; Waller, 11191a)

MAIRAN, Jean Jacques d'Ortous de

Dissertation sur la Cause de la Lumière des Phosphores et des Noctiluques. Qui a remporté le Prix à l'Académie Royale des Belles Lettres, Sciences & Arts de Bordeaux, pour l'année 1717. . . .

Bordeaux: Chez R. Brun, Imprimeur de l'Académie Royale, rue Saint James. 1717.

Second (first Bordeaux) edition. 12mo. 2 leaves, 54 pp. Very good copy, in dark-brown quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original marbled wrappers bound in.

ONE OF the earliest prizes of the Bordeaux Academy of Science was awarded to Mairan for his essay on the subject of luminescence. His essay had first appeared as a fifty-four-page tract two years earlier (Paris, 1715) but was submitted to the academy in 1717 for the prize. Mairan discusses the two current theories of the nature of light (particle and wave) and maintains that light comprises an effusion of particles from the object being viewed. "He believed that the light substance . . . consisted of sulphur, very subtle and very restless. . . . It alone of the five principles (sulphur, salt, earth, water, and mercury) known to chemists has the property of acting on and transmitting its action to other substances.' De Mairan stated that the words 'Phosphores' and 'Noctiluques' would be used synonymously" (E. N. Harvey). Phosphorescent substances are classified as naturally occurring and man-made. Rare. (D.S.B., IX, 34; E. N. Harvey, *History of Luminescence*, 1957, pp. 151–154; Poggendorff, II, 17; Watt, II, 635x)

MAIRAN, Jean Jacques d'Ortous de

Dissertation sur la Glace, ou explication physique de la formation de la glace, & de ses divers phénomènes. . . .

Paris: De l'Imprimerie Royale. 1749.

First illustrated edition. 12mo. xxix, (11), 384, xx pp. With engraved frontispiece and 5 folding engraved plates. Very good copy in contemporary tree calf (repaired), spine richly gilt, maroon morocco label. The Denis I. Duveen copy, with his maroon bookplate on front pastedown endpaper.

THE FIRST edition of this book on the formation of ice was published at Bordeaux, 1716, and was awarded the prize of the Bordeaux Royal Academy of Sciences. Further editions appeared at Béziers (1717) and Paris (1729, 1737, and 1749). The present considerably enlarged and first illustrated edition contains a section on the cooling produced in liquids by evaporation (pp. 248–257), with details of quantitative

experiments. The plates depict forms of snow and ice crystals, the probable arrangement of water molecules to produce these crystal shapes, etc. Of historical interest are discussions of freezing mixtures, niter, sal ammoniac, effects of cold on metals, crystallization, thermometers, barometers, and other subjects connected with the behavior of materials at low temperatures. References are given to the works of earlier and contemporary authors, including Boyle, Boerhaave, Newton, Hauksbee, and Reaumur. A later edition appeared (Lucques, 1757), augmented by a section on the thermometers of George Martine. Not in Blake or most chemical bibliographies. (D.S.B., IX, 34; Duveen, 386; Honeyman, 2113; Hoover, 554; Partington, III, 153; Poggendorff, II, 17; Sotheran, Cat. 734 [1913], 11305)

MAIRAN, Jean Jacques d'Ortous de

Dissertation sur la Glace, ou explication physique de la formation de la glace, & de ses divers phénomènes. . . . Nouvelle édition augmentée d'un Discours sur la Construction, & la Comparaison des Thermomètres par M. Martine. . . .

Lucca: chez Philippe M. Benedini, et se vend par Vincent Giuntini. 1757.

First edition published in Italy. 2 vols., 8vo. I: 1 leaf, lxxxix, (1) pp., 1 leaf (blank), 103, (1) pp., 5 leaves (index) + lvi pp. (Martine). II: 300 pp. With 5 folding engraved plates (including thermometric scales) at the end of volume I. Apart from pages xxv–lvi of Martine being misbound after page xxiv of the preface to Mairan, fine copy, uncut with wide margins, in quarter calf antique, marbled boards, maroon labels, spines dated, original marbled wrappers bound in.

THE ONLY edition to be published in Italy, it is also the only edition to include the important work on thermometers by George Martine (1702–1741). Originally included on pages 175–214 of Martine's *Essays medical and philosophical* (London, 1740), the *Essay on the construction and graduation of thermometers* appears here as the first translation into the French language. The work "was in advance of its time. Martin came out strongly for the necessity of two fixed points, one being the boiling point of water . . . the other the temperature of ice beginning to melt." (Middleton, *History of the Thermometer*, p. 116.) Rare. Not in the usual bibliographies. (Sotheran, Cat. 734 [1913], 11306)

MAIRAN, Jean Jacques d'Ortous de

Dissertation sur les Variations du Barometre, qui a remporté le prix à l'Académie Royal des belles Lettres, Sciences & Arts de Bordeaux. Par Monsieur d'Ortous de Mayran, de Beziers. 1715.

Bordeaux: Chez R. Brun, Imprimeur & Libraire de l'Académie. 1715.

First edition. 12mo. 1 leaf (blank), 1 leaf (title), 82 pp., 1 leaf (blank). Very fine copy in the original speckled calf, spine gilt, maroon morocco label.

THE FIRST major work of Mairan (1678–1771), which received the prize for 1715 from the Royal Academy of Belles-Lettres, Sciences, and Arts of Bordeaux. Mairan was also awarded prizes from the academy for his work on ice (*Dissertation sur la glace*, 1716) and phosphorescence (*Dissertation sur . . . phosphores*, 1717). As the result of being crowned for three successive years by the academy, he was appointed a censor of the society. In 1718 he moved to Paris, where he became a member of the Academy of Sciences. Thus he began a long and distinguished career in science. Newton, Huygens, Descartes, Marriotte, Rohault, et al., are cited in this important dissertation on barometers and the causes of changes in the pressure of the air. Boyle is not mentioned, but there are discussions of chemical reactions, subterranean fires, and other topics. Although almost entirely on barometers, this work is not mentioned by W. E. Knowles Middleton, probably owing to its considerable rarity. Not in Blake, Partington, Waller, etc. (D.S.B., IX, 34; Poggendorff, II, 17; Watt, II, 635x)

MAIRAN, Jean Jacques d'Ortous de

Eloges des Académiciens de l'Académie Royale des Sciences morts dans les années 1741, 1742, & 1743. Par M. Dortous de Mairan . . .

Paris: Rue Saint Jacques, Chez Durand, Libraire, au Griffon. 1747.

First edition. 12mo. 4 leaves, 360 pp. With allegorical frontispiece (E. S. Fessard sculp. 1747). Minor marginal water stains; otherwise good copy in original mottled calf, gilt, maroon morocco label.

AN IMPORTANT series of obituaries and eulogies of members of the Paris Royal Academy of Sciences. "Mairan was secretary of the Academy from 1741 to 1743, succeeding Fontanelle, and he was made pensionnaire geometrie in 1746" (D.S.B.). The *Éloges* in this volume include François Pourfour-du-Petit (1664–1741), Melchior de Polignac (1661–1741), Gilles-François Boulduc (1675–1742), Edmond Halley (1656–1742), François de Bremond (1713–1742), Joseph Privat de Molieres (1677–1742), François-Joseph Hunauld (1701–1742), André Hercule de Fleury (1653–1743), Jean-Paul Bignon (1662–1743), and Louis Lemery (1677–1743), son of the great chemist Nicolas Lemery (1645–1715). The book is valuable for its biographical information and for the bibliography of each of the authors discussed. (Poggendorff, II, 17; Roller & Goodman, II, 152; Watt, II, 635x; Wellcome, IV, 31)

MAIRAN, Jean Jacques d'Ortous de

Lettre de M. De Mairan, Secrétaire Perpetuel de l'Académie Royale des Sciences, &c. a Madame La Marquise Du Châtelet. Sur la Question des Forces Vives, en réponse aux Objections qu'elle lui a fait sur ce sujet dans ses Institutions de Physique.

(Colophon: Paris, 4 mars 1741).

First edition. 8vo. 38 pp., 1 leaf (blank). Fine copy, bound with 2 works by Gabrielle-Émilie Châtelet, in contemporary calf.

IN HER book *Institutions de Physique* (1740), Madame du Châtelet had included a chapter on the problem of *forces vives* in which she vigorously defended Leibniz's point of view and severely criticized a memoir of 1728 by d'Ortous de Mairan that condemned this principle. Mairan replied to this in the present memoir, to which Madame du Châtelet answered with a very direct attack in her *Réponse de Madame *** à la lettre que M. de Mairan . . . lui a écrite le 18 Février, 1741, sur la question des forces vives* (Bruxelles, 1741). (D.S.B., III, 216; Poggendorff, II, 17; Waller, 11392 [different pagination: (2), 52 pp.]; Watt, II, 635x)

MAIRAN, Jean Jacques d'Ortous de

Traité Physique et Historique de l'Aurore Boréale. . . Suite des Mémoires de l'Académie Royale des Sciences. Année M.DCCXXXI.

Paris: De l'Imprimerie Royale. 1733.

First edition. 4to. 4 leaves, 281, (1) pp. With 15 folding plates (Ph. Simonneau Sculp.). Woodcut on title page. Few pages with very light browning; otherwise fine, large-paper copy, in original mottled calf, rebounded, contemporary maroon morocco label, each cover with armorial crest in gilt. From the library of the celebrated zoologist Charles Atwood Kofoid (1865–1947), with his bookplate.

MAIRAN'S EARLY interest in luminescence led him to prepare this work, the first comprehensive treatise on the aurora borealis. He attributed the phenomenon to an extension of the Sun's atmosphere, which at times enveloped Earth and blended with our atmosphere. Although primarily on physics, Mairan suggests that the aurora may be due to chemical reactions of the upper atmosphere. He records 229 displays of the aurora dating from A.D. 502 until 1731. There are many references to Cassini, Descartes, Euler, Newton, et al. Like Halley before him, Mairan sought a mechanical explanation of the aurora, and he speculated that perhaps the solar atmosphere was the cause of sunspots. No one took him up on this, and it was a century before the solar cycle was discovered. With its excellent plates, this book illustrates very well the eighteenth-century view on the nature of matter and light, problems to

which at the time scientific knowledge was unable to supply the correct answers. An enlarged edition with new material and seventeen plates appeared (Paris, 1754; Wheeler Gift, 382). Harvey presents an excellent discussion of both editions. Benjamin Franklin owned a copy of the second edition (Gartrell, 337). (D.S.B., IX, 33; Ekelöf, 17; Harvey, 258; Honeyman, 2112; Poggendorff, II, 17; Watt, II, 635x; Wolf, II, 305)

MALBEC DE TRESFEL, Jean

Abregé de la Theorie, et des Veritables Principes de l'Art appellé Chymie, qui est la troisième partie ou colonne de la vraie Medecine Hermetique. Divisé en deux Parties. Qui sont Theorie & Pratique. Où l'on void clairement les abus de la fausse Chymie, les principes de la veritable, & les raisons du mépris qu'on en fait aujourd'huy. . . .

Paris: Chez l'Auteur, ruë Mazarin, derriere le College des Quatre Nations. 1671.

First edition. 2 parts in 1 vol., 12mo. 84 + 116 pp. (separate signatures to each part). Fine copy in late-nineteenth-century quarter morocco, boards, spine richly gilt.

AN ALCHEMICAL work privately printed in a small number of copies for the author. The first part, dealing with theoretical principles, covers the animal, vegetable, and mineral kingdoms; the five constituents (phlegm, terre damné, salt, sulphur, and mercury); fire (a fourth invisible element); and the Paracelsian principles. Preparations based on metals, particularly antimony, are praised for their medicinal benefits. Four main processes—dissolution, distillation, sublimation, and calcination—are discussed. The second part deals with practical chemistry, including the preparation of acids, bases, and salts. This work, “remarkable for its lucidity” (Duveen), is dedicated to Antoine Vallot, first physician to Louis XIV. It is interesting for providing details on the sophistication practiced by the apothecaries of the time. Thorndike discusses the book at length. Not in Caillet, Ferguson, Krivatsy, etc. (Cole, 903; Dorbon, *Bibl. Esoterica*, 2863 [“Très rare ouvrage”]; Duveen, 386 [“Very rare”]; Ferchl, 335; Ferguson Coll., 442; Neu, 2621; Partington, III, 28; Rosenthal, 583; Thorndike, VIII, 367–370)

MALBEC DE TRESFEL, Jean

Recueil des Remedes et Secrets tirez des memoires de Mr. le Chevalier Digby, Chancelier de la Reyne d'Angleterre. Avec plusieurs autres Secrets & parfums, tous experimentez. Dedié a Mr. Bourdelot, par Jean Malbec De Trefel [sic], Medecin Chimique.

Paris: L'Auteur, . . . et Mille de Beaujeu, . . . 1669.

First edition. 8vo. 7 leaves, 359 pp., 1 leaf. Fine copy in contemporary calf, maroon label, spine richly gilt.

A VALUABLE COLLECTION of the main chemical and pharmaceutical secrets of Sir Kenelm Digby, plus secrets gathered from other authors, translated into French by Jean Malbec de Tresfel, a doctor of chemical medicine. “Under Digby’s name there appeared certain books of secrets in French and German, but they are not translations of this collection of Hartman’s, although they contain a good many of his ‘choice receipts’” (Ferguson, *Books of Secrets*, I, Part VI, 20–21). By this statement Ferguson meant that the present title is not the French translation of George Hartman’s *Choice and experimented receipts in physick and chirurgery* (London, 1668). Ferguson continues: “The French version was made by Jean Malbec de Tresfel, the royal privilege for seven years is dated 1668, but I do not know if the book first came out then. The copies I have seen are of a later time.” Ferguson was writing in 1888, and it is obvious that he was unaware of this edition. Ferchl (p. 125) states that there were two printings in 1669, and these were followed by several later editions. Goldsmith (D609–D611) lists only the editions of 1671, 1684, and 1700. Caillet and Guaita describe this edition as “fort curieux et rare.” Not in Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Partington, Smith, Thorndike, Waller, Watt, etc. (Caillet, 7040; Ferchl, 125, 335; Guaita, 1877; Neu, 1146; Wellcome, II, 469)

MALBEC DE TRESFEL, Jean

Remedes Souverains et Secrets Experimentez, de M. Le Chevalier Digby, Chancelier de la Reine d'Angleterre. Avec plusieurs autres Secrets & parfums curieux pour la conservation de la beauté des Dames. Nouvelle Edition.

Paris: Chez Guillaume Cavellier, au quatrième Pillier de la grande Salle du Palais, à la Palme. 1689.

12mo. 2 leaves, 300 pp., 14 leaves. Good copy in contemporary calf, gilt, maroon morocco label. Bound with: Le Clerc, Charles Gabriel, *Le medecin aisée* (Paris: E. Michallet, 1697). Seventeenth-century note in ink on rear pastedown endpaper: “Ce livre apartien a moy Delmar etudiant en chirurgie a Bourdeaux Delmar.”

COMPARISON of Malbec de Tresfel’s *Recueil des remedes et secrets* (Paris, 1669) with the present work reveals that the texts are identical; however, this edition contains an additional section (pp. 277–300), viz. “Secrets pour la conservation de la beauté des dames; l’usage du quinquina, ou remede contre toutes sortes de fievres; remede du Prieur de Cabrieres, pour les descentes; & maniere de traiter les descentes.” In 1888 Ferguson (*Books of Secrets*, I, Pt. VI, 21) described other editions of Utrecht (1681), Paris (G. Cavellier, 1684), and a “sixième edition” of La Haye (1700). By 1894 Ferguson (*Secrets*, II, 3rd Supplement, 51) was able to describe the present edition of 1689, a later French edition

(La Haye, 1715) and two Dutch translations (Amsterdam, 1697 and 1727). Rare. Not mentioned by Bolton, Caillet, Cushing, Duveen, Ferchl, Ferguson, Goldsmith, Guaita, Neu, Osler, Partington, Waller, Watt, Wellcome, etc., although some of these authorities list the Paris (1684) edition. (Ferguson Coll., 193; Smith, 149)

MALLEEN, Jacob

Observationes Mineralogico Metallurgicae de Monte Cupifero Tulas Wuori . . . praeside . . . Petro Adriano Gadd . . . pro gradu Publico Examine submittit Stipendiarius Regius Jacob Malleen, Filius Tavastia Fenno . . . in Auditorio Majori Die XIX Junii Anni MDCCLXIX.

Åbo: Impressit Joh. Christoph. Frenckell. (1769).

First edition. 4to. 12 pp. Very good copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadd. Nine Dissertations. 1759–1778.

A DISSERTATION OF chemical interest on mineralogy and metallurgy, presented by Malleen under the direction of Pehr Adrian Gadd at Åbo. Sulphide ores containing copper, iron, and lead (e.g., chalcopyrites, iron pyrites, and galena) found in Finland are described. Other minerals discussed include basalts, feldspars, mica, quartz, and steatite. (Ferchl, 169; Partington, III, 179; Poggendorff, I, 826)

MALLEMENT DE MESSANGE, Claude

L'Ouvrage de la Creation. Traitté Physique du Monde. Nouveau Systeme. Raisonemens differens de ceux des anciens & des nouveaux Philosophes. Par Monsieur Mallement de Messange.

Paris: Chez la veuve Claude Thiboust et Pierre Esclassan Libraire Iuré & ordinaire de l'Universite, ruë S. Jean de Latran, devant le College Royal. 1679.

First edition. 8vo. 22 leaves, 260, (4) pp. With 2 full-page and 2 half-page engravings, and 2 woodcuts in text. Woodcut on title page, engraved headpiece, woodcut head- and tailpieces, historiated initials. Fine copy in original dark-red morocco, all edges gilt, triple gilt fillets on covers, gilt ornaments at all corners, wreathed and crowned arms of d'Hennequin in gilt on both covers, spine gilt. From the library of the theologian Claude d'Hennequin (1654–1738), whose family produced a number of scholars in the seventeenth and eighteenth centuries.

A TREATISE ON astronomy, cosmology, and physics, of peripheral chemical interest, by Mallement (1653–1723), a priest and “a follower of Descartes” (Thorndike). Toward the beginning of a thirty-four-year career teaching natural philosophy at the University of Paris, the author published a twenty-two-page pamphlet entitled *Nouvelle Systeme du Monde* (Paris, 1678, 4to.). The following year he expanded

his ideas in the present work, in which he interprets the book of Genesis according to the principles of Descartes. He describes the six days of creation, the system of planets and stars, the universe, the nature of light, fire, subterranean forces, etc. Celestial movements are explained by means of vortices or “tourbillons.” Mallement's career and this work correspond with the beginning of the critique that overthrew Cartesianism as a system of natural science by the first decade of the eighteenth century and gradually established Newtonian physics in France. Thorndike discusses the contents of this work. Mallement also published tracts on comets, magnets, and the squaring of the circle. An extremely rare book with a distinguished provenance. Not in N.U.C. (Goldsmith, M248; Pmggendorff, II, 26; Thorndike, VIII, 339–341)

MALLINCKRODT, Wilhelm

Dissertatio Inauguralis Philosophica qua Genesis Lapidum Variis Observationibus Illustratur. . . Praeside . . . Ioanne Ioachimo Langio . . . Die (blank) Ianuar. Anni MDCCLVI. Publice defensa ab auctore respondente Wilhelmo Mallinckrodt Tremoniensi Guestphalo . . .

Halle: Literis Hendelianis. (1756).

First edition. 4to. 30 pp., 1 leaf. Woodcut capitals, head- and tailpieces. Fine copy in cloth antique, spine ink-lettered and dated.

A DISSERTATION ON the chemistry of the formation of stones, by Mallinckrodt (dates unknown), presented under the direction of Johann Joachim Lange (ca. 1698–1765), professor of philosophy and mathematics at Halle. In thirty-eight paragraphs the author cites the works of Bartholin, Boyle, Hales, Henckel, Mairan, Pott, Zimmermann, and others. Lange published several works on mineralogy and a textbook on chemistry: *Grundlegung zu einer chemischen Erkenntniss der Körper* (Halle, 1770; Cole, 751). (Ferchl, 294; Poggendorff, I, 1369)

MALM, Eric

Dissertatio Gradualis, de Refractionibus Crystalli Islandicae, . . . moderante Mag. Samuele Duraeo, . . . publice ventilandam exhibit, alumnus regius, Ericus Malm, Sudermannus. . . X. Junii. Anni MDCCLXI. . .

Uppsala. (1761).

First edition. 4to. 10 pp. With engraved plate depicting 3 figures. Large woodcut capital and headpiece. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

ON THE double refraction of Iceland spar (crystallized calcium carbonate), with references to the works of Bartholin,

116 NOUVEAV SYSTEME

Explication de l'Apogée.

Cette figure, dont le plus grand cercle represente l'orbe de la terre, & le plus petit l'orbe du Soleil, fait voir combien est juste & mécanique la raison par laquelle j'explique dans mon Hypothese l'Apogée & le Perigée, qui ont fait admettre dans tous les Systèmes des excentricitez si peu conformes aux regles du mouvement. Car si le Soleil est en *a*, & la terre en *a*, le Soleil sera dans le Perigée. Et comme il fait deux tours
contre

Huygens, Newton, et al. Malm (dates unknown) mathematically analyzes the refraction of the ordinary ray, which obeys Snell's law, and the extraordinary ray, which does not. Both types of ray are shown in the figures. No reference to Malm or this important thesis on the phenomenon of double refraction has been found.

MALOUIN, Paul Jacques

Chimie Médicinale, contenant la maniere de préparer les Remedes les plus usités, et la méthode de les employer pour la Guérison des Maladies. Par M. Malouin . . . Nouvelle Édition.

Paris: Chez la Veuve d'Houry Imprim. Lib. de Mgr. le Duc d'Orleans, rue S. Severin près la rue S. Jacques. 1755.

Second edition. 2 vols., 12mo. I: 1 leaf, xiv, 630 pp., 1 leaf (errata). II: viii, 590 pp., 3 leaves. Very good copy in original mottled calf, spines richly gilt, maroon morocco labels. Engraved eighteenth-century armorial bookplate: Marchionis Salsae.

MALOUIN (1701–1778), professor of chemistry at the Jardin du Roi (1745), F.R.S. (1753), was physician to the queen of France. He contributed chemical articles to the first *Encyclopédie* and published works on medicine. In the present book on pharmaceutical chemistry (first: Paris, 1750, 2 vols., 12mo.; Smith, 312), he describes the basic processes involved in the preparation of inorganic and organic compounds from mineral, plant, and animal sources. Clear directions are given for making salts and a number of organic compounds. The first volume includes sections on milk, wines, and spirits. This (final) edition was translated into German by G. H. Königsdörfer as *Die medicinische Chemie* (Altenburg, 1763–64, 2 vols., 8vo.). Malouin had earlier published a *Traité de Chimie* (Paris, 1734, 2 vols., 12mo.; Duveen, 387), mainly concerned with pharmaceutical chemical preparations. Bolton and Poggendorff wrongly give the date of the present edition as 1756. (Blake, 285; Bolton, 650; D.S.B., IX, 62; Ferchl, 335; Partington, III, 72; Poggendorff, II, 29; Wellcome, IV, 37)

MALTHUS, Francis

Pratique de la Guerre. Contenant l'Usage de l'Artillerie, Bombes & Mortiers, Feux Artificiels & Petards, Sappes & Mines, Ponts & Pontons, Tranchées & Travaux, avec l'ordre des assauts aux Brèches. Ensemble un Traité des Feux de Joye. Par Le Sieur Malthus . . .

Paris: Chez Gervais Clousier, au Palais, sur les degrez de la faincte Chapelle. 1650.

First edition, second issue. 4to. 4 leaves, 282 pp., 3 leaves (index). With splendid dedicatory engraved frontispiece, 30

detailed engravings (29 full page, 1 half page). Historiated woodcut capitals, fleurons, head- and tailpieces. Fine copy with wide margins, in original vellum, contemporary ink-lettering on spine.

THE FIRST issue of this definitive treatise by Malthus appeared four years earlier (Paris, I. Guillemont, 1646). The present volume comprises the sheets of the 1646 issue with a reset title page, plus a beautiful engraved frontispiece. The book contains the accumulated knowledge of this great military engineer (who was in the service of Louis XIII) concerning artillery, sieges, bridges, and the many uses of pyrotechnic devices in wartime. Numerous techniques are described for laying siege to fortresses and towns, including trenching and mining. The scientific principles of artillery and the manufacture and delivery of bombs are described. The final and longest section is on fireworks, their construction, and their decorative effects over castles and towers set against night skies. The superbly detailed engravings portray the making and use of grenades, bombs, mortars, etc. Extremely rare. Not in Cockle, *Military Books; Kat. der Ornamentstichsammlung Berlin*; or Spaulding & Karpinski, *Early Military Books*. (N.U.C. 358.69 [1 copy]; Goldsmith, M261; Philip, M040.8)

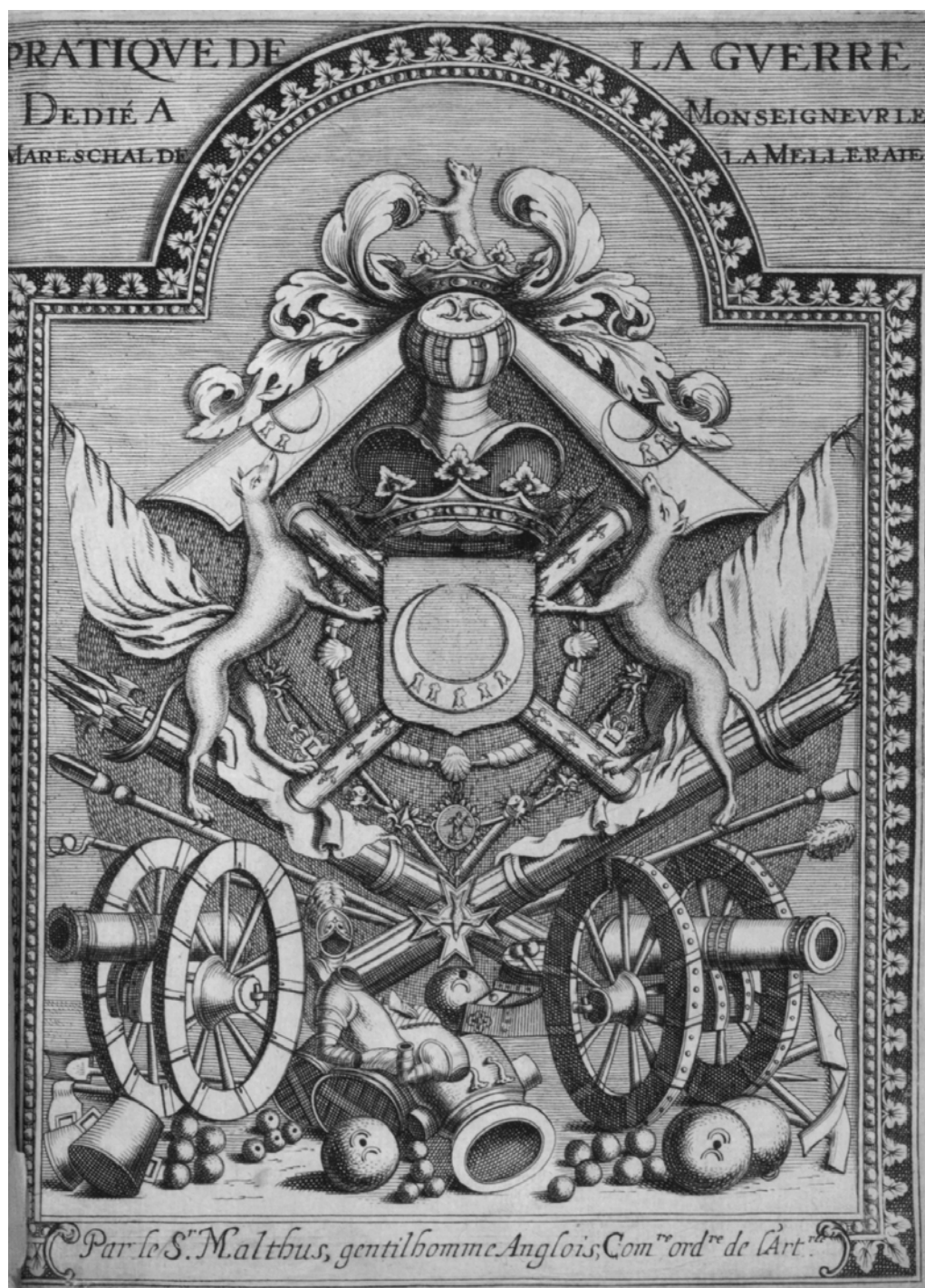
MALTHUS, Francis

Traité des Feux Artificiels pour la Guerre, et pour la Recreation; avec plusieurs belles observations, abreges de Geometrie, Fortifications, Horologes Solairs, & exemples d'Arithmetique. De nouveau reveu, corrigé, & augmenté par l'Auteur, François de Malthé, Commissaire des Feux Artificiels du Roy, & Mathematicien.

Paris: Chez Pierre Guillemot, au Palais, à la Gallerie des Prisonniers. 1632.

Second edition. 8vo. 4 leaves, 277, (9) pp., 1 leaf (privilege). With fine engraved title page, 28 copperplates (some full page), and 15 woodcuts in text. Woodcut capitals, head- and tailpieces. Light toning of paper; otherwise very good copy, in tan calf antique, spine gilt-ruled and dated.

THE REVISED and enlarged edition (first: Paris, P. Guillemot, 1629) of this treatise on fireworks for war and recreation. It is dedicated to Cardinal de Richelieu. Little information is recorded of Malthus (fl. 1629–ca. 1681), an “English nobleman [who held] an important position in the French army” (Zeitlinger). The first section (pp. 1–56) describing fireworks used in war is followed by a long account of the composition and manufacture of fireworks for pleasure (pp. 57–130). The third section (pp. 131–171) covers “practical geometry” (techniques for determining the heights of buildings). The remaining sections discuss fortifications, solar clocks (sundials), and elementary arithmetic for use in the



Malthus. Pratique de la Guerre. Paris, 1650.

field. The privilege is dated 24 December 1628. Interesting for the detailed copperplates, one of the chapters describes a "Méthode très-violente pour porter le feu dans une ville." Further French editions appeared in 1633, 1640, and 1641. The first edition of 1629 was translated into English as *A Treatise of Artificial Fire-works both for Warres and Recreation* (London, 1629). Not in the British Library (1633 edition only). All editions are rare. (Brock, *Pyrotechnics*, 1922, p. 122; Goldsmith, M263; Philip, M040.3; Sotheran, *Bibl. Chem.-Math.* [1921], 11328 ["Rare"]; Weil, Cat. 10, 184a)

MANGET, Jean Jacques

Bibliotheca Chemica Curiosa, seu Rerum ad Alchেমiam pertinentium Thesaurus Instructissimus: . . . Artis Auriferæ . . . Tractatus omnes Virorum. . .

Geneva: Sumpt. Chouet, G. De Tourne, Cramer, Perachon, Ritter, & S. De Tourne. 1702.

First edition. 2 vols., folio. I: 10 leaves, 938 pp. II: 2 leaves, 904 pp. Title of volume I in red and black. Engraved portrait frontispiece of Manget and 30 full-page engraved plates, plus woodcuts in text. Usual mild embrowning (owing to quality of paper); otherwise magnificent copy in original mottled calf, spines richly gilt, citron morocco labels.

THE MOST complete collection of alchemical texts ever published, in which 140 treatises are reproduced. Many of the original texts are now impossible to obtain or are lost, so this compilation is of the greatest importance to the historian of alchemy and early chemistry. Bolton and Ferguson list the contents of these volumes. This copy includes the fifteen beautiful plates (sometimes missing) of the enigmatic *Mutus Liber* (silent book) in fine impressions at the end of volume I. These deal "in a unique way with the operations of the Grand Magistery leading up to the discovery of the Philosophers' stone" (Read, *Prelude to Chemistry*, pp. 155–160). Unquestionably, this is the rarest and most important of Manget's works. "Ouvrage de la plus grande rareté" (Caillet). The compiler and editor, Manget (1652–1742), M.D. (Valence, 1678), was first physician to the king of Prussia. His collections and publication of large volumes on medicine and surgery are still very valuable sources of information. (Bolton, 1004–1013; Caillet, 7071; Duveen, 387; Edelstein, 1539; Ferchl, 336; Ferguson, II, 68–70; Ferguson Coll., 444; Heym, *Ambix*, vol. 1, p. 52; Mellon, 147; Neu, 2636; Poggendorff, II, 33; Smith, 313; Verginelli, 211; Waller, 11192; Wellcome, IV, 42)

MANGET, Jean Jacques

Bibliotheca Scriptorum Medicorum, veterum et recentiorum: in qua sub eorum omnium qui a mundi primordiis . . . Nominibus, Ordine Alphabetico adscriptis; Vitae compendio enarrantur; Opiniones, & Scripta . . . sicque Historia Medica Vere Universalis Exhibitur. Opus Doctis Omnibus, Maximeque Medicis Utile . . .

Geneva: Sumptibus Perachon & Cramer. 1731.

First edition. 2 vols. in 4 parts. Folio. I (pt. 1): 22 leaves, 587, (1) pp. I (pt. 2): 1 leaf, 789, (1) pp. Blank leaf between pp. 12–13 and engraved portrait (Guilielminus) facing p. 538. II (pt. 1): 1 leaf, lxxxviii, 570 pp. II (pt. 2): 1 leaf, 699, (1) pp. Blank leaf between pp. 12–13. Title page of volume I (pt. 1) in red and black. Each volume with large woodcut title-vignette (arms of king of Prussia), decorative headpieces and initials. Occasional very minor foxing; otherwise fine copy, uncut with wide margins, in brown library buckram, spines gilt-lettered and dated.

A MONUMENTAL ENCYCLOPEDIA history of physicians, chemists, and other scientists, from the Greeks and Romans to the first part of the eighteenth century. This treatise contains "the whole of Mercklin's *Lindenius renovatus*, with reprints of biographical notices and reviews from a variety of sources, and additional authors subsequent to Mercklin's time" (Ferguson, who refers often to this work). It is of considerable historical importance for biographical and bibliographical information on obscure chemists. Although rebound, this is possibly an early (review) copy, issued without a frontispiece of Manget but with a specimen portrait of Dominicus Guilielminus (1655–1710), a physician and professor of mathematics at Bologna. Some copies contain only the Manget frontispiece (e.g., Eales, Wellcome), while later issues (extra illustrated) contain up to sixteen portraits of physicians (e.g., Waller). The Blocker copy has no frontispiece or plates. (Blake, 285; Blocker, 257; Caillet, 7073; Eales, 1041; Ferguson, II, 71 [not in Young Coll.]; Waller, 18718; Watt, II, 639d; Wellcome, IV, 43)

MANLIIS DE BOSCO, Johannes Jacobus De

Luminare Maius Omnibus cum Medicis, tum Aromatariis per necessarium: in quo multa Clarissimorum Medicorum pharmaca, Nicolai Mutoni Medici Mediolanensis opera, nuper addita, & que prius extabant, ab infinitis quibus scatebant erroribus, purgata reperies: ut vere nunc illustris redditum, Luminare Maius appellari possit. In quo etiam duo sunt additi Indices, alter, ad minima quaeque simplicium nomina reperienda ante operis initium, Alter in fine libri, quid in unaquaque sectione contineatur amplissime declarans. Appositi etiam sunt duo illi libri aromatariis familiarissimi, Lumen Apothecariorum, et Aromatariorum Thesaurus.

Venice: Apud Juntas. 1549.

First edition edited by Nicolo Mutoni. Folio. 8 leaves, 198 folios (numbered on recto only), 3 leaves (last blank). Large woodcut printer's device on title page, repeated on verso of final leaf, and many fine historiated woodcut capitals. Colophon dated March 1549. Fine, crisp copy, in elaborately blind-stamped pigskin over wooden boards, with brass clasps (1 catch missing), front cover dated 1571. Bound with: Myrepsius, Nicolaus, *Medicamentorum Opus* (Basel, 1549).

MANLIUS DE BOSCO (fl. 1490) was a famous Italian physician, born in Alexandria, who lived in the last half of the fifteenth century. Many editions of this well-known and important work on materia medica and pharmaceutical chemistry appeared in Venice from about 1490. Enumerating twenty editions between ca. 1490–1566, Ferguson states that the “best edition of the *Luminare* is said to be that by Nic. Muttonus” (i.e., the present edition). On Nicolaus Mutoni see Ferchl (p. 376). The book is replete with descriptions of salts, acids, alkalies, minerals, organic compounds (extracted from plants and animals), and other materials used in medicines and pharmaceutical preparations of the period. There are numerous references to the works of Greek, Roman, Egyptian, Arabian, and European authors. A beautiful copy of a finely printed sixteenth-century pharmacopoeia. Very rare. Not in Bolton, Cushing, Duveen, Eales, Osler, Partington, Reynolds, Thorndike, Waller, etc. Other editions are listed by Durling, Edelstein, Ferguson Coll., Neu, Smith, Watt, and Wellcome. (Ferchl, 336; Ferguson, II, 73 [not in Young Coll.]

MANNERCRANTZ, Friedrich Wilhelm

Observationes Chemicæ de Antimonialibus Sulphuratis, quas venia Ampl. Fac. Phil., præsiede Mag. Torb. Bergman, . . . Publice ventilandam sistit Fred. Wilb. Mannercrantz. In Auditorio Gust. Majori die 10 Julii, anno 1782.

Uppsala: Apud Johan. Edman, Direct. et Reg. Acad. Typogr. (1782).

First edition. 4to. 2 leaves, 14 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation on the preparation and properties of antimony pentasulphide (Sb_2S_5), presented by Mannercrantz (dates unknown) under the direction of the great Swedish chemist Torbern Olof Bergman (1735–1784). The differences between various antimony compounds (e.g., oxides and sulphides) are carefully examined. Crude antimony, glass of antimony, liver of antimony, golden sulphur of antimony, and Kermes mineral are specifically discussed. The state of oxidation (calcination) of antimony and the amount of sulphur present are given as reasons to account for the differences in each compound described. A revised

version appeared in Bergman's *Opuscula physica et chemica* (Stockholm, 1783, vol. III). (Cole, 101; Edelstein, 1541; Ferchl, 37; Hoefer, II, 448; Moström, 210; Partington, III, 183; Poggendorff, I, 150; Waring, 245)

MANNI, Pasquale

Riflessioni Fisico-Chimiche di Pasquale Manni. Sopra la Meccanica Vegetazione delle Piante.
N.p., n.d. (Naples, 1789).

First edition. 8vo. viii, 62 pp., 1 leaf (blank). Fine copy with wide margins, in modern patterned boards.

A RARE WORK published on the eve of the Chemical Revolution of Lavoisier and his coworkers. The dedication is signed: Napoli 22 Maggio 1789. Of the author, Manni, nothing appears to be recorded. An adherent of the doctrine of phlogiston, on which he discourses extensively, he also notices the researches of Lavoisier and the antiphlogistic French school. Manni refers in passing to the works of many famous chemists: e.g., Bergman, Black, Crawford, Kirwan, Macquer, Priestley, Scopoli, and Senebier. The book deals principally with the chemistry occurring in plants: photosynthesis, evolution of oxygen and carbon dioxide, absorption of salts, etc. Manni puts forward his theories on the underlying physical and chemical processes involved in these phenomena. (Bolton, *First Supplement*, 284)

MANSFIELD, Charles Blachford

A Theory of Salts: a Treatise on the Constitution of Bipolar (Two-Membered) Chemical Compounds. By the late Charles Blachford Mansfield.

London: Macmillan and Co., 16, Bedford Street, Covent Garden. 1865.

First edition. 8vo. lii, 608 pp. With 2 folding plates. Mint copy, uncut, in original publisher's dark-orange cloth.

BORN IN Hampshire, Mansfield (1819–1855), a friend of Michael Faraday and A. W. Hofmann, was a technical chemist in London. He died at the early age of thirty-five, from burns he received while carrying a blazing naphtha into the street in an attempt to save the premises. Mansfield discovered a method for preparing pure benzene, toluene, xylene, and related compounds by the fractional distillation of coal tar, which “laid the necessary foundation for the development of the aniline industry” (Ernst von Meyer). In the present work, published posthumously with a biographical preface by the mineralogist M. H. Nevil Story-Maskelyne (1823–1911), Mansfield sets forth his theory of inorganic and organic salts with its unusual nomenclature. “A most important book on theoretical chemistry”

(Duveen). There is a considerable discussion of contemporary organic chemistry, with an attempt to relate organic structures to the inorganic salts. Toward the end an attempt is made to classify all salts (inorganic and organic) into a rational system. (Bolton, 652; Duveen, 388; Partington, IV, 435; Sotheran, Cat. 734 [1913], 11361)

MARANTA, Bartolomeo

Della Theriaca et del Mithridato Libri Due di M. Bartolomeo Maranta, a M. Ferrante Imperato; ne quali s'insegna il vero modo di comporre i sudetti antidoti, et s'esaminano con diligenza tutti i medicamenti che v'entrano.

Venice: Appresso Marcantonio Olmo. 1572.

First edition. 4to. 8 leaves, 280 pp., 14 leaves (index). Engraved title page, woodcut initials and headpieces. Two small marginal tears (pp. 23–26) with no loss of text and minor water stains; otherwise good copy in eighteenth-century speckled gilt-ruled calf, rebounded, maroon morocco label gilt. From the British Museum with withdrawal stamps (one dated 1787) and the Wellcome Library with withdrawal stamp on verso of title. M.B. (i.e., Museum Britannicum) in gilt on front cover.

MARANTA OF VENOSA (fl. 1559–1570), a celebrated physician, wrote a book on medicinal simples (*Metodo de' semplici medicaments*, 1558), another on the mineral waters of Naples (*De aquae Neapoli*, 1559), and the present work on antidotes to poisons, which is dedicated to the iatrochemist Ferranti Imperato (1550–1625). Of pharmaceutical chemical importance, antidotes to animal, vegetable, and mineral poisons are described. A translation into Latin by Joachim Camerarius appeared later (Frankfurt, 1576). Thorndike (VI, 258–261) discusses the works of Maranta. Rare. Not in the usual early chemical and medical bibliographies. (Durling, 2948; Ferchl, 337; Thorndike, VI, 258; Wellcome, I, 4037)

MARAT, Jean Paul

Recherches Physiques sur le Feu. Par M. Marat . . .

Paris: Rue Dauphine; Chez Cl. Ant. Jombert, fils aîné, Libraire du Roi pour le Génie & l'Artillerie. 1780.

First edition. 8vo. 2 leaves, 202 pp., 1 leaf. With 7 folding copperplates on thick paper. Fine copy in contemporary gilt-ruled calf, maroon morocco label.

ONE OF the best known of the scientific books by the infamous French revolutionary Marat (1743–1793), an able physicist whose heretical opinions (notably his attacks on Newton's emission theory of light) brought him into bitter conflict with the academicians. Here he sets forth his theory of a *fluide igné*, a mechanical explanation of the phenomenon of heat, based on 166 experiments in two of which he

demonstrates the increase in weight of metals on calcination (pp. 29–31). Marat's theory "was first vigorously attacked by an American, Count Rumford, but as late as 1856 it received preference over the dynamic theory in the article 'Heat' in the *Encyclopaedia Britannica* (8th edition)" (Cajori, *History of Physics*, 1929, p. 122). Marat became an enemy of Lavoisier and other members of the academy when Lavoisier made a brief public announcement that the academy had not given its approval to Marat's work. A German translation by C. E. Weigel appeared (Leipzig, 1782). (Blake, 287; Bolton, *First Supplement*, 284; Caillet, 7101; Cole, 909; Duveen, 388; Edelstein, 1545; Neu, 2648; Partington, III, 607; Poggendorff, II, 39; Smith, 314; Waller, 11396; Wellcome, IV, 49)

MARCELLINI, Silvestro

Trattato Compendioso Orittologico di D. Silvestro Marcellini Abate Olivetano.

Camerino: Dalli Torchi Goriani. 1801.

First edition. 8vo. 278 pp., 1 leaf (errata). With 1 copperplate of chemical symbols at the end. Fine, crisp copy, with wide margins, in contemporary half sheep, marbled boards, gilt-lettered label, spine gilt.

AN IMPORTANT but little-known treatise on mineralogical chemistry, which gives the analyses of numerous minerals, metals, salts, etc. The author, on whom no biographical information has been found, adopts the antiphlogistic system and new nomenclature of Lavoisier and discusses improvements made up to the date of publication. There are many references to contemporary chemists (e.g., Bergman, Brugnatelli, Berthollet, Fourcroy, Guyton-Morveau, Lavoisier, Kirwan, and Klaproth). No reference has been found to this interesting work in the usual early chemical bibliographies.

MARCET, Alexander John Gaspard

A Chemical Account of the Brighton Chalybeate. By Alexander Marcet . . . From the new edition of Dr. Saunders's "Treatise on Mineral Waters."

London: Printed by Phillips & Fardon, George Yard, Lombard Street. 1805.

First separate edition. 8vo. 74 pp., 2 leaves (1 index, bound following title; 1 blank at end). Near-fine copy in quarter calf antique, marbled boards. Presentation copy with "From the Author" in ink in top blank margin of title page and 2 stamps of "Fort Pitt Medical Library."

MARCET (1770–1822), physician (M.D., Edinburgh, 1797) and chemical lecturer at Guy's Hospital, became F.R.S. (1815) and professor of chemistry at Geneva (1819). In

this, one of Marcet's earliest works, he discusses the chemical composition of ferruginous and other waters in the vicinity of Brighton, Kent. Numerous tests are described, which are interesting for the light they shed on the analytical procedures then used. Marcet states (p. 3) that this book is reprinted in its entirety in William Saunders' *Treatise on the Chemical History . . . of Mineral Waters* (London, 1805). Fort Pitt was the military medical school at Chatham; its library was sold in the early 1950s. Rare. Unknown to the usual bibliographers. (Munk, II, 467; Waring, 785)

MARCET, Alexander John Gaspard

A Chemical Account of Various Dropsical Fluids; with Remarks on the Nature of the Alkaline Matter contained in these Fluids, and on the Serum of the Blood. By Alexander Marcet, M.D. F.R.S. One of the Physicians to Guy's Hospital. From the second volume of the Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London.

London: G. Woodfall. 1811.

First separate edition. 8vo. 1 leaf, 42 pp. Fine copy, in the original blue paper wrappers; signed in ink in Marcet's handwriting at the top of the title page: "From the Author." Written in ink on the front wrapper is the signature: "G. Tuthill. Soho Square." Sir George Leman Tuthill (1772–1835), physician and chemist, F.R.S. (1810), was a friend of Marcet and contributor to the *Pharmacopoeia Londinensis* (1824). See D.N.B. and *Munk's Roll*, III, 171.

ONE OF the rarer works by Marcet (1770–1822), physician (M.D., Edinburgh, 1797) and chemical lecturer at Guy's Hospital, London. He was also professor of chemistry at Geneva (1819) and F.R.S. (1815). Marcet collaborated extensively with Berzelius on the investigation of the structure and composition of various organic and inorganic compounds, on which see Partington (III, 707–708). In the present work Marcet presents the results of his researches on the several substances occurring in the fluids of the human body (e.g., spina bifida, hydrocephalus internus, and blood). As the result of these investigations Marcet was able to isolate and identify several chemical compounds (e.g., sodium and potassium chlorides, calcium phosphate, iron phosphate, albumen, and magnesium phosphate). His chemical analytical tests and methods were ingenious. There are many references to the works of contemporary chemists (e.g., John Bostock, Thomas Brande, George Pearson, Charles Aikin, William Hyde Wollaston, and Richard Kirwan). Partington (loc. cit.) states: "Marcet's publications on body fluids, including cerebro-spinal and dropsical fluids, are of biochemical importance." A most desirable presentation copy, from one important chemical physician (Marcet) to another (Tuthill). For an excellent biography

of Marcet, see *Munk's Roll*, II, 466–467. Very rare. Not in Bolton, Cushing, Duveen, Ferchl, Garrison-Morton, Morgan, Osler, Poggendorff, Smith, Waller, etc. (Partington, III, 707; Watt, II, 642q)

MARCET, Alexander John Gaspard

An Essay on the Chemical History and Medical Treatment of Calculous Disorders. By Alexander Marcet . . . Second edition, revised and enlarged.

London: Printed by Strahan and Spottiswoode, Printers-Street; for Longman, Hurst, Rees, Orme, and Brown, Paternoster-Row. 1819.

Second edition. 8vo. xiv, 194 pp., 5 leaves (index). With 10 engraved plates, each with a facing leaf of descriptive text; plates 6, 7, 8, and 9 are hand colored. Fine copy, uncut with wide margins, in early marbled boards, modern gilt-ruled calf spine, red morocco label. Stamp of "Norfolk Medical Book Society 1822" on title page and contemporary bookplate of "Norwich & Norfolk United Medical Book Society" on front endpaper.

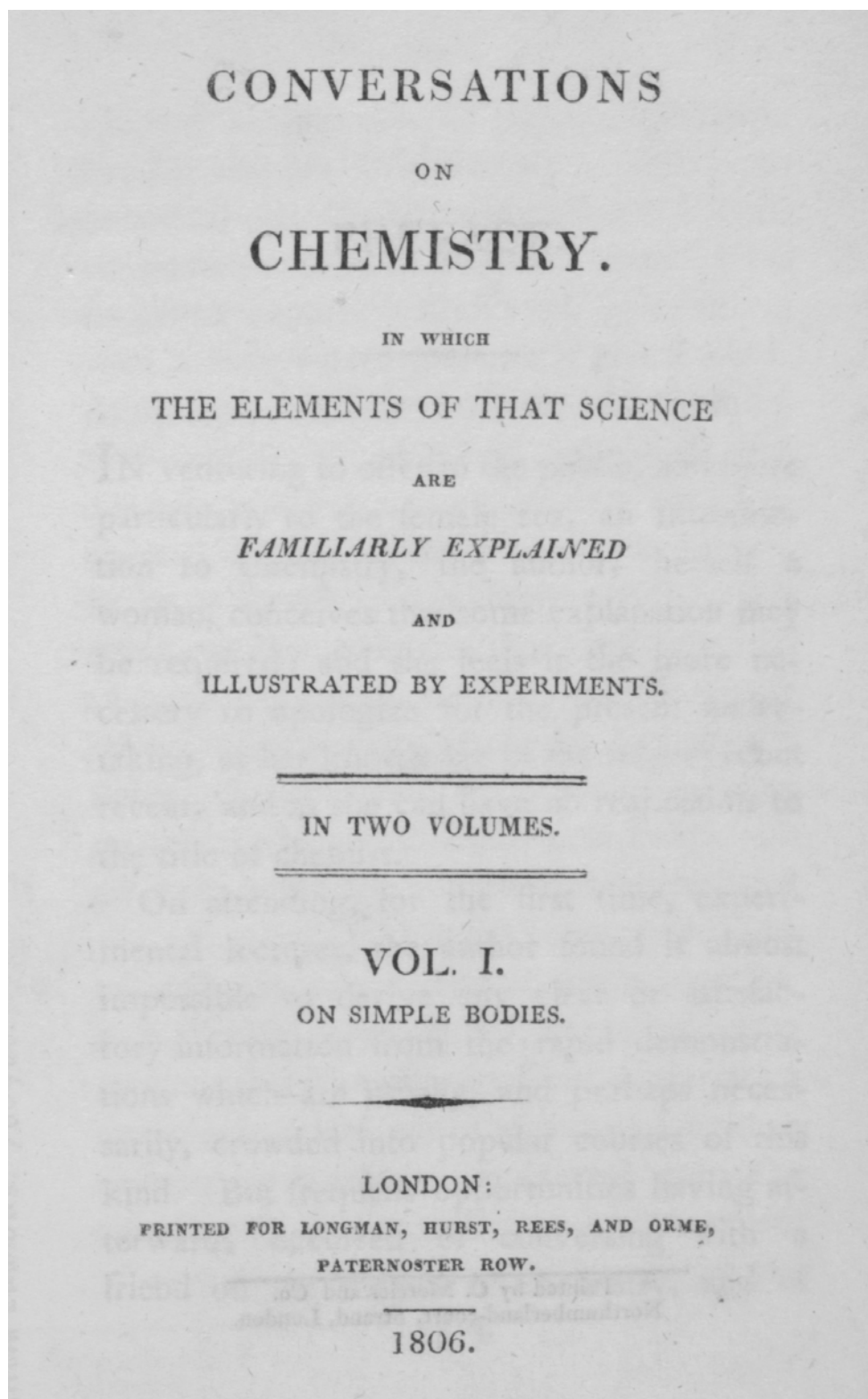
THE FINAL and best edition (first: London, 1817) of this classic work in which Marcet announced his discovery of xanthine in a urinary calculus. He named it xanthic oxide, as it was soluble in alkalies and on evaporation with nitric acid gave a yellow substance. The correct formula for xanthine was later found by Wöhler and Liebig (*Annalen*, 1838, xxvi, 340). Dedicated to the chemist William Hyde Wollaston, in the introduction Marcet states that the purpose of the book is "to describe, and illustrate by means of accurate engravings, the characters by which the different calculi may be distinguished; to indicate the easiest analytical methods by which their chemical nature may be ascertained; and to point out the modes of medical treatment which afford the best prospect of success." Marcet "was probably the first to remark that the pain of a renal calculus is due to its passage down a ureter, and that it may grow in the kidney without the patient suffering acutely at all" (Sir Norman Moore). (Partington, III, 707; Wellcome, IV, 49)

MARCET, Jane

Conversations on Chemistry. In which the Elements of that Science are familiarly explained and illustrated by experiments. . . .

London: Printed for Longman, Hurst, Rees, and Orme, Paternoster Row. 1806.

First edition. 2 vols., 8vo. I: xvi, 326 pp., 3 leaves (1 errata + 2 advertisements). II: xi, (1), 289, (1) pp., 5 leaves (4 index + 1 errata). With 11 line engraved plates (9 in vol. I, 2 in vol. II; drawn by J. Marcet, engraved by Lowry). Superb copy in mint condition, in original gilt-ruled diced half calf, marbled boards.



Marcet, Jane. Conversations on Chemistry. London, 1806.

THE FIRST edition of one of the most popular introductory chemical textbooks ever written. Born in London of Swiss parents, Jane Marcet (née Haldimand, 1769–1858) married Alexander John Gaspard Marcet in 1799. Although published anonymously, this work was quickly recognized to be by Mrs. Marcet. It is written in an easy dialogue style, in which Marcet (“Mrs. B”) instructs two young ladies (“Caroline” and “Emily”) in the principles and discoveries of modern chemistry. The first volume covers “simple bodies” and the second “compound bodies.” Michael Faraday, when an errand boy for a bookbinder, first became interested in chemistry by reading this elegantly written work. Enormously popular, numerous editions appeared in England and America, as well as translations into French, German, and Italian. Marcet introduced and discussed the latest discoveries as each edition appeared. She was active in the scientific and literary circles of the time and attended Humphry Davy’s lectures at the Royal Institution. Evidently printed in very small number, the first edition is rare. Most copies were handled by young people and were literally read to pieces. Mint copies of the first edition (such as the present) can be considered to be virtually unique. Several of the plates are dated 2 December 1805. (Bolton, 652; Cole, 910; Knight, 208; Partington, III, 708; Read, *Humour and Humanism in Chemistry*, 1947, pp. 176–190; Smith, *Old Chemistries*, 1927, pp. 64–71)

MARCET, Jane

Conversations on Chemistry; in which the Elements of that Science are familiarly explained and illustrated by experiments. . . . The Sixth Edition, revised, corrected, and enlarged. . . .

London: Printed by Strahan and Spottiswoode, Printers-Street; for Longman, Hurst, Rees, Orme, and Brown, Paternoster-Row. 1819.

Sixth edition. 2 vols., 12mo. I: xv, (1), 366 pp., 1 leaf (blank). II: xii, 372 pp., 2 leaves (blank). With 15 line engraved plates (12 in vol. I, 3 in vol. II; drawn by J. Marcet, engraved by Lowry). Characteristic minor browning of some leaves and plates; otherwise very good copy in contemporary polished calf, covers gilt-ruled, spines gilt.

THE TWENTY-THREE “conversations” in this work were kept up-to-date by Mrs. Marcet. The isolation of the alkali metals—sodium and potassium—by Humphry Davy is described (vol. I, pp. 355–363), as well as many later discoveries. (Wellcome, IV, 50)

MARCET, Jane

Conversations on Chemistry; in which the Elements of that Science are familiarly explained and illustrated by experiments. . . . By Jane Marcet. The Twelfth Edition, considerably enlarged and corrected. . . .

London: Printed for Longman, Rees, Orme, Brown, Green, and Longman, Paternoster-Row. 1832.

Twelfth edition. 2 vols., 12mo. I: xvi, 348 pp. II: x, 347, (1) pp. With 18 line engraved plates (15 in vol. I, 3 in vol. II; drawn by J. Marcet, engraved by Lowry). Very fine copy in original gilt-ruled half calf, marbled boards, black morocco labels.

IN THIS edition the number of “conversations” has been expanded to twenty-five. Marcet states in her advertisement that in the tenth edition (London, 1825) she added a conversation on the steam engine (vol. I, pp. 150–171, plates VII and VIII), “a machine which contributes so abundantly to the wealth, power, and happiness of this country. . . . In the Eleventh Edition, Chlorine has been substituted in the place of oxymuriatic acid; the theory of the latter being considered as erroneous, and that of the former fully established. The present Edition has been revised throughout, and the Conversation on Electro-Chemistry has undergone considerable alterations.” Plate XIII depicts Davy’s safety lamp. A voltaic battery and machine for generating electricity by friction are shown in plate IX. A rare edition, not located in the usual bibliographies.

MARCET, Jane

Conversations on Chemistry, in which the Elements of that Science are familiarly explained and illustrated by experiments and plates. To which are added, some late Discoveries on the subject of the Fixed Alkalies, by H. Davy . . . A Description and Plate of the Pneumatic Cistern of Yale College, and a short Account of Artificial Mineral Waters in the United States. With an Appendix, consisting of Treatises on Dyeing, Tanning and Currying.

New Haven: From Sidney’s Press, for Increase Cooke & Co. Book-Sellers, N. Haven. 1809.

First New Haven edition. 12mo. xi, (1), 178, (3), 182–358, (2), 17, (7) pp. With engraved frontispiece of “Pneumatic Cistern of Yale College” and 11 plates (drawn by the author, engraved by Doolittle). Some minor foxing (typical of American books of this period); otherwise very good copy, in original tree calf, spine gilt-ruled, black morocco label.

THE THIRD American edition (first and second: Philadelphia, 1806, and 1809), to which the anonymous editor has added new material on mineral waters and the principles of dyeing, tanning, and currying. The recent isolation of the alkali metals, potassium and sodium, by Humphry

Davy is described (pp. 338–351). (Bolton, *First Supplement*, 285; Cole, 912; Edelstein, 1548; Roller & Goodman, 159; Smith, 314)

MARCET, Jane

Conversations on Natural Philosophy, in which the Elements of that Science are familiarly explained, and adapted to the comprehension of young pupils. . . . By the author of Conversations on Chemistry, and Conversations on Political Economy.

London: Printed for Longman, Hurst, Rees, Orme, and Brown, Paternoster-Row. 1819.

First edition. 12mo. x, (2), 424 pp. With 23 engraved plates (Lowry Sc.), each containing several figures. Fine copy in contemporary half calf, marbled boards, spine richly gilt, black morocco label.

A POPULAR BOOK on elementary physics, astronomy, and mechanics, which passed through many editions (Partington mentions a fourteenth, dated 1872, published posthumously). Forming a companion to the author's celebrated *Conversations on Chemistry* (first: London, 1806), it is written in the same easy style of dialogue between "Mrs. B." (Marcet) and her young pupils "Caroline" and "Emily." The physical properties of matter, gravity, laws of motion, hydrostatics, optics, and related subjects are covered, as well as several topics of chemical interest (e.g., atoms, gases, liquids, and crystals). A good review of the state of physical science at the beginning of the nineteenth century is given. A French translation by Prevost appeared (Paris & Geneva, 1820; Wellcome, IV, 50). Scarce. (Partington, III, 708)

MARCET, Jane

Conversations on Natural Philosophy; in which the Elements of that Science are familiarly explained, and adapted to the comprehension of young pupils. . . . Fourth Edition, revised and corrected by the author.

London: Printed for Longman, Hurst, Rees, Orme, Brown and Green, Paternoster-Row. 1824.

Fourth edition. 12mo. x, (2), 429, (1) pp. With 23 engraved plates (Lowry Sc.), each containing several figures. Fine copy in contemporary diced tan calf (by Charles Lewis?), covers gilt-ruled, rebacked, spine gilt-lettered and dated.

IN THE preface the author apologizes for her "ignorance of mathematics, and the imperfect knowledge of natural philosophy which that disadvantage necessarily implies." She says that these lectures "are intended, in the course of elementary science, to precede the *Conversations on Chemistry*; and were actually written previous to either of her former publications." This is an interesting revelation, as

the work on chemistry originally appeared in 1806. The present book must have remained in manuscript for many years, and the author's apprehension is evident: "It is with increased diffidence that the author offers this little work to the public." Despite her misgivings the book became very popular, with many English and American editions, plus translations into foreign languages. (Partington, III, 708; Roller & Goodman, 159)

MARCET, William

On the Composition of Food and How it is Adulterated, with Practical Directions for Its Analysis.

London: John Churchill. 1856.

First (only) edition. 8vo. Pp. xvi, 178. With 32-page catalogue of Churchill's publications on medicine, surgery, and science at the end. Large folding table facing page 108 and many woodcut figures in text (some full page). Fine, crisp copy, in the original blind-stamped, patterned brown cloth, spine gilt-lettered.

MARCET (1829–1900), born in Geneva, was the son of Professor Francis Marcet and grandson of Dr. Alexander Marcet, F.R.S. After graduating at Edinburgh in 1850, he practiced in London, becoming assistant physician to both Westminster and Brompton hospitals, where he was one of the earlier specialists in laryngology. He soon after developed a profound interest in physiological chemistry and conducted research on the absorption of fat and the action of bile. He also carried out important and original experiments on the problems of respiration. Much of his research was done in the physiological laboratory of University College (London). As he was amply endowed with private means, he abandoned the practice of medicine relatively early in life and devoted himself to scientific research. His biography appears in *Munk's Roll* (IV, 111–112).

During much of the nineteenth century, food and drink were often adulterated with inferior or not infrequently mildly toxic materials. With the development of more precise analytical techniques, chemists were able to identify the components of foods and beverages. Improvement in the quality of aliments was slow, but with stricter governmental laws, thanks mainly to the efforts of such chemists as Marcet, the so-called pure food and drug laws were gradually formulated. An important book in the history of food chemistry and very scarce. Not mentioned by Cushing, Duveen, Ferchl, Garrison-Morton, Morgan, Osler, Partington, Poggendorff, Reynolds, Smith, Waller, etc. (Bolton, 652)

MARCHAND, Jean Eugène August

Étude sur la Force Chimique contenue dans la Lumière du Soleil, la mesure de sa puissance et la détermination des climats qu'elle caractérise. Par Eugene Marchand . . .

Paris: Gauthier-Villars, n.d. (1875).

First edition. 8vo. xviii, (2), 196 pp. With 4 plates and 4 woodcut figures in text. Fine copy in original crimson quarter morocco, marbled boards, spine richly gilt. A presentation copy, neatly inscribed in ink on half title: "A Monsieur Georges Ville. Hommage respectueux. Eugène Marchand."

AN IMPORTANT work on the photochemical action of the rays of the sun, with particular reference to photosynthesis, the growing of agricultural plants, and early photography. Dedicated to the great chemist Jean Baptiste André Dumas (1800–1884), by Marchand (1816–1895), a celebrated pharmacist. This book is an expanded version of the lecture presented by Dumas to the Académie des Sciences, 24 March 1873. A German translation appeared (Kiesel, 1874; Ferchl, 338) of the original lecture. Marchand presented this copy to the notable nineteenth-century chemist Georges Ville (see Bolton, 888; Partington, IV, 473). (Bolton, 653)

MARENGUS, Joannes Baptista

Palladis Chymicae Arcana Detecta, sive Mineralogia Naturalis, & Artificialis. In Naturali ostenditur, quomodo a natura metalla in visceribus terrae generentur: in artificiali vero modus, quo per artem metalla imperfecta reducuntur ad perfectionem Solis, vel Lunae, demonstratur. Opus plane aureum in tres partes divisum. Auctoris nomen in hoc puro anagrammate delitescit. Ianus Gobrat sapiens manet.

Genoa: Typis Antonii Franchelli. 1674.

First edition. 12mo. 285, (3) pp. Few minor wormholes in some margins (not touching text); otherwise very fine, crisp copy, in original mottled calf, spine richly gilt.

AN IMPORTANT alchemical treatise in three parts, which discuss the generation of metals in their ores, the supposed composition and properties of metals, the transmutation of base metals into silver and gold by means of the philosopher's stone, the uses of metals and their salts in medicine, etc. Marengus (fl. seventeenth century) was a prominent citizen of Genoa who was distinguished in literature. A rewritten and enlarged edition in two volumes appeared (Genoa, 1678). In 1742 Lenglet Dufresnoy described the first edition as a "livre estimé & peu commun." In 1888 Waite said it was "rare," and in 1906 Ferguson stated it to be "extremely rare," with no copy in the British Museum. However, a copy has since been acquired by the British Library. (British Library, *S.T.C. Italian Books, 17th Century*, p. 535; Duveen, 389; Ferguson, II, 76 [not in Young Coll.];

Ferguson Coll., 446; Kopp, *Die Alchemie*, II, 367; Lenglet Dufresnoy, III, 253; Neu, 2651; Smith, 316; Waite, 295)

MARGGRAF, Andreas Sigismund

Chymischer Schriften Erster Theil.

Berlin: bey Arnold Wever, Buchhändler. 1761.

First edition. 8vo. 12 leaves, 358 pp. With 2 copperplates of apparatus (containing 7 figures) and folding printed table (defective) facing page 324. Bottom blank margins of pages 307–358 stained; otherwise good unpressed copy in original marbled wrappers.

MARGGRAF (1709–1782) was the last and most eminent supporter of the phlogiston theory in Germany. As an assistant to Caspar Neumann in Berlin he gained proficiency in chemistry, pharmacy, and metallurgy, which enabled him "to carry out researches of the greatest value" (E. von Meyer). He discovered a new process for preparing phosphorus, showed that it increased in weight when burned, and explained the formation of phosphoric acid. One of the most accomplished analytical chemists of the period, he distinguished between alum and magnesia, used potassium prussiate (ferrocyanide) to test for iron in solution, showed that gypsum, barytes, and potassium sulphate were all derivatives of sulphuric acid, and distinguished sodium and potassium salts by the coloration they imparted to a flame. He first used a microscope to study different crystal structures. Partington discusses Marggraf's researches at length. Almost all of his publications are in the *Memoirs of the Berlin Academy*, and most were reprinted in the *Chemische Schriften*, edited by Johann Gottlob Lehmann. (Bolton, 653; D.S.B., IX, 106; Ferchl, 339; Ferguson, II, 76 [not in Young Coll.]; Harvey, 168; Neu, 2655; Partington, II, 724; Pogendorff, II, 48)

MARGGRAF, Andreas Sigismund

Chymischer Schriften Erster (Zweyter) Theil.

Berlin: bey Arnold Wever, Buchhändler. 1768, 1767.

First edition of vol. II, second edition of vol. I. 2 vols., 8vo., in 1. I (1768): 11 leaves, 330, (6) pp. II (1767 xiv, 206 pp., 1 leaf (errata). With 2 copperplates of apparatus (containing 7 figures) and folding printed table in volume I, and engraved frontispiece (Glassbach fec.) of an insect in volume II. Fine copy in original blue boards.

THE COLLECTED works of Marggraf, including the new and improved second edition of volume I (first: Berlin, 1761), edited with a preface by J. G. Lehmann as in the first edition. The second volume, edited with preface by L. von Beausobre, contains new material, the most important of which is the section (pp. 70–86) describing the discovery

of fundamental importance that beet sugar and cane sugar are identical. "Marggraf's most significant contribution to applied chemistry was his extraction and crystallization of sugar from plants commonly grown in Europe" (D.S.B.). In 1747 he used boiling rectified alcohol to extract the juice from the dried roots of beets (red and white mangelwurzels). He confirmed the identity of cane and beet sugars by examining the crystals under his microscope—probably the first such application of a microscope in a chemical laboratory. Although Marggraf pointed out the economic importance of his discovery, it was not until 1796 that commercial production of sugar from sugar beets was begun by Achard. The plates and table in volume I are identical in the first and second editions. (Bolton, 653; Cole, 916; D.S.B., IX, 106; Duveen, 390; Ferguson, II, 76; Ferguson Coll., 446; Neu, 2656; Partington, II, 724; Smith, 316)

MARGGRAF, Andreas Sigismund

Opuscules Chymiques de M. Margraf, de l'Academie de Berlin.

Paris: Chez Vincent, Imprimeur-Libraire, rue S. Severin. 1762.

First French edition. 2 vols., 12mo. I: li, (1), 402, (6) pp. II: vii, (1), 456 pp. Mint copy in original marbled calf, spines richly gilt, brown morocco labels.

THE FRENCH edition of Marggraf's works, made principally from the *Chymischer Schriften* (Berlin, 1761). The translation was in part by Formey, secretary of the Berlin Academy, and in part by Jacques François Demachy, who edited the entire work. This translation was reviewed and approved by Marggraf. The twenty-six dissertations (plus one not listed in the contents) originally appeared (with several exceptions) in the *Memoirs of the Berlin Academy*. They include Marggraf's new method of preparing phosphorus (1743); the extraction of sugar from beets and carrots (1747); preparation of formic acid by distilling ants (1749); and experiments on the earth of alum (1753), on tin (1756), and on the composition of common salt (from an undated manuscript). No illustrations were made for this translation. Not in the British Library, which has only the German editions. (Bolton, 653; Cole, 917; D.S.B., IX, 106; Edelstein, 1566; Ferchl, 339; Partington, II, 724 [wrong date: 1712]; Szabadvary, 58; Wellcome, IV, 53)

MARGGRAV, Christian

Jacobi Le Mort Pseudochemici & Ratiocinatoris Dupondiarri Ignorantia circa Chemiam & universam Scientiam naturalem, detecta à Christiano Marggravio Med. Doctore. . . .
Leyden: Petrum de Graaf. 1687.

First edition. 8vo. 6 leaves, 97, (1) pp. Very good copy in later full vellum, spine gilt-lettered.

IN HIS *Ignorantia circa chemiam et universam scientiam naturalem detecta à C. Marggravio* (Leyden, 1687), Jacob Le Mort (1650–1718) attacked Marggrav, who promptly responded by publishing this vitriolic attack on Le Mort. According to Partington, "the Leyden chemists seem to have been unusually touchy and quarrelsome." Marggrav (d. 1687), a professor of medicine in Leyden, calls Le Mort a "pseudo-chemist" incapable of rational thought. In seven chapters Marggrav points out Le Mort's published errors about calcination, precipitation, sublimation, extraction, distillation, acids, alkalies, salts, etc. Despite the unpleasant tone of Le Mort's and Marggrav's works, they undoubtedly had a salutary effect by stimulating chemists to question and think more carefully about the processes discussed. Of this edition Duveen says: "I have been unable to trace this author or the book in the usual authorities. It is an attack on Le Mort, the well-known Dutch chemist, and in 1688 Le Mort published a defence." Published after Marggrav's death, Le Mort's defense was entitled *Chymia, rationibus et experimentis auctorioribus, iisque demonstrationibus superstructa, in qua malevolorum calumniae modeste simul diluuntur* (Leyden, 1688), on which see Bolton (p. 616). A rare work. Not in Bolton, Cushing, Edelstein, Ferchl, Ferguson, Ferguson Coll., Osler, Smith, Sondheimer, Thorndike, Waller, Watt, etc. (Duveen, 390; Neu, 2657; Partington, II, 737; Poggendorff, II, 50)

MARGGRAV, Christian

Prodromus Medicinae Practicae Dogmaticae & vere Rationalis. Superstructae circulari sanguinis motui, nec non Principiis Chemicis ac Hypothesi Helmontianae & Sylvianae. Exhibens specimen methodi perquam facilis medendi plerisque corporis humani affectibus ope salium i.e. acidi & alcali. Sub tabellarum compendio propositus, & concinnatus . . .

Leyden: Apud Cornelium Boutesteyn. 1685.

Second edition. 4to. 10 leaves, 173, (7) pp. Engraved title page. Very good copy, in modern quarter calf, marbled boards, spine gilt-lettered and dated. From the library of William Arthur, sixth duke of Portland, with beautiful engraved armorial bookplate, dated 1900.

THE GREATLY enlarged and best edition of this iatrochemical treatise by Marggrav (1626–1687), professor of medicine at Leyden. The first edition (Leyden, 1673; Krivatsy, 7439) was a much shorter work of only 112 pages. The book is based on the chemical principles of Helmont and Sylvius (i.e., François Dubois), who contended that good health depended on the proper balance of acid and alkali in the body. Some copies have a *Vita Georgii Marggravii* (8 pp.) following the preface, which is not in this copy. Georg Marggrav (1610–1644) published works on natural history. Christian Marggrav also wrote *Materia medica contracta* (Leyden, 1674; Duveen, *Supplement*, 253), which passed through several editions. (Krivatsy, 7441; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 1, p. 262; Partington, II, 737; Thorndike, VIII, 164)

MARHEINECKEN, Nicolaus Ludolphus

Dissertatio Inauguralis Chymico-Medica de Phosphoris . . . praeside Simone Paulo Hilschero . . . pro gradu doctoris . . . auctor Nicolaus Ludolphus Marheinecken Hildesiensis. Ad diem (14) Januarii MDCCXXXIV.

Jena: Litteris Jo. Christ. Croekeri. (1744).

First edition. 4to. 40 pp., 4 leaves. Very good copy in late-nineteenth-century half cloth, patterned boards.

THE DOCTORAL thesis of Marheinecken (dates unknown), with Simon Paul Hilscher (1682–1748) presiding, on phosphorus and other phosphorescent materials. “Although rotten wood and insects were mentioned, the chief interest of the author was inorganic luminescence, with most of the classical work reviewed” (Harvey, *History of Luminescence*, 1957). Boyle’s work on phosphorus and phosphorescence is extensively discussed, as are works on these subjects by Balduin, Bartholin, Brandt, Hauksbee, Homberg, Kunkel, Lemery, Slare, et al. An interesting and very rare work. Not in Blake, Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Smith, Waller, Waring, Watt, etc. (Ferchl, 341; Harvey, 179; Wellcome, III, 267)

MARHERR, Philipp Ambrosius

Dissertatio Chemica de Affinitate Corporum, quam auctoritate, et consensu . . . universitatis rectoris . . . publicae disquisitioni committit Philippus Ambrosius Marherr Vindobonensis, pro suprema doctoratus medici laurea candidatus . . . die 2 mensis Aprilis MDCCCLXII.

Vienna: Typis Josephi Kurzbock, Univers. Typographi. (1762).

First edition. 8vo. 8 leaves, 99, (1) pp. 4 copperplates of chemical symbols (Augustin Cippis sc.). Engraved vignette of a library and chemical laboratory on page 1. Fine copy, in brown

speckled half calf antique, marbled boards, longitudinal maroon morocco gilt-lettered and dated label on spine, with original patterned stiff wrappers bound in.

MARHERR (1738–1771), an eminent chemist and physician, was appointed professor of the Institutes of Medicine in Prague, where he maintained (against Haller) that the blood travels through the lungs more rapidly than through the rest of the body. He received the M.D. degree for the present dissertation, which was translated into German by E. G. Baldinger as *Chemische Abhandlung von der Verwandtschaft der Körper* (Leipzig, 1764). In the present substantial work on chemical affinity, Marherr criticizes Geoffroy’s tables, referring to the writings of numerous earlier and contemporary chemists to support his views. Partington does not appear to have seen this important book, as he mentions it only briefly. Very scarce. Not in Blake, Duveen, Edelstein, Ferguson Coll., Neu, Smith, Waller, Watt, etc. (Bolton, 654; Ferchl, 341; Ferguson, II, 77 [not in Young Coll.]; Partington, III, 55; Poggendorff, II, 50)

MARINI, Gioseffo

Breve Tesoro Alchimistico de più Valorosi Alchimisti Moderni d’Europa nel quale si tratta d’alcun secreti particolari d’alchimia oprati da virtuosi moderni, e posti in luce da Don Gioseffo Marini Dottore in Filosofia, e Sacra Theologia. Dedicato all’Illustrissimi Signori Martin e Lodovico Vidimani Conti d’Ortemburgo, &c.
Venice: Appresso Camillo Bortoli. 1664.

First edition. 12mo, 89, (1) pp., 1 leaf (blank). Very good copy, entirely uncut, in the original patterned blue and red pasteboards.

AN ALCHEMICAL work, divided into twelve chapters, comprising a collection of secrets on the powder of projection, transmutation, congelation of mercury into gold, the multiplication of gold, potable gold, etc. The book is valuable because Marini attempts to give clear directions for the processes, using known chemicals (e.g., sal ammoniac, tartar, and arsenic) so that a modern chemist could try to repeat the experiments. The author, of whom little is known, was a doctor of philosophy and theology. He dedicated his book to Martin e Lodovico Vidimani, count of Ortemburg. Schmieder briefly mentions this title, giving the wrong date (1644), which is repeated by Kopp, Hofer, and Ferchl. Very rare. Not in most of the early chemical libraries. (Duveen, 391; Ferchl, 341; Hofer, II, 322; Kopp, *Alchemie*, II, 358; Neu, 2659; Schmieder, 385)

MARIOTTE, Edme

Oeuvres de Mr. Mariotte, de l'Académie Royale des Sciences; divisées en deux tomes, Comprenant tous les Traitez de cet Auteur, tant ceux qui avoient déjà paru séparément, que ceux qui n'avoient pas encore été publiés; Imprimées sur les Exemplaires les plus exacts & les plus complets; Revuës & corrigées de nouveau. . . .

Leyden: Chez Pierre Vander Aa, Marchand Libraire, Imprimeur de l'Université & de la Ville. 1717.

First collected edition. 2 vols., 4to., in 1. I: 6 leaves, 320 pp. II: 2 leaves, pp. 321–701, (1), 17 leaves. With 26 folding copperplates (two numbered IV, but different). Titles in red and black, with large engraved vignettes. Occasional minor browning of a few leaves; otherwise fine copy in original speckled calf, spine gilt in compartments, maroon morocco label.

THE COLLECTED works of the eminent French scientist Mariotte (ca. 1620–1684), who made outstanding discoveries in physics, optics, hydraulics, and certain chemical phenomena. Among the most important works in these volumes are his treatise on percussion (his percussion apparatus is still in use in physical laboratories), the essays on the vegetation of plants, the chemical and physical properties of air (including the rediscovery of Boyle's law, still known in France as "Mariotte's law"), radiant heat and the nature of colors, his work on hydromechanics ("Mariotte's flask"), his observations on vision ("punctum caecum") with letters by Pecquet and Perrault, and the treatise on the movement of the pendulum (not separately published). The introduction contains valuable information on the bibliography of Mariotte. Mahoney (D.S.B., IX, 114–122) discusses the contents of these volumes in detail. The first edition is much rarer than the reprint (La Haye: Jean Neaulme, 1740, 2 vols., 4to.). (D.S.B., IX, 121; Harvey, 394; Magie, 88; Partington, II, 523; Poggendorff, II, 54; Roller, 373; Sotheran, Cat. 741 [1913], 11432; Watt, II, 644g)

MARMONTEL, Jean François

The Life of Belisarius, translated from the French; with some notes and observations. . . .

London: Printed for J. Hinton, at the King's-Arms in Newgate-street. 1759. (Price One Shilling).

First edition. 8vo. ii, 84 pp. Very good copy in worn contemporary quarter calf, gilt, marbled boards, maroon morocco label (entitled: "Pamphle[ts]"). Bound with: Cohausen, J. H., *Hermippus Redivivus: or, the Sage's Triumph* (London, 1749); and Venuti, Marquis Don Marcello di, *A description of. . . Herculanum* (London, n.d., ca. 1750).

A BIOGRAPHY OF the Byzantine general Belisarius (ca. 505–565), who served under the emperor Justinian I. It is an anonymous translation from an earlier edition by the French

historian Marmontel (1723–1799), whose "reputation was considerably enhanced by the publication of two philosophical romances, *Bélisaire* (1767) and *Les Incas* (1777)" (*Encyclopaedia Britannica*). The book is of no chemical significance but is included because it is bound with two works of historical chemical interest. (Watt, II, 645h)

MARTELLI, Giandomenico

Delle Acque Caje ovvero de' Bagni di Viterbo Opera Fisico-Medica dedicata all' . . . Antonio Casali . . . da Giandomenico Martelli . . .

Rome: Nella Stamperia di Marco Pagliarini. 1777.

First edition. 4to. xii, 92 pp. Large folding copperplate (baths of Viterbo). Title in red and black. Woodcut title-vignette, historiated capitals, head- and tailpieces. Fine copy with wide margins, in contemporary vellum, maroon morocco label gilt. Old stamp on title (Medical Society of London) and release stamp of the Wellcome Library on verso.

A COMPREHENSIVE WORK on the mineral waters of Viterbo, in which Martelli describes the analytical tests he carried out to determine their chemical composition. He refers to the works of Bacci, Boerhaave, Crivellati, Durante, Savonarola, and especially to Friedrich Hoffmann. Not in Bolton, Edelstein, Ferchl, Ferguson, Ferguson Coll., Partington, Poggendorff, Smith, Sondheimer, Waller, Watt, etc. (Blake, 289; Duveen, 393; Duveen, *Supplement*, 562; Neu, 2668)

MARTIENSEN, Johann Christian

Dissertatio Solemnis de Lapidis Microcosmici Genesi, quam . . . moderatore D. Gottlieb Henr. Kannegiesser, . . . pro publico eruditorum examini submittit auctor Johannes Christianus Martiensen, Graboviensis, d. XLIX Novembr. anno MDCCXLIV.

Kiel: Litteris Gottfr. Bartschii, Acad. Typogr. (1744).

First edition. 4to. 44 pp., 6 leaves. Fine copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A CHEMICAL AND medical dissertation on the formation of microcosmic salt (sodium ammonium hydrogen phosphate) in various types of human calculi and urine, presented by Martiensen (fl. 1740) under the direction of the professor of medicine at the University of Kiel, Gottlieb Heinrich Kannegiesser (1712–1792). The preparation and properties of the salt are described, with numerous references to the works of earlier and contemporary chemists and physicians. At the end, with separate title page, is the *Invitatio* by Kannegiesser, with colophon dated 15 November 1744. Poggendorff (I, 1222) lists several works by Kannegiesser but not the present title. Very rare. Unknown to the usual bibliographers.

MARTIN, Benjamin

Biographia Philosophica. Being an Account of the Lives, Writings, and Inventions, of the most eminent Philosophers and Mathematicians who have flourished from the earliest Ages of the World to the present Time. . . .

London: Printed and sold by W. Owen, near Temple-Bar, and by the Author, at his House in Fleet-street. 1764.

First edition. 8vo. 2 leaves, 565, (1) pp., 1 leaf (index). With the rare full-page engraved portrait of Newton (facing p. 361). Fine copy, in contemporary Cambridge paneled calf, rebacked, maroon morocco label. Rococo engraved bookplate: Jos. Rennard.

A USEFUL WORK containing 156 biographies, covering the ancients and medieval and early-modern figures. More than half the book describes seventeenth- and eighteenth-century scientists: e.g., Bacon, Borelli, Boyle, Hooke, Leibnitz, Newton, and Pascal. The striking portrait of Newton, lacking in the Babson copy as in most, is present in a fine impression. (Babson, 291; Gray, 400; Poggendorff, II, 62; Wallis, 400; Wheeler Gift, 411)

MARTIN, Benjamin

A Panegyrick on the Newtonian Philosophy. Shewing the Nature and Dignity of the Science, and Its absolute Necessity to the Perfection of Human Nature; the Improvement of Arts and Sciences, the Promotion of true Religion, the Increase of Wealth and Honour, and the Completion of Human Felicity. . . .

London: Printed for W. Owen, near Temple-Bar, and J. Leake, and J. Frederick, at Bath. 1769 (i.e., 1749).

First edition, first issue. 8vo. (in 4s). 63, (1) pp. Very good copy, in original gilt-ruled calf, rebacked, dark-green morocco label.

MARTIN (1704–1782), mathematician, instrument maker, and author of many scientific books, was a popularizer of Newtonian doctrine (see D.N.B. and D.S.B.). “His *Panegyrick* is a semi-popular exposition of Newton’s philosophy. At the end is a poetical effusion: On the Anti-Newtonians” (Babson). Mainly on physics, the book is of some peripheral chemical interest. The title page of the first issue (as here) is wrongly dated 1769. This was corrected on the title of the second issue to 1749. Both issues are very rare, and a second edition appeared in 1754 (Gray, 116; Watt, II, 349p). Not in Blake, D.S.B., Poggendorff, etc. (Babson, 89; Wallis, 116)

MARTIN, Benjamin

The Philosophical Grammar; being a View of the Present State of Experimented Physiology, or Natural Philosophy. In Four Parts. Part I. Somatology . . . Nature and Properties of Matter . . . Part II. Cosmology . . . View of the Universe . . . Part III. Aerology . . . the Atmosphere . . . Part IV. Geology . . . Minerals, Metals, Stones . . .

London: Printed for John Noon, at the White-Hart in Cheap-side, near Mercers-Chapel. 1755.

Fifth edition. 8vo. 1 leaf, 362 pp., 3 leaves (index). With 26 folding copperplates and 2 folding tables. Fine copy, in original gilt-ruled speckled calf, rebacked, crimson label.

FIRST PUBLISHED in 1735 (D.S.B., IX, 141) this was the “most successful of Martin’s works” (D.N.B.). It was reprinted several times in a French translation by Puisieux. Second (1738), third (1748), and fourth (1753) editions appeared, but the present edition of 1755, containing “Alterations, Corrections, and very large Additions, by way of Notes,” is the best. This work covers all the sciences, natural history, and medicine in question-and-answer form and provides an excellent summary of the state of knowledge in the mid-eighteenth century. The plates illustrate scientific instruments, maps, astronomical diagrams, biological and geological subjects, etc. Topics of chemical interest are discussed (pp. 239–258). “One of the works in which Newtonian natural philosophy and chemistry were popularized was Benjamin Martin’s *Philosophical Grammar*. . . . In Martin’s book the Newtonian corpuscularian doctrines are clearly expressed” (Knight, *Natural Science Books in English 1600–1900*, p. 81). (Wallis, 113.964)

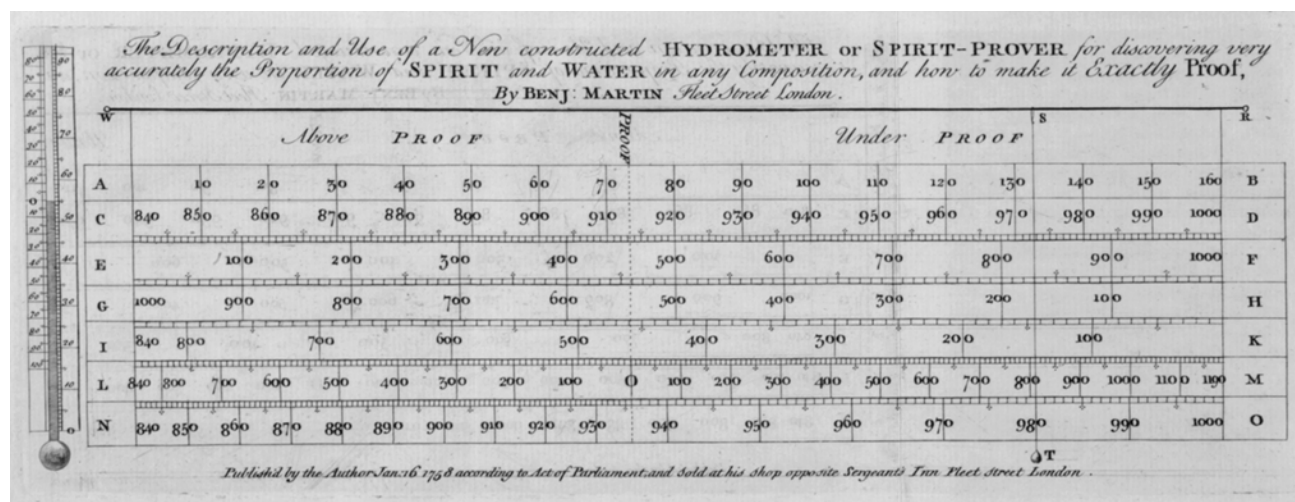
MARTIN, Benjamin

A Plain and Familiar Introduction to the Newtonian Philosophy, in Six Sections. . . . Designed for the use of such gentlemen and ladies as would acquire a competent knowledge of this science, without mathematical learning; and more especially those who have, or may attend the author’s course of six lectures and experiments on these subjects. . . .

London: Printed for W. Owen, at Homer’s Head near Temple-Bar. 1751.

First edition. 8vo. 4 leaves, 164 pp., 2 leaves (index). With 6 detailed folding copperplates. Title page in red and black. Fine copy, in original gilt-ruled calf, rebacked, maroon morocco label.

THE OUTCOME of a course of six lectures that Martin gave on Newtonian philosophy, this work is interesting for containing descriptions of many scientific instruments: e.g., different microscopes (including a pocket microscope invented



Martin, Benjamin. *Sure Guide to Distillers*. London, 1759.

by the author), refracting and reflecting telescopes, barometers, thermometers, hygrometers, new portable air pump, hydrostatic balance, water pump, and a new pyrometer. All of these instruments are illustrated in the plates. Reprinted several times, the first edition is rare. The Babson catalogue lists only the third edition of 1754. Not in Blake, Poggendorff, Watt, etc. (Gray, 114; Wallis, 114)

MARTIN, Benjamin

A Sure Guide to Distillers, and all Dealers in Spirituous Liquors, for discovering the True Proportion of Water and Alcohol in any proposed Compound; and How to make it exactly Proof, by a New-constructed Hydrometer, and Scale of Lines, whose Uses are described and illustrated by Examples. The Whole deduced from a Mathematical Theory founded on Philosophical Principles and Experiments. By Benjamin Martin. . . .
(London, n.p., 1759)

First edition. 8vo. (in 4s). 32 pp. With 1 folding engraved plate. Fine copy in marocco antique, covers gilt-ruled, inner gilt dentelles, spine gilt-lettered and dated.

A DETAILED TRACT advertising and explaining an important new instrument (invented by Martin) for measuring the exact proof of mixtures of alcohol and water. The hydrometer is equipped with an elaborate sliding gauge and is shown in the plate. Martin states on the title page that "this Hydrometer is made only by Him, and Sold at his Shop, the Sign of the Visual-Glasses and Globe, in Fleet-street, 1759. Price One Pound Five Shillings." He claims that his hydrometer "is constructed geometrically and physically exact; and I make no doubt of its being the first that

ever was so." At the end (pp. 23–32) he describes "The Mathematical Theory and Philosophical Principles on which the Construction and Use of the Hydrostatic Scale of Lines Pertaining to this New hydrometer depend." One of the rarest of Martin's works. Not in the usual bibliographies. (Sotheran, Cat. 741 [1913], 11507)

MARTIN, Louis Aimé

Lettres à Sophie sur la Physique, la Chimie et l'Histoire naturelle, par L. Aimé-Martin; avec des notes par M. Patrin, de l'Institut. . . .

Paris: Charles Gosselin, Rue de Seine, No. 12; Parmentier, Rue Dauphine, No. 14. 1822.

Nouvelle (sixth) edition. 4 vols., 12mo. I: 2 leaves, xxiii, (1), 249, (1) pp. II: 2 leaves, 300 pp. III: 2 leaves, 254 pp. IV: 2 leaves, 220 pp. With engraved frontispiece dated 1822 in each vol. Fine set, with half titles, in contemporary gilt-ruled calf, spines gilt. Engraved nineteenth-century armorial bookplate: H. G. W. Sperling.

A WIDE-RANGING SERIES of essays on physics, chemistry, and natural history by Martin (ca. 1767–1846 or 1847), professor of literature at the Lyons Polytechnic School. Of chemical interest throughout, topics covered include Lavoisier's researches, electrolysis and composition of water, hydrogen, oxygen, gases, nature of fire, caloric, luminescence, and chemical affinity. Other subjects include comments on Newton, Buffon, volcanoes, aurora borealis, the sea, causes of winds, migration of birds, and explanation of specters. Although several editions appeared (first: Paris, 1810; second, 1811, Duveen, 393), all are scarce and overlooked by most bibliographers. Other editions: 1827 (Smith, 318), 1842, 1847 (Ferchl, 343)

MARTINE, George

Essays Medical and Philosophical by George Martine, M.D. . . .

London: Printed for A. Millar over against St. Clement's Church in the Strand. 1740.

First edition. 8vo. 7 leaves, 376 pp. With folding engraved table of 15 thermometric scales (facing p. 217). Fine copy, in original gilt-ruled calf, rebacked with old spine laid on, red morocco label. The front pastedown is a page of advertisements of Millar's books. Old ink inscriptions on title (Alexr. Irvine, Andr. Wood, 1791, & Societatis Medicae Aberdonensis).

A COLLECTION OF essays containing the first important work on clinical thermometry, in which the Scottish physician Martine (1702–1740) shows himself to be in advance of his time. In his *Essay on the Construction and Graduation of Thermometers* (pp. 175–214), he advocates the need for two fixed points: the boiling point of water and the melting point of ice. He criticizes Reaumur's method of determining these points and urges the use of mercury as a thermometric liquid instead of Reaumur's alcohol. His *Essay towards comparing Different Thermometers* (pp. 217–230) includes a table depicting fifteen different thermometric scales used by earlier physicists. In *An Essay on the Heating and Cooling of Bodies* (pp. 231–273) and *An Essay towards a Natural and Experimental History of the Various Degrees of Heat in Bodies* (pp. 275–376), Martine was the first to discover the law of cooling of a body for differences exceeding 40 to 50 degrees Celsius. "The clinical thermometry dreamed of by Sanctorius . . . was revived in the classic *Essays* . . . of George Martine . . . which is the only scientific treatment of the subject before the time of Wunderlich" (Garrison). A French translation appeared (Paris, 1751). (Blake, 290; Garrison, *History of Medicine*, 356; Garrison-Morton, 2671; Mendelsohn, *Heat and Life*, 81–84; Middleton, *History of the Thermometer*, 115–116; Norman, 1447; Watt, II, 650w)

MARTINE, George

Essays on the Construction and Graduation of Thermometers, and on the Heating and Cooling of Bodies. By George Martine, M.D. A New Edition, with notes and considerable additions, especially the Tables of the Different Scales of Heat, exhibited by Dr. Black, in his Annual Course of Chemistry. Edinburgh: Printed for and sold by William Creech. 1792.

Fourth edition. 12mo. vi, 186 pp. Large folding engraved table (thermometric scales) and woodcut diagram on page 67. Very good copy, in contemporary calf, rebacked with original gilt-ruled spine laid on, maroon morocco label. An important association copy from the library of John Gough (1757–1825), the blind teacher of John Dalton (founder of the chemical atomic

theory) and the philosopher William Whewell. With Gough's small woodcut stamp ("John Gough, Kendal") on page 56 and his engraved bookplate on the front pastedown endpaper (partly covered by that of Harry Arnold, Arnbarrow).

AN UPDATED version of Martine's celebrated *Essays* (first: 1740), on thermometers and heat, by an anonymous editor. "As this book is recommended by Dr. Black, to the Students attending his class, the Editor has endeavoured to render this edition more useful to them by inserting some notes, and by adding, in the appendix, some tables of the scales of heat, which the Doctor usually exhibits and explains in his course" (advertisement). The title page of this edition is reproduced as plate II of Andrew Kent's *An Eighteenth Century Lectureship in Chemistry* (Glasgow, 1950). A precious association copy of an important work. Dalton was first a student and later a partner at Gough's school in Kendal, and there is no doubt that he studied this copy during his stay in Kendal, 1781–1793. "Under Gough's tuition Dalton made rapid progress in mathematics, meteorology, and botany" (A. Thackray, in D.S.B.). (Blake, 290)

MARTINEZ, Martin

Philosophia Sceptica, extracto de la Physica antigua, y moderna, recopilada en dialogos, entre un Aristotelico, Cartesiano, Gasendista, y Sceptico, para instruccion de la curiosidad Española. . . .

Madrid: n.p. 1730.

First edition. 4to. 6 leaves, 379, (1) pp. Title page in red and black. With 2 full-page copperplates and woodcut figures in text. Fine copy in original vellum. Inscribed in ink on flyleaf: Balthasar Duarte, 19 June 1749.

MARTINEZ (1684–1734) was physician to the Spanish Court and president of the Royal Society of Seville. In this rare book he surveys contemporary physics and chemistry in eleven "dialogues." Dialogue V, on "elementos chimicos" (pp. 102–111), in which Sceptico discourses with an Aristotelian and a Cartesian on alchemy and the principles of chemistry, is reminiscent of Boyle's *Sceptical Chymist* (London, 1661). Other topics include discussions on the primary matter, Aristotelian elements, heat, light, sound, magnets, and astronomy. Evidently a Cartesian, Martinez depicts the planets rotating around the sun in a "vortex" woodcut (p. 246). The tenth dialogue contains a discussion on animals and whether they have souls or are ingenious machines created by God. A posthumous third edition of this work appeared (Madrid, 1768). Martinez also published well-received books on anatomy and surgery. (Wellcome, IV, 69)

MARTINEZ RUEDA, Manuel

Arte de Fabricar el Salitre y la Polvora, escrito y publicado de Orden del Rey Nuestro Senor, y dedicado a S.M. Por D. Manuel Martinez Rueda.

Madrid: En la Imprenta Real. 1833.

First edition. 4to. xxxi, (1), 308 pp. With royal coat of arms on title page and 16 very large folding engraved plates. Superb copy with wide margins in pristine condition on superior paper, in original Spanish marbled calf, spine richly gilt, broad ornamental gilt dentelles on each cover, maroon morocco label.

AN EXCELLENT treatise on the manufacture of saltpeter and gunpowder in Spain, written and published by order of King Ferdinand VII. All aspects of the history, chemistry, and technology of the subject are covered. The plates illustrate all of the equipment employed. Judging by the sumptuousness of the format and binding, and the fact that the book was printed at the Royal Press, it is probable that very few copies were made. Neither Martinez Rueda nor this rare work are recorded in the usual bibliographies.

MARTINI, Gregorius

Commentatiuncula in libri qui inscribitur De Chymicorum cum Aristotelicis et Galenicis Consensu ac Dissensu Caput XI. Quod est de principiis Chymicorum. Tractationem quaestionis: an sal sulphur & mercurius sint prima perfectè mixta, & reliquorum perfectè mixtorum principia: novam perque utilem continens. Autore Gregorio Martini . . .

Frankfurt on Oder: Typis Friderici Hartmanni. 1621.

First edition. 8vo. 6 leaves, 243, (1) pp. Few marginal notes and underlining in an old hand; otherwise very good copy in contemporary vellum. Bound with: Sala, Angelo, *Anatomia antimonii* (Leyden, 1617), and 5 other works.

A COMMENTARY ON various chapters of the *De Chymicorum cum Aristotelicis et Galenicis consensu ac dissensu* (Wittenberg, 1619), by Daniel Sennert. The book is of considerable chemical interest, with early references to the atomic theory, elements, the three spagyric principles, and other contemporary theories. Martini cites the works of numerous chemists: e.g., Basil Valentine, Beguin, Duchesne (Querctanus), Gluckrad, Isaac Holland, Paracelsus, Severinus, and Zwinger. Partington states that he had "not been able to trace" a copy of this extremely rare book. Of the author, Martini (fl. 1617–1621), a physician, almost nothing is recorded. Not in Duveen, Ferguson Coll., Van Melsen, Wellcome, etc. (Ferchl, 343; Ferguson, II, 81; Krivatsy, 7503; Partington, II, 272)

MARZUCCHI, Giuseppe

Nova et Vera Chymiae Elementa.

Padua: Ex Typographia Seminarii. Apud Joannem Manfre. 1751.

First edition. 8vo. 8 leaves, 237, (1) pp., 1 leaf (blank). With folding copperplate containing 10 geometrical figures. Woodcut of Phoenix rising from the fire on title page, historiated woodcut capitals, head- and tailpieces. Mint copy in pristine condition, in original vellum, brown morocco label. From the library of John Stuart, third earl of Bute (1713–1792), secretary of state to George III.

A BEAUTIFULLY PRINTED example of eighteenth-century Italian book production and a profound work on theoretical chemistry, in which an attempt is made to deduce chemical principles by applying the mathematics of gravitational theory. Reference is made to the writings of Newton, Boyle, Bernoulli, Freind, Keil, et al. The ten chapters cover the basic tenets of chemistry, calcination, distillation, sublimation, fermentation, suspension, precipitation, crystallization, and an explanation of Friend's tables of the density of metals, nonmetals, salts, and several organic materials. Marzucchi (or Marzucco, 1713–ca. 1779), an abbot and physician, was professor of mathematics at the Royal University of Naples. He also published a work (Naples, 1757) on the quadrature of the circle, one of the greatest and earliest of all mathematical problems, in which he traced attempts to square the circle from the time of Archimedes to the eighteenth century. Rare. (Bolton, 657; Cole, 925; Ferchl, 345; Poggendorff, II, 71)

MASCAGNI, Paolo

Dei Lagoni del Senese e del Volterrano Commentario di Paolo Mascagni al Signor Francesco Caluri Professore nella Regia Università di Siena.

Siena: Nella Stamperia di Vinc. Pazzini Carli e Figli. 1779.

First edition. 8vo. 87, (1) pp. Very fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

ONE OF the greatest Italian anatomists of the eighteenth century, Mascagni (1755–1815) "made several discoveries regarding the lymphatics," and his "beautiful atlas contained 41 engravings of the lymphatics and gained him lasting fame" (Garrison-Morton). "Mascagni was appointed professor of anatomy at Pisa; he was also invited to hold professorships at Bologna and Padua, but accepted the vacant post at Florence" (D.S.B., IX, 153). He also taught chemistry as well as anatomy and physiology. The *Dei Lagoni* is entirely on the chemistry of the lake waters and adjoining areas around Siena and Volterrano. Mascagni found high

concentrations of borax and other minerals in the lakes. "Fin dal 1779 il Mascagni esaminò acque minerali e quelle del lago volterrano, avendovi ritrovato borace in grandissima quantita. Dal quel tempo cominciò in Italia lo sfruttamento dell'acido borico" (Capparoni, *Medici e Naturalisti celebri Italiani*, II, 121). See also Moreni (*Bibliografia della Toscana*, II, 50). Reference is made to the works of Baumé, Cadet, Macquer, et al., and various analytical tests are described. A rare book. Although the biography of Mascagni appears in the D.S.B., this title is not mentioned. It is also not listed by the usual early chemical bibliographies.

MASCAGNI, Paolo

Lettera del professore nell'università di Pisa Paolo Mascagni ad un de' quaranta della Società Italiana delle Scienze. (Siena: Il Agosto. 1805.)

First edition. 8vo. 16 pp. Fine copy, uncut, in maroon quarter cloth, marbled boards, spine gilt-lettered and dated. Bound with: 3 tracts by Pacchiani, 2 by Cioni and Petrini, and 1 each by Sangiorgio, and Thenard and Biot, all of 1805.

A PAPER ADDRESSED to the Italian Society of Science on the composition of hydrochloric acid and hypochlorous acid. Mascagni (1755–1815), professor of anatomy first at Siena and later at Pisa, describes his repetition of the important experiments of Pacchiani in which dilute solutions of sea salt and hydrochloric acid were electrolyzed. This paper is possibly an offprint from Brugnatelli's *Giornale Fisico-Medico* or his *Avanzamenti della Medicina e Fisica*. In addition to this work, Mascagni published on naturally occurring boric acid (see Weeks, *Discovery of the Elements*, 1960, pp. 581–582). Mascagni, who was a friend of Felice Fontana, taught chemistry at the Santa Maria Nuova Hospital in Florence. Very rare. (Mottelay, 363)

MASCALL, Leonard

A profitable booke declaring dyuers approoued remedies, to take out spotts and staines, in Silkes, Veluets, Linnen, and Wollen Clothes. With diuers colours how to die Veluets and Silkes, Linnen and woollen Fustian and Threade. Also to dresse Leather, and to colour Felles. How to Gild, Graue, Sowder, and Vernishe. And to harden and make soft Yron and Steele. Very necessarie for all men, specially for those which hath or shall haue any doings therein: with a perfect table hereunto, to find all things readie, not the like reuealde in Englishe heretofore. Taken out of Dutche, and Englished by L. M.

Imprinted at London by Thomas Purfoot, dwelling in the newe Rents. 1596.

Third edition. 4to. 1 leaf, 78 pp., 3 leaves (index), 1 blank leaf. Small piece missing from bottom of title page, removing the words "dwelling in the newe Rents. 1596" and the suffixes "on," "as," and "rfoot" of London, Thomas, and Purfoot, respectively; otherwise a fine copy, bound in paneled calf antique, spine gilt-ruled, lettered and dated.

MASCALL (d. 1589) was clerk of the kitchen to Matthew Parker (1504–1575), archbishop of Canterbury. He translated various foreign books on poultry, cattle, fishing, and "remedies" and wrote *A Booke of the Arte . . . howe to plant and graffe all sortes of Trees* (1572). The present title first appeared in 1583, and paginary reprints were published in 1588, 1596 (this edition), and 1605. Ferguson (*Books of Secrets*, II, 5th Supplement, pp. 9–11) discusses the editions of 1583, 1596, and 1605. He states that all three of these editions are valuable and that no copy of this 1596 edition is in the British Museum Library. The title page says that this work was translated from Dutch, but Ferguson states that he could not trace the original Dutch version. He adds that the parts on softening iron and steel, etc., correspond to sections in the *Kunstbüchlin* (1537) and Andriessen's *Kunst-Boeck* (1549). The book is of considerable chemical interest. Extremely rare. Other copies are known that have the imprint missing (e.g., Wellcome Library). Not in Duveen, Ferguson, Partington, Smith, etc. (Ferguson Coll., 451; Lawrie, 448; S.T.C., 17592 [3 copies: 2 in U.S.]

MASTRIO, Bartholomaeo, and BELLUTO, Bonaventura

Disputationes in libros de celo et metheoris. Quibus ab adversantibus tum veterum tum recentiorum iaculis Scoti philographia vindicatur. . .
Venice: Typis Marci Ginami. 1640.

First edition. 4to. 8 leaves (including engraved title), 312 pp., 1 leaf (advertisement of books printed by Ginami). Fine copy in original vellum. Bound with: Mastro, B., and Belluto, B., *Disputationes in libros de gener. et corrupt.* (Venice, 1640).

MASTRIO OF MELDOLA (1602–1673) and Belluto of Catania (1599–1676) met as fellow students at the College of Saint Bonaventura in Rome and later taught together at Cesena, Perugia, and Padua. In his discussion of the Scotist Revival, Thorndike (VII, 465–476) devotes the whole of chapter XV to these works. The authors were in such remarkable agreement in interpreting the philosophy of Duns Scotus that their pupils said that they spoke with one tongue, wrote with one pen, and thought with one head. These works discuss the celebrated books of Aristotle, agreeing on many points but disagreeing on others. Of importance in the history of seventeenth-century scientific concepts and discoveries, these works cover topics in biology, botany,

chemistry, physics, astronomy, meteorology, medicine, geology, mineralogy, metallurgy, etc. Thorndike notes that the Bibliothèque Nationale has only a 1678 edition of these authors' works and quotes the present editions from a reference to them in J. Zedler's *Grosses Vollständiges Universal Lexicon* (1732–1750). Only the first volume is in the British Library. Extremely rare. (British Library, *Seventeenth Century Italian*, II, 557)

MASTRIO, Bartholomaeo, and BELLUTO, Bonaventura

Disputationes in libros de gener. et corrupt. Quibus ab adversantibus tum veterum tum recentiorum iaculis Scoti philosophia vindicatur. . .

Venice: Typis Marci Ginami. 1640.

First edition. 4to. 10 leaves (including engraved title), 464 pp. Fine copy in original vellum. Bound with: Mastrio, B., and Belluto, B., *Disputationes in libros de celo et metheoris*. (Venice, 1640).

A SEQUEL TO the work with which it is bound. There are references to the writings of Galileo, Telesio, Kepler, Cardan, Copernicus, and Brahe in astronomy; Raymund Lull, Agricola, and Licetus in alchemy and chemistry; Pomponazzi, Poncius, and others in physics; and numerous other references to earlier and contemporary scientists and philosophers. Not in the British Library and not traced in the usual bibliographies.

MATHESIUS, Johann

Berg-Postilla oder Sarepta darinnen von allerley Bergwerck und Metallen, was ihre Eigenschafft und Natur, und wie sie zu Nutz und gut gemacht, guter Bericht gegeben. . . mit einer Vorrede von dem Autore und dessen Schrifften. . . neue gedruckt und verlegt zu Freyberg. . .

Freiberg: von Zacharias Beckern. 1679.

Final, most complete edition. 4to. 16 leaves, 892 pp., 14 leaves; 70 leaves. Title page in red and black. Black letter. Some leaves lightly browned (as usual); otherwise fine copy, in original vellum. Bound with: Junghanns, G., *Aussgeklaubte Braublein Ertz* (Freiberg, 1680).

A CLOSE FRIEND of Agricola, Mathesius (1504–1565) was a Lutheran minister and first preacher at Joachimsthal, then the richest silver mine in the heart of the Bohemian mining district known as the Erzgebirge. In this work (first: Nuremberg, 1562), which is presented in the form of sermons on mining topics, he related practical mining problems to biblical stories in order to influence the miners' religious sentiment and pleasure in the church, as well as to deepen their professional interest. He describes the mining

of iron, copper, silver, gold, and other metals; refining of ores; smelting; assaying; marketing; etc. The book is replete with metallurgical and chemical information, which is discussed by Partington. In the second part—the Joachimsthal chronology—there is a detailed account of the town from 1516 through the end of 1617, with a record of the output of each shaft. The publication of Agricola's *Bergbuch* is mentioned under the year 1556. Many editions of this popular work appeared, the present being the most complete. All editions are now rare. An interesting account of Mathesius and this work is given by Adams (*Birth and Development of the Geological Sciences*, 1938, pp. 196–198). Hoover (no. 565) describes the first edition (1562), and Ferchl (p. 345) lists editions of 1578 and 1608. (Partington, II, 62; Poggenдорff, II, 82; Smith, 319)

MATHEWS, Richard

The Unlearned Alchymist His Antidote: Or, A more full and ample Explanation of the Use, Virtue and Benefit of my Pill, Entituled, An effectual Diaphoretick, Diuretick, purgeth by Sweating, Urine. Whereunto is added, Sundry Cures and Experiences, with particular direction unto particular Diseases and Distempers. Also, Sundry plain and easie Receipts, which the Ingenuous may prepare for their own health. By Richard Mathew, and are to be had at his house by the Lyons Den at the Tower, next Gate to the By-ward.

London, Printed for Joseph Leigh, at the upper end of Bazing-hall-street, near the Naggs-head Tavern, and are there to be sold together with this Pill, 1662.

Second edition, first issue. 8vo. 4 leaves, 192 pp. Very good copy in early-nineteenth-century half calf, marbled boards, spine blind-tooled and dated in gilt, black gilt-lettered label. With early-nineteenth-century bookplate on front pastedown endpaper: T. Davison, Scarbro'.

THE FIRST edition appeared in 1660, with only 143 pages of text (see Duveen, 394). Ferguson describes this second edition, but the Young copy has eight leaves, 192 pages, and two almost identical title pages, which differ only in that in one the imprint lacks the words "and are there to be sold together with this Pill," which corresponds to the wording in the third edition of 1663. It is probable, therefore, that, as there are two states of the title page, this implies that there were two issues in 1662, the issue with the extra words (as above) being the first and similar in wording to the imprint of the first edition of 1660. This suggestion is the more probable because the second issue has eight prefatory leaves (as in the Young copy), which corresponds more closely to the ten prefatory leaves of the third edition of 1663. Written in faded ink on the recto of the leaf preceding the title page is the following seventeenth-century

memorandum: "Directions How to take thy Pills on Page 116 and 117 on. First I tooke 10 graines and they never moved mee. Next take 16 graines." Very rare. (Ferguson, II, 82; Watt, II, 656j; Wing, M1290a [4 copies: 2 in U.S.A.]

MATHEWS, Richard

The Unlearned Alchymist His Antidote: or a more full and ample Explanation of the Use, Virtue and Benefit of my Pill. Entituled, an effectual Diaphoretick, Diuretick, purgeth by Sweating Urine. Whereunto is added, Sundry Cures and Experiences, with particular direction unto particular Diseases and Distempers. Also, Sundry plain and easie Receipts, which the Ingenious may prepare for their own health. Together with a precious Pearl in the midst of a Dunghil, being a true and faithful Receipt of Mr. Richard Mathews's Pill, according to his Own practice recorded in writing under his own hand, 1659. Presented to the world by Mrs. [sic] Anne Mathews, amongst many sad Complaints of wrongs done to her, and the Commonalty, and her deceased Husband. By Richard Mathews, and are to be had at his house by the Lyons Den at the Tower, next Gate to the By-ward. London: Printed for Joseph Leigh, at the upper end of Bazing-hallstreet, near the Nags-head Tavern. 1663.

Fourth (final and best) edition. 8vo. 10 leaves, 204 pp. (page 156 misnumbered 128, and pages 161–176 misnumbered 151–166). Signature A1 (blank, lacking), signature A2 recto blank, verso listing "Certain choice Receipts." Very good copy, in calf antique, maroon morocco label, by Bernard Middleton. Bound with: Kendall, George, *An Appendix to the Unlearned Alchymist* (London, 1664).

A SPIRITED AND emotional defense of Mathews' pill by his widow, Anne Mathews, in which she states (sign. A4v): "Though it be above Fourteen Months since my Husband Mr. Richard Mathews died . . .," which puts Mathews' death in either 1661 or 1662. She complains that various shopkeepers were selling the pills that her husband invented and attributing their discovery to George Starkey. Shorter versions appeared in 1660 and 1662 (two editions). This is the first edition to contain the *Precious Pearl in . . . a Dunghil*, with separate title page (p. 159). Extremely rare. Wing cites only five copies in the United States, including this copy. (Duveen, 394; Ferchl, 346; Ferguson, II, 82; Ferguson Coll., 453; Krivatsy, 7552; Neu, 2679; Watt, II, 656i; Wing, M1291)

MATTE LA FAVEUR, Sebastian

Pratique de Chymie, divisée en quatre parties, . . . Avec un avis sur les eaux minerales.

Montpellier: Par Daniel Pech, Imprimeur ordinaire du Roy, de Monseigneur l'Evesque, & de lad. ville. Il se vend chez l'Autheur. 1671.

First (only) edition. 8vo. 7 leaves, 360 pp., 4 leaves (misnumbered 3–10), 18 leaves (last blank). Engraved leaf (coat of arms) following title, folding copperplate (chemical vessels, at p. 46) with explanatory leaf of text, folding plate (chemical symbols, at p. 58), and 10 folding plates (apparatus, furnaces, etc). Very fine copy, in original speckled calf, gilt. Signature on pastedown endpaper of Mary Portman Orchard, 1682, wife of Sir William Portman Orchard, F.R.S., friend of Robert Hooke.

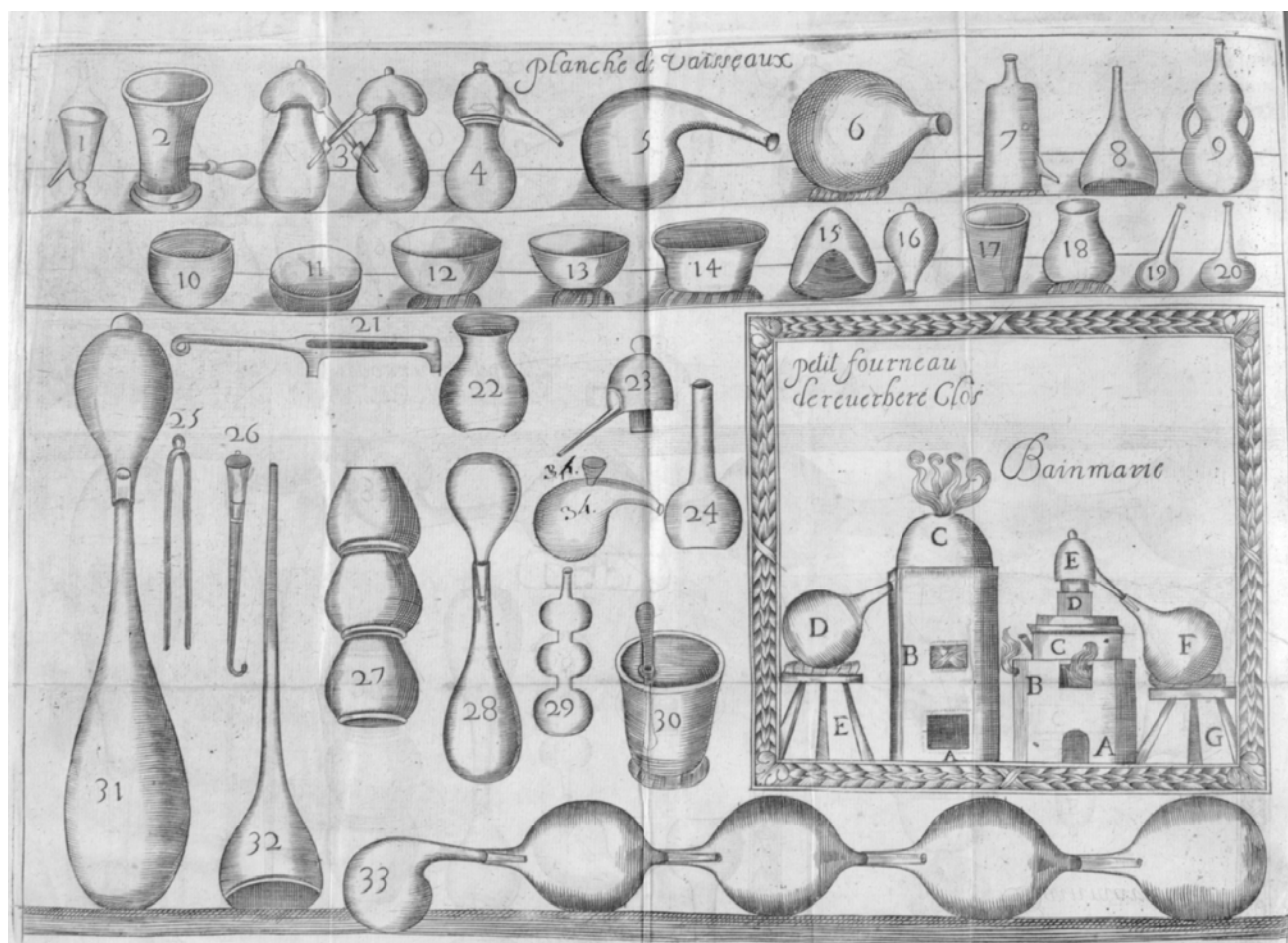
AN IMPORTANT work that is discussed by Partington and definitively analyzed by R. G. Neville (*Ambix*, 10 [1962], 14–28). Probably the finest example extant, this copy has thirteen plates. Less than a dozen copies are known to exist, most imperfect with missing leaves and fewer plates. Sold only by the author at his home in Montpellier, the *Pratique* contains clear directions on practical operations and the preparation of chemicals. Matte La Faveur (fl. 1671), distiller and demonstrator of chemistry at Montpellier, simultaneously gave a course at Paris until 1684, when he was succeeded by the famous chemist Nicolas Lemery. Undoubtedly, Lemery used this work when writing his celebrated *Cours de Chymie* (1675), and it is well known that he seldom acknowledged his sources. The *Pratique* forms a direct link between the *Traité de la Chymie* (1663) of Christophle Glaser and the *Cours* of Lemery. This copy has a distinguished provenance: Sir William Portman, of Orchard Portman, Somersetshire, was one of the earliest fellows of the Royal Society (F.R.S., 1664). Hooke mentions him twice in his *Diary* (Feb. and April 1674). Extremely rare. (Caillet, 7225; Dorbon-Ainé, 6273; Duveen, 395; Ferchl, 345; Goldsmith, M669; Neu, 2681; Partington, III, 27; Poggendorff, II, 78; Sotheran, Cat. 800 [1926], 11519; Thorndike, VIII, 141; Thornton & Tully, 122)

MATTHEWS, William

A Compendium of Gas-Lighting, adapted for the use of those who are unacquainted with Chemistry; containing an account of some New Apparatus lately introduced. By William Matthews. . . .

London: Rowland Hunter, 72, St. Paul's Churchyard. 1827.

First edition. 12mo. viii, 134 pp., 1 leaf (advertisements). With 2 copperplates of apparatus for manufacturing coal and oil gas (drawn by Matthews, engraved by J. Lowry) and 5 small woodcuts of gas-monitoring equipment in text. Stamp of Sion



Matte la Faveur. Pratique de Chymie. Montpellier, 1671.

College Library (released, 1938) on verso of title leaf. Fine copy, uncut, in original quarter cloth, boards, contemporary printed paper label on spine.

AN EARLY introductory work on the history and use of coal gas for lighting, by one of the great expositors of gas and water engineering. Matthews here first describes Samuel Crosley's inventions of the "Tell-tale, the Pressure Indicator, the Apparatus for Registering the Impurities of Gas, and the Instrument employed for ascertaining the Specific Gravity of Gas." The principle and operation of Crosley's improved gas meter (over Samuel Clegg's original design) is described, with an illustration (p. 44). In addition, to convey "notions of the nature and properties of the gaseous bodies . . . the terms or principles of chemistry [have] been subjoined." Discoveries and improvements made by "Messrs. Murdoch, Creighton, Clegg, Dr. W. Henry, &c." are also included. Apparently unknown to the bibliographers, this rare work forms a prelude to Matthews' *An Historical Sketch of the Origin . . . of Gas-Lighting* (London, 1827). (Sotheran, Cat. 832 [1932], 6090)

MATTHEWS, William

An Historical Sketch of the Origin, Progress, & Present State, of Gas-Lighting. By William Matthews. . . .

London: Rowland Hunter, 72, St. Paul's Churchyard. 1827.

First edition. 12mo. xxxii, 434 pp., 1 leaf (advertisements).

Large woodcut on title. Stamp of Sion College Library (released, 1938) on verso of title leaf. Fine copy, uncut, in original boards with modern gilt-lettered cloth spine.

A DETAILED HISTORY of the origins and development of the British coal-gas industry. Matthews "was a witness of William Murdoch's exhibition of gas-lighting at Boulton and Watt's works at Soho, Birmingham, 'the first public display of the kind in this country' . . . [this] work is valuable for containing a large amount of historical information not elsewhere to be found, and gives full accounts of Murdoch's, Winsor's, Clegg's and Lowe's inventions" (Zeitlinger). The long appendix (pp. 235–434) contains reprints of documents by founders of lighting with coal gas, together with comments (favorable and unfavorable) on the changes

wrought by this rapidly growing industry. (Sotheran, Cat. 741 [1913], 11594)

MATTIOLI, Pietro Andrea

Commentarii secundo aucti, in libros sex Pedacii Dioscoridis Anazarbei de medica materia. Adjectis quam plurimis plantarum, & animalium imaginibus quae in priore editione non habentur, eodem auctore. His accessit ejusdem apologia adversus Amathum Lusitanum, quin & censura in ejusdem enarrationes.

Venice: Ex Officina Erasmiana, Vincentii Vairisii. 1558.

Second Latin edition, 2 parts in 1 vol. Folio. 50 leaves, 776, 50 pp., 1 leaf (colophon). With over 700 fine woodcuts of plants, animals, etc. Woodcut printer's device on both title pages and at end. Roman and italic letter. Few minor stains in blank margins of first leaves; otherwise very good, tall copy, in old vellum, gilt, brown morocco label.

THE ENLARGED second Latin edition (first: Venice, 1554) of the great herbal of Mattioli (1501–1577), his most important work, which surpassed those of Brunfels and Fuchs in popularity. Many editions appeared, and the present contains 133 more woodcuts than the first, with improved text and the addition of chapters on other subjects besides the exposition of Dioscorides materia medica. There is a chapter on wine and a section on poisons and antidotes, as well as chapters on minerals and zoology that were not reprinted in later editions. The illustrations of plants are executed in great detail and are important in the history of botany. “In his Commentary on Dioscorides, which . . . [is] . . . an encyclopaedia of Renaissance pharmacology, he collected the results of his long-continued observations . . . and described hundreds of plants, . . . the illustrations . . . are far superior to anything previously published in Italy in this field” (Castiglioni, p. 485). The *Apologia* against Amathus, here in first edition, has separate title page and pagination. “Bonne édition . . . longtemps consulté comme le meilleur traité de botanique et aussi de distillation et de parfumerie” (Caillet). D.S.B., Edelstein, Hoover, Neu, Osler, Partington, et al., list other editions. (Arber, *Herbals*, 93–94; British Library, *S.T.C. Italian Books, 1465–1600*, p. 218; Caillet, 7243; Durling, 3009; Ferchl, 346; Ferguson Coll., 453; Forbes, 384; Pritzel, 5985; Waller, 6323; Wellcome, I, 4139)

MATTIOLI, Pietro Andrea

De i Discorsi di M. Pietro Andrea Matthioli . . . nelli sei libri di Pedacio Dioscoride Anazarbeo, della materia medicinale, parte prima (seconda) . . . ricorretta, ampliata, & all'ultima perfettione ridotta, . . .

Venice: Appresso Bartolomeo de gli Alberti. 1604.

First Alberti (or Ginami) edition. 2 vols., large folio. I: 84 leaves, 672 pp. II: 2 leaves, pp. 673–1527, (1), 6 leaves. Woodcut device on each title page. Woodcut portrait of Mattioli facing page 1. Historiated woodcut initials. Over 1,000 large woodcuts of plants, animals, distillation furnaces, etc. Large copperplate engravings on pages 131, 143, 986, and 995. Roman and italic letter. Few leaves slightly browned, some light damp stains, occasional short marginal wormhole (not touching text), sections 4X and 4Y neatly remargined; otherwise an excellent, tall copy on thick paper with very wide margins (some uncut), in contemporary vellum (repaired), brown morocco labels, gilt.

THE MAGNIFICENT and monumental Alberti edition of Mattioli's commentary on the materia medica of Dioscorides. The first edition (1554) was revised and improved by Mattioli until his death in 1577. The preface is dated 1 April 1568. The superb woodcuts of plants are mostly by Giorgio Liberale and Wolf Meierpeck. At the end of volume II is a six-leaf appendix depicting six different types of furnace and distillation apparatus for waters and oils from plants. This appendix, with separate title page, was also issued separately (see Duveen, 395; Neu, 2689). The colophon (p. 1527) states: Appresso Domenico Nicolino. The Venetian printers Alberti and Nicolini were active between 1604–1613 and 1601–1605, respectively. One of the finest editions of Mattioli's famous work. Rare. “Edition fort recherchée.” (Brunet, III, 1539). (Arber, 92–97; British Library, *S.T.C. Italian 17th Cent.*, pp. 301, 559; Osler, 344 [imperf.]; Watt, II, 656m; Wellcome, I, 4137)

MATTIOLI, Pietro Andrea

Epistolarum Medicinalium Libri Quinque.

Lyons: Apud Caesarem Farinam. 1564.

First Lyons, and first 8vo. edition. 652 pp., 14 leaves (index). Woodcut printer's device on title page and 6 woodcuts in text (2 of animals, pp. 406, 630; and 4 of plants, pp. 491, 492, 624). Roman letter. Woodcut capitals. Fine, crisp copy, in contemporary overlapping vellum.

PREVIOUSLY PRINTED in folio (Prague, 1561), this first 8vo. edition contains the scientific correspondence of the great Italian physician and botanist Mattioli. It is a mine of information for the chemical, pharmaceutical, botanical, and zoological knowledge of the sixteenth century. Mattioli's letters are addressed to many of the famous scientists and physicians of his day (e.g., Falloppio, Aldrovandi, Crato, Peucer, Joa. Jordanus, and Maranta), but letters exchanged by other scientists are also included—for example, a letter from M. Guilandinus to Conrad Gesner and Gesner's reply, referring to the controversy between Guilandinus and Mattioli concerning plants. A letter to H. Brillus deals with

a concoction of guaiacum wood and its use in treating “morbus gallicus,” and another addressed to Mathesius concerns the magnet. According to Schelenz (*Geschichte der Pharmazie*, p. 395), Mattioli was the first to speak (in the present work) of dried plants for the use of pharmacognostic studies. Thorndike discusses this book at length, and Partington refers to its chemical importance. Only the first edition (1561) is listed by Osler, Partington, and Thorndike. Rare. Not in the British Library. (Durling, 3034; Watt, II, 656m; Wellcome, I, 4151)

MAURICE, Frédéric Guillaume

Traité des Engrais tiré des différens rapports, faits au Département d'Agriculture d'Angleterre, avec des notes; suivi de la traduction du Mémoire de Kirwan sur les Engrais, et de l'explication des principaux termes chimiques employés dans cet ouvrage. Par F. G. Maurice . . .

Geneva: De l'Impr. de la Bibliothèque Britannique. Et se vend Chez J. J. Paschoud, Libraire. 1800.

First edition. 8vo. xxiv, 466 pp. With large folding table correlating English and French weights, measures, and money. Very fine copy on bluish paper, in original gilt-ruled half calf, speckled boards, orange label.

MAURICE (1750–1826) was secretary of the Société des Arts de Genève and corresponding member of several other learned societies. The memoir by Richard Kirwan (pp. 325–422) is the first French translation of the important work Kirwan carried out on agricultural chemistry. Kirwan's paper originally appeared in the *Transactions of the Royal Irish Academy*, 1796 (vol. 5, pp. 129–198: read in 1794), and was entitled “What are the Manures most advantageously applicable to the various Sorts of Soils, and what are the Causes of their Beneficial Effect?” This celebrated paper was published separately (Dublin, 1796, and London, 1796), with reprints appearing up to 1806. Surprisingly, neither Kirwan nor Maurice are mentioned by C. A. Browne (*Source Book of Agricultural Chemistry*, 1944). Partington (III, 669) briefly refers to Kirwan's work but evidently did not know of this French translation. (Duveen, 397)

MAWE, John

Familiar Lessons on Mineralogy and Geology; explaining the easiest methods of discriminating Minerals, and the earthy substances, generally called Rocks, which compose the primitive, secondary, floetz or flat, and alluvial formations: to which is added, a Description of the Lapidaries' Apparatus, &c. . . .

London: Printed for, and sold by, the Author, 149, Strand; and for Longman, Hurst, Rees, Orme, and Brown, Paternoster-Row. 1820.

Second edition. 8vo. (in 6s). vi, (2), 96 pp. With aquatinted frontispiece and 3 engraved plates (1 colored). Fine copy in contemporary gilt-ruled calf, spine gilt, black leather label.

MAWE (1764–1829), a mineralogist and chemist, published this second edition (enlarged from the first of 1819) to “unlock . . . a casket of useful knowledge, and to present to the learner a compendious view of the beauty and value of its contents” (preface). One plate illustrates twenty-two specimens of different minerals in their natural colors, accompanied by a full page of explanation. The frontispiece shows a Brazilian miner panning for gold and diamonds and a cross-section of the strata at Matlock High Tor, Derbyshire. One plate depicts primitive, secondary, and stratified rocks, and another shows the portable lapidaries' apparatus. The use of the apparatus and the blowpipe in chemical analysis is discussed in the final chapter. A very popular work. Hoover (no. 568) lists an eighth edition (1826) and Wellcome (IV, 88) a twelfth edition (1830). (Roller & Goodman, II, 175; Ward & Carozzi, 1528)

MAYER, Johann Tobias

Anfangsgründe der Naturlehre zum Behuf der Vorlesungen über die Experimental-Physik. . . .

Göttingen: bey Heinrich Dieterich. 1801.

First edition. 8vo. viii, 550 pp., 10 leaves (index). With 3 folding engraved plates. Neat contemporary annotations in ink; otherwise very good copy in original gilt-ruled half sheep, marbled boards, orange label.

MAYER (1752–1830), professor of mathematics and physics at Altdorf, Erlangen, and then Göttingen, at first opposed the antiphlogistic theory of Lavoisier but later supported it. The present work, although primarily on physics, contains a great deal of information on chemical subjects: e.g., acids, alkalis, salts, metals, minerals, combustion, calcination, sulphur, alcohol, ether, chemical affinity, and electricity. Partington (III, 433) quotes a letter by Girtanner written to Van Mons in 1796: “Professor Mayer of Erlangen is an excellent mind, who unites profound knowledge of mathematics, physics and chemistry.” A seventh edition appeared (Göttingen, 1827; Roller & Goodman, II, 177). Ferchl (p. 347) and Partington (III, 623) list other titles by Mayer.

MAYERNE, Theodore Turquet de

Praxeos Mayernianae in Morbis internis praecipue Gravioribus & Chronicis Syntagma, ex Adversariis, Consiliis ac Epistolis Ejus, Summâ Curâ ac Diligentia Concinnatum.
London: Impensis Sam. Smith ad Insignia Principis in Coemeterio D. Pauli. 1690.

First edition. 8vo. 12 leaves, 451, (1) pp., 10 leaves. Fine engraved frontispiece portrait of Mayerne, age 82 (W. Elder sculp.). Very good copy in unlettered contemporary paneled calf.

MAYERNE (1573–1655) studied medicine in Heidelberg and Montpellier (M.D., 1597) and practiced in Paris, where he became physician to Henri IV in 1600. He gave lectures to young surgeons and apothecaries in 1603, recommending both galenic and chemical medicines, particularly compounds of antimony, iron, mercury, and tin. He was an exceptionally good chemist for his time; however, his enemies managed to get the Paris Medical Faculty to condemn him, and he ceased lecturing but continued to practice medicine. Partington (II, 172–174) traces Mayerne's career, discussing his chemical contributions, including the present work. Well received in England, Mayerne became M.D. (Oxford, 1606). He was called to London in 1611 and appointed court physician to James I, a post he held under Charles I until the latter's execution. Mayerne was made physician to Charles II but retired the same year to Chelsea. He was knighted by James I in 1624. During his long and successful career he made a large fortune, and many of his manuscripts are in the British Library. The D.N.B. describes Mayerne as "a great physician and the general tone of his writings is enlightened." Edited by Mayerne's godson, Theodore de Vaux, thirty-five years after the author died, the present work was compiled from meticulous notes in twenty-three volumes of manuscript. Walter Charleton wrote the preface. A sequel appeared in 1695. (D.S.B., XIII, 508; Ferchl, 546; Munk, I, 168; Osler, 3355; Partington, II, 172; Waller, 6371; Watt, II, 659q; Wing, M1431)

MAYOW, John

Tractatus Duo, Quorum prior agit de Respiratione: Alter de Rachitide. . .

Leyden: Apud Felicem Lopez de Haro, Cornelium Drie-huysen. 1671.

Second (first Leyden) edition. 8vo. 1 leaf, 57, (1) pp. With 2 copperplates (containing 15 figures). Woodcut on title page. Fine copy in contemporary mottled calf, spine gilt. Inscribed on title "Revolat." Bound with: Thruston, Malachi, *De Respirationis* (Leyden, 1671). Bookplates: E. N. da C. Andrade, John Yudkin.

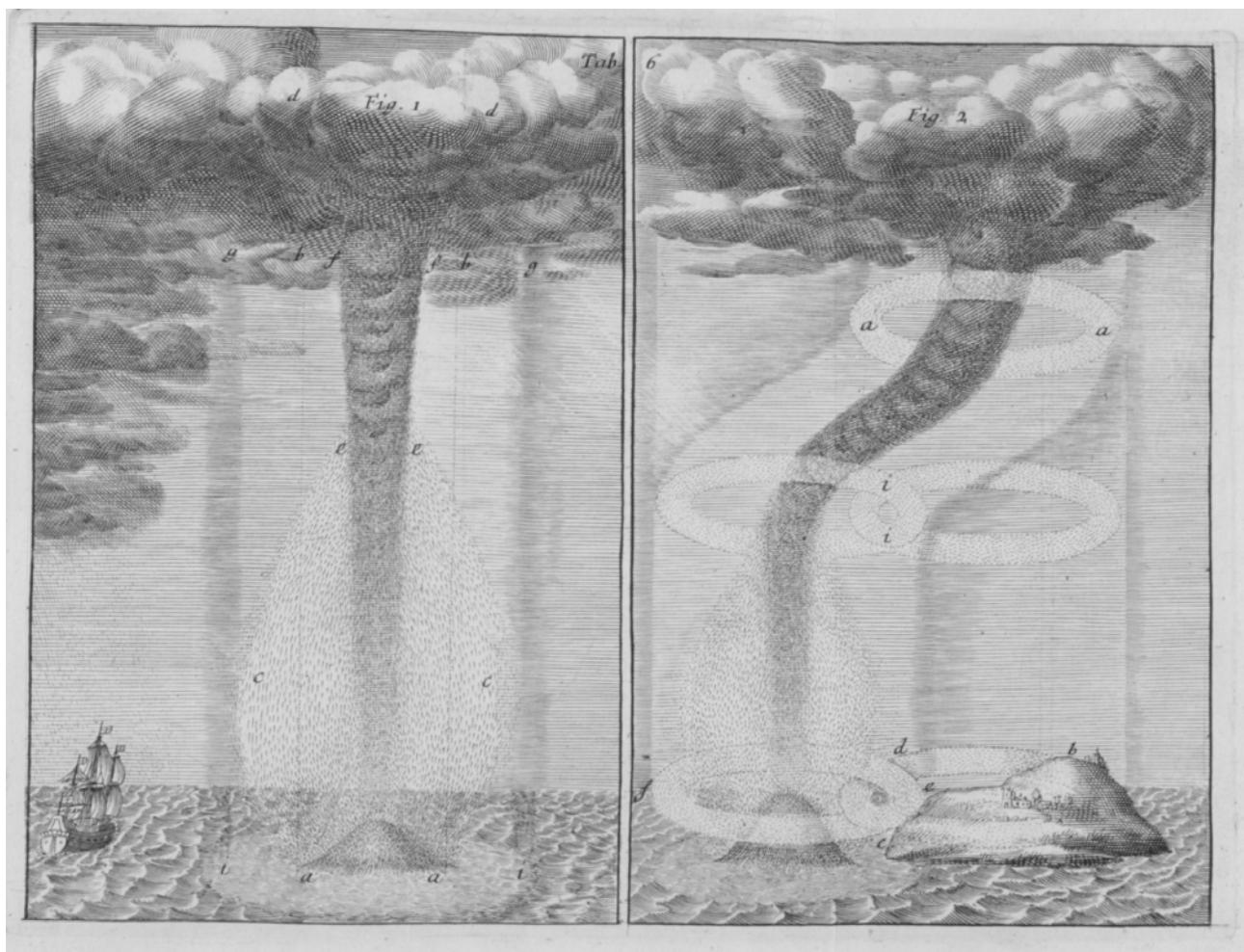
THE FIRST printing on the Continent of Mayow's important studies on respiration, after their appearance in the Oxford (1668/9) edition. "Mayow's first publication, a thin volume [containing] two tracts, the first on respiration and the second on rickets, demonstrated his involvement in the scientific and medical issues and literature of the day. In *De respiratione* Mayow specifically cited the work of his English contemporaries Robert Boyle, Nathaniel Highmore, and Thomas Willis, and of the Italian Marcello Malpighi" (D.S.B., IX, 243). Apart from his pioneering research on the nature of respiration, this work contains Mayow's monograph on rickets, the second treatment of this subject by an Englishman. These tracts were reprinted in the *Tractatus Quinque* (Oxford, 1674). The Leyden publisher has a note on the verso of the title of each work stating that the book has been printed so that it may be bound with the other if desired and with Swammerdam's tract on respiration. Fulton records no copies of the Mayow work so bound. This copy has an important provenance, having come from the libraries of the physician Étienne Benoit Revolat (1768–1848), the distinguished physicist and bibliophile E. N. da C. Andrade (1887–1971), and John Yudkin (1910–1995), the founder of the first chair of nutrition at the University of London. (Fulton, *Mayow*, 106; *Heirs of Hippocrates*, 223; Krivatsy, 7657; Partington, II, 580; Thornton, 86)

MAYOW, John

Tractatus Quinque Medico-Physici. Quorum primus agit de sal nitro, et spiritu nitro-aereo. Secundus de respiratione. Tertius de respiratione foetus in utero, et ovo. Quartus de motu musculari, et spiritibus animalibus. Ultimus de rachitide. . .
Oxford: E Theatro Sheldoniano. 1674.

First edition. 8vo. 20 leaves, 355, (1), 152 pp. Engraved frontispiece portrait of Mayow (believed to be by Faithorne) and 6 folding copperplates. Superb copy, in mint condition, in original paneled calf, modern brown morocco label, gilt.

ONE OF the great classics of chemistry and medicine. Mayow (1643–1679), who took a degree in law at Oxford but became a physician at Bath, was a brilliant chemist and physiologist. Most of his chemical research was carried out in Oxford, and in his *Tractatus quinque* (1674) "he puts forward a theory of combustion similar to Hooke's but supported by beautiful and ingenious experiments. He concluded that air consists of at least two constituents, one of which is identical with Hooke's nitre air, which Mayow calls the nitro-aerial spirit, which supports combustion and respiration, whilst the other constituent, left as a diminished volume after combustion or respiration, is inert" (Partington). His experiments are described in great detail, and his careful investigations foreshadowed the discovery



Mayow. *Tractatus Quinque Medico-Physici*. Oxford, 1674.

of oxygen a century later. Partington devotes an entire chapter to an analysis of Mayow's researches. The book is also a classic of physiology and has been described as "one of the world's great masterpieces" (Ruhrah, *Pediatrics of the Past*, 341 ff.). The great rarity of this book is attested to by Fulton, Osler, Partington, et al. (Bolton, 659–660; Cushing, M236; D.S.B., IX, 244; Eales, 835; Edelstein, 1584; Ferchl, 348; Fulton, *Mayow*, 108; Garrison-Morton, 578; *Heirs of Hippocrates*, 411; Krivatsy, 7653; Needham, *History of Embryology*, 149; *Notable Medical Books*, 83; Osler, 3359; Partington, II, 581; Smith, 320; Thorndike, VIII, 424; Thornton & Tully, 120; Waller, 6392; Wing, M1537)

MAYOW, John

Opera Omnia Medico-Physica, Tractatibus quinque comprehensa. Quorum Catalogum Pagina post Epistolam Dedicatariam exhibet. Editio novissima, Figuris aeneis adornata.

The Hague: Apud Arnoldum Leers. 1681.

Second edition. 8vo. 4 leaves, 416 pp., 12 leaves. With engraved portrait of Mayow (in facsimile) and 7 copperplates. Title page in red and black, with small repair (not affecting text). Very fine (near mint) copy, in original overlapping vellum. Neat signature in ink of Daniel Kellander Petersson, Uppsala, dated 10 May 1715, on first free endpaper.

THE FIRST Continental edition of this landmark work. Apart from the *Elenchus rerum* appearing at the end instead of at the beginning of the volume (as in the 1674 edition), and the omission of the laudatory poem to Mayow, this is a reprint of the *Tractatus quinque*, with some minor misprints in the text corrected. The plates have been carefully reengraved. The portrait is often missing from this edition. Not in D.S.B., Osler, Roller, etc. (Cushing, M235; Duveen, 397; Ferchl, 348; Krivatsy, 7654; Neu, 2714; Partington, II, 582; Poggendorff, II, 95; Thorndike, VIII, 424; Thornton & Tully, 120; Waller, 6389)

McKERNAN, H.

A Treatise on Printing and Dyeing Silks; Shawls, Garments, Bandanas, and Piece Goods; in the different Colours. Illustrated with plates and diagrams. By H. McKernan, an experienced colourmaker and dyer.

London: Published by H. Fisher, Son, & P. Jackson. 1829.

First edition. 4to. 92 pp. Steel-engraved frontispiece and 7 plates. Very good copy in original mauve cloth, with original printed paper label on spine.

A RARE TREATISE on the chemistry and technology of dyeing silk. McKernan (dates unknown) "has aimed to embody that knowledge of Silk Printing and Dyeing, which he has been acquiring through life, in plain and intelligible language, and to trace the various processes through all their branches" (preface). No biographical details on the author have been found, but judging from this work he was a very competent practical chemist. An important book on the technology of dyeing silk in the early nineteenth century. Not in Duveen, Ferchl, Ferguson Coll., Morgan, Partington, Poggendorff, Smith, Waller, etc. (Bolton, *First Supplement*, 280; Edelstein, 3261; Lawrie, 433)

MEAD, Richard

A Mechanical Account of Poisons in several Essays. . . .

London: Printed by J. R. for Ralph South, at the Bible, near the Piazza's of the Royal-Exchange, Cornhill. 1702.

First edition. 8vo. 8 leaves, 175, (1) pp. With 1 folding copperplate containing 19 figures. Very good copy, in dark morocco antique, crimson label, spine dated.

THE FIRST medico-chemical work by the eminent physician Mead (1673–1754), which "excited so much attention that an abstract of it was printed in the 'Philosophical Transactions' for 1703, and in the same year he was elected F.R.S." (D.N.B.). Two of the five chapters discuss poisons from vipers, tarantulas, and mad dogs. Mead dissected vipers and gives an exact account of the mechanism that erects the fangs when the snake opens its mouth. He also swallowed the venom without harm, confirming Galen's experiment on fowls, and concluded that puncture is necessary to produce the effect. Of direct chemical interest are the final three chapters on poisonous minerals and plants, opium, "venomous exhalations" (poisonous natural gases), and waters. Several editions of this classic work appeared, the last in 1756. Inheritor of the famous "gold-headed cane," Mead was physician to George II. (Blake, 295; Blocker, 265; Eales, 1161; Ferchl, 349; Ferguson Coll., 455; *Heirs of Hippocrates*, 766; Munk, II, 47; Neu, 2717; Osler, 3362A; Partington, II, 451; Poggendorff, II, 98; Watt, II, 661b)

MEAD, Richard

A Mechanical Account of Poisons, in Several Essays. . . .

London: Printed by J. M. for Ralph Smith, at the Bible, under the Piazza's, of the Royal Exchange, Cornhill. 1708.

Second edition. 8vo. 8 leaves, 189, (3) pp. With 1 folding copperplate containing 19 figures. Fine copy, in original blind-ruled paneled unlettered calf.

THE REVISED second edition, containing additional experiments and observations. (Blake, 295; Bolton, 660; Watt, II, 661b)

MEADE, William

Dissertatio Chemica Inauguralis, de Aquis Ninerilibus, quam, annuente summo numine . . . D. Gulielmi Robertson . . . Pro Gradu Doctoris . . . Gulielmus Meade, Hibernus . . . Ad diem 24 Junii . . .

Edinburgh: Apud Balfour et Smellie, Academiae Typographos. 1790.

First edition. 8vo. 4 leaves, 40 pp. Very fine copy in contemporary speckled calf, covers with inner and outer gilt dentelles, all edges gilt, spine richly gilt, black morocco label. Presentation copy, neatly inscribed in ink on verso of fourth leaf: "To George Home Esq. with Sentiments of Gratitude & Esteem from his much Obliged Freind Willm. Meade."

BORN IN Ireland, Meade (?–1833) presented this dissertation for the M.D. degree at Edinburgh University on 24 June 1790. It discusses the mineral waters of Epsom, Yorkshire, Scotland, and other locations. Most of the great chemists of the day are mentioned (e.g., Bergman, Black, Fourcroy, and Home). The work ends with descriptions of seventeen chemical experiments carried out in order to analyze the various waters. Meade emigrated to the United States, and Duveen (p. 398) lists a title by him on the waters of New York State (Philadelphia, 1817). Rare. Not in Poggendorff's (II, 98) list of Meade's publications.

**MECKLENBURG, J. M., and
SIMON, Johann Franz**

Grundzüge der Chemie in Tabellen-Form. Zunächst als Repertorium für angehende Aerzte und Pharmaceuten bearbeitet von Dr. J. M. Mecklenburg, . . . and J. Franz Simon, . . .

Berlin: Verlag von August Hirschwald. 1835.

First edition. 4to. v, (1), 156 pp. Occasional minor foxing; otherwise good copy in original mottled half calf, marbled boards, gilt. From the library of the celebrated agricultural chemist James F. W. Johnston (1798–1855), with his signature on title page dated "Leyden October 26th 1835."

AN EXCELLENT synopsis of chemistry in the form of tables, mainly for the use of physicians and pharmacists. It is divided into two parts: the first, on inorganic chemistry (pp. 9–94), was written by the physician J. M. Mecklenburg. The second part, on organic chemistry (pp. 95–156), was written by J. F. Simon (1807–1843), a pharmacist and later well-known chemist, who taught at the University of Berlin. Not included in Ferchl's list of Simon's publications. (Bolton, 660)

MEIJER, Gerhard

Tal, om det Svenska Metal-Arbetets Forkofring, hållit för Kongl. Svenska Vetenskaps Akademien . . . 17 Jan. 1747. Stockholm: Tryckt hos Lars Salvius. (1747).

First edition. 8vo. 1 leaf, 26 pp. Woodcut on title page. Woodcut initials, head- and tailpieces. Inner margin of last leaf repaired (just touching a few letters); otherwise very good copy, uncut, with wide margins, in maroon quarter cloth, marbled boards, spine gilt-lettered and dated.

A SPEECH DELIVERED to the Swedish Royal Academy of Sciences on the production of metals and their alloys in Sweden. The author discusses copper, tin, and iron and their use in making artillery, firearms, machinery, clocks, etc. He refers to the writings of Lemery, Swedenborg, Tillaeus, et al. Meijer (d. 1784) was chief director of the foremost cannon foundry in Sweden. Poggendorff (II, 103) lists several of his works but not the present title.

MEINEKE, Adolph Heinrich

Chemischer Katechismus. Mit besonderer Rücksicht auf die Bedürfnisse der Landwirthe, Gewerbtreibenden und überhaupt aller jener, welche die Chemie nicht blos als Studium, sondern auch zur Anwendung im Leben sich eigen zu machen wünschen. Unter steter Beachtung der neuesten Entdeckungen der Engländer, Franzosen und Deutschen . . . Prague Bei Friedrich Tempsky.

Firma: J. G. Salve. 1820.

First edition. 8vo. viii, 653, (3) pp. Very good copy, uncut and unpressed, in dark-brown quarter morocco antique, marbled boards, maroon label, spine gilt-ruled and dated, with original wrappers bound in.

BORN IN Hildesheim, Meineke (b. 1762) graduated in medicine and practiced in Magdeburg and later in Berlin. He published in Crell's *Annalen* and translated works on chemistry by Kirwan. Divided into 3,709 paragraphs, this chemical catechism covers all aspects of pure and applied chemistry and is an excellent introduction to these subjects. Scarce. Not in Cole, Duveen, Edelstein, Partington, Smith, etc. (Bolton, 661; Ferchl, 350; Poggendorff, II, 103)

MELIN, Laurentius

Dissertatio Gradualis, de Existentia Corporum Durorum, . . . praeside Mag. Samuele Duraeo, . . . sistit Laurentius Melin, Calmariensis. . . XI. Febr. Anni MDCCLXI. Uppsala. (1761).

First edition. 4to. 16 pp. With 2 woodcut diagrams. Large woodcut capital, head- and tailpieces. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

ON THE possibility of the existence of permanent substances, with a mathematical treatment of the behavior of perfectly elastic bodies on impact. On pages 10–12 Melin discusses the kinetic theory of small particles (i.e., what are now called molecules and ions) of salts in aqueous solution. He refers to Newton, Leibnitz, Descartes, Johann Bernoulli, Maclaurin, et al. No reference to the author or this work has been found.

MÉMOIRE

Mémoire contenant le procédé de la teinture du coton rouge-incarnat d'Andrinople, sur le coton filé.

(Colophon:) Paris: De l'Imprimerie Royale. 1765.

First edition. 4to. 7, (1) pp. Published without title page. Very good, wide-margined copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

A VERY RARE tract giving experimental directions for the dyeing of cotton a brilliant red, using a red dye in alkaline solution. There is no indication of the identity of the author, although it is evident from the text that he was knowledgeable in the technique of dyeing. Could it have been Pierre-Joseph Macquer? Under item 3290, the Edelstein catalogue lists another work of similar title, undated, but perhaps published in Paris, possibly in 1750. Not found in any available bibliography.

MEMOIRS

Memoirs Relative to Egypt, written in that Country during the Campaigns of General Bonaparte, in the Years 1798 and 1799, by the Learned and Scientific Men who accompanied the French Expedition. Published in Paris by Authority.

London: R. Phillips, T. Hurst, Carpenter and Co.; E. Balfour, Edinburgh; and J. Archer, Dublin. 1800.

First English edition. 8vo. viii, 459, (1) pp. (pagination jumps from p. 236 to p. 241, but complete). With folding engraved frontispiece map and folding engraved map facing page 270. Fine copy in half calf antique, marbled boards, maroon morocco label, spine gilt-ruled and dated.

ALL PUBLISHED of the English translation. "In 1798 Berthollet and Monge, with other scientists, accompanied the expedition of Napoleon to Egypt, and were often exposed to considerable danger. An 'Institute of Egypt' was founded at Cairo, on the lines of the National Institute of France, the first paper being read in August 1798. Berthollet read his memoir on mass action and affinity at one of its last meetings (1799). The work of the Institut d'Égypte was published in the *Memoires on Egypt* edited by E. F. Jomard" (Partington, III, 498). The French edition was entitled *Memoires sur l'Égypte, publiés pendant les campagnes du Général Bonaparte dans les années VI et VII (+ VIII et IX)* (Paris, 1800–1803, 4 vols.). This translation begins with an account of the Institute of Egypt, its membership, and its proceedings, followed by a selection of memoirs. The most distinguished contributors are Monge (two papers, on mirages and on the fountain of Moses near Suez), Geoffroy St. Hilaire (on the ostrich's wing), and C. L. Berthollet (three papers: on natron, on the dyeing properties of henna, and on eudiometrical observations). The maps and a paper on gunpowder are by A. F. Andreossy. The English translation is rare and is not mentioned by Partington. Not in Duveen, Ferguson, Morgan, Osler, Smith, Watt, et al. (Edelstein, 3879)

MEMOIRS OF SCIENCE AND THE ARTS

Memoirs of Science and the Arts. Or, an Abridgement of the Transactions published by the Principal Learned and Oeconomical Societies established in Europe, Asia, and America. . . .

Deptford: Printed by Delahoy, for Robert Faulder, No. 42, Bond-Street; J. Egerton, Charing-Cross; and J. Sewell, Cornhill. 1793.

First edition, first issue, of vol. I, parts I and II. 4to. I (part I): 1 leaf, iv, 366, iv pp. I (part II): 2 leaves, ii, pp. 367–544, xii, viii; 19 copperplates and 2 folding tables. Very fine copy in pristine condition, uncut with wide margins, in modern boards.

THE FIRST volume of a scientific journal that survived for only one more part. The British Union Catalogue of Periodicals lists only three complete holdings of volume I, parts I and II (as here), and volume II, part I (all published) in the United Kingdom: Edinburgh, Leeds, and London universities. Other complete holdings are at the Library of Congress and at Harvard, Yale, and Princeton universities. Even the British Library holds only volume I, part I. Volume I, parts I and II, were reissued five years later in a so-called second edition (i.e., second issue). This rare periodical presents long, well-illustrated abstracts from a wide variety of British, European, Asian, and American journals, many of chemical interest and importance. Many

articles by the great scientists of the period (e.g., Beddoes, Cavendish, Curtis, Herschel, Hunter, Hutton, Playfair, Rumford, and Wedgwood) are reprinted. The apology at the beginning of part II suggests that the failure of the journal resulted from the difficulties encountered in obtaining contributions from the Continent during the Napoleonic period. Only volume II, part I, ever appeared (London, 1794). (Bolton, *Catalogue of Scientific & Technical Periodicals, 1665–1882*, No. 2928)

MEMOIRS OF SCIENCE AND THE ARTS

Memoirs of Science and the Arts; a General Abridgement of the Transactions published by the Principal Learned and Oeconomical Societies established in the Different Parts of the World: consisting of a number of curious and interesting Articles in Agriculture, Botany, History, Antiquities, Biography, Chemistry, Mechanics, &c. &c. . . . By a Member of the Royal College of Physicians, of London. In three parts, . . . London: Printed for Lackington, Allen, and Co. Temple of the Muses, Finsbury Square. 1798, 1794.

First edition, second issue, of vol. I, parts I and II; and first edition of vol. II, part I (all published). I (part I): 1 leaf, iv, 366, iv. pp. I (part II): pp. 367–544, xii; 19 copperplates (2 folding) and 2 folding tables. II (part I): 2 leaves, pp. 3–212, (2), viii; 10 copperplates. Minor damp spotting of plates in volume II; otherwise very good copy, uncut with wide margins, in modern boards.

ALTHOUGH THE title page of volume I designates this to be the second edition, apart from the completely reset title this is the second issue of the first edition, comprising the sheets and plates of the first issue (Deptford, 1793). The title page of volume I (part II) of the 1793 first issue is naturally omitted. Volume II (part I) is all that appeared despite the notice in the table of contents (p. iv) that there would be a part II of volume II. Bolton lists only the first issue of each volume (1793, 1794) and was unaware of the 1798 second issue of volume I. (Bolton, *Catalogue of Scientific & Technical Periodicals, 1665–1882*, No. 2928)

MENDELEEV, Dmitry Ivanovich

Osnovy Khimii (Principles of Chemistry). St. Petersburg. 1869–1871.

First edition. 2 vols., 8vo. I (1869): 2 leaves, iv, 816 pp.; 151 woodcut figures in text. II (1871): 2 leaves, 951, (1) pp.; 28 woodcut figures in text. Large folding printed table of the periodic table (in 2 forms) in volume II. Repair to page 816 of volume I (affecting text), occasional minor water stains and early annotations; otherwise very good copy in contemporary Russian brown quarter leather, pebbled cloth boards, spine gilt-lettered.

Mendeleev. *Osnovy Khimii*. St. Petersburg, 1869–1871.

THE FIRST edition of the most important book by Mendeleev. It is a fundamental milestone in the literature of modern chemistry, as it contains the first public appearance of the periodic table of the elements in its earliest form, preceded only by a single sheet announcement made for Mendeleev for private distribution. The second volume contains the first appearance of the periodic table in its modern form, with the elements of each group arranged vertically rather than horizontally. “In richness and boldness of scientific thought, originality of expression and influence on the development and teaching of chemistry, Mendeleev’s work has no equal in the world’s chemistry literature” (*Great Soviet Encyclopedia*, XVI, pp. 112–113). The first periodic table appears in volume I, page iv. The modern form of the table is presented in volume II on a folding plate. The table also appeared in 1869 in a paper by Mendeleev in the *Journal of the Russian Chemical Society*. Extremely rare. Not in the usual bibliographies. (Bolton, 663–664 [wrong date: 1868]; D.S.B., IX, 288–290; Partington, IV, 894)

MENDELEEV, Dmitry Ivanovich

La Loi Périodique des Éléments Chimiques. Par M. D. Mendeleeff. Traduit, pour le Moniteur scientifique, par M. Charles Baye, et revu par l’auteur. Annalen der Chemie und Pharmacie, supplement band VIII, 1872. A Monsieur le Docteur Quesneville . . . à Paris.
Paris: Chez M. Quesneville, Rédacteur-Propriétaire. 1879.

First French edition. Large 8vo. In: *Le Moniteur Scientifique*, vol. 21, pp. 691–737 (1879). Fine copy of the complete volume for 1879, in contemporary quarter cloth, marbled boards.

ONE OF the great classics of chemistry, this is the first detailed account of the famous periodic table of the chemical elements and its first appearance in French published by Quesneville. Born in Siberia, Mendeleev (1834–1907) published the first version of the table in February 1869. His paper also contained “the first statement of the periodic law, and the deductions from it that (a) the atomic weights of some elements must be altered to fit into the table, (b) undiscovered elements must exist, filling vacant places in the table. . . . In 1871 Mendeleeff published a long paper in which the periodic table is improved . . . and assumes more or less its modern form” (Partington [IV, 891–897], who gives an account of the development of Mendeleev’s work on atomic weights). This complete volume of the *Moniteur* for 1879 also contains numerous papers by important chemists: e.g., Abel, Berthelot, Brodie, Cannizzaro, Chevreul, Emile & Otto Fischer, Graebe, A. W. Hofmann, Landolt, Pasteur, W. H. Perkin (with large folding plate of his dye factory), and O. N. Witt. (Bolton, *Catalogue of Scientific & Technical Periodicals, 1665–1882*, pp. 494–495; D.S.B., IX, 290, 293; Partington, IV, 897; Thornton & Tully, 225)

MENDELEEV, Dmitry Ivanovich

The Principles of Chemistry. By D. Mendeleeff. Translated from the Russian (sixth edition) by George Kamensky . . . Edited by T. A. Lawson . . .
London: Longmans, Green, and Co. 1897.

Second English edition (first edited by Lawson). 2 vols., 8vo. I: xviii, 621, (1) pp. II: 3 leaves, 518 pp., 1 leaf (blank) + 32 pp. (advertisements). With 97 woodcuts in text and folding printed

table in volume II. Spines faded; otherwise mint copy in original publisher's maroon cloth.

THE FIRST English edition of this famous and original textbook, edited by A. J. Greenaway (London, 1891; Smith, 323), was translated by G. Kamensky from the fifth Russian edition. The present is the best of the English editions, translated from the sixth Russian edition. The first Russian edition appeared at St. Petersburg, 1868–71. The present (1897) edition contains three new papers by Mendeleev, one of them being the important lecture to the Chemical Society of Great Britain on 4 June 1889 (vol. II, pp. 473–490) on his discovery of the periodic law of the elements. This edition was reprinted (London, 1905), edited by T. H. Pope. (Bolton, *First Supplement*, 292; D.S.B., IX, 293; Knight, 235, 243; Morgan, 533; Partington, IV, 891; Roller & Goodman, 184)

MENDELEEV, Dmitry Ivanovich

Polozhenija, izbrannyja dija zaschischenija na stepen magistra khimii. . . .
St. Petersburg. 1856.

First edition. 8vo. 16 pp. Very good copy in dark-brown quarter morocco, marbled boards, spine gilt-lettered and dated.

THE THESIS of the great Russian chemist Mendeleev (or Mendeleeff), which he presented for the master's degree on 9 September 1856 at the University of St. Petersburg. In this work he expressed his adherence to the chemical ideas of Gerhardt, to which he remained loyal throughout his life. "Among other topics, he made known his agreement with unitary and type theories and his opposition to Berzelius' electrolytic theory of the formation of chemical compounds" (D.S.B.). Atomic and molecular weights of inorganic compounds are discussed, and this early work contains the germs of ideas that led him to formulate the periodic law of the elements. Mendeleev obtained the status of *privatdocent* in October 1856 and became professor of chemistry at St. Petersburg (1866–1907). This work is of the utmost rarity, with no copy in N.U.C. (D.S.B., IX, 286; Partington, IV, 892)

MENNANDER, Jonas Henricus

Dissertatio Chemica de Theoria Calcinationis . . . praeside Mag. Johanne Gadolin, . . . pro gradu publico examini subjicit Jonas Henricus Mennander, Tavastia-Fenno. In Audit. Maj. die XXV Maji MDCCXCII. . . .
Åbo: Typis Frenckellianis. (1792).

First edition. 4to. 1 leaf, 15, (1) pp. Mint copy, in maroon quarter cloth antique, marbled boards, spine labeled in gilt: Gadolin. 11 Dissertations. 1792–1805.

AN IMPORTANT Finnish dissertation on the calcination of metals, presented by Mennander under the direction of Gadolin (1760–1852), professor of chemistry at Åbo. After discussing the theory of phlogiston, Gadolin adopts the oxygen theory of Lavoisier (pp. 11–13) and divides the process of calcination into four types, of which the most significant is the formation of oxides. Very rare and unknown to almost all bibliographers. (Bolton, *First Supplement*, 177; Partington, III, 235)

MENSA PHILOSOPHICA

Mensa Philosophica que tractat de his quibus utimur in mensa: de naturis rerum videlicet cibi & potus: de questionibus mensalibus variis ac jocundis quibus in mensa recreamur: deque conditionibus eorum quibus in mensa conversamur philosophice hylariterque procedit.
(Colophon: Venice: Impressus Simone ex Luere. 1514.)

4to. 36 leaves. Black letter. Historiated woodcut initials. Fine copy in seventeenth-century vellum, maroon label gilt.

A ONCE POPULAR book, attributed variously to Thibaud Anguilbert or Michael Scot, which was first published in 1480 and appeared in at least eight more editions before 1500. It is of chemical interest as it discusses fire, salts, alcohol, acetic acid (vinegar), oils, etc. Much of the book is devoted to the medical aspects of food, drink, diet, wine, hygiene, etc., with references to the works of Avicenna, Averroes, Rhazes, et al. Translated into English by "W. B.," it appeared as *The philosophers banquet: furnished with a few dishes for health: but large discourse for pleasure . . .* (London, 1609, 12mo.). "This treatise has . . . been ascribed, wrongly, to Michael Scot" (Ferguson Coll., p. 458). "The work is also attributed to Theobald Anguilbert, an Irish physician" (Osler, no. 7491). Rare. Durling (nos. 3066–3068) lists editions of 1500–1517 but not this. (Ferguson Coll., 458; Waller, 19988; Wellcome, I, 5888)

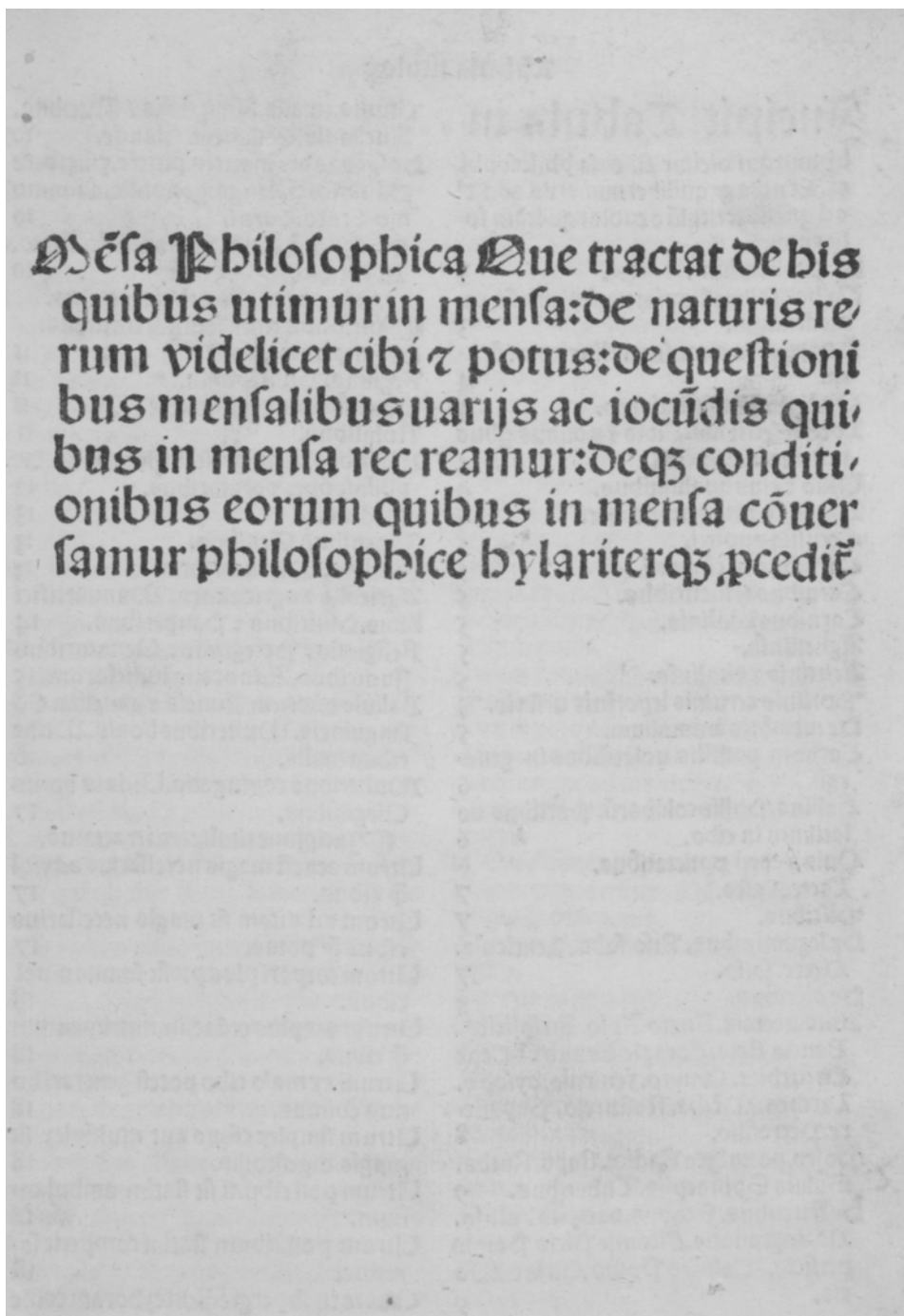
MENSCHING, Johann Heinrich

De Aeris Fixi ac Dephlogisticati in Medicina Usu. Dissertatio Inauguralis Physico-Medica quam Illustris Medicorum Ordinis Consensu et Auctoritate pro Gradu Doctoris Medicinae ac Chirurgiae Publice Ventilabit. Auctor Ioann. Henricus Menschling Sverino-Megapolitanus die XI. Aprilis MDCCCLXXXVII.

Goettingae: Typis Ioh. Albr. Bartheimer Acad. Typogr. (1787).

First edition. 8vo. 2 leaves, 106 pp, 1 leaf (errata). Mint copy in contemporary patterned boards.

AN EARLY doctoral dissertation on the chemical, physical, and medicinal uses of fixed air (carbon dioxide) and dephlogisticated air (oxygen), with numerous references to the



Mensa Philosophica. Mensa Philosophica. Venice, 1514.

works of the great chemists of the period (e.g., Priestley, Lavoisier, Bergman, Kirwan, and Scheele). On Mensching, the author, little biographical information exists. This interesting publication has remained unknown to all bibliographers of chemistry except Ferchl (p. 352).

MERCATI, Michele

Metallotheca Opus Posthumum, Auctoritate, & Munificentia Clementis Undecimi Pontificis Maximi e tenebris in lucem educatum; Opera autem, & studio Joannis Mariae Lancisii Archiatri Pontificii Illustratum.

Rome: Ex Officina Jo: Mariae Salvioni Romani In Archigymnasio Sapientiae. 1717, 1719.

First edition, first issue. Two works in 1 vol., folio. I: 7 leaves (including half title, frontispiece, and 2 portraits), pp. xiii–xlv, (3), xlix–lxiv, 378, (16). Engraved frontispiece, 2 portraits (of Mercati and Lancisi), 21 full-paged engraved plates (2 folding), and numerous engravings in text (several full page). Engraved title-vignettes, initials, and tailpiece. II: (appendix, title page dated 1719), 53, (1) pp. With 1 full-page engraved plate on separate leaf (duplicating plate on p. 7, but with added caption) and 20 engravings in text (several full page). Title page to each volume in red and black. Occasional foxing; otherwise fine, large-paper copy, in original blind-stamped vellum.

A SUPERB EXAMPLE of eighteenth-century Italian fine printing, here in the rare first issue with the date 1717 on the main volume, and not 1719 (the date of the second issue) as is often the case. Although written in the sixteenth century, the work was first printed in this edition, edited by Giovanni Maria Lancisi (1654–1720). Mercati (1541–1593), director of the Vatican botanical garden, had prepared this catalogue of the collection of fossils and minerals in the Vatican collection, assembled under the aegis of Pope Sixtus V, as early as 1574. As a record of an important renaissance mineralogical and palaeontological collection, Mercati's work is of great importance, and it is one of the most attractive "museum" books ever published. The majority of illustrations in the text are from the original sixteenth-century engraved plates prepared for Mercati, rediscovered by Lancisi, and printed here for the first time. (Caillet, 7391; D.S.B., IX, 309; Ferchl, 353; Hoover, 581; Partington, II, 92; Thorndike, VI, 334; Zittel, 16)

MERCURIALE, Girolamo

De Venenis et Morbis Venenosis Tractatus Locupletissimi. . . . Ex voce Excellentissimi Hieronymi Mercurialis . . . excepti, atque in Libros duos digesti: Opera Alberti Scheligi . . .
Venice: Apud Paulum Meietum Bibliopolam Patavinum. 1588.

First edition, second issue. 4to. 8 unnumbered leaves, 44 numbered folios. Roman letter. Woodcut printer's device on title page and ornamental woodcut capitals in text. Some marginal water staining (mostly minor); otherwise very good copy, in unlettered modern marbled boards.

THE SECOND ISSUE (first, 1584), with reset title page, of the abstract by Albert Schelig of the treatise on toxicology by Mercuriale, containing much of interest on inorganic and organic poisons and their antidotes. Descriptions of poisoning by compounds containing arsenic, lead, mercury, etc., are given, as are poisoning by alcohol, opium, fungi, snakes, scorpions, spiders, and other venomous animals. This work is extensively discussed by Thorndike (V, 479–481). The famous Italian physician Mercuriale (1530–1606) published many books and taught at Bologna, Rome, Venice, and elsewhere. (Blocker, 268; British Library, *S.T.C. Italian, 1465–1600, Supplement*, p. 55; Durling, 3106; Neu, 2743; Partington, II, 26; Watt, II, 665m; Wellcome, I, 4244)

MERRETT, Christopher

Pinax Rerum Naturalium Britannicarum, continens Vegetabilia, Animalia, et Fossilia, in hac Insula reperta inchoatus. . . .

London: Typis T. Roycroft, Impensis Cave Pulley. 1667.

Second edition, first issue. 8vo. 16 leaves, 223, (1) pp. Fine, crisp copy, in original vellum.

THE EARLIEST attempt at a classification of the animals, plants, and minerals of Great Britain. Merrett (1614–1695), physician, writer, and original member of the Royal Society, was the first curator of the museum and library given by William Harvey to the Royal College of Physicians. He contributed to some of Robert Boyle's works and in 1662 translated into English Neri's great book of 1612 on the manufacture of glass. The *Pinax*, Merrett's main work, was written because William How's *Phytologia Britannica* (London, 1650) was out of print. The botanical section (165 pp.) lists over 1,400 species arranged alphabetically, with synonyms from Gerarde, Parkinson, Turner, et al. The section on birds (pp. 170–184) is the first detailed list of British birds ever published. The "*Pinax* will always rank as one of the most important milestones . . . of the natural history of this country as it was the first attempt to provide a catalogue of the native species" (Lisney, *Bibliop. British Lepidoptera*, 43). In the *Epistola* Merrett discusses chemical principles and condemns alchemy. Almost all copies of the first edition (printed Aug. 1666) were destroyed in the Great Fire of London (2–6 September 1666). The author corrected the first edition and had it reprinted (as here)

with the date in Roman numerals. Some copies were reissued later in 1667 with a cancel title, dated in Arabic numerals, and "Editio secunda" added. Ferguson (II, 91) gives a biography of Merrett without mentioning this title. (D.S.B., IX, 313; Ferchl, 353–354; Henrey, 98–100; Keynes, 3233; Krivatsy, 7831; Munk, I, 264; Partington, II, 368; Poggendorff, II, 125; Roller, 386; Thorndike, VIII, 69; Thornton & Tully, 118; Watt, II, 666a; Wing, M1840)

MERULA, Gaudenzio

Memorabilium . . . ultra primam editionem et Recognitum et Quatuor libris auctem opus cum emendatione et scholiis Pomponii Castalii Olivetani.

Lyons: Apud Matthiam Bonhomme. 1556.

Third (first Castali) edition. 8vo. 6 leaves, 432 pp., 22 leaves. Woodcut printer's device on title page, historiated woodcut capitals, and 5 woodcuts in text. Old blind stamp on title page and last few leaves; otherwise fine copy in original limp vellum, with author's name and book title neatly written in an old hand in ink on spine and front cover.

BORN AT Labezzaro near Novara, Merula (1500–1555) taught the classics in Milan. His *Memorabilia* (first: Labezzaro, 1546) was enlarged and reprinted in Venice, 1550. The extensive commentary by Pomponio Castali is first included in the present edition, which greatly augments the text of the two previous printings. The work discusses metals, minerals, nonmetals, salts, mineral waters, and naphtha, as well as alchemy, astrology, theology, and other subjects. In his *Musaeum metallicum* (1648) Aldrovandi cites Merula on alchemy, and William Gilbert (*De magnete*, London, 1600) refers to Merula and his experiments on the magnet. The woodcuts are on alchemical and astronomical subjects. There is a brief notice concerning the "insulae America" (pp. 417–418). Very rare. Not in Watt, Wellcome, or the usual bibliographies. (British Library, *S.T.C. French Books*, 311; Durling, 3120; Mottelay, 528; Sabin, 48033; Thorndike, V, 547)

MERULA, Giorgio

Enarrationes vocum piscarum in libris de re rustica, per Georgium Alexandrinum. Philippi Beroaldi in libros XIII. Columellae Annotationes. Aldus de Dierum generibus, simulque de Umbris, & Horis, quae apud Palladium.

Lyons: Apud Seb. Gryphium. 1549.

First Gryphius edition. 8vo. 84 unnumbered leaves. Woodcut printer's device (a griffin) on title page. Historiated woodcut capitals. Italic letter. Few headlines shaved; otherwise very good copy in late-seventeenth-century paneled calf, gilt, maroon morocco label. Bound with: Columella, Lucius Junius Moderatus, *De re rustica libri XII* (Lyons, 1548).

A RARE WORK, being three commentaries on Columella's *De re rustica* by Georgius Alexandrinus (i.e., Giorgio Merula, 1424–1494), Philippus Beroaldus (1453–1505), and Aldus Manutius (1447–1515). The work of Aldus Manutius is based upon a much earlier treatise by Rutilius Taurus Aemilianus Palladius (fourth century A.D.). While both the commentaries of Merula and Beroaldus are of peripheral chemical interest, that of Manutius deals only with the lengths of the days during various seasons of the year. Merula was "a learned and ingenious Italian writer, born at Alexandria in the Duchy of Milan" (Watt [II, 666k], who does not mention the present title). Not in Durling, Wellcome, etc. (British Library, *S.T.C. French Books*, 1470–1600, p. 311)

MESUE the Younger

Opera de medicamentorum purgantium delectu, castigatione, & usu, libri duo. Quorum priorem Canones universales, posteriorem de Simplicibus vocant. Grabadin, hoc est compendii secretorum medicamentorum, libri duo. Quorum prior Antidotarium, posterior de Appropriatis vulgo inscribitur. Cum Mundini, Honesti, Manardi, & Sylvii in tres priores libros observationibus . . . His accessere plantarum in libro simplicium descriptarum imagines ex vivo expressae. Atque item Joannis Costaei annotationes, tum quas in editione superiori dedimus, tum praeterea novae aliae in postremas novem antidotarii sectiones . . .

Venice: Apud Juntas. 1581.

First edition edited by Giovanni Costeo and Vincenzo Cogollo. Folio, 2 vols. in 1. I: 8 leaves, 272 folios. II: 6 leaves, 278 folios, 12 leaves. With 37 large botanical woodcuts in text and hundreds of decorative woodcut initials. The *Supplementum* has its own title page. Large woodcut printer's device on each title. Very good copy in contemporary vellum (spine worn).

THE PHARMACEUTICAL chemical works supposedly of the Arabic physician Mesue the younger (928–ca. 1015), but more probably Latin compilations of the tenth and eleventh centuries attributed to the real Mesue (Joannes Mesue Damascenus—Yuhanna ibn Masawayh, ca. 777–857) to increase their prestige. "No Arabic originals have been traced nor is a Mesue junior ('928–1015') mentioned by any Arabic writer" (Osler). These works were the authority on pharmacy for several centuries. Among the first medical books to be printed, they passed through more than a dozen editions between 1471 and 1500 and became the basis for the official pharmacopoeias of Europe. Other editions are listed by Duveen, Ferchl, Neu, Osler, et al. (British Library, *S.T.C. Italian Books*, 1465–1600, p. 739; D.S.B., IX, 75; Durling, 3131; Reynolds, 2757 [imperf.], Waller, 6523)

MEURDRAC, Marie

La Chymie Charitable et Facile, En faveur des Dames. Par Damoiselle M.M.

Paris: Se vend rue des Billettes, & rue du Plastre proche la ruë S. Avoye, où il y aura pareilles Affiches. 1666.

First edition. 12mo. 18 leaves, 334 pp. With woodcut table of chemical symbols (pp. 39–42). Fine copy, in original blind-ruled speckled calf, tastefully rebacked to match, maroon morocco label.

A BOOK OF secrets dealing with practical chemistry, with particular emphasis on preparations of use to women (e.g., medicines for home use, cosmetics, perfumes, stain removers, dyes, and pigments). Of Marie Meurdrac nothing is recorded. She was obviously very knowledgeable in chemistry, and at least half the book is on chemical processes (e.g., distillation, construction of furnaces, crystallization, extraction, and lixiviation). Divided into six parts, the work provides an excellent introduction to the practical chemistry of the period. The first edition is of great rarity, and even such omniscient bibliographers as Ferchl, Ferguson, and especially Caillet were unable to describe the first edition or say anything about the date of its publication. Caillet, copying Barbier, states that the first edition is dated 1656, and there is a copy so dated in the Ferguson Collection. However, that date is a misprint for 1666, as the privilege of this work is dated 20 December 1665, and there is nothing in the dedication to the Countess De Guiche to suggest an earlier edition. A second edition (Paris, 1674; Duveen, 401) and a so-called third edition in French (Paris, 1687; Neu, 2755) appeared, as well as what is probably the true third edition (Lyons, 1680; Edelstein, 1603). Translations into German and Italian were published, on which see Ferchl; Ferguson; and Ferguson, *Books of Secrets*. (Caillet, 7486; Ferguson Coll., 461)

MEURLING, Martin Gustav

Dissertatio Gradualis, de Differentia inter Inertia et Gravitationem, . . . sub praesidio Mag. Samuelis Duraei, . . . subjicit . . . Martinus Gust. Meurling, Petri Fil. Ostro-Gothus. . . XI. Junii, Anni MDCCLX.

Uppsala. (1760).

First edition. 4to. 10 pp. Large woodcut headpiece and capital. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A DISCOURSE ON physics in which the difference between inertia and gravitation in bodies is considered. Meurling discusses the works of Newton, Euler, Galileo, Kepler, et al., on these subjects. No reference to the author or this work has been found.

MEURLING, Olavus

Dissertatio Historico-Physica de Casu, Inventorum Fertilissimo. . . praeside, Mag. Samuele Duraeo, . . . subjicit . . .

Olavus Meurling, Pet. Fil. Ostro-Gothus . . . II Junii, Anni MDCCLXIV.

Uppsala. (1764).

First edition. 4to. 14 pp. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

ON THE origins of discoveries and inventions in physics, chemistry, and other sciences. Meurling (dates unknown) discusses magnetism, mechanics, hydrostatics, gravity, etc. On page 10 he refers to the invention of the telescope. Of chemical interest are his comments on the invention of gunpowder by Roger Bacon in England (ca. 1290) and Berthold Schwartz (ca. 1320) in Germany, on pages 10–11. He also speaks of the invention of printing (p. 11), stating that Coster of Leyden developed the process before 1430 and that Fust, Schoeffer, and Gutenberg later improved it. On page 12 the author praises the great discoveries of Newton in celestial mechanics and optics. He also discusses Franklin's work on electricity. No reference to Meurling or this work has been found.

MEXIA, Pedro

Dialoghi di Pietro Messia tradotti nuovamenti di Spagnuolo in volgare da Alfonso D'Ulloa. Con la tavola di tutte le cose degne di memoria, che in essi si leggono. . . .

Venice: per Plinio Pietrasanta. 1557.

First Italian edition. 4to. 4 leaves, 125, (1) pp., 5 leaves. Woodcut printer's device on title, historiated woodcut capitals and decorative headpieces. Roman letter. Fine, crisp copy, in contemporary unlettered limp vellum with remains of ties. Neat sixteenth-century inscription below colophon: "Tiberij Delphini Parmensis liber." Bound with: Fuentes, Alonzo de, *Somma della natural filosofia* (Venice, 1557).

THE ITALIAN edition of *Colloquios o dialogos* (Seville, 1541), by Mexia (ca. 1496–1552), noted Spanish historian and native of Seville. The translator was the famous Venetian author Alfonso de Ulloa (d. ca. 1580). Of considerable scientific interest, the book is divided into six dialogues between various learned men who discourse on such topics as the Sun, Moon, stars, comets, meteors, Earth, oceans, earthquakes, animals, man, plagues, medicine, foods, and digestion. Subjects of chemical interest include discussions of the four Aristotelian elements and their properties, vacuum, materia medica, marsh gas, distillation, minerals, metals, salts, gold, and wine. This copy has an important provenance, having once belonged to Tiberius Delphino, who

was probably a relative of Domenico Delphino (fl. 1550), author of *Sommario di tutte le scientie* (Venice, 1556). Very rare. Not in D.S.B., Durling, Osler, Waller, Wellcome, or the usual chemical bibliographies. (British Library, *S.T.C. Italian Books, 1465–1600*, p. 436; Watt, II, 667k)

MEY, Johann de

Sacra Physiologia, sive Expositio locorum Sacrae Scripturae, in quibus agitur de rebus naturalibus . . . Editio secunda, priore auctior atque emendatior; cui etiam addita est pars V & ultima, continens expositionem locorum N. Test.
Middelburg: Apud Jacobum Fierensium Bibliopolam, sub Insigni Globi. 1655.

First complete edition. 4to. 8 leaves, 223, (1) pp., 7 leaves; 293, (3) pp. Woodcut printer's ornament on title page and large historiated woodcut capitals. Few minor marginal wormholes in first quire (not touching text); otherwise very good copy, in original unlettered vellum. Neat signature of Nathaniel Ellison, dated 1699, on first flyleaf.

AN INTERESTING if credulous work on scientific subjects mentioned in the Bible. "Johannes de Mey in 1651 published a commentary on passages in the Pentateuch concerning natural phenomena. This was followed the next year by parts two, three and four, or a commentary on some selected passages from the Old and New Testament dealing with the things of nature. In 1655 the first part was reissued and combined with that of 1652 as *Sacra Physiologia*, second edition. . . . *Physiologia* was of course used by Mey in the sense of natural philosophy or science in general. Mey's main contention is that scriptural statements concerning physical matters are true" (Thorndike). Topics of chemical interest include discussions on minerals, metals, salts, bitumen, and petroleum. A third edition appeared in 1661, with a few additions and changes from the present edition. Mey was a doctor of theology who lived at Middelburg, the capital of the province of Zeeland, The Netherlands. The former owner of this copy, Nathaniel Ellison, was the author of *The Magistrates Obligation*, 1700 (Wing, E610). Rare. (Thorndike, VIII, 277)

MEYER, Johann Friedrich

Chymische Versuche, zur näheren Erkenntniss des ungelöschten Kalchs, der elastischen und electrischen Materie, des allerreinsten Feuerwesens, und der ursprünglichen allgemeinen Säure. Nebst einem Anhang von dem Elementen. Zwote nach dem eigenhändig verbesserten Exemplar des seel. Verfassers und mit dessen alchymistischen Briefen vermehrte Ausgabe.

Hannover: verlegt Johann Wilhelm Schmidt. 1770.

Second edition. 8vo. 1 leaf (general title), 1 leaf (fly title: *Alchymistische Briefe*), pp. 3–48; 1 leaf (title to *Chymische Versuche*, with imprint: Hanover and Leipzig, bey Johann Wilhelm Schmidt. 1770), pp. 3–418; 14 leaves. Fine copy in the original blind-ruled, unlettered calf, with original ties. From the Prince Furstemberg library, Donaueschingen, with small stamps on versos of first title page and final leaf.

THE DEFINITIVE edition of a book first published in 1764, which became the starting point of a heated controversy among chemists of the period. In it Meyer (1705–1765), an apothecary of Osnabrück, expounded his theory of an acidum pingue, which contradicted the theory of Joseph Black, that the difference between mild and caustic alkalis is owing to the presence or absence of fixed air. Meyer was a diligent chemist, and for a while his theory was strongly supported, even by Lavoisier and Guyton de Morveau. This support gradually disappeared, however, as further experimental evidence became available. Chapter XXV (pp. 333–359) deals with electricity, posing the question if and to what extent acidum pingue is the cause of it. This posthumous edition, edited by Andreae, is based on a copy of the first edition corrected by the author. Added to it is Meyer's only other publication, *Alchymistische Briefe*, six letters written between 1764 and 1765, describing his experiments on transmutation. Ferguson, Partington, and Poggendorff refer to Meyer but do not mention this scarce edition. Not in Blake, Duveen, Edelstein, Neu, Smith, Waller, Watt, etc. (Bolton, 667; D.S.B., IX, 347; Ferchl, 355; Ferguson Coll., 462)

MEYER, Johann Friedrich

Lettres Alchymiques de M. Meyer, a M. André Apothicaire a Hanovre: Mises en François par le Traducteur des Essais de Chymie sur la Chaux vive, &c. . . .

Paris: Chez Claude Herissant, Imprimeur-Libraire rue neuve Notre-Dame. 1767.

First French edition. 12mo. xxviii, 76 pp., 2 leaves. Very good copy, in brown quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE FRENCH translation by F. F. Dreux of Meyer's *Alchymistische Briefe* (Hanover, 1767, 8vo., 48 pp.; Sotheran, Cat. 832 [1932], 5536). The editor, Johann Gerhard Reinhard Andreae (1724–1793), states that the six letters comprising this work were written from August 1747 to August 1767. They record Meyer's research on the transmutation of metals, "made in consequence of results found by his friend Dr. Constantini in Hanover" (Partington). Meyer treated mercury with a variety of salts, then heated the products with lead and silver, in his attempts to make gold. "Interesting as one of the last serious attempts in which the

possibility of making gold from baser metals was maintained" (Zeitlinger). He enunciates a curious theory concerning the composition of metals, involving acidum pingue, and challenges the theories of Cronstedt and Vogel. (D.S.B., IX, 347; Duveen, 402; Ferchl, 355; Ferguson, II, 93 [not in Young Coll.]; Neu, 2759; Partington, III, 145; Smith, 327; Wellcome, II, 44)

MEYER, Johann Peter

Specimen Experientiae Chymico-Medicae. . . Promotore Andrea Westphal . . . Anno MDCCLXVII die (blank) Julii . . . exhibuit Johannes Petrus Meyer Vesaliensis . . .
Greifswald: Typis A. F. Röse. (1767).

First edition. 4to. 12 pp. Fine, crisp copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN INTERESTING dissertation describing thirteen experiments on chemicals of medicinal importance (acids, alkalies, salts, and minerals). Freezing mixtures and various reactions are discussed. Meyer (dates unknown) was a student of Andreas Westphal (1720–1788), professor of medicine at the University of Greifswald. Very rare. Unknown to the usual bibliographers.

MEYER, Oskar Emil

Die Kinetische Theorie der Gase. In Elementarer Darstellung mit Mathematischen Zusätzen. . .
Breslau: Verlag von Maruschke & Berendt. 1877.

First edition. 8vo. xv, (1), 338 pp., 1 leaf (errata). Fine copy in original green quarter cloth, marbled boards. An important association copy, from the library of the celebrated physical chemist Friedrich Wilhelm Georg Kohlrausch (1840–1910), with his signature ("Kohlrausch") on first flyleaf.

"THE FIRST edition of this classic of the kinetic theory of gases, and the one generally referred to by its historians" (Zeitlinger). Dedicated to Franz Ernst Neumann (1798–1895), professor of physics at Königsberg, it contains an introduction tracing the theory back to Boyle and Daniel Bernoulli. Meyer (b. 1834), professor of physics at Breslau, was the brother of the famous chemist Julius Lothar Meyer (1830–1895). In this work Meyer fully develops the modern theory of gas kinetics, with mathematical equations that describe the physical behavior of ideal and non-ideal gases. (Bolton, *First Supplement*, 295; E. von Meyer, *History of Chemistry*, 1906, p. 524; Smith, 327; Sotheran, Cat. 789 [1924], 5588)

MEYER, Victor

Die Thiophengruppe von Dr. Victor Meyer . . .
Braunschweig: Druck und Verlag von Friedrich Vieweg und Sohn. 1888.

First edition. 8vo. xix, (1), 301, (1) pp. + 1 leaf (list of books published by P. Vieweg & Son). Fine copy in original half morocco, cloth boards, spine gilt-lettered.

A CLASSIC WORK in which the discovery of thiophene and its many chemical reactions are described. The German chemist Victor Meyer (1848–1897) held several chairs of chemistry before succeeding Robert Bunsen at Heidelberg in 1889. Meyer discovered the heterocyclic compound thiophene, which he isolated from benzene prepared from coal tar. During a lecture in 1883 he "found that a specimen of benzene failed to give Baeyer's indophenine reaction, the formation of a blue colour with isatin and concentrated sulphuric acid. Enquiry showed that the benzene had been prepared . . . from benzoic acid and was very pure; investigation showed that ordinary coal-tar benzene, which gave the reaction, did so because it contained a new substance thiophen, a sulphur compound, C₄H₄S. Meyer and Sandmeyer synthesised it in small yield by passing acetylene through boiling sulphur. Meyer showed that thiophene is a ring compound analogous to furan and pyrrole" (Partington). The thorough researches of Meyer "on thiophene and its derivatives have before all others led conclusively to the recognition of the analogous composition (of furan and pyrrole), and also to a more precise conception of the term aromatic compounds" (Ernst von Meyer). This milestone book lists "more than one hundred papers published by him with his students during the years 1882–1887" (Farber). Meyer is best remembered for the apparatus he used to determine the vapor density of organic compounds. (Bolton, 668; Bugge, *Das Buch der Grossen Chemiker*, II, 383; D.S.B., IX, 356; Farber, *Great Chemists*, 858; E. von Meyer, *History of Chemistry*, 363; Partington, IV, 810; Smith, 328)

MICHAELIS, Gottlieb Augustus

Dissertatio Inauguralis Medica de Anodynorum Virtutibus Venenorum quam praeside Christ. Godofr. Stentzelio . . . die Septembris XXII. A(nno). MDCCXXXV. Pro gradu doctoris . . . Gottlieb Augustus Michaelis Marglissa-Lusatus.
Wittenberg: Ex Officina Eichsfeldiana. (1735).

First edition. 4to. 50 pp., 7 leaves. With engraved title page (Sysang sc. Lips.), historiated woodcut initials, head- and tailpieces. Fine, large-paper copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original crimson painted wrappers bound in.

THE DOCTORAL dissertation of Michaelis (or Michael, dates unknown), on the benefits of using small amounts of poisons as anodynes, presented under the direction of Christian Gottfried Stentzel (1688–1748), professor of medicine at Wittenberg. Of pharmaceutical chemical interest, with many references to earlier and contemporary chemists and physicians. Ferguson (II, 407) briefly mentions Stentzel's work on poisons, and Waller lists several works by him, but neither list the present dissertation. Very rare. Not in the usual chemical and medical bibliographies. (Waring, 126)

MICHEL DU TENNETAR

Éléments de Chymie, rédigés d'après les découvertes modernes; ou précis des leçons publiques de la Société Royale des Sciences et des Arts de Metz . . .

Metz: Chez Gerlache, Libraire, rue Fournirue, près de la Place d'Armes. 1779.

First edition. 12mo. 6 leaves, 281, (1) pp., 1 leaf. Neat manuscript recipe for liqueurs on final leaf; otherwise fine copy, uncut with wide margins, in quarter morocco antique, marbled boards, crimson morocco label, original wrappers bound in. From the Fugger library (noted German bankers).

DEDICATED TO the Duc de Broglie, patron of the Royal Society of Sciences and Arts of Metz, this introductory work summarizes the lectures on chemistry presented by Michel du Tennetar (1740–1801) to the society. Physician-ordinary to the king and professor of medicine at the University of Nancy, the author briefly refers to the statement by Lavoisier (p. 11) that air is not an element but a mixture. Later (p. 91) he espouses the traditional theory of phlogiston. Metals, he claims, are composed of earth and a "primitive acid" united with phlogiston to form a phosphorus, which combines with the earth. This unusual hypothesis is an example of the strange ideas that some eighteenth-century chemists put forward in their attempts to cling to the old phlogiston theory. Blake (p. 304) lists other works by Michel du Tennetar, but not this title. An extremely rare book, which is not in N.U.C. or the Bibliothèque Nationale. (Bolton, 669; Ferchl, 356; Poggendorff, II, 144)

MIDDLETON, Amos

A Chemical Analysis of the Lemington Waters, with a Practical Dissertation on their Medical Effects: and Instructions for Cold and Warm Bathing. By Amos Middleton, M.D. . . .

Warwick: Printed and Sold by Henry Sharpe, Advertiser-Office, High-Street. 1814.

Third edition, revised and enlarged. 4to. xvii, (1), 73, (1) pp. Fine copy in contemporary gilt-ruled quarter calf, marbled

boards, with large gilt-lettered crimson morocco label on front cover. From the library of the duke of Cumberland.

AN EARLY work on the spa waters of Leamington, Warwickshire, of considerable chemical interest. Middleton (dates unknown) refers in the preface to the writings of Erasmus Darwin, the researches of Beddoes on gases, and electricity and galvanism. Also praised (p. 4) are the "brilliant and important discoveries of the accurate and penetrating Davy." An analysis is given of the chemicals occurring in the water (e.g., hydrogen sulphide, nitrogen, carbon dioxide, iron carbonate, sulphur, and chlorides and sulphates of sodium and magnesium). Each compound is discussed in short chapters, and comparisons are made between the Leamington and Cheltenham waters. In addition to its importance to the chemical historian, this work is of interest for its detailed descriptions of the medical cures achieved by these waters. Leamington spa waters are discussed by William Addison (*English Spas*, London, 1951, pp. 116–119), who does not mention this rare work. The first edition (Warwick, 1808) was followed by a slightly enlarged second edition (Warwick, 1811; Wellcome, IV, 132). Unknown to Bolton, Waring, Watt, etc. (Duveen, 403)

MIDGLEY, Robert

A New Treatise of Natural Philosophy, freed from the intricacies of the schools. With several observations useful for the health of the body.

London: Printed by R. E. for J. Hindmarsh, at the Golden-Ball over against the Royal Exchange in Cornhill. 1687.

First edition. 12mo. 6 leaves, 342 pp., 2 leaves (advertisements). Very good copy, in polished tan calf antique, double gilt fillets on covers, spine gilt-ruled, decorated and dated, maroon and blue morocco labels.

EDUCATED AT Christ's College, Cambridge, Midgley (1653–1723) graduated M.D. (1687) and was admitted a candidate of the Royal College of Physicians the same year (see D.N.B.). He was licenser of the press (1686) and here signed the imprimatur of his own book. "Contains much of chemical interest" (Duveen). Chapters on chemical topics include "causes and principles of nature, iron and the loadstone, mercury, gold, silver, copper, poisons and toxicks, arsenic, antidotes, atoms and their nature, vacuum, composition of bodies, mettals and their formation, minerals, salts, etc." There are also chapters on astronomy, balneology, geology, medicine, etc. Rare. (Duveen, 403; Krivatsy, 7901; Munk, I, 476; Neu, 2765; Osler, 3407; Wing, M1995)

MILLAR, James

Elements of Chemistry, with Its Application to Explain the Phenomena of Nature and the Processes of Arts and Manufactures.

Edinburgh: W. & C. Tait, and Longman, Hurst, Rees, Orme & Brown, London. 1820.

First edition. 8vo. 14, 466 pp. With 3 folding plates at the end depicting crystals and chemical apparatus (engraved by W. & D. Lizars, Edinburgh). Very fine copy, unpressed and uncut, in the original boards. From the library of the great Scottish chemist Thomas Charles Hope (1766–1844), with the bookplate (“The Hope Trust, 31 Moray Place, Edinburgh”) on the front pastedown endpaper. Inscribed in ink on the recto of the first free endpaper: “With the Author’s best Compts.”

MILLAR (1762–1827), a physician and miscellaneous writer, was educated at Glasgow, and was M.D. and F.R.C.P., Edinburgh. He became chaplain to Glasgow University and edited the fourth and part of the fifth editions of the *Encyclopaedia Britannica*, contributing extensively to both. He also planned and edited a more popular work, the *Encyclopaedia Edinensis; or, Dictionary of Arts, Sciences and Literature* (Edinburgh, 1827, 6 vols.).

In the preface to the present work, the author says that his design is to “fill a place seemingly unoccupied by any of the numerous publications, which derive their origin from the inexhaustible fertility of Chemical science.” His aim is to present a textbook “of middle station between the more superficial and profounder Treatises.” This is a very important presentation copy as it belonged to Dr. T. C. Hope, the dedicatee because (as stated in the dedication) the author had “the benefit derived from his lectures.” The book is divided into three parts: chemical principles, chemical phenomena in nature, and arts and manufactures. A rare work. Not in Cushing, Ferchl, Ferguson, Morgan, Osler, Partington, Poggendorff, Smith, Waller, Watt, etc. (Bolton, 670; Duveen, 404)

MILLAR, James

A New Course of Chemistry: in which the Theory and Practice of that Art are delivered in a Familiar and Intelligible Manner: the Furnaces, Vessels, and Instruments are described; and the Preparations of the Several Medicines are laid down according to the Most Easy and Certain Processes. Together with a Succinct Account of the Several Drugs used in the Preparation of Chemical Medicines; as to their Nature, Production and Country. . . .

London: Printed for D. Browne . . . Lockyer Davis . . . and J. Ward . . . 1754.

First edition. 8vo. viii, 384, (8) pp. With 5 copperplates of apparatus and furnaces. Fine copy in original gilt-ruled calf, rebacked, red morocco label.

A WORK FOR apothecaries who prepare their own medicines, dedicated “To the Worshipful Company of Apothecaries, London.” Millar (fl. 1754) complains (p. 4) about the deficiencies of contemporary chemistry texts: “Boerhaave is too voluminous . . . Wilson is imperfect . . . nor have the Additions of Dr. Lewis supplied this Defect . . . Dr. Shaw’s Lectures are excellent but . . . diffuse and unfinished . . .” Millar attempts to correct these shortcomings in this clearly written book. The appendix (pp. 334–384) is in two parts: (1) the preparation of phosphorus, phosphorescent materials, sympathetic inks, chemical experiments for amusement; (2) preparations of “Medicines . . . not frequently used.” (Blake, 305; Bolton, 670; Cole, 939; Ferchl, 357; Smith, 329; Wellcome, IV, 135)

MILLAR, John

Observations on Antimony, read before the Medical Society of London, and published at their Request. By John Millar, M.D.

London: Printed for J. Johnson . . . and D. Wilson and G. Nicol. 1774.

First edition. 8vo. viii, 104 pp. Few leaves with minor foxing; otherwise very good copy in gilt-ruled half calf antique, marbled boards, maroon morocco label, spine dated.

MILLAR (1733–1805), a physician, read this critical review of the chemical and medicinal properties of antimony compounds in February 1774. In five sections he traces the opinions of earlier chemists on preparations containing antimony, as well as the occurrence of antimony minerals (especially sulphides), their chemical properties and analysis, and finally their uses in medicine. Millar concludes (p. 100) that medicines containing antimony compounds are “highly dangerous to mankind.” He also published “Observations on the asthma and on the whooping cough” (London, 1769), in which he first describes *laryngismus stridulus* (“Millar’s asthma,” see Garrison-Morton, 3167). (Blake, 305; Waring, 238; Watt, II, 670v; Wellcome, IV, 135)

MILLER, William Hallowes

A Treatise on Crystallography. By W. H. Miller, M.A., F.R.S., F.G.S., F.C.P.S. . . .

Cambridge: J. & J. J. Deighton, etc. 1839.

First edition. 8vo. viii, 139, (1) pp. With 10 folding engraved plates on 5 leaves. Fine copy in contemporary cloth-backed boards, original printed paper label on spine.

A MILESTONE WORK of fundamental importance in the history of crystallography, chemistry, physics, and mineralogy. Miller (1801–1880), professor of mineralogy at Cambridge (1832–1870), developed the system of crystallographic notation (Miller indices) adapted to mathematical calculation, still in use today. “Miller’s significant contribution to crystallography was made in *A Treatise on Crystallography*. . . [He] started with the fundamental assertion that crystallographic reference axes should be parallel to possible crystal edges; his system of indexing [was] a derivative from Whewell (*Phil. Trans. Roy. Soc.*, 1825). . . The algebraic advantages . . . were immediately apparent; . . . [they were] not fully appreciated until Bragg’s interpretation of the diffraction of X rays by crystals in 1912” (D.S.B.). Miller’s system “was far more simple, symmetrical, and adapted to mathematical calculations than any which has yet been devised” (Professor T. G. Bonney, F.R.S.). “He placed the keystone into the arch of the science of crystallography” (Professor N. Maskelyne, F.R.S.). Not in Bolton, Duveen, Edelstein, Ferchl, Hoover, Morgan, Waller, etc. (D.S.B., IX, 392–393; Partington, IV, 203; Poggendorff, II, 151; Smith, 329; Sotheran, Cat. 676 [1907], 2996 [“Scarce”])

MILLON, Nicolas Auguste Eugène

Éléments de Chimie Organique comprenant les Applications de cette Science à la Physiologie Animale.

Paris: Chez J.-B. Baillièrre. 1845, 1848.

First edition. 2 vols., 8vo. I: 3 leaves, 636 pp. II: 2 leaves, 771, (1) pp. Fine, crisp copy in contemporary quarter roan, gilt, marbled boards; with author’s presentation inscription in ink on half title of volume I to Henri Victor Regnault: “A Monsieur Regnault Membre de l’Institut. Hommage de haute considération. E. Millon.” Signature in ink of “V. Regnault” on flyleaf of volume II and presentation inscription in ink from “J. Mascart” (Paris, 1912) to the Royal Society of Edinburgh, whose stamps appear on half titles and title pages.

A PRECIOUS ASSOCIATION copy from one great chemist to another. Millon (1812–1867) was professor of chemistry in the military hospital Val-de-Grâce, Paris, and pharmacist-in-chief to the army in Africa. “He . . . carried out important researches on the action of metals on nitric acid, investigated mercury salts . . . discovered iodine dioxide, . . . discovered chlorites, and investigated chlorine dioxide. . . Millon determined urea by the action of nitrous acid . . . and introduced ‘Millon’s reagent’ . . . for proteins” (Partington, who discusses Millon’s work but does not mention the present title). “The years from 1837 to 1847, scientifically the most important period of Millon’s life, were devoted to basic chemistry. His circle of friends . . . included Pelouze, J. Reiset, F. Hofer, Regnault, Louis Laveran, and F.-J.-J. Nicklès. . . Millon’s lectures at the

Val-de-Grâce formed the basis for his . . . *Éléments de chimie organique* (Paris, 1845–48)” (D.S.B.). Very scarce. Not in Duveen, Edelstein, Morgan, Smith, Sondheimer, etc. (Bolton, 671; D.S.B., IX, 401; Ferchl, 358; Poggendorff, II, 152)

MILNER, Isaac

A Plan of a Course of Experimental Lectures, introductory to the Study of Chemistry, and other Branches of Natural Philosophy. By Isaac Milner, B.D. F.R.S. Fellow of Queen’s College, and Jacksonian Professor in the University of Cambridge. . . .

Cambridge: Printed by John Archdeacon and John Burges, Printers to the University. N.d. (ca. 1780).

First edition. Sm. 4to. 1 leaf, 46 pp. Interleaved throughout, with notes in pencil taken by an unidentified student from lectures, according to an inscription on the first flyleaf, “Read by Mr. Woollaston [*sic*] at the Botanic Gardens Cambridge, Ap(ril) 20, 1795.” Fine copy in modern half calf antique, marbled boards, spine gilt, with maroon morocco label, by Bernard Middleton. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

MILNER (1750–1820), mathematician, theologian, and chemist, was president of Queens’ College, Cambridge. He was the first Jacksonian professor of chemistry (1783–92) and was elected F.R.S., 1780. Milner discovered that ammonia could be oxidized to nitric oxide, and the modern process for making nitric acid is based on this reaction. These lectures, although elementary in scope, give a clear idea of the syllabus taught by Milner. Partington discusses this author’s important process for preparing nitric acid and niter (III, 343–344). The interesting pencil notes in this copy were made from lectures read by Francis John Hyde Wollaston (1762–1823), who succeeded Milner as Jacksonian professor of chemistry (1792–1813). Wollaston was the brother of the celebrated William Hyde Wollaston (1766–1828). A very rare book. Not mentioned by Bolton, Cushing, Duveen, Ferchl, Ferguson, Morgan, Neu, Osler, Poggendorff, Smith, Walter, Watt, etc. (Partington, III, 343)

MINARDO, Ventura

De Balneis Calderii, in Agro Veronensi (olim Gauderii dictis Iunoni sacris) eorumque antiquitate, ac multiplici virtute: Doctorum omnium qui hucusq(ue) de ipsis scripserunt documentis; Monopanton. D. Ventura Minardo Athesino, Monacho Camaldulense Authore. Addito etiam compendio ejusdem, vernacula lingua, rudibus balnea ipsa petentibus, cum canonum serie eorum, que observari ex documentis predictorum opus fuerit, ut in capite Elenchus demonstrabit. Venice: (Colophon: Ad instantiam Alexandri F. Thomae de Salodiis) 1571.

First edition. 8vo. 136 folios. Signatures P and Q are interchanged. Title page with elaborate woodcut border, historiated woodcut capitals. Very good copy in contemporary vellum. Bound with: Minardo, Ventura, *Compendio delle Regole* (Venice, 1571).

A BALNEOLOGICAL WORK of chemical and pharmaceutical interest, by the sixteenth-century Italian physician Minardo. It comprises extracts from the works of Menghus Branchellus, G. A. Panteo (leaves 26–103), Alearcus de Pindemontibus, Antonio Fumanelli, Girardus Bolderius, Nicola Massa, and Gabriele Falloppio. All these texts, except that of Falloppio, were previously printed in the same form and in the same order in the collection published in Venice by the Giunta press in 1553, under the title *De Balneis omnia quae extant apud Graecos, Latinos, et Arabas*. The text is in Latin, but the following work by Minardo, which is usually found bound with this, is in Italian. Rare. Not in Boston, Cushing, Ferchl, Ferguson, Osler, Partington, Smith, Thorndike, Waller, Watt, Wellcome, etc. (Durling, 3174; Duveen, 404; Neu, 2769)

MINARDO, Ventura

Compendio delle Regole contenute ne gli Eccellentiss. Autori, che de' bagni di Caldiero nel territorio Veronese hanno scritto del modo di usar dette acque & fango; & d'altri particolari avisi a quelli, che visi conducono. Per D. Ventura Minardo da Este Monaco Camaldulense. Con un dialogo, dove si tratta della Minera contenuta in dette acque, & fango, & delle separationi fatte di esse.
Venice, 1571.

First edition. 8vo. 68 folios. Title page within elaborate woodcut border, historiated woodcut capitals. Very good copy in contemporary vellum. Bound with: Minardo, Ventura, *De Balneis Calderii* (Venice, 1571).

IN ITALIAN throughout, this work is of chemical interest because it contains, on pages 37–68, a detailed discussion of the various minerals in the water. The discussion is between Minardo and Torniello and deals with attempts to analyze the water by means of the chemical tests known in the sixteenth century (e.g., addition of oak galls, ferrous sulphate, alum, and distillation). Rare. (Durling, 3174; Duveen, 404; Neu, 2769)

MINDERER, Raymund

De Calcantho seu Vitriolo. Eiusque qualitate, virtute, ac viribus, nec non medicinis ex eo parandis. Disquisitio iatrochymica. Frigidis, ac crudis quorundam de vitriolo sinistre sentientium opinionibus & sententiis opposita.
Augsburg: apud Saram Mangin Viduam. 1617.

First edition. 4to. 1 leaf, 22, 113, (1) pp., 3 leaves (last blank). Ornamental woodcut capitals, head- and tailpieces. Few small wormholes in extreme outer edges of first several leaves; otherwise remarkably fine, crisp copy, bound in fifteenth-century musical manuscript (in red and black) on vellum, over boards. From the library of the Frankfurt iatrochemist Johann Hartmann Beyer (1563–1625), whose neat inscription is on the title page.

MINDERER (ca. 1570–1621), famous army surgeon, iatrochemist, and physician in Augsburg and to the emperors Mathias and Maximilian, wrote several chemical and medical works. The present book is a treatise on green and blue vitriols (i.e., ferrous sulphate and copper sulphate), their reactions, and compounds that can be prepared from them (e.g., sulphuric acid), with their medicinal uses. In addition there are discussions on arsenic, mercury, silver, vinegar, mineral waters, alchemy, Paracelsian medicine, etc. He mentions that sulphuric acid reddens paper that has been dyed with an extract of blue violets (p. 81). Minderer is reputed to have discovered how to make ammonium acetate, from ammonium carbonate and vinegar, and Duveen states that the preparation is described in this book. However, there is no such description, and Partington (II, 172) says that “ammonium acetate is not described in any of the works of Minderer I have examined.” Despite this, ammonium acetate solution is described in the old literature as *spiritus Mindereri* and *spiritus ophthalmicus Mindereri*. A very scarce and important book, with an interesting provenance. Not in Bolton, Edelstein, Ferguson, Osler, Waller, etc. (Duveen, 404–405; Ferchl, 358; Neu, 2773; Partington, II, 171; Waring, 441; Wellcome, I, 4329)

MINDERER, Raymund

Threnodia Medica seu Planctus Medicinae lugentis. . . .
(Colophon:) Augsburg: Excudebat Andreas Aperger. 1619.

First edition. 8vo. 24 leaves, 597, (1) pp., 9 leaves. With beautiful engraved title page (Lucas Kilian Sculp.). Very fine, crisp copy, in contemporary vellum, both covers ruled in black with large ornamental medallion in black and gilt, black and gilt fleurons in each corner, spine lettered and dated.

AN INTERESTING iatrochemical work in which Minderer discusses Paracelsian medicines, condemns so-called pseudo-chemists, rails against supposititious remedies, is ambivalent about astrology, reviles sympathy and antipathy, and comments frequently on alchemy. The Wellcome copy is imperfect (lacks title page). Scarce. Not in Cushing, Edelstein, Ferguson, Waller, etc. (Duveen, 405; Ferchl, 358; Ferguson Coll., 466; Neu, 2776; Osler, 5149; Partington, II, 171; Watt, II, 672q; Wellcome, I, 4332)

MINE ADVENTURE

A List of all the Adventurers in the Mine-Adventure. May the First, 1700.

London: Printed by F. Collins in the Old Bailey. 1700.

First edition. Folio. 4 pp. Bound with: Shire, William, *A Familiar Discourse or Dialogue Concerning the Mine-Adventure* (London, 1700).

A LIST OF the investors in the Mine-Adventure to exploit the very rich silver, copper, and lead mines discovered by Sir Carbery Price (d. 1695) in 1690 on his estates in Cardiganshire, Wales. Upon the death of Pryce (1695), Sir Humphrey Mackworth (1657–1727) bought controlling interest in the mines and formed a company to develop them under the governorship of the duke of Leeds. There are several hundred names of investors in this list, which was published separately and sent to the investors. Very rare. Wing L2377 cites only three copies (British Museum, Columbia University, Yale).

MIRUS, Johann Friedrich

Dissertationem Physicam de Novo Phosphoro Aethereo praeside Mart. Gotth. Loescheri, . . . defendet respondens auctor M. Jo. Fridericus Mirus, Zittav. Lusat. in auditorio majori horis matutinis A. MDCCXVI. d. IV. Mart.
Wittenberg: Ex Officina Christiani Schroederi, Acad. Typ. (1716).

First edition. 4to. 12 leaves (unpaginated). Very good copy in late-nineteenth-century half cloth, patterned boards.

AN INTERESTING doctoral thesis by Mirus (dates unknown), with Martin Gotthelf Loescher (d. 1735) presiding, on the element phosphorus, phosphorescent materials, and luminescence in general. The work of Hauksbee on the luminescence of gases and phosphorus in a vacuum over mercury is described, as are the experiments of Boyle on phosphorus and other phosphorescent substances. Mirus also discusses experiments by Bernoulli, Descartes, Freind, Homberg, Sturm, et al. A very rare work, which was unknown to the authority on these subjects, E. Newton Harvey (*History of Luminescence*, 1957). Although Poggendorff and Ferchl both mention this work under Loescher, neither had seen it, as they do not give the place and date of publication. Not in Blake, Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Smith, Waller, Waring, Watt, Wellcome, etc. (Ferchl, 320; Poggendorff, I, 1486)

MISCELLANEA CHYIMIAE ET METALLURGIAE

Miscellanea Chymiae et Metallurgiae, oder: Hundert und fünf und funfzig wahre Experimenta, aus denen hinterlassenen Schriften eines berühmten Chymici, verbotenus gezogen, mit allen von demselben angemerkten Handgriffen und Productis. Aechten Liebhabern zur Nachahmung und Belustigung vorgelegt, besonders denen Herren Berg-officianten zu Erkänntniss und Untersuchung verschiedener unansehnlicher verachteter Steine und Erden.

Hof: bey Johann Gottlieb Vierling. 1766.

First edition. 8vo. Fine engraved frontispiece (Püschel sc.), showing mining and chemical operations. 3 leaves, 152 pp. Fine copy in maroon half calf antique, marbled boards, spine gilt-lettered and dated. From the library of Professor Franz Sondheimer, with his bookplate on the front endpaper.

AN INTERESTING and important work describing 155 alchemical, chemical, and metallurgical experiments. In the preface the anonymous author says that he labored for sixty years in his laboratory, and he refers to two earlier books, neither of which Duveen could trace. These were *Geheimer Natur eröffnete Pforten* and *Der sechs Tagwerk in dieser Welt geheime Bedeutung, in dem Spiegel der uralten und Mosaischen Philosophie entdeckt*, published in 1718 and 1721, respectively. According to Duveen, this work is "entirely unrecorded" and "Not in the British Museum." However, it is listed by Bolton, Ferchl, and other bibliographies (see below). Rare. Not in Blake, Edelstein, Ferguson, Hoover, Partington, Smith, Waite, Waller, Watt, etc. (Bolton, 1015; Duveen, 406; Ferchl, 359; Ferguson Coll., 466; Neu, 2779 [Duveen copy]; Sondheimer, 1063)

MITCHILL, Samuel Latham

Eulogy on the Life and Character of the Hon. Samuel Latham Mitchill, M.D. delivered at the request of the New-York City and County Medical Society, in the Superior Court Room, City Hall, October 15th, 1831. By Felix Pascalis, M.D. . . .

New York: From the American Argus Press. 1831.

First edition. 8vo. 1 leaf (blank), 25, (1) pp. Few leaves with minor browning; otherwise very good copy in crimson quarter cloth antique, marbled boards, spine gilt-lettered and dated, original printed wrappers bound in.

A EULOGY, BY Felix Pascalis (ca. 1750–1840), of Samuel Latham Mitchill (1764–1831), the first chemist to sit in the United States Congress after the adoption of the Constitution. Born on Long Island, Mitchill first studied medicine under the professor of chemistry at Columbia, Samuel Bard, then went to Edinburgh, where he graduated M.D. (1786) and attended Joseph Black's lectures on chemistry.

Returning to New York in 1792, Mitchill became professor of chemistry and natural history at Columbia, where he taught a modification of Lavoisier's antiphlogistic system. In 1797 he helped to establish *The New York Medical Repository* and was one of its editors for twenty-five years (see W. D. Miles, *American Chemists and Chemical Engineers*, 1976, pp. 342–343). Rare. Not located in the usual bibliographies.

MITSCHERLICH, Eilhard

Éléments de Chimie, par E. Mitscherlich, . . . traduits de l'Allemand sur la dernière édition, par M. B. Valérius, . . .
Brussels: Louis Hauman et Compe, Libraires. 1835, 1836.

First edition in French. 3 vols., 8vo. in 2. I (1835): 2 leaves, 419, (1) pp.; 18 folding plates (containing 204 figures). II (1836): xv, (1), 296 pp.; 2 folding plates (with 20 figures). III (1836): 2 leaves, 238 pp.; 9 folding plates (with 76 figures). Fine copy in contemporary half calf, gilt, marbled boards.

MITSCHERLICH (1794–1863) studied chemistry in Göttingen under F. Stromeyer, in Berlin under H. F. Link, and then in Stockholm under Berzelius. He became professor of chemistry in Berlin in 1825. His famous *Lehrbuch der Chemie* (first: Berlin, 1829–30; 2 vols.) was again reprinted (Berlin, 1833–35), and this French version by Valérius comprises only the translation of volume I and volume II (part 1) of the second German edition. “The work contained Mitscherlich's lectures on all aspects of pure and applied chemistry, as well as a considerable amount of material on physics, all illustrated with a number of beautiful woodcuts. The lectures themselves are characterized by their exemplary clarity and ingenious experiments; the book was highly praised by Mitscherlich's contemporaries, including Berzelius and Liebig” (D.S.B.). An intended third volume on organic chemistry, with a fourth on the history of chemistry, never appeared. Despite these omissions, there is a considerable amount of information on organic compounds. The law of isomorphism, for which this chemist is famous, is discussed (vol. II, p. 3 et seq.) in the present edition. (Bolton, 673; Cole, 945; D.S.B., IX, 426; Partington, IV, 206; Roller & Goodman, 200 [imperf.]; Wellcome, IV, 145)

MITSCHERLICH, Eilhard

Elementi di Chimica di E. Mitscherlich . . . Traduzione Francese dal tedesco di M. B. Valerius . . . e contemporaneamente Italiana di F. Du Pré . . .
Venice: Appresso Luigi Plet. 1835, 1836, 1838.

First Italian edition. 3 vols., 8vo., in 1. I (1835): 4 leaves, 244 pp.; 18 folding plates (containing 204 figures). II (1836): 173, (1) pp.; 2 folding plates (with 20 figures). III (1838): 135, (1) pp.; 9 folding plates (with 76 figures). Very fine copy, uncut

and unpressed, in contemporary calf-backed marbled boards, old ink-lettering on spine.

A FAITHFUL TRANSLATION into Italian, by Du Pré, of the first edition in French (Brussels, 1835, 1836), which itself was a translation of the second German edition of the *Lehrbuch der Chemie* (Berlin, 1833, 1835). Mitscherlich discovered his law of isomorphism in 1819, and this property of compounds possessing the same general chemical composition is discussed in the present work. Rare. This Italian edition unknown to the usual bibliographers. (Bolton, 673)

MIZAULD, Antoine

Aesculapii et Uraniae medicum simul & astronomicum ex colloquia conjugium, harmoniam microcosmi cum macrocosmo, sive humani corporis cum coelo, paucis figurans, & perspicue demonstrans. . . .
Lyons: Apud Ioan. Tornaesium. 1550.

First edition. 4to. 105, (3) pp. Last leaf blank except for woodcut on verso. Roman and italic letter. Woodcut printer's device on title page and ornamental criblé capitals. Some headlines and catchwords shaved; otherwise very good copy, in unlettered half vellum antique, marbled boards. Neat early signature (“D.D.F.M. Prosimius”) on pages 11, 24, 47, and 62.

AN IATROCHEMICAL and astrological treatise, of some alchemical interest, on the marriage of Aesculapius and Urania, in which Mizauld attempts to explain the relationship between the sun, moon, planets, and stars and their influence on the human body in sickness and health. He mentions atoms (p. 81). Thorndike (V, 300) states that Sudhoff (1902, p. 59) had not seen this very rare work, and Cartier (No. 174) knew of only one copy in France (Bibliothèque Nationale, Paris). Ferchl (p. 360), gives the place of publication, erroneously, as Leiden. (British Library, *S.T.C. French Books, 1470–1600*, p. 314; Durling, 3179; Pogendorff, II, 163; Wellcome, I, 4348)

MIZAULD, Antoine

Alexikepus, seu auxiliaris et medicus hortus, rerum variarum, & secretorum remediorum accessione locupletatus. . . .
Paris: Apud Federicum Morellum, Regium Typographum. 1575.

Second edition, second issue. 8vo. 12 leaves, 107 folios, 5 leaves. Woodcut printer's device on title page. Ornamental woodcut capitals, head- and tailpieces. Little inner marginal worming of first pastedown endpaper and free endpaper; otherwise very good, crisp copy in contemporary vellum.

AN IMPORTANT pharmaceutical and medical work, primarily on the cure of diseases by the administration of medicines from natural sources, mainly plants. There are sections

on chemical topics: e.g., preparation of various “waters” and essences, distillation, and salts. Included among the remedies is an infusion of irises to induce abortion and the use of nettles to cure cancer. The book is purportedly a supplement to Alexis of Piedmont’s *Secrets*. According to Durling, the translation is not by Mizauld but by Alban Thorer, professor of medicine at Basel. The first issue of the first edition (Paris: F. Morel, 1564) was reissued in 1565. The first issue of the second edition (Paris: F. Morel, 1574) was reissued in 1575 (as here). A Latin edition appeared in Germany (Cologne, 1576). The *Epistola* of the present edition is dated January 1574. Not in the British Library (1565 and 1574 issues only). The 1565 issue is listed by Cushing, Durling, Partington, and Wellcome but not the present 1575 issue, which is very rare. Partington and Wellcome list the 1574 issue. (Waller, 6575)

MIZAULD, Antoine

Memorabilium, sive Arcanorum Omnis Generis, per Aphorismos Digestorum, Centuriae IX. Et, Democritus Abderita, de rebus naturalibus & mysticis. Cum Synesii, et Pelagii commentariis. Interprete de Graeca lingua, Dominico Pizimentionio Vibonensi, Italo. Praefatio. In omnes hosce libros. Cologne: Apud Joannem Birckmannum. 1572.

First Cologne edition. 12mo. 54 leaves (last 2 blank), 245 folios, 1 leaf (blank). Woodcut capitals, head- and tailpieces. Italic letter. Fine, crisp copy, in contemporary speckled calf, gilt, dark-green morocco label.

IN HIS *Books of Secrets*, Ferguson says that this book is “of such excessive rarity that the edition of 1572 is mentioned by only one or two writers, and its very existence has been doubted.” The only copies known to Ferguson (who was writing in January 1885) were those in the Hamilton and Hunterian libraries, University of Glasgow. The importance of the present edition of 1572 is that it is the first in which appear the Latin translations of the chemical writings of Democritus, Synesius, and Pelagius. The translator was Dominic Pizimentioni. “In the present edition the author’s original dedication has been replaced by a long preface by the publisher, dated 1 March 1572, in which he names Jean Matal as his associate in preparing the edition” (Durling). The British Library and Bibliothèque Nationale do not possess this edition. Not in the usual chemical bibliographies. (Durling, 3187; Ferchl, 360; Ferguson, I, 205, II, 97 [not in Young Coll.]; Ferguson Coll., 467; Lenglet Dufresnoy, 1742, III, 237; Partington, II, 27; Wellcome, I, 4363)

MIZAULD, Antoine

Memorabilium, utilium, ac jucundorum centuriae novem, in Aphorismos Arcanorum omnis generis locupletes, perpulchrè digestae. Autore Anton. Mizaldo Monluciano, Medico. Lectori. Omne tulit punctum qui miscuit utile dulci: Ardua res, fateor, sed meditanda tamen.

Lutetiae (Paris): Apud Federicum Morellum, in vico Bellovaco, ad urbanam Morum. 1566.

First edition. 8vo. 16 leaves, 136 ff. Printer’s woodcut device (Renouard 791) on title. Historiated woodcut capitals. Fine copy in unlettered calf antique. Neat signature in ink on title page: “T. Pelerin D.M. 1619,” and small Harvard release stamp on verso of title.

BORN AT Monluçon, in the Bourbonnois, Mizauld (1520–1578) studied medicine at Paris so successfully that he was known as the French Aesculapius. Under Oronce Finé he acquired skill in astrology, working it as a branch of medicine, as was the contemporary custom. Summoned to the court, he was befriended by Princess Marguerite de Valois and became her physician and astrologer. He relinquished medicine to devote himself to investigating the secrets of nature and to writing books. Writing in 1885, Ferguson stated that “Mizauld’s works are utterly forgotten,” so that one can study his writings “only in their original editions, and most of these have become rare.” This collection of nine hundred scientific and medical aphorisms, many of which are of chemical interest, gives a thorough knowledge of the information then available to physicians and natural philosophers. Mizauld was cited by Aldrovandi in his *Musaeum metallicum* (1648), on which see Partington, and Thorndike. This is one of the earliest, and certainly one of the most important, sixteenth-century books of scientific secrets. Rare. Not in Cushing, Duveen, Edelstein, Guiata, Lenglet-Dufresnoy, Neu, Osler, Poggendorff, Smith, Waller, Watt, etc. (Caillet, 7611; Dumoulin, *Morel*, 122; Ferchl, 360 [who erroneously gives the place of publication as Frankfurt, 1566]; Ferguson, II, 97 [not in Young Coll.]; Ferguson Coll., 467; Ferguson, *Books of Secrets*, Pt. IV, 5; Partington, II, 27; Thorndike, VI, 216; Wellcome, I, 4362)

MIZAULD, Antoine

Memorabilium, utilium, ac jucundorum centuriae novem in aphorismos Arcanorum omnis generis locupletes, perpulchrè digeste . . . Lectori, omne tulit punctum qui miscuit utile dulci: ardua, res: tamen haec mixta dat iste liber.

Paris: Apud Federicum Morellum, Architypographum Regium, via Iacobaea, ad insigne Fontis. 1598.

8vo. 16 leaves, 132 numbered folios. Woodcut ornament on title page. Woodcut capitals and headpiece. Italic letter. Fine copy in gilt-lettered vellum antique.

A REPRINT OF the first edition (Paris, 1566) by the same publisher (Morel). The printer has used the same woodcut capitals as are in the 1566 edition. Unlike the Cologne edition of 1572, the chemical writings of Democritus, Synesius, and Pelagius are not included. Of the greatest rarity, this edition is not in the British Library and is not in any available bibliography. Even Graesse, who gives the most complete list of Mizauld's works, did not know the present edition.

MIZAULD, Antoine

Neunhundert Gedächtnuszwürdige Geheimnusz und Wunderwerck: von mancherley Kräutern, Metallen, Thieren, Vögeln und andern natürlichen Künsten und Historien. Erstlich durch den hochgelehrten Antonium Mizaldum aus Franckreich, in Latein zusammen getragen. Jetzt aber newlich allen Kunstlichenden zu nutz und gut, auch besser erklärung, in Hochteutsche Sprach gebracht, durch Georgium Henisch von Bartfeld. Sampt einem Büchlin Sexti Platonici Philosophi, von den Kräfte der zahmen und wilden Thieren, so in der Artzney mögen für allerley Kranckheiten gebraucht werden. . . .

Basel: in verlegung Ludwig Königs. 1615.

Second edition in German. Two parts in 1 vol. 8vo. 1 leaf, 444, 58 pp. Title in red and black. Paper slightly embrowned (as usual); otherwise fine copy in contemporary German blind-stamped vellum over oak boards, with original brass clasps (one lacking) on vellum thongs. Bound with: Basilius Valentinus, *Offenabrung der verborgenen Handgriffe* . . . (Erfurt, 1624), and 2 other works.

THE SECOND edition of the German translation of the *Memorabilium* (first: Basel, P. Perna, 1574). It is the first edition published by König. The translator was Georg Henisch von Bartfeld (1549–1618), “a man of broad culture and learning, who taught logic and mathematics and practiced medicine at Augsburg, . . . published medical handbooks and works in arithmetic and astronomy, . . . also . . . astrological predictions” (Thorndike, VI, 142–143). The second section of this work (58 pp., with separate title page) comprises a translation into German and commentary by Henisch on the *De medicamentis ex animalibus* . . . of Sextus Placitus (fl. fourth century A.D.). It is of some pharmaceutical chemical interest. The Wellcome Library has a copy of the first German translation by Henisch (1574: Wellcome, I, 4364). The present extremely rare edition is unknown to the usual chemical bibliographers. (Ferchl, 360)

MOBERG, Adolf

Dissertatio Chemica de Stannatibus, . . . Publicae modeste subjicit censurae Adolphus Moberg Phil. Mag. In Auditorio Philosophico die XXVI Maji MDCCCXXXVIII. . . .
Helsingfors (Helsinki): Ex Officina Typographica Frenckeliana. (1838).

First edition. 8vo. 1 leaf, 26 pp. Very fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards lettered in gilt: Moberg & Ehrström. Two Dissertations. 1838, 1843.

A DISSERTATION ON the salts of stannic acid (stannates), by Moberg (1813–1895), who later became professor of chemistry and physics at the University of Helsinki. The preparation of soluble alkali metal stannates, by fusing sodium or potassium hydroxide with stannic oxide, is described. The stannates of other metals are prepared by double decomposition with solutions of salts of various metals (e.g., barium, copper, lead, magnesium, mercury, and zinc). Not in the usual chemical bibliographies. (Poggendorff, II, 163)

MOBERG, Adolf

Dissertatio Chemica Theorias Corporum, quae Halogenia dicuntur, comparans . . . Praeside Gustavo Gabriele Hallström . . . Pro summis in philosophia honoribus publicae modeste subjicit censurae Adolphus Moberg . . . In Auditorio Philos. die 21 Martii 1840.

Helsingfors (Helsinki): Ex Officina Typographica Frenckeliana. (1840).

First edition. 8vo. 1 leaf, 43, (1) pp. Fine copy, uncut with wide margins, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the history, preparation, properties, and reactions of inorganic and organic halides, comparing them with pseudohalide compounds, particularly cyanides. The stoichiometry of these compounds is discussed with reference to the researches of Dulong. Even the newly discovered organometallic compounds are covered: e.g., cacodyl oxide and dimethylchloroarsine (p. 17). The reactivities of inorganic and organic halogen-containing compounds are compared (e.g., acyl chlorides, halo-substituted alkanes). Moberg presented this work under the direction of Gustaf Gabriel Hallström (1775–1844), professor of physics at the University of Åbo. Poggendorff (I, 988–990) gives a long list of Hallström's publications but not this title. Ferchl (p. 360) gives the wrong date (1839).

MODELL, Johann Georg

De Borace Nativa, a Persil Borech dicta, dissertatio. A D. Modell . . .

London: Prostant Venales apud C. Davis, Regalis Societatis Typographum, e Regione Hospitii Grayensis, in Vico Holbourn dicto. 1747.

First edition. 4to. 36 pp. Ornamental woodcut on title. Fine copy, with wide fore- and lower margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

DEDICATED TO Martin Folkes, president of the Royal Society, this is a comprehensive work on borax, boric acid, and soda. At the end it is dated from St. Petersburg, 1746. Modell (or Model, 1711–1775), born at Rothenburg on the Tauber, Germany, was professor of pharmacy and political economy at St. Petersburg. In addition to this extensive monograph on borax, he published memoirs on common salt, Persian salt (native soda), sal ammoniac, coal, mineral resin, camphor, etc. “The dissertations on borax and sal ammoniac are not without interest” (Partington). Borax and its reactions with other compounds are described, with many references to earlier and contemporary chemists. A German translation by J. G. Gmelin appeared (Tübingen, 1751), as well as a Latin edition (Halle, 1749). Other titles are listed by Modell in Bolton, Duveen, and Neu. Not in Wellcome or the usual early chemical bibliographies. (Blake, 307; Ferchl, 361; Partington, III, 575; Poggendorff, II, 164; Waring, 686; Watt, II, 647h)

MODELL, Johann Georg

De Borace Nativa, a Persis Borech dicta, dissertatio. A Dn. Modell . . . Iuxta exemplar Londinense.

Halle: Typis Joannis Christiani Hendelii, Acad. Typogr. 1749.

First Continental edition. 4to. 40 pp. Ornamental woodcut on title. Fine, large-paper copy, uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE FIRST Continental edition of this work on borax and other salts. It is essentially a verbatim copy of the original Latin edition (London, 1747). Not in Wellcome or the usual chemical bibliographies. (Blake, 307; Poggendorff, II, 164; Waring, 686)

MOHS, Friedrich

Treatise on Mineralogy, or the Natural History of the Mineral Kingdom. By Frederick Mohs, Professor in the Mining Academy of Freiberg. Translated from the German, with considerable Additions, by William Haidinger, F.R.S.E. Edinburgh: Printed for Archibald Constable and Co. Edinburgh; and Hurst, Robinson, and Co. London. 1825.

First English edition. 3 vols., 8vo. I: 2 leaves, xxiv, 458 pp. II: 3 leaves, 472 pp. III: 3 leaves, 319, (1) pp. With 50 engraved plates (diagrams of crystals) by W. Miller. Very good copy in original gilt-ruled half calf, marbled boards, black morocco labels. Armorial bookplate (nineteenth century): Richard Hugh Sennett.

MOHS (1773–1839), one of Abraham Werner’s outstanding students and his successor at Freiberg (1818), was later professor of mineralogy at the University of Vienna (1828). His important *Grundriss der Mineralogie* (Dresden, 1822–24, 2 vols.; Poggendorff, II, 172) contains his ideas on crystallography and a systematic description of minerals. Wilhelm von Haidinger (1795–1871), the translator, made so many additions to this English version of the *Grundriss* that it should be regarded as the second edition, rather than merely a translation of the original work. Haidinger had studied at Graz under Mohs, then at Edinburgh under the mineralogist Thomas Allan (1777–1833). The famous Mohs’ scale of hardness, based upon minerals of increasing hardness on an empirical scale of 1 to 10, is fully described (vol. I, pp. 300–307). Talc, the softest mineral, is assigned a hardness of 1, with diamond a hardness of 10. In addition to being a classic mineralogical treatise, this work includes analyses of minerals by such illustrious chemists as Berzelius, Kirwan, and Klaproth. (Burke, *Origins of the Science of Crystals*, [1966], pp. 163, 185; D.S.B., VI, 18, IX, 448; Partington, IV, 211; Roller & Goodman, 203; Ward & Carozzi, 1594; Wellcome, IV, 149)

MOISES, Hugh

A Treatise on the Blood, or, general arrangement of many important Facts, relative to the Vital Fluid. With some cursory Observations on the Theory of Animal Heat. Interspersed with Pathological and Physiological Remarks from the Inductions of Modern Chemistry. . . . By Hugh Moises, Surgeon of the Western Regiment of Middlesex Militia, and late Senior Pupil to the General Hospital Nottingham.

London: Printed for J. Evans, Paternoster Row, and J. Stead, at the Naval and Military Printing Office, Gosport. (1794).

First edition. Sm. 4to. 4 leaves, xx + 270 pp., 1 leaf (blank). Fine, crisp copy, in contemporary half calf, marbled boards, rebaked with the original gilt-tooled spine laid on, maroon gilt-lettered label. Printed in part on bluish paper. From the library of the Revd. William B. Moises, with early-nineteenth-century signature in ink on the dedication leaf.

THE AUTHOR was a nephew of the Reverend Hugh Moises (1722–1806), of Newcastle-upon-Tyne (see dedication). This is his most important work, in which he attacks the researches of Lavoisier, Crawford, et al., and their explanations of the generation of animal heat. Moises contended that animal heat cannot be explained by chemical reactions

occurring at approximately body temperature. Lavoisier et al. had maintained that the heat generated by the ingestion of food was the result of "combustion" taking place in the cells, the heat produced being the result of chemical reactions occurring in the body. The present work is almost entirely chemical in content, with numerous references to the researches of earlier and contemporary chemists, physicists, biologists, physicians, etc. Despite its obvious importance as a milestone in the literature of chemistry and biochemistry, it remained unknown to Partington, Garrison and Morton, Duveen, Bolton, Ferchl, Cushing, Smith, Waller, etc. A very rare book. (Knight, 89; Neu, 2795; Watt, II, 674r)

MOISSAN, Henri

Classification des Corps Simples. Par M. Henri Moissan, Membre de l'Institut, Professeur à l'Université de Paris. Paris: Masson et Cie, Éditeurs. 1904.

First separate edition. 8vo. 1 leaf, 38 pp. Very good copy, uncut, in modern maroon pebbled cloth, spine gilt-lettered and dated, with original printed wrappers bound in. Presentation copy, inscribed in ink on title: "A mon cher Confrère Monsieur Muntz. Souvenir affectueux Henri Moissan."

A HISTORY OF the development of a classification of the elements, from the ancient Greeks to the beginning of the twentieth century, reprinted from the celebrated *Traité de Chimie minérale* (Paris, 1904), edited by Moissan. The classifications of Thenard, Berzelius, Dumas, Frémy, Naquet, Mendeleeff, Lothar Meyer, and Moissan are discussed. (Partington, IV, 914; Smith, 332)

MOISSAN, Henri

École Supérieure de Pharmacie de Paris. Thèse présentée au Concours d'Agrégation (Section des Sciences Physiques). Série du Cyanogène par H. Moissan . . . Paris: Imprimerie a Parent, A. Davy, Succr. 29–31, Rue Monsieur-le-Prince. 1882.

First edition. 4to. 323, (1) pp. Fine copy with wide margins, in gilt-ruled maroon pebbled cloth antique, spine gilt-lettered and dated, with original printed wrappers bound in. Presentation copy, inscribed in ink on title: "A Monsieur P. P. Dehérain, Professeur au Museum, Hommage affectueux de son élève Henri Moissan."

A POSTDOCTORAL THESIS on cyanogen, inorganic and organic cyanides, and related compounds. Although now chiefly remembered as an inorganic chemist, Moissan originally began his researches on organic chemistry under Edmond Frémy and Pierre-Paul Dehérain at the Musée d'Histoire Naturelle. The present comprehensive work reviews the chemistry of cyanogen and its derivatives, in-

cluding organic cyanides (nitriles, carbylamines), cyanates (including isocyanates, isothiocyanates, and cyanurates), cyanamides (including carbodiimides and melamine), ureas, urethanes (including hydantoin and allantoin), amino acids, purines (including caffeine), and chromocyanides. A detailed bibliography (pp. 247–318) covers the chemistry of cyanogen and related compounds from 1780 to 1882. An important association copy, presented by Moissan to Professor Dehérain (1830–1902), his mentor and friend. (Bolton, *Academic Dissertations*, 264; Edelstein, 1636; Smith, 333; Sondheimer, 1071)

MOISSAN, Henri

Le Fluor et ses Composés. Par M. Henri Moissan de l'Institut.

Paris: G. Steinheil, Éditeur. 1900.

First edition. 8vo. xii, 396 pp., 1 leaf (errata). Mint copy, uncut with wide margins, in modern maroon cloth, with original plain wrappers bound in.

A CLASSIC WORK describing the preparation and chemical and physical properties of the extremely reactive element fluorine and its compounds. "In 1884 Moissan began his remarkable research on the compounds of fluorine, which was to lead him to the isolation of this element . . . on 26 June 1886. . . . This difficult feat was accomplished by using an electrolyte of dry potassium acid fluoride dissolved in anhydrous hydrofluoric acid" (D.S.B.). For his epoch-making research on the isolation of fluorine and the study of very high-temperature reactions using the electric furnace of his invention, Moissan received the Nobel Prize in 1906. A comprehensive bibliography on fluorine and its compounds is included (pp. 305–390), tracing the literature from 1558 to 1899. Some copies (possibly a later issue) contain a frontispiece portrait of Moissan. There is no evidence that this copy (probably the first issue) ever had a frontispiece, as it is in mint condition. (Bolton, *Second Supplement*, 139; D.S.B., IX, 451; Duveen, 408; Edelstein, 1633; Partington, IV, 913; Roller & Goodman, II, 204; Smith, 332; Waller, 11196a)

MOISSAN, Henri

Le Four Électrique. Par M. Henri Moissan de l'Institut.

Paris: G. Steinheil, Éditeur. 1897.

First edition. 8vo. vi, (2), 385, (1) pp. With 42 figures in text. Fine copy in original half morocco, embossed cloth.

MOISSAN FOUNDED the study of high-temperature chemical reactions by his invention of the electric furnace and using it to fuse and purify many refractory oxides, silicides, carbides, and borides. He first synthesized small diamonds

(not of gem quality) by dissolving carbon in molten iron and then rapidly cooling it. Moissan's process was successfully repeated by Otto Ruff (*Zeitschrift für anorganische Chemie* [1917], 22, 73). Ruff (1871–1939) proved that the crystals were diamonds (and not silicon carbide) by several tests. Using his electric furnace to reduce metallic oxides with carbon, Moissan prepared many metals, e.g., chromium, manganese, molybdenum, titanium, tungsten, uranium, vanadium, and zirconium. "The electrochemical and metallurgical applications to industry of Moissan's work became immediately apparent, for example in the large-scale production of acetylene from calcium carbide" (D.S.B.). At the end of this classic book is a bibliography listing seventy-eight of Moissan's papers (1892–1896) on the electric furnace. (Bolton, *First Supplement*, 300; D.S.B., IX, 451; Duveen, 408; Edelstein, 1632; Morgan, 544; Partington, IV, 914; Smith, 332; Waller, 11196b)

MOISSAN, Henri

The Electric Furnace. By Henri Moissan. Authorized translation by Victor Lenher, Ph.D., University of Wisconsin. Easton, Pa.: The Chemical Publishing Company. 1904.

First American edition. 8vo. 3 leaves, ix, (1), 305, (1) pp. With 42 figures in text. Mint copy in original ribbed cloth.

THE ENGLISH translation, by Victor Lenher, of *Le Four Électrique* (Paris, 1897), to which Moissan has added a preface dated 10 May 1903. "Since we commenced our first chemical researches with the electric furnace in 1892, we have found many reactions, one after another, which have been studied at high temperatures, both in the laboratory and in industry. We have had the pleasure . . . to see the development of certain industries, such as the preparation of calcium carbide, chromium, ferro-silicon, ferro-chromium, and ferro-titanium. At the same time, F. N. Acheson, who, in his discovery of the crystalline silicide of carbon, created the carborundum industry, and . . . later was able to realize the industrial preparation of graphite" (preface). The Edgar Fahs Smith Collection (University of Pennsylvania) possesses seven letters from Moissan to Lenher concerning this translation, as well as 103 pages of manuscript notes, including *Preface de l'édition Américaine*, written by Moissan. There is also another, quite independent translation by A. T. de Moulpied (London: E. Arnold, 1904). (Smith, 332)

MOISSAN, Henri

Recherches sur les Différentes Variétés de Carbone. Par M. Henri Moissan, Membre de l'Institut. Paris: Gauthier-Villars et Fils, Imprimeurs-Libraires. 1896.

First edition in book form. 8vo. 2 leaves, 152 pp. With 21 woodcut illustrations in text. Old stamps of Faculté des Sciences de Paris on half title, title, and several places in text; otherwise fine copy in original red quarter morocco, marbled boards.

A DETAILED ACCOUNT of Moissan's researches on the allotropes of carbon, with a discussion of their similarities and differences. The first part (pp. 1–17) covers his investigations on amorphous carbon and the second (pp. 18–59) his work on graphite. In the third and most important part (pp. 60–150) Moissan describes his epoch-making research on the production of microscopic diamonds, which he obtained by heating iron and carbon in the electric furnace, rapidly cooling the crucible in cold water, and dissolving the iron in hydrochloric acid. This book reprints articles originally published in the July and August issues of *Annales de Chimie et de Physique* (VIII, 466). (Partington, IV, 914; Weil, Cat. 33 [1965], 182)

MOISSAN, Henri

Thèses présentées à la Faculté des Sciences de Paris pour obtenir le grade de docteur des sciences physiques, par M. H. Moissan . . . 1re Thèse. Sur les oxydes métalliques de la famille du fer. 2e Thèse. Propositions données par la Faculté. Soutenues le (blank) juillet 1880, devant la Commission d'Examen. MM. Desains, Président. H. Sainte-Claire Deville, Troost, Examineurs. Paris: Gauthier-Villars, Imprimeur-Libraire de l'École Polytechnique . . . 1880.

First edition. 4to. 3 leaves, 58 pp., 1 leaf. Fine copy with wide margins, in maroon pebbled cloth antique, spine gilt-lettered and dated, with original printed wrappers bound in.

THE DOCTORAL thesis of the great French chemist and Nobel laureate (1906) Ferdinand Frédéric Henri Moissan (1852–1907). The thesis describes the preparation, properties, and reactions of the oxides of iron, manganese, nickel, cobalt, and chromium. "His early investigation of the oxides of iron and related metals, and particularly the compounds of chromium, attracted the attention of Henri Sainte-Claire Deville and H. J. Debray, who encouraged him. This work formed the basis of Moissan's doctoral thesis of 1880 and preoccupied him to a large extent during the next three years" (D.S.B.). Moissan dedicated this rare publication—one of his earliest and his first on inorganic chemistry—to his friend P. P. Dehérain, professor at the Musée d'Histoire Naturelle, in Paris. (Bolton, *First Supplement*, 300; D.S.B., IX, 451; Edelstein, 1637; Partington, IV, 912)

MOJON, Giuseppe

Corso Analittico di Chimica di G. Mojon . . .

Genoa: Dalla Stamperia di Giovanni Gioiosi. 1806.

First edition. 2 vols., 8vo. I: 4 leaves, pp. 1–208. II: 4 leaves, pp. 209–414. Fine, crisp copy, in contemporary mottled calf, gilt-lettered tan morocco labels, spines gilt.

THE PRINCIPAL work of Mojon (1772–1837), professor of chemistry at the University of Genoa. Reprinted four times to 1816 and also translated into Spanish (Barcelona, 1818), the course gives an excellent account of chemical knowledge (including organic and biochemistry) in Italy at the beginning of the nineteenth century. Mojon carried out one of the earliest demonstrations of electromagnetism in 1804, by inserting magnetized steel needles into a voltaic circuit. A very rare textbook, especially in first edition. Not in D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Bolton, 676; Ferchl, 363; Poggendorff, II, 174)

MOJSJEENKOW, Feodor

Mineralogische Abhandlung von dem Zinnsteine, abgefast von Feodor Mojsjeenkow.

Leipzig: bei Johann Gottlob Immanuel Breitkopf. 1779.

First edition. 8vo. 6 leaves, 91, (1) pp. Fine, crisp copy, in the original half vellum, patterned boards.

A MINERALOGICAL AND chemical work on the ores of tin and other ores (principally those of copper, lead, silver, and tungsten), with many references to the writings of contemporary mineralogists and chemists (e.g., Henckel, Werner, Macquer, Born, Vogel, Sage, Scopoli, Waller, and Cronstedt). It is dedicated to the professor of chemistry in St. Petersburg, Erik Laxmann (1737–1796), on whom see Poggendorff (I, 1396). No bibliographical reference to the author, Mojsjeenkow, has been found, but to judge from this book he was obviously an important, very well-read mineralogical chemist, probably of Russian origin. A very rare work.

MONARDES, Nicolas Bautista

Ein nützlich und lustig Gespräche, von Stahl und Eisen. Darinnen dieser Metallen Würdigkeit und Artzney Tugenden angezeigt werden: Erstlich in Spanischer Sprache geschrieben, von dem Hochgelahrten Medico D. Nicolao Monardo, und vorwenig Jahren in die Lateinische gebracht, durch den fürtrefflichen Herrn Carolum Clusium, Jetzo aber . . . in unsere Deutsche Sprache versetzt: Sampt einem andern Tractätlin, Von dent Schnee und Eyss . . . Alles sehr nützlich und lustig zu lesen, und mit angehengten Zugaben vermehret, durch Jeremiam Gesnerum . . .

Leipzig: Bey Abraham Lamberg, in verlegung Johan Eye-rings und Johan Perferts, beyder Buchhändler in Breszlaw. 1615.

First German translation. 4to. 5 leaves, 123, (1) pp. Title printed in red and black. Large woodcut printer's device on last page. Paper slightly and uniformly embrowned (characteristic of period); otherwise very fine copy with wide fore- and lower margins, sumptuously bound in crimson morocco antique, covers gilt-ruled, spine gilt-lettered and dated.

AN EXTREMELY rare book containing the author's metallurgical treatise on iron and steel, followed by the treatise on snow and ice and their application in the refrigeration of food and beverages. The German translation is by the Silesian physician Jeremias Gesner, mainly from the Latin by Charles de l'Ecluse, with additions. Monardes (ca. 1493–1588) is best known as the author of the "First American Herbal." The treatise on iron and steel first appeared in Spanish, appended to the three parts of his great herbal (Seville, 1574). The treatise on snow (*Libro que trata de la nieve*, Seville, 1571) was also published in Spanish. The biographer of Monardes, Francisco Guerra, could cite only one copy of the present work, in the National Library of Medicine. Even Guerra's own copy is a facsimile, and he states that this German edition has never appeared on the market. (Guerra, *Nicolas Bautista Monardes, su vida y su obra*, Mexico City, 1961, No. 37, and pp. 99–100)

MONCONYS, Balthasar de

Journal des Voyages de Monsieur De Monconys . . . Où les Scavants trouveront un nombre infini de nouveautez, en Machines de Mathematique, Experiences Physiques, Raisonnemens de la belle Philosophie, curiositez de Chymie, & conversations des Illustres de ce Siecle . . . Publié par le Sieur de Liergues son Fils. . .

Lyons: Chez Horace Boissat, & George Remeus. 1665–1666.

First edition, first issue. 3 vols., 4to., in 1. I (1665): 4 leaves, 328, "325–328," 329–491, (1) pp. II (1666): 2 leaves, 10 pp., 1 leaf, 387, 396–503, (1) pp. (Pagination irregular: pp. 327–328, 343–344, 388–395, and 467–470 omitted, but text complete. Pp. 337–344 misnumbered 335–342). III (1666): 4 leaves, 60, 56, 44, 96 pp., 16 leaves (last blank). With 30 copperplates (by C. Derbage). Fine copy, in original limp vellum. Signature (seventeenth century) on first title page: Mde la Comtesse de T (illegible). Bookplate: Kenneth G. Huston.

EDUCATED in the natural sciences, Monconys (1611–1665) was devoted to chemistry, physics, and mathematics. He assisted in the founding of the Royal Academy and gives an account herein of its early meetings. During his extensive travels (1645–64) through Britain, Europe, and the

Orient he visited many famous scientists (e.g., Boyle, Guericke, Torricelli, and Willis). These volumes contain much of chemical interest, including letters on alchemy sent by Sir Kenelm Digby to Monconys. Also covered are electroluminescence and bioluminescence. A very important work, valuable for the history of science in the seventeenth century; the plates illustrate laboratory equipment, instruments, etc. These *Voyages* were reprinted (Paris, 1695) and were translated into German (Leipzig, 1697). (Caillet, 7642; Duncan, 8936; Ferchl, 364; Goldsmith, M1244; Harvey, 271, 579; Middleton, *History of the Barometer*, 31; Mottelay, 126; Poggendorff, II, 183; Rubin, Digby, 106; Watt, II, 676k)

MONCONYS, Balthasar de

Journal des Voyages de Monsieur De Monconys . . .
Paris: Chez Louis Billaine, Au Pallais. 1677.

First edition, second issue. 3 vols., 4to., in 2. Collation as for first issue (1665–66). With 12 engraved plates (identical to those of first issue). Fine copy, in original speckled calf, gilt.

THE FIRST ISSUE was published by Horace Boissat and George Remeus at Lyons in 1665–1666. The sheets of the Lyons edition were reissued eleven years later by the Paris publisher Louis Billaine (as here), with the three title pages reset and the ten-page biography of Monconys (in the first issue) reset in eight pages. The first issue contains thirty plates, but in this copy there are twelve plates. Careful examination reveals that this copy, in excellent contemporary condition, has evidently not had any plates removed. It is possible, therefore, that in the intervening eleven years, eighteen of the original plates were either lost or were unavailable to Billaine. This Paris issue is extremely rare. Not in N.U.C. (Duncan, 8936; Goldsmith, M1245)

MONCREIFF, John

An Inquiry into the Medicinal Qualities and Effects of the Aerated Alkaline Water: illustrated by Experiments and Cases. . . .

Edinburgh: Printed for William Creech; and sold by G. G. and J. J. Robinsons, Pater-Noster Row, T. Kay, No. 552 Strand, London; and Dunlop and Wilson, Glasgow. 1794.

First edition. 8vo. (in 4s). 4 leaves, 205, (1) pp. With engraved plate. Pristine copy with wide margins, in half calf antique, marbled boards, gilt-ruled and blind-stamped spine, red morocco label.

A TREATISE ON the preparation of carbonated alkaline solutions and their uses in medicine, especially for dissolving stones in the kidneys and bladder. The solutions were made by “aerating” salt of tartar (potassium carbonate) with carbon dioxide to form potassium bicarbonate. The carbon

dioxide was generated by reacting dilute sulphuric acid with chalk in a Nooth’s apparatus, which is illustrated in the plate. Many experiments are described that confirm the efficacy of these solutions for alleviating “gravelish disorders.” The author mentions the “discovery of Fixed Air by Dr. Black, and of its general properties and effects, by subsequent philosophers” (p. 4). This work was “Favourably noticed in analytical review in *Duncan’s Med. Commentaries*, xix (1794), p. 105–114” (Waring). Moncrieff, an apothecary, was an honorary member of the Royal Physical Society, in Edinburgh. A very scarce work, not in the usual bibliographies. (Blake, 308; Ferguson Coll., 470; Waring, 105; Watt, II, 676m; Wellcome, IV, 153)

MONGE, Gaspard

Description de l’Art de Fabriquer les Canons, faite en exécution de l’arrêté du Comité de Salut public, du 18 pluviôse de l’an 2 de la République française, une et indivisible; par Gaspard Monge. Imprimé par ordre du Comité de Salut Public.

Paris: De l’Imprimerie du Comité de Salut Public. An 2 de la République Française (1794).

First edition. 4to. 2 leaves, viii, 231, (1) pp. With 4 large folding tables and 60 large folding copperplates. Fine copy with wide margins, in original mottled calf, spine richly gilt, brown morocco label.

A CLASSIC TREATISE on the manufacture of cannons, and one of the most important books on the chemistry, metallurgy, and technology of steel- and bronzemaking of the late eighteenth century. Well known as a first-rate mathematician who founded descriptive geometry, Monge (1746–1818) was also an expert chemist who collaborated with Lavoisier and his associates. As an important figure in French politics under Napoleon, on 7 February 1794 Monge was ordered by the Committee of Public Safety to write on all aspects of gunfounding. The result was this definitive treatise covering in detail the selection of the best ores of copper, tin, and iron for making bronze and steel, the processes for casting cannon and cannonballs, the design of suitable furnaces, etc. The book was a major contribution to the development of the steel industry, which was to dominate nineteenth-century engineering and the economy of the industrial nations. Although his influence has not been fully recognized, Monge was one of the most significant figures in the history of technology. The beautiful plates in this volume illustrate every aspect of gun manufacture. (D.S.B., IX, 477; Ferguson, *Bibl. Hist. Technology* [1968], 297; Smith, *Hist. Science of Steel* [1968], 279; Sotheran, Cat. 741 [1913], 12018 [“Rare”]; Taton, *L’Oeuvre scientifique de Gaspard Monge* [1951], 34)

MONGIN, Jean Baptiste

Le Chimiste Physicien où l'on montre que les Principes naturels de tous les Corps sont véritablement ceux que l'on découvre par la Chimie. Et où par des Experiences & des Raisons fondées sur les Loix des Mécaniques, après avoir donné des moyens faciles pour les separer des Mixtes, on explique leurs propriétés, leurs usages & les Principaux Phénomènes qu'on observe en travaillant en Chimie. . . .
Paris: Chez Laurent d'Houry . . . 1704.

First edition. 12mo. 8 leaves, 224 pp. Fine copy in original speckled calf, gilt, brown morocco label.

DEDICATED TO the Duc de Quintin, this is the first book published by Mongin (dates unknown) after he graduated M.D. Divided into three parts, the first discusses the general tenets of chemistry and chemical analysis. Mongin asserts that salt, sulphur, water, and earth are the essential principles or elements of substances. In the second part examples are given of the effects produced by mixing these principles (i.e., chemical reactions). Operations described are dissolution, fermentation, precipitation, the reaction of acids with alkalies to produce salts, etc. In the third part Mongin discusses three of van Helmont's experiments and refutes the claim by that author that salt, sulphur, and earth are produced from water. He refers to the works of Descartes, Lemery, et al. Ferchl misspells Mongin as "Mongen" and gives the wrong date: 1703. The approbation and privilege are dated 8 January and 4 April 1704, respectively. (Cailliet, 7650; Cole, 948; Duveen, *Supplement*, 263; Edelstein, 1641; Ferchl, 364; Smith, 333; Wellcome, IV, 154)

MONNET, Antoine Grimoald

Exposition des Mines, ou Description de la Nature et de la Qualité des Mines: a laquelle on a joint des Notices sur plusieurs Mines d'Allemagne & de France; & une Dissertation pratique sur le traitement des Mines de cuivre, traduite de l'Allemand, de M. Cancrinus. . . .

London and Paris: Chez P. Fr. Didot le jeune, et Edme. 1772.

First edition. 12mo. xii, 398 pp. (mispaginated 396: pp. 11–12 repeated). Very fine, copy, in original mottled calf, gilt, crimson morocco label.

AN IMPORTANT book on the mineralogy of metal ores and the extraction of all the then-known metals. Descriptions of numerous French and German mines and their output are included. A translation of the treatise on copper minerals by Cancrinus (pp. 274–395), with useful comments by Monnet, supplies much valuable information. Rare. Not in Blake, Bolton, Cole, Ferchl, Partington, Poggendorff, etc. (D.S.B., IX, 478; Duveen, 409; Hoover, 592; Neu, 2811)

MONNET, Antoine Grimoald

Nouvelle Hydrologie, ou Nouvelle Exposition de la Nature et de la Qualité des Eaux; avec un Examen de l'Eau de la mer, fait en différents endroits des Côtes de France, ou l'on a joint une description des sels naturels. . . .

London and Paris: Chez P. Fr. Didot le jeune, et Edme. 1772.

First edition. 12mo. xii, 312 pp. Very minor damp stains toward the end; otherwise crisp copy in original gilt-ruled quarter calf, boards, tan morocco label.

A COMPREHENSIVE WORK on all forms of water (e.g., mineral, rain, sea), their origins, chemical and physical examination, methods of rendering potable, etc. Analyses of the most famous French mineral waters are given, as well as those of seawater sampled from various locations in France. The final section discusses naturally occurring salts. The book is a sequel to the author's *Traité des eaux minérales* (Paris, 1768) and "is almost entirely chemical in character" (Duveen). Signature A1, the existence of which Duveen doubted, was removed from almost all copies (including this); it is a shorter version of the *avertissement* (pp. v–viii), here present. Very scarce. Not in Blake, Bolton, D.S.B., Partington, etc. (Cole, 950; Duveen, 409; Ferchl, 365; Neu, 2812; Poggendorff, II, 187)

MONNET, Antoine Grimoald

Traité de la Dissolution des Métaux. . . .

Amsterdam and Paris: Chez Didot l'aîné. 1775.

First edition. 12mo. 2 leaves, viii, 352 pp. Fine copy, in original mottled calf, gilt, maroon morocco label.

A CHAPTER IS devoted to each of the thirteen metals and the ability of different acids and bases to dissolve them, and also their oxides, hydroxides, and sulphides. Water is included as a solvent for iron. "Monnet in his treatise on the dissolution of metals said the whole theory of affinity was a chimera which could give nothing useful to science, but Macquer refuted this" (Partington). He also thought that cobalt and nickel are modifications of the same metal. Despite his sometimes faulty theoretical beliefs, including the vigorous refutation of Lavoisier's antiphlogistic discoveries, Monnet contributed significantly to contemporary knowledge of the behavior of metals when they dissolve in acids to form salts and gases (e.g., hydrogen, oxides of nitrogen). Scarce. Not in Blake, Duveen, Edelstein, Neu, Smith, etc. (Bolton, 678; Cole, 951; D.S.B., IX, 478; Ferchl, 365; Partington, III, 102; Poggendorff, II, 187; Sondheimer, 1081)

MONNET, Antoine Grimoald

Traité de la Vitriolisation et de l'Alunation, ou l'Art de Fabriquer les Vitriols et l'Alun. Avec une Dissertation sur la Minéralisation & sur l'état du soufre dans les Mines & les métaux. . . .

Amsterdam and Paris: Chez Pierre-François Didot le jeune. 1769.

First edition. 12mo. 2 leaves, xxxiv pp., 1 leaf, 288 pp., 1 leaf (errata). With 4 illustrations on 2 folding copperplates (Fonbonne Sculp.). Very fine copy, in original half calf, marbled boards, tan morocco label.

AN EXCELLENT work on the preparation of alum (potassium aluminum sulphate) and the sulphates (vitriols) of other metals (e.g., iron, copper, zinc). Also described is the chemistry of pyrites (iron disulphide) and its oxidation to ferrous sulphate. "Since . . . Monnet's discovery of potassium in the alum from Tolfa attracted little notice, chemists still continued to regard that element as peculiar to the vegetable realm" (Weeks, *Discovery of the Elements*, p. 459). Monnet, who visited many alum and vitriol factories, describes their methods and problems, with attempts to explain processes chemically. "His best work" (Partington). Not in Blake, Duveen, Edelstein, Ferguson, etc. (Bolton, 678; Caillet, 7668; Cole, 952; D.S.B., IX, 478; Ferchl, 365; Ferguson Coll., 470; Partington, III, 102; Poggendorff, II, 187; Smith, 333)

MONNET, Antoine Grimoald

Traité des Eaux Minérales, avec plusieurs Mémoires de Chymie relatifs a cet Objet. . . .

Paris: Chez P. Fr. Didot le jeune. 1768.

First edition. 12mo. xxxii pp., 4 leaves, 359, (1) pp. Fine, crisp copy, in original mottled calf, gilt, maroon morocco label.

"AN INTERESTING work giving full chemical and analytical details of all the mineral waters known to the author" (Duveen). Monnet (1734–1817) attended the chemical lectures of G. F. Rouelle at the Jardin du Roi, Paris, then became an apothecary, giving lectures on chemistry. He had previously published several papers on the analysis of mineral waters, which had attracted the attention of some scientists and of Malasherbes, who became his patron. Later he was appointed first inspector general of French mines and published the first mineral atlas of France. In this book (his first) Monnet presents a brief history of the subject, followed by chapters on chalybeate, alkaline, and sulphurous waters. The last part comprises memoirs describing chemical experiments on substances that occur in mineral waters and on minerals through which they pass. (Blake, 308; Bolton, 678; D.S.B., IX, 478; Duveen, 409; Ferchl,

365; Neu, 2813; Partington, III, 102; Poggendorff, II, 187; Sondheimer, 1080)

MONRO, Donald

Appendix or Supplement to Dr. D. Monro's Treatise on Medical and Pharmaceutical Chymistry, and the Materia Medica: Containing I. An Account of some Articles omitted. II. A Sketch of the New System of Chymistry. III. Application of it to the former Parts of this Work. IV. And a general Index to the four Volumes. Making Vol. IV.

London: T. Cadell. 1790.

First edition. 8vo. 4 leaves, pp. 1–47, (48), 51–306. (N.B. The second title page: "A Short Appendix to Dr. D. Monro's Treatise on . . . Chymistry . . ." [London: T. Cadell, 1789], is pp. 49–50 but is bound at the beginning). Fine copy in quarter calf antique, marbled boards, maroon lettering label, gilt.

A VERY IMPORTANT work in which there is a detailed discussion of the New Chemistry of Lavoisier and his circle, comparing and contrasting it with the phlogiston theory. Written as a sequel volume to Monro's *A Treatise on Medical and Pharmaceutical Chymistry, and the Materia Medica* (London: T. Cadell, 1788, 3 vols., 8vo.), this fourth volume is possibly the earliest exposition of the antiphlogistic system of chemistry to appear in English, as indicated by the date of the second title page, viz. 1789). Monro's conclusion is that Lavoisier's theories have great merit but require further experimental proof. Therefore, Monro was not prepared to embrace Lavoisier's New Chemistry wholeheartedly. Pages 201–206 discuss "Objections made to the New Theory of Chymistry," while pages 207–294 deal with the "Application of the New Theory." Pages 295–306 comprise a general index to the four volumes. There are numerous references to Lavoisier, Morveau, Fourcroy, Berthollet, Priestley, Cavendish, et al. Surprisingly, Duveen and Klickstein do not refer to this important work in their bibliography of Lavoisier. Very scarce. Not in Cushing, Morgan, Osler, Smith, Waller, etc. Bolton (p. 679), Ferchl (p. 365), and Poggendorff (II, 189) erroneously describe the complete work as "3 vols., 1788–90." (Duveen, 409–410; Neu, 2823; Watt, II, 677p)

MONRO, Donald

A Treatise on Medical and Pharmaceutical Chymistry, and the Materia Medica: to which is added, an English translation of the New Edition of the Pharmacopoeia of the Royal College of Physicians of London, 1788 . . .

London: Printed for T. Cadell, in the Strand. 1788.

First edition. 3 vols., 8vo. I: xv, (9), 446 pp. II: 8 leaves, 455, (1) pp. III: 8 leaves, 464 pp. + 16 pp. (advertisements, dated 1788).

With 2 large folding printed tables in volume I ("Mr. Moreau's Synoptical Table of Chymical Solvents or Menstrua"), following page 14. Fine copy in original speckled tan calf, gilt-ruled spines, dark-blue morocco labels. From the library of Kenneth Alexander Howard, first earl of Effingham (1767–1845), with his signature ("Effingham") on title page of volume III.

AN IMPORTANT work that contains a translation of the sixth London pharmacopoeia and gives clear directions for preparing acids, alkalies, salts, oils, and other materials used in the medicinal prescriptions of the period. It was written "as part of a course of lectures on the theory and practice of physic . . . read by the author in the years 1758, 59 and 60, and was planned nearly in the form it now appears" (preface). Since 1760, Monro updated the work to include the "late publications on chymistry and the materia medica," but was not yet ready to adopt "the new French Nomenclature, published last year (1787)." An able chemist, Monro prepared several organic acids and their salts (see Partington, III, 555). Bolton gives the wrong imprint ("Edinburgh"). A fourth volume to this work appeared entitled *Appendix or Supplement* (London, 1790). (Blake, 309; Bolton, 679; Ferchl, 365; Munk, II, 294; Neu, 2823; Poggendorff, II, 188–189; Watt, II, 677p)

MONRO, Donald

A Treatise on Mineral Waters. In Two Volumes. By Donald Monro, M.D. . . .
London: Sold by D. Wilson and G. Nicol . . . and T. Durham . . . 1770.

First edition. 2 vols., 8vo. I: xxiv, 475, (1) pp. II: viii, 419, (1) pp. With half title in volume I, not required in volume II. Fine copy in contemporary speckled calf, gilt, maroon morocco labels. Neat signature on first flyleaf of each volume: Rich. Walker (fl. 1789–1806).

THE SECOND son of Alexander Monro (1697–1767), Donald Monro (1727–1802) graduated M.D. (Edinburgh, 1753) and became an army physician and later physician at St. George's Hospital, London (1758–1786). He was elected F.R.S. (1766) and F.R.C.P. (1771). In addition to medical works he published this comprehensive treatise on the chemical, physical, and medicinal properties of the mineral waters of Great Britain, Ireland, and many European and a few Asian countries. All types of natural waters are described, including pure water, seawater, and every kind of mineral water (e.g., acidic, alkaline, arsenical, chalybeate, ferruginous, oleaginous, saline, and sulphurous). Examples of numerous chemical tests and analyses are given, and this scientific study inspired the expansion of many spa towns. Richard Walker, a former owner of this copy, was apothecary at the Radcliffe Infirmary, Oxford. He published sev-

eral papers in the *Philosophical Transactions*, 1788–1801 (see Partington, III, 309–310). (Blake, 310; Bolton, 679; Duveen, 409; Munk, II, 294; Neu, 2824; Partington, III, 124; Waring, 777; Wellcome, IV, 157)

MONTANOR, Guido de

Tesaurus Chymiatricus, Das ist, Lang verborgener Schatz der hochberühmten und herrlichsten Kunst Chymiae, Darinnen das überköstliche Kleinodt Menschlicher Gesundheit, und verenderung der Metallen durch den Lapidem Vegetabilem, animale und mineralem, wie auch allerhand andere ausserlesene schöne particular Medicamenta aus selbst eigner Erfahrung beschrieben worden, Von dem hocheleuchten Philosopho Guidone Magno de Monte. Nun aber aus sonderbaren Ursachen Hermanni Condeisyani den Filiis Sapientiae zum bessern Unterricht eröffnet und an Tag geben.

Halle: Gedruckt . . . bey Peter Schmieden . . . In verlegung Caspar Klosemans, Buchh. 1623.

First German edition. 8vo. 8 leaves, (7), 126, (1) pp. With 2 half-page woodcuts of chemical apparatus (pp. 5 and 10). Title page backed at an early date and characteristic minor toning of paper; otherwise very good copy in later marbled boards, printed label on spine.

THE FIRST German translation and first separate edition of the *De arte chymica libellus*, a work that was later published in the *Harmonia imperscrutabilis chymicae-philosophicae* (Frankfurt, 1625) by Johann Grasshoff. The translation was carried out by Grasshoff (fl. 1600–1625), who signed the preface using the pseudonym Hermannus Condeesyanus. The book is a compilation of chemical processes and pharmaceutical recipes. Divided into three parts, the first describes the preparation of inorganic acids, bases, and salts. The second part is devoted to mercury, sulphur, and their compounds. The third part deals with chemicals prepared from the animal, vegetable, and mineral kingdoms. The author, Montanor, lived between the fourteenth and fifteenth centuries and was, according to Hoefler (1866, vol. 1, p. 428), of French origin. Ferguson states that he had not seen several of the titles he mentions in his entry for Montanor. Very rare. Not in Duveen, Edelstein, Krivatsy, Partington, etc. (Ferchl, 366; Ferguson, II, 100 [not in Young Coll.]; Ferguson Coll., 471 [imperf.]; Wellcome, I, 4407)

MONTANUS, Joannes Baptista

Metaphrasis summaria eorum quae ad medicamentorum doctrinam attinent excerpta ab accuratis auditoribus ex quotidianis praelectionibus in Patavino gymnasio pulice explicatis à Ioan. Baptista Montano physico Veronensi. Anno salutis 1549. Mense Movembri.

Patavii (Padua): Jacobus Fabrianus, 1550.

First edition. 8vo. 64 numbered folios. With 4 fine historiated woodcut capitals. Fine copy in contemporary vellum, rebacked in calf.

MONTANUS (1498–1552), distinguished physician, came from a noble family of Verona. He “practised at Rome and Naples, . . . then at Padua, where . . . he was appointed professor of medicine” (Ferguson, *Bibl. Chem.*, II, 101). The present work describes in detail the course in medicine that Montanus taught at the University of Padua. Included are many references to both galenical and chemical medicines. Montanus was a great believer in chemical preparations and was one of the foremost-thinking Italian physicians of the sixteenth century. In the section on materia medica are discussions of acids, alkalies, salts, and other chemicals used in the preparations of medicines. The first part of the book comprises a discussion of the Aristotelian four elements, the nature of fire and combustion, the conversion of metals to the calces, ethereal oils and spirits prepared by chemists, the nature of vacuum, heat and cold, moistness and dryness, salts, niter, iron, lead, clay, amber, alcohol, and many other topics of interest to the chemical historian. Many of the great names of science and medicine are mentioned (e.g., Aristotle, Democritus, Theophrastus, Plato, Galen, Avicenna, Hippocrates, and Fracastorius). Both Durling and Wellcome list numerous titles and editions by Montanus, but the present title is not in the Wellcome Library. Very rare. Not in Caillet, Cole, Cushing, Duveen, Ferchl, Ferguson, Neu, Osler, Partington, Smith, Waller, Watt, etc. (Durling, 3277)

MONTÉ-SNYDER, Johann de

Metamorphosis Planetarum. Das ist: Eine wunderbarliche Verenderung der Planeten und Metallischen Gestalten in ihr erstes Wesen, mit beygefügetem Process und Entdeckung der dreyen Schlüssel, so zu Erlangung der drey Principia gehörig, und wie das Universale Generalissimum zu erlangen, in vielen Ortern dieses Büchleins beschrieben. Anietzo wiederumb zum Druck befördert durch A. Gottlob B.

Frankfurt & Leipzig: Verlegts Tobias Oehrling, Buchhändl. in Jena, daselbst gedruckt mit Nisischen Schriften. 1684.

Second edition. 8vo. 139, (1) pp., 1 leaf (blank). With beautiful emblematic-alchemical engraved frontispiece. Very light toning of a few leaves; otherwise fine copy in near-contemporary overlapping vellum with original green linen ties. Bound with: Monte-Snyder, Johann de, *Tractatus de Medicina Universali* (Frankfurt and Leipzig, 1678).

EDITED BY Adam Gottlob Berlich, this alchemical work on the transmutation and metamorphosis of the “planets” (i.e., metals) first appeared at Amsterdam in 1663 (Ferguson Coll., 472; Wellcome, IV, 161). “The text speaks of three

worlds, how to distinguish the hermaphroditish little irrational mineral world from the lunar feminine *Gebubrt*, of the double and universal nature of the hermaphroditish microcosm, how the planets serve the monarch of this world, how Mercury, after he triumphs, changes himself into mercury of the philosophers, and many other metaphorical representations of the chemical process” (Thorndike). Although he did not own a copy of this book, Isaac Newton very carefully prepared a manuscript transcript of it, including the symbolic frontispiece. The manuscript is listed as MS 58 in Keynes’ bibliography (see B. J. T. Dobbs, *The Foundations of Newton’s Alchemy*, 1975, pp. 167–172). Very rare. This edition not in Ferguson, Ferguson Coll., Krivatsy, Wellcome, etc. (Caillet, 7690; Duveen, 411; Kopp, *Die Alchemie*, II, 312, 364; Thorndike, VIII, 356; Waller, 12082)

MONTÉ-SNYDER, Johannes de

Metamorphosis Planetarum. Das ist: Eine wunderbarliche Veränderung der Planeten und Metallischen Gestalten in ihr erstes Wesen, mit beygefügetem Process und Entdeckung der dreyen Schlüssel, so zu Erlangung der drey Principia gehörig, und wie das Universale Generalissimum zu erlangen, in vielen Oertern dieses Büchleins beschrieben. Anjetzo wiederumb zum Druck befördert durch A. Gottlob B.
Frankfurt: Verlegts Georg Heinrich Oehrling, Buchhändler. Wetzflar druckts Georg Ernst Winckler. 1700.

Second edition in German. 8vo. 142 pp. (pagination skips from p. 12 to p. 15, but text complete). With beautiful engraved alchemical frontispiece. Woodcut capitals, head- and tailpieces. Imprint just grazed (as usual); otherwise very fine, crisp copy, in old (but later) vellum. Bound with: Monte-Snyder, J. de, *Tractatus de medicina universali* (Frankfurt, 1709).

MONTÉ-SNYDER (or Mondscheider) was a native of the Palatinate and reputedly a grandson of Levinus Lemnius, from whom he inherited a tincture used for transmutations. Van Vreeswyk records that at Aix-la-Chapelle in 1667, in the presence of the assayer and goldsmith Guillaume, Monte-Snyder produced gold of fine quality from lead and copper. After his stock of tincture ran out, he died in poverty in Mainz. In the preface of the present alchemical work the author refers to an earlier treatise, *De elementis magicis*. The text discusses three worlds and distinguishes “the hermaphroditish little material mineral world from the lunar feminine *Gebubrt*, of the double and universal nature of the hermaphroditish microcosm” (Thorndike). The book first appeared in Latin (Amsterdam: J. Jansson, 1663, 12mo., 133 pp.; see Caillet, 7690, and Thorndike, VIII, 356). The first German translation, edited by Adam Gottlob Berlich (Frankfurt, 1684), was followed by the present edition (1700) and much later by another (1774; Bolton, 1016). Rare. (Caillet, 7690; Duveen, 651; Ferchl, 367; Ferguson,

II, 104; Ferguson Coll., 473; Neu, 2833; Smith, 334; Soth-eran, Cat. 832 [1932], 5553)

MONTE-SNYDER, Johann de

Reconditorium ac Reclitorium Opulentiae sapientiaeque Numinis Mundi Magni, cui deditur in titulum Chymica Vannus, obtenta quidem & erecta Auspice Mortale Coepto; sed Inventa Proauthoribus Immortalibus Adeptis, quibus Conclusum est, sancitum & decretum, ut Anno hoc per Mysteriartham Mercurium, Velut Viocurium, seu Medicurium, . . .

Amsterdam: Apud Joannem Janssonium à Waesberge, & Elizeum Weyerstraet. 1666.

First edition, first issue. 2 works in 1 vol. 4to. I: 292 (misnumbered 392). II: 1 leaf (*Commentatio de Pharmaco Catholico*), 76 pp., 2 leaves (1 errata, verso blank, one blank). With *Character Adeptorum* plate (usually missing) printed in red as frontispiece and 12 full-page symbolical copperplates. Other diagrams in text. Fine, crisp copy, in original calf, rebounded with old gilt spine laid on, corners neatly restored.

A CURIOUS COMPILATION of alchemical, chemical, and pseudo-scientific subjects, which has been attributed to several different authors. The *Commentatio* is a Latin translation of the *Von der Universal Medicin* by Monte-Snyder. Duveen suspects Monte-Snyder to be the author of the entire book, and J. W. Baumer (*Bibliotheca chemica*, 1782, p. 95) also attributes the work to this author. Caillet, however, ascribes it to Thomas Vaughan. There was a copy in Newton's library, heavily annotated by him (see B. J. T. Dobbs, *Newton's Alchemy*, 1975, p. 168; Harrison, 1378; Villamil, 71). The second issue appeared thirty years later, entitled *Chymiae Aurifodina Incomparabilis* (Leyden, 1696; Duveen, 135). "Extremement rare" (Caillet). (Bolton, 1030; Caillet, 2362, 11061; Duveen, 498–499; Ferchl, 435; Ferguson, II, 246–247; Ferguson Coll., 586; Guaita, 891; Hall, 115; Krivatsy, 9439 [imperf.]; Mellon, 122; Neu, 3436; Smith, 407; Verginelli, 69; Waller, 11213)

MONTE-SNYDER, Johann de

Tractatus de Medicina Universali. Das ist von der Universal Medicin, wie nemlich dieselbe in denen dreyen Reichen der Mineralien, Animalien und Vegetabilien zu finden und daraus zu wege zu bringen, durch ein besonders Universal Menstruum, welches auff- und zuschliessen, und jedes Metall in Materiam primam bringen kan, auch wie dadurch das fixe unzerstörliche Gold in ein warhafftes Aurum potabile zu bringen . . . Und mit einer kurtzen gründlichen Erklärung auch beygefügeten Spagyrischen Grundregeln illustriret durch A. Gottlob B.

Frankfurt & Leipzig: In Verlegung Thomae Matthiae Gotzens sel. Erben. 1678.

Second edition. 8vo. 176 pp. Engraved alchemical vignette on divisional title page (p. 139) and woodcut chemical symbols in text. Faint old stamp on title; otherwise fine copy in near-contemporary overlapping vellum with original green linen ties, spine unlettered. Bound with: Monte-Snyder, Johann de, *Metamorphosis Planetarum* (Frankfurt and Leipzig, 1684).

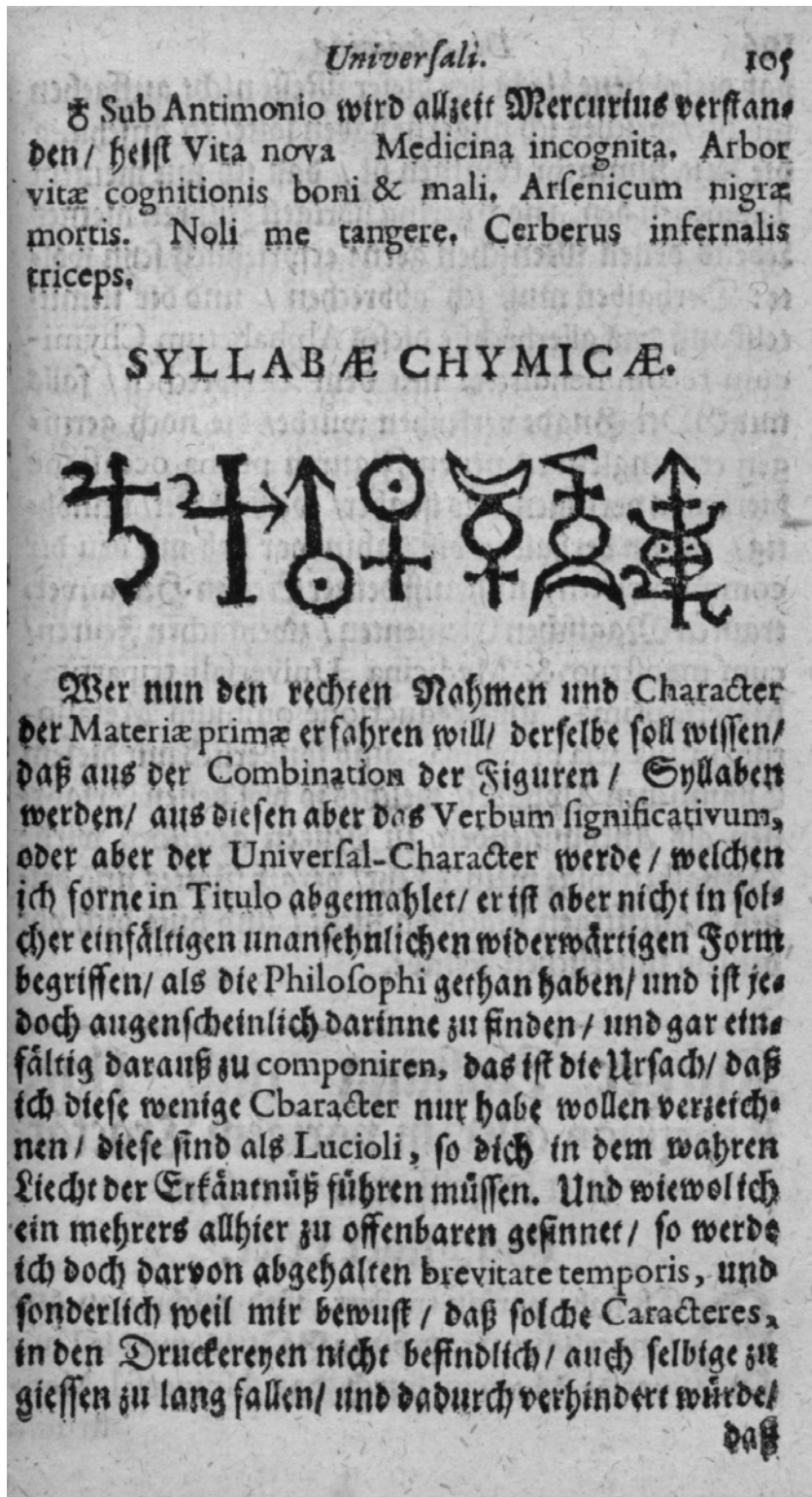
IN THIS work on the universal medicine Monte-Snyder rails against "cacochemische" books, which have caused many chemists to waste their time on useless experiments (p. 118). Alchemical symbols are used throughout. The first edition, a much shorter book, appeared in 1662 (Duveen, 411; Wellcome, IV, 160). The present second edition, greatly enlarged, contains the first edition of the *Spagyrische Grund Regeln*, with separate title, listing 150 ground rules on alchemical processes. Written in German. Monte-Snyder discusses "the universal menstruum of all metals and minerals . . . the destruction of the metals and their reduction to the three principles; whether the universal medicine is to be found in the seven stars, i.e., metals, or just in gold and first matter" (Thorndike). Adam Gottlob Berlich edited the second part. (Caillet, 7689; Ferguson, II, 104–105; Ferguson Coll., 472; Krivatsy, 8062 [imperf.]; Thorndike, VIII, 355–356; Waite, 294; Waller, 6650; Wellcome, IV, 161)

MONTE-SNYDER, Johannes de

Tractatus de Medicina Universali. Das ist: Von der Universal-Medicin, wie nemlich dieselbe in denen dreyen Reichen der Mineralien, Animalien und Vegetabilien zu finden, und daraus zu wege zu bringen, durch ein besonders Universal-Menstruum, welches auff- und zuschliessen, und jedes Metall in Materiam primam bringen kan, auch wie dadurch das fixe unzerstörliche Gold in ein warhafftes Aurum potabile zu bringen, so sich nimmermehr wieder in ein fix Gold-Corpus reduciren lässet, Gott zu Ehren, und dem menschlichen Geschlecht zu sonderbarem Trost und Nutzen anjetzo wiederum zum Druck befördert, und mit einer kurzen gründlichen Erklärung, auch beygefügeten Spagyrischen Grund-Regeln illustriret, durch A. Gottlob B. Frankfurt: In Verlegung Georg Heinrich Oehrlings. 1709.

Fifth edition? 8vo. 159, (1) pp. Signature H7 (p. 125) is a divisional title page (*Spagyrische Grund-Regeln*). Woodcut alchemical symbols on pages 104–105. Very fine, crisp copy. Bound with: Monte-Snyder, J. de, *Metamorphosis Planetarum* (Frankfurt, 1700).

"THE WORK of Johann de Montesnyder on the universal medicine is alchemical rather than medical and is written in German" (Thorndike, VIII, 355–356). Subjects discussed include the universal menstruum (solvent) of all metals



Monte-Snyder. Tractatus de Medicina Universali. Frankfurt, 1709.

and minerals, the threefold fire of the ancient sages, the destruction of metals and their reduction to the three principles (spagyric salt, sulphur, and mercury), the transmutation of metals, the properties of the seven known metals (viz. copper, gold, iron, lead, mercury, silver, and tin), alchemical symbolism, and whether the universal medicine is to be found in the seven metals or only in gold and the first matter. The book ends with 149 fundamental rules taken by Adam Gottlob Berlich from the foregoing work on the universal medicine (pp. 125–159). The first edition (Frankfurt, 1662; Duveen, 411) was followed by others of 1678, 1696, 1699, 1709, and 1773. Very rare. (Ferguson Coll., 472)

MONTEN, A. U.

Observationes circa Iodinum in Fuco Vesiculoso, . . . praeses Carol. F. Fagerström; Phil. Mag., respondente A. U. Monten, Gothoburgensi. In Acad. Carolina die XX Dec. MDCCCXXXIII.

Lund: Ex Officina Berlingiana. 1823.

First edition. 4to. 13, (1) pp. Good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the occurrence of iodine in various types of seaweed, and especially in the species *fucaeae*, presented by Monten under the direction of Carl Frederik Fagerström (1795–1850) at the University of Lund. The discovery of iodine by Courtois in 1811 and its extraction from seaweed ash (varec) is described, as are the slightly later researches on the subject by Fyfe, Gay-Lussac, Gaultier de Claubry, John, et al. The preparation and chemical reactions of various iodide salts are also discussed. A table at the end gives the analyses of the salts in the ashes of seaweed. (Ferchl, 149; Poggendorff, I, 714; Waring, 444)

MONTEN, Johan Anders

Dissertatio Chemica Animadversiones Celeberrimi Gmelin, in Theoriam Lavoisierianam, de Natura Acidi Carbonici Examinans. . . . Praeside Mag. Job. Gadolin, . . . pro gradu publicae censurae subjicit Johannes Andreas Monten, Satacundensis. In Auditorio Minori die XXII Junii MDCCCL. . . . Åbo: Typis Frenckellianis. (1801).

First edition. 4to. 1 leaf, 18 pp. Mint copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. Nature of Acids. 1801–1802.

A DISSERTATION ON the preparation, composition, and reactions of carbon dioxide and carbonic acid, being one of a series of replies to the rejection by Johann Friedrich Gmelin (1748–1804) of Lavoisier's theory of acids (see Crell, 1796, I, 293). The researches of Humboldt, Landriani, Lavoisier,

Pearson, Scheele, et al., are cited. Monten presented this work under the direction of Gadolin, professor of chemistry at Åbo. (Cole, 500; Partington, III, 235)

MONTILIUS, Magnus Magni

Disputatio Physica de Elementis. Respective consideratis. . . . Sub praesidio . . . Isacii Isthmenii, Physices Professoris . . . Ingenii exercendi gratia ventilandam proponit Magnus Magni Montilius O-Gothus. Ad diem 6 Martii . . . Anno 1647.

Uppsala: Typis Eschilli Matthiae. (1647).

First (only) edition. 4to. 6 leaves (unpaginated). Woodcut capital, head- and tailpieces. Fine copy, in half morocco antique, marbled boards, spine gilt-lettered and dated.

AN EARLY Swedish dissertation on the physical and chemical properties of the four Aristotelian elements, presented under the direction of the professor of physics Isaac Isthmenius. The work is divided into twenty-one sections, each of which covers a separate aspect of the properties of the elements. Section IV is important as it defines the concept "element": "Elementa sunt partes vel principia materialia, ex quibus mixta omnia primum componuntur, & in quae ultimo resolvuntur, ipsa vero in nulla se priora." This definition is historically important as it is reminiscent of that given by Boyle fourteen years later in his celebrated *Sceptical Chymist* (1661). The author briefly mentions salts and chemical compounds in section VII. No reference to Isthmenius, Montilius, or this extremely rare work has been located in available bibliographies.

MONTIN, Isaac

Animadversiones in Commentationem Nobilissimi von Crell de Notione Carbonii. . . . Praeside Mag. Job. Gadolin, . . . pro gradu philosophico publice examinandam proponet Isaacus Montin, V.D.M. Ostrobotniensis. In Auditorio Inferiori die XVI Junii MDCCCL.

Åbo: Typis Frenckellianis. (1801).

First edition. 4to. 1 leaf, 14 pp. Very fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine lettered in gilt: Gadolin. Dissertations 1784–1801. Bound with: Dissertations by Bremer, Gadolin, Harfvelin, and Maconius.

AN INTERESTING and important Finnish dissertation in which Montin, a student of Johan Gadolin at the University of Åbo, discusses carbon (charcoal) and its supposedly containing an abundance of phlogiston. In 1793 Lorenz von Crell had reviewed the main principles of the older phlogistic and antiphlogistic theories and had expressed the opinion that it would be possible to adopt parts of each

while rejecting others, and the relative merits of his suggestions are covered herein. As it occurs in plants, Crell regarded carbon not as elementary but as a complex substance. Montin, under the guidance of Gadolin, states that carbon is an element, as are phosphorus, sulphur, and metals. Gadolin taught the New Chemistry of Lavoisier from 1789. Rare. Unknown to the usual bibliographers. (Partridge, III, 235–236)

MONTON, Bernardo de

Segredos das Artes Liberaes, e Mecanicas, recopilados, e traduzidos de Varios Authores selectos, que tratao de Fisica, Pintura, Architectura, Optica, Quimica, Douradura, e Acharoado, com outras varias curiosidades proveitosas, e divertidas. . . . vertido de Castelhana em Portuguez, por Joaquim Feo Cerpa. E oferecidos ao Senhor Dezembargador Joaquim Rodrigues Satna Martha Soares. Por Jozé da Silva da Natividade.

(Colophon:) Lisbon; Na Officina de Jozé da Silva da Natividade.) 1744.

Sole Portuguese edition. 8vo. 17 leaves, 323, (1) pp. Very good copy in original sheep, gilt, maroon morocco label.

A FAMOUS BOOK of secrets translated from the Spanish, of which many editions appeared. This is the only edition in Portuguese. Of considerable chemical interest, topics covered include winemaking, coffee production, illumination and painting, dyes and pigments, gilding, varnishing, enameling, artificial minerals and gems, metals and alloys and preparation of useful chemicals. Very rare. Not in the usual chemical bibliographies. (Ferguson Coll., 473; Palau, 179426)

MORAEUS, Johannes

Dissertation Chimica de Vitriolo, quam Divina adfulgente gratia . . . Sub praesidio . . . Laurentii Roberg . . . Publico ac placido bonorum examini modeste submittit . . . Johannes Moraeus Cuprim: Dalekarlus. . . . XII Maji Anno MDCCIII.

Uppsala: Per Joh. Henr. Werner, Reg. Acad. Typogr. (1703).

First edition. 4to. 2 leaves, 22 pp. Fine copy in contemporary unlettered vellum. Bound with: Nauclerus, Olaus, *Delineatio Magnae Fodinae Cuprimontanae* (Uppsala, 1702, 1703).

THE DOCTORAL dissertation of Moraeus (fl. 1700) on naturally occurring vitriols (sulphates of metals), presented under the direction of Lars Roberg (1664–1742), professor of medicine at the University of Uppsala. The history of vitriols is traced, with references to the works of Agricola, Caneparius, Dioscorides, Lohneys, Mathesius, Pliny, Sala,

and others. Vitriols from several parts of Europe are described, and distinctions are made between them: e.g., blue, green, and white. The preparation of oil of vitriol (concentrated sulphuric acid) is discussed, as well as its use in preparing sulphates of various metals, with their medicinal applications. Moraeus quotes Nehemiah Grew (*Musaeum Regalis Societatis*, London, 1681) and his description of ferrous sulphate: “A native green vitriol mixed with some rays of a pale blew. A native vitriol of a pale purple and consisting of pointed crystals &c.” (p. 5). Extremely rare. (Waring, 430)

MORATELLI, Giambatista

Memorie Fisico-Chimiche di D. Giambatista Moratelli . . .
Venice: Presso Antonio Curti q. Giacomo. 1805.

First edition. 8vo. 6 leaves, 433, (1) pp. With 3 folding copper-plates of apparatus and crystal structures. Half title misbound before plates; otherwise mint copy, unpressed and uncut with wide margins, in gilt-ruled quarter morocco antique, marbled boards, maroon morocco label, spine dated, original printed wrappers bound in.

MORATELLI (fl. 1800) was professor of physics at the National Lyceum in Ferrara. The nine “memoirs” in this collection cover heat, light, action of oxygen on putrid effluvia, contagion, purification of air and disinfection, mineral waters, galvanism, medical applications of electricity, crystallization, meteorites, and the new French metric system. Lavoisier is frequently mentioned (e.g., pp. 21, 35–36, 116, 159, 178), as are many other contemporary scientists (e.g., Count Rumford, Crawford, Guyton de Morveau, Haüy, Herschel, Izarn, Klapproth, Priestley, Scheele, and Volta). Not in N.U.C. or Supplement. (Cole, 955)

MOREL, A. M. Thomas

Traité Pratique des Feux d'Artifice, pour le spectacle et pour la guerre, avec les petits Feux de table, et l'Artifice à l'usage des Théâtres. Par A. M. Thomas Morel.

Paris: Chez Firmin Didot, libr. pour les Mathématiques, la Marine et l'Architecture, rue Jacob, no. 24. 1818.

Second edition. 8vo. 2 leaves, 163, (1) pp. With 1 folding printed table and 11 folding engraved plates. Very good copy in original half calf, spine richly gilt, marbled boards and endpapers.

A PRACTICAL TREATISE on the chemicals used in the manufacture of all types of fireworks for festive occasions and in war. With the exception of having been reset, this edition is identical to the first (Paris, 1800). Included are recipes for making small fireworks for the dinner table and for use

in theatrical performances. The detailed plates contain 120 figures of fireworks and related equipment. Brock briefly mentions this work but wrongly dates it "c. 1812." Nothing appears to have been recorded of the life of Morel. The present edition was described as "rare" by Zeitlinger in 1907. Not in British Library. (Brock, *History of Fireworks*, 1949, p. 269; Philip, M170.2, Sotheran, Cat. 676 [1907], 3071)

MORERI, Louis

Le Grand Dictionnaire Historique ou le mélange curieux de l'histoire sacrée et profane: qui contient en abrégé . . . les vies et les actions remarquables des . . . auteurs anciens et modernes; des philosophes; des inventeurs des arts; et de ceux qui se sont rendus recommandables en toute sorte de professions, par leur science, par leurs ouvrages . . . les principaux noms des arts et des sciences . . . Le tout enrichi de remarques, de dissertations et de recherches curieuses . . . tirées de differens auteurs, et sur tout du Dictionnaire Critique de M. Bayle. . . . Paris: Chez Jean-Baptiste Coignard, Imprimeur ordinaire du Roy . . . 1712.

Nouvelle edition. 5 vols., folio. I: 8 leaves, 939, (1) pp. Engraved title page (Desmarests delineaivit, Thomassin sculpt.), full-page portrait of Moreri at age 37 (De Troye pinx., S. Thomassin sculpt.). II: 2 leaves, 860 pp. III: 2 leaves, 868 pp. IV: 2 leaves, 482 + 298 pp. V: 2 leaves, pp. 297–1028. All title pages in red and black. Large pictorial engraved and woodcut capitals and headpieces. Fine set, in original speckled calf, spines richly gilt, maroon morocco labels (joints cracked). Armorial bookplates: George Simon, Earl of Harcourt (ca. 1661–1727), barrister and politician, "best speaker of his day, friend of Pope and Swift" (D.N.B.).

CONTAINING ADDITIONS from Bayle's great dictionary, this work achieved an "unparalleled position in European society . . . New material, particularly contemporary events and biographical information, was immediately incorporated in each succeeding edition, which thus became an accurate mirror of the times . . . and provides valuable material for the research worker" (Collison). By 1759 the work had reached its twentieth and last edition and had grown to ten folio volumes. It is especially important to historians of science. (Collison, 89; Watt, II, 683j)

MORERI, Louis

The Great Historical, Geographical and Poetical Dictionary; being a Curious Miscellany of Sacred and Profane History. Containing, in short, the lives and most remarkable actions of the Patriarchs, Judges, and Kings of the Jews; of the Apostles, Fathers, and Doctors of the Church . . . of Philosophers, Inventors of Arts, and all those who have recommended themselves to the World . . . the Description of Empires, Kingdoms . . . the principal Terms of Arts and Sciences . . . Collected from the best Historians, Chronologers, and Lexicographers . . . Now done into English . . . by several Learned Men. Wherein are inserted the last Five Years Historical and Geographical Collections of Edmond Bohun, Esq. designed at first for his own Geographical Dictionary, and never Extant till in this Work.

London: Printed for Henry Rhodes . . . Luke Meredith . . . John Harris . . . and Thomas Newborough . . . 1694.

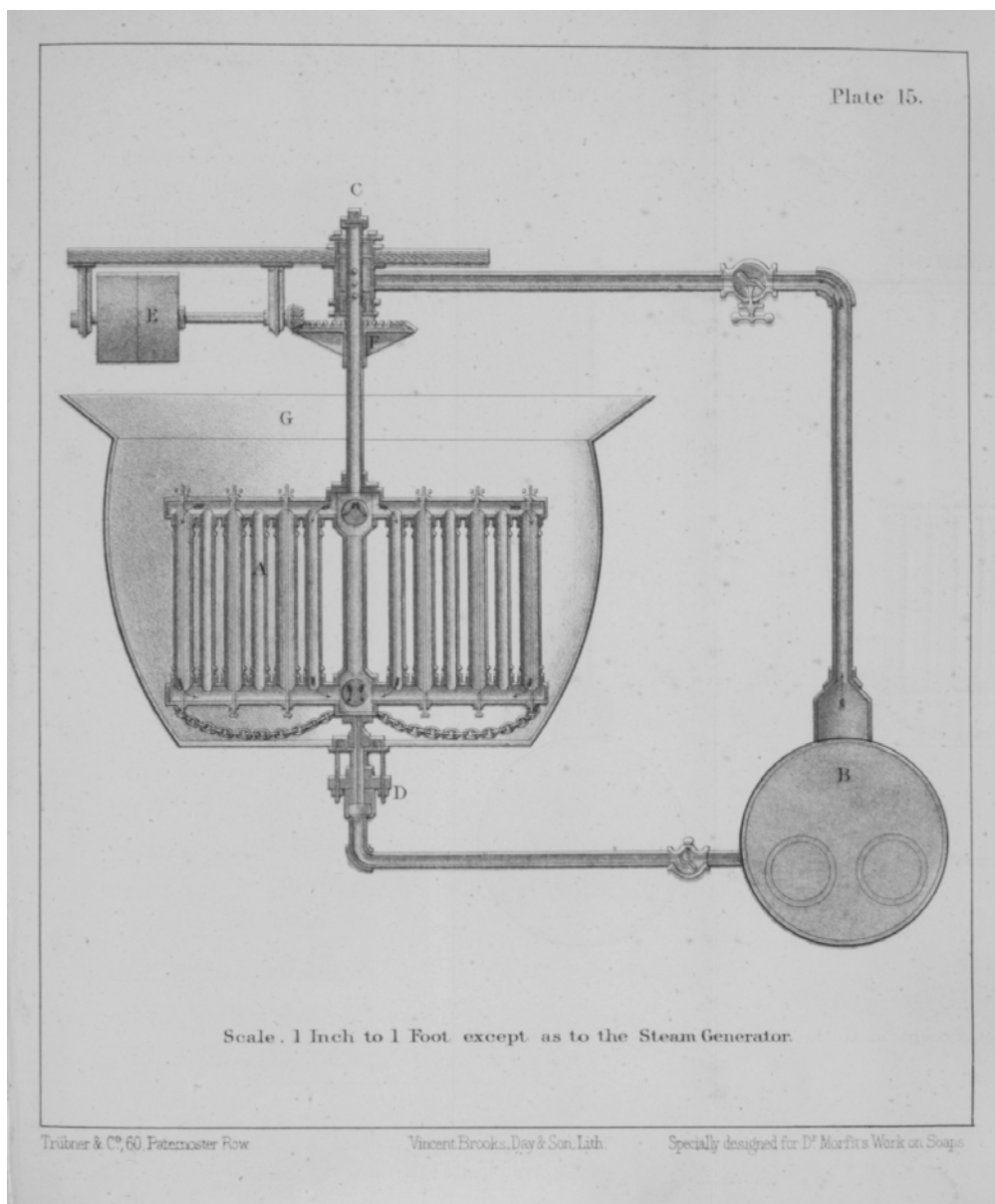
First English edition. 2 vols., folio, in 1. Unpaginated and in double columns throughout. With license leaf dated 28th January 1691/2. Titles in red and black. Fine copy in original blind-ruled calf, spine gilt, brown label, joints repaired. Signature on flyleaf: Tho. Colby Senr. 20th Decbr. 1693. Armorial bookplate: Earl of Rosebery (1783–1868).

THE ENGLISH translation of *Le grand dictionnaire historique* compiled by Moreri (1643–1680). Published in large folio (Lyons, 1674), its immediate success resulted in augmented editions in 1681, 1683, 1687, 1688, 1691, etc. The English translation, based on the sixth French edition corrected and enlarged by Le Clerc, first includes information collected by Edmund Bohun (1645–1699). This important encyclopedia contains much material on scientific subjects. A second edition (1701) in English was followed by a supplement (1705). Many later English encyclopedias acknowledge their debt to Moreri. (Collison, 89; Watt, II, 683k; Wing, M2725)

MORFIT, Campbell

Chemical and Pharmaceutic Manipulations: a Manual of the Mechanical and Chemic-Mechanical Operations of the Laboratory, containing a complete description of the most approved apparatus, with instructions as to their application and management both in Manufacturing Processes, and in the more exact details of Analysis and Accurate Research. . . . By Campbell Morfit, . . . assisted by Alexander Mucklé . . . Philadelphia: Lindsay and Blakiston. 1849.

First edition, first issue. 8vo. xiv, (2), 25–482, (2) pp. (pp. 17–24 omitted, but text complete). With 2 full-page plates of a laboratory and 421 woodcuts in text (some full page). Few leaves, with minor foxing; otherwise near-fine copy, in original ornamental blind-stamped cloth.



Morfit. Chemical and Pharmaceutic Manipulations. Philadelphia, 1849.

MORFIT (1820–1897) graduated M.D. (Maryland, 1853) and became professor of analytical and applied chemistry at the University of Maryland (1854–58), then consulting and analytical chemist in New York (1861–97). He lived for some time in England and worked there to improve chemical manufacturing processes. This well-illustrated book describes the best practical techniques to be used in a typical mid-nineteenth-century American chemical laboratory. A list of “Dealers in and manufacturers of apparatus” (pp. 468–470) and a comprehensive index complete the work. A second issue appeared in 1850 (Bolton, 680; Roller & Goodman, 210). An English reprint appeared (London, 1850; Wellcome, IV, 178), as well as an enlarged second American edition (Philadelphia, 1857). (Edelstein, 1648; Poggendorff, II, 202; Smith, 335)

MORFIT, Campbell

A Practical Treatise on the Manufacture of Soaps. With numerous woodcuts and elaborate working drawings. . . . London: Trübner & Co., 60, Paternoster Row. 1871.

First edition. 8vo. 1 leaf, x, (2), 270 pp. + 32 pp. (book catalogue). With 16 large folding plates (5 colored) and 35 woodcuts in text. Very fine copy in modern maroon buckram, spine gilt-lettered. From the Denis I. Duveen library on soap manufacture.

THE MOST important treatise on the chemistry and technology of soap manufacture up to the time of publication, written while Morfit was visiting London. He dedicated it to the well-known English industrial chemist William Gossage (1799–1877). The scope of the book is stated in the preface: “This is an original treatise founded upon the studies and labours of the author, in the industrial chemistry of fats. Its object is to reform the empiricism of soap-making, by adjusting the art to the principles of true modern science. The experimental results from which it is written were conducted on a manufacturing scale; and therefore both the text and the drawings may be accepted, with full confidence, as positive lessons in the theory and practice of the subject.” The publisher’s catalogue (p. 20) states that the book was published by subscription in a limited number of copies. (Smith, 335)

MORHOF, Daniel Georg

De Metallorum Transmutatione ad Virum Nobilissimum & Amplissimum Joelem Langelottum, Serenissimi Principis Cimbrici Archiatrum Celeberrimum Epistola. Hamburg: Ex Officina Gothofredi Schultzen. 1673.

First edition. 8vo. 168 pp. Small woodcut printer’s ornament on title page and at end. Few neat contemporary marginal

annotations; otherwise very good copy in seventeenth-century vellum. Bound with: Morison, Thomas, *Liber novus de metallorum causis* . . . (Frankfurt, 1593).

AN IMPORTANT alchemical work that attempts to prove by historical evidence the reality of the transmutation of metals into gold, with numerous references to the writings of earlier and contemporary authors. Morhof first discusses the origin of metals and the possibility of transmutation, then gives an account of other alchemical authors and finally “experiments of this art,” including “such credulous accounts as that of Edward Kelley and John Dee” (Thorndike). This book is discussed by John Read, who gives a reproduction of page 149, in which the story is told of Seton’s meeting with the Dutchman Hanssen and a subsequent transmutation of a small piece of lead into gold. Morhof’s text was reprinted in Manget’s *Bibliotheca Chemica Curiosa* (1702, I, p. 168 et seq.). A German translation appeared much later: *Vom Goldmacher, oder physikalisch-historische Abhandlung der Metalle* (Lübeck, 1764). Morhof (1639–1691), a learned German historian and bibliographer, was professor of poetry at the University of Rostock and afterwards of history at the University of Kiel. Not in Caillet, D.S.B., Hoover, Mellon, Partington, Smith, etc. (Bolton, 1016; Duveen, 413; Edelstein, 1651; Ferchl, 368; Ferguson, II, 107; Ferguson Coll., 475; Neu, 2848; Poggendorff, II, 205; J. Read, *Humour and Humanism in Chemistry*, 1947, pp. 40–41; Sotheran, Cat. 832 [1932], 5556 [“Rare”]; Thorndike, VIII, 371; Verginelli, 220; Watt, II, 684k)

MORHOF, Daniel Georg

De Metallorum Transmutatione . . .

Hamburg: Ex Officina Gothofredi Schultzen, prostant & Amsterodami. Apud Joannem Janssonium à Waesberge. 1673.

First edition. 8vo. 168 pp. Small woodcut printer’s ornament on title page and at end. Very good copy. Bound with: Bracesco, Giovanni, *De alchemia dialogi duo* (Hamburg, 1673), and 2 other alchemical works.

ANOTHER COPY of this work, with variant imprint on title page containing the name of J.-J. à Waesberg; otherwise identical to the Schultz (Hamburg, 1673) printing, comprising the same sheets.

MORHOF, Daniel Georg

Polyhistor Literarius Philosophicus et Practicus. Maximam partem opus posthumum, accurate revisum, emendatum, ex auctoris annotationibus . . . quarum prior Morhofii vitam et scripta, partim inedita atque affecta, polyhist. item historian, et eruditorum de illis iudicia exhibet, illustratum à Johanne Mollero, . . . Accedunt indices necessarii. Editio secunda, priori multo correctior. . . .

Lübeck: Sumtibus Petri Bockmanni. 1714.

Second edition, revised. Thick 4to. Engraved frontispiece portrait of Morhof (D. Lemküis fec.). 4 leaves, 28 + 80 + 1072 + 604 pp., 106 leaves. Title in red and black. Fine copy in contemporary vellum.

MORHOF “WAS a man of . . . great learning, and of sound critical judgment. His encyclopaedic reading and knowledge are displayed in his chief work *Polyhistor*, . . . a survey of learning on all topics to his own time. The work first appeared at Lübeck, 1688–92, the second edition in 1695, and a revision of this at Lübeck in 1714. For it, Johannes Moller—as full of erudition as Morhof himself—wrote elaborate Prolegomena on Morhof’s life and works, including the *Polyhistor*” (Ferguson, who points out that Morhof discusses alchemy and chemistry among a multitude of other subjects). Third and fourth editions also appeared (Lübeck, 1732 and 1747). The book is an immense mine of information on writers of the sixteenth and seventeenth centuries. Partington (quoting the 1747 edition) states that the *Polyhistor* was widely read, and he gives a translation of Morhof’s account of niter and the nitro-aerial particles of John Mayow. There are many references to earlier and contemporary scientists: e.g., Paracelsus, Gesner, Du Chesne, Lully, Basil Valentine, Neri, Descartes, Charleton, Guericke, Boyle, Hooke, and Newton. Not in Blake, Caillet, D.S.B., or the usual chemical and medical bibliographies. (Collison, *Encyclopaedias*, 1966, pp. 90–92; Ferguson, II, 108 [not in Young Coll.]; Partington, II, 619; Watt, II, 684k)

MORIN, Claude

La Platine, l’Or Blanc, ou le Huitieme Métal; Recueil d’Expériences faites dans les Académies Royales de Londres, de Suede, &c. sur une nouvelle Substance métallique tirée des Mines du Pérou, qui a le poids & la fixité de l’Or. Ouvrage intéressant pour les Amateurs de l’Histoire naturelle, de la Physique & de la Chymie. . . .

Paris: Chez Le Breton, Durand, Pissot, Lambert. 1758.

First edition. 12mo. xvi, 194 pp., 3 leaves. With folding table (specific gravities of platinum alloys with tin, lead, silver, copper, iron). Dedication leaf (sign. aiii) removed as usual (canceled prior to publication); otherwise fine copy in original mottled calf, gilt, brown morocco label. Duplicate from University of Wisconsin, with bookplate.

THE EARLIEST extensive account of the noble metal platinum, discovered in Peru by a French geodetical commission. The introduction contains the communications of Antonio de Ulloa, William Watson, Professor Bose, Charles Wood, et al. Morin (fl. 1760) collects herein for the first time the most recent studies on platinum in English, German, Italian, and Swedish, to inform the scientific community of the latest research on the subject and to prevent the fraudulent trade of platinum for gold. The chemical experiments of William Lewis, Scheffer, and others are described, and the practical uses of platinum alloys with several metals are considered. Because it polishes well and does not tarnish, platinum was used in an alloy with brass to make mirrors and even as reflectors in telescopes before glass mirrors were perfected. Owing to its scarcity and cost, this use was not widespread. This book contains a summary of all known information on platinum up to the year 1755. (Caillet, 7778; Duveen, 414; McDonald, *History of Platinum*, 1960, pp. 31–32; Neu, 2850; Partington, III, 176; Smith, 336; Wellcome, IV, 181)

MORIN, Pierre

L’Abregé des Bons Fruits, avec la Maniere de les connoistre, & de cultiver les Arbres. Reveu & augmenté par l’Auteur, de plusieurs excellens & nouveaux Fruits. Divisé par Chapitres, selon les especes.

Paris: Chez Charles De Sercy. 1675.

12mo. 178 pp. Fine, crisp copy, in contemporary speckled calf, spine gilt. Bound with: Saint Etienne, Claude, *Nouvelle Instruction pour connoistre les Bons Fruits* (Paris, 1678).

MORIN WAS a famous French gardener who first published the present work in 1674. In the preface to this second edition, the author states that he has added information on the cultivation of many more types of fruits than were discussed in the previous edition. The book is of some agricultural chemical interest, as it mentions the types of fertilizers used to obtain abundant yields of fruit, as well as the making of different wines. A rare work, no edition of which is mentioned by Goldsmith.

MORISON, Thomas

Liber Novus de Metallorum Causis et Transsubstantiatione, editus per Thomam Moresinum Aberdonanum Scotum, Doctorem Medicum; in quo chemicorum quorundam inscitia & impostura Philosophicis, Medicis & Chemicis rationibus retegitur & demonstratur; & vera iis de rebus doctrina solide asseritur.

Frankfurt: Apud Joannem Wechelum. 1593.

First edition. 8vo. 130 pp., 1 leaf. Large woodcut printer’s device on title page. Woodcut capitals, head- and tailpieces.

Roman and italic letter. Small hole in title leaf (repaired), occasional neat contemporary marginal annotations and underlining; otherwise very good copy in seventeenth-century vellum. Bound with: Morhof, D. G., *De metallorum transmutatione* (Hamburg, 1673).

THE FIRST published work of Morison or Moresin (ca. 1558–ca. 1603), of Aberdeen, Scotland, dedicated to James VI and directed against alchemists and astrologers. The author, a physician who had studied in France (M.D., Montpellier), later became a successful diplomatist in the services of Essex, the earl of Huntly, et al. His principal patron was Anthony Bacon (1558–1601), brother of Sir Francis Bacon, who also maintained a correspondence with him. In this work Morison “contends that the pretensions of hermetic philosophers are vain and their reasoning false” (Bolton). “Traité curieux et rare” (Caillet). (Bolton, 1017; British Library, *S.T.C. German Books, 1455–1600*, p. 628; Caillet, 7752; Duveen, 413; Ferguson Coll., 476; Lenglet Dufresnoy, 1742, III, 238; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. I, 357; Neu, 2853; Wellcome, I, 4460)

MORLEY, Christopher Love

Collectanea Chymica Leydensia, id est, Maëtsiana, Margravianana, Le Mortiana. Scilicet trium in Academia Lugduno-Batavâ Facultatis Chimicae, quâ publicè, quâ privatim, Professorum, nunc viventium, atque docentium, qui ist haec discipulis suis, ex omni Europa illo confluentibus, per hos annos, non solum ostenderunt, verum etiam suis verbis dictarunt. Opus, quingentis, & ampliùs, processibus adornatum, omnibus & Medicis, & Chemicis, & Pharmacopaeis, imprimis utile; cum ob insignem plerorumque usitatorum processuum varietatem, tum ob novam, atque elegantem in singulis operandi rationem, tribus his, tantisque viris, in usu habitam. Collegit, digessit, editit, Christophorus Love Morley, M.D. Anglus. Quis huic operi sit scopus, quae methodus, quinam Auctores, caeteraque quae Lectorem ignorare non expedit, praefatio indicabit.

Leyden: Henricum Drummond. 1684.

First edition. 4to. 16 leaves, 506 pp., 11 leaves (index). Woodcut printer's device on title. Very good copy in full blind-ruled calf antique, maroon morocco gilt-lettered label, spine blind-tooled.

THE ENGLISH physician Morley (ca. 1616–ca. 1700), M.D. (Leyden, 1679), became honorary fellow of the College of Physicians (1680) and practiced in London from 1684. He published *De Morbo Epidemico* (London, 1679) and the present *Collectanea*, which is based on the notes of the Leyden courses given by Carel Lodowijk de Maets (ca. 1640–1690), Christian Marggrav (1626–1687), and Jacob Le Mort (1650–1718). The *Collectanea* contains chemical preparations arranged topically, the name of the author (de

Maets, Marggrav, and Le Mort) responsible for each being given in the margin. “De Maets attacked this book in the *Animadversiones* in his *Prodromus* (1684), saying it was published without his knowledge, and Morley's knowledge or consent (as the printer admits in the preface), from his lecture notes lent to a friend, and he had never had Morley as a private auditor” (Partington). Extensive notes of Morley's chemical lectures at Leyden in 1677–79 are contained in the Sloane MS. in the British Museum. (Bolton, 373; Ferguson, II, 110; Munk, I, 450; Neu, 2854; Partington, II, 736; Smith, 336; Thorndike, VIII, 152; Watt, II, 685b)

MORLEY, Christopher Love

Collectanea Chymica Leidensia, oder auserlesene mehr als 700. Chymische Prozesse welche von Herrn Maëthio, Margravier und le Mortio . . . dictirt worden. Vor diesem von Herrn Christoph Ludwig Morley . . . zusammen getragen, und ans Licht gebracht, nachmahls durch Herrn Theodorum Muykens . . . Mit vielen neuen, schönen, und accuraten Experimenten vermehrt, in richtigere Ordnung gestellet . . . Nun aber auf Ersuchen guter Freunde ins Teutsche übersetzt, und mit doppelten Registern versehen. . . .

Jena: Verlegts Christoph Henrich Cröker, Buchhandler. 1696.

First German edition, second issue. 8vo. 3 leaves, pp. 1–222, 221–524, 533–785, (1), 23 leaves. Pagination erratic, text complete. Engraved allegorical frontispiece (by Cröker) of alchemical symbolism. Title page in red and black. Very fine copy, in contemporary ornamental blind-stamped half calf, marbled boards, rebacked to match.

AFTER DE MAETS died in 1690, his disciple, Theodor Muykens (1665–1721), published a corrected and enlarged edition of Morley's *Collectanea* in Latin (Leyden, 1693), which was translated into German (Jena: H. C. Cröker, 1696; Krivatsy, 8110). Later in 1696 the publisher, Croker, brought out the present second issue, enlarged from “724” (i.e., 732) pages to 785 pages, with reset title correcting errors in the first issue. Ferguson (II, 110–111) cites the first issue, but this second issue appears to be unrecorded by the usual bibliographers.

MOSCARDO, Lodovico

Note overo Memorie del Museo di Lodovico Moscardo Nobile Veronese, . . . in Tre Libri distinte. . . .

Padua: Per Paolo Frambotto. 1656.

First edition. Folio (in 4s). 10 leaves, 306, (1) pp., 6 leaves (index). Engraved allegorical frontispiece and numerous large engravings in text. Woodcut capitals, head- and tailpieces. Fine copy, in contemporary unlettered, gilt-ruled calf, rebacked, with original gilt spine laid on. From the library of the distinguished

French agronomist and inspector-general of the national veterinarian schools Jean-Baptiste Huzard (1755–1838), with his stamp on verso of letterpress title.

THE PROFUSELY illustrated catalogue of the extensive museum of the Veronese antiquary Count Moscardo, providing a vivid picture of a private “cabinet of curiosities” of the mid-seventeenth century. It was one of the principal collections of minerals, fossils, gems, antiquities, and other natural history objects of the period. Divided into three sections, the first covers antiquities; the second, objects from the mineral kingdom; and the third is devoted to corals, plants, animals, etc. There is a discussion of magnets (pp. 141–142), and a shoe worn at the time of Columbus by an American Indian is shown (p. 304). “One of the earliest museums in Italy was started by Francesco Calceolari in the sixteenth century, and continued by his son. . . . The contents of the museum passed into the hands of several persons, chiefly Conte Lodovico Moscardo . . . Samples of the Bolognian phosphor, called a ‘miracle of nature’ were . . . in the collection . . . and considerable space devoted to its history” (Harvey). A second edition appeared (Verona: Andrea Rossi, 1672). Ray visited the museum in 1663, and Gilbert Burnet in 1685, but by 1730 no trace of it could be found (see Murray, *Museums*, I, 84). Rare. (British Library, *Italian*, 598; Casey Wood, 473; Thorndike, VIII, 15; Watt, II, 687g)

MOULLIN DE MARGUERY, Jean

Traité des eaux minerales nouvellement découvertes au Village de Passy, près Paris. Dans lequel sont expliquées leur nature minérale, la différence des sources, leurs qualitez, leurs vertus, & leurs effets sur le corps humain. Par M. Moullin de Marguery, Médecin de la Faculté de Paris. Paris: Chez François Barois . . . 1723.

First edition. 12mo. 8 leaves, 415 pp., 5 leaves. Fine, crisp copy, in contemporary mottled calf, spine richly gilt, brown morocco label.

A DETAILED TREATISE on the ferruginous spring waters of Passy, which at the time this book was written was a village near Paris, but which is now a suburb of that city. Over one-half of the book comprises descriptions of the detailed chemical analyses that were carried out by the author, a physician who was also an excellent chemist. Comparisons are made with other mineral waters of France and Germany, and the works of Du Clos, Bresmal, Heers, Le Givre, Linand, Rouvière, et al., are cited. On page 183 et seq. the investigations of Nicolas Lemery, one of the greatest of contemporary French chemists, are discussed. This work is very important in the history of analytical chemistry but is unknown to the usual chemical bibliographers, except Duveen,

who says of it: “Contains much detailed information about the waters in question with particular reference to their chemical nature.” The approbation is signed by the royal censor, aptly named “Burette,” although the apparatus of the same name did not derive from him. Very rare. (Duveen, 415–416; Ferchl, 371; Neu, 2863)

MOYES, Henry

Heads of a Course of Lectures upon Philosophical and Chemical Subjects, to be delivered at (blank). By Henry Moyes, M.D. Dr. Moyes proposes to explain the following subjects in twenty-two lectures; but if they require more, he engages to give the remainder to subscribers gratis. The lecture to be given from (blank) to (blank) in the (blank). Each subscriber to the whole course to pay one guinea; and non-subscribers, two shillings per lecture. Subscriptions taken in at (blank). Due notice will be given to the subscribers, when the lectures begin.

N.p., n.d. (London? ca. 1780)

First edition. 8vo. 16 pp. Fine copy in maroon half morocco antique, marbled boards, spine gilt-lettered. From the library of Professor Franz Sondheimer, but without his bookplate.

BORN IN Scotland, Moyes (1750–1807) was blinded by smallpox when he was three years old. Despite this handicap, he attended the University of Edinburgh, where he heard Dr. Joseph Black lecture on chemistry. To support himself he tried public lecturing, first unsuccessfully on music, then very successfully on chemistry. In 1779 he went to England, and during six years in London and elsewhere he lectured on chemistry and natural philosophy. In 1785–86 he visited the United States, where his lectures were enthusiastically received. For an excellent biography of Moyes, see W. D. Miles, *American Chemists and Chemical Engineers* (Washington, D.C., 1976, pp. 352–353). The present syllabus, which appears to be Moyes’ only publication, covers heat, air, corpuscular and elective attractions, earths, metals, water, and vegetable and animal substances. Moyes evidently believed in phlogiston, as he mentions the “principle of inflammability” (p. 5). Blake, Bolton, and Watt list copies with the title *Heads of a Course of Lectures on the Philosophy of Chemistry and Natural History* . . . (n.p., n.d.). The present variant wording of the title must be very rare, as no bibliographical reference to it has been located. (Sondheimer, 1093)

MUELLER, Frants Henrik

Specimen Academicum de Zeolithis Svecicis, quod venia amplissimae Facultatis Philosophicae in Celeberrimo Lyceo Carolino sub Praesidio D.M. Andr. J. Retzii . . . Auctor Franciscus H. Muller, Hafnia-Danus, ad diem (blank) Martii MDCCXCI.

Lund: Typis Berlingianis. (1791).

First edition. 4to. 40 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

BORN IN Copenhagen, Mueller (1732–1820) was a famous apothecary and inspector at the Royal Danish pottery factory from 1781 to the time of his death. He published on the analysis of silver and gold ores, but his principal importance in the history of chemical technology is his research on the manufacture of the fine porcelain of Copenhagen, which is still made and highly prized today. Mueller's interest in the minerals used in the manufacture of porcelain must have been very great, as he was fifty-eight years old when he presented this thesis before the professor of chemistry at the Carolinian Institute in Stockholm, Anders Jahan Retzius (1742–1821). This comprehensive work deals with Swedish zeolites (i.e., hydrous aluminosilicates containing alkali- and alkaline-earth metals), which are used to produce glazes and enamels when fused. Although Mueller's publications are listed by Ferchl (p. 371) and Poggendorff (II, 222–223), this work is not mentioned.

MUELLER, Philipp

Miracula et Mysteria Chymico-Medica Libris quinq(ue) . . . Editio quarta. Accesserunt his: 1. Tyrocinium Chymicum. 2. Novum Lumen Chymicum. . .

Wittenberg: Sumptibus Clement Bergeri, Typis Johannis Haken. 1623.

Fourth edition. 12mo. 12 leaves (last blank), 535 (misnumbered 493), 5 pp. (last blank). Note: pp. 151–190 duplicated. Title page in red and black, within woodcut border. Several woodcut figures in text. Few leaves characteristically browned; otherwise fine copy in original blind-ruled overlapping vellum, with remains of green silk ties. Oval seventeenth-century armorial bookplate (unidentified).

A SUCCESSFUL COMPENDIUM of pharmaceutical chemistry, which “contains the preparation of a number of substances, amongst which (p. 66) is ‘Terra foliata secretissima’ (potassium acetate)” (Ferguson). The present edition was preceded by those of 1611, 1614, and 1616, all published at Wittenberg. Other editions: Paris, 1644; Amsterdam, 1656, 1659, 1669. The *Tyrocinium chymicum* of Jean Beguin (pp. 151–368) and the *Novum lumen chymicum* of Michael Sendivogius (pp. 369–493) are reprinted in this edition.

Comprehensive indexes to each work are included. Mueller (1585–1659) was an iatrochemist and physician of Freiburg im Breisgau, in the Black Forest. Not in D.S.B., Edelstein, Neu, Smith, Wellcome, etc. (Bolton, *First Supplement*, 305; Duveen, 416; Ferchl, 372; Ferguson, II, 115–116; Ferguson Coll., 480; Partington, III, 3; Patterson, *Annals of Science*, 2 [1937], 251, 291; Rosenthal, 611; Watt, II, 690k)

MUELLER, Philipp

Miracula Chymica, et Mysteria Medica. Libris quinque enucleata, quorum summam pagina versa exhibet.

Paris: Apud Melchiorum Mondiere, in area Palatii ad insigne Viperarum. 1644.

First (only) Paris edition. 12mo. 12 leaves (first blank), 191, (1) pp. (last blank). Woodcut device with alchemical symbols on title page. Several woodcut figures (apparatus, furnaces, etc.) in text. Very good copy in original limp vellum.

A REPRINT of the first edition (Wittenberg, 1611), with the dedication to Maximilian III, archduke of Austria, dated 4 August 1610. This well-known work on “chemical miracles” is divided into five books, the first of which describes chemical apparatus, the philosopher's stone, mercury and its purification, the preparation of gold and silver, etc. Book II discusses three methods of transmutation, and book III deals with rare preparations, especially from minerals. Book IV covers the preparation of extracts, distillates, balsams, and salts from plants and minerals. The fifth and final book (nearly half of the text) is devoted to rarer and more secret remedies for treating diseases of the human body. Rare. Not in British Library, Duveen, Edelstein, Ferguson, Neu, Partington, etc. (Bolton, *First Supplement*, 305; Caillet, 7868; Ferchl, 372 [wrongly gives “Wittenberg”]; Ferguson Coll., 480; Thorndike, VII, 163)

MUENCHHAUSSEN, Ernest Friedemann de

Dissertatio Philosophica de Elementis Corporum sive Atomis Naturae quam potentissimo principe ac domino . . . Georgio II. . . annuente inclyta facultate philosophica ad diem XXIII. Sept. MDCCXLI. publico eruditorum examini submittet auctor Ernestus Friedemannus De Münchhausen.

Göttingen: Apud A. Vandenhoeck, Acad. Typogr. (1741).

First edition. 4to. 4 leaves, 76 pp. With 1 copperplate at the end. Large headpiece on page 1 and large tailpiece on page 76, both engraved by G. D. Heumann. Slightly foxed; otherwise a good copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A RARE DISSERTATION on the atomic theory and the composition of matter, in 165 paragraphs, with references to the works of Lucretius, Epicurus, Descartes, Newton

14

MIRACULA

FIGURA VII.

Circulum ferreum depingit.



H H H. Circuli
cuspides turris pa-
rietibus insigen-
di.

Z Circuli capaci-
tas.

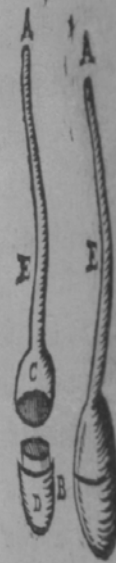
FIGURA VIII.

Craticulam exhibet.

Fig. VIII.



FIGURA IX.
Ovum Philosophicum int-
ponit, quod in me-
est aperitile.
Fig. X. Fig. IX.



FIGURA

Ovi partes distinet
a. c. ut notat.
c. Superior fundi pars, que
inferior.
d. Inferior pars capax et
injectionis.

(p. 41), and others. There are numerous references to Leibnitz. Both the author and his work have remained unknown to the bibliographers.

MULDER, Gerrit Jan

The Chemistry of Vegetable and Animal Physiology. . . .
Translated from the Dutch by Dr. P. F. H. Fromberg, . . .
With an introduction and notes, by James F. W. Johnston.
Edinburgh: William Blackwood and Sons. 1845–49.

First English edition. 4 vols., 8vo. I: iv, 184 pp. II: 1 leaf, pp. 185–346. III: 2 leaves, pp. 4 + 347–614. IV: iv, pp. 615–827, (1), + 28 pp. + 8 pp. (advertisements). With 20 engraved plates (8 hand colored). An excellent set in original printed wrappers, uncut, contents in pristine state.

A MILESTONE WORK in phytological and agricultural chemistry, by Mulder (1802–1880), a pupil of Berzelius and later professor of chemistry at Utrecht (1840–68). The original edition appeared as *Proeve eener algemeene physiologische scheikunde* (Rotterdam, 1843–46, 2 vols.). Translated from Dutch by Dr. Fromberg, of the Agricultural Chemistry Association of Scotland, the English edition contains useful notes by the agricultural chemist J. F. W. Johnston. “At first both Liebig and Berzelius accepted Mulder’s analysis of proteins; but Liebig soon opposed the theory vigorously, and a deep conflict with Mulder ensued” (D.S.B.). “A large number of distinguished agricultural chemists obtained their training under Mulder. . . . Liebig’s criticisms of Mulder . . . were directed chiefly against [his] views upon the proteins and humus. Mulder had coined the word ‘protein’ to indicate a wide class of nitrogenous plant and animal constituents, whose great importance in nutrition he was among the earliest to recognize” (Browne, who analyzes this work extensively). Mulder “was a modest and very industrious man. He chose a field of study of extreme difficulty—for the time an impossible one” (Partington). Very scarce. Not in Cole, Edelstein, Ferchl, Poggendorff, Smith, Waller, etc. (Bolton, 687; C. A. Browne, *A Source Book of Agricultural Chemistry*, 1944, pp. 252–262; D.S.B., IX, 558; Duveen, 416; Partington, IV, 319; Sotheran, Cat. 800 [1926], 11612)

MULLER, Johann Adam

Disputatio Physica de Fulmine, quam auspice Christo, sub praesidio . . . Dn. M. Johannis Sperlingen, . . . Publicè propugnaturus est Job. Adamus Muller Obernbrettâ-Franc. Ad diem 14. Martii, in Auditorio Majori horis matutinis.
Wittenberg: Ex officinâ Typographica Michaelis Wendt. 1643.

First edition. 4to. 8 leaves. Fine, crisp copy, in quarter maroon morocco antique, marbled boards, spine gilt-lettered and dated.

A DOCTORAL DISSERTATION on fire and combustible substances, of chemical interest. Sperling (1603–1658), professor of physics in the University of Wittenberg, presided over this work by Muller, of whom nothing appears to be recorded. The author attempts to explain the formation of meteors by the reaction of nitrous and sulphurous particles in the upper atmosphere. He describes the chemical properties of niter and sulphur, with references to the writings of classical authors (e.g., Pliny, Seneca, and Xenophon) as well as to those who have published recently (e.g., Bodin, Scaliger, and Sennert). Very rare. Apparently unknown to the bibliographers.

MÜLLER, Johann Christian Wilhelm

Dissertatio Inauguralis Medica de Viribus ac Usu Mercurialium . . . Praeside Ernesto Antonio Nicolai . . . Pro gradu doctoris . . . die XVI Decembr. MDCCCLXXV. . . . Auctor Ioann. Christian. Guilielm. Müller Saxo-Vinariensis.
Jena: Litteris Fickelscherrii. (1775).

First edition. 4to. 27, (1) pp. Woodcut head- and tailpieces. Fine copy with wide margins, in quarter maroon morocco antique, marbled boards, spine gilt-lettered and dated.

DEDICATED to the duke of Saxony, an interesting dissertation by Müller on the preparation, properties, and pharmaceutical uses of metallic mercury and its compounds. There are numerous references to contemporary chemists. The praeses, Ernst Anton Nicolai (1722–1802), was professor of medicine at Halle and from 1759 professor of chemistry and medicine at Jena. Nicolai is briefly discussed by Partington (II, 768). Rare. Not in the usual source books. At the end is bound another dissertation by Müller, on the anatomy of the peritoneum (dated 20 Dec. 1775, 2 leaves, 16 pp.). (Waring, 473)

MUNCK, Eberhard Zacharias

Dissertatio Chemica de Principiis Sanguinis Humani, . . . sub praesidio . . . Christiani Wollin, . . . pro gradu doctoris in philosophia, publico eruditorum examini submittit auctor Eberhard Zacharias Munck, Phil. et Med. Cand. In Auditorio Majori, die V Junii Anni MDCCXCIII. . . .
Lund: Typis Berlingianis. (1793).

First edition. 4to. 12 pp. Very good copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Wollin. 2 Dissertations. 1793, 1794.

A DISSERTATION ON the chemical composition of human blood, presented by Munck under the direction of Christian Wollin (1730–1798), professor of chemistry at Lund. Experiments on the analysis of blood are described that are of interest in the early history of organic chemistry and

biochemistry. Works cited include those of Blumenbach, Boerhaave, Gren, Haller, Helms, Hewson, Lister, Macquer, et al. Not in Blake, Waller, Watt, etc. (Ferchl, 588; Poggendorff, II, 1364)

MUNDY, Henry

Bioxphetologia seu Commentarii de Aere Vitali, Esculentis ac Potulentis una cum Corollario de Parergis in Victu & Indice accurato cujusvis Capitis.

Frankfurt & Leipzig: Ex Officina Hafniensi, Christian Hauboldi, & Johannis Liebe. Typis Aubryanis. 1685.

First Continental edition. 8vo. 2 leaves, 362 pp., 17 leaves (index). Title page in red and black. Inner edge of title and inner edge of final leaf of index slightly defective (with loss of a few numerals); otherwise good copy, in original calf, gilt (worn). Early-eighteenth-century signature ("Vinot medicus") on title and pages 89 and 362; also full page of pharmaceutical prescriptions (dated 1712) on leaf following the index.

MUNDY (Munday, or Munday, 1623–1682), B.A. (Oxford, 1647), was headmaster of the Free Grammar School at Henley-on-Thames but later practiced medicine (evidently without a medical degree). This work summarizes the *Tractatus quinque* (Oxford, 1674) of John Mayow and discusses the role of air in combustion and respiration, on which see Partington. There are chapters on wine, beer, tea, coffee, chocolate, fish, fruit, tobacco, etc. Although the book passed through several editions, all are now rare. The first octavo edition (Oxford, 1680; Wing M3077) was reprinted in duodecimo (Oxford, 1685; Wing M3078). In addition to the present edition, others appeared at Leyden in 1685 and 1715. Not in Duveen, Ferguson Coll., Krivatsy, Vicaire, Waller, etc. (Ferguson, II, 118 [not in Young Coll.]; Partington, II, 616; Watt, II, 690s)

MURRAY, Andreas Johann Georg

De Extracto Saturni et Aqua Vegeto-Minerali nominatim optima utrumque praeparandi ratione experimentis confirmata. . . .

Goettingen: Typis Jo. Christ. Dieterich. 1788.

First edition. 8vo. 48 pp. Small woodcut on title page. Very good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

DEDICATED TO Johann Georg Zimmermann (1728–1795), this tract by Murray (dates unknown) is on the preparation of lead compounds (e.g., acetate, carbonate, chloride, and hydroxide) and their uses in medicine. The works of Aikin, Boerhaave, Goulard, Macquer, Percival, Saunders, et al., are cited. In twenty-three experiments, details are given on the best processes for the preparation of the various lead com-

pounds. Rare. Not in the usual bibliographies. (Ferchl, 375; Waring, 627)

MURRAY, Johan Anders

Apparatus Medicaminum tam Simplicium quam praeparatorum et compositorum in praxeos adjumentum consideratus. . . .

Pavia: ex Typographia R. & Imp. Mon. S. Salv. 1787–1792.

Second (first Pavia) edition. 6 vols., 8vo. I (1787): xxxii, 515, (1) pp. II (1787): 368 pp. III (1787): 420 pp. IV (1788): 471, (1) pp. V (1791): 437, (1) pp. VI (1792): 268 pp. With ornamental woodcut on each title page (except vol. VI). Some leaves embrowned owing to quality of paper, and worming to spines; otherwise good set in original half calf, gilt, patterned boards.

A NATIVE OF Sweden and a favorite of Linnaeus, Murray (1740–1791) was professor of botany and medicine at the University of Göttingen (1769). The *Apparatus medicaminum* (first: Göttingen, 1776–92, 6 vols.) comprises a detailed and thoroughly documented pharmaceutical chemical treatise on plants, plant products, and their uses in medicine. "A work of great research and value, embodying all that had been recorded by trustworthy observers up to the date of its publication" (Waring). The sixth volume, edited by Ludovic Christoph Althof after Murray had died, contains additional information on the same subject. A supplement covering minerals, metals, and salts used in medicine was published (Göttingen, 1795–96, 2 vols.) by Johann Friedrich Gmelin (1748–1804), professor of chemistry and medicine at Göttingen. (Waring, 64; Wellcome, IV, 202)

MURRAY, John

Elements of Chemistry. By J. Murray. . . .

Edinburgh: Printed by T. Maccliesh and Co. . . . Sold by Reid & Scott, etc. 1801.

First edition. 2 vols., 8vo., in 4s. I: viii, (4), 332 pp. II: 4 leaves, 360 pp., 2 leaves (index to both vols.). Half title in each volume. Old stamp ("Kings Inn's Library Dublin") on verso of title page and final leaf of each volume; otherwise very good copy in original calf, rebaked, maroon morocco labels.

BORN IN Edinburgh, Murray (ca. 1778–1820) graduated M.D. (St. Andrews, 1814) and was extramural lecturer in chemistry, materia medica, and pharmacy in Edinburgh. This book, his first, gives "an outline of a course of Lectures on Chemistry, delivered by the Author, and is published principally with the design of facilitating the study of the Science to those to whom these Lectures are addressed" (preface). The first volume covers the general doctrines of chemistry, simple substances, and binary compounds, while volume II discusses metals, salts, and plant

and animal substances. Murray disagrees with Humphry Davy's views on chlorine and proposes arguments for heat being a caloric fluid. Like most contemporary textbooks, he describes a Newtonian world of corpuscles and attractive forces of cohesion and affinity. Written in clear language this work immediately became popular and passed through at least six editions. The last edition (1828), published posthumously, was seen through the press by his son, John Murray (1798–1873). The copy described by Cole apparently lacked the final two leaves of volume II (i.e., the important index). (Bolton, 689; Cole, 959; Knight, 204; Partington, IV, 56; Poggendorff, II, 243; Smith, 338; Watt, II, 692c)

MURRAY, John

Elements of Chemistry. By J. Murray . . .

Edinburgh: Printed for William Creech, John Anderson, etc. 1810.

Second edition. 2 vols., 8vo., in 1. I: 8, 520 pp. II: 8, 519, (1) pp. + 3 engraved plates, depicting 28 figures of apparatus (J. Grant Sculpt.). Stamp on each title page ("Steeven's Hospital Med. & Surgical Library 1813"); otherwise very fine copy in contemporary gilt-ruled half calf, marbled boards, black morocco label.

THE GREATLY enlarged and almost completely rewritten second edition (first: Edinburgh, 1801, 2 vols.), including the most up-to-date information. In his discussion of chemical affinity Murray refutes Dalton's newly announced atomic theory (pp. 57–60), stating that "much of this system is hypothetical, and, with regard to the principle itself, it appears irreconcilable with the law of chemical affinity so well established, that bodies act chemically in the ratio of their affinity and quantity." Murray never accepted Davy's theory that chlorine ("oxymuriatic acid") is an elementary substance and defends his position that it contains oxygen (I, pp. 511–512). There is an index to the two volumes (II, pp. 513–519). (Cole, 960; Wellcome, IV, 203)

MURRAY, John

A Manual of Experiments illustrative of Chemical Science, systematically arranged. Also, Remarks on the Nomenclature, and Theory of Definite Proportions, etc. With the application of tests for the detection of metallic poisons, examination of mineral waters; vocabulary of technical terms, &c. By John Murray, . . .

London: Printed for Longman, Rees, Orme, Brown, and Green, Paternoster-Row. 1828.

Second edition. 12mo. xii, 136 pp. Very good copy in original half calf, marbled boards, rebounded, spine gilt-lettered and dated. Bound with: Murray, J., *A Memoir on the Diamond* (London, 1831).

MURRAY (ca. 1786–1851), a popular scientific writer and lecturer on chemistry at Hull, was well known for his lectures at various mechanics' institutions. He described a safety lamp in 1815 and claimed to have anticipated the Edinburgh chemist John Murray (ca. 1778–1820) by five months. The completely revised and enlarged second edition (first: ca. 1826) is important for its exposition of the "new nomenclature": i.e., the beginning of modern, systematic names for chemicals, as opposed to trivial names. In the section "Theory of Definite Proportions" (pp. 10–17), Murray briefly traces the history of chemical combination from the hypothesis outlined by "Mr. Higgins, of Dublin" to the establishment of the laws of simple and multiple proportions on a firm foundation by John Dalton. Smith (p. 339) gives the pagination as "vi, 125 pp.," evidently lacking the "List of Tests or Re-agents required in Chemical Analysis" (pp. 127–135) present in this copy. Very scarce, not in the usual bibliographies.

MURRAY, John

A Manual of Experiments illustrative of Chemical Science, systematically arranged. Remarks on the Nomenclature, and Theory of Definite Proportions; application of tests for the detection of poisons, examination of mineral waters; vocabulary of technical terms, &c. By John Murray, . . .

London: S. Highley, Fleet-Street; Deighton, Cambridge; Parker, Oxford; Curry, Dublin; and Maclachlan and Stewart, Edinburgh. 1833.

Third edition. 12mo. xvi, 149, (1) pp., 6 leaves (advertisement of books by Murray), 1 leaf (blank). With engraved plate of apparatus by R. Martin (p. xiv) and woodcuts in text. Very good copy in original boards, printed paper label on spine.

IN THE preface Murray states that the "sale of nearly two thousand copies" of the earlier editions has prompted him to publish the present edition, which first contains the "explanatory plate and woodcuts." Also first appearing in this edition is a "Descriptive list of some particular apparatus" (pp. 141–149), with illustrations of laboratory equipment. (Roller & Goodman, II, 222; Wellcome, IV, 203)

MURRAY, John

A Memoir on the Diamond. By John Murray, . . .

London: Longman, Rees, Orme, Brown & Green. 1831.

First edition. 12mo. 61, (1) pp., 3 leaves (postscript). With lithographed frontispiece (by R. Martin) depicting 8 large and famous diamonds in actual size and a scale of weights (in carats). Very good copy. Bound with: Murray, J., *A Manual of Experiments* (London, 1828).

A WORK IN four chapters on the history, occurrence, and physical and chemical properties of diamonds, covering their

combustion, reaction with chemicals, hardness, crystalline forms, cutting, and polishing. Experiments on diamonds conducted by Allen, Children, H. Davy, Mackenzie, Smithson Tennant, and others are described. Several extremely large and famous diamonds and their history are discussed. In the postscript Murray expresses his gratitude to many gentlemen (including the chemists Forbes and Millar) who had supported him for election to the "Chemical Chair, of King's College, London." Being a member of the Church of Scotland, however, he was disqualified because he could not take the Eucharist according to the Church of England. Murray states that John Frederic Daniell (1790–1845) was in fact elected "Professor of Chemistry; and I sincerely wish him every success." (Sinkankas, II, 4663; Wellcome, IV, 203)

MURRAY, John

A System of Chemistry. By John Murray, . . . In four volumes. Edinburgh: Printed for Longman, Hurst, Rees & Orme, London; and William Creech, and A. Constable & Co. Edinburgh. 1806–1807.

First edition. 4 vols., 8vo. I (1806): xv, (1), 592 + 120 pp. II (1806): vii, (1), 595, (1) + 44 pp. III (1807): vii, (1), 704 pp. IV (1807): viii, 758 pp. With 8 engraved plates in volume I (J. Grant Sculpt.) containing 65 figures and several woodcut figures in text. Splendid copy in mint condition, in original half calf, marbled boards, spines gilt-ruled, dark-green and blue leather labels.

ONE OF the most comprehensive and systematic textbooks on elementary chemistry in English of the period. In effect it is an entirely rewritten and enlarged version of the second edition of Murray's *Elements of Chemistry* (Edinburgh, 1810, 2 vols.). Notes have been added for the use of more advanced students. Modern nomenclature as translated by George Pearson, with some corrections by Richard Chenevix, is employed. Numerous bibliographical references are included. The work was kept up-to-date by the appearance of editions and supplements in 1809, 1812, and 1819. (Bolton, 689; Cole, 963; Ferchl, 375; Partington, IV, 56; Poggendorff, II, 243; Roller & Goodman, 222; Wellcome, IV, 203)

MURRAY, John

A System of Chemistry. By John Murray, . . . In four volumes. Edinburgh: Printed for William Creech, etc. 1812.

Third edition. 4 vols., 8vo. I: vi, (2), 692 pp. II: vii, (1), 735, (1) pp. III: vii, (1), 688 pp. IV: vii, (1), 691, (1) pp. Near-fine copy in original half calf, marbled boards, spines blind-stamped, olive and brown leather labels.

THE EXCITING new discoveries of Dalton, Davy, and others are included in this updated edition. For the benefit of

those who had purchased the two earlier editions, a supplement (Edinburgh, 1812) is mentioned in the preface. The material of the supplement is included in the present edition. On the verso of the title page of volume I, a note asks the binder to put the plates at the end, but they have been omitted. They are identical to those in the first two editions. Rare. This edition not listed in the usual bibliographies.

MUSAEUM HERMETICUM

Musaeum Hermeticum Reformatum et Amplificatum, omnes Sopho-Spagyricae Artis Discipulos fidelissime erudiens, quo pacto Summa illa veraque Lapidis Philosophici Medicina, qua res omnes qualemunque defectum patientes, instaurantur, inveniri & haberi queat. Continens Tractatus Chemicos XXI. . . . In gratiam filiorum doctrinae, quibus Germanicum Idioma ignotum est, Latina Lingua ornatum. Frankfurt: Apud Hermannum à Sande. 1678.

Second edition. 4to. 6 leaves, 863, (1) pp. Frontispiece and title page engraved by M. Merian (dated 1678), 4 large folding allegorical copperplates, and 41 engravings in text. Frontispiece and engraved title mounted; otherwise very fine copy in original vellum. Armorial bookplate: F. G. Irwin.

THE GREATLY enlarged and best edition of this beautifully illustrated and famous collection of alchemical texts. Each tract (except the fifth) has a special half title or title page, many dated 1677. The first edition containing only ten treatises appeared fifty-three years earlier (Frankfurt, 1625). This edition contains twenty-one treatises by Jean de Meung, N. Flamel, Lamspring, Basil Valentine, John Cremer, Thomas Norton, M. Sendivogius, Philaletha, Michael Maier, Helvetius, et al. Most of these works are virtually impossible to find in their original editions. Several of the magnificent engravings are reproduced in C. G. Jung's *Psychology and Alchemy*. "Ouvrage de la plus grande rareté" (Caillet). The engraved title of most copies is dated 1677, but in this copy it is dated 1678. The Young Collection contains only the reprint of this edition (Frankfurt & Leipzig, 1749; Ferguson, II, 119). Newton owned a copy of the present edition (Harrison, 1131). (Bolton, 1018; Caillet, 7891; Duveen, 418–419; Ferchl, 375; Ferguson Coll., 482; Krivatsy, 8213; Read, *Prelude to Chemistry*, pp. 166–169; Thorndike, VIII, 84; Waite, 294)

MUSAEUS

Musaei opusculum de Herone & Leandro. Orphei argonautica. Eiusdem hymni. Orpheus de lapidibus.

(Colophon:) Venice: In aedibus Aldi et Andreae Socerimense Novembri. 1517.



Musaeum Hermeticum. Musaeum Hermeticum Reformatum. Frankfurt, 1678.

First edition of the poem *De lapidibus*. 8vo. 80 numbered leaves. Woodcut Aldine anchor device on title and last leaf and 2 text woodcuts (fol. 8 verso and 9 recto). Guide letters. Printed in Greek and Latin (italic type) throughout. Title leaf slightly worn (this and last leaf skillfully repaired in blank portions); otherwise very good copy in early-seventeenth-century vellum. From the libraries of Camillo Agrippa (fl. 1553–1598), with signature (C. Agrippa. 1555) in ink on title page; and Frederick Lawrence (1821–1867), with signature (Fredk. Lawrence, Essex Court, Temple, Jany. 1863) in ink on flyleaf.

THE EXTREMELY rare first edition of the poem *De lapidibus* (“Lithica”), setting forth in 770 lines the virtues of about thirty gems. Appearing here under the name of Orpheus, it was probably written in the fifth century A.D., based on the prose treatise by Damigeron of Alexandria, who lived in the second century B.C. “This work of Damigeron is of interest in that it formed the principal source from which Marbodius derived the material for his celebrated medieval lapidary” (Adams). The “Lithica” occupies ff. 66–80 of the present volume, which also contains the second editions of Orpheus’ *Argonautica*, a work of “great importance for alchemical theory during the whole Middle Ages and later” (Duveen), and of Musaeus’ famous love poem *Hero and Leander* (Greek with Latin translation), illustrated with two charming woodcuts. This copy has an important provenance, having once been owned by the sixteenth-century architect Camillo Agrippa (1533–1595), who published works on moving a huge obelisk, various treatises on military strategy, etc. A later owner was the celebrated barrister Frederick Lawrence, who, when young, was employed at the British Museum (1846–49). (British Library, *S.T.C. Italian, 1465–1600*, p. 457; Proctor-Isaac, 12872; Thorndike, I, 293–296; Watt, II, 692v; Wellcome, I, 4494)

MUSEUM RUSTICUM

Museum Rusticum et Commerciale: or, Select Papers on Agriculture, Commerce, Arts, and Manufactures. Drawn from Experience, and Communicated by Gentlemen engaged in these Pursuits. Revised and Digested by several Members of the Society for the Encouragement of Arts, Manufactures, and Commerce. . . .

London: Printed for R. Davis, J. Newbery, L. Davis and C. Reymers. 1764–1766.

Second edition. 6 vols., 8vo. I: 4 leaves, viii, 480 pp., 4 leaves. II: 2 leaves, viii, 382 pp., 5 leaves. III: viii, 388 pp., 4 leaves. IV: 1 leaf, viii, 470 pp., 3 leaves. V: viii, 395, (1) pp., 2 leaves. VI: xii, 453 pp., 3 leaves. With 23 plates and tables (14 folding), woodcuts in text. Very fine copy in original mottled calf, spines richly gilt, maroon morocco labels. Armorial bookplate (eighteenth century): Sir John Eden Bart.

THE BEST edition, published the same years as the first. Dedicated to the Society of Arts, the work appeared monthly from September 1763 to June 1766. An important compilation on agriculture and agricultural chemistry, the contributors included Robert Billing, Richard Bradley, Robert Dossie, and Arthur Young. Although the Society of Arts disclaimed connection with this work, the title clearly indicates that members revised it. After publication ceased, Dossie started his *Memoirs of Agriculture* (1768–82, 3 vols.). Not in Sabin, although there are many American references. Not in Blake, McDonald, Partington, etc. (Fussell: *Early Agricultural Works*, 1930, p. 14 [no. 79]; Fussell, *More Old English Farming Books*, 1950, pp. 54–55; Gibbs, *Annals of Science*, 7 [1951], 166–171; Wood, *A History of the . . . Society of Arts*, 1913, pp. 329–330)

MUSHET, David

Papers on Iron and Steel, Practical and Experimental: a series of original communications made to the Philosophical Magazine, chiefly on those subjects. With copious illustrative notes. By David Mushet . . .

London: John Weale, 59, High Holborn. 1840.

First edition. 8vo. xxvi, (2), 952, (2) pp. With 6 plates (5 folding) by Mushet (J. W. Lowry Sculp.). Near fine copy in original blind-stamped green cloth. From the library of Richard March Hoe (1812–1886), U.S. inventor of the rotary printing press, with his bookplate and signature on title page.

A PIONEER in the development of modern steelmaking, Mushet (1772–1847), the son of a Scottish iron founder, frequented his father’s and other foundries in the Glasgow area and began experimenting with ironmaking in 1793. His researches from 1800 to 1835 resulted in the granting of five patents. “The author is perhaps best known for his process of making steel by melting in crucibles iron-ore mixed with a suitable proportion of carbonaceous matter—practically the same as the ancient Hindoo process for wootz—which he sold . . . to a Sheffield firm. The work contains also important papers on the hot-blast furnace, the reduction of iron ores, and on iron alloys” (Zeitlinger). “Mushet was the most important single investigator in Great Britain (at that time) into the technology of iron and steelmaking” (Clow). His researches were the precursor of Bessemer’s successful process for making cheap steel, brought out in 1856. His son, Robert Forester Mushet (1811–1891), improved Bessemer’s process by adding an iron-manganese alloy (spiegel) to the molten steel, which degasified it. The publication of the present book was initiated by Mushet’s son, David, and Mushet himself added copious notes to the originals. For a biography of Richard M. Hoe, whose inventions revolutionized printing worldwide, see *Encyclopedia Britannica* (vol. 11, p. 573). (Clow,

The Chemical Revolution [1952], 351–353; D.S.B., IX, 591; Roller & Goodman, II, 223; Sotheran, Cat. 741 [1913], 12319)

MUSPRATT, James Sheridan

Chemistry Theoretical, Practical & Analytical, as applied and relating to the Arts and Manufactures. By Dr. Sheridan Muspratt . . .

London: William Mackenzie. N.d. (1860).

First edition. 2 vols., 4to. I: 4 leaves, 9, (1), 836 pp. II: 2 leaves, 10, 1186 pp. With engraved and printed title pages in each volume, 31 full-page steel-engraved portraits of eighteenth- and nineteenth-century chemists, and 1,108 woodcuts in text. Fine copy in original green half calf, pebbled cloth, spines gilt, maroon morocco labels.

MUSPRATT (1821–1871) worked with Liebig in Giessen, published papers in collaboration with Hofmann, and carried out important research on metallic sulphites. He first assisted at University College, London, and then (1848) founded a College of Chemistry in Liverpool, where he was professor. “From 1854 to 1860 he was engaged in editing a large and readable dictionary of *Chemistry . . . as applied to the Arts and Manufactures*, of which several editions have been published in English, and in German and Russian translations” (D.N.B.). The present work is really a masterpiece, as it provides an essentially complete picture of the state of chemistry and chemical technology in the middle of the nineteenth century. The preface is dated 1860. (Bolton, 690; Cole, 966; Duveen, 652; Edelstein, 3313; Morgan, 549; Partington, IV, 437; Roller & Goodman, II, 223; Smith, 339)

MUSPRATT, James Sheridan

Chemistry, Theoretical, Practical, and Analytical, as applied to the Arts and Manufactures. By Writers of Eminence. . . .

London: William Mackenzie, 69 Ludgate Hill. N.d. (ca. 1875–80).

First edition. 2 vols., imperial 8vo., in 8. I: 2 leaves, 256 pp. II: 2 leaves, pp. 227–512. III: 2 leaves, pp. 513–768. IV: pp. 769–1024. V: 2 leaves, pp. 1025–1048 + 232 pp. VI: 2 leaves, pp. 233–488. VII: 2 leaves, pp. 489–744. VIII: 2 leaves, pp. 489–1008. With 54 plates (some double page, or folding) and hundreds of woodcut figures in text. Fine set, in original gilt-stamped, decorated publisher’s cloth, richly gilt spines.

ALTHOUGH CATALOGUED under Muspratt, this treatise was in fact entirely rewritten, with only the title and names of the articles remaining. The new editor, C. W. Vincent, employed some of the most distinguished chemists of the day, including Thomas Andrews, Benjamin Collins Brodie, William Crookes, Edward Frankland, and Carl Schor-

lemmer. Vincent omitted the engraved portraits of Muspratt’s work and in their place included remarkably detailed plates of chemical processing plants. All that remained of “Muspratt” was the title and the general plan of the work. A fascinating and scientifically accurate encyclopedia, it contains long articles on photography, dyeing and calico printing, petroleum, the manufacture of acids, bases, salts, etc. The article on dyeing is presumably by Sir William Crookes, as he is listed as a contributor, but unfortunately the articles are unsigned. Taken as a whole, this treatise presents a detailed picture of nineteenth-century chemical technology, and in this regard it is invaluable. (Partington, IV, 437; Roller & Goodman, I, 226)

MUSSCHENBROEK, Petrus van

Compendium Physicae Experimentalis conscriptum in usus academicos.

Leyden: Apud S. et J. Luchtmans. 1762.

First edition. 8vo. 2 leaves, 515, (1) pp. With 14 folding copperplates of apparatus and diagrams. Woodcut printer’s device on title page. Very good copy in contemporary calf, spine richly gilt, maroon morocco label. From the library of the mineralogist Friedrich August Walchner (1799–1865), with his signature dated 1817 on first flyleaf.

EDITED BY Johann Lulofs, this collection of some of Musschenbroek’s famous lecture notes was published a year after he died. Lulofs was a colleague of Musschenbroek at Leyden, and, although primarily on physics, chemical topics are discussed: e.g., metals, fire and combustion, and luminescence and phosphorescence. Walchner, an early owner of this copy, was professor of mineralogy and geology at Karlsruhe (Poggendorff, II, 1244–1245). Partington (IV, 405) mentions that Walchner “investigated racemic acid.” (D.S.B., IX, 597)

MUSSCHENBROEK, Petrus van

The Elements of Natural Philosophy. Chiefly intended for the Use of Students in Universities. By Peter van Musschenbroek . . . Translated from the Latin by John Colson, M.A. and F.R.S. . . .

London: Printed for J. Nourse, at the Lamb without Temple-Bar. 1744.

First English edition. 2 vols., 8vo. I: xiii, (3), 334 pp., 1 leaf (advertisements). II: 2 leaves, 328 pp. With 25 folding copperplates and 1 large folding map of the world (showing California as an island). Fine copy in contemporary gilt-ruled mottled calf, rebaked, maroon and green morocco labels.

THE LUCASIAN professor of mathematics at Cambridge, John Colson (1680–1760), translated Musschenbroek’s *Elementa physicae* (Leyden, 1734) as the present *Elements*,

which, in addition to physics, discusses subjects of chemical interest: e.g., atoms, air, water, fire, thermometry, and calcination. (D.S.B., IX, 596; Knight, 82; Partington, II, 739; Watt, II, 693m; Wheeler Gift, 312)

MUSSCHENBROEK, Petrus van

Essai de Physique . . . Avec une Description de nouvelles sortes de Machines Pneumatiques, et un Recueil d'Expériences par Mr. J. V. M. Traduit du Hollandois par Mr. Pierre Massuet . . .

Leyden: Chez Samuel Luchtmans, Imprimeur de l'Université. 1739.

First French edition. 2 vols., 4to., in 1. I: xxv, (3), 502 pp. (pp. 75–77 omitted: text complete). II: 2 leaves, pp. 503–914 (pp. 865–868 omitted: text complete), 15 leaves; 63, (1) pp.; 8 pp., 1 leaf. With 34 folding copperplates (including world map showing California as an island). Title pages in red and black. Fine copy in original vellum.

A PUPIL OF Boerhaave and 's Gravesande, Musschenbroek (1692–1761) was professor of mathematics and philosophy in Duisburg and Utrecht, then at Leyden, where he taught experimental physics. During a visit to England he met Newton, Desaguliers, and other scientists and was elected F.R.S. (1734). "The excellence of his lectures maintained the reputation that Leiden had acquired under Boerhaave and 's Gravesande, and students interested in experimentation came from all parts of Europe . . . [He] is generally credited with originating the Leyden jar" (D.S.B.). His books on physics followed Newton, influenced Nollet, Voltaire, Senebier, and the *Encyclopédistes*, and appeared in ever larger volumes. These volumes deal with bodies in general, mechanics, electricity, magnetism, fluids, heat, optics, sound, meteorology, and some topics of chemical interest. The plates illustrate numerous scientific instruments. At the end of volume II is a treatise on air pumps by the author's brother, the instrument maker Jan van Musschenbroek (1687–1761), followed by his sales catalogue of scientific apparatus (with prices). Some relatively few copies were issued with a frontispiece portrait, but most do not have it. It was never bound with this copy in its original binding. (Blake, 318; D.S.B., IX, 596; Poggendorff, II, 247; Wellcome, IV, 206; Wheeler Gift, 300)

MUSSCHENBROEK, Petrus van

Introductio ad Philosophiam Naturalem auctore Petro van Musschenbroekio. Editio prima Italica pluribus adnotationibus emendata aucta atque illustrata.

Padua: Typis Seminarii. Apud Joannem Manfre. 1768.

First Italian edition. 2 vols., 4to. I: 8 leaves, 477, (1) pp., 1 blank leaf (pp. 145–152 mispaginated 245–252). II: 652 pp. With 65 folding copperplates (apparatus, diagrams, etc.), folding printed table, and folding map (showing California as an island). Woodcut printer's device on each title page, and copperplate head- and tailpieces in volume I. Few quires in volume II very lightly watermarked; otherwise near-fine copy in original calf, spines richly gilt, tan morocco labels.

THE RARE first edition printed in Italy of Musschenbroek's lectures, edited and posthumously published by Johann Lulofs. This Latin work (first: Leyden, 1762; Partington, II, 739) was "widely used and translated into Dutch, English, French, and German. . . . The experiments can be studied in [his] books, which contain fine illustrations; they deal with the mechanics of rigid bodies, air pressure, heat, cohesion, capillarity, phosphorescence, magnetism, and electricity. Many of these experiments have become classics of elementary instruction" (D.S.B., IX, 595). "C'est le plus vaste recueil de ce qu'on connaissait alors en physique" (*Biogr. Gen.*). In his preface Lulofs traces the development of Musschenbroek's printed lectures, from their first appearance in 1726 up to 1748, plus the improvements he made until the time of his death. (Roller & Goodman, II, 223)

MUTHUON, J. M.

Traité des Forges dites Catalanes, ou l'Art d'extraire directement et par une seule opération le fer de ses mines; contenant le détail des constructions et dispositions métallurgiques qui s'y rapportent, avec la manière de réduire la gause en fer au moyen de la fusion liquide dans les affineries, et de nouvelles expériences sur les pompes. . . .

Turin: De l'Imprimerie Départementale. 1808.

First edition. 8vo. 238 pp., 1 leaf (blank). Fine, crisp copy, in original gilt-ruled half calf, marbled boards, brown gilt-lettered label.

MUTHUON (dates unknown) was engineer in chief of the iron mines and famous Catalan smelting works. In this book he describes the processes employed to extract iron directly from its ores, as well as the removal of impurities from the metal and the manufacture of the finest steel. Ferchl (p. 376) briefly refers to Muthuon and his writings on Spanish smelting operations but does not mention the present title. An important book on the chemistry and metallurgy of iron and steel. Very rare. Not located in available bibliographies.

MYLIUS, Johann Daniel

Anatomia Auri, sive Tyrocinium Medico-Chymicum, continens in se partes quinque: Quarum I. Tradit concordantium & harmoniam Solis coelestis cum Auro terrestri . . . II. Agit de Medicinis aureis & Receptis antiquorum ac recentium Medicorum . . . III. Tractat de Auri potabilis praeparatione . . . IV. Exhibit usum Medicinalem Auri potabilis . . . V. Demonstrat ideam Lapidis Philosophici in duodecim figuris.
Frankfurt: Sumptibus Lucas Jennisi Bibliop. 1628.

First edition. 4to. 14 leaves, 304, 27, (1) pp. Engraved title page, letterpress title with woodcut vignette, splendid full-page engraved coat of arms of the dedicatee, and 6 full-page engravings in text. Some very light browning of pages; otherwise fine copy in contemporary calf, spine richly gilt, 2 brown morocco labels.

PUBLISHED DURING the last year of the author's life, this finely illustrated alchemical book is the rarest work by Mylius. The *Anatomy of Gold* is a pharmaceutical treatise in which its five parts consider the harmony between the celestial sun and terrestrial gold, and the definition and conflict of opinion concerning gold. Medicines and recipes, ancient and modern, in which gold is an ingredient are covered, as are preparations of potable gold (both vulgar and philosophic) and the concept of the philosopher's stone. The beautiful engravings are similar to those by Matthaeus Merian, who had illustrated Michael Maier's *Atalanta Fugiens* (Oppenheim, 1618). The dedication is to Johann Martin Baur von Eyseneek, whose love of alchemy is underlined by the putto (emblem of secret fire) embracing two birds symbolizing the philosopher's stone, the phoenix (exaltation), and the pelican (multiplication). N.U.C. lists only the Duveen copy, which lacks the engraved title page (here present). Not in Caillet, Ferguson, Krivatsy, Wellcome, etc. (Duveen, 421; Gardner, 474; Neu, 2897)

MYLIUS, Johann Daniel

Opus Medico-Chymicum: Continens tres Tractatus sive Basilicas: Quorum prior inscribitur Basilica Medica. Secundus Basilica Chymica. Tertius Basilica Philosophica.
Frankfurt: apud Lucam Jennisi. 1618.

First edition. 2 parts (of 3) in 1 vol., 4to. 22 leaves (including engraved title and portrait), 428 pp. (recte 418: pp. 304–314 omitted, but text complete), 1 leaf (blank); 184 pp., 124 leaves, 492 pp. With 3 folding engraved plates and the very large plate (by M. Merian) to the *Basilica Philosophica* (not present here). Near-fine copy in contemporary vellum.

ONE OF the most cryptic and unstudied alchemical books of the seventeenth century, in the same Paracelsian tradition as the *Basilica Chymica* of Oswald Croll. Exactly like the copies described by Duveen and Ferguson, this copy

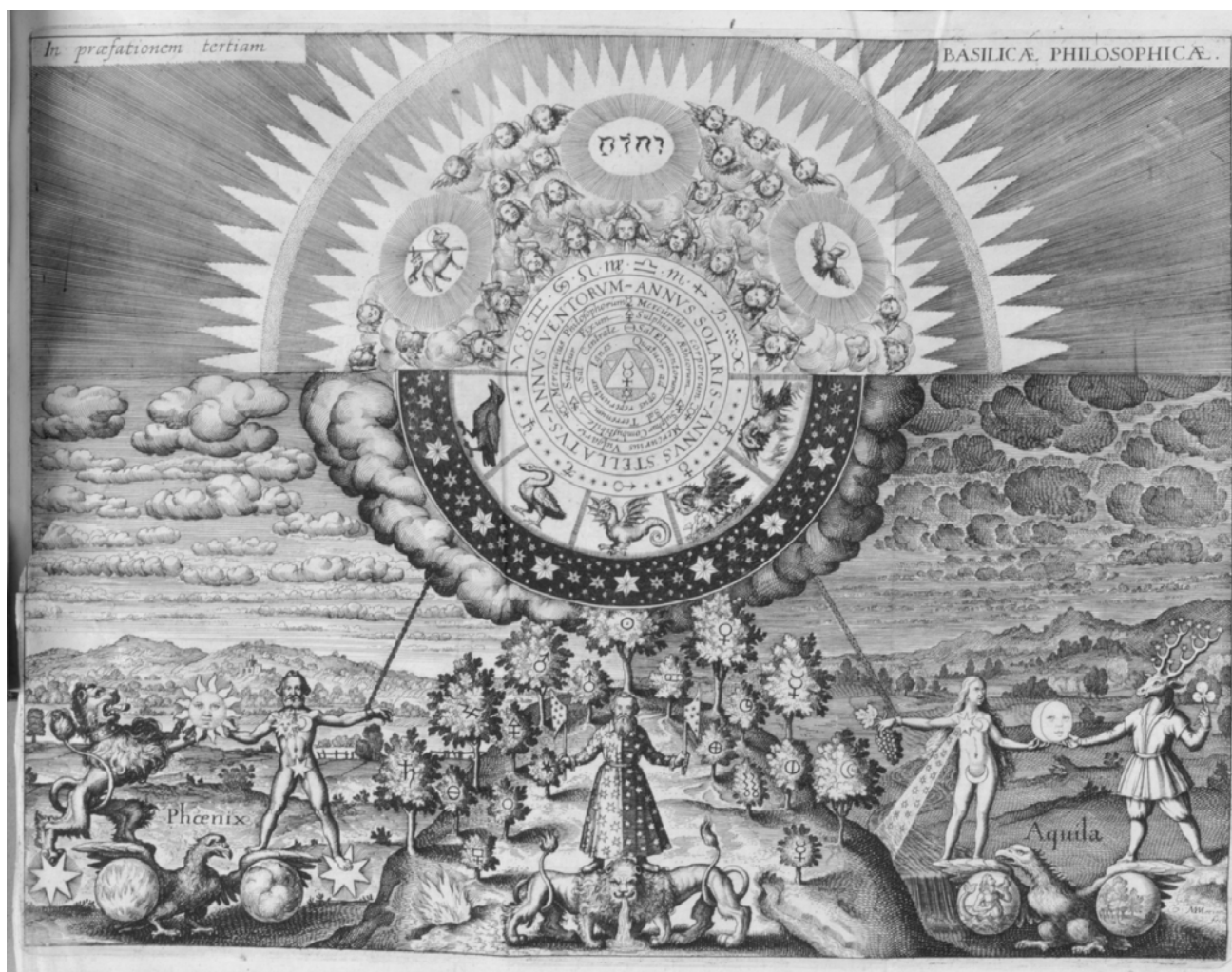
contains only the first two parts, suggesting that the third part was published later in 1618. This copy does contain, however, the remarkable oversized folding copperplate by Merian belonging to the *Basilica Philosophica* (as in the Duveen copy). The first part covers physiology, pathology, and therapeutics, and the second part on chemistry discusses metals, minerals, animals, and vegetables. This is evident from the beautiful plates, which place all natural elements and their functions in a grand cosmogony derived from the creation in Genesis. The folding plate by Merian is a "symbolical representation of the analogy of the alchemical microcosm to the macrocosm" (Read). This plate was reused in the *Musaeum Hermeticum* (Frankfurt, 1678). Of Mylius (fl. 1616), an iatrochemical physician from Wetterau in Hesse, almost nothing is recorded. Privately printed by Lucas Jennisi, all works by Mylius are extremely rare, which suggests that only a limited number of each edition were printed. The only copy in the United States with all three parts is in the National Library of Medicine. (Duveen, 419–420; Ferguson, II, 120–121; Krivatsy, 8235; Neu, 2899; Partington, II, 180; Read, *Prelude to Chemistry*, 83–84; Thorndike, VII, 177; Wellcome, I, 4498)

MYNSICHT, Adrian von

Thesaurus, et Armamentarium Medico-Chymicum. . . . Cui in fine adjunctum est Testamentum Hadrianeum de Aureo Philosophorum Lapide. . . .
Frankfurt: Impensis & Typis Balthas. Christoph. Wustii. 1675.

Second Frankfurt edition. 8vo. 6 leaves, 525 pp., 27 leaves, 22 pp. With beautiful engraved frontispiece portrait of Mynsicht and fine engraved title page (conjugate with the frontispiece). Separate divisional title page to *Testamentum*, with large alchemical woodcut. Fine copy, in original vellum, contemporary lettering on spine. From the library of Kurt Seligmann, with cabalistic bookplate.

MYNSICHT (1603–1638), physician and chemist, was a follower of Paracelsus and first published his medicochemical treasure and arsenal at Hamburg in 1631. Immediately popular, numerous editions and translations of this iatrochemical work appeared until 1726. Many chemical preparations discovered by Mynsicht are described, and the *Testamentum* in Latin verse at the end is purely alchemical. Under his pseudonym Madathanus, in 1621 he published an alchemical work, *Aureum seculum redivivum*, which was included in the *Musaeum Hermeticum* (1625 and 1677–78), for details on which see Ferguson (II, 61). Partington discusses the chemical investigations of Mynsicht and gives a partial bibliography of his works. Kurt Seligmann, the former owner of this copy, wrote *The History of Magic* (1948). The first Frankfurt edition appeared in 1658.



Mylius. Opus Medico-Chymicum. Frankfurt, 1618.

(Ferchl, 376; Ferguson, II, 122 [not in Young Coll.]; Ferguson Coll., 484; Krivatsy, 8250; Neu, 2905; Partington, II, 178; Waller, 6794)

MYNSICHT, Adrian von

Thesaurus & Armamentarium Medico-Chymicum: or a Treasury of Physick. With the most secret way of preparing remedies against all diseases. Obtained by labour, confirmed by practice, and published out of good will to mankind. Being a work of great use for the publick. Written originally in Latine by that eminent physician Hadrianus à Mynsicht, . . . and faithfully rendred into English by John Partridge Physician to His Majesty.

London: Printed by J. M. for Awnsham Churchill at the Black Swan near Amen Corner. 1682.

First English edition. 8vo. 8 leaves, 377, (1) pp., 17 leaves. Engraved frontispiece of John Partridge (R. White sculp.) and signature A8 (verse by John Gibson) lacking; otherwise good copy, in original blind-ruled unlettered calf, worn. Early-eighteenth-century signature neatly written at top of title page (E: Libris Johannis Puddicombe) and later eighteenth-century signature on page 377 (Frances Christopher).

THE RARE English translation of Mynsicht's famous *Thesaurus*, which omits the alchemical *Testamentum*. The author was involved in the Rosicrucian controversy in early-seventeenth-century Germany, and this is alluded to in the dedicatory verse by William Hide (A7 verso). Mynsicht was studied by Newton (see Babson, 417; Harrison, 1137). The translator, John Partridge (1644–1715), was a noted astrologer and physician to Charles II and later to Queen Mary (wife of William III). The D.N.B. gives some interesting information on Partridge and his connection with Jonathan Swift. The copy in the National Library of Medicine also lacks the frontispiece. (Duveen, 421; Ferguson Coll., 485; Krivatsy, 8252; Neu, 2907; Partington, II, 178; Thorndike, VIII, 84; Wing, M3177)

MYREPSUS, Nicolaus

Nicolai Myrepsi Alexandrini Medicamentorum Opus, in Sectiones Quadraginta octo Digestum, hactenus in Germania non visum, omnibus tum Medicis, tum Seplasiarijs mirum in modum utile, à Leonbarto Fuchsio medico, & Scholae Tubingensis professore publico, è graeco in latinum recens conversum, luculentissimisque Annotationibus illustratum. Accessit non solum rerum & verborum, sed & medicaminum singulis morbis destinatorum locupletissimus Index.
Basel: Johannis Oporinus. 1549.

First edition edited by Leonhard Fuchs. Folio. 8 leaves, 293 folios (in 586 numbered columns), 5 leaves (last blank). Large woodcut printer's device on title page and many fine historiated woodcut capitals. Title page and colophon dated March 1549. Fine, crisp copy, in elaborately blind-stamped pigskin over wooden boards, with brass clasps (one catch missing), front cover dated 1571. From the Fürstliche Hofbibliothek, Donaueschingen, Sotheby auction, July 1982, with unobtrusive stamp on verso of title page. Bound with: Manliis de Bosco, Johannes Jacobus de, *Luminare Maius* (Venice, 1549).

MYREPSUS LIVED in Alexandria during the second half of the thirteenth century and was a Greek medical writer. He was private physician at the court of the emperor, Johannes Ducas Vatatzes (1222–1255) at Nicaea, and lived long enough to mention Pope Nicolaus III (1277–1280). Myrepsus visited the already old school of medicine at Salerno and became acquainted with the *Antidotarium* of Nicolaus Praepositus. Influenced by that work, he compiled a treatise incorporating the *Antidotarium*, plus information gleaned from Actuarius, Mesue, and many other writers down to his time. The book is a milestone in the history of medieval pharmaceutical chemistry. Never printed in the original Greek, it was first translated into Latin by Nicolaus Rheginus (Ingolstadt, 1541). The definitive translation is, however, this Latin version by the great botanist Leonhard Fuchs (1501–1566), whose preface is dated June 1547. Very rare. Not in Bolton, Caillet, Cushing, Duveen, Eales, Edelstein, Ferguson Coll., Osler, Partington, Reynolds, Smith, Stillwell, Waller, Wellcome, etc. (Ferchl, 376; Ferguson, II, 123, 224 [not in Young Coll.]; Neu, 2954; Watt, II, 694f)

NAQUET, Alfred Joseph

Des Sucres. Thèse présentée et soutenue à la Faculté de Médecine. Par le Dr. A. Naquet . . .

Paris: Imprimerie de E. Martinet. 1863.

First edition. 4to. 80 pp. Very fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

NAQUET (1834–1916) presented this thesis on naturally occurring sugars for a fellowship in the Faculty of Medicine at Paris. These carbohydrates are divided into monosaccharides and disaccharides. The greater part of this work discusses their chemistry, structure, and physical properties. Biochemical reactions of sugars *in vivo* are described, and chemical equations to explain their degradation are given. Pharmaceutical uses of various sugars are listed. The sixth chapter, on saccharimetry, is especially important as physico-chemical measurements are shown to be of use in determining the extent of fermentation of sugars by yeasts. Optical rotatory dispersion is covered, with mathematical equations. An excellent chemist, Naquet was interested in the determination of the molecular structures of organic compounds. Bolton cites at least seven chemical works by Naquet. Partington (IV, 424) refers to Naquet's researches but not the present thesis, which is important because it describes researches on sugars before the great investigations of Emil Fischer that did not begin until the mid-1880s. Rare. (Bolton, 692)

NARDI, Giovanni

De rore disquisitio physica D. Ioannis Nardii Florentini.

Florence: Typis Amatoris Massae, & Laurentii de Landis. 1642.

First edition. 4to. 10 leaves, 212 pp. With engraved frontispiece and woodcut capitals. Very good copy in contemporary speckled calf, spine richly gilt. From the library of the Royal Meteorological Society (Symons Bequest, 1900), sold in 1973, with their bookplate on the front pastedown endpaper.

NARDI was born in Montepulciano in the Florentine district, graduated in medicine at Pisa, and practiced in Florence with so great a reputation that he was known as the Florentine Aesculapius. He was a member of the Society of Apathistae and published books on milk, subterranean fire, voice, various subjects in physics, the present work, and other publications. Nardi became involved in a dispute with Licetus and was a friend of Harvey. The present work is an important study on dew and its mode of formation, physical and chemical properties, medicinal uses, etc. There are references to works by Galen, Hippocrates, Democritus, Dioscorides, Pliny, Theophrastus, et al. The solubilities of

various salts and natural products (e.g., sugars) in dew collected from different sources are discussed. The book also contains several chapters on pearls and their physical and chemical properties. Ferguson says that this work on dew is commended by Morhof in his *Polyhistor*. Rare. (Ferguson, II, 126 [not in Young Coll.]; Watt, II, 694f)

NAU, Bernard Sebastian von

Anleitung zur Bergbauwissenschaft.

Mainz: in der kurfürstlich privilegierten Universitätsbuchhandlung. 1790.

First edition. 8vo. 8 leaves, 318 pp., 1 leaf (blank). Very good copy, uncut with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original plain wrappers bound in.

NAU (1766–1845) was professor of natural history and mineralogy at the University of Mainz and published several books on these subjects. In the present work he discusses the chemistry, physics, mineralogy, and geology of various ores, with an account of the useful metals and nonmetals that can be extracted from them. The author begins by listing the titles and editions of numerous earlier and contemporary books and journals (mostly German) on mining, mineralogy, and metallurgy, with dates and places of publication (pp. 3–29). This valuable bibliography enables the historian to trace seventeenth- and eighteenth-century German works not recorded elsewhere. (Ferchl, 378; Pogendorff, II, 256)

NAUCLERUS, Olaus

Delineatio Magnae Fodinae Cuprimontanae . . . Sub praesidio . . . Petri Elvii . . . 19 Decemb. Ao. 1702. . . .

Olaus Nauclerus Ol. Fil. Cuprimontano-Dalekarlus.

(Followed by) Pars posterior Chalcurgica: sive Officina

Aeraria Cuprimontana. . . praeside . . . Johanne Uppmarck . . . 16 Junii, A:i 1703. Dissertatione Graduali . . .

Olaus Nauclerus Cuprimontanus.

Uppsala: Excudit Joh. H. Werner, Reg. Acad. Typogr. (1702, 1703).

First edition. 2 parts in 1 vol., 4to. I (1702): 4 leaves, 70 pp.; 3 folding engraved plates ("Machina Nova" and 2 maps). II (1703): 2 leaves, pp. 71–101, (1). Fine copy in contemporary unlettered vellum. Bound with: Moraeus, Johannes, *Dissertatio Chimica de Vitriolo* (Uppsala, 1703).

THE MAJOR source of information on the famous Stora Kopparberg (Felun mine) and copper works in their heyday in the late seventeenth century is the present doctoral dissertation by Nauclerus (b. 1675). Opened in the early middle ages, the mine was central to the economic history

of Sweden. Copper production was closely controlled by the state, and for a long time taxes on copper provided its main source of income. The son of a mine surveyor, Nauclerus enrolled at the University of Uppsala in 1692, towards the end of Rudbeck's great reforms and the introduction of Cartesian science. The dissertation is in two parts, presented under Petrus Elvius and Johanne Upmarck in 1702 and 1703, respectively. The first part traces the history of the mine and its management, laws, operations, accidents, dangers, etc. The second part describes the copper works, smelting and refining of copper, royal weighing house, forging, and minting. This account of the mine was known in England by way of letters from J. Fr. Leopold, a Lübeck physician, to the English geologist John Woodward (1720) and through Swedenborg's *Regnum subterraneum* (1734). The work was translated into Swedish with notes as Olaus Nauclerus, *Stora Kopparbergs gruva och Kopparverk* (Uppsala, 1941), with a summary in English. Extremely rare. Not in the usual bibliographies.

NAUDÉ, Gabriel

Apologie pour tous les Grands Personnages qui ont esté fausement soupçonnez de Magie. . . .

Paris: Chez François Targa, au Palais, à l'entrée de la Galerie des Prisonniers. 1625.

First edition. 8vo. 12 leaves, 649, (1) pp. (misnumbered 615), 11 leaves. Outer edge of lower cover worn; otherwise fine copy in original vellum.

NAUDÉ (1600–1653), royal physician and librarian to the Cardinals Richelieu and Mazarin, wrote this famous defense of celebrated scientists accused of being magicians or sorcerers. "Among the men defended by Naudé are: Cardanus, Geber, Lullius, Arnaldus de Villanova, Paracelsus, Agrippa von Nettesheim, Roger Bacon, etc. The book is preceded by poems in honour of the author, among which a poem in Hebrew and one in Latin by Jac. Gaffarellus and a tetra-stich by Guy Patin Medicus Parisiensis are to be found" (Duveen). Thorndike discusses the present work, as well as other publications by Naudé. Later editions appeared: e.g., Paris, 1669; and Amsterdam, 1712. "Ouvrage célèbre et souvent réimprimé" (Caillet). "One of his most curious works" (Watt). Very scarce. (Brunet, *Supplement*, II, 9; Caillet, 7923; Cushing, N23; Duveen, 423; Ferguson Coll., 487; Goldsmith, N75; Graesse, IV, 650; Guaita, 753; Neu, 2910; Rosenthal, 3002; Thorndike, VII, 301; Watt, II, 696c)

NAUDÉ, Gabriel

The History of Magick by way of Apology, for all the Wise Men who have unjustly been reputed Magicians, from the Creation, to the present Age. Written in French, by G. Nau-daeus Late Library-Keeper to Cardinal Mazarin. . . .

Englished by J. Davies.

Printed for John Streater, and are to be sold by the Booksellers of London. 1657.

First English edition. 8vo. 8 leaves, 306 pp., 1 leaf. The final leaf (sign. X2) is an advertisement of books printed for John Streater. Fore-edge of title leaf neatly repaired (just touching the y of "History"); otherwise good copy in nineteenth-century blind-tooled calf, spine gilt-lettered and dated.

THE ENGLISH translation of this famous book, by John Davies (1625–1693), who was educated at Jesus College, Oxford, and St. John's College, Cambridge. For an account of Davies and a list of his other translations, see the D.N.B. (Cushing, N24; Duveen, *Supplement*, 273; Edelstein, 1679; Ferguson Coll., 487; Neu, 2911; Osler, 5215; Watt, II, 696c; Wing, N246)

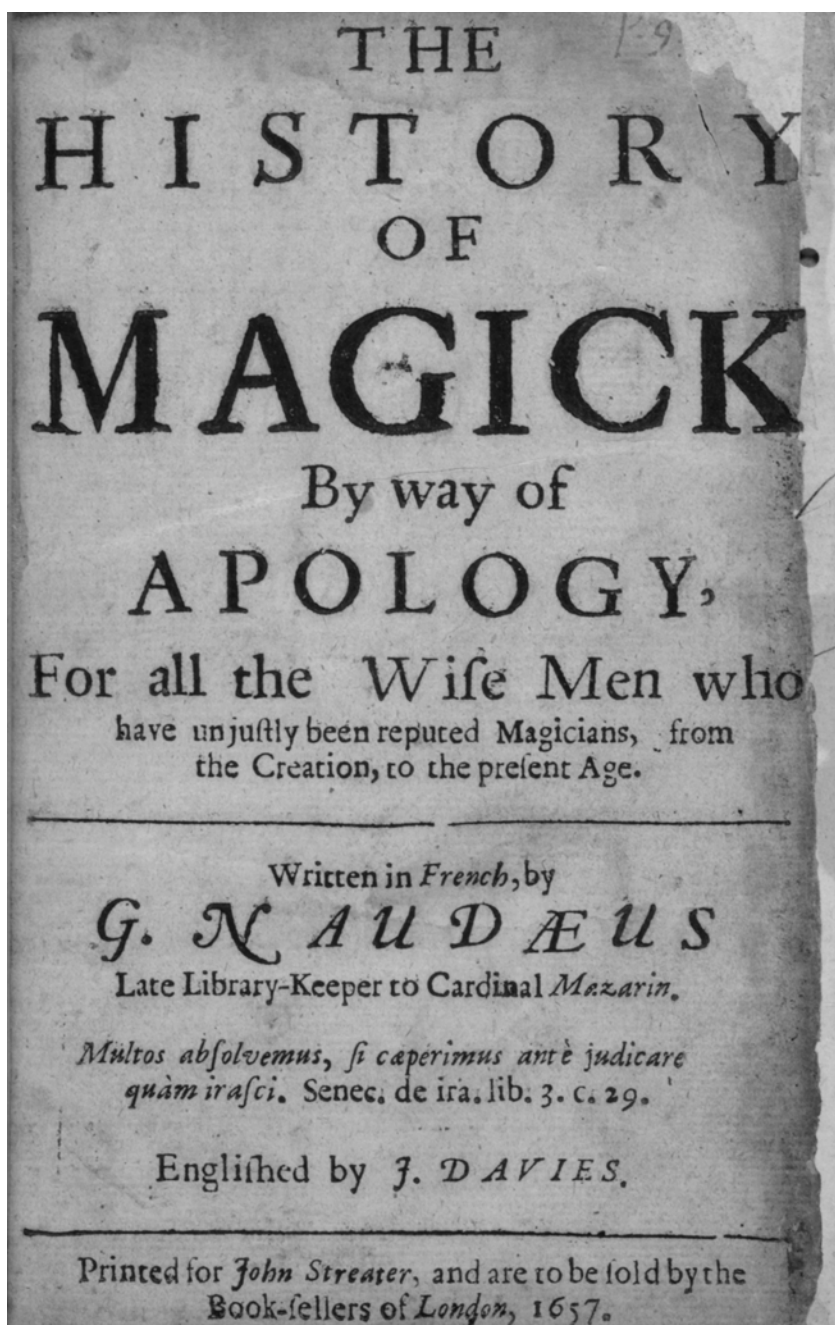
NAUMANN, Alexander

Lehr- und Handbuch der Thermochemie. . . .

Brunswick: Druck und Verlag von Friedrich Vieweg und Sohn. 1882.

First edition. 8vo. xi, (1), 606 pp., 1 leaf (errata). Fine copy in original half russia, cloth sides, spine gilt-ruled, maroon leather label.

AN IMPORTANT early treatise on chemical thermodynamics, containing numerous tables listing vast amounts of useful data on exothermic and endothermic reactions, heats of formation of inorganic and organic compounds, dissociation, etc. Naumann (1837–1922), professor of chemistry at Giessen, began his career as an organic chemist but later turned to physical chemistry and especially to thermochemistry. "During the 1860s the thermodynamic knowledge recently acquired in physics was slowly penetrating the field of chemistry, and the results of Naumann's tireless work contributed significantly to preparing the way for later important discoveries in chemical thermodynamics" (F. Szabadvary, in D.S.B., who describes this as a "most important book"). Naumann made valuable contributions toward Guldberg and Waage's law of mass action, and Partington (IV, 593–594) refers to Naumann's researches but not to this title. Greatly expanded and updated from the author's *Grundriss der Thermochemie* (Brunswick, 1869), this book contains thousands of references to contemporary literature and a comprehensive index. (Bolton, 694; D.S.B., IX, 619–620)



Naudé. History of Magick. London, 1657.

NAVIER, Pierre Toussaint

Contre-Poisons de l'Arsenic, du Sublimé Corrosif, du Vert-de-Gris et du Plomb. Suivis de trois Dissertations intitulées; La première, Recherches Médico-Chymiques sur différents moyens de dissoudre le Mercure, &c. La Seconde, Exposition de différents moyens d'unir le Mercure au Fer, &c. La troisième, Nouvelles Observations sur l'Ether, &c. Par M. Pierre-Toussaint Navier, . . .

Paris: Chez P. Théophile Barrois le jeune, rue du Hurepoix, près le Pont S.-Michel. 1777.

First edition. 2 vols., 12mo. I: 2 leaves, xxv, (1), 30, 360 pp. II: xxi, (1), 389, (1) pp., 1 leaf (blank). Very fine copy in original mottled calf, spines richly gilt, maroon and dark-green labels. Signed by Navier (I, viii; II, xxi).

AN IMPORTANT treatise on toxicological chemistry, with details on antidotes for several types of poisons then encountered in everyday life. Navier (1712–1779), a court physician and member of the Académie Royale des Sciences, describes the preparation of compounds of arsenic, corrosive sublimate (mercuric chloride), verdigris (basic copper acetate), and lead salts. The common occurrence of these substances, their toxicity, and antidotes for accidental poisoning by them are discussed. The second volume contains a report dated 20 December 1774, signed by Bourdelin, Lassone, and Lavoisier (pp. 213–228), on organic compounds (esters) obtained by the reaction of ethyl alcohol with solutions of various metals in nitric acid and hydrochloric acid. Navier states that “ethers nitreux” are produced (probably ethyl nitrate and ethyl chloride). In this copy on each title page a printed slip is pasted over the original imprint (“Chez la Veuve Méquignon . . . Didot le jeune”), with the P. T. Barrois le jeune imprint, as above. (Blake, 320; Bolton, 694; Duveen, 423; Duveen, *Bibliography of Lavoisier, Supplement*, No. 758; Ferchl, 378; Neu, 2912; Poggendorff, II, 260; Waring, 263, 423, 501; Wellcome, IV, 216)

NAVIER, Pierre Toussaint

Précis des Moyens de Secourir les Personnes Empoisonnées par les Poisons corrosifs. Extraits de l'Ouvrage des Contre-poisons de l'Arsenic, du Sublimé corrosif, du Vert-de-gris & du Plomb, &c. de M. Navier . . . Par Mrs. Navier fils . . .

Paris: De l'Imprimerie Royale. 1778.

First edition. 8vo. vii, (1), 55, (1) pp. Free endpapers torn; otherwise very good copy in contemporary maroon morocco, covers triple-gilt ruled, inner dentelles gilt, spine richly gilt, green label, all edges gilt.

A SUMMARY OF part of Navier's *Contre-poisons de l'arsenic* . . . (Paris, 1777, 2 vols.), by his two sons, who were physicians in the Faculties of Medicine at Paris and Rheims, as well as members of the Académie des Sciences. The first part gives a general account of poisons and their treatment, and the second discusses specific poisons: arsenic and compounds of mercury, copper, and lead. At the end formulas are given for preparing seven types of antidote. These comprise various mixtures of chalk, flowers of sulphur, iron filings, niter, olive oil, potash, soap, etc. (Blake, 320; Wellcome, IV, 216)

NAXAGORAS, Johann Ehrd von

Alchymia Denudata Revisa et Aucta, oder dass biss anhero nie recht geglaubte, durch die Experienz Nunmehr aber würcklich; beglaubte . . . Wunder der Natur, nebst . . . Beschreibung der unweit Zwickau in Meissen zu Nieder-Hohendorff und anderer umliegenden Orten gefundenen Goldischen Sande . . .

Leipzig & Wismar: Verlegts Samuel Gottlieb Lochmann. 1723.

Third edition. 8vo. 15 leaves, 202 pp. Title in red and black. With divisional title page (p. 161) to *Goldischen Sande* dated 1715. Few minor stains, and occasional early underlining and marginal notes; otherwise very good copy in original unlettered, gilt-ruled patterned boards. Old stamp on verso of title page: Bibliotheca Ponickaviana.

THE ALCHEMICAL works of Naxagoras “seem to be rare, as Kopp got them only in the libraries of Breslau, Frankfurt am Main, and Rostock” (Ferguson, II, 130). The name Naxagoras is a pseudonym for Johann Neithold (dates unknown), who styled himself a Silesian nobleman, but who was evidently a charlatan and “an arch-deceiver and a master of sophistry” (Fictuld, *Probiar-Stein*, 1753, vol. 2, p. 102). In the second edition (Breslau, 1716) the supplement entitled *Beschreibung der Goldischen Sande*, which had first appeared separately in 1696, was added. Kopp (*Die Alchemie*, 1886, II, 211–213) gives a detailed description of the different editions. The work was later enlarged with a second part (Leipzig and Stralsund, 1728). Caillet, Duveen, and Neu list other editions of this title. (Ferchl, 379; Ferguson, II, 127 [not in Young Coll.]; Smith, 341)

NAXAGORAS, Johann Ehrd von

Ausführliche Beschreibung der unweit Zwickau in Meissen zu Niederhohendorff und anderer umliegenden Orten gefundene Goldischen Sande . . .

In Verlegung dess Autors (no place, no printer). 1696.

First edition. 8vo. 64 pp. Fine copy in modern dark-blue boards.

THE FIRST alchemical work of the author, which includes an early account of the important discovery of clays for making porcelain near Zwickau in Meissen. The text describes the chemical analysis of the “golden” (i.e., gold-bearing) sand and attempts to extract gold by amalgamation with mercury or by dissolution in aqua regia. Published at the expense of the author, the dedication is dated from Leipzig, 16 June 1696. Kopp discusses Naxagoras and the titles, dates, and editions of his works in detail. Evidently Kopp had never seen a copy of the present first edition, as he mentions only later editions of this title. Ferguson gives the full title of this extremely rare book, which remained unknown even to eighteenth-century bibliographers of chemistry (e.g., Baumer, Gmelin, Lenglet-Dufresnoy, Manget, and Schmieder). Not in Duveen, Guaita, Krivatsy, Wellcome, etc. (Caillet, 7934; Ferchl, 379; Ferguson, II, 129; Kopp, *Die Alchemie*, II, 212)

NAXAGORAS, Johann Ehrd von

Chymischer odor Alchymistischer Particular Zeiger, das ist Treuer Unterricht vom Gold- und Silber-machen, Vermittelt selchem einer, der sonst sein Brodt erwerben muss, bloss durch die eine Zeither nach einander, von einem und andern Authore in öffentlichen Druck beförderte dem Ansehen nach geringe Zinnober Experimenta . . . Allen Ignoranten, so die Transmutation oder Maturation der Metallen . . . von I.N.V.E.J. E.A.S.P.C.

Rostock: zu finden bey Johann Heinrich Russworm. 1706.

First edition. 8vo. 8 leaves, 75, (1) pp. Fine copy in brown speckled boards antique.

AN ALCHEMICAL work on transmutation, describing twenty-five experiments in which cinnabar (native mercuric sulphide) is supposedly converted into gold and silver by reacting it with various chemicals. János Ádám Hofsteter spoke approvingly of this tract in his *Dissertatio solennis de cinnabari nativa* (Copenhagen, 1714), and Kopp describes the contents. The name of the author is cryptically denoted in the title by the letters “I.N.V.E.J. E.A.S.P.C.”: i.e., Ich Naxagoras von Ehrd Johann, Eques Auratus ac Sacri Palatii Comes. Other editions: second (Rostock and Leipzig, 1707; Smith, 342) and third (Rostock and Leipzig, 1715; Ferguson, II, 129–130; Wellcome, IV, 216). Rare. (Duveen, 424; Ferchl, 379; Ferguson Coll., 490; Kopp, *Die Alchemie*, 1886, II, 211; Neu, 2915)

NAXAGORAS, Johann Ehrd von

Experientia Naxagorae, secundum Annulos Platonicos, et Catenam Auream Homeri. Worinnen der wahrhafftige Process, die Universal-Medicin zu elaboriren, so wohl vor den menschlichen Leib, als die Metalla zu verbessern; klar und aufrichtig vor Augen lieget.

Frankfurt am Main: Auf Kosten guter Freunde, und in Commission bey Dominico von Sand. 1723.

First edition. 8vo. 4 leaves, 184 pp. Occasional marginalia and neat underlining by an early-eighteenth-century adept; otherwise very good copy in original unlettered half vellum, marbled boards. Bookplates of Walther Königsberger and the American physiologist Arno B. Luckhardt (1885–1957), codiscoverer of the anesthetic properties of ethylene gas.

DESPITE THE *Catenam Auream Homeri* in the title, this work has nothing to do with Kirchweger's *Aurea Catena Homeri*, which also first appeared in 1723. According to a printed notice on the verso of the title page, this book is based on a manuscript that was purchased at a considerable price. The text deals with the preparation of the philosopher's stone and the transmutation of mercury and silver into gold, with numerous references to the alchemical writings of Basil Valentine, Batsdorff, Bernardus Trevisanus, Paracelsus, and others. Kopp (*Die Alchemie*, 1886, II, 208–209) discusses the present work. (Duveen, 425–426; Ferchl, 379; Ferguson, II, 130; Neu, 2917)

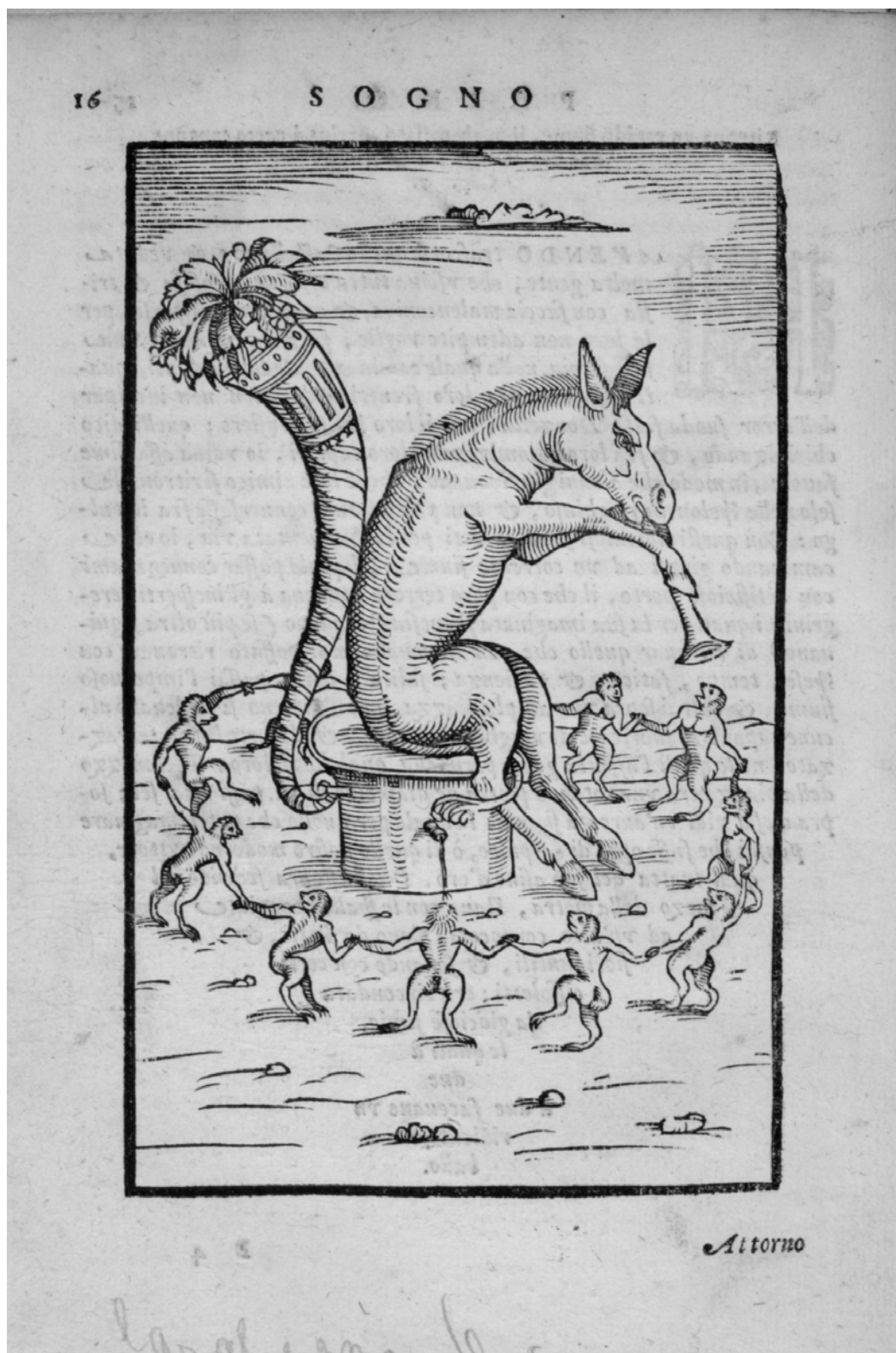
NAZARI, Giovanni Battista

Della Tramutatione Metallica Sogni Tre . . . Nel primo de quali si tratta della falsa tramutatione sofistica. Nel secondo della utile tramutatione detta reale usuale. Nel terzo della divina tramutatione detta reale Filosofica. Aggiuntovi di nuovo la Concordanza de Filosofi, & loro Prattica: Nellaquale, si vede i gradi, & termini di esso divino magistero, & della verissima Compositione della Filosofia Naturale, con laquale ogni cosa diminuta si riduce al vero Solificio, & Lunificio. Con un copioso Indice per ciascun sogno de gli Autori, & dell'Opere c'hanno sopra di cio trattato.

Brescia: Appresso Pietro Maria Marchetti. 1599.

Third edition. 4to. 8 leaves, 231, (1) pp. Roman and italic letter. Woodcut device on title and last page, 4 full-page woodcuts, 2 smaller text illustrations (each repeated 3 times), woodcut frame (repeated twice), 2 woodcuts of alchemical symbols (pp. 70–71). Ornamental woodcut initials, head- and tailpieces. Few minor stains and early annotations; otherwise very good copy, in original vellum.

THE FINAL and best edition of this important alchemical work, and the first to contain the *Concordantia de Filosofi* (pp. 169–231). Four grotesque woodcuts illustrate the three



Nazari. Della Tramutazione Metallica. Brescia, 1599.

sogni (dreams). Some woodcuts represent Bernhardus Trevisanus instructing the author, and others show Nazari (fl. 1560) asleep and dreaming about alchemy in an oak wood. The first two *sogni* appeared as *Il metamorfosi metallica et humano* (Brescia, 1564), and they were reprinted (Brescia, 1572) with a third *sogno*. The book is valuable for its list of alchemists and their works, showing the extent of alchemical literature at the end of the sixteenth century (pp. 135–144). (British Library, *S.T.C. Italian, 1465–1600*, p. 463; Duveen, 426; Edelstein, 1680; Ferchl, 379; Ferguson, II, 131; Ferguson Coll., 488; Mellon, No. 55; Neu, 2920; Thorndike, V, 625, 679–695; Verginelli, 229; Waller, 11198; Watt, II, 696q; Wellcome, I, 4517)

NEANDER, Johann

Tabacologia: hoc est Tabaci, seu Nicotianae descriptio Medico-Chirurgico-Pharmaceutica vel ejus praeparatio et usus in omnibus ferme corporis humani incommodis . . .

Leyden: Ex Officina Isaaci Elzeviri, Jurati Academiae Typographi. 1626.

Second edition. 4to. 18 leaves, 256 pp., 2 leaves. With beautiful engraved title page (including chemical apparatus), and 9 finely engraved plates (tobacco plants, their cultivation, harvesting and preparation, hookahs, pipes). Occasional minor water stains; otherwise good copy in original unlettered vellum.

THE RARE second edition of the most famous early book dealing wholly with the subject of tobacco, almost identical to the first of 1622, except for the prefatory leaves. Some copies have a portrait, which this copy appears never to have had. Neander (b. 1596), a physician of Bremen, treats tobacco as a medicine, especially against the plague. Of pharmaceutical chemical interest are the prescriptions containing tobacco for treating a wide variety of diseases. Three of the fine plates are etchings by the famous Dutch painter Moses van Uytenbroeck, showing Indians preparing tobacco, and these are the earliest illustrations of the American tobacco trade. The last two leaves contain a poem in Dutch, by Joost van Ravelingen, praising tobacco. Its popularity as a stimulant spread rapidly during the early seventeenth century, and on page 47 is an account of the postmortem of a young man whose death is attributed to his addiction to smoking, having had no previous illness. Jacques Veyras translated this work into French as *Traicté du tabac* (Lyons, 1625). (Ferguson Coll., 488; Osler, 3490; Sabin, 52173; Waller, 6823; Waring, 709; Wellcome, I, 4518; Willems, 257)

NEANDER, Josiah Christopher

Disputatio Physica de Elementis in Genere; . . . dirigente . . . Dn. Johanne Sperlingen, . . . publicè ventilandam proponit Josias Christophorus Neander, Luben: Lus. A. & R. In Auditorio Majori, ad diem 17. Julij horis matutinis.

Wittenberg: Typis Johannis Haken. 1650.

First edition. 4to. 12 leaves. Fine crisp copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated. Bound with: Kotay, J., *Disputatio physica de elementis* (Wittenberg, 1649).

A DOCTORAL DISSERTATION on the properties of the four Aristotelian elements (air, earth, fire, water), presided over by Sperling (1603–1658), professor of physics at the University of Wittenberg. The term *element* is defined, with references to the writings of Aristotle. Neander then discusses the possibility of transmuting these elements, with citations from works by Magirus, Sennert, Balduin, Cardan, et al. He maintains that all of the elements possess properties in common and asks rhetorically if they can be generated and corrupted. These doubts were expressed again a decade later by Robert Boyle, in *The Sceptical Chymist* (1661). No reference to Neander or this very rare work has been found.

NEEDHAM, Walter

Disquisitio Anatomica de Formato Foetu. . . .

London: Typis Gulielmi Godbid, prostantq(ue) venales apud Radulphum Needham, ad Insigne Campanae, in vico vulgo vocato Little-St. Bartholomews. 1667.

First edition. 8vo. 12 leaves, 205, (1) pp., 1 leaf (blank), 8 leaves. With 7 folding copperplates. Fine copy, with wide margins, in unlettered original paneled calf, rebound and repaired. Inscription dated 1694 on front flyleaf: "Sum Antonii . . ."

THE PHYSICIAN and anatomist Needham (1631–1691), F.R.S. (1671), was one of the earliest to carry out biochemical experiments. Dedicated to Robert Boyle, this is the "founding work of developmental chemical embryology, the first book to report chemical experiments on the developing mammalian embryo, and the first to give instructions on dissections of embryos . . . also the first to describe the solid bodies in the amniotic fluid" (Garrison-Morton, 467.2). The absorption of air into the bloodstream is described in chapter 6 (pp. 129–175), with references to Bartholin, Boyle, Harvey, Henshaw, Lower, Sylvius, Willis, et al. "Needham was particularly interested in fetal nutrition, opposing the notion that the fetus feeds on amniotic fluid by mouth and defending the Harveian view that nourishment passes to the fetus via the umbilical vessels. He

analyzed the chemical composition of the embryonic liquids" (Norman, 1579). The chemical experiments are discussed by Joseph Needham (*History of Embryology*, 1934, pp. 138–141). The book is described as a "standard work" by Munk (I, 472) and as "still worthy of note" by Thornton & Tully (p. 139). (Eales, 669; Ferchl, 379; Fulton, 267; Krivatsy, 8283; Parkinson & Lumb, 1726; Partington, II, 573; Waller, 6824; Watt, II, 697v; Wing, N411)

NEHR, Johann Joseph

Beschreibung der mineralischen Quellen zu Marienbad auf der Stiftsberrschaft Tepl nahe bei dem Dorfe Auschowitz.
Karlsbad: gedruckt bei Johanna Franieck, Wittwe. 1813.

First edition. 8vo. 6 leaves, 84 pp. With folding printed table facing page 24. Fine copy in quarter maroon morocco antique, marbled boards, spine gilt-lettered and dated, with original blue wrappers bound in. Old stamp on title: Medic. Chirurg. Bibliothek Altenburg.

THE DEFINITIVE early work on the mineral waters of Marienbad (Mariánské Lázně), an important spa in the West Bohemia region of Czechoslovakia. Nehr traces the history of the spa from 1596, discusses the composition and healing properties of the waters, and gives a detailed table of their content (including salts and gases). The mineral springs that made Marienbad famous as a spa were long the property of Tepl Abbey (twelfth century), about 14 kilometers from the town. "Josef Nehr, the abbey's doctor (1779–1820), demonstrated the therapeutic properties of the peat and springs. . . . Special features of the springs are the high iron content . . . and the strength of the alkaline-saline waters . . . the spa is now a centre for international congresses and symposia" (*Encyclopaedia Britannica*, 1971, vol. 14, p. 869). Very scarce. Not in Duveen or the usual early chemical bibliographies.

NERI, Antonio

L'Arte Vetraria distinta in Libri Sette . . . Ne quali si scoprono, effetti maravigliosi, & s'insegnano segreti bellissimi, del vetro nel fuoco & altre cose curiose. . . .
Florence: Nella Stamperia de' Giunti. 1612.

First edition. 4to. 4 leaves, 114 pp., 3 leaves. Woodcut printer's device on title page. Historiated woodcut capitals, head- and tailpieces. Very fine, crisp copy, in old vellum.

THE EARLIEST and most famous treatise on the chemistry and technology of glassmaking, in which the practical and closely guarded secrets of the art are revealed for the first time. "The work will forever remain of importance, not only for its intrinsic value, but for being the first connected treatise

on glassmaking. Neri was the first to make lead glass, he teaches how to calcine copper, which he uses in colouring glass red, and recommends the purple residue of an evaporated solution of gold in aqua regia for colouring glass, a suggestion first adopted by Kunckel. His researches, backed up by the physical ones of the Accademia del Cimento, developed a powerful glass-making industry in Italy, and made Florentine and Venetian glass wares world-famous" (Zeitlinger). Neri (1576–1614), a priest, learned the art of glassmaking at Murano and continued his studies on chemistry and glass at Antwerp. His book "served as a nucleus for the observations of later writers" (D.S.B.). Many editions and translations appeared throughout the seventeenth, eighteenth, and early nineteenth centuries. A milestone work in the chemistry and technology of glassmaking, which was "not seen" by Partington. Very rare. (Bolton, 696; D.S.B., X, 23; Duncan, 9299; Duveen, *Supplement*, 276; Ferchl, 380; Ferguson, II, 135 [not in Young Coll.]; Ferguson Coll., 490; Ferguson, *Books of Secrets*, I, pt. 3, p. 40; Honeyman, 2296; Partington, II, 368; Poggendorff, II, 269; Singer, *History of Technology*, III, 217; Sotheran, Cat. 800 [1926], 13123; Thorndike, VII, 249; Thornton & Tully, 117; Wellcome, I, 4526)

NERI, Antonio

L'Arte Vetraria distinta in Libri Sette . . . Impressione seconda, ricorretta, ed espurgata da vari errori. . . .
Florence: Per Marco Rabbuiati. Nella Stamperia della Fortuna. 1661.

Second edition. 8vo. 8 leaves (first blank), 192 pp. Title-vignette. Ornamental woodcut capitals, head- and tailpieces. Bottom of spine slightly defective; otherwise fine copy, in original limp vellum.

THE SECOND edition in Italian of this celebrated work, and the first in octavo format. Dedicated by Rabbuiati to Silvio Alli, the first edition of 1612 having been dedicated by Neri to Antonio Medici. Corrections in this edition were made by Rabbuiati, and the text follows closely that of the 1612 edition. (British Library, *17th Century Italian*, p. 612; D.S.B., X, 23; Duncan, 9299; Ferguson, II, 135 [not in Young Coll.]; Ferguson Coll., 490; Ferguson, *Books of Secrets*, I, pt. 3, p. 41, II, *1st Supplement*, p. 33; Partington, II, 368; Smith, 343; Sotheran, Cat. 800 [1926], 13125 ["Rare"]; Thornton & Tully, 117)

NERI, Antonio

L'Arte Vetraria Distinta in Libri Sette. . . Dedicata All'Illustrissimi Signori Giacomo, e Giovanni Polli Nobili Veneti.

Venice: Appresso Giacomo Batti. 1663.

Third edition. 12mo. 261, (1) pp. Title within double rules, with woodcut vignette. Woodcut capitals, head- and tailpieces. Some leaves towards the end embrowned, with occasional minor worming in gutter (not affecting text). Small piece of signature L7 missing (pp. 253–254), replaced at an early date with contemporary paper, and 5 lines of index neatly filled in. Otherwise good copy in original vellum.

THE THIRD edition in Italian, the first to be printed in Venice, and the first in duodecimo format. Dedicated by the printer Giacomo Batti (active 1647–63) to the two Venetian noblemen Giacomo and Giovanni Polli, the text follows closely that of the original edition (1612). Very rare. Not in the usual chemical bibliographies. (British Library, *17th Century Italian*, p. 612; D.S.B., X, 23; Duncan, 9299; Ferchl, 380; Ferguson, II, 135 [not in Young Coll.]; Partington, II, 368)

NERI, Antonio

L'Arte Vetraria Distinta in Libri Sette . . . Ne' quali si scoprono maravigliosi effetti, e s'insegnano Segreti bellissimi del Vetro nel Fuoco, & altre cose curiose.

Venice: Appresso Steffano Curti. 1678.

Fourth edition. 12mo. 201, (1) pp., 1 leaf (blank). Title within double rules, with large woodcut vignette. Woodcut capitals, head- and tailpieces. Very good copy in original calf, gilt. From the celebrated library of the Scottish patriot Andrew Fletcher (1655–1716), with his cipher ("AF" overlapping) on title page.

THE FOURTH and final early edition in Italian, the second printed in Venice and the first by Steffano Curti (active 1663–96). Unlike the first Venice printing (1663), there is no dedication in this edition. The text is that of the original edition of 1612. Very rare. (British Library, *17th Century Italian*, p. 612; D.S.B., X, 23; Duncan, 9299; Ferguson, II, 135 [not in Young Coll.]; Ferguson, *Books of Secrets*, I, pt. 3, p. 41)

NERI, Antonio

L'Arte Vetraria di Prete Antonio Neri.

(Venice: Francesco Pezzana. 1781).

Fifth edition. 8vo. 159, (1) pp. Caption title. Very good copy, uncut, in original Italian pasteboards.

THE FIFTH edition in Italian, and although copies were sold separately (as here), most were appended to volume 3

of the first Italian edition of the *Chimica Sperimentale e Ragionata* (Venice: Francesco di Niccolo Pezzana, 1781). The license leaf refers to Francesco Pezzana and is dated 25 April 1781. Ferguson (*Books of Secrets*, II, 3rd suppl., p. 41) describes the sixth Italian edition only (Venice: F. Pezzana, 1788; 143 pp.), which was also appended to volume 3 of Baumé's *Chimica Sperimentale* (second edition, Venice, 1788; Cole, 50). Ferguson states that "copies . . . were put separately in circulation." Unknown to Duncan, Partington, etc. (Cole, 49; Duveen, 53; Ferguson, II, 135 [not in Young Coll.]; Ferguson Coll., 490)

NERI, Antonio, and MERRETT, Christopher

The Art of Glass, wherein are shown the wayes to make and colour Glass, Pastes, Enamels, Lakes, and other Curiosities. Written in Italian by Antonio Neri, and Translated into English, with some Observations on the Author. Whereunto is added an account of the Glass Drops, made by the Royal Society, meeting at Gresham College.

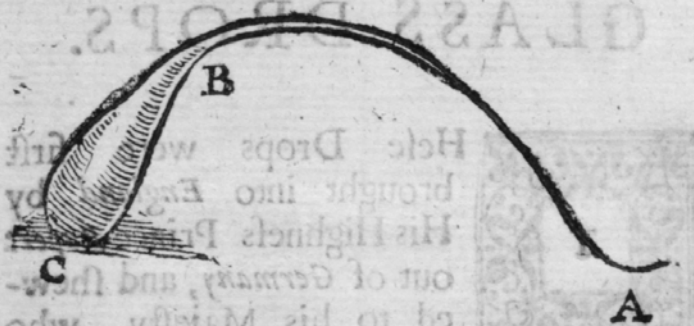
London: Printed by A. W. for Octavian Pulleyn, at the Sign of the Rose in St. Pauls Church-yard. 1662.

First English edition. 8vo. 12 leaves, 362 pp., 4 leaves (last 2 blank). Woodcut figure on page 354. Very fine copy, in original unlettered, blind-ruled calf. Inscription in ink of the celebrated Knowsley Library on inside of front cover.

THE FIRST English translation of the 1612 edition of Neri, containing many additions, corrections, and other information by Merrett (1614–1695), an original F.R.S., and friend of Robert Boyle, to whom the book is dedicated. A friend of William Harvey, Merrett became first Harveian librarian at the Royal College of Physicians (destroyed in the Great Fire, 1666). The part by Neri (203 pp.) is greatly augmented by Merrett's "observations" (pp. 205–352) comprising explanations, additions, and emendations, which almost double the length of the book and are of considerable chemical importance. The section on "Prince Rupert's drops" (pp. 353–362) describes their preparation and properties. "This is not only a rare but it is an instructive book . . . it gives the reader insight into how the sciences in the seventeenth century depended on the use of glass. . . . The account of the . . . furnaces, pots, materials and reagents, of the methods for making different qualities and colours of glass, is very well done" (Ferguson). (Bolton, II, 309; D.S.B., X, 23; Duncan, 9299; Duveen, 426; Ferguson, II, 135 [not in Young Coll.]; Ferguson Coll., 490; Ferguson, *Books of Secrets*, I, pt. 6, pp. 3–4; Fulton, *Boyle*, 263; Munk, I, Neu, 2926; Partington, II, 368; Pogendorff, II, 125; Singer, *History of Technology*, III, 218–221; Sotheran, Cat. 800 [1926], 13132; Thorndike, VII, 250; Thornton & Tully, 117; Watt, II, 699c; Wing, N438; Wolf, I, 500)

354 *An account of the Glass Drops.*
 experiments to be made in any kinde
 whatsoever, as being done with exceed-
 ing exactness.

*This account was given to the
 Society by Sir Robert Mo-
 ray, MDC LXI.*



A B the thread, B C the body, B the
 neck, A the point or end of the thread.

They are made of *Green-glass* well re-
 fined; till the Metall (as they call it) be
 well refined, they do not at all succeed,
 but crack and break, soon after they are
 dropt into the water.

The

NERI, Antonio, and MERRETT, Christopher

De Arte Vitraria Libri Septem, & in eosdem Christoph. Merretti . . . Observationes & Notae. In quibus omne gemmarum artificialium, encaustorum & laccarum artificium explicatur.

Amsterdam: Apud Andream Frisium. 1668.

First Latin edition, first issue. 12mo. 14 leaves, 232, (4), 235–455, (1) pp., 8 leaves. Woodcut (p. 421) and B2 (p. 23) mis-signed A2. Engraved title page (glassworks), printed title with engraved vignette, and 6 folding copperplates (kilns, glassblowing tools, etc.). Minor foxing in some margins; otherwise fine copy, in original speckled calf, gilt.

THE FIRST edition in Latin of Merrett's version of Neri (*Art of Glass*, London, 1662), translated by Andreas Prisius and dedicated to Theodor Kerckring, the translator and commentator of Basil Valentine. The book is important as being the first illustrated edition of Neri. The second issue of 1669, with altered title page, is otherwise identical to the first. (D.S.B., X, 23; Duncan, 9299; Duveen, 427; Ferguson, II, 135; Ferguson Coll., 491; Ferguson, *Books of Secrets*, I, pt. 3, p. 41; Neu, 2924; Partington, II, 368; Smith, 342; Sotheran, Cat. 832 [1932], 6111 ["Rare"]; Thornton & Tully, 117)

NERI, Antonio, and MERRETT, Christopher

De Arte Vitraria Libri VII. & in eosdem Christophori Merretti . . . Observationes & Notae. In quibus omne gemmarum artificialium, encaustorum & laccarum artificium explicatur.

Amsterdam: Apud Henr. Wetstenium. 1686.

Second Latin (first Wetsten) edition. 12mo. 18 leaves, 222, (2), 225–440 pp., 8 leaves. Engraved title page (glassworks), small woodcut on printed title, and 6 folding copperplates (kilns, glassblowing tools). Extremely fine copy, crisp and spotless, in full dark-green nineteenth-century levant morocco, both covers with broad filigree dentelles, gilt, inner dentelles gilt, all edges gilt, spine richly gilt.

THE FINAL edition in Latin, translated by Andreas Frisius, with an additional dedication to Theodore Kerckring (dated March 1686) praising his translation of Basil Valentine's *Currum Triumphalem Antimonii* (Amsterdam, 1671 and 1685). The text follows that of the first Latin edition (1668). The engraved title and the plates are identical to those of the 1668 edition, with appropriate changes in wording and pagination. Bolton, Ferchl, and Poggendorff give the wrong date (1681), thus creating a ghost. Not in D.S.B., Partington, Smith, Thornton & Tully, etc. (Bolton, 696; Duncan, 9299; Duveen, 427 [imperf.]; Ferchl, 380; Ferguson, II, 135 [not in Young Coll.]; Ferguson Coll., 491; Ferguson, *Books of Secrets*, I, pt. 3, p. 41; Neu, 2925; Poggendorff, II, 269; Sotheran, Cat. 800 [1926], 13130 ["Rare"]; Thorndike, VII, 250)

NERI, Antonio, MERRETT, Christopher, KUNCKEL, Johann, et al.

*Art de la Verrerie, de Neri, Merret et Kunckel. Auquel on a ajouté Le Sol Sine Veste d'Orschall; L'Helioscopium videndi sine veste solem Chymicum; Le Sol Non Sine Veste; Le Chapitre XI. du Flora Saturnizans de Henckel, sur la Vitrification des Végétaux; Un Mémoire sur la maniere de faire le Saffre; Le Secret des vraies Porcelaines de la Chine & de Saxe. Ouvrages ou l'on trouvera la maniere de faire le Verre & le Crystal, d'y porter des Couleurs, d'imiter les Pierres Précieuses, de préparer & colorer les Emaux, de faire la Potasse, de Peindre sur le Verre, de préparer des Vernis, de composer des Couvertes pour les Fayances & Poteries, d'extraire la Couleur Pourpre de l'Or, de contrefaire les Rubis, de faire le Saffre, de faire & peindre les Porcelaines, &c. Traduits de l'Allemand, par M. D***.*

Paris: Chez Durand & Pissot. 1752.

First French edition. 4to. 2 leaves, 55, (1), 629, (1) pp., 1 leaf (privilege). Engraved frontispiece, 16 folding copperplates, and 5 text woodcuts. Very fine copy with wide margins, sumptuously printed and illustrated, in original sprinkled calf, maroon morocco label, rebounded with original gilt spine laid on.

THE MOST important collection of early works on glass-making and allied industries to appear in the eighteenth century, translated and edited by Baron d'Holbach (1723–1789) from the German editions (most of which are now very rare). This classic work summarizes all the knowledge then available on the chemistry and technology of glass-making and is valuable for the notes and additions by d'Holbach. A memoir by Zimmermann at the end describes processes for making the famous cobalt blue used in porcelain made in Saxony (pp. 589–600). Also described are the manufacture and coloring of porcelain made in China and Saxony (pp. 601–616). Another edition appeared (Paris, 1759). (Bolton, 696 [wrong date: 1754]; Cole, 971; D.S.B., X, 23; Duncan, 6194; Duveen, 427; Ferchl, 380; Ferguson, II, 135 [not in Young Coll.]; Ferguson Coll., 491; Ferguson, *Books of Secrets*, I, pt. 6, p. 4; Morgan, 554; Neu, 2927; Partington, II, 364; Poggendorff, II, 269; Smith, 343; Sotheran, Cat. 832 [1932], 6117)

NESBIT, John Collis

On Agricultural Chemistry, and the Nature and Properties of Peruvian Guano.

London: Longman and Co. (1856).

Third edition. 8vo. (in 4s). 2 leaves, 128 pp. Fine copy in the original blind-stamped, patterned green cloth, gilt-lettered on front cover and spine. With several woodcuts in the text.

NESBIT (1818–1862), an eminent agricultural chemist, was a fellow of the Geological Society (F.G.S.), as well as a fellow of the Chemical Society, London. He was the son of Anthony Nesbit (1778–1859), a schoolmaster who published works on land surveying. John Nesbit introduced natural science teaching into his father's school, which he converted into a chemical and agricultural college, known as the College of Agriculture and Chemistry, and of Practical and General Science. The college, of which J. C. Nesbit was principal, was in Kennington, a borough of London. The first leaf of this copy comprises an advertisement for the college, with fees for analyses, and the statement: "A limited number of students are received at the College, at which unusual facilities are afforded of acquiring a thorough knowledge of Analytical Chemistry, and every other branch of science requisite to prepare youth for the pursuits of Agriculture, Engineering, Mining, Manufactures and the Arts." Nesbit was obviously an energetic and enterprising man.

He was a promoter of chemical fertilizers, especially Peruvian guano, which is rich in phosphates. Nesbit states in the preface that this work comprises a summary of his lectures on chemical manures, lime, and Peruvian guano, which he recommended highly. The author discusses (p. 31 et seq.) Kuhlmann's beneficial use of such nitrogen-containing fertilizers as sodium nitrate, ammonia, and dissolved bones. Pages 127–128 reproduce a letter on nitrification sent by Nesbit to Philip Pusey (1799–1855), an agriculturist who was prominent in the formation of the Royal Agricultural Society of England (1840). A scarce work, a Swedish edition of which also appeared (Stockholm, 1863). Not in Duveen, Ferchl, Morgan, Partington, Poggendorff, Smith, Waller, etc. (Bolton, I, 309)

NESSSEL, Edmond

Traité des Eaux de Spa avec une Analyse d'icelles, leurs vertus et usage. . . .

Spa: Chez J. Salpeteur; & Liège: Chez la Vefve d'Adrien Brixhe, ruë du Pot d'Or à l'Enseigne du Faucon. 1699.

First edition. 8vo. (in 4s). 4 leaves (first blank), 116 pp. Woodcut ornament on title page. Folding copperplate of insect (caddis-fly larva) facing page 80. Fine copy, in original calf, rebacked, spine unlettered.

THE RARE first edition of this excellent work on the chemical and medicinal properties of the mineral waters at Spa, Belgium. Nessel (1658–1731), a physician who practiced at Spa, discusses the chemical analyses of these waters and describes the cures effected by drinking the waters. (Ferguson Coll., 491; Goldsmith, N123; Krivatsy, 8293; Parkinson & Lumb, 1728)

NESSSEL, Edmond

A Treatise Concerning the Medicinal Spaw Waters. . . . Dedicated to the College of Physicians of London. Translated out of French into English. Published for the Discovering and Preventing of the common Imposition in the Use of bad Spaw Waters, which never came from the Spaw. Containing Directions likewise for such as Drink them.

London: Printed and Sold by J. Downing in Bartholomew-Close near West-Smithfield; and by the Book-sellers of London and Westminster. 1715.

First edition, second issue. 8vo. (in 4s). viii, 56 pp. Margins cut close (not touching text); otherwise good copy, in dark-brown quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE FIRST English translation of the *Traité des eaux de Spa* (1699), with the text of the original French edition and the English version in parallel columns on each page. In the first issue the title page is dated 1714. (Blake, 321; Duveen, 427; Eales, 1253; Neu, 2930; Waring, 775; Watt, II, 699g)

NEUKRANTZ, Zacharias

Abstrusum Respirationis Humanae Negotium, exulante famosa vacui fuga, . . . simul cum ardui istius Harveani, doctis omnibus L. de Gen. Animal. Exerc. de Partu proposui, nec non bimembris hujus problematis solutione; cur animalia tam propter aeris inspirati cohibitive, praesentiam, quam in Machina Boyleana Pneumatica exhausta ejusdem aeris absentiam tam velociter quasi ex anima succumbant, brevique moriantur? Sub schemate dissertationis philosophico-medicae, . . . Dn. Michaelis Etmulleri, . . . In auditorio majori ad diem VII Aprilis . . . author Zacharias Neukrantz, Hamburg. . . .

Leipzig: Typis Joh. Georg. 1676.

First edition. 4to. 57 leaves, unpaginated. Fine, crisp copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation on theories of respiration, with particular reference to John Mayow. "Zacharias Neukrantz, of Hamburg, later a physician and inspector of schools in Torgau, presented under Etmuller's presidency an elaborate thesis on respiration in which Mayow's theories are fully and critically discussed. It quotes a large number of authors, including Guericke, Torricelli, Boyle, Lower, Thru-ston, Mayow, and Pechin, and Mayow's *Tractatus Quinque* (1674) repeatedly by page. Chapter V explains Mayow's theory of the action of the diaphragm and the intercostal muscles in the mechanism of respiration. Chapter VII deals with mechanical properties of air, Guericke, Torricelli, and

especially Boyle, being quoted" (Partington, who discusses this treatise in detail). Chapter IX is devoted entirely to Harvey's theory of the respiration of the fetus. A very rare book. Partington had no access to this first edition, as he quotes from Etmuller's *Opera Omnia* (Frankfurt, 1688), in which it is reprinted. Not in the usual early chemical bibliographies. (Partington, II, 617–619)

NEUMANN, Caspar

The Chemical Works of Caspar Neumann, M.D. Professor of Chemistry at Berlin . . . Abridged and Methodized. With large Additions, Containing the later Discoveries and Improvements made in Chemistry and the Arts depending thereon, by William Lewis, M.B. . . .

London: Printed for W. Johnston, G. Keith, A. Linde, P. Davey, and B. Law, T. Field, T. Caslon, and E. Dilly. 1759.

First English edition. 4to. 8 leaves, 586, (38) pp. Very fine copy in original gilt-ruled speckled calf, crimson morocco label.

ORIGINALLY APPRENTICED to several apothecaries, Neumann (1683–1737) of Züllichau, Silesia, in 1711 was sent by Frederick I to study technology, mining, pharmacy, and chemistry in Germany, Holland, and England. In 1716 he followed George I to Hanover and later Berlin; there Stahl obtained for him a royal stipend with which he visited England and then France, where he worked with the Geoffroys. Elected to the Berlin Academy (1723), he became professor of practical chemistry in the new Collegium Medico-Chirurgicum. He was elected F.R.S. in 1725. The present work is an abridged translation of Neumann's *Chemiae medicae dogmatico-experimentalis* (Züllichau, 1756), which was posthumously published. The translator, William Lewis (aided by his assistant, Alexander Chisholm), has added extensive notes based on experiments carried out in his "own laboratory." The text is divided into three approximately equal parts covering the mineral, vegetable, and animal kingdoms. One of the best textbooks of the period, it contains (according to Cole) "the first exposition of Stahl's phlogiston theory in English." A bibliography of Neumann's publications appears in the preface. (Blake, 323; Bolton, 698; Cole, 973; D.S.B., VIII, 297, X, 26; Ferguson, II, 137 [not in Young Coll.]; Neu, 2936; Partington, II, 703; Poggendorff, I, 1443, II, 273; Smith, 343; Wellcome, IV, 224)

NEUMANN, Caspar

The Chemical Works of Caspar Neumann, M.D. Professor of Chemistry at Berlin, F.R.S. &c. Abridged and Methodized; with Large Additions, containing the Later Discoveries and Improvements made in Chemistry, and the Arts depending thereon. By William Lewis, M.B. F.R.S. The Second Edition. Vol. I (II.)

London: Printed for J. and F. Rivington; T. Davies; W. Johnston; G. Keith; S. Crowder; T. Caslon; T. Longman; T. Becket; B. Law; E. and C. Dilly; G. Robinson; T. Cadell; and W. Goldsmith. 1773.

Second English edition. 2 vols., 8vo. I: 9 leaves, 439, (1) pp. II: 6 leaves, 458 pp., 35 leaves (index). Very good copy, with the required half titles, in contemporary calf, tastefully re-backed by Bernard Middleton, the spines gilt-ruled, with gilt-lettered green morocco labels. From the library of Professor Franz Sondheimer (1926–1981), with his bookplate on the front pastedown endpaper of each volume.

THE SECOND edition in English but the first in 8vo. format. Although the first edition appeared fourteen years earlier (London, 1759), this second edition is an essentially unchanged reprint. It appears to be much rarer than the first edition in English. Not mentioned by Cushing, Ferguson Coll., Hoover, Morgan, Waller, Watt, etc. (Bolton, 698; D.S.B., X, 26; Duveen, 430; Edelstein, 1685; Ferchl, 381; Ferguson, II, 137 [not in Young Coll.]; Neu, 2937; Partington, II, 703; Poggendorff, II, 273; Smith, 344; Sondheimer, 1119)

NEUVIRTH, Augustus J. N.

Dissertatio Inauguralis Chémico-Médica sistens Salium Acidorum originem, naturam, ac combinationem in sales medios, vel praeparata. . . . Publicae disquisitioni submittit Aug. I. N. Neuvirth, Moravus Iglaviensis, . . . die (blank) mensis (blank) anno MDCCCLXXXII.

Vienna: Typis Mathiae Andreae Schmidt. (1782).

First edition. 8vo. 4 leaves, 45, (3) pp. With fine copperplate frontispiece portrait of Joan. Nepomuceno de Martini (the dedicatee). Woodcut head- and tailpieces. Very good copy in contemporary unlettered tree calf.

ON ACIDIC, neutral, and alkaline salts, with their preparation from various acids tabulated on pages 6–10. Neuvirth (dates unknown) discusses salts made from vegetable, animal, and mineral sources, with their medicinal virtues. An important and rare work that has remained unknown to chemical historians. Not in the usual early chemical bibliographies. (Waring, 102)

NEW METHOD

A New Method for the Improvement of the Manufacture of Drugs: in a Treatise on the Elixir Proprietatis. . .
London: Printed for C. Davis, . . . Printer to the Royal Society. 1747.

First edition. 8vo. 1 leaf, ii, 80 pp. Woodcut ornament on title. Good copy in quarter calf antique, marbled boards, spine gilt-lettered and dated.

AN ANONYMOUS phytochemical work on the preparation of plant products for pharmaceutical use, with many references to the writings of Boerhaave, Boyle, Geoffroy, Hoffmann, Quincy, et al. Newton's *Opticks* is mentioned on pages 37 and 39. Subjects covered include elixir proprietatis of Paracelsus; vegetable oils, balsams, gums and resins; myrrh; aloes; and saffron. Rare. Not in the usual chemical and medical bibliographies. (Blake, 323)

NEWLANDS, John Alexander Reina

On the Discovery of the Periodic Law, and on Relations among the Atomic Weights. . .
London: E. & F. N. Spon. 1884.

First edition. 8vo. viii, 39, (1) pp. + 15, (1) pp. (Spon advertisements). With 2 folding letterpress tables. Mint copy in original publisher's gilt-lettered green cloth.

THE ENGLISH chemist Newlands (1837–1898) has a strong claim to the discovery of the periodicity of atomic weights well before Mendeleev. "This little book contains an exact reprint of all the papers on Relations Among the Atomic Weights, and on the Periodic Law (provisionally termed the 'Law of Octaves'), written by myself, and printed in the *Chemical News*, some years before M. Mendelejeff had published anything on the subject of the Periodic Law" (preface). In 1863 Newlands began to publish a series of papers in *Chemical News* on regularities among atomic weights of the elements. He first developed the concept of atomic number and predicted that certain elements were "centres of triads, the extremes of which are at present unknown." In 1865 he published what is unquestionably a primitive periodic table, four years before the better-known version in 1869 by Mendeleev. Newlands noted that the periodic relationship was evident only if the atomic weights of Cannizzaro were employed, and he left blank spaces for unknown elements. Partington discusses this important work, and Newlands' struggle to be recognized for his contributions to the discovery of the periodicity of the elements, as set forth in this book. The Royal Society (of which Newlands was not a fellow) awarded him the Davy Medal in 1887. (Bolton, 142; D.S.B., X, 38; Edelstein, 1690; Morgan, 556; Norman, 1585; Partington, IV, 887; Smith, 346)

NEWTON, Sir Isaac

Opticks: or, A Treatise of the Reflexions, Refractions, Inflexions and Colours of Light. Also Two Treatises of the Species and Magnitude of Curvilinear Figures.
London: Printed for Sam. Smith, and Benj. Walford, Printers to the Royal Society, at the Prince's Arms in St. Paul's Church-yard. 1704.

First edition, first issue. 4to. 2 leaves, 144 + 211, (1) pp. Page 120 misnumbered 112. With 19 folding copperplates. Title in red and black. Very fine, crisp copy, with wide fore- and lower margins, in original blind-ruled calf, rebacked, dark-green morocco label.

ONE OF the great books in the history of science, in which Newton expounds his corpuscular (or emission) theory of light and all of his important discoveries in optics. He explains the formation of colors in the rainbow, "Newton's rings," the double refraction of Iceland spar, etc. The two mathematical treatises were intended to assert Newton's priority to the discovery of the calculus over Leibnitz. "Newton's *Opticks* did for light what his *Principia* had done for gravitation, namely, placed it on a scientific basis" (E. W. Brown). Pages 132–137 contain sixteen queries, some of which deal with purely chemical subjects (see Partington, II, 469). In later editions these queries were expanded to thirty-one in number. The overall importance of this classic work in the history of science can hardly be overemphasized. (Babson, 132; Dibner, 148; D.S.B., X, 56 ff; Gray, 174; Harvey, 147–148; Horblit, 79b; Knight, 63–64; Osler, 1027; Poggendorff, II, 277; P.M.M., 172; Sotheran, Cat. 676 [1907], 3249 ["Very Rare"]; Sparrow, 150; Thornton & Tully, 111–112; Wallis, 174; Watt, II, 701n; Wolf, I, 267)

NEWTON, Sir Isaac

Opticks: or, A Treatise of the Reflections, Refractions, Inflexions and Colours of Light. The Second Edition, with Additions. By Sir Isaac Newton, Knt.

London: Printed for W. and J. Innys, Printers to the Royal Society, at the Prince's-Arms in St. Paul's Church-Yard. 1718.

Second edition, second issue. 8vo. 4 leaves, 382 pp., 1 leaf (advertisements). With 12 folding copperplates and several woodcut figures in text. Woodcut head- and tailpieces. Fore-margin of final leaf (advertisements) slightly defective and occasional light foxing of a few leaves; otherwise very good copy, in contemporary tree calf, spine gilt-ruled, crimson morocco label. Neat eighteenth-century inscription in ink on title page: "John Bowen's Book being the gift of the Revnd. Mr. Thomas Price Rector of Kilgarry."

THE IMPORTANT second (first 8vo.) edition, containing the additional queries 17–31, including the celebrated query

28 on the nature of light. The first issue of the second edition (known in only a few copies) has a title page dated 1717. Babson states that two preliminary leaves (advertisement I) are reset, and Wallis says that the fourth advertisement leaf is reset. Babson's two copies of the second issue do not have the final leaf of publisher's advertisements, present here and called for by Wallis. "In this Second Edition . . . I have omitted the Mathematical Tracts published at the End of the former Edition, . . . And at the End of the Third Book I have added some Questions. And to shew that I do not take Gravity for an essential Property of Bodies, I have added one Question concerning its Cause, chusing to propose it by way of a Question, because I am not yet satisfied about it for want of Experiments" (advertisement II). Query 31 is significant because, in addition to other chemical experiments, it describes one of the earliest preparations of diethyl ether (p. 359). (Babson, 134; D.S.B., X, 93; Gray, 176; Harvey, 147; Honeyman, 2325; Keynes, 3290; Partington, II, 469; Thornton & Tully, 112; Wallis, 176; Wolf, I, 267)

NEWTON, Sir Isaac

Philosophiae Naturalis Principia Mathematica. . . . Imprimatur, S. Pepys, Reg. Soc. Praeses. Julii 5, 1686.

London: Jussu Societatis Regiae ac Typis Josephi Streater. Prostant Venales apud Sam. Smith. 1687.

First edition. 4to. 4 leaves, pp. 1–383, 400–510, 1 leaf (errata). Folding copperplate (cometary orbit) and numerous woodcut diagrams in text. Title page skillfully (and almost invisibly) inlaid, inner margin of signature A2 and corner of A3 repaired; otherwise very good copy, in original mottled calf, rebaked with original spine laid down, maroon morocco label. Signature on flyleaf: Alexander Napier (1814–1887), Trinity College, Cambridge (see D.N.B.).

THE "EXPORT" issue with cancel title page bearing the three-line Sam. Smith imprint. The first edition comprised only three hundred to four hundred copies, of which about fifty to sixty carried the above imprint. Smith was a distributor of British works on the Continent. During the printing of the *Principia* various corrections were made, but when the sheets were gathered for binding, no attention was paid to those corrected or uncorrected, and no particular group of variants can be associated with either issue (see Munby, *Essays and Papers*, pp. 43–54). The monumental achievement of Newton (1642–1727), it is the foundation work on dynamics and gravitation. Generally regarded as the greatest work in the history of science, Laplace described it as "pre-eminent above any other production of human genius." Macomber traced 148 extant copies of the two-line imprint, but only 47 of the three-line (including this copy).

Smith sent most copies to Holland, where they were bound in vellum. Very few copies were bound in calf, as here. (Babson, 11; Dibner, 11; D.S.B., X, 52; Gray, 7; Horblit, 78; Macomber, *Census of Principia*, 1953, No. 43; Partington, II, 468; Poggendorff, II, 277; P.M.M., 161; Thornton & Tully, 110; Waller, 12159; Wallis, 7; Watt, II, 701m; Wing, N1049)

NEWTON, Sir Isaac

Philosophiae Naturalis Principia Mathematica. . . . Editio Secunda Auctior et Emendatior.

Cambridge: (University Press). 1713.

Second (first Cambridge) edition. 4to. (28), 484, (8) pp. Copperplate vignette on title page. Folding plate (cometary orbit) and numerous woodcut diagrams in text. Superb copy, in pristine condition, in original speckled calf, rebaked with original spine laid down, maroon morocco label. From the Hopetoun library, with armorial bookplate.

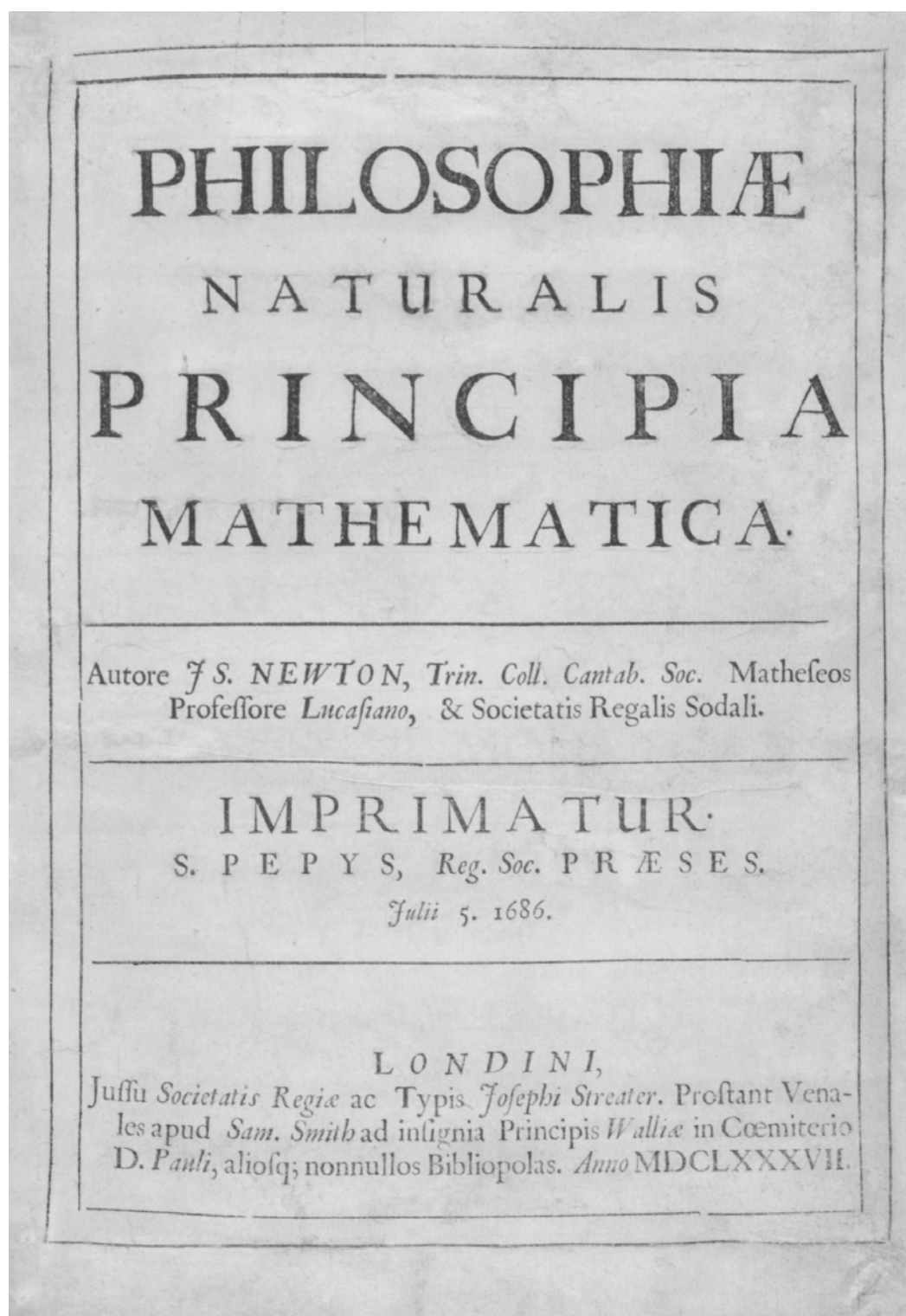
EDITED BY Newton's friend Roger Cotes, F.R.S., who wrote a preface and added the *Index rerum alphabeticus*, this edition of only 750 copies is the first to contain the "General Scholium" in which Newton gives a review of the work. The chapters on lunar and cometary theory are greatly enlarged. In his preface Cotes vigorously attacks the Cartesian philosophy then still being taught at the universities and refutes an assertion that Newton's theory of attraction is a "causa occulta." This edition contains a new preface by Newton and a Latin poem on him by the famous astronomer Edmund Halley. Partington discusses this great work as far as chemical principles are concerned. Newton's biographer, Sir David Brewster, states that the first edition of 1687 was sold quickly and that a copy of the *Principia* "could scarcely be procured in 1691." In the preface to the present edition, Cotes says that the first edition was scarce and "could only be obtained at an immense price." The second edition is now scarce. (Babson, 12; D.S.B., X, 93; Gray, 8; Partington, II, 468; Poggendorff, II, 277; Thornton & Tully, 110; Wallis, 8; Watt, II, 701m)

NEWTON, Sir Isaac

Philosophiae Naturalis Principia Mathematica. . . . Editio tertia aucta & emendata.

London: Apud Guil. & Joh. Innys, Regiae Societatis typographos. 1726.

Third edition. 4to. 18 leaves, 530 pp., 3 leaves. Portrait frontispiece (Newton at age 83, painted by Vanderbank, 1725; engraved by George Vertue, 1726). Title in red and black. Engraving of cometary orbit (by J. Senex, p. 506) and numerous woodcut figures in text. Fine, crisp copy, complete with



Newton. Philosophiæ Naturalis Principia Mathematica. London, 1687.

half title and license leaf, in original gilt-ruled calf, rebacked, maroon morocco label. From the library of Trinity College, Dublin, with stamps (including release) on verso of title page.

THE DEFINITIVE edition, being the last revised by Newton and published in his lifetime, and the text on which all subsequent editions is based. Edited by his friend Henry Pemberton (1694–1771), it contains a new preface by Newton and a large number of alterations, the most important being the scholium on fluxions. Printing began about the beginning of 1724 and was completed in February 1726, the book being published in March. There were three issues of this edition: a regular issue of a thousand copies (as here), a large-paper issue of two hundred copies, and a folio-size issue of fifty copies for presentation. (Babson, 13; D.S.B., X, 93; Gray, 9; Partington, II, 468; Poggendorff, II, 277; Thornton & Tully, 111; Wallis, 9; Watt, II, 701m)

NEWTON, Sir Isaac

The Mathematical Principles of Natural Philosophy. By Sir Isaac Newton. Translated into English by Andrew Motte. To which are added, The Laws of the Moon's Motion, according to Gravity. By John Machin Astron. Prof. Gresh. and Secr. R. Soc. In Two Volumes.

London: Printed for Benjamin Motte, at the Middle-Temple-Gate, in Fleetstreet. 1729.

First edition in English. 2 vols., 8vo. I: 19 leaves, 320 + 71 + (1) pp. Engraved frontispiece and 25 folding engraved plates. II: 1 leaf, 393 pp., 6 leaves (index), 8 pp. (appendix). Engraved frontispiece and 22 folding engraved plates. Fine crisp copy in speckled paneled calf antique, with maroon and green gilt-lettered labels.

THE FIRST English translation of the *Principia*, from the third and definitive Latin edition of 1726, which was authorized by Newton shortly before he died in 1727. This contains the preface of Roger Cotes to the second edition of 1713. The translator, Andrew Motte (d. 1730), anticipated a similar project by Henry Pemberton. Motte was an eminent mathematician, and this translation into English is a highly creditable production. "Again and again, when projected new versions were made and compared with Motte's, it proved to be the case that Motte had produced a sound, literate, and generally accurate work, one that conveyed admirably—in its style and language—the spirit of the Newtonian Age" (I. B. Cohen, *Introduction to Newton's Principia*, p. xv). Motte collaborated with his brother Benjamin (d. 1738), the bookseller and publisher, in editing the abridged *Philosophical Transactions*. As the first edition in English of Newton's *Principia*, a work that in Professor E. N. da C. Andrade's words "changed the face of science,"

Motte's translation is extremely important. It is now a very rare book. (Babson, 20; Carter and Muir, *Printing and the Mind of Man*, 161; D.S.B., X, 53; Gray, 23; Partington, II, 468–469; Poggendorff, II, 277; Thornton & Tully, 111; Wallis, 23; Watt, II, 701m)

NEWTON, Sir Isaac

Excerpta quaedam e Newtoni Principiis Philosophiae Naturalis, cum Notis Variorum.

Cambridge: Typis Academicis Excudebat J. Bentham, etc. 1765.

First edition. 4to. ix, (i), 180 pp. With 12 folding plates (mathematical figures). Fine copy with wide margins, in contemporary half calf, gilt, marbled boards. From the library of William Hallows Miller (1801–1880), celebrated mineralogist, with neat signature in ink on title page: "W. Millers St. John's."

AN IMPORTANT abridgement of the *Principia*, edited and annotated by John Jebb, M.D., Robert Thorp, and Francis Wollaston, all famous mathematicians. Miller, who once owned this copy, devised the mathematical notation for defining the planes and faces of crystals: the so-called Miller indices, which are still in use (see D.N.B.). Comparison of the signature on the title page with that in the *Signatures in the First Journal-Book and the Charter-Book of the Royal Society* (London, 1912, p. 64) confirms that this is Miller's copy, purchased when he attended St. John's College, Cambridge. There are several marginal notes in pencil in Miller's handwriting (mathematical calculations, etc.). (Babson, 15; Gray, 20; Sotheran, Cat. 828 [1931], 3577; Wallis, 20)

NICANDER, Jonas

Tentamen Mechanicum de Emendatione Birotae, . . . praeside, . . . Mag. Samuele Duræo, . . . sistit . . . Jonas Nicander, Sudermannus. . . XIII. Junii. MDCCLXX.
Uppsala: Typis Edmannianis. (1770).

First edition. 4to. 10 pp. With folding copperplate (A. A. sc.) depicting 9 figures. Large woodcut headpiece. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A DISCOURSE ON the physics of axles, of chemical interest for its description of the use of the solid lubricant orichalcum (an alloy of copper) to reduce the friction and heating of iron and steel axles. No reference to Nicander or this work has been found.

NICHOLSON, William

A Description of a New Instrument for Measuring the Specific Gravity of Bodies. By William Nicholson, in a Letter to Mr. Magellan.

Warrington: Printed by W. Eyres. 1785.

First separate edition. 4to. 13, (1) pp., 1 leaf (blank). With engraved frontispiece of the hydrometer. Very good copy in contemporary plain brown wrappers, bound in maroon quarter morocco, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT work in the history of physics and chemistry, in which Nicholson describes his newly invented hydrometer, an instrument which is still used. The original paper appeared in the *Memoirs of the Manchester Literary and Philosophical Society*, 2 (1785), 386–396. The verso of the title states that “a few copies were, with the permission of the Society, struck off, for the author to present to his friends.” Eyre’s offprints are known to have been produced in very small runs, often as few as twelve and rarely more than twenty-five. A penciled note on the inside of the front wrapper states: “No copy in Warrington Library 1899.” Very rare. (D.S.B., X, 109; Ferchl, 382 [wrong date: 1787]; Partington, IV, 20; Poggendorff, II, 279)

NICHOLSON, William

A Dictionary of Chemistry, Exhibiting the present State of the Theory and Practice of that Science, its Application to Natural Philosophy, the Processes of Manufactures, Metallurgy, and numerous other Arts dependent on the Properties and Habitudes of Bodies, in the Mineral, Vegetable, and Animal Kingdoms. With a considerable number of tables, expressing the Elective Attractions, Specific Gravities, Comparative Heats, Component Parts, Combinations, and other Affections of the Objects of Chemical Research. . . .

London: Printed for G. G. and J. Robinson, Paternoster-Row. 1795.

First edition. 2 vols., 4to. I: viii, 576 pp. II: pp. (2), 577–1132. With 4 finely engraved plates (2 double page). Very fine copy with wide margins, in original speckled calf, gilt fillet on covers, spines gilt, crimson and blue morocco labels.

THE FIRST dictionary of chemistry by an Englishman, superseding the English translation of Macquer’s dictionary (London, 1771) by the Scot James Keir. Although preferring the antiphlogistic chemistry of Lavoisier, Nicholson also presents the phlogistic alternative. This work is important for containing one of the earliest English versions of the table of the new chemical nomenclature from the *Methode de nomenclature chimique* (Paris, 1787) by Lavoisier et al. The chart is in three parts (vol. I, pp. 524–529), with

an abstract of the salient points of the new system of chemistry (pp. 520–523). Plates I and II illustrate apparatus and furnaces; III and IV (each double page) show the chemical symbols of Hassenfratz and Adet and of Bergman. A note to the binder (p. 1111) states that there are five plates, but all known copies have four. Nicholson was one of the earliest English converts to the New Chemistry. (Blake, 324; Bolton, 70; Cole, 974; D.S.B., X, 108–109; Duveen & Klickstein, *Bibliography of Lavoisier*, 137; Neu, 2947; Partington, IV, 19–20; Poggendorff, II, 280; Smith, 347; Wellcome, IV, 234)

NICHOLSON, William

A Dictionary of Practical and Theoretical Chemistry, with its application to the arts and manufactures, and to the explanation of the phaenomena of nature: including throughout the latest discoveries, and the present state of knowledge on those subjects. . . .

(London:) Printed for Richard Phillips, No. 6, Bridge-Street. 1808.

Second (first revised) edition. 8vo. 2 leaves, 820 pp. (pages not numbered). With 12 engraved plates (2 folding, Cooper sculp.) and 13 folding tables. Very good copy in original tree calf, maroon morocco label. Armorial bookplate of the seventh earl of Cavan, Richard Ford William Lambart (1763–1836), army general (see D.N.B.).

WHILE SIMILAR in title to the *Dictionary of Chemistry* (London 1795), in the advertisement Nicholson says, “though formed on the basis of the *Dictionary* [this] is in effect an entirely new work; the articles being either considerably enlarged, or entirely rewritten, and in every instance being adapted to the present improved state of chemical science.” This edition contains the table of chemical nomenclature, three tables of chemical compounds, and the table of the correspondence of thermometers. In addition to tables, the appendix reprints Humphry Davy’s important Bakerian lecture (read to the Royal Society, 19 November 1807) on the decomposition of the fixed alkalis by electricity, which first produced metallic potassium and sodium. In the article on phlogiston Nicholson states: “This doctrine is at length abandoned, as all the phaenomena are more readily explained by the simple absorption of oxigen, which incontrovertibly takes place.” “One of the first of the larger chemical dictionaries [which] formed the basis of Ure’s *Dictionary* and was the ancestor of the many modern chemical dictionaries” (Zeitlinger). (Cole, 975; D.S.B., X, 109; Partington, IV, 20; Sotheran, Cat. 773 [1919], 2588 [“Rare”]; Wellcome, IV, 234)

NICHOLSON, William

The First Principles of Chemistry. By William Nicholson.
London: Printed for G. G. J. and J. Robinson, Paternoster-Row. 1790.

First edition. 8vo. xxvii, (1), 532 pp., 3 leaves (index). With folding engraved plate of chemical apparatus. Very good copy in original calf, spine richly gilt, maroon morocco label.

DEDICATED TO Henry Cavendish, this excellent introductory textbook explains the phlogistic and antiphlogistic theories and represents a transition from the theory as enunciated by Stahl to that of Lavoisier and his circle. Nicholson, however, did not completely accept either theory and believed “the antiphlogistic hypothesis equally probable with the modified system of Stahl. [He attempted] to keep clear of every system [and] called things by such names as are most in use” (preface, pp. vi and viii). The book is in two sections: I. General Chemistry (definitions, heat, thermometers, combustion, gases, balances, elective attractions, etc.); II. Particular Chemistry (principles, heat, light, phlogiston, gases, earths, salts, alkalies, acids, metals, plant and animal substances, etc.). The preface is dated 25 January 1790. Watt, Poggendorff, and Ferchl give the wrong date (1789). A German translation by C. H. Spohr appeared (Leipzig, 1791). (Bolton, 700; D.S.B., X, 109; Duveen, 431; Edelstein, 1704; Ferchl, 381; Morgan, 576; Neu, 2948; Partington, IV, 19; Poggendorff, II, 280; Smith, 347; Watt, II, 704x)

NICHOLSON, William

The First Principles of Chemistry. By William Nicholson.
The second edition, with improvements.
London: Printed for G. G. J. and J. Robinson, Paternoster-Row. 1792.

Second edition. 8vo. xxxi, (1), 546 pp., 3 leaves (index). With folding engraved plate of chemical apparatus. Fine copy in original speckled calf, maroon morocco label. Engraved eighteenth-century armorial bookplate: James Brodie of Brodie Esqr.

IN A NOTE dated 10 November 1791, at the end of the preface (p. x), Nicholson states: “I have carefully revised the second Edition of this Work: the new discoveries are inserted; and no exertions have been spared to render it worthy of the distinguished approbation it has met with.” A new table (no. XII) has been added (“Numerical Expression of Attractions by Mr. Morveau”) listing seven alkalies and earths versus five acids. The other twelve tables of the first edition are reprinted unchanged, making a total of thirteen tables. The engraved plate of apparatus is identical to that of the first edition. (Blake, 324; Cole, 977; Roller & Goodman, II, 243)

NICHOLSON, William

The First Principles of Chemistry. By William Nicholson.
Third edition, revised by the author.
London: Printed for G. G. and J. Robinson, Paternoster-Row. 1796.

Third edition. 8vo. xxix, (3), 564 pp., 2 leaves (index). With folding engraved plate of chemical apparatus (torn, with upper-right corner defective and loss of insignificant piece of one tiny figure). Occasional signs of use and notes in ink (dated 1812) on front and rear pastedown endpapers; otherwise good copy in original calf, maroon morocco label.

THE FINAL edition of this excellent textbook. In a note dated 25 January 1796 (preface, p. x), identical in wording to that of the second edition, Nicholson states that this edition has been revised and updated. In his discussion of phlogiston and combustion (pp. 89–91) he concludes that “the existence of heat, light, and phlogiston, as chemical principles of bodies, is not yet incontrovertibly established.” Consequently, explanations are still given in both the phlogistic and antiphlogistic terms. The plate is the same as that in the first and second editions. (Cole, 978)

NICHOLSON, William

An Introduction to Natural Philosophy. Illustrated with copper plates. By William Nicholson. . . .
London: Printed for J. Johnson, No. 72, St. Paul's Church Yard. 1782.

First edition. 2 vols., 8vo. I: xx, 383, (1) pp., 6 leaves (index). II: xi, (1), 441, (1) pp., 7 leaves (index). With copperplate vignette on each title page, and 25 folding plates. Fine copy in contemporary sheep, green morocco labels. Each volume with manuscript book ticket of “W. Peach” on front endpaper; possibly Charles William Peach (1800–1886), geologist and naturalist (see D.N.B.).

VERSATILE AND accomplished, Nicholson (1753–1815) published excellent, up-to-date accounts of the sciences of his time. Although primarily on physics and physical phenomena, volume 2 (book III, sections I and II) is entirely on chemistry, in which the author describes the calcination of metals in terms of the phlogiston theory. The first of Nicholson's many publications, the introduction “enjoyed some success as a Newtonian text” (D.S.B.). The sections on electricity (vol. II) give a good account of current knowledge on the subject. Nicholson “a native of London, an ingenious Mathematician, Chemist, and Mechanic . . . from the failure of his many projects, was involved in great [financial] difficulties [and] died aged 62” (Watt). On the free endpaper of volume I is a note in ink by the original (anonymous) purchaser: “2 vols. 7s. each. Feb. 83” (i.e., 1783). Watt, Ferchl, and Poggendorff give the wrong date

(1784) for the first edition, and Arnold Thackray (in D.S.B.) mistakenly dates it 1781. The dedication to Sir Joseph Banks is dated 28 February 1782. Other editions: second, 1787; third, 1790; fourth, 1796; fifth, 1805. (D.S.B., X, 108; Ekelöf, 559; Ferchl, 381–382; Partington, IV, 20; Poggendorff, II, 280; Roller & Goodman, II, 243; Wheeler Gift, 510)

NICHOLSON, William

An Introduction to Natural Philosophy. Illustrated with copper plates. By William Nicholson. . . .

London: Printed for J. Johnson, No. 72, St. Paul's Churchyard, by T. Bensley, Bolt Court. 1805.

Fifth edition. 2 vols., 8vo. I: xx, (2), 359, (1) pp., 4 leaves (index). II: 3 leaves, 349, (1) pp., 6 leaves (index). With copper-plate vignette on each title page and 26 folding plates. Fine copy in original half calf, marbled boards.

THE FINAL edition of this work, which became one of the most popular textbooks in Great Britain and America. The dedication to Sir Joseph Banks of the first edition (1782) is reprinted, as is the "Advertisement to the Second Edition" (1787). In the "Advertisement to this Fifth Edition," Nicholson states: "From the pressure of business, and repeated attacks of illness, the Author has found it impossible to finish the present edition without assistance. In consequence, the whole of the section on chemistry has been rewritten by Mr. Accum, whose abilities as a chemist are well known; and that on electricity has been revised, and the section on galvanism added, by Mr. T. Churchill." He notes that three new planets have been discovered "since the astronomical part was printed" and gives up-to-date details on them. In the long chemical section (vol. II, pp. 112–259), Accum accounts for the production of light when many metals combine with oxygen on calcination, by saying: "It is possible that part of it (light) may also be derived from the oxygen gas, but it is evidently unnecessary to suppose so. Such is the theory of combustion modified by modern chemists" (p. 150). It is not generally known that F. C. Accum contributed greatly to this final edition. The title-vignette is a reengraved version of that in the first edition. (D.S.B., X, 109)

NICHOLSON, William

A Journal of Natural Philosophy, Chemistry, and the Arts . . . By William Nicholson.

London: Printed for G. G. and J. Robinson, Paternoster-Row. 1797–1802.

First edition. 5 vols., 4to. I (1797): xxviii, 600 pp.; 24 copper-plates. II (1799): 2 leaves, xxiii, (1), 564 pp.; 24 plates. III

(1800): 2 leaves, xix, (1), 552 pp.; 22 plates. IV (1801): 2 leaves, xvi, 562 pp.; 24 plates. V (1802): 2 leaves, viii, 354, (2) pp.; 18 plates. Very fine set complete with half titles, in original gilt-ruled half calf, speckled boards, maroon morocco labels.

THE FIRST of its kind, Nicholson's *Journal* contains original papers on scientific discoveries, technical processes, and instruments, books, meetings, translations, etc. Of great importance is the epoch-making paper (IV, 179–187) by Nicholson and Anthony Carlisle announcing the discovery of the electrolysis of water by the voltaic pile. The earliest papers on galvanism by Humphry Davy also appear (IV, 275–281, 326–328, 337–342, 394–402). These volumes contain early papers by John Dalton, who discusses his theory of mixed gases, which led eventually to his chemical atomic theory. In addition to contributions by Nicholson, there are papers by Accum, Hatchett, Kirwan, Pearson, Priestley, Count Rumford, Benjamin Thomson (on thermodynamics), Wollaston, et al. Included are many translations by Nicholson, from foreign journals, of works by Berthollet, Chaptal, Fourcroy, Guyton de Morveau, and other chemists. The quarto format of this five-volume series was abandoned in 1802, and a new series in octavo was begun (1802–1813, 36 vols.). (Bolton, 1124; Bolton, *Scientific Periodicals*, 2518; D.S.B., I, 108; Ferchl, 381; Morgan, 839; Mottelay, 336; Partington, IV, 20; Poggendorff, II, 280; Sotheran, Cat. 741 [1913], 12662 ["Rare"]; Watt, II, 704z)

NICOLAUS, Johann

I. N. J. Tractatio de Mercurio et Hermis, seu Statuis Mercurialibus quas Germanice vocamus, Wege-Zeiger, oder Weg-Seulen, darnach man sich richtet. Ubi & de statuis in genere tractatur, & simul variae tam utiles, quam lectu dignae antiquitates Sacrae & profanae illustrantur. Opera & studio Johannis Nicolai.

Frankfurt & Leipzig: apud Joh. Dauderstadium. (1687).

First edition. 12mo. 2 leaves, 159, (5) pp. Fore-edge of 4 final leaves shaved (not affecting text); otherwise fine copy, in gilt-ruled old calf, rebacked, maroon morocco label. Engraved bookplate of Thomas South and signature of A. T. & M. Atwood, 1859; also maroon bookplate of Denis Duveen (canceled).

AN EXTREMELY rare alchemical work by Nicolaus (ca. 1654–1708), who was born at Ilm in Schwartzburg and was a professor at the University of Tübingen. "The work consists largely of a careful account of the mythological stories relating to the origins and attributes of Mercury and Hermes" (Duveen). An important association copy from the library of the famous hermeticists Thomas South, his daughter Mary Anne Atwood (1817–1910), and her husband, the Reverend Alban Thomas Atwood (d. 1883), vicar

of Leake, near Thirsk, Yorkshire. This is the copy described by Duveen in his *Bibliotheca Alchemica et Chemica* (London, 1949, pp. 431–432). Unknown to the usual bibliographers.

NICOLS, Thomas

A Lapidary: or, The History of Pretious Stones: With cautions for the undeceiving of all those that deal with Pretious Stones. By Thomas Nicols, sometimes of Jesus-Colledge in Cambridge. . . .

Cambridge: Printed by Thomas Buck, Printer to the University. 1652.

First edition, first issue. 4to. 6 leaves, 239, (1) pp. With folding table. Title page signed A2. Lacks leaf before title, as usual (blank except for signature, A1); otherwise very good, crisp copy, in nineteenth-century morocco, rebacked, blue label, inner dentelles gilt. Bookplate: William Stirling.

THE FIRST English book on precious stones and their classification, of chemical interest. It is also a significant work in the development of mineralogy, as it draws on the *Gemmarum et lapidum historia* (Hanau, 1609) of Anselmus Boetius de Boodt, the most important and influential lapidary of the seventeenth century. Nicols frequently quotes from de Boodt and adopts his system of classification, as well as agrees with him that gems do not possess occult powers. Marking the first steps toward a more scientific approach to geology and mineralogy, the book contains interesting comments on amber, jet, and the magnetic properties of lodestones. The sheets of this edition were reissued under the title *Arcula gemmea: or, a cabinet of jewels* (1653; Duveen, 432), and again as *Gemmarius fidelius: or, the faithful lapidary* (1659). A German translation by Johann Lange appeared as *Beschreibung der Steine* (Kulmbach, 1734; Ferchl, 383). Not in British Library, Krivatsy, Thorndike, Watt, etc. (Annen, 51; Edelstein, 1706; Ferguson, II, 138 [not in Young Coll.]; Ferguson Coll., 496; Gunther, *Early Science in Cambridge*, 1937, p. 438; Honeyman, 2339; Hoover, 610; Neu, 2959; Partington, II, 103; Roller, 5923; Wheeler Gift, 136; Wing, N1145)

NIEUWENTIJT, Bernard

The Religious Philosopher: or, The Right Use of Contemplating the Works of the Creator. I. In the wonderful Structure of Animal Bodies, and in particular Man. II. In the no less wonderful and wise Formation of the Elements, and their various Effects upon Animal and Vegetable Bodies. And, III. In the most amazing Structure of the Heavens . . . Translated from the Low-Dutch. To which is prefix'd, a Letter to the Translator by the Reverend J. T. Desaguliers . . .

London: Printed for J. Senex . . . E. Taylor . . . W. and J. Innys . . . and J. Osborne. 1724.

Third English edition. 2 vols., 4to. I: viii, (28), xxix, (1), 234 pp. II: (2), pp. 235–585, (1). With 29 folding engraved plates. Fine copy in contemporary paneled calf, rebacked, brown morocco labels, spines dated. Bookplate: Wm. A. Cole.

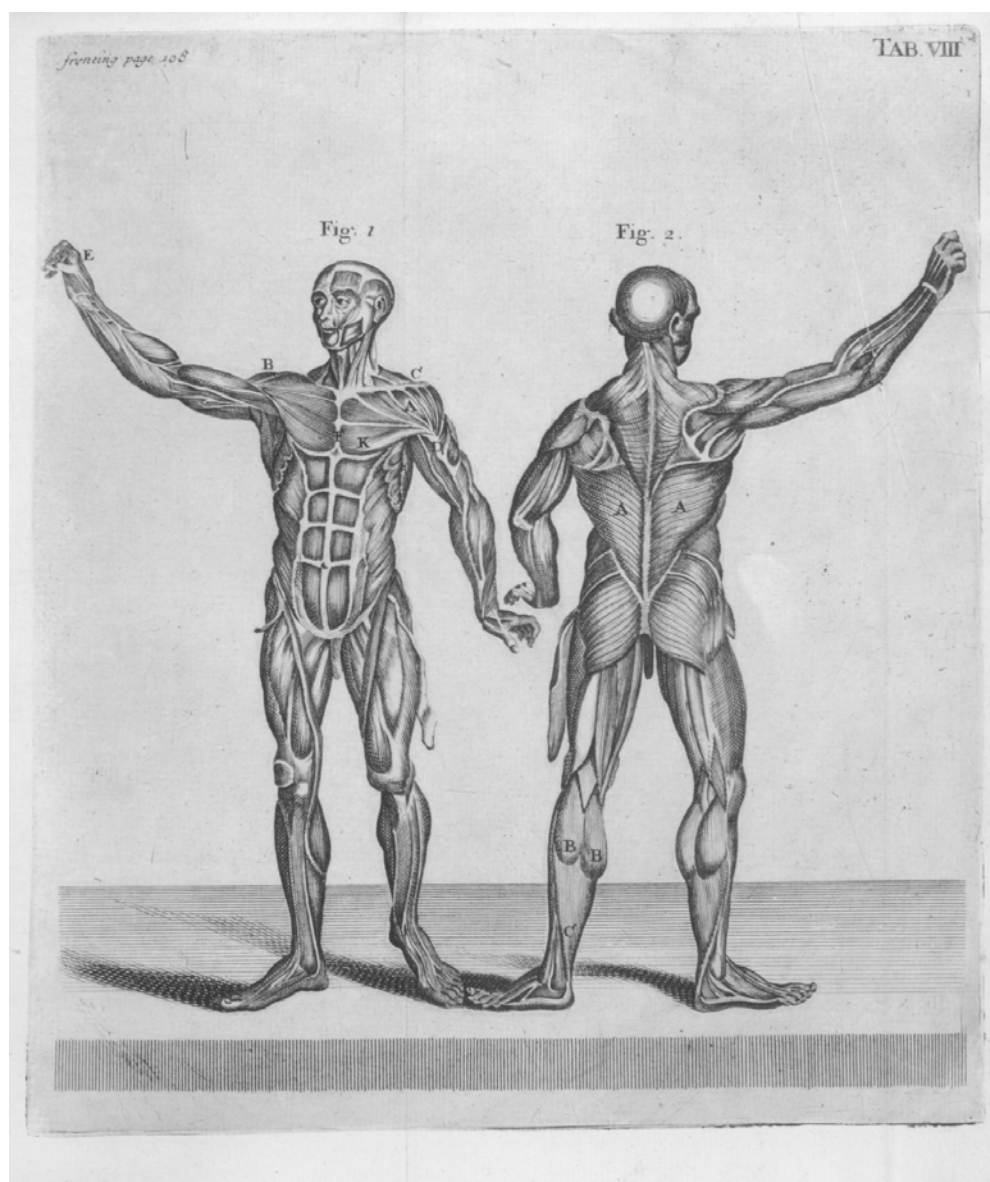
A COLLECTION of scientific and medical observations by the Dutch physician Nieuwentijt (1654–1718), who graduated in medicine at the University of Utrecht (1676). When young he was influenced by Cartesianism and acquired a thorough knowledge of mathematics and natural philosophy. “In 1695–1700 he was engaged in a controversy with Leibniz and his school on the foundations of calculus” (D.S.B.). Nieuwentijt became famous in Holland and abroad by publishing the present book in Dutch (first: Amsterdam, 1714). This English translation by John Chamberlayne (1666–1723), F.R.S. (1702), made from the reedited second Dutch edition (1717), comprises a compendium of the physical and natural sciences. It records the latest discoveries in anatomy, astronomy, chemistry, hydrostatics, meteorology, physics, physiology, and other sciences. The book was intended to demonstrate the existence of God by teleological arguments and had never before been attempted on such a scale. The first English edition appeared in three volumes, 8vo. (London, 1718–1719). (D.S.B., S, 120; Partington, III, 118; Roller & Goodman, II, 245; Wellcome, IV, 239)

NISBET, William

A General Dictionary of Chemistry, containing the leading principles of the science, in regard to facts, experiments, and nomenclature. For the use of students. By William Nesbit, M.D. Fellow of the Royal College of Edinburgh, Member of the different medical societies, &c.

London: S. Highley (successor to the late Mr. John Murray). 1805.

First edition. 12mo. pp. viii + 415, 3 leaves (advertisements). Very good copy in antique-style quarter calf, marbled boards, maroon morocco lettering label, by Bernard Middleton. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.



Nieuwentijt. Religious Philosopher. London, 1724.

NISBET (fl. 1787–1805), a celebrated medical writer (F.R.C.S., Edinburgh), wrote on a variety of diseases (e.g., cancer, scrofula, venereal disease). A bibliography of his published works is given by Watt, and his biography is in the D.N.B. The present chemical dictionary was published posthumously, by an anonymous editor. In the preface the author states that no up-to-date chemical dictionary in English has appeared suitable for the use of students, that of Nicholson having been “ten years in circulation . . . [and] . . . deficient in many of the later discoveries.” This dictionary was therefore compiled “from the most approved and most modern authors.” The author says that he was “particularly indebted” to the works of Black, Parkinson, Thom-

son, Murray, Pearson, Davy, et al. Pages 357–386 comprise a very useful table of chemical nomenclature in which the old and new names of chemicals are given. Under “Simple or undecomposed Substances” are listed light, calorific (equated with phlogiston), calorificum (latent heat), gasogen (combined heat), and gosogenium (the matter of heat). These forms of energy were clearly then regarded as being material substances. This work contains many tables, as well as lists of elements and their compounds. Rare. Not in Cushing, Duveen, Ferchl, Morgan, Osler, Partington, Poggenorff, Reynolds, Waller, etc. (Bolton, 70; Smith, 347; Watt, 706u)

NOAD, Henry Minchin

Chemical Manipulation and Analysis, Qualitative and Quantitative. With an introduction explanatory of the general principles of chemical nomenclature; the construction and use of formulae; the doctrine of equivalent proportions; and on the preparation and management of gases. . . .
London; Robert Baldwin, 47, Paternoster Row. 1852.

Second edition. 8vo. lxiv, 367, (1) pp., 1 leaf (advertisements). With numerous woodcut illustrations in text (furnaces, apparatus). Very good copy, uncut, in original publisher's blind-stamped green cloth.

THIS "NEW edition, considerably enlarged" is actually the second, the first having appeared in 1848 (Ferchl, 384). The book is noteworthy because it is one of the earliest to contain many balanced chemical equations. In addition an early version of the group separation tables for qualitative inorganic analysis appears (pp. 312–323). A classic work of nineteenth-century qualitative and quantitative analysis, which (surprisingly) is unnoticed by Ferenc Szabadvary (*History of Analytical Chemistry*, 1966). A "valuable treatise" (D.N.B.). An American edition, with notes by Campbell Morfit, was published (Philadelphia, 1849; Smith, 348). (Bolton, 701; Sotheran, Cat. 676 [1907], 3336)

NOAD, Henry Minchin

Lectures on Chemistry; including its applications in the arts; and the analysis of organic and inorganic compounds. . . .
London: Simpkin, Marshall, and Co., Stationers' Hall Court. 1843.

First edition. 8vo. 5 leaves, 505, (1) pp., 1 leaf (errata). With 106 woodcut illustrations and large folding table. Good copy, rebound in modern maroon cloth.

NOAD (1815–1877) studied chemistry and electricity under A. W. Hofmann at Giessen; became professor of chemistry at St. George's Hospital, London (1847); was awarded the Astley Cooper prize (1852); and was a consulting chemist to Welsh ironworks. He was elected F.R.S. (1856). In addition to books on chemistry, Noad published many books and articles on electricity (see Wheeler Gift Catalogue). Dedicated to Thomas Graham, this is his first published book. The large folding table exhibits the reactions of metals, together with their compounds with oxygen, chlorine, and sulphur, and their behavior with reagents and before the blowpipe. (Bolton, 701; Cole, 984; Ferchl, 384; Roller & Goodman, II, 247; Wellcome, IV, 241)

NODIER, Charles, and PICHOT, Amédée

Essai critique sur le gaz hydrogène et les divers modes d'éclairage artificiel.
Paris: Charles Gosselin. 1823.

First edition. 8vo. 2 leaves, xvi, 165, (1) pp., 1 leaf (advertisements). Fine, wide-margined copy, with many fore- and lower edges uncut; bound in quarter calf antique, marbled boards, spine gilt-lettered, blind-tooled, and with raised bands.

WRITTEN AT the time of the introduction of gas lighting into France, to which the authors state their objections. Although they feel that gas lighting will eventually come to France universally, the authors cite the numerous devastating and often lethal explosions that have occurred in England and urge caution in those who are brave enough to install this new form of lighting in their homes and places of business. There are numerous references to the works of Accum and to the various types of gas lighting used in England. The works of many contemporary chemists are quoted (e.g., Lavoisier, Davy, Haüy, Chevreul, Argand, Winsor, Lebon, Clayton, Watson, and William Henry). Chemical topics covered in detail include the preparation and combustible properties of hydrogen, methane, olefiant gas (ethylene), coal gas, etc.; the structure of flames; types of coal yielding combustible gases and oils; explosions occurring in gasometers (gas holders) and gas-generating equipment; and objections to the use of hydrogen for lighting houses. In addition, there are chapters on the theory of combustion of coal and the formation of coal gas and observations on its chemical composition. Nodier (1780–1844), member of the French Academy, was one of the luminaries of French Romantic literature. Pichot was a doctor of medicine. A very rare and important work. Not mentioned by Bolton, Caillet, Duveen, Ferchl, Morgan, Partington, Poggendorff, Waller, et al. (Smith, 348; Sotheran, Cat. 676 [1907], item 3343)

NOLLET, Jean Antoine

L'Art des Expériences, ou Avis aux Amateurs de la Physique, sur le Choix, la Construction et l'usage des Instruments; sur la préparation et l'emploi des Drogues qui servent aux Expériences. . . .

Paris: Chez P. E. G. Durand, Neveu, Libraire, rue S. Jacques, à la Sagesse. 1770.

First edition. 3 vols., 12mo. I: xxiv, 509, (1) pp. II: 2 leaves, 552 pp. III: 1 leaf, 524 pp., 2 leaves, 10 pp. With 56 folding engraved plates (13 in vol. I; 23 in vol. II; 20 in vol. III). Fine copy in original gilt-ruled calf, spines richly gilt, red and green morocco labels.

A SEQUEL TO the *Leçons de physique expérimentale*, in this (his last) work Nollet “offers the ‘amateur of physics’ the distillation of forty years of attention to the ‘choice, construction, and use of instruments’” (D.S.B.). It is an important treatise on eighteenth-century scientific apparatus, complete with instructions for its use in conducting physical experiments. Of chemical interest, the first volume contains a long section (pp. 245–501) on the preparation of compounds, pharmaceuticals, and other useful materials, as well as sections on glassmaking and working in metals. Volumes II and III describe the construction and use of individual instruments. A plate in volume III shows Reaumur’s thermometer. “Practical instructions for students’ use . . . a suggestive and helpful manual” (Wheeler Gift, which lists only fifty-four plates). (Blake, 326; D.S.B., X, 147; Duveen, 433; Roller & Goodman, II, 248; Wellcome, IV, 243; Wheeler Gift, 430)

NOLLET, Jean Antoine

Essai sur l'Électricité des Corps. . .

Paris: Chez les Freres Guerin, rue S. Jacques, vis-à-vis les Mathurins, à S. Thomas d'Aquin. 1746.

First edition. 12mo. xx, (4), 227, (1) pp. With engraved frontispiece (R. Brunet fecit) depicting an electrical experiment in a crowded room and 4 folding plates of electrical apparatus. Very good copy, uncut with wide margins, in modern maroon half morocco, marbled boards, spine gilt. Old stamp on title page: Latimer Clark.

ONE OF the leading researchers on the electrical properties of matter, the Abbé Nollet (1700–1770) was the first in France to conduct experiments with the Leyden jar. In 1748 he was the first anywhere to publicize the close relationship between electricity and lightning. In this work he describes many of his earlier discoveries in electricity, including the streams of light produced by pointed electrified objects and the fact that nonconductors are more strongly excited in air than in a vacuum. Nollet discarded Du Fay’s distinction of vitreous and resinous electricity and described “electric matter” as either “affluent or effluent.” In 1734 he visited England, where he was elected F.R.S., and in 1739 he was elected to the Académie des Sciences. This copy has a distinguished provenance, having belonged to Latimer Clark (1822–1898), who formed the extensive and valuable library on electricity and magnetism that later was purchased by Schuyler Wheeler and presented on 21 May 1901 to the American Institute of Electrical Engineers. (D.S.B., X, 147; Ekelöf, 246; Gartrell, 396; Mottelay, 181–182; Ronalds, 370; Wellcome, IV, 243; Wheeler Gift, 329)

NOLLET, Jean Antoine

Saggio intorno all'Eletricità de' Corpi. . . Traduzione dal Francese. Aggiuntevi alcune Esperienze ed Osservazioni, che illustrano l'istessa materia, del Sig. Guglielmo Watson.

Venice: Presso Giambattista Pasquali. 1747.

First Italian edition. 8vo. 254 pp., 1 leaf (blank). With engraved frontispiece of an electrical experiment in a crowded room and 5 folding plates of electrical apparatus. Very good copy, uncut with wide margins, in original white pasteboards.

THE ITALIAN edition of Nollet’s *Essai sur l'électricité des corps* (Paris, 1746), by an anonymous translator. This edition contains the Italian translation of the observations on electricity made by William Watson (1715–1787), which were read by him to the Royal Society of London on 20 October 1746 (pp. 195–254). The frontispiece is an unsigned close copy of that by R. Brunet in the 1746 first French edition. (Ekelöf, 250; Gartrell, 413; Ronalds, 370)

NOLLET, Jean Antoine

Leçons de Physique Expérimentale. . .

Paris: Du fonds de H. L. Guerin & L. F. Delatour, Chez Durand, Neveu. 1771, 1771, '69, '68, '71, '71.

Mixed 5th, 6th, and 7th editions. 6 vols., 12mo. I (1771, 7th): (2), cviii, 379, (1) pp. II (1771, 7th): iv, 488 pp. III (1769, 6th): iv, 514 pp. IV (1768, 5th): (4), 535, (1) pp. V (1771, 5th): vi, (2), 592 pp. VI (1771, 7th): (4), 524 pp. With engraved frontispiece in volume I and 116 mainly folding plates throughout the 6 volumes. Very good set in contemporary mottled calf, spines, gilt, brown morocco labels. Engraved eighteenth-century bookplates: D. Duguet.

ONE OF the principal works of Nollet, in which he sets forth his lessons on physics and certain aspects of chemistry. In “the famous *Leçons de physique*, which appeared in six volumes between 1743 and 1748 and was often reprinted [Nollet gives] lively, comprehensive, and up-to-date [presentations] with full directions for realizing the effects under study and excellent illustrations of apparatus” (D.S.B.). He covers the whole of classical physics, as well as some subjects of chemical interest: e.g., nature and properties of heat and fire, electric discharges, phosphorescence, luminescence, fulminating powder, gunpowder, fusion, and glassmaking. In 1753 Nollet became professor of experimental physics at the College de Navarre. (Other editions: Blake, 326; D.S.B., X, 145, 147; Ekelöf, 244; Gartrell, 400–402; Roller & Goodman, II, 248; Ronalds, 369; Wheeler Gift, 319)

NOLLIUS, Heinrich

The Chymists Key to shut, and to open: or the true doctrine of Corruption and Generation, in ten brief Aphorismes, illustrated with most plain and faithful commentaries out of the pure light of Nature: By that Judicious & Industrious Artist Henry Nollus. . . . Published by Eugenius Philalethes. London: Printed by E. B. for L. Lloyd at the Castle in Cornhill. 1657.

First English edition. 12mo. 6 leaves, 63, (1) pp. Title page with ornamental woodcut border. Very good copy in late-eighteenth-century brown russia, both covers richly gilt with "John," "Mary," "GR" (surmounted by a coronet), and religious symbols in gilt; spine gilt and blind-stamped, by the Buckingham Palace Bindery for King George III. Bound with: Espagnet, Jean d', *Enchyridion physicae restitutae* (London, 1651).

AN ALCHEMICAL and iatrochemical work, being a translation of Nollus' *De generatione rerum naturalium liber, ex vero naturae lumine conformatus* (Frankfurt, 1615), containing references to Hermes, Sendivogius, et al. In "The Authours Post-script to his Readers," the anonymous translator says "that whosoever is *Adeptus*: and Master in it, he is truly rich and wise." Writing before 1906, Ferguson states, "One hundred and twenty years ago his books were said to be rare." F. E. Hutchinson (*Henry Vaughan*, Oxford, 1947, p. 183) says, "I have been unable to trace any copy of 'The Chymists' Key' in any public library or to discover an entry of its registration at Stationers' Hall." No copy is listed in any of the usual early chemical and medical library catalogues. In the first edition of Wing (1948), only one copy of this very rare book was located (Harvard); the second edition of Wing (1982) lists five copies (two in U.S.A.: Huntington Library and Harvard). This copy is important because it has a distinguished provenance, having come from the library of King George III. (Pritchard, 376; Waite, 295; Wing, N1221; New Wing, N1221)

NOLLIUS, Heinrich

Naturae Sanctuarium: quod est, Physica Hermetica. In studiosorum sincerioris Philosophiae gratiam, ad promovendam rerum naturalium veritatem, methodo perspicua & admirandorum Secretorum in Naturae abyssu latentium Philosophica explicatione decenter in undecim libris tractata . . . En dabo in Hermetis doctrinam introitum . . . Sub finem duae appendices quarum I. Pansophiae fundamentum, & II. Philosophiam Hermeticam de lapide Philosophorum quatuor tractatibus antehac editis, iam vero recognitis & auctis comprehensam explicat, annexa sunt. . . . Frankfurt: Typis Nicolai Hoffmanni, sumptibus Jonae Rosae. 1619.

First edition. 8vo. 838 (recte 848) pp., 8 leaves (last 2 blank). Pagination jumps from 769 to 780, but collation is complete. Occasional scoring and a few notations in a neat contemporary hand. Lower blank margin of title page renewed with contemporary paper; otherwise fine copy in original blind-ruled vellum.

NOLLIUS (Noll, or Nolle, fl. 1612), professor of philosophy at the newly founded University of Giessen, also practiced chemistry and medicine, being a staunch supporter of Paracelsus and a good teacher. This work, written along the lines of Wecker's *Book of Secrets*, contains a discussion of the physical principles and concepts of nature as then understood. Strongly alchemical, as the title page states, the book deals rather with the "hidden secrets of nature" than with practical chemistry. The appendix (pp. 687–792) comprises two alchemical tracts, containing references to the Smaragdine Table of Hermes, with quotations from the works of Geber, Lull, Paracelsus, Basil Valentine, Sendivogius, et al. Writing in 1906, Ferguson states that books by Nollus were rare in the 1780s. (Caillet, 8050; Duveen, 433; Edelstein, 1710; Ferchl, 384; Ferguson, II, 139; Ferguson Coll., 497; Ferguson, *Books of Secrets*, I, pt. 1, p. 16; Neu, 2967; Verginelli, 230; Wellcome, I, 4565)

NORBERTO, Pedro

Effeitos Raros, e Formidaveis dos Quatro Elementos, que escreve, e dedica ao Senhor Infante D. Manoel Pedro Norberto de Aucourt e Padilha.

Lisbon: Na Officina Patriarcal de Francisco Luiz Ameno. 1756.

First edition. 4to. 12 leaves, 154 pp. Woodcut headpieces and initials. Fine, crisp copy, in nineteenth-century half tree-calf, marbled boards, 2 maroon morocco gilt-lettered labels, spine gilt.

A VERY RARE Portuguese work on the four Aristotelian elements (air, earth, fire, water). The author, on whom no biographical information has been found, was evidently well acquainted with the literature of chemistry, physics, geology, etc., as he refers to Pliny, Agrippa, Kircher, Aristotle, Epicurus, et al., among the older authors, and to Lemery, Burnet, et al., among those who had written more recently. The effect of fire on salts, sulfur, vitriol, niter, etc., is discussed, as are other chemical subjects. The last part of the book deals with the eruptions of volcanoes, earthquakes, and other subterranean phenomena. No bibliographical reference to this book has been found.

NORDENSKIÖLD, Nils Gustav

Försök till Framställning af Kemiska Mineralsystemet, med afseende på öfverensstämmelsen emellan fossiliernas kemiska sammansättning och deras kristallform.

Stockholm: Tryckt hos P. A. Norstedt & Söner. 1827.

First edition. 4to. 1 leaf, iv, 25, (1) pp., 1 leaf (errata). Very fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original printed wrappers bound in. From the library of Professor Franz Sondheimer.

AN IMPORTANT work in which the chemical composition of minerals is given in tabular form, employing the symbols of Berzelius (which are still used today). Nordenskiöld (1792–1866) was superintendent of Finnish mining in Helsingfors (Helsinki). In 1825 Gmelin proposed a classification of minerals based on the electronegative or “formative” elements, taking account of the numbers of atoms or proportions of these; e.g., silicates were classed as simple, double, etc., up to sextuple, as they contained from one to six equivalents of silica. Nordenskiöld suggested a similar system, taking into account the crystalline form. He “established that the pyroxenes contain the monoxides of calcium, magnesium, iron, and manganese in varying proportions, in agreement with Mitscherlich’s law of isomorphism” (Partington, IV, 185). The second edition of this significant work on mineralogical chemistry appeared six years later (Helsingfors, 1833). Not in D.S.B., Duveen, Edelstein, Hoover, Morgan, Smith, Waller, etc. (Bolton, 702; Ferchl, 385; Partington, IV, 211; Poggendorff, II, 298; Sondheimer, 1139)

NORDWALL, Andreas O.

Dissertatio Academica, de Sono Simplici, Directo, . . . praeside Mag. Samuele Duraeo, . . . offert Andreas O.

Nordwall, O. Gothus. . . XXIX. Maji, A. MDCCLXXIX.

Uppsala: Apud Joh. Edman, Direct. & Reg. Acad. Typogr. (1779).

First edition. 4to. 16 pp. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

ON ACOUSTICS and the propagation of sound, with references to Galileo, Kircher, Descartes, Mersenne, Euler, D’Alembert, et al. On pages 10–11, Nordwall (dates unknown) discusses the resonant properties of metals, and on pages 11–13 he comments on the velocity of sound in dry and moist air. The author refers on pages 14–15 to Newton’s *Principia*, the elasticity of the air, and the propagation of sound. No reference to the author or this work has been found.

NORELL, Carolus

Dissertio [sic] Chemica. De Magnesia Alba, quam, . . . praeside Mag. Torb. Bergman, . . . publice ventilandam sistet . . . Carolus Norell, V. Gothus . . . 23 Dec. Anni 1775.
Uppsala: Typis Edmannianis. (1775).

First edition. 4to. 28 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation by Norell (dates unknown), a student of Torbern Bergman, in which are described the preparation of pure magnesia and from it pure specimens of magnesium sulphate, nitrate, chloride, fluoride, arsenate, borate, oxalate, tartrate, acetate, formate, phosphate, etc. In the historical introduction (pp. 3–4) the earlier investigations of Black, Hoffman, Marggraf, et al., are discussed. Partington says that this work contains “useful observations.” A revised version appeared in Bergman’s *Opuscula physica et chemica* (Stockholm, 1779, vol. 1), from which English, French, German, and Italian translations were made. Rare. Not in the usual early chemical libraries. (Ferchl, 37; Moström, 99; Partington, III, 182, 190; War-ing, 552)

NORMANDY, Alphonse Rene Le Mire

Practical Introduction to H. Rose’s Treatise on Chemical Analysis. Illustrated by Synoptic Tables and Numerous Formulas. By A. Normandy . . .

London: Printed for William Tegg and Co. 1849.

First edition. 8vo. xii pp.; signatures B-U8 (unpaginated). With 7 tables (1 folding). Woodcuts in text. Errata slip facing page 1. Fine copy in original blind-stamped, pebbled green publisher’s cloth, rebacked, with original gilt-lettered spine laid on. Bound with: Rose, Heinrich, *A Practical Treatise of Chemical Analysis* (London, 1848).

A VOLUME ON qualitative inorganic analysis, being a sequel to the author’s English translation of Rose’s *A practical treatise of chemical analysis* (London, 1848), with which it is bound. In his preface Normandy (1809–1864) states that he wrote this book to “explain, as briefly as consistent with clearness, the rationale of the processes upon which the analysis of compounds is based, and give an epitome of the reactions of general and of particular bodies upon other substances, and upon each other . . .” Normandy believed “that the book might prove acceptable to a certain class of readers less advanced in chemical knowledge [and] as a guide and an introduction to H. Rose’s admirable work.” The author states that “the works from which I have more especially extracted the materials of this book, are Rose’s *Traité d’Analyse Chimique*, Berzelius’ and Thenard’s *Traité de Chimie*, and Pelouze and Fremy’s *Chimie Générale*.”

Although unpaginated, the book is easy to use, as each section and topic is suitably numbered for cross reference. Ferchl and Poggendorff give the wrong date: 1848. (Bolton, 703; Ferchl, 383; Poggendorff, II, 301)

NOSTRADAMUS, Michael

The True Prophecies or Prognostications of Michael Nostradamus, Physician to Henry II. Francis II. and Charles IX. Kings of France, and one of the best Astronomers that ever were. A Work full of Curiosity and Learning. Translated and Commented by Theophilus de Garencieres, . . .

London: Printed by Thomas Ratcliffe, and Nathaniel Thompson, etc. 1672.

First English edition. Folio. 18 leaves, 522 pp. Title in red and black. Fine copy, in original gilt-ruled speckled calf, maroon morocco label.

MICHEL DE NOTREDAME or Nostredame (1503–1566), French prophet, astrologer, and physician who taught at Aix and Lyon, began to make his prophecies about 1547, when he published *Centuries* (Lyon, 1555). "Astrology was at a peak at this time, and an enlarged second edition, dedicated to the king, was published in 1558. The *Centuries* consisted of quatrains grouped in hundreds, each set of quatrains being called a century. Some of Nostradamus' prophecies seemed to have become fulfilled, and his fame became such that he was invited to visit Catherine de Medicis and himself received the duke of Savoy . . . his predictions were eagerly read for long after" (*Encyc. Britannica*). The prophecies were usually sufficiently obscure that they would accord with several disparate events. Garencieres, the translator, understood this, and he warns that

the prophecies will be better interpreted after the events predicted have occurred. Of chemical interest are discussions of alchemy (pp. 163–164, 219, 361), the philosopher's stone (p. 105), poisons (p. 207), etc. Nostradamus discovered benzoic acid in 1556 (see Partington, III, 16). This copy appears never to have had the engraved frontispiece that occurs in some copies. (Caillet, 8073; Cushing, N127; Watt, II, 711w; Wing, N1399)

NYREN, Gustaf Johan

Dissertatio Chemica de Acido Animalis, quam suffragante Ampliss. Facult. Philosoph. et moderante Doctore Christiano Wollin . . . Ad Publicum Eruditorum Examen Defert Gustavus Johan. Nyren Ostro-Gothus. Die XX Junii MDCCLXXXI.

Lund: Typis Berlingianis. (1781).

First edition. 4to. 2 leaves, 16 pp. Very good copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the organic and inorganic acids that can be obtained from various animals (and their parts) by destructive distillation. Preparations of formic acid from ants, hydrochloric acid from blood, phosphoric acid from bones, and nitric acid from feces are described, as are the various salts derived from these acids. Methods of analysis are well illustrated, and reference is made to the writings of Gahn, Macquer, Rouelle, Scheele, et al. Nyren was a student of Christian Wollin (1730–1798), the professor of chemistry at Lund. Ferchl and Poggendorff list works by Wollin but not this title. Rare. Unknown to the usual bibliographers.

OBERMAYR, Franz Anton

Dissertatio Experimentalis Chemica de Sale Sedativo Hombergii . . . Publicae Disquisitioni committit Franciscus Anton. Obermayr Austriacus Neostadiensis. Disputabitur in Palatio Universitatis Die (blank) Mensis (blank) MDCCLXVI. Vienna: Typis Joannis Thomae de Trattnern. (1766).

First edition. 8vo. 74 pp., 1 leaf (blank). Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT doctoral dissertation summarizing contemporary chemical knowledge on boric acid (so-called Homberg's sedative salt), prepared from borax (sodium biborate), presented at the University of Vienna by the Austrian physician Obermayr (or Obermayer, dates unknown). The history of boric acid is traced and its preparation described in twenty quantitative experiments, with references to many seventeenth- and eighteenth-century chemists. "In 1702 Homberg stated in the *Memoirs* of the Academy of Sciences at Paris that he had heated borax with a solution of iron vitriol (ferrous sulfate) and sublimed off with the water vapor a substance which he called *sel volatile narcotique du vitriol* . . . Thus it is evident that he must have prepared boric acid . . . G. E. Stahl showed in 1723 that the 'sedative salt' could be prepared by treating borax not only with sulfuric acid but also with other acids . . . After the chemical revolution, 'sedative salt' came to be regarded as an acidic oxide, boric acid" (Weeks, *Discovery of the Elements*, 1960, pp. 572–574.) Rare. Not in the usual chemical bibliographies. (Ferchl, 386; Neu, 2997)

OBERNDORFFER, Johann

Apologia Chymico-Medica Practica Johan. Oberndorfferi . . . Adversus illiberales Martini Rulandi Person. Medici Calumnias. . .

(Amberg:) Ex Typographeo Forsteriano. 1610.

First edition. 4to. 6 leaves, 88, (4) pp. (last blank). Woodcut printer's device on title page, woodcut head- and tailpieces. Bottom margin of title leaf repaired with loss of last digit of date. Paper lightly embrowned; otherwise very good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

OBERNDORFFER (d. ca. 1621) was a physician who practiced in Italy, Styria, and Regensburg. "He travelled much, remained a long time in Italy, practised medicine at Gratz in Styria, and then went to Regensburg as physician. . . . In the present work he incidentally gave a few biographical facts, and made a violent attack upon Martinus Rulandus, the younger, and his chemical remedies, but he did not on

that account reject these, but claimed to have himself used them thirty years before. Rulandus wrote a reply: *Alexicacus Chymiatricus*, Francof., 1611, 4to." (Ferguson). Very rare. Not in Blocker, Cushing, Duveen, Ferguson Coll., Krivatsy, Osler, Parkinson & Lumb, Waller, Watt, Wellcome, etc. (British Library, XVIII, col. 135, p. 945; Ferchl, 386; Ferguson, II, 149; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 1, p. 421)

ODHELSTJERNA, Eric

Observationes Chymico-Metallurgicas circa Ortum & Effluvia Metallorum, Dissertatione Inaugurali summo favente Numine, nec non Amplissimae Facultatis Medicae Remensis consensu Pro Summis in Medicina Honoribus & Privilegiis ritè consequendis, Eruditorum, censurae subjicit Ericus Odhelius, Suecus. Ad diem 10 Januar. St. N.l.h.s. Brussels: Excudebat Daniel Petri, Anno 1687.

First edition. 4to. 14 leaves (unpaginated). Woodcut printer's device on title and woodcut capitals in text. Good copy in half morocco antique, marbled boards, spine gilt-lettered and dated.

ODHELSTJERNA (1661–1704) was born in Uppsala and in 1688 became the first mining instructor of the Nya Kopparbergs and Hellefors districts. In 1695 he was assessor of the Swedish Mining College. These observations were presented before the medical faculty at Rheims, although the book was published in Brussels. The book deals with the supposed origin of metals in their ores and contains a chemical and metallurgical commentary on sixteenth- and seventeenth-century writers on these subjects (e.g., Agricola, Barba, Boyle, Bohn, and Helmont). The hypothesis of the Paracelsian *tria prima* is employed to account for the properties of different metals and alloys, which were assumed to be compounded of philosophical salt, sulphur, and mercury in varying amounts. There are several textual corrections in ink, presumably by the author. On signatures C1 (verso) and C2 (recto) there is a poem in English "occasioned by my L(ate) Br(other)s happy arrival unto England." Signature C2 (verso) comprises an encomium, in French, by S. Dimbergh, dated Paris, 23 October 1686. This is possibly the first book on metals by a Swedish author and as such is important since Sweden became preeminent in metallurgical chemistry in the eighteenth century. A very rare work that has remained unknown to almost all bibliographers and historians of science. (Ferchl, 387; Poggen-dorff, II, 307)

ODLING, William

A Course of Practical Chemistry, arranged for the Use of Medical Students. By Wm. Odling, M.B. F.C.S. . . .

London: Samuel Highley. 1854.

First edition. 8vo. xi, (1), 108 pp. Very good copy in original blind-stamped mauve cloth.

ODLING (1829–1921), demonstrator in chemistry at Guy's Hospital, succeeded Frankland at St. Bartholomew's Hospital in 1863. In 1868 he succeeded Faraday as professor of chemistry at the Royal Institution and in 1872 became professor of chemistry at Oxford University, where he succeeded Sir Benjamin Brodie. In this book, his first, Odling gives "an outline of the course of practical chemistry annually carried out in the laboratory of Guy's Hospital" (preface). General testing, toxicological, and animal (organic) chemistry are covered in three sections, the first of which (pp. 5–19) contains three tables that are early precursors of the well-known group analysis schemes for inorganic compounds. An excellent account of the chemical training given to mid-nineteenth-century medical students, the book was very successful. A fifth edition appeared in 1876 and a Russian translation in 1867. The first edition is rare and was unknown to Bolton, who lists later editions. (D.S.B., X, 178; Partington, IV, 464; Sotheran, Cat. 676 [1907], 3366; Thornton & Tully, 223)

ODLING, William

A Course of Six Lectures on the Chemical Changes of Carbon. By William Odling, M.B., F.R.S. Delivered before a Juvenile Auditory at the Royal Institution of Great Britain during the Christmas Holidays of 1868–69. Reprinted from the Chemical News, with Notes by William Crookes, F.R.S.

London: Longmans, Green, and Co. 1869.

First edition in book form. 8vo. xii, 162 pp. Neat early marginal notes in pencil on some pages; otherwise very good copy in original publisher's blind-stamped mauve cloth, spine faded. An early issue with seal impressed in blind on title: Presented by the Publishers.

A SERIES OF lectures on the chemistry of carbon compounds delivered by Odling to juvenile audiences at the Royal Institution. "A remarkable feature of these Lectures is the fact that every term made use of is defined as it occurs, and the oral definition is supplemented by a clear and decisive experimental illustration" (preface by William Crookes). Odling has been described as the "most eloquent of chemical lecturers" (Gunther [*Early Science in Oxford*, XI, 292], who reproduces a student's caricature of Odling lecturing). A French translation appeared (Paris, 1870). (Bolton, 704; D.S.B., X, 178; Partington, IV, 464; Thornton & Tully, 223)

ODLING, William

A Manual of Chemistry Descriptive and Theoretical. By William Odling, M.B., F.R.S. Part I.

London: Longman, Green, Longman, and Roberts. 1861.

First edition. 8vo. xiv, (2), 380 pp. Diagrams in text. Good copy, uncut, in modern blue buckram, spine gilt-lettered, original printed blue wrappers bound in.

ALL PUBLISHED of this excellent work, which was translated into Russian, French, and German. Odling (1829–1921), demonstrator in chemistry at Guy's Hospital, succeeded Frankland at St. Bartholomew's Hospital in 1863. In 1868 he succeeded Faraday as professor of chemistry at the Royal Institution and in 1872 became professor of chemistry at Oxford University, succeeding Sir Benjamin Brodie. He is best remembered for his proposals of the formulae of ozone (1861) and bleaching powder (1870). On pages 94–95 of this *Manual of Chemistry* he discusses ozone, and on page 56 he comments on the structure of bleaching powder, indicating that it contains hypochlorite. "Odling made important contributions to the developments of the Periodic Law, Chemical Equivalency and the Theory of Types" (Duveen). The *Manual* "is based on the newer type or substitution theory as propounded by Gerhardt and Laurent" (Zeitlinger). Very scarce. Not in Edelstein, Ferchl, Ferguson Coll., Morgan, Smith, Sondheimer, Waller, etc. (Bolton, 704; D.S.B., X, 178; Duveen, 439; Partington, IV, 461; Sotheran, Cat. 676 [1907], 3369; Thornton & Tully, 223)

OEJEBOM, Jacob

Dissertatio Mineralogica de Generatione Lapidum & Crystallisatione, . . . Praeside . . . Gustavo Harmens, . . . pro laurea Phil. obtinenda, submittet Jacob Ojebom, W. G. In Audit. Maj. . . Die (blank) Aug. MDCCLII.

Lund: Ex Officina Director. Caroli Gustavi Berling, Reg. Acad. Carol. Typograph. (1752).

First edition. 4to. 4 leaves, 28 pp. Fine copy, in maroon quarter cloth antique, marbled boards, spine lettered in gilt: Harmens. Dissertations. 1748–1760.

A DISSERTATION ON the origin and physical and chemical properties of crystalline minerals, presented by Ojebom under the direction of Gustav Harmens (1699–1774), professor of medicine and chemistry at the University of Lund. The works of Francis Bacon, Herman Boerhaave, Robert Boyle, Nicolas Lemery, Isaac Newton, Robert Plot, Johan G. Wallerius, and others are cited. There are several descriptions of the manufacture of glass (by fusing ground quartz with plant ashes) and of colored glasses by admixture with various minerals (e.g., cobalt and manganese).

Unknown to Duncan and the usual bibliographers. (Watt, I, 467j)

**OFFENBACH, and BOUILLON-LAGRANGE,
Edme Jean Baptiste**

*L'Art de Fabriquer la Poterie, Façon Anglaise; contenant les procédés et nouvelles découvertes, la fabrication du minium, celle d'une nouvelle substance pour la couverte, celle des couleurs vitrifiables, l'art d'imprimer sur Faience et porcelaine, et un vocabulaire de termes techniques et chimiques. Avec gravures, a l'usage des fabricans et de ceux qui veulent établir des poteries; par M. O*** Ancien Manufacturier; revu pour la partie chimique par M. Bouillon-Lagrange, Docteur en Médecine, Professeur de Chimie, etc.*
Paris: Grand Buffon. 1807.

First edition. 12mo. 298 pp. With 2 folding engraved plates. Fore-margin of title page rather narrow (not affecting text); otherwise a fine copy in early-nineteenth-century quarter calf, pebbled boards, spine gilt-ruled and lettered in gilt.

AN INTERESTING and important work on all aspects of the chemistry and technology of making fine china, pottery, and glass, following the procedures discovered by Josiah Wedgwood in England. The chemistry presented in the text was carefully reviewed by Professor Bouillon-Lagrange. A valuable feature of the book is the comprehensive vocabulary of chemical terms and definitions (pp. 180–285). The plates depict furnaces and other equipment for manufacturing pottery and glassware. No reference to this work on chemical technology has been found in available bibliographies.

OGG, George

An Elementary Treatise on Chemistry: including the history of the science; the operation of powerful chemical agencies; explanations of the nature and properties of the most important inorganic substances, and their uses in the arts; with numerous experiments and illustrative figures. By George Ogg.

London: Printed for the Author, by H. Hetherington, . . . 1829.

First edition. 12mo. 264 pp. With 4 copperplates (Henry Ogg sculp.) depicting 45 pieces of chemical apparatus. Fine, crisp copy, uncut, in the original cloth-backed boards, printed paper label on spine. From the library of Professor Franz Sondheimer (1926–1981). Signature in ink of “W. Gregory Esqr.” (1803–1858), famous chemist and editor of English editions of Liebig’s works, on front endpaper. Prof. Sondheimer has written in pencil on front endpaper: “Prof. of Chemistry, Glasgow, Aberdeen Chemistry (age 26 in 1829).”

IN THE preface the author says that the text “was published a few years since in an Encyclopedia,” which unfortunately he does not name. The first nineteen pages give an interesting history of chemistry. No biographical reference to the author or bibliographical reference to this privately printed work has been found. A fine association copy of a very rare textbook.

OHM, Georg Simon

Théorie Mathématique des Courants Électriques . . . Traduction, préface et notes de J.-M. Gauguain.
Paris: L. Hachette et Mallet-Bachelier. 1860.

First French edition. 8vo. 1 leaf, 202 pp., 1 leaf. With 6 figures in text. Fine, crisp copy, in original half calf, marbled boards, maroon morocco label.

THE FRENCH translation of *Die Galvanische Kette* (Berlin, 1827), in which Ohm (1789–1854) established his famous law relating the voltage, V, and amperage, I, passing through an electrical conductor of resistance, R: namely, $R = V/I$. Ohm’s law and his other discoveries were ignored or contradicted at the time, and Faraday took no notice of them. “The translation is preceded by a critical preface and by a sketch of the author’s life; also valuable notes by the translator, himself a distinguished electrician” (Wheeler Gift). The *Appendice sur l’action chimique du circuit galvanique* (pp. 141–165) is an attempt to explain mathematically the electrochemical action of batteries. One of the great landmark books of science, the original German edition of which is listed by Cushing, Dibner, Edelstein, *Printing and the Mind of Man*, Thornton & Tully, Waller, etc. An English translation appeared in 1841. (D.S.B., X, 193; Ekelöf, II, 7; Partington, IV, 137; Poggendorff, II, 317; Sotheran, Cat. 676 [1907], 3373 [“Scarce”]; Wheeler Gift, 835b)

OLAFSEN, Erik, and POVELSEN, Biarne

Travels in Iceland: performed by Order of His Danish Majesty. Containing observations on the manners and customs of the inhabitants, a description of the lakes, rivers, glaciers, hot-springs, and volcanoes; of the various kinds of earths, stones, fossils, and petrifications; as well as of the animals, insects, fishes, &c. By Messrs. Olafsen & Povelsen. Translated from the Danish.

London: Printed for Richard Phillips, 6, Bridge-Street, Blackfriars, by Barnard & Sultzter, Water Lane, Fleet Street. 1805.

First English edition. 8vo. (in 4s). 162 pp. Folding engraved frontispiece map of Iceland and 4 engraved plates. Fine copy, in modern quarter maroon morocco, cloth boards, spine gilt-lettered.

AN ACCOUNT of a survey of Iceland begun in July 1800 by Olafsen (a native of Iceland) and Povelsen, a Danish physician who resided in Iceland. This exploratory survey was carried out at the instigation of the king of Denmark, who directed the Danish Academy of Sciences to select "proper persons to travel over that Island, relative to which only vague and imperfect ideas had hitherto prevailed." In addition to its historical and geographic interest, this work contains much important information relating to chemical subjects. There are detailed descriptions of minerals, mines, smelting of metals, various chemical processes, extractions, etc. The anonymous editor and translator has signed his name with the initials "F. W. B." (p. 158). Rare. (Ward & Carozzi, 1675)

OLIVER, William

A Practical Dissertation on Bath Waters. I. Of the Antiquity of Bath and its Waters. II. The Origine of Springs. III. Of the Ingredients in the Waters. IV. The Cause of their Heat. V. Of Drinking the Waters and Bathing, and Directions in Both. VI. Of the Virtues of Bath Waters in particular. VII. That they are of great Use in the Gout. VIII. That they are extraordinary good in Womens and Children's Cases. IX. That the City of Bath is very healthy. X. Of Cold Bathing. To which is added, a Relation of a very Extraordinary Sleeper near Bath. . . .

London: Printed for A. Bell, at the Bible and Cross-Keys in Cornhil. 1707.

First edition. 8vo. 8 leaves, 136 pp. Very fine copy, in original blind-stamped, unlettered paneled calf.

AFTER THE battle of Sedgemoor, Oliver (1659–1716), a surgeon to the duke of Monmouth, fled to Holland but returned to England in 1688 as an officer in the army of William of Orange. Admitted a licentiate of the Royal College of Physicians (1692), he became physician to the navy. In 1702 he practiced at Bath, was elected F.R.S. (1703), and in 1709 returned to London, where he was successively physician at Chatham and Greenwich hospitals (see D.N.B.). Dedicated to Queen Anne, this excellent work on the mineral waters of Bath contains a discussion of their chemical composition (with references to Becher, Drebbel, Guidott, et al.). Oliver attributes the thermal properties of the waters not to "Subterranean Fires," but "to Fermentation . . . from a Mixture of differing Salts dissolv'd in Water . . . Any Acid or Alkali mixt together will do the same . . ." "A full and finished practical discourse" (Bishop Nicholson, quoted by Waring). Later editions appeared: 1716, 1719, 1737, 1747, 1764, 1765. The first edition is rare. (Blake, 332; Munk, I, 494; Waring, 782)

OLNHAUSEN, Carl de

Dissertatio Inauguralis Medica de Probato, Tutoque Usu Interno Vitrioli Ferri Factitii adversus Haemorrhagias Spontaneas, largiores . . . Praeside Philippo Friderico Gmelin, . . . ad captandos summos in medicina honores D. XXVI Februar. anni MDCCLXIII. . . . Exponit Carolus de Olnhausen, Vinimontanus, . . .

Tübingen: Literis Sigmundianis. (1763).

First edition. 4to. 26 pp. Fine, crisp copy, with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A CHEMICO-MEDICAL dissertation by Olnhausen (dates unknown), on the internal uses of ferrous sulphate, presented under the direction of Philipp Friedrich Gmelin (1721–1768), professor of chemistry and botany at Tübingen. "A good memoir, containing directions for preparing 'Vitriolum Ferri factitium,' the grounds on which it is to be preferred to other preparations of iron, its great powers in controlling haemorrhage and nocturnal emissions" (Waring). The author discusses the various forms of ferrous sulphate (e.g., anhydrous, mono- and hepta-hydrates), as well as preparations made by calcination. The works of Boerhaave, Cramer, Kenelm Digby, Henckel, Le Mort, Macquer, et al., are quoted. Rare. Not in the usual chemical and medical bibliographies. (Waring, 441)

OLSZEWSKI, Karol Stanislaw

The Liquefaction and Solidification of Argon.
January 31, 1895.

First edition. 4to. In: *Philosophical Transactions of the Royal Society*, (1895) pp. 253–259. With 1 woodcut figure. Fine copy in modern brown buckram, spine gilt-lettered; presented by William Ramsay to the physicist Ernest Howard Griffiths (1851–1932). Bound with: 3 other papers on argon, by Lord Rayleigh and William Ramsay, William Crookes, and William Ramsay and Sydney Young.

OLSZEWSKI (1846–1915), professor of chemistry at the Jagiellonian University of Cracow, was a pioneer in the field of low-temperature physics and chemistry. He became famous when, in 1883, working with Zygmunt Florenty von Wroblewski (1845–1888), he succeeded in liquefying air. The same year he successfully liquefied pure oxygen, pure nitrogen, and carbon monoxide. The present classic paper, communicated to the Royal Society by William Ramsay, describes the experiments carried out by Olszewski, in which he first liquefied the newly discovered chemically inert gas argon. Ramsay had sent Olszewski 300 cubic centimeters of argon in a sealed glass bulb, and with this small specimen he determined the following physical constants for argon: critical temperature, critical pressure, boiling

point, freezing point, and gaseous density. Olszewski also determined the approximate density of liquid argon at its boiling point. (D.S.B., X, 206)

O'REILLY, R.

Essai sur le Blanchiment, avec la description de la nouvelle méthode de Blanchir par la Vapeur, d'après le procédé du Citoyen Chaptal; et son application aux Arts. Par R. O'Reilly . . . Paris: De l'Imprimerie et au Bureau des Annales des Arts et Manufactures, . . . chez Déterville . . . et chez les frères Levrault . . . à Strasbourg. An IX (1801).

First edition. 8vo. xvi, 226, 5, (1) pp. With 14 engraved plates depicting industrial equipment for steam bleaching (by Tardieu after drawings by O'Reilly). Very fine copy in original half calf, marbled boards, spine ruled in gilt and blind.

A CLASSIC BOOK on the newly invented process by Chaptal on bleaching using steam, prepared by O'Reilly at Chaptal's request. Chaptal's process was faster and less expensive than the widely used process of Berthollet, which employed chlorine. O'Reilly went further than Chaptal by inventing better machinery and combining efficient caustic steam, with chlorine bleaching as a final step. A chapter of O'Reilly's work of interest to bibliophiles is "The restoration of books and the bleaching of prints" (a very early discussion of paper restoration methods). A milestone in the chemistry and technology of bleaching, this book is discussed by Sidney M. Edelstein in "A Frenchman named O'Reilly—modern bleaching 150 years ago" (in *American Dyestuff Reporter*, 47 [1958], 253–257). Translations appeared in German (Leipzig, 1802) and Italian (Naples, 1804). (Edelstein, 3351; Ferchl, 389; Poggendorff, II, 331; Ron, 788; Watt, II, 797g)

O'REILLY, R.

Vollständige Bleichkunst; nebst des Bürger Chaptal Beschreibung einer neuen Methode, durch Dämpfe zu bleichen, und ihrer Anwendung auf die Künste und Fabriken von R. O'Reilly . . . Aus dem französischen übersezt, mit Anmerkungen und Zusätzen, nebst einer Vorrede von D. Christ. Gotthold Eschenbach . . .

Leipzig: bei J. C. Hinrichs. 1802.

First German edition. 8vo. 3 leaves, iv, iv, 1 leaf, 184 pp. With 14 folding copperplates (Strasberger sc.). Fine copy, uncut with wide margins, in half calf antique, marbled boards, maroon morocco label, original blue wrappers bound in. Old stamp on title page of the Stettin government library.

THE GERMAN translation by Christian Gotthold Eschenbach (1753–1831) of O'Reilly's *Essai sur le blanchiment* (Paris, 1801). A professor of chemistry at the University of Leipzig, the translator has added a preface (dated October 1801) and many important comments and footnotes.

O'Reilly (d. 1806) was a member of the Academy of Bordeaux and of the Lycée des Arts in Paris. Two further volumes were published by Eschenbach (Leipzig, 1804, 1806) comprising German translations of later papers on bleaching by Chaptal and O'Reilly. The plates are reengraved versions of those in the 1801 French edition. (Edelstein, 3353; Ron, 790)

ORFILA, Mateo Jose Buenaventura

Éléments de Chimie Médicale. Par M. P. Orfila . . .

Paris: Chez Crochard, Libraire, rue de Sorbonne, No. 3. 1817.

First edition. 2 vols., 8vo. I: xxviii, 610 pp. II: xvi, 575, (1) pp. With 14 engraved plates (by Dubois; 12 in I, 2 in II). Very good copy in original mottled calf, gilt, covers with ornamental gilt fillets (spines and covers repaired).

ONE OF the founders of toxicology, Orfila (1787–1853), born in Minorca, studied chemistry in Paris under Vauquelin (1807). After studying medicine in Valencia and Barcelona (M.D., 1811), he became professor of forensic medicine and toxicology (1819–22) and medical chemistry (1823) in the Faculty of Medicine at Paris. Orfila here outlines his course of medicinal chemistry and pharmacy, with particular emphasis on toxicology. Volume I presents the basic principles of chemistry as they relate to the physical and chemical properties of inorganic compounds. Volume II covers organic compounds derived from plant and animal sources, including procedures for the analysis of organic compounds, mineral waters, etc. A detailed description of the contents of this work is given (in Spanish) by C. E. Prelat and A. G. Velarde (*Chymia*, vol. 3 [1950], 81–93). Well received, the book was kept up-to-date by Orfila, an eighth edition appearing in three volumes (Paris, 1851). (Bolton, 707; Duveen, 440; Edelstein, 1725; Ferchl, 389; Partington, IV, 478; Poggendorff, II, 332; Watt, II, 718z; Wellcome, IV, 267)

ORFILA, Mateo Jose Buenaventura

Éléments de Chimie, appliquée à la Médecine et aux Arts. Par M. Orfila . . .

Paris: Librairie de Crochard, rue et place de l'École de Médecine, No. 13. 1831.

Fifth edition. 2 vols., 8vo. I: 2 leaves, xvi, 754, (2) pp. II: 2 leaves, xii, 744 pp. With 14 engraved plates (by Dubois; 12 in I, 2 in II). Near-fine copy in contemporary dark-blue quarter calf, marbled boards, spines gilt-ruled.

THE GREATLY enlarged and updated fifth edition of this classic textbook of medical chemistry and toxicology (first: Paris, 1817). The title was changed to its present form in the second edition (Paris, 1819). The plates by Dubois are

slightly modified versions of those in the first edition. (Bolton, 707; Roller & Goodman, II, 261)

ORFILA, Mateo Jose Buenaventura

Practical Chemistry, or a Description of the Processes by which the various articles of chemical research, in the animal, vegetable and mineral kingdoms, are procured: together with the best mode of analysis . . . Translated from the French of P. M. Orfila [sic] . . . By John Redman Coxe . . .

Philadelphia: Published by Thomas Dobson and Son, at the Stone-House, No. 41, South Second Street. William Fry, Printer. 1818.

First American edition. 8vo. xv, (1), 355, (1), lxxxvi pp. With 8 engraved plates (Lawson sc.). Very fine copy in original tree calf, spine gilt-ruled, red morocco label. Signatures on half title and title page dated 1831.

THE ENGLISH translation of Orfila's *Éléments de Chimie Médicale* (Paris, 1817), by John Redman Coxe (1773–1864), professor of chemistry, materia medica, and pharmacy at the University of Pennsylvania. Coxe (M.D., Pennsylvania, 1794) practiced in Philadelphia (1809–19) before joining the faculty. "The text of Orfila had an influence upon the earlier generations of American chemists. . . . [Coxe] believed and declared 'that few works can be found, in which so much matter of practical tendency is embodied in so small a compass.' The section on Analysis, borrowed to some extent from the work of Thenard, reads well . . . a first rate book" (E. F. Smith, *Old Chemistries*, 1927, pp. 41–42). To make this translation more valuable than Orfila's original, Coxe has added "a variety of useful tables from different sources" (p. xv) and a "Glossary of Chemical Terms, &c. both ancient and modern" (pp. i–lxxiii). An unusually fine copy for an American book of this period, most of which are browned owing to the poor quality of the paper then in use. (Bolton, 707; Miles, *American Chemists & Chemical Engineers* [1976], 99; Morgan, 583; Smith, 357)

ORSATO, Sertorio

Philosophicum Sertum a Sertorio Ursato Patavino ex variis scientiae naturalis floribus consertum Illmo. & Excmo. Aequiti Hieronymo Lando Patritio Veneto ac Senatori Amplissimo Dicitum. (Padua, 1635).

First (only) edition. 4to. Engraved title page, 2 leaves, 75 pp., 1 p. (errata). Fine copy in simulated vellum boards.

ORSATO (1617–1678), or Ursatus, a celebrated antiquary, historian, grammarian, and poet, was born in Padua. This is his first and only scientific work, which is entitled *Philosophical Garland*. Among the chapters are: De partibus cor-

poris naturalis; de universo; de affectionibus; de infinito; de vacuo; de mathematica; de elementis, etc. Although the author was not extensively versed in the scientific knowledge of his time, he does discuss matters of peripheral chemical interest: e.g., the Aristotelian elements (air, earth, fire, water), the generation and corruption of organic and inorganic matter, vacuum, metals, and related subjects. The title of this work contains a play on the author's name. A very rare book that is not mentioned by the usual bibliographical authorities. (Watt, II, 720z)

ORSCHALL, Johann Christian

Apelles Post tabulam observans maculas In Sole Sine Veste Ob J.C.O. Die wahre Aufschliessung Des Goldes und den Rubin-Fluss gnugsam erwiesen?

N.d. (1720).

First edition thus. 8vo. 44 pp. Good copy. Bound with: Gertz, P., *Neu-eröffnete Kunstammer* (1720), and 3 other alchemical works.

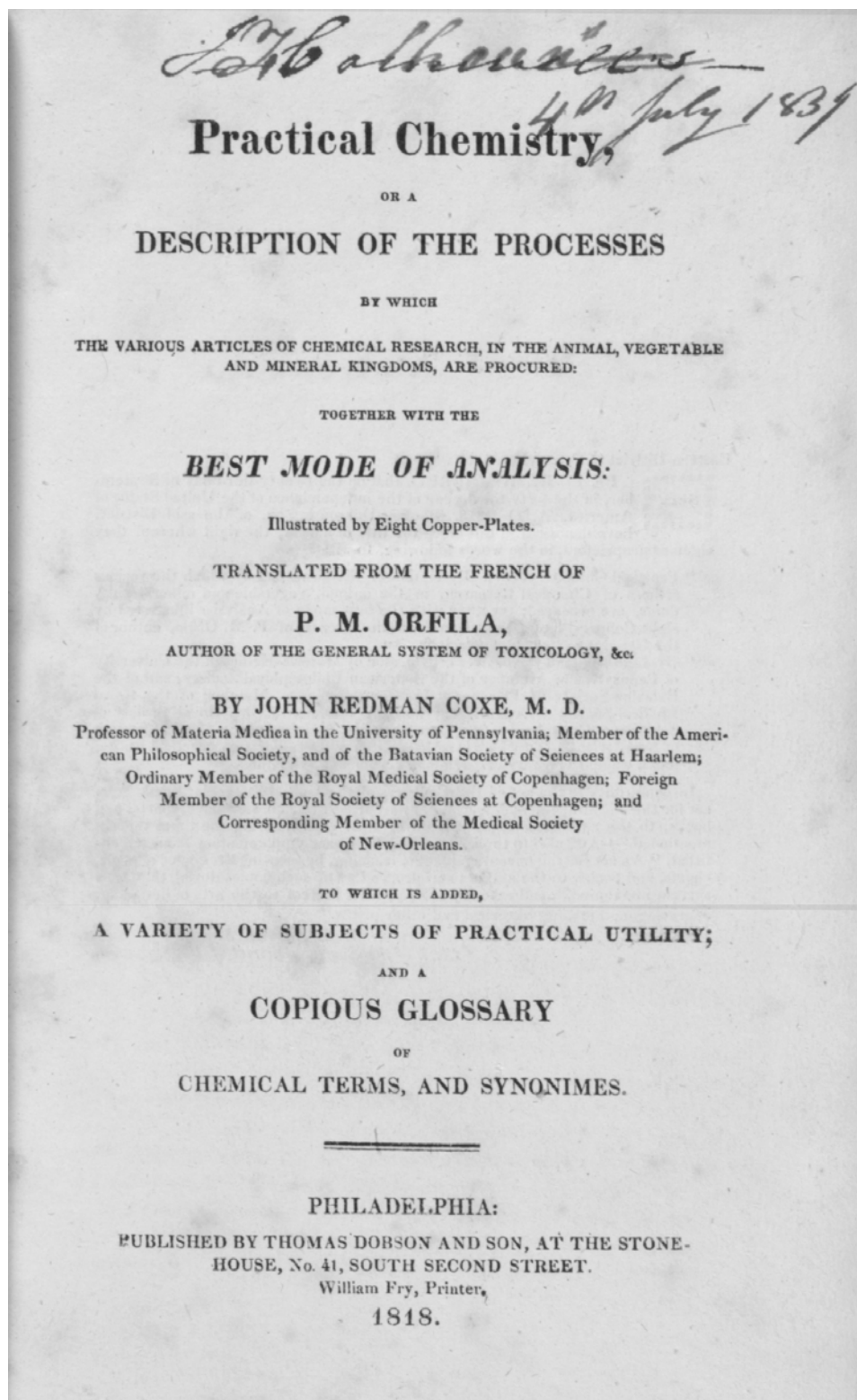
AN ANONYMOUS tract appended to the *Sol Sine Veste* (1720) by Orschall, "but it is really an attack on him" (Duveen). The first edition (Cologne, 1684) is described by Ferguson (I, 38). Not in Duncan or the usual bibliographies. (Duveen, 245)

ORSCHALL, Johann Christian

Oeuvres Métallurgiques de M. Jean-Christian Orschall, . . . Contenant I. L'Art de la Fonderie; II. Un Traité de la Liquefaction; III. Un Traité de la Macération des Mines; IV. Le Traité des Trois Merveilles; (Traduit de l'Allemand) . . . Paris: Chez Hardy, Libraire, rue S. Jacques au dessus, de celle de la Parcheminerie, à la Colonne d'or. 1760.

First French edition. 12mo. xxxii, 394 pp., 1 leaf (errata). Folding copperplate (facing p. 110). Fine copy, in original mottled calf, spine richly gilt (small repair at foot).

THE COLLECTED edition of the author's scattered German works on mining, metallurgy, and metallurgical chemistry, translated by Baron d'Holbach. Duveen (following Ferguson) states that the translation is "probably by Demachy, of the author's work *Sol sine Veste*" but is wrong on both counts. In the preface d'Holbach explains that Orschall's only other work—the *Sol sine Veste*—is not included, as it has already been appended to his translation of Neri, Merret, and Kunckel's work on glassmaking, published in 1752. Detailed descriptions are given of three alchemical processes for making large quantities of gold. Despite its alchemical overtones, the book gives much valuable information on extractive metallurgy. The colophon is dated 1759. This copy contains the half title and errata leaf (usually missing). The



Orfila. Practical Chemistry. Philadelphia, 1818.

book was reissued by J. T. Herissant in 1761. Scarce. Not in Blake, Bolton, Edelstein, Poggendorff, Smith, etc. (Duveen, 441–442; Ferchl, 389; Ferguson, II, 156 [not in Young Coll.]; Ferguson Coll., 504; Hoover, 618; Neu, 3007; Partington, II, 371)

ORSCHALL, Johann Christian

Sol sine Veste. Oder Dreyssig Experimenta dem Gold seinen Purpur auszuziehen, welches theils die Destructionem auri vorstellet, mit angehängtem Unterrichts, den schon längst verlangten Rubin-Fluss oder Rothe Glass, in höchster Perfection zubereiten, ans Licht gegeben aus eigener Erfahrung von J. C. O.

Amsterdam: N.p. 1684.

Second (first Amsterdam) edition. 12mo. 11 leaves, 91, (1) pp., 3 leaves (blanks). Contemporary notes in ink on flyleaves; otherwise very good copy printed on thick paper, in blind-ruled calf antique, green morocco label, spine dated.

ORSCHALL (dates unknown), a Hessian mining official, learned the amalgamation process for gold at Dresden in 1682, which he later worked in Bohemia. In 1684–87 he was a mining inspector at Franckenberg. Ferguson (II, 156–157) provides the few biographical details known about him. In addition to his extensive knowledge of mining and metallurgy, he was an expert at glassmaking. The present work (first: Augsburg, 1684) gives a detailed account of seventeenth-century processes for making ruby glass. Orschall describes the preparation of “gold-purple” from salts of tin (i.e., so-called purple of Cassius, or colloidal gold, made by mixing a solution of gold chloride with stannous chloride). The colloidal gold was used to color glass a beautiful deep ruby red. The book was reprinted at Augsburg (1739) and at Kassel (1742). Duveen (p. 245) lists an edition of 1720, without imprint. The text was incorporated with those of Neri, Merret, and Kunckel in Holbach’s French translation in 1752. This Amsterdam edition is extremely rare and was unknown to Duncan, Ferchl, Ferguson, etc. There is a copy at the University of Wisconsin. (Neu, 3008)

ORSCHALL, Johann Christian

Sol Sine Veste, Oder Dreyssig Experimenta Dem Gold seinen Purpur auszuziehen, Welches theils die Destructionem auri vorstellet, Mit angehängtem Unterrichts, Den schon längst verlangten Rubin-Fluss Oder Rothe Glass In höchster Perfection zu bereiten. Ans Licht gegeben aus eigener Erfahrung von J.C.O.

Anno 1720.

First edition thus. 8vo. 1 leaf, 60 pp. Title page in red and black. Good copy in original vellum, rebaked in vellum antique. Bound with: Gertz, P., *Neu-eröffnete Kunstammer* (1720), and 3 other alchemical works.

A REPRINT OF the first edition (Augsburg, 1684). This tract has its own title page and pagination but forms part of the book by P. Gertz, the signatures being continuous. “The author relates in this work the story of the alchemist who transmuted, at Hamburg, a glass of water into gold with an unknown powder” (Duveen). Ferguson does not mention this edition. Not in Duncan or the usual bibliographies. (Duveen, 245)

ORSCHALL, Johann Christian

Wunder-Drey, Das ist: Beschreibung Dreyer Dem Ansehen nach Unannehmlicher der Practic nach aber wohl Practicabler Particularien, Aus eigener Experiencz Von Einem Liebhaber der Chymie. Wunder-Dreyes Continuatio, Welches sind fernere Experimenta, So in Elaboratione dieser Drey Processen observirt, In Anno 1684. herausgegebenen Wunder-Drey, Aus sonderer Lieb des Nächsten herausgegeben Von Eben selbigem Authore.

Cassel: In Verlegung Joh. Bertram Cramer. 1737.

Third edition of vol. I, second edition of vol. II. 2 vols., 8vo., in 1. I: 4 leaves, 84 pp. II: 11 leaves, 131, (1) pp. First title page with small red wax spot and old signature in ink (“Stettina”). Paper lightly toned; otherwise fine copy in mid-nineteenth-century olive morocco, covers with double gilt fillets and corner fleurons, spine richly gilt, black morocco label. From the library of the celebrated hermeticists A. P. and M. Atwood, with signature in ink dated 1859.

TWO ALCHEMICAL works that describe processes for the preparation and multiplication of gold and silver. Estimates are given for the costs and profitability of the processes. The *Continuatio* discusses the “seeds of metals” and describes experiments on the transmutation of metals (e.g., copper, lead, mercury) into silver and gold. Concerning the *Continuatio* Ferguson states: “On p. 6, the author refers to a *Historia Metallorum* by him, which is possibly that published by David Kellner: *Praxis metallica curiosa, oder curieus angestellte und experimentirte Schmelz-proben von einem wohlerfahrenen Erzkundiger, Nordhausen, 1693, 1701, 1707.*” Other editions: *Wunder-Drey*: Augsburg (3 issues), 1684, 1685, 1686; Cassel, 1696–98; 1753; *Wunder-Dreyes Continuatio*: Cassel, 1686, 1698, 1753. Duveen, Neu, Partington, and Wellcome list some of the earlier editions but not this of 1737. All editions are very rare. (Ferchl, 389; Ferguson, II, 156 [not in Young Coll.]; Kopp, *Die Alchemie*, II, 338; Schmieder, 454)

ORTA, Garcia ab

Due Libri dell' Historia de i semplici, aromati, et altre cose, che vengono portate dall' Indie Orientali, pertinenti alla medicina, di Don Garzia dall' Horto, medico Portugnese; con alcune brevi annotationi di Carlo Clusio. Et due altri libri parimente di quelle che si portano dall' Indie Occidentali, di Nicolo Monardes, medico di Siviglia. Hora tutti tradotti dalle loro lingue nella nostra Italiana da M. Annibale Briganti, Marrucino da Cività di Chieti, dottore & medico eccellentissimo. Con privilegio.

Venice: (no printer or publisher), 1576.

First Italian edition. 4to. 8 leaves, 92 + 44 folios. Two parts in one volume. Printer's woodcut device on title page and 15 well-executed woodcuts in text. Woodcut headpieces and many ornamental woodcut initials. Very good copy in contemporary limp vellum.

THE RARE Italian edition of two landmark botanical works: the first book on the medicinal plants of India and the Far East, by da Orta (fl. 1515–1561), and Monardes' famous book, generally considered the first American herbal containing the first descriptions of plants, trees, and natural history of the New World. This Italian translation by Briganti is the first of da Orta's work and the second of Monardes'. Orta, a famous Portuguese physician, practiced medicine for a quarter of a century in Goa, India, and amassed a fortune. His important *Coloquios dos simples, e drogas he cousas medicinais da India* (Goa: Joannes, 1563), published posthumously, is of great rarity, so this Italian translation is both valuable and more accessible. It contains the translation of Monardes' *Dos libro: El uno trata de todas las cosas que traen nuestras, Indias Occidentales*, etc. (Sevilla: S. Trugillo, 1565), which is the first treatise on Central American drugs and was for many years the most important work on the medicinal plants of the New World. For details on these works, see A. Arber, *Herbals their origin and evolution* (Cambridge, 1953, pp. 104–110). This edition is not in Cushing, Eales, Ferchl, Garrison & Morton, Osler, Reynolds, Waller, etc. (D.S.B., X, 238; Durling, 3418; Wellcome, I, 4659)

OSKAMP, Theodor Leonard

Disquisitio Chemico-Medica de Calcinatione Metallorum per Aquae Analysisin, eorumque per eiusdem fluidi synthesisin reductione. . . pro medicinae, artisue obstetriciae doctoris dignitate . . . publice pugnabit auctor. Cessante mense Aprili MDCCXCI.

Marburg: Litteris Joannis Bayrhofferi, Acad. Typographi. (1791).

First edition. 8vo. 2 leaves, 60 pp., 2 leaves. Fine copy in brown quarter morocco antique, marbled boards, spine gilt-lettered and dated, with the original printed blue paper wrappers bound in.

THE AUTHOR was a Ph.D. from Utrecht, and this is his thesis for the M.D. degree. It is purely chemical and consists mainly of a description and discussion of the experiments of Lavoisier and Priestley explaining the calcination of metals. At that time many chemists still believed that metals were mixtures of their calx and phlogiston. Oskamp contended that metals also contain a small concentration of water. He believed that the hydrogen produced when metals react with acids originates from the water supposedly contained in the metal. Gaseous hydrogen was released, leaving the oxygen (of the water in the metal) to produce the calx (oxide), which then reacted with the acid to give a salt. A rather bizarre hypothesis, but one that at that time appeared from Oskamp's arguments to be credible. At the end (pp. 37–56) there is a substantial bibliography of chemical works (published between 1727–1791) consulted by the author in writing this thesis. A rare and historically important work, which is not in the major early chemical libraries. It has remained unknown to Duveen and Klickstein, Partington, and other chemical historians who have written at length on Lavoisier and Priestley and their roles in explaining the calcination (oxidation) of metals.

OSTERMANN, Johann Christian Otto

De Tartaro Emetico. Consentiente illustri medicorum ordine pro gradu doctoris medicinae et chirurgiae D. XVI Sept. MDCCCLXXVII. Disputabit Joh. Chr. Otto Ostermann Osteroda-Hannoveranus.

Göttingen: Litteris Joh. Christ. Dieterich. (1777).

First edition. 4to. 28 pp. Pristine copy with wide margins (lower edges uncut), in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DETAILED DISSERTATION on the preparation, chemical properties, and medicinal uses of the salt known as tartar emetic (antimony potassium tartrate), with numerous references to the works of earlier and contemporary chemists. This important compound is still employed in the treatment of parasitic infections in humans and animals. No biographical information on Ostermann has been located, and the praeses is not named. Very rare. Not in the usual bibliographies. (Waring, 240)

OTT, Johann Georg

Dissertatio Medica Inauguralis de Effectibus Caloris et Frigoris Atmosphaerae in Corpus Humanum. . . . Ex Auctoritate Magnifici Rectoris, D. Joachimi Schwartzii, . . . Pro gradu doctoratus, . . . Johannes Georgius Ott, Scaphuza Helvetus. Ad diem 29 Augusti 1749. . . .
Leyden: Apud Conradum Wishoff. 1749.

First edition. 4to. 23, (1) pp. Large copperplate vignette (by J. Besoet, dated 1737) on title page. Woodcut head- and tailpieces. Fine, crisp copy, with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of Ott (dates unknown), presented under the direction of Joachim Schwartz, professor of medicine at Leyden, on the effects of heat and cold on the human body. Of interest to the historian of chemistry and physics, there are descriptions of freezing mixtures, the corporeal nature of heat and cold, fermentation and putrefaction processes, etc. The author refers frequently to Boerhaave's *Elementa chemiae*. The discussions on thermometry and heat measurement remained unknown to Middleton (*History of the Thermometer*, 1966). Very rare. Not located in any available bibliography.

OTTLEY, William Campbell

A Dictionary of Chemistry, and of Mineralogy, as connected with it, in which is attempted a complete list of the names of substances, according to the present as well as former systems; with an introduction, pointing out the order in which the chief parts of the work may be perused, so as to constitute a Regular Course of Chemistry; and a vocabulary, in which the apparatus and processes made use of are briefly described. Copious notes, &c. &c. By William Campbell Ottley.
London: John Murray, Albemarle Street. 1826.

First edition. 8vo. Unpaginated. 2 leaves + sign. b8, c7, B-Z8, 2A8, 2B4. With 2 engraved plates (chemical apparatus). Fine copy in maroon half morocco, marbled boards, spine richly gilt, by Bernard Middleton. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

A LITTLE-KNOWN but important chemical dictionary by Ottley, on whom no biographical information has been found. Sotheran (Cat. 682 [1908], no. 3410) cites a *Treatise on the Differential Calculus* (Cambridge, 1837), by a certain "W. C. Ottley" of Caius College, Cambridge, but whether or not he was the same person is not known. In his introduction the author says that there have been so many changes since about 1800 in the nomenclature of chemical compounds that "some of the best works on Chemistry of the eighteenth century are now become nearly

incomprehensible." He adheres strictly to the theories of Sir Humphry Davy, "particularly with regard to the hydrogen acids and their compounds." The author states that he has "inserted every thing which he believes essential to a knowledge of the principles of chemistry; so that . . . a person hitherto unacquainted with the subject, may be enabled to instruct himself." Included are useful tables of chemical elective attraction (sig. Z6v-Z8v) and a table of the principle chemical tests (sig. 2A2v-2A4v). Very rare. A "new edition containing the recent discoveries" (London, 1828, in 8vo.) is cited by Bolton (p. 71), but no bibliographical reference to the present edition of 1826 has been found.

OVERKAMP, Heidentryk

Nieuwe Beginselen tot de Genees- en Heel-Konst. Ontdeckende de voornaamste bewegingen en bedieningen der dierelijke huishouding in's menschen ligchaam: rakende de bereiding van spijs en drank, gyl, bloed en geest-making, voedinge, beweging der spieren, ademhaling, de sinnen, slapen, waken, dronkenschap, afscheiding der pis, stonden, transpiratie, en menigte diergelijke meer. Steunende op de gronden der fermentatie, en dese op die van Renatus des Cartes. Door Heidentryk Overkamp, Med. Doct. tot Harlingen met een na reden aan Dr. Agaeus Piphroen.
Amsterdam: By Jan ten Hoorn, Boeckverkooper, tegen overt Oude Heere Logement. 1681.

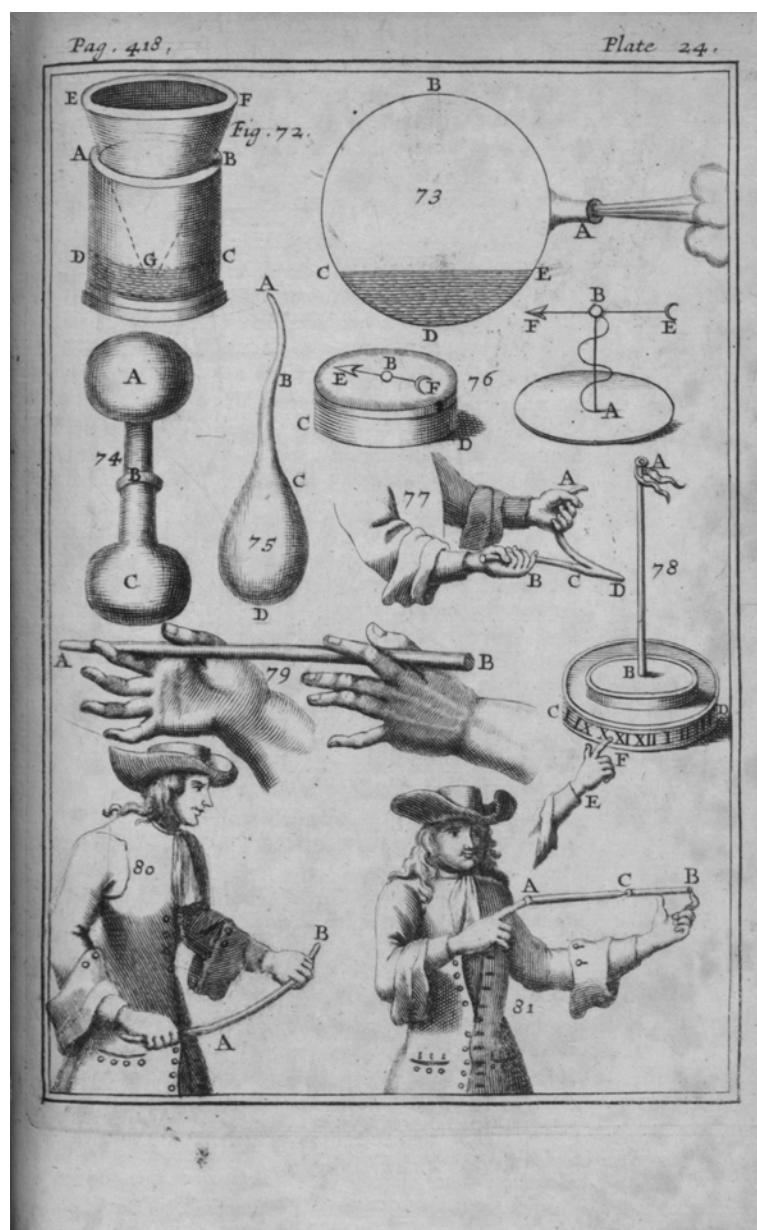
First edition. 8vo. 12 leaves, 640 pp., 8 leaves. Title printed in red and black, with ornamental woodcut. Fine copy in contemporary vellum.

OVERKAMP (dates unknown) was a physician and iatrochemist who practiced in Harlingen. The present work is on fermentation as it occurs in the human body. Overkamp attempts to explain "fermentation" (i.e., what is now called metabolism) according to the philosophy of Descartes. Health is the result of fermentative processes being in balance, while sickness results when they are imbalanced. The book is of interest in the history of biochemistry. Very rare. Not in the usual early chemical and medical bibliographies. (Ferchl, 391; Wellcome, II, 453)

OZANAM, Jacques

Recreations Mathematical and Physical; laying down, and solving many Profitable and Delightful Problems of Arithmetick, Geometry, Opticks, Gnomonicks, Cosmography, Mechanicks, Physicks, and Pyrotechny. By Monsieur Ozanam, Professor of the Mathematicks at Paris. Done into English, and illustrated with very many cuts.
London: Printed for R. Bonwick, W. Freeman, Tim Goodwin, J. Waltho, M. Wotton, S. Manship, J. Nicholson, R. Parker, B. Tooke, and Ralph Smith. 1708.

Ozanam. Recreations Mathematical and Physical.
London, 1708.



First English edition. 8vo. 19 leaves, 2 leaves (advertisements), 530 pp. With 27 engraved plates (including 2 numbered 25, but different) and numerous large woodcut illustrations in text. Very good copy, in half calf antique, marbled boards, spine gilt-lettered and dated.

THE EMINENT French mathematician and writer on physics Ozanam (1640–1717) first published his extremely popular *Récreations mathématiques et physiques* at Paris in 1694. It passed through several French editions, as well as this anonymous translation into English. The French editions of 1735 and 1791, edited and enlarged by Montucla, were translated by Charles Hutton in 1803, with further

editions in 1840 and 1844. The later French editions are discussed by E. N. Harvey (*History of Luminescence*, p. 174) in connection with the sections on natural and artificial organic and inorganic phosphors. The present English edition of 1708 is of chemical interest for the long section on pyrotechny and also for discussions of “phosphorus’s” (pp. 449–452), sympathetic inks, divination of ores, detection of water in wines, fulminating powder, aqua fortis (nitric acid), aurum fulminans, experiments with metals and minerals, etc. (D.S.B., X, 264; Houzeau and Lancaster, 9338; Philip, 110–111; Sotheran, Cat. 789 [1924], 5824 [“Rare”]; Watt, II, 725t)

PACCHIANI, Francesco Giuseppe Maria

Lettera del Dottor Francesco Pacchiani . . . all'illustriss. Sig. Giovanni Fabbroni . . .
(Pisa: 10 Giugno. 1805.)

I: First edition. 8vo. 13, (1) pp., 1 leaf (blank). II: First edition. 8vo. 14 pp., 1 leaf (blank). III: First edition. 8vo. 8 pp. Very good copies (I and II uncut), in maroon quarter cloth, marbled boards, spine gilt-lettered and dated. Bound with: Pacchiani, F. G. M., *Lettera del Dottor Francesco Pacchiani . . . all'illustriss. Sig. Giovanni Fabbroni . . .* (Florence: 9 Luglio. 1805.); Pacchiani, F. G. M., *Lettera del Dottor Francesco Pacchiani . . . al chiarissimo Sig. Lorenzo Pignotti . . .* (Pisa: 9 Maggio. 1805.); and 2 tracts by Cioni and Petrini, and 1 each by Mascagni, Sangiorgio, and Thenard and Biot, all of 1805.

I: A LETTER TO Fabbroni on the apparatus for the production of oxygen, hydrogen, and chlorine by the electrolysis of solutions of sea salt, using electrodes of silver and zinc, with references to the researches of Pignotti, Vauquelin, et al. II: Another letter to Fabbroni describing further experiments on the production of pure oxygen and hydrogen by the electrolysis of acidified water, with references to the works of Fossombroni, Gay-Lussac, Humboldt, et al. III: A letter to Pignotti on the electrolysis of water and dilute hydrochloric acid, with references to Branchi, Galvani, Volta, et al. As the result of these experiments, Pacchiani believed that hydrochloric acid is an oxide of hydrogen. The author published papers on the electrolysis of water and dilute acids in the *Nuovo Giornale dei Letterati* (Pisa), and these are probably offprints from that journal. He also published in the *Annales de Chimie* and *Gilberts Annalen* on the nature of potassium and sodium. Pacchiani (1771–1835) was professor of physics at Pisa but died in Florence. A rare set of reprints on an important topic. (Ferchl, 391; Kopp, *Geschichte der Chemie*, II, 332, III, 353; Mottelay, 392; Partington, IV, 41; Poggendorff, II, 343; Wheeler Gift, 671)

PACKER, Thomas

The Dyer's Guide; being a Compendium of the Art of Dyeing Linen, Cotton, Silk, Wool, Muslin, Dresses, Furniture, &c. &c. With the method of Scouring Wool, Bleaching Cotton, &c., and directions for ungumming silk, and for whitening and sulphuring silk and wool. And also an introductory epitome of the leading facts in chemistry, as connected with the art of dyeing. By Thomas Packer, Dyer and Practical Chemist. . . .

London: Printed for Sherwood, Gilbert, and Piper, Paternoster-Row. 1830.

Second edition. 12mo. viii, 156 pp., 2 leaves (advertisements). With hand-colored frontispiece ("Epitome of Colours obtained by Sir Isaac Newton's method of decomposing the rays of light"), including 7 squares (red, orange, yellow, green, blue, indigo, violet). Good copy in contemporary pebbled cloth, rebaked, crimson label, spine dated. Old stamp on title page ("Liverpool Mechanics' Institution") and early-nineteenth-century bookplate on first pastedown endpaper ("Liverpool Institute and School of Art").

THE FINAL and best edition of an important work on the chemistry and technology of dyeing. The "Dyer and Practical Chemist." Packer (fl. 1830) has "corrected and materially improved" this edition (first: London, 1816; Wellcome, IV 282). In the preface he reprints a letter (dated 18 June 1823) he received "from the late Sir Humphry Davy, the first chemist of the age, . . . concerning the chemical theory of the art of dyeing." Earlier works on dyeing by Hellot, Macquer, Berthollet, and others are mentioned. Technical processes are covered for dyeing cotton, silk, wool, and other materials, using mainly natural dyes obtained from plants. A useful index has been added, which was not in the first edition. (Edelstein, 3357; Lawrie, 514; Ron, 798; Sotheran, Cat. 741 [1913], 12879)

PADUANUS, Fabricius

Fabritii Paduanii . . . Tractatus Duo, alter de Ventis alter perbrevis de Terraemotu.

Bologna: Apud Ioannem Baptistam Bellagambam. 1601.

First edition. Folio (in 4s). 4 leaves, pp. 1–16, 17*–18*, 17–163, (1), 6 leaves (index). Woodcut device on title page. With 39 large engraved illustrations and maps in text, 5 full page. Fine, crisp copy, in contemporary Italian vellum, ink lettering on spine. Bound with: Gilbert, William, *De magnete* (London, 1600).

AN IMPORTANT and comprehensive treatise on winds and the uses to which air currents can be put (e.g., in bellows for smelting metals and ores). The beautiful engravings include wind maps of the world (including America), wind roses, and the technology of using wind for a wide variety of machines and instruments (e.g., windmills, sea transport, agriculture, mining, and music). At the end (pp. 153–163) the nature and origin of earthquakes are discussed, with their possible connection with winds. The author, Paduanus (Padovani or Padvani, fl. 1600), was a well-known philosopher and physician of Urbino. Very rare. Not in Church, D.S.B., Sabin, Wellcome, etc. (British Library, *S.T.C. Italian 17th Century*, p. 640; Honeyman, 2387; Riccardi, I [2], 230–231)

PAECKEN, Matthia

Salis Essentialis Acidi Tartari Analysis Chemica. . . .
Göttingen: Apud Joann. Christ. Dieterich. 1779.

First edition. 4to. 2 leaves, 19, (1) pp. Woodcut ornament on title page. Fine, crisp copy, with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN EARLY monograph on tartaric acid and its salts. Paecken (dates unknown), a physician, describes the preparation of tartaric acid from cream of tartar (potassium hydrogen tartrate), obtained from the sediments in the manufacture of wine, with references to the researches of Macquer, Marggraf, Retzius, Scheele, et al. He also gives details on the preparation of the tartrates of calcium, copper, iron, lead, mercury, silver, tin, and zinc. The chemical properties and analyses of tartaric acid and tartrates are described. The earliest work on the subject listed by Waring, who describes it as “mainly pharmaceutical.” No biographical information on Paecken has been located. Rare. (Ferchl, 391; Waring, 721)

PAJOT DES CHARMES, Claude

L'Art du Blanchiment des Toiles, Fils et Cotons de tout genre, rendu plus facile et plus général, au moyen des nouvelles découvertes. . . . Par Pajot-des-Charmes . . .

Paris: Chez A. J. Dugour et Durand, Libraires, Rue et Hôtel Serpente. An VI de la République (1798).

First edition. 8vo. 2 leaves, 282 pp., 1 leaf (blank). With 9 large folding engraved plates of machinery. Very fine copy, with half title, in original speckled calf, spine richly gilt, maroon morocco label.

FORMERLY AN inspector of manufactures at Abbeville (ca. 1791), Pajot des Charmes (1756–1835) established a soda factory in the department of Aisne (1779–84) and later (1808) assisted in running a glass factory at Tourlaville. In this book he gives a detailed account of Berthollet's bleaching process using chlorine water. In an attempt to lessen the deleterious effects of breathing chlorine on the health of the workmen, he added potash or soda, or both, with quicklime to the chlorine water, in order to lower the vapor pressure of the chlorine over the solution. He discusses the harmful effects of breathing air containing chlorine and urges his workers to use gas masks of his own design and chew licorice. This recommendation by the author represents one of the earliest attempts to protect the health of workers in the chemical industry. The book was originally planned for publication in 1791, but its appearance was delayed by the revolution. “Rare” (Zeitlinger). (Edelstein, 3359; Ferguson Coll., 508; Partington, III, 507; Ron, 799; Sotheran, Cat. 750 [1914], 12920)

PAJOT DES CHARMES, Claude

L'Art du Blanchiment des Toiles, Fils et Cotons de tout genre, rendu plus facile et plus general, au moyen des nouvelles découvertes. . . . Par Pajot-des-Charmes . . .

Paris: Chez A. J. Dugour, Libraire, Rue et Hotel Serpente. An VIII. (1800).

Second edition, first issue. 8vo. 2 leaves, 280 pp. With 9 large folding engraved plates of machinery. Fine copy with half title, unpressed and uncut with wide margins, in half calf antique, marbled boards, spine gilt-ruled and dated, maroon morocco label.

A CLOSE PAGINARY reprint of the first edition (Paris, 1798), containing the same plates. The typographical errors of the first edition have been corrected (e.g., “Schelle” on p. 1 of the 1798 edition appears as “Scheele” here). Otherwise the two editions are essentially identical. The sheets of this edition were reissued by Goeury (Paris, ca. 1803), the A. J. Dugour imprint being overpasted and Goeury's advertisements added at the beginning and end (see Wellcome, IV, 285). (Duveen, 445; Edelstein, 3358; Ferguson Coll., 508; Ron, 800; Smith, 361)

PAJOT DES CHARMES, Claude

The Art of Bleaching Piece-Goods, Cottons, and Threads, of every Description, rendered more easy and general by Means of the Oxygenated Muriatic Acid; with the Method of rendering painted or printed Goods perfectly white or colourless. To which are added, the most certain Methods of bleaching Silk and Wool; and the Discoveries made by the Author in the Art of bleaching Paper. . . . Composed for the use of manufacturers, bleachers, dyers, callico printers, and paper-makers. By Pajot des Charmes . . . Translated from the French, with an Appendix.

London: Printed for G. G. and J. Robinson, Pater-Noster-Row. 1799.

First English edition. 8vo. xvi, 351, (1) pp. With 9 large folding engraved plates of machinery. Very fine copy, uncut and unpressed with wide margins, in original blue boards, calf-backed antique style, maroon morocco label, spine gilt-ruled.

THE ENGLISH translation by the chemist William Nicholson of *L'Art du blanchiment* (Paris, 1798). The process of cleaning and whitening using Berthollet's “oxygenated muriatic acid” (i.e., hypochlorite) was one of the most important techniques for many different crafts and technologies. It was essential in the manufacture of cloth and paper. Pajot des Charmes was particularly concerned with the production of white paper, and the text contains valuable information on the papermaking processes of the period. The plates are carefully re-engraved versions of those in the French editions, showing complex machinery used in

processing fibers, fabrics, and paper. To this English edition Nicholson has added useful footnotes and an appendix on chemical nomenclature, weights, measures, and observations on Berthollet's new method of bleaching as it was carried out in Great Britain. (Cole, 994; Edelstein, 3360; Partington, III, 507; Roller & Goodman, II, 271; Ron, 801; Smith, 361; Sotheran, Cat. 741 [1913], 12901 ["Rare"]; Wellcome, IV, 285)

PALACIOS Y BAYO, Felix

Palestra Pharmaceutica Chymico-Galenica, en la qual se trata de la eleccion de los simples, sus Preparaciones Chymicas, y de las mas selectas composiciones antiguas, y modernas, usuales, tanto en Madrid, como en toda Europa . . . Obra muy util, y necessaria para todos los profesores de la Medicina, Medicos, Cirujanos, y en particular Boticarios; muy añadida en esta ultima impression. . . . Autor Don Felix Palacios . . . Madrid: Por Joachin Ibarra, calle de las Urosas. 1763.

Ninth edition? Folio (in 6s). 22 leaves, 736 pp. Engraved plate of chemical symbols and 4 engraved plates of chemical apparatus. Text printed in double columns. Very good copy in original limp vellum, rebacked in vellum, with ink-lettered vellum label.

AN IMPORTANT treatise on pharmaceutical chemistry (first: Madrid, 1706). Palacios (1678–1737) was court physician to the king of Spain and a distinguished member of the Regia Sociedad Medico-Chymica of Seville. The book is divided into six parts: I. Pharmacy in general; II–III. Composition and preparation of medicines; IV. Substances prepared by distillation; V. Various chemical processes employed to prepare the ingredients used in medicines; VI. Substances prepared from minerals, plants, and parts of animals for use in medicine. The plates of chemical apparatus and symbols are outstanding. Many editions of this valuable work appeared in Spain throughout the eighteenth century: e.g., Madrid, 1706, 1721, 1723, 1725, 1730, 1737, 1753, 1763, 1778, 1792; Barcelona, 1716 (Duveen, 445–446). Blake, Neu, and Wellcome list several editions; all are uncommon (see Palau, VI, 13). No editions in Bolton, Edelstein, Kremers & Urdang, Osler, Schelenz, Waller, etc. (Blake, 336; Neu, 3030; Wellcome, IV, 286)

PALISSY, Bernard

Discours Admirables, de la Nature des Eaux et Fontaines, tant naturelles qu'artificielles, des metaux, des sels & salines, des pierres, des terres, du feu & des emaux. Avec plusieurs autres excellens secrets des choses naturelles. Plus un traité de la marne, fort utile & necessaire, pour ceux qui se mellent de l'agriculture. Le tout dressé par dialogues, esquels sont introduits la theorique & la pratique. Par M. Bernard Palissy, inventeur des rustiques figulines du Roy, & de la Royne sa mere. A Treshaut, et Trespuissant sieur le sire Anthoine de Ponts, Chevalier des ordres du Roy, Capitaine des cents gentils-hommes, & conseiller tresfidele de sa maiesté.

Paris: Chez Martin le Jeune, à l'enseigne du Serpent, devant le college de Cambray. 1580. Avec Privilege du Roy.

First edition. 8vo. 8 leaves, 361 pp., 11 leaves. Fine copy in full blind-ruled calf antique, spine gilt-lettered.

A BOOK OF great importance in the history of chemistry, hydrology, geology, and agriculture. Palissy (ca. 1509–1589), who is best known for his discovery of the secret of enameling pottery, was far in advance of his time in scientific ideas. "Palissy shines as a close and accurate observer of natural objects, a man of eminent common sense, and an original and laborious experimenter" (Partington). Toward the end of his life he described his work in the present book, which probably incorporates the lectures he gave in Paris about 1575. It is written in dialogue form between "Theory" and "Practice," and it is always Practice that instructs Theory. Divided into eleven chapters, the book covers metals, alchemy, medicine, salts, precious stones, glass, pottery and ceramics, agriculture, fertilizers, etc. The first edition is an extremely rare book. Ferguson acquired his copy, now in Glasgow University, after many years of search, and wrote on the flyleaf: "At last, after long, long waiting and watching." It is one of the very few books in Duveen's collection of which he reproduced the title page in his *Bibliotheca Alchemica et Chemica*. (Adams, 446–448; Bolton, 716; Browne, 32; Brunet, IV, 320; D.S.B., X, 280; Duncan, 9726; Duveen, 446; Ferchl, 392; Ferguson Coll., 509; Neu, 3034; Partington, II, 70; Poggendorff, II, 347; Thorndike, V, 596; Watt, II, 727g)

PALISSY, Bernard

Le Moyen de devenir Riche, et la Maniere veritable, par laquelle tous les hommes de la France pourront apprendre à multiplier & augmenter leurs thresors & possessions. Avec plusieurs autres excellens secrets des choses naturelles, desquels jusques à present l'on n'a ouy parler. Par Maistre Bernard Palissy de Xaintes Ouvrier de terre & Inventeur des Rustiques Figulines du Roy.

Paris: Chez Robert Fôuet, ruë S. Jacques à l'Occasion devant les Mathurins. 1636.

Bound with: *Seconde Partie du Moyen de devenir Riche, contenant les Discours Admirables de la Nature des eaux & Fontaines, tant Naturelles qu'Artificielles des Fleuves, Puits, Cisternes, Estags, Marez & autres Eaux douces de leur origine, bonté, & autres qualitez. De l'Alchimie des Metaux, de l'Or potable, du Mitridat, des glaces, des sels vegetatifs ou generatifs, du sel commun. Description des Marez salans. Des pierres tant communes, que precieuses. Des causes de leur generation, formes, couleur, pesanteur & qualitez d'icelles, des terres d'argille, de l'art, de la terre, de son utilité, & du feu, de la marne, & le moyen de la cognoistre. Par M. Bernard Palissy Inventeur des Rustiques figulines du Roy.*
Paris: Chez Robert Foüet, ruë S. Jacques à l'Occasion devant les Mathurins. 1636.

First collected edition. 2 vols., 8vo., in 1. Part I: 8 leaves, 255 + (1) pp., 1 blank leaf. Part II: 8 leaves, 526 pp., 1 blank leaf. An exceptionally fine copy, in pristine condition, with all edges gilt. Sumptuously bound in full olive late-nineteenth-century morocco, quadruple gilt fillets, corner and center gilt ornaments, richly gilt dentelles, spine gilt in compartments.

A MAGNIFICENT COPY of the very rare first collected edition of Palissy's two major works. The first discusses a wide variety of topics, including agriculture, salts, springs, precious stone mines, and forestry. The second work is the second printing of the famous and important *Discours* (first ed., 1580). Not in Duveen, Ferguson, Neu, Smith, etc. (Bolton, 717; Ferchl, 392; Ferguson Coll., 509; Goldsmith, P127; Partington, II, 70; Watt, II, 728g; Wellcome, I, 4699)

PALISSY, Bernard

Palissy the Potter. The Life of Bernard Palissy, of Saintes, his labours and discoveries in art and science; with an outline of His Philosophical Doctrines, and a translation of Illustrative Selections from His Works. By Henry Morley. . . .
London: Chapman and Hall, 193, Piccadilly. 1852.

First edition. 2 vols., 8vo. I: viii, 320 pp. + (2), 33, (1) pp. (book catalogue, dated 1853). II: vii, (1), 352 pp. Fine copy, uncut, in original blind-stamped red publisher's cloth. From the library of Joseph Cowen, Junr. (1831–1900), politician, M.P. for Newcastle in 1873–1885 (see D.N.B.).

MORLEY (1822–1894), the author of this excellent biography of Palissy and his writings, was professor of literature at the University of London. He published several biographies and works on English literature. The present work is important as it contains the first translations into English of a number of passages from Palissy's writings (see D.N.B.). (D.S.B., X, 281; Duveen, 446; Edelstein, 1736; Partington, II, 70; Smith, 336)

PALISSY, Bernard

Palissy the Potter. The Life of Bernard Palissy, of Saintes. By Henry Morley. . . .
London: Chapman and Hall, 193, Piccadilly. 1855.

Second edition. 8vo. xiii, (1), 494 pp. Small woodcut of Palissy on title page and 4 text illustrations. Very good copy in contemporary calf, covers gilt-ruled, spine gilt, red morocco label. Presentation copy, inscribed in ink on front flyleaf: "Thos. Hancock Esqr. with Chas. C. James' kind regards."

THE FIRST edition (London, 1852, 2 vols.) was found to contain a number of factual errors, which have been corrected in this second edition. Further editions appeared in 1869 and 1878. An important association copy, having belonged to the chemical technologist Thomas Hancock (1786–1865), founder of the india rubber industry in England. Hancock first made vulcanized rubber in 1843 and published his famous book on rubber entitled *Personal Narrative of the Origin and Progress of Caoutchouc or Indiarubber Manufacture in England* (London, 1857). (Partington, II, 70; Waller, 17459)

PALLADIUS IATROSOPHISTES

Palladii de Febribus concisa Synopsis Graece et Latine cum Notis Jo. Steph. Bernard. Accedunt Glossae Chemicæ et Excerpta ex Poetis Chemicis ex Codice MS. Biblioth. D. Marci.

Leyden: Apud Philippum Bonk, & Trajecti ad Rhenum, Nicolaum Muntendam. 1745.

First edition. 8vo. 8 leaves, 164 pp., 6 leaves. Copperplate vignette on title (by N. van der Meer). Text in Greek and Latin. Very good copy in contemporary speckled calf, gilt, maroon morocco label gilt. Bookplate: F. B. Lorch.

THE CELEBRATED physician Palladios of Alexandria (fourth–fifth century A.D.) wrote commentaries on materia medica and this work on fevers, which is of pharmaceutical chemical interest. Sarton described the first edition, with notes by Bernard, as "containing interesting explanations" of fevers. Pages 103–164 are important in the history of early Greek chemistry as they reprint a collection of chemical fragments, taken from a manuscript in Venice, supplied to Bernard by J. P. D'Orville. Not in Bolton, Duveen, Edelstein, Ferchl, Ferguson, Smith, Sondheimer, Waller, etc. (Blake, 336; Ferguson Coll., 510; Neu, 3035; Partington, I, 201; Watt, II, 728m)

PALMARIUS, Petrus

Lapis Philosophicus Dogmaticorum. Quo paracelsista Libavius restituitur, Scholae Medicae Parisiensis iudicium de Chymicis declaratur, censura in adulteria & fraudes Parachymicorum deffenditur, asserto verae Alchemiae honore. . . . Adjecta est Historia Leprosae Mulieris Persanatae.

Paris: Apud Davidem Douleur, via Jacobea Mercurium involucrem. 1609.

First edition, second issue. 8vo. 16 leaves, 160 pp., 6 leaves (last blank). Woodcut title-vignette. Ornamental woodcut initials and headpieces. Very fine, crisp copy, in contemporary unlettered vellum.

THE FRENCH physician and iatrochemist Palmarius (Pierre Le Paulmier, 1568–1610) in the present work attacked Paracelsus and Libavius and attempted to make a case for the old galenic pharmaceuticals of the Paris school. However, he favored some chemical preparations, the fifth essence, and prescribed potable gold as well as antimony. Chapter XI (pp. 62–68) is titled “Alchemiae necessitas in medendo ejusque beneficia.” Ferguson gives a detailed account of the reception of this book by the medical faculty of Paris. All authorities quote the present second issue of 1609, but Ferguson states that the first issue appeared in 1608, and there is a copy of that issue in the Ferguson Collection. The present copy is discussed, with a facsimile of the title page, by Felix Cunha, M.D. (see *California and Western Medicine*, vol. 35, No. 4, October 1931). (Caillet, 8269 [“Tres rare”]; Duveen, 447; Edelstein, 1737; Ferchl, 397; Ferguson, II, 163; Goldsmith, P146; Neu, 2340 [wrong collation]; Partington, II, 269; Rosenthal, 648; Thorndike, VI, 251; Wellcome, I, 4702)

PALMER, Edward

Palmer's New Catalogue, with Three Hundred Engravings of Apparatus, illustrative of Chemistry, Pneumatics, Frictional & Voltaic Electricity, Electro Magnetism, Optics, &c. &c. . . . London: Printed by W. Gilbert, Salters-Hall Court, Cannon Street. 1840.

First edition. 8vo. 1 leaf, iv, 64 pp. Large wood engraving of an early locomotive on title page and 292 woodcut figures in text. Fine copy in original blind-stamped purple cloth, royal arms in gilt on front cover, spine faded, all edges gilt. Bound with: Smee, Alfred, *Elements of Electro-Metallurgy* (London, 1841).

ONE OF the earliest catalogues of commercially available chemicals and scientific apparatus, complete with prices. A rare work, it provides a glimpse into the problems of equipping laboratories in the early Victorian period. The author thanks “the Professors of Chemistry and Natural Philosophy, not only for their individual assistance, but for

their kind recommendations.” Palmer refers to the newly invented method of electrotyping and the “new, powerful, and simple Galvanic Battery, invented by Alfred Smee.” (Ronalds, 997; Sotheran, Cat. 757 [1915], 14932)

PALMER, Lud, and CLARKE, John

A Catalogue of Druggs, and of Chymical and Galenical Medicines, prepared and sold by Lud Palmer and John Clarke, Chymists, in Barbican, London.

Printed by Cluer Dicey in Bow-Church-Yard. 1757.

First edition. 8vo. 16 leaves, without signatures or pagination. Fine copy in contemporary marbled wrappers, bound in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

AN EXTREMELY rare catalogue of the drugs and chemicals manufactured and sold by Palmer and Clarke, chemists who owned an apothecary shop in London. The first 11 pages list about 290 “drugs,” and the next 10 pages list about 250 “Galenicals,” all made from animals, plants, and minerals. The last 9 pages list about 220 “chemicals,” mainly inorganic, but a few organic compounds are included (e.g., alcohol, benzoin, and menthol). Some prices have been penciled in neatly by an eighteenth-century owner. A fascinating ephemeral work, which gives details on the availability of pharmaceutical chemicals in the mid-eighteenth century. No reference to Palmer and Clarke has been found, and this work (possibly unique) is unknown to the bibliographers.

PANAS, Jean A.

Quelques observations ajoutées a l'Histoire du Chlorate de Potasse. . . .

Paris: Rignoux, Imprimeur de la Faculté de Médecine. 1856.

First edition. 4to. 58 pp. Very good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE THESIS presented to the medical faculty at Paris for the M.D. degree, by Panas, a Greek. It is a detailed account of the many uses of potassium chlorate in medicine. The author traces the chemistry and history of the medical applications of potassium chlorate and defends its use in treating difficult afflictions, such as cancer of the mouth. There are references to the works of important French chemists and pharmacists of the mid-nineteenth century (Barthez, Chanal, Herpin, Rilliet, et al.) and also to the pioneering work of Dr. Henry Hunt, in England. Numerous chemical experiments are described, with their successful medical applications. Rare. Unknown to the usual bibliographers.

PANCIROLI, Guido

Nova Reperta, sive Rerum Memorabilium, recens inventarum, et veteribus plane incognitarum . . . Liber secundus. Jam primum ex Italico Latine redditus, & commentariis illustratus ab Henrico Salmuth.

Amberg: Typis Forsterianis. 1602.

First edition. 8vo. 10 leaves, 719, (1) pp., 7 leaves (N.B. lacking 4 leaves: i.e., signature Aaa, 3 leaves index, and final blank leaf). Woodcut capitals, head- and tailpieces. Fine, crisp copy, in contemporary half vellum, marbled boards, with old ink-lettering on spine. The missing signature (Aaa4) appears never to have been bound into this copy.

THE FIRST edition of this important book in which the secrets of the “moderns” are covered. It is a companion volume to that published by Salmuth three years earlier (Amberg, 1599). “My observation is that copies of every edition of the second part are much scarcer than the first. . . . In some respects the second part of Panciroli’s history is even now the more interesting. It is always curious to know when a thing was an absolute novelty” (Ferguson). Apart from the chapters on alchemy, distillation, metallurgy, ceramics, etc., the book is important for the chapter on the origin of printing from movable type (pp. 578–588). Panciroli states that the art of printing was invented by Johann Gutenberg in 1440, in the city of Mainz, Germany. He adds that Gutenberg used an alloy of lead and antimony to cast his types. The three missing leaves of index in this copy is not a serious fault in such an extremely rare book, as the table of contents is sufficient to guide the reader to chapters of particular interest. Writing about 1890, Ferguson (*Books of Secrets*) states that in the catalogue of the Van Hulthem library he found “the only copy I have met with of the first edition of the second part,” which attests to the great rarity of the 1602 edition. Not in the British Library, Wellcome, or the usual chemical bibliographies. (Ferguson, *Books of Secrets*, II, First Supplement, pp. 11–12, 39–40; Watt, II, 729r)

PANCIROLI, Guido

Nova Reperta sive Rerum Memorabilium recens inventarum & veteribus incognitarum, . . . Liber Secundus ex Italico Latine redditus, & commentariis illustratus ab Henrico Salmuth. Editio tertia. . . .

Frankfurt: Apud Christoph. Vetterum. 1617.

Third Latin edition, second issue. 8vo. 12 leaves, 740 pp., 10 leaves. Woodcut capitals and headpieces. Fine copy in contemporary blind-stamped vellum over oak boards, with remains of brass catches and vellum thongs, old ink-lettering on spine. Bound with: *Rerum Memorabilium* (Amberg, 1612).

THE FIRST issue of the third Latin edition of the second part of Panciroli’s book of secrets was published by M. Forster (Amberg, 1612). The sheets of the 1612 edition were again reissued with a reset title page at Frankfurt, as in the present copy. It is the first issue with a Frankfurt imprint, the collation and pagination being identical to the copy of the first issue (see Wellcome, I, 4704). Ferguson (*Books of Secrets*, II, First Supplement, p. 12) says: “My observation is that copies of every edition of the second part are much scarcer than the first.” Ferguson (*ibid.*, I, part 3, p. 14) also states: “I do not know whether the second book was published at the same time or not,” and neither the first nor the second issue (i.e., 1612 and 1617) was known to him as long ago as 1884. The second volume of 1617 is now extremely rare, with only one copy listed in the National Union Catalogue.

PANCIROLI, Guido

Rerum Memorabilium iam olim deperditarum: & contra recens atque ingeniose inventarum: libri duo, . . . Italice primum conscripti, nec unquam hactenus editi: nunc vero & Latinitate donati, & notis quamplurimus . . . illustrati per Henricum Salmuth.

Amberg: Typis Forsterianis. 1599.

First edition. 8vo. 8 leaves, 752 pp., 17 leaves (last blank). Woodcut capitals, head- and tailpieces. Fine, crisp copy, in contemporary half vellum, marbled boards, with old ink-lettering on spine. Late-sixteenth and early-seventeenth-century manuscript annotations in ink on last 2 flyleaves.

THE FIRST appearance of an important book of secrets of the ancient world, by Panciroli (1523–1599), a celebrated lawyer who was born in Reggio and died in Padua. Panciroli originally wrote this work in Italian, and his manuscript was later translated into Latin by Heinrich Salmuth (b. ca. 1550), being published (as here) at Amberg. An encyclopedic production containing a vast amount of information on lost and secret arts in all branches of science and technology, with much of interest to the historian of chemistry. A sequel volume dealing with the secrets of the “moderns” appeared three years later (Amberg, 1602). Extremely rare when in first edition. Not in Caillet, Durling, Guaita, Thorndike, or the usual chemical bibliographies. (British Library, *S.T.C. German Books, 1455–1600*, 1962, p. 672; Ferguson, *Books of Secrets*, II, First Supplement, pp. 10–11, 39–40; Ferguson Coll., 511; Watt, II, 729r; Wellcome, I, 4703)

PANCIROLI, Guido

Rerum Memorabilium Libri Duo. Quorum prior deperditurum; posterior noviter inventarum est. Ex Italico Latine rediti, & notis illustrati, ab Henrico Salmuth. Editio tertia. . . . Amberg: Typis Michaelis Forsteri. 1612.

Third Latin edition. 8vo. 8 leaves, 751 pp., 17 leaves (last 2 blank). Woodcut on title and large woodcut printer's device on colophon leaf (dated 1612). Woodcut capitals, head- and tailpieces. Fine copy in contemporary blind-stamped vellum over oak boards, with remains of brass catches and vellum thongs, old ink-lettering on spine. Bound with: Panciroli, G., *Nova Reperta sive Rerum Memorabilium . . . Liber Secundus* (Frankfurt, 1617).

THE THIRD Latin edition of the first part of this popular book of secrets (first ed., 1599; second, 1607). Speaking of this edition, Ferguson (*Books of Secrets*) says: "The present edition is not referred to by any one except by Graesse." It was published the same year as the first edition in Italian, by Flavio Gualtieri da Tolentino (Venice, 1612), on which see Ferguson. Very rare. Not in Caillet, Guaita, Watt, Wellcome, or the usual chemical bibliographies. (Ferguson, *Books of Secrets*, I, part III, 14; Ferguson Coll., 511)

PANCIROLI, Guido

Rerum Memorabilium sive Deperditarum . . . Commentariis illustrata et locis proptis innumeris postremum aucta ab Henrico Salmuth . . .

Frankfurt: Sumptibus Haeredum Joannis Godefridi Schonwetter. 1660.

4to., 2 parts in I vol. 4 leaves (including engraved title page), 350 pp., 11 leaves (index); 313 pp., 8 leaves (index), 1 leaf (blank). Few leaves slightly embrowned; otherwise very good copy in contemporary vellum, with nineteenth-century armorial bookplate (George R. Alexander) on front pastedown.

FINE QUARTO edition of this popular work. Numerous editions in Latin appeared, with translations into French (Lyon, 1608), Italian (Venice, 1612), and English (London, 1715). Ferguson (*Books of Secrets*, I, part II, p. 33) states: "Pancirolo's work is interesting, not only as giving some notion of the state of knowledge as to the history of invention in his time, but as displaying the attitude of scholars towards the practical arts of the ancients." There are, inter alia, many discussions of chemical topics. Scarce. (Duveen, 447; Ferguson, *Books of Secrets*, I, part II, p. 33; Neu, 3039; Rosenthal, 8744; Sabin, 58412; Watt, II, 729r)

PANCIROLI, Guido

The History of Many memorable Things lost, which were in Use among the Ancients: and an Account of many excellent Things found, now in Use among the Moderns, both Natural and Artificial. Written Originally in Latin, By Guido Pancirollus; and now done into English, and illustrated with a new Commentary of choice Remarks, pleasant Relations, and useful Discourses, from Salmuth's large Annotations; with several Additions throughout. . . . To this English Edition is added, First, A Supplement to the Chapter of Printing, shewing the Time of its Beginning, and the first Book printed in each City before the Year 1500. Secondly, what the Moderns have found, the Ancients never knew: Extracted from Dr. Sprat's . . . History of the Royal-Society, the Writings of the Honourable Mr. Boyle, the Royal-Academy at Paris, &c. Thirdly, an Index to the Whole.

London: Printed for John Nicholson . . . and sold by John Morpew . . . 1715.

First English edition. 2 vols., 12mo., in 1. I: 8 leaves, 242 pp. II: 3 leaves, pp. 265–452, 6 leaves (index), 16 pp. (catalogue of books). Very good copy in contemporary paneled calf, rebounded, black morocco label, spine dated.

THE FIRST translation into English of this encyclopedic work describing ancient and modern inventions and discoveries. This edition is important for descriptions of developments that occurred in the seventeenth century. The anonymous translator covers numerous topics of chemical interest: e.g., alchemy, salts, metals, porcelain, glass, dyes, paper, gunpowder, and Greek fire. In the account of the discovery of printing (pp. 346–348), Johann Fust is claimed to be the inventor, with Johann Gutenberg merely financing its development. Another English edition was printed in 1727 (2 vols., 12mo.). Very scarce. Not in Blake, Duncan, Duveen, Edelstein, Ferchl, Ferguson, Partington, Smith, Waller, Watt, etc. (Bolton; 144; Ferguson, *Books of Secrets*, I, part 2, p. 33; Ferguson Coll., 510; Neu, 3040; Sabin, 58415; Sondheimer, 1161)

PAPA, Giuseppe del

Lettera intorno alla Natura del Caldo, e del Freddo, scritta all'Illustrissimo Sig. Francesco Redi, Gentiluomo Aretino, dal Dottore Giuseppe Del Papa da Empoli. Lettore di Logica nell'Università di Pisa.

Florence: Per Francesco Livi. 1674.

First edition. 8vo. 250 pp. Fine, crisp copy, uncut, with wide margins, in old vellum.

PAPA (1649–1735) was professor first of logic then of medicine in the University of Pisa. He was the teacher of Cardinal Francesco Maria de Medici and was physician to the

grand duke of Tuscany. Papa was a pupil of the famous Francesco Redi, to whom he dedicated this book on heat and cold. In addition to sections on such subjects as lightning, colors, and painting (mentioning Michelangelo, Rafael, Titian, et al.), there are numerous references to ice and its manufacture, glass, crystal, etc. The celebrated Accademia del Cimento is mentioned seven times, Galileo eight times, Gassendi once, Borelli twice, Cabeo four times, Torricelli once, etc. On page 217 the author refers to the work of Robert Boyle (“famosissimo Boile”). The book contains much of interest to the chemical historian, as it describes various freezing mixtures made from common salt, sal ammoniac, niter, etc., mixed with snow or ice; the phosphorescent Bolognian stone; theories of fire and combustion; theories of cold; metals; salts; chemical elements; atoms and molecules; liquids and solids; the melting of metals; acids and alkalies; etc. In 1681 Papa published a work on the nature of wetness and dryness (*Della natura dell'umido, e del secco, lettera all' . . . Francesco Redi*). Partington (II, 297) states that Papa opposed chemical theory and preferred iatrophysics but does not mention this title. Papa also published a work on fire and light in 1675 (*Lettere intorno al Fuoco, e la Luce*). A rare book that is not mentioned by the usual chemical bibliographers. (Poggendorff, II, 354; Watt, II, 729d)

PAPA, Giuseppe del

Lettera intorno alla Natura del Caldo, e del Freddo, scritta all'illustrissimo Sig. Francesco Redi . . .
Florence: Per Francesco Livi. 1674.

First edition. 8vo. 250 pp. Mild foxing of some leaves. Bound with: Papa, G. del, *Lettera nella . . . il fuoco, e la luce* (Florence, 1675).

ANOTHER COPY of Papa's first published work on heat and cold.

PAPA, Giuseppe del

Lettera nella quale si discorre se il Fuoco, e la Luce sieno una cosa medesima, scritta all'illustriss. Sig. Francesco Redi . . .
Florence: Per Gio: Antonio Bonardi, e Luca Luti. 1675.

First edition. 8vo. 108 pp. Mild foxing of some leaves; otherwise good wide-margined copy in contemporary vellum, rebaked in old vellum with part of the original spine laid on. Bound with: Papa, G. del, *Lettera intorno . . . caldo e del freddo* (Florence, 1674).

A TREATISE of physical and chemical interest on the nature of fire (i.e., heat) and light, addressed to Francesco Redi. Papa discusses whether fire and light are corporeal or noncorporeal and refers to the works of Aristotle, Democri-

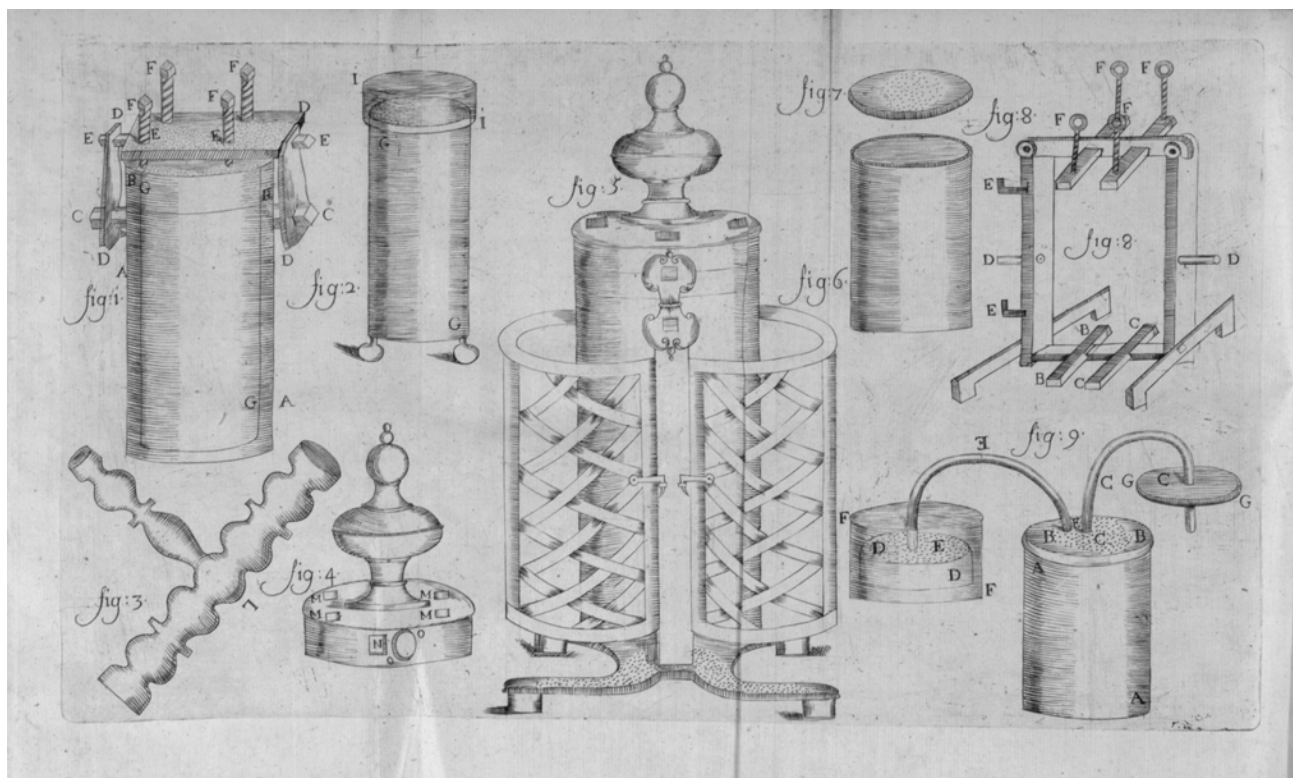
tus, Epicurus, Leucippus, Plato, and other philosophers. He inclines toward the corporeal nature of fire (heat) and light, and speaks (p. 29) of “atomi del Fuoco.” The nature of phosphorescence is discussed, mentioning Fortunius Licetus and “la Pietra Lucifera.” Also included are speculations on the velocity of light, opacity, and other optical topics, with references to Galileo and Alessandro Marchetti. “Ces écrits sont empreints du cachet qui caractérise, dans les sciences physiques, les travaux de l'académie del Cimento” (*Biog. Univ.*). A second edition appeared (Florence, 1690; Krivatsy, 8540; Wellcome, IV, 292). Rare. (Hirsch, IV, 495; Poggendorff, II, 354; Watt, II, 730d)

PAPIN, Denis

A New Digester or Engine for Softning Bones, containing the Description of its Make and Use in these Particulars: viz. Cookery, Voyages at Sea, Confectionary, Making of Drinks, Chymistry, and Dying. With an Account of the Price a good big Engine will cost, and of the Profit it will afford. . . .
London: Printed by J. M. for Henry Bonwicke at the Red Lyon in S. Paul's Church-yard. 1681.

First edition. 4to. 4 leaves, 54 pp. With 2 folding engraved plates of apparatus. Very fine, large copy, in pristine condition, complete with the license leaf; in blind-ruled paneled calf antique, maroon morocco label, gilt. “From the Dendy Marshall Sale of Railway Books, sold Nov. 13th, 1945. Probably the finest copy of this Book” (penciled note on front endpaper).

A WORK of fundamental importance in chemistry and physics, in which Papin (1647–ca. 1712) announces his invention of the pressure cooker, or autoclave. The original concept for a “digester,” in which materials can be heated under pressure, occurred to Papin when he was an assistant to Robert Boyle, who was then working on his air pump. “The ‘Digester’ was an apparatus for softening bones by boiling them with water in a closed vessel—the water, boiling under pressure, boiled at a higher temperature, as we now know, and this increased its power of solution” (Wolf). Papin demonstrated his autoclave under the auspices of Robert Hooke before the Royal Society in May 1679. Late in 1680 he was elected F.R.S., and the society ordered the publication of this book. For the “digester” he invented a safety valve “that was to be technologically important in the development of steam power” (D.S.B.). This work marks the beginning of all experimentation in high-pressure chemistry and physics. Very rare. A French translation appeared (Paris, 1682). (Bolton, 717; D.S.B., X, 293; Edelstein, 3889; Ferchl, 393; Krivatsy, 8547; Partington, II, 520; Poggendorff, II, 355; Thornton & Tully, 101; Vicaire, 653; Watt, II, 730h; Wing, P309; Wolf, I, 548)



Papin, Denis. *A New Digester . . . for Softning Bones*. London, 1681.

PAPIN, Denis

A Continuation of the New Digester of Bones: It's Improvements and new Uses it hath been applied to, both for Sea and Land. Together with some Improvements and new Uses of the Air-Pump, tryed both in England and in Italy. . . .

London: Printed by Joseph Streater, near Pauls-Wharf in Thames-street, and are to Sold by the Book-Sellers in London. 1687.

First edition. 4to. 4 leaves, 123, (1) pp., 1 leaf (blank). With 1 folding engraved plate. Very fine, large copy, in pristine condition, complete with the license leaf; in blind-ruled paneled calf antique, maroon morocco label, gilt. With corrections in ink by Papin. From the Dendy Marshall Sale of Railway Books, sold 13 November 1945.

THE SEQUEL to the *New Digester* (1681), describing (pp. 1–43) more experiments by Papin with his improved pressure cooker, or autoclave. In the second section (pp. 44–83) he discusses improvements and new uses of the air pump. The third section (pp. 84–123) describes chemical and physical experiments that he carried out in Sarotti's Academy in Venice. The existence of a substance in air (oxygen) that supports respiration is foreshadowed (pp. 98–102). Other chemical experiments conducted in air and in vacuo include unsuccessful attempts to ignite gunpowder in a

vacuum, and the reaction of nitric acid with metals in air and in a vacuum. A French translation appeared (Paris, 1688). In addition to textual corrections made from the printed errata, this copy contains corrections made by Papin himself to clarify the exact dates on which he carried out his experiments. For example (p. 57) "26th of June I did" has "1685" inserted after "June"; also (p. 59) "1686" is inserted after "29th of May." Only Papin could have known the precise dates. Other minor corrections occur on pages 62, 71, 119, etc. Very rare. (Bolton, 717; D.S.B., X, 293; Ferchl, 393; Krivatsy, 8548; Partington, II, 520; Poggendorff, II, 355; Thornton & Tully, 101; Wing, P308)

PAPIN, Nicolas

Nicolai Papini Blaesensis M.D. de Pulvere Sympathico Dissertatio.

Lutetiae (Paris): Apud Simonem Piget, viâ Jacobea, ad insigne Fontis. 1650.

8vo. 8 leaves, 40 pp. Woodcut ornament on title. Woodcut headpieces and capitals. Fine copy in contemporary vellum. Bound with another work by Papin and 2 works by Isaac Cattier.

PAPIN (d. ca. 1653), an uncle of the famous Denis Papin (1647–ca. 1712), was born in Blois, practiced medicine there

and at Alençon, and died about 1653. His *Cordis diastole* (Alençon, 1653, 4to.) was written against Harvey's innovating views. Papin also published a treatise in French on the saltiness of the sea, the tides, and the origin of fountains (Blois, 1647, 8vo.) and a volume on deafness (Saumur, 1648, 12mo.). The first edition of the present work appeared about 1640 (Thorndike, VII, 504), with editions at Paris in 1644, 1647, and 1650 (as here); Rouen (1650); and later editions. This work extolling the powder of sympathy was attacked by Isaac Cattier in 1651. Papin promptly responded in 1651, and Cattier responded in the same year. These works are bound with this copy. Guaita lists a copy of the four works (two by Papin and two by Cattier), bound together in contemporary vellum, and indicates that such a collection is "fort rares et que l'on trouve bien difficilement réunis." The Guaita catalogue was published in 1899. Copies of all four works bound together are today of very great rarity. The dedication to this Paris (1650) edition is dated from Padua, September 1646, so possibly there was an Italian edition of that date. Ferguson describes an Italian edition (Padua, 1656). Not mentioned by Bolton, Cushing, Duveen, Ferchl, Neu, Poggendorff, Smith, Waller, Watt, etc. (Caillet, 8281; Ferguson, II, 167 [not in Young Coll.]; Ferguson Coll., 512; Goldsmith, P181; Guaita, 1233; Osler, 3610; Partington, II, 424; Thorndike, VII, 504)

PAPIN, Nicolas

Nicolai Papinii Blaesensis M.D. de Pulvere Sympathico Dissertatio.

Rothomagi (Rouen): Sumptibus Joannis Berthelin, Biblioplae. 1650.

8vo. 7 leaves, 37 pp. Printer's woodcut ornament on title. Woodcut headpieces and capitals. Fine copy in early-nineteenth-century half calf, cloth, maroon gilt-lettered label, spine gilt-ruled and dated. Bound with: Lull, R., *Codicillus seu vade mecum* (Rouen, 1651).

THE RARE Rouen edition of this work. For details, see the description given under the Paris, 1650, edition. This work was reprinted in the *Theatrum Sympatheticum* (Nuremberg, 1660). Not in Caillet, Ferguson, Ferguson Coll., Guaita, etc. (Goldsmith, P180 [imperfect]; Partington, II, 424; Thorndike, VII, 504)

PAPIN, Nicolas

La Poudre de Sympathie, deffendue contre les Objections de Mr Cattier, Medecin du Roy. Par N. Papin, D.M.

Paris: Chez Simeon Piget, rue Saint Jacques, à l'enseigne de la Fontaine, & de la Syrenne. 1651.

First edition. 8vo. 4 leaves, 56 pp. (1 blank leaf missing). Large woodcut (vase of flowers) on title. Fine copy in contemporary

vellum. Bound with another work by Papin and 2 works by Isaac Cattier.

THIS IS Papin's response to Cattier's *Divers Traictez* (Paris, 1650–51), in which the latter had attacked Papin's *De Pulvere Sympathico* (1650). The *epistre* is dated 20 January 1651, and this work was immediately answered by Cattier in his *Response a Monsieur Pain . . . touchant la Poudre de Sympathie* (Paris, 1651), the *epistre* of which is dated 21 March 1651. Cattier's work appears to have ended the heated controversy. Very rare. Ferguson notes that neither Cattier's *Response* (Paris, 1651) nor Papin's *La Poudre . . . deffendue* (Paris, 1651) are reprinted in the *Theatrum Sympatheticum* (Nuremberg, 1660), and they are not referred to by Papin's biographers. Not in Bolton, Caillet, Cushing, Duveen, Ferchl, Neu, Partington, Smith, etc. (Ferguson, II, 167 [not in Young Coll.]; Ferguson Coll., 512 [lists it as a 4to.]; Goldsmith, P179; Guaita, 1233 ["Ouvrage fort rare"]; Osler, 3612; Thorndike, VII, 505; Watt, I, 730k)

PARACELSUS

Archidoxa Philippi Theophrasti Paracelsi Bombast . . . Von heymeligkeyten der Natur. Zehen Bücher. Item, I. De tinctura Physicorum. II. De occulta Philosophia. . . .

Strassburg: durch Theodosium Rihel. N.d. (1570).

First Strassburg edition. 8vo. 242 leaves (unpaginated).

Woodcut printer's device on title. Very good copy in modern unlettered vellum.

EDITED BY Michael Toxites, the first edition in German was printed in quarto format (Basel, 1570; Sudhoff, 116). The Latin first edition appeared at Cracow in 1569. The present Strassburg edition is one of the earlier reprints, as the forward by Toxites is dated 28 January 1570. This book established Paracelsus' reputation as a founder of chemistry, in which he attempted to propound a rational system of chemical theory: the *tria prima* (philosophical salt, sulphur, and mercury) together with the Aristotelian four elements (air, earth, fire, water) as being the primary materials of which all matter is composed. Paracelsus introduced new laboratory methods and devised new processes for rendering therapeutic chemical mixtures less harmful. Written in 1525–1527, the *Archidoxa* is one of Paracelsus' most important works: it is of equal importance for the history of alchemy and chemistry as for the history of pharmacology and medicine. The book has considerable material on the magnet and its occult properties, and Paracelsus describes a wonderful tincture supposedly extracted from the magnet. Rare. (British Library, *S.T.C. German*, 138; Durling, 3487; Duveen, 452; Mottelay, 64–65; Neu, 3049; Partington, II, 136–138; Sudhoff, 118; Thorndike, V, 625 & 627; Wellcome, I, 4772)

PARACELSDS

Archidoxorum . . . X. Bücher, so wir die Vorred de Mysterio Microcosmi, für das erst Büch achten wollen. Darzu seind von neuwem, dise folgenden fünff Tractat kommen. I. De Tempore. II. De Imaginibus. III. De Speculi Constellatione. IIII. De Compositione Metallorum. V. De Sigillis Planetarum. Erst neuwlich publiciert, und auss geschriebnen Exemplaren an tag geben.
(Basel: Perna). 1572.

First edition (later issue). 4to. 8 leaves, 121 leaves (paginated), 63 leaves. Black letter. Title page in red and black, with woodcut printer's device. Woodcuts and tables in text. Very good copy in contemporary blind-stamped pigskin over oak boards (ends of spine trifle worn), with 1 (of 2) original brass clasps and catches. First signature slightly sprung, and single small wormhole through outer blank margins. Bound with: Lochner, Zacharias, *Prober Buchlein* (Augsburg, 1565).

AN IMPORTANT collection of texts, including the *Archidoxorum* and the five other texts listed in the title (sixty-three leaves) all printed here for the first time. Preliminary leaves 5–8 and the numbered leaves (1–121), the text of the *Archidoxorum*, are actually reissues of the first edition of the *Archidoxorum* (Basel: Perna, 1570; Sudhoff, 116). Extremely rare. Not in British Library, Durling, Mellon, Wellcome, or the usual bibliographies. (Ferchl, 244; Partington, II, 136–138; Sudhoff, 142 [wrong collation]; Thorndike, V, 625–627)

PARACELSDS

Archidoxorum, seu de Secretis Naturae mysteriis, libri decem. Quibus nunc accesserunt libri duo, unus de Mercuriis Metallorum, alter de Quinta Essentia. Manualia item duo, quorum prius Chemicorum verus thesaurus, posterius praestantium Medicorum experientiis refertum est: ex ipsius Paracelsi autographo. Cum indice rerum & verborum ditissimo. . .
Basel: Per Petrum Pernam. 1582.

8vo. 12 leaves, 415, (1) pp. Woodcut initials. Some leaves slightly embrowned; otherwise fine copy in contemporary vellum. Neat inscription dated 1698 on title page.

AN IMPORTANT edition of one of Paracelsus' major chemical works, which has been completely re-edited on the basis of translations by Gerhard Dorn (1570) and Michael Toxites (1574). The book first appeared as a Latin translation (Cracow, 1569). Duveen (p. 452) states that the Strassburg (1570) edition is the first to contain the commentary of Michael Schütz (so-called Toxites). Partington (II, p. 125 et seq.) discusses the chemical content and importance of the work. The 1582 edition is rare and is not mentioned by the usual chemical bibliographers. (*British*

Museum German Books, 138; Durling, 3510; Ferguson Coll., 516; Rosenthal, 658; Sudhoff, 191)

PARACELSDS

Dess erfarnesten Fürsten aller Artzetten Aureoli Theophrasti Paracelsi von ersten dreyen principiis, was jre formen und wirkung. Item zwen tractat von läme sampt gründtlicher gewisser jrer cur. Auch lxij. Capitul von apostematibus, ulceribus, sironibus und nodis, waarhaffter und trostlicher bericht. Publicirt durch Adamen von Bodenstein medicum und philosophum.
(Basel: Petrum Perna. 1563.)

First edition. 8vo. 8 leaves, 237, (1) pp., 1 leaf. Black letter. Woodcut capitals. Lacking the 2 blank preliminary leaves and the final blank leaf. Title leaf neatly repaired without loss, and minor water stains in places; otherwise very good copy in nineteenth-century patterned brown boards. From the library of the historian of chemistry Ernst Darmstaedter (b. 1877), with his stamp on front pastedown endpaper and withdrawal stamp of the Wellcome Library on verso of title page.

AN IMPORTANT work (preface dated 1563), edited by Bodenstein (1528–1577), in which the theory of the three principles (*tria prima*) enunciated by Paracelsus is discussed (pp. 1–22). In addition to the Aristotelian four elements (air, earth, fire, water), Paracelsus believed that all matter contains three so-called philosophical principles, namely, salt, sulphur, and mercury. "The three Paracelsian principles . . . do not replace the elements of the ancients, nor are they matter of any kind. They are rather principles within matter that condition the state in which matter can occur. There is thus in every object a principle (salt) responsible for its solid state; a principle (sulphur) responsible for its inflammable . . . state; and a third (mercury) responsible for its smoky (vaporous) or fluid state" (D.S.B., X, 309). The remainder of the book describes chemical preparations and their medicinal uses. Very rare. Not in the usual chemical and medical bibliographies. (Durling, 3460; Ferguson Coll., 529; Sudhoff, 56; Wellcome, I, 4752)

PARACELSDS

Liber Vexationum. D. Phil. Theophrasti Paracelsi. Kunst und Natur der Alchimia und was darauff zü halten sey, durch siben gegrundte Regeln gegen den siben gemeinen Metallen zügericht, sampt einer Vorred mit etlichen zügehörenden stucken und Beschlüssen abgefertiget. Publiciert durch D. Adam von Bodenstein. Leyd und Meyd.
(Basel: probably Apiarius for Perna, 1567).

First edition. 8vo. 24 leaves (unpaginated). Fine copy in unlettered paneled calf antique, covers richly blind-stamped by Aquarius.

ARCHIDOXORVM
Des Hochgelehrten
 vnd weit berümpftesten Herren **D.**
Theophrasti Paracelsi X. Bücher so wie
 die Vorred de **Mysterio Microcosmi** für
 das erst Buch achten wollen.

Darzu seind von neuem/dise folgenden stüff
 Tractat kommen.

- I. De Tempore.
- II. De Imaginibus.
- III. De Speculi Constellatione.
- IIII. De Compositione Metallorum.
- V. De Sigillis Planetarum.

Erst neuwlich publiciert vnd auß geschriebnen Exemplaren.
 an tag geben.



M▷D▷LXXII▷

ONE OF the rarest and most important books by Paracelsus on alchemy and chemistry and their relationship to medicine. The text was edited with numerous alchemical symbols and published by Adam von Bodenstein, whose dedication to his friend Adolph Wilhelm von Dörnbergk is dated 1567. While Paracelsus is writing here on the nature of the seven common metals and their properties, his real interest in alchemy was in the creation of new metals for use in medicine. "Much has been written about Paracelsus as an alchemist, but he was not really interested in the classical alchemists' problems of transmutation, the philosopher's stone, or making gold. Rather, 'alchemy' meant to him the invention of new and nontoxic, metals for medicinal uses" (D.S.B., X, 308). Not in N.U.C., British Library, Durling, Wellcome, etc. (Ferguson Coll., II, 536; Sudhoff, 90)

PARACELSUS

Medicorum et Philosophorum Summi, Aureoli Theophrasti Paracelsi, Eremitae, de Tartaro libri septem perquam utiles. Opera et industria nobilis viri Adami a Bodenstein, in lucem propter commune commodum microcosmi primo editi, nunc verò auctiores & castigatiores denuò excusi. . . .
Basel: Per Petrum Pernam. 1570.

First Latin edition. 8vo. 8 leaves, 451, (1) pp., 5 leaves. Full-page woodcut portrait of Paracelsus on last leaf of dedication (verso). Woodcut initials. Imperceptible repair to title leaf and some leaves lightly embrowned; otherwise very good copy in contemporary limp vellum.

A VERY RARE book that describes the physiological effects and chemical properties of tartar (i.e., potassium hydrogen tartrate, made from wine residues). Originally appearing in German as *Schreiben von Tartarischen Kranckheiten* (Basel: P. Perna, 1563), it is here edited by Bodenstein. The preface is dated 7 March 1563, as in the German-language edition. The portrait of Paracelsus appears for the first time in this edition. "Far in advance of his time, Paracelsus discarded Galenism and the four humours . . . he was the first to write on diathetic (tartaric) . . . diseases" (Garrison). "The general principles of Paracelsus's pathology are best illustrated by his doctrine of Tartar" (Pagel, *Paracelsus*, p. 153 et seq.). "Tartar . . . is the principle of all diseases which are caused by . . . deposition of earthy matter. . . . This deposition Paracelsus compares with the separation of tartar . . . in wine casks" (Partington [II, 138], who does not mention this title). "Tartar which is taken in with food and drink and, unless eliminated from the system by the excretory organs, becomes the mother of all diseases" (Thorndike [V, 626], discussing Paracelsus but not mentioning this title). Not in the usual chemical and medical bibliographies. (Durling, 3490; Ferchl, 246; Ferguson Coll., 540; Sudhoff, 126)

PARACELSUS

Opera Omnia Medico-Chemico-Chirurgica, tribus voluminibus comprehensa. Editio novissima et emendatissima, ad Germanica & Latina exemplaria accuratissimè collata. . . .
Geneva: Sumptibus Joan. Antonii, & Samuelis De Tournes. 1658.

First De Tournes edition. 3 vols., folio, in 2. I: 18 leaves, 828 pp., 20 leaves. II: 12 leaves, 718 pp., 17 leaves. III: 6 leaves, 212 pp., 16 leaves, 119, (1) pp., 4 leaves, 18 pp. Frontispiece portrait of Paracelsus engraved by François Chauveau (1613–1676) after the painting by Giacomo Tintoretto (1560–1635) in volume I. Titles in red and black with large vignettes, woodcut initials, head- and tailpieces, woodcut text illustrations. Some light embrowning owing to paper quality; otherwise very good copy in contemporary gilt-ruled calf, rebacked. An important association copy from the library of the famous Paracelsus scholar Émile Angelo Grillot de Givry (1874–1929), with his signature in ink on endpaper of each volume.

THE BEST and most complete Latin edition of Paracelsus' collected works, edited by the Geneva physician Fridericus Bitiskius, who wrote prefaces to each volume defending Paracelsus from his detractors. This edition was the basis for the A. E. Waite English translation (1894). Grillot de Givry translated Paracelsus' works into French as *Oeuvres complètes* (Paris, 1913–14, 2 vols.), in the preface of which he states that he had used the De Tournes (1658) edition (i.e., this copy). (Blocker, 300; Bolton, 718; Caillet, 8283 ["Edition rare"]; Dibner, 124; Duveen, 453; Edelstein, 1749; Ferchl, 244; Ferguson, II, 169; Ferguson Coll., 514; Guaita, 1953; Harrison, *Newton*, 1242; *Heirs of Hippocrates*, 125; Neu, 3067; Osler, 528; Partington, II, 124; Poggendorff, II, 357; Reynolds, 3242; Rosenthal, 651; Smith, 371; Sotheran, Cat. 800 [1926], 11703 ["Rare"]; Sudhoff, 381–383; Waller, 7144; Watt, 730s)

PARACELSUS

Paracelsus His Aurora, & Treasure of the Philosophers. As also the Water-Stone of the Wise Men; describing the matter of, and manner how to attain the universal Tincture. Faithfully Englished. And Published by J. H. Oxon.

London: Printed for Giles Calvert, and are to be sold at the Black Spred Eagle, at the West end of Pauls. 1659.

First English edition. 12mo. 4 leaves, 229 pp., 1 leaf. An imperfect copy, lacking 5 leaves (viz. signatures D12, E1, E12, K6, K7); otherwise a good copy in the original unlettered sheep.

A CURIOUS AND rare alchemical work, describing the philosopher's stone and its preparation, properties, and use in supposedly transmuting base metals into gold. The *Water-Stone of the Wise Men* is by Johann Ambrosius Siebmacher. The name of the translator of this English edition

("J. H.") remains in doubt. Some attribute the translation to John Hester (e.g., Cushing, Duveen, Partington), or John Headrich (e.g., Osler), or James Howell (e.g., Ferguson Collection). Complete copies are very difficult to find, as this English edition was much used by adepts in their attempts at transmutation. Not in Bolton, Caillet, Edelstein, Ferchl, Ferguson, Mellon, Smith, Sondheimer, Waite, etc. (Cushing, P51; Duveen, 454; Ferguson Coll., 516; Neu, 3053; Osler, 534; Partington, II, 126; Sudhoff, No. 389; Watt, II, 730r; Wing, B3540)

PARACELSUS

Paracelsus of the Chymical Transmutation, Genealogy and Generation of Metals & Minerals. Also, of the Urim and Thummim of the Jews. With an appendix, of the virtues and use of an excellent water made by Dr. Trigge. The second part of the mumial treatise. Whereunto is added, philosophical and chymical experiments of the famous philosopher Raymund Lully; containing, the right and due composition of both elixirs, the admirable and perfect way of making the great stone of the philosophers, as it was truly taught in Paris, and sometimes practised in England, by the said Raymund Lully, in the time of King Edw. 3. Translated into English by R. Turner . . .

London: Printed for Richard Moon . . . and Hen: Fletcher . . . 1657.

First English edition. 8vo. 4 leaves, 166 pp. The 4 leaves (signature A) missing in this copy; otherwise very good copy in nineteenth-century polished calf. Bound with: Heydon, J., *The wisemans crown* (London, 1664–65).

UNFORTUNATELY LACKING the title page and three leaves of prefatory matter. The text is absolutely complete. "A rare and curious collection . . . The translator, Robert Turner was a well-known astrologer and botanist who translated several occult works. . . . He dedicated the present work to William Backhouse (1593–1662) who devoted his time to the study of occult sciences and became renowned as an alchemist . . . who gave great encouragement to those addicted to similar pursuits and especially to Elias Ashmole whom he adopted as his son and to whom he imparted all his secrets" (Duveen). Though there was an explosion of translations of Paracelsus during 1656–61, neither the S.T.C. nor Wing shows any other translation of the works of Lull. "The first part is a translation of parts of *Congeries Paracelsicae chemiae de transmutationibus metallorum*" (Ferguson Coll.). (Bolton, 1022–1023; Cushing, P55; Duveen, 454; Ferguson Coll., 518; Neu, 3066; Partington, II, 132; Sotheran, Cat. 887 [1950], 1037 ["Very rare"]; Watt, II, 730r; Wing, B3543)

PARA DU PHANJAS, François

Théorie des Nouvelles Découvertes en Genre de Physique et de Chymie: pour servir de Supplément à la Théorie des Êtres Sensibles, ou au Cours complet & au Cours élémentaire de Physique de M. l'Abbé Para. . . .

Paris: Chez Didot fils. 1786.

First edition. 8vo. 604 pp. With 10 folding copperplates (by Bernard). Very good copy in contemporary mottled calf, gilt, maroon morocco label gilt (headbands worn).

PARA DU PHANJAS (1724–1797) taught physics in several Jesuit colleges, and his lectures at Besançon attracted up to three hundred students. After the suppression of the Jesuit Order he moved to Paris, where he published a vast textbook (*Théorie des êtres sensibles*, 1772, 4 vols.). In the long preface to the present work he explains that the great discoveries made since 1772 called for an additional book, and since these discoveries were made mainly in the field of chemistry, this supplement must of necessity be a theoretical introduction to that science. By far the largest part of the volume deals with chemistry, including an important section on gases (pp. 383–451) in which many experiments are described. Sections on glassmaking, oils and soap, aërostation, and electricity are also included, and at the end (pp. 596–604) there is an analytical catalogue of the author's publications. Not in Blake, D.S.B., Ferguson, Ferguson Coll., Morgan, Neu, Smith, Waller, Watt, etc. (Bolton, 718; De Backer-Sommervogel, VI, 197, 14; Duveen, 450; Ferchl, 393; Partington, III, 53, 491; Poggendorff, II, 357)

PARFUMEUR ROYAL

Le Parfumeur Royal, ou Traité des Parfums, des plus beaux Secrets qui entrent dans leur Composition, & de la Distillation des Eaux de Senteur & autres Liqueurs précieuses. Nouvelle Édition, revue, corrigée, & considérablement augmentée. Paris au Palais: Chez Saugrain, l'ainé. 1761.

Second edition, enlarged. 12mo. 1 leaf, 242 pp., 2 leaves. Fine copy in contemporary mottled calf, spine richly gilt, with brown gilt-lettered label.

A VERY RARE treatise, of chemical interest, on the preparation of all kinds of perfumes, mostly from flowers and leaves. Techniques employed involve distillation, solvent extraction, expression of oils from seeds, fermentation, etc. There is a separate section on distillation (pp. 205–226). As the *approbation* is dated 30 October 1759, it is probable that the first edition appeared late in that year or in 1760. This "nouvelle edition" is most likely the second appearance of the work. The catalogue of the Ferguson Collection (p. 818) attributes this title to Simon Barbe, author of *Le parfumeur françoise*, several editions of which appeared in the 1690s.

Comparison of the text of the present work with that of Barbe's *Parfumeur* (Amsterdam: P. Marret, 1696) reveals that the two books are entirely different and unrelated. The identity of the author is not known. Not mentioned by Ferguson (*Books of Secrets*) and not in the catalogues of the usual early chemical libraries (e.g., Bolton, Duveen, Edelstein, Ferguson, and Smith). (Ferchl, 394; Ferguson Coll., 546)

PARIS, John Ayrton

The Elements of Medical Chemistry: embracing only those branches of chemical science which are calculated to illustrate or explain the different objects of medicine; and to furnish a chemical grammar to the author's Pharmacologia. . . .
London: Printed and Published by W. Phillips, George Yard, Lombard Street, etc. 1825.

First edition. 8vo. 1 leaf, xxxi, (1), 586 pp., 7 leaves. Numerous woodcuts in text. Small stains on pages 264–265; otherwise very fine copy, unpressed and uncut with wide margins, in original blue boards, modern unlettered calf back.

WRITTEN FOR medical students, this excellent work covers both physical chemistry and the descriptive chemistry of the elements and their compounds. Dalton's atomic theory, laws of definite proportions, chemical equivalents, heat, light, electricity, and the preparation of organic compounds from natural sources are described. The introductory dialogue between the author and a practitioner whose son is about to enter the study of medicine "presents some of the author's ideas regarding the . . . usefulness of chemistry" (Cole). Paris's "knowledge of chemistry was extensive and profound. To this fascinating science he had early devoted himself; and he attracted notice on first settling in London by the extent and precision of his chemical attainments. These brought him into communication with Wollaston, Davy, Young, and others" (Munk). An American edition appeared (New York, 1825). A scarce book, not in the usual bibliographies. (Bolton, 718; Cole, 998; Munk, III, 126)

PARIS, John Ayrton

La Physique et la Chimie, appliquées a la Médecine. . . .
Paris: Baudouin Frères, Éditeurs, Rue de Vaugirard, No. 17. Brussels: Même Maison de Commerce. 1826.

First French edition. 8vo. 2 leaves, 649, (1) pp. With 9 unsigned steel-engraved plates (chemical equipment) on heavy paper at the end. Fine copy, in original quarter calf, marbled boards, spine gilt-lettered.

THE FRENCH edition of *The Elements of Medical Chemistry* (London, 1825), by an anonymous translator. The figures

which were scattered throughout the text of the English edition have been grouped together in the nine plates. A table of freezing mixtures (pp. 641–642), not in the English original, is added. Rare. (Cole, 999)

PARIS, John Ayrton

A Guide to the Mount's Bay and the Land's End; comprehending the topography, botany, agriculture, fisheries, antiquities, mining, mineralogy and geology of Western Cornwall. . . . To which is added, for the information of Invalids, a dialogue on the peculiar advantages of the climates of Penzance, Devonshire, and the Southern parts of Europe. By a physician. . . .

London: Printed and published by W. Phillips, George Yard, Lombard Street: sold also by T. Vigurs, Penzance; and W. and C. Tait, Edinburgh. 1824.

Second edition. 8vo. xx, 272 pp. Engraved frontispiece and title page (both by J. Tonkin), and 11 woodcuts of Cornish views in text. Fine copy, uncut, in half morocco antique, pebbled cloth, spine gilt-lettered. Inscription on flyleaf: "Thomas St. Aubyn from my Mother. 2d March, 1834." This former owner was the son of Sir John St. Aubyn, fifth baronet (1758–1839), M.P. (1784–1812), F.R.S., famous collector of fossils and minerals whose portrait was painted by Sir Joshua Reynolds (see D.N.B.).

ORIGINALLY PUBLISHED in duodecimo format at Penzance in 1815, this is the greatly enlarged final edition. Although anonymous, this fascinating book was written by Paris and is dedicated to the Royal Geological Society of Cornwall. There is much of chemical, mineralogical, and geological interest, with references to famous Cornishmen (e.g., Sir Humphry Davy, William Gregor, William Borlase, and Philip Rashleigh). Mining and metallurgical processes employed in the extraction of copper, lead, tin, and other metals are described. Very scarce. (Munk, III, 126)

PARIS, John Ayrton

Memoir of the Life and Scientific Labours of the late Rev. William Gregor, A.M. read before the Royal Geological Society of Cornwall, at the Anniversary Meeting, A.D. 1817, and printed at their Request. . . .

London: Printed and sold by William, Phillips, George Yard, Lombard Street. Sold also by Harry, Truro, Cornwall. 1818.

First edition. 8vo. 37, (1) pp. Crisp, clean copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated. Presentation copy, inscribed in ink by Paris on title page: "John Noble Johnson, M.D. From his Friend the Author."

THE EARLIEST detailed biography of the Cornish chemist and true discoverer of titanium William Gregor (1761–

1817), written by his close friend, the successful London physician J. A. Paris (1785–1856). Educated at St. John's College, Cambridge (M.A., 1787), Gregor was rector of Creed, Cornwall (see D.N.B.). He “became interested in chemistry and analytical mineralogy . . . was fascinated by the minerals of England, and acquired such great skill in analyzing them that Berzelius and other competent judges referred to him as ‘a famous mineralogist’ . . . The most interesting mineral that Mr. Gregor ever analyzed . . . was a black, magnetic sand from the Menacchan valley in his own parish. His account of . . . it appeared in *Crell's Annalen* in 1791 . . . this black magnetic sand [is] now known as ilmenite” (Weeks, *Discovery of the Elements*, 1960, pp. 545–548). Gregor's work of 1789 on ilmenite (ferrous titanate) led to the recognition of the new element titanium by M. H. Klaproth in 1794. Klaproth abandoned his initial claim to the discovery of titanium and acknowledged “that the merit of it belonged solely to Mr. Gregor” (p. 20). This copy was given by Paris to Dr. J. N. Johnson (d. 1823; *Munk's Roll*, III, 136–137), physician at Westminster Hospital. (Partington, III, 656)

PARIS, John Ayrton

Philosophy in Sport made Science in Earnest; being an attempt to illustrate the first principles of Natural Philosophy by the aid of Popular Toys and Sports . . .

London: Printed for Longman, Rees, Orme, Brown, and Green, Paternoster-Row. 1827.

First edition. 3 vols., 12mo. I: xviii, 314 pp. II: viii, 316 pp. III: vi, 207, (1) pp. Numerous woodcut illustrations by George Cruikshank. Very fine, crisp set, in pristine condition; bound by Henry Young (Liverpool, England) in half calf, cloth boards, spines richly gilt and dated, top edges gilt. Armorial book-plates: Mexborough and John Ponsonby.

DEDICATED to the celebrated novelist Maria Edgeworth (1767–1849), this work is written in the form of a novel for young people in which the scientific principles underlying many games and toys are explained to two children. Various chemical phenomena are discussed. A fundamental work in the history of the cinema and the concept of the motion picture; the first chapter of the third volume describes a thaumatrope: i.e., a device that demonstrates the principle of the persistence of vision. This constitutes the first mention of the concept of the modern motion picture. “The illustrations to this long popular book . . . represent George Cruikshank in the unusual role of a scientific illustrator” (Zeitlinger [Sotheran, Cat. 682 (1908), 3458]). The woodcuts by Cruikshank (1792–1878) are particularly charming. This well-received work passed through nine editions (last: London, 1861). The first edition is very scarce, especially when in fine condition. (Cohn, *George Cruikshank, a Catalogue Raisonné*, 626; Munk, III, 127)

PARKES, Samuel

A Chemical Catechism for the Use of Young People: with Copious Notes for the assistance of the teacher; to which are added a Vocabulary of Chemical Terms, Useful Tables, and a Chapter of Amusing Experiments. By S. Parkes, Manufacturing Chemist.

London: Printed for the Author, and sold by H. D. Symonds, Paternoster-Row; J. Hatchard, Piccadilly; and W. J. and J. Richardson, Cornhill. 1806.

First edition. 8vo. xvi, 607, (1) pp. With frontispiece of chemical apparatus (“Etched on Glass by Fluoric Acid”). Very fine copy, unpressed and uncut with wide margins, in blue boards, printed paper label.

AN INDUSTRIAL chemist in Stoke-on-Trent (1793–1803) and then in London, Parkes (1761–1825) published this book at his own expense for the instruction of his daughter. An excellent work, simply arranged and well documented with references to contemporary literature, it immediately became popular. There were at least fourteen English editions, translations into most European languages, and several American editions. Of great interest is the frontispiece, produced by exposing the scratched surface of glass coated with wax to the vapors of a warm solution of hydrofluoric acid. “Two famous works on chemistry published in the early nineteenth century were in the form of dialogues; S. Parkes' *Chemical Catechism*, and Mrs. Jane Marcet's *Conversations on Chemistry* . . . both of which came out in 1806” (Knight). Parkes' work is presented in a less “elementary” way. (Bolton, 718; Cole, 1000; Duveen, 458; Ferchl, 394; Knight, 203; Partington, III, 706; Poggendorff, II, 361; Smith, 375; Watt, II, 732t)

PARKES, Samuel

A Chemical Catechism, with Copious Notes, a Vocabulary of Chemical Terms, and a Chapter of Instructive and Amusing Experiments. . . .

London: Printed for the Author, and sold by Lackington, Allen, and Co., etc. 1807.

Second edition. 8vo. xv, (1), 631, (1) pp. With frontispiece of chemical apparatus (“Etched on Glass by Fluoric Acid, for the Chemical Catechism”). Occasional neat contemporary notes in pencil and old signature (J. Robson?) on title; otherwise very good copy in modern boards, printed paper label on spine.

THE ENLARGED and updated second edition in which “much new matter has been added, particularly in the Notes; many striking experiments have been introduced; and every new discovery has been noticed” (Preface). The frontispiece (“Etched by H. Mutlow”), different from that in the first edition (London, 1806), is described (pp. xiii–xv). Parkes suggests “that great advantages would be obtained in the

art of printing, if impressions could be taken from glass with the same facility and security as from copper." He first discusses (pp. 531–532) the very important new "experiments of professor Davy, published in the first part of the *Philosophical Transactions* for 1807, [which] have thrown considerable light on the agencies of electricity and galvanism." (Wellcome, IV, 306)

PARKES, Samuel

The Chemical Catechism, with Notes, Illustrations, and Experiments. . . . The Eighth Edition, greatly enlarged, and carefully adapted to the present state of chemical science. London: Printed for the Author, and published by Baldwin, Cradock, and Joy, Paternoster-Row, etc. 1818.

Eighth edition. 8vo. xxv, (7), 622 pp., 1 leaf (errata). With large folding engraved plate (by James Davis, 1816: "The Laboratory at the Surrey Institution, Black Friars Bridge, London"). Mint copy in contemporary diapered tan calf, spine richly gilt, covers with inner and outer ornamental gilt dentelles, marbled edges.

AN AUTHORITATIVE and excellent edition: "The changes and additions have been so numerous and considerable, that the greater portion of the present volume may be said to have been rewritten. . . . The Dictionary of Terms has been enlarged by the admission of many new words, not to be found in any other chemical vocabulary" (advertisement). This edition is noteworthy because it contains a valuable bibliography of the books quoted, which extends from Elias Ashmole's *Theatrum Chemicum Britannicum* (London, 1652) to the *Annales de Chimie* (Paris, 1817). Dalton's atomic theory is discussed (p. 483). Further editions of this popular work appeared up to the "new edition" by W. Barker (London, 1854; Bolton, 718). (Wellcome, IV, 306)

PARKES, Samuel

A Chymical Catechism: or the Application of Chymistry to the Arts, for the use of young people, artists, tradesmen, and the amusement of leisure hours. To which are added a vocabulary of chymical terms, some useful tables, and a variety of amusing experiments. By S. Parkes, manufacturing chymist. . . . This edition is embellished with a frontispiece of the economical laboratory of James Woodhouse, M.D. Professor of Chymistry in the University of Pennsylvania, &c. Philadelphia: James Humphreys. 1807.

First American edition. 8vo. (in 4s). 334 pp. + 1 leaf (with quotations from Beddoes and Tilloch). With folding frontispiece of Woodhouse's laboratory (engraved by Tanner). Fine copy in contemporary tree calf, spine gilt-ruled, with crimson lettering label. Signature of John G. Hoskins in ink on title page and inscription in ink on recto of flyleaf: "John G. Hoskins. 1814. Presented by John Head Warder Philadelphia 1807."

THE VERY rare first American edition of this famous work, the first edition of which (London, 1806) was printed in only 1,500 copies. Apart from a page describing the economical laboratory of James Woodhouse (recto of leaf following title), this is a verbatim reprint of the London (1806) edition. James Woodhouse (1770–1809) was an illustrious professor of chemistry at the University of Pennsylvania. This edition is discussed by E. F. Smith (*Old Chemistries*, New York, 1927, pp. 52–54) who states that many American editions appeared. The first American edition (as here) is not mentioned by Bolton, Cushing, Duveen, Ferchl, Morgan, Osler, Partington, Reynolds, Smith, Waller, Watt, etc. Only much later New York editions of 1816, 1818, and 1821 are cited by Morgan, Smith, and Bolton, respectively, which underscores the rarity of this first American edition.

PARKES, Samuel

The Chemical Catechism, with Notes, Illustrations, and Experiments. By Samuel Parkes. . . . From the Ninth London Edition, carefully corrected and adapted to the present state of chemical science. New York: Published by Collins & Co. No. 189, Pearl Street. 1821.

Third New York edition. 8vo. (in 4s). xxvii, (1), 576 pp. With folding engraved frontispiece dated 1822 (Rollinson sc.) and plate of chemical apparatus (H. Anderson Sculpt.) facing page 485. Characteristic occasional browning of some leaves; otherwise good copy in modern black pebbled cloth, spine gilt-lettered and dated.

THE THIRD edition with a New York imprint (first: 1816; Morgan, 598; second: 1818, Cole, 1002; Edelstein, 1766; Smith, 375), based on the ninth English edition (London, 1819). The frontispiece depicts "The Laboratory at the Surrey Institution, Black Friars Bridge, London" and "A Section of the Furnaces." The bibliography of works "quoted in this treatise" is included, as in the eighth English edition (London, 1818). (Bolton, 718)

PARKES, Samuel

Chemical Essays, principally relating to the Arts and Manufactures of the British Dominions. . . . London: Printed for the Author; and published by Baldwin, Cradock, and Joy, Paternoster Row. 1815.

First edition. 5 vols., 12mo. I: xxxiv, (2), 395, (1) pp.; 5 plates. II: xviii, (2), 483, (1) pp.; 7 plates (1 folding). III: x, (2), 518, (2) pp.; 5 plates. IV: xiv, (2), 524 pp.; 5 plates. V: v, (3), 390 pp.; folding frontispiece. A total of 23 finely engraved plates. Very fine set in essentially mint condition, in original mottled calf, spines richly gilt, red morocco labels.

AN IMPORTANT work in which Parkes gives a detailed account of the chemically based industries of the early nineteenth century. Included are chapters on the manufacture of glass, dyes and pigments, bleaching, soapmaking, acids, alkalies, salts, metals, nonmetals, ceramics, pottery, glazes, mortars, cements, leather tanning, distillation, and brewing. "In selecting the subjects, the author has fixed upon those which seem to have been the least examined by other chemical writers" (I, vii). The *Essays* "contain much historical information. . . . His essay on the manufacture of tin-plate is especially interesting" (Partington). The plates are of fine quality, clear and precise. A detailed index to the five volumes completes the work. (Bolton, 718; Cole, 1006; Ferchl, 394; Haber, 31; Partington, III, 706; Poggendorff, II, 361; Smith, 375)

PARKES, Samuel

Chemical Essays, principally relating to the Arts and Manufactures of the British Dominions. . . . The Fourth Edition, revised, corrected, enlarged, and illustrated with numerous Copper Plates and Wood Cuts of Machinery and Chemical Apparatus; by J. W. Hodgetts.

London: Henry G. Bohn, York Street, Covent Garden. 1841.

Fourth (first Bohn) edition. 8vo. xxi, (3), 648 pp. With frontispiece of Francis Bacon and 13 engraved plates. Very good copy, uncut, in original publisher's blind-stamped green cloth, spine gilt-lettered and depicting chemical apparatus in gilt.

THE CONSIDERABLY enlarged and updated fourth and penultimate edition of this well-received treatise on chemical technology. The prefaces of the first, second, and third editions are reprinted, and this fourth edition appears to be a reprint of the third. Duveen (p. 458) lists a copy of the third edition (London: Baldwin & Cradock, 1830) with almost identical pagination but lacking the frontispiece of Bacon (present in this copy). A so-called new edition by W. Barker (London, 1854) was the final appearance of this work. (Sondheimer, 1167)

PARKES, Samuel

Chimie des Gens du Monde, par Samuel Parkes: Ouvrage traduit de l'anglais, sur la 9e Édition, par Jn. Riffault . . .

Paris: Leblanc, Imprimeur-Libraire, Abbaye Saint-Germain. 1822.

First French edition. 2 vols., 8vo. I: 2 leaves, xvi, 464 pp. II: 2 leaves, 412 pp. With folding engraved plate of chemical apparatus (Drouet Sculpt.). Fine copy in original gilt-ruled speckled calf, spine gilt, red and green morocco labels.

THE FRENCH edition of this classic textbook, translated from the ninth English edition (London, 1819) by Jean René Denis Riffault des Hêtres (1754–1826). Riffault was general administrator of gunpowder and saltpeter-making in Paris and member of the Légion d'Honneur. In addition to translating many works from English into French (e.g., Thomas Thomson's *A System of Chemistry*, Paris, 1818–1822; Partington, III, 719), he published books on gunpowder, saltpeter, dyeing, bleaching, and related subjects (see Poggendorff, II, 644). (Bolton, *First Supplement*, 322)

PARKES, Samuel

A Letter to the Farmers and Graziers of Great Britain, on the Advantages of Using Salt in the Various Branches of Agriculture, and in Feeding all Kinds of Farming Stock. . . .

London: Published by Baldwin, Cradock, and Joy, etc. May 1819.

Third edition, corrected. 8vo. 106 pp., 1 leaf (advertisements). Very good, crisp copy, in original marbled boards, rebounded in modern calf, spine gilt-lettered and dated.

A SEQUEL TO the author's *Thoughts on the Laws relating to Salt* (London, 1817). The preface of the first edition of this interesting work on the agricultural applications of common salt is dated 22 February 1819. The book sold very rapidly, requiring second and third printings in quick succession. The preface of the present third edition is dated 1 May 1819. After reviewing the history of the use of salt in agriculture (pp. 37–60), the author lists testimonials on the effects of salt in feeding horses, sheep, cattle, bees, etc. (pp. 60–73). Speeches on salt duties, delivered to the Board of Trade and House of Commons in 1817–18, follow (pp. 74–101). The book ends with a discussion of the expenses of conveying rock salt by sea from Liverpool, details of the awards offered to those who can demonstrate the utility of salt as food and as manure, and a complete list of agricultural societies in England and Wales. The fourth edition, enlarged and corrected, is cited in Perkins (no. 1305). Extremely rare. No edition is listed in the usual bibliographies.

PARKES, Samuel

The Rudiments of Chemistry; Illustrated by Experiments, and eight copper-plate engravings of chemical apparatus.

By Samuel Parkes . . .

London: Printed for the Author; and sold by Lackington, Allen, and Co., etc. 1810.

First edition. 12mo. xii, 294 pp. With 8 engraved plates (1 folding). Fine copy in original mottled calf, gilt. Neatly

inscribed in ink on front pastedown endpaper: "Fanny Burney, the Gift of her Friend, John Hodgson, June 29th, 1811"; and on flyleaf: "John Hodgson, Charles Street, St. James's Square."

AN INTRODUCTORY work on the principles of chemistry, written at a time when the science was undergoing great changes. "The author hopes . . . that, while the Chemical Catechism is better calculated for the more advanced students, this small essay will be found suitable to those who are just entering on the study of this science" (preface). The work of Dalton, Davy, and others is discussed. This copy has an important provenance, having belonged to the famous novelist Fanny Burney (Madame d'Arblay, 1752–1840), who, with her father, Charles Burney (1726–1814), was a friend of Dr. Samuel Johnson, James Boswell, and their circle. The antiquary John Hodgson (1779–1845), who gave this copy to Fanny Burney, published *Account of the (colliery) Explosion at Felling* (1813) and assisted Humphry Davy in the invention of his safety lamp. (Cole, 1009; Edelstein, 1769; Ferchl, 394; Sondheimer, 1168; Watt, II, 732t)

PARKES, Samuel

Thoughts on the Laws relating to Salt; with arguments for the repeal of those laws, collected from a variety of sources; and arranged under distinct heads. To which is prefixed, the author's evidence given to the Honourable the Board of Trade, on the 8th and 11th of April, 1817, on the same subject. By Samuel Parkes, F.L.S. M.R.I. and member of the Geological Society; author of The Chemical Essays, The Chemical Catechism, and The Rudiments of Chemistry.

London: Printed for the Author. Published by Baldwin, Cradock, and Joy; and sold by all other booksellers. 1817.

First edition. 8vo. 229 pp., 1 leaf (advertisements). Fine, crisp, uncut copy, in the original boards, rebacked. Presentation copy, with "from the Author" written in ink on the front pastedown endpaper, presumably given to Gilbert Hamilton (unidentified), whose signature, in ink, appears below.

A RARE WORK by Parkes, which discusses the industrial manufacture of common salt and chemicals produced from it (e.g., hydrochloric acid and sodium carbonate). The economics of each process are evaluated, and recommendations are made for the repeal of duties and taxes. The many different uses of salt are described, and the chemical principles underlying the manufacture of soap, glass, ammonium chloride (sal ammoniac), sodium hypochlorite, calcium hypochlorite, Glauber's salt, Epsom salt, sodium carbonate, mercuric chloride, etc., are discussed. The uses of salt as a preservative in the food, fish, meat, etc., industries are also covered. The appendix (p. 65 et seq.) contains observations on the salt duties. Not in Bolton, D.S.B., Duveen, Ferchl, Ferguson, Edelstein, Morgan, Partington,

Poggendorff, Smith, Waller, Watt, et al., and apparently unknown to the chemical bibliographers.

PARKINSON, James

The Chemical Pocket-Book; or Memoranda Chemica: arranged in a Compendium of Chemistry: with Tables of Attractions, &c. calculated as well for the occasional reference of the Professional Student, as to supply others with a General Knowledge of Chemistry. By James Parkinson. Second Edition, with the latest discoveries.

London: Printed by C. Whittingham for H. D. Symonds, etc. 1801.

Second edition. 8vo. xii, 250 pp., 1 leaf. With engraved frontispiece (S. Springsguth Sculp.) depicting "The Economical Laboratory of Guyton" and "The Chemical Characters of Hassenfratz & Adet." Very fine copy, unpressed and uncut with wide margins, in gilt-ruled half calf antique, marbled boards, maroon morocco label, spine dated.

THE ENLARGED second edition of this popular work (first: London, 1800), which was written for the use of medical students and was the first textbook of general and elementary chemistry to incorporate the discoveries of Lavoisier and his circle. "It is hardly necessary to acknowledge the Author's obligations to the various labours of Bergman, Fourcroy, Lavoisier, Chaptal, Kirwan, Hatchett, Pearson, Babington, &c." (preface). Many references are made to original sources. The physician and surgeon Parkinson (1755–1824), who practiced in Hoxton (east London), is best remembered as the first to give the classic description of the shaking palsy (Parkinson's disease) in 1817 (see Garrison-Morton, 4690). Parkinson was greatly interested in the collecting of fossils and on the final leaf of the present work states that he is "engaged in researches respecting Extraneous Fossils, with the intention of publication [and] earnestly solicits assistance" for "communications, and . . . specimens or accurate drawings." His researches led to the appearance of two important contributions to paleontology: *Organic Remains of a Former World* (London, 1804, 1808, 1811; 3 vols.) and *Outlines of Oryctology* (London, 1822). (Duveen, 458; Partington; IV, 602; Wellcome, IV, 306)

PARKINSON, James

The Chemical Pocket-Book; or Memoranda Chemica; arranged in a Compendium of Chemistry. By James Parkinson, Hoxton. Third Edition. With appropriate tables & accounts of the latest discoveries.

London: Printed by O. Whittingham, Dean Street, Fetter Lane. For H. D. Symonds, Paternoster Row; Murray and Highley, Coxe, Boosey, Arch & Callow. 1803.

Third edition. 12mo. 1 leaf, xii, 272 pp. + 4 pp. (advertisements). With engraved frontispiece (identical to that of the second edition) and engraved title page, including small figure. Contemporary signature ("T. Ingle. Pet. Coll.") on front paste-down endpaper and a few neat marginal notes; otherwise fine copy, uncut, in original boards, paper on spine mostly gone.

IN THIS updated third edition Parkinson states in the preface "that these memoranda have been enriched by a careful collation with the Course of Lectures on Chemistry, delivered at the Royal Institution of Great Britain, by Mr. Davy and with the Systeme des connoissances Chymiques of Fourcroy." He also acknowledges his indebtedness to Wollaston, Chenevix, Hatchett, Babington, Crichton, Pearson, and Powell. This edition is the first to introduce "those alterations in the names of substances which have been proposed by Mr. Chenevix" (in Richard Chenevix, *Remarks on Chemical Nomenclature*, London, 1802). (Cole, 1011; Partington, IV, 602)

PARKINSON, James

The Chemical Pocket-Book; or Memoranda Chemica: arranged in a Compendium of Chemistry: with Tables of Attractions, &c, Calculated as well for the occasional reference of the Professional Student, as to supply others with a General Knowledge of Chemistry. By James Parkinson. With the latest discoveries. From the London second edition of 1801. To which is now added An Appendix, containing the principal objections to the Antiphlogistic System of Chemistry. By James Woodhouse, M.D. . . .

Philadelphia: Printed and sold by James Humphreys, at the N.W. Corner of Walnut and Dock-street. 1802.

First American edition. 12mo. xii, 13–215, (1) pp. With folding frontispiece (Tanner sc.) of "The Economical Laboratory of Guyton" and "The Chemical Characters of Hassenfratz & Adet," and folding plate of the "Economical Laboratory of James Woodhouse, M.D." Very good copy in original gilt-ruled tree calf, maroon morocco label.

THE AMERICAN edition edited and revised by James Woodhouse (1770–1809), professor of chemistry at the University of Pennsylvania. Woodhouse has added an appendix describing his own "economical laboratory" together with a discussion of some objections to Lavoisier's new chemistry. He describes various experiments made by Priestley, Maclean, Mitchill, Cruikshank, and others. On the last page is an advertisement of "Dr. Woodhouse's Lectures on Chemistry . . . during the Course, several thousand brilliant Experiments are exhibited." A "striking volume, with a great mass of facts concisely set forth" (Smith, 1918). Born in Philadelphia, Woodhouse graduated from the University of Pennsylvania Medical School and in 1796 was elected

professor of chemistry. He introduced Robert Hare, Benjamin Silliman, and others to chemistry, and these men later became leaders in American chemical research. (Bolton, 719; Cole, 1014; Edelstein, 1771; Morgan, 600; Smith, 376 [imperf.]; E. F. Smith, *James Woodhouse* [1918], 207–213)

PARKINSON, John

Paradisi in Sole Paradisus Terrestris. A Garden of all sorts of pleasant flowers which our English ayre will permitt to be noursed up: with A Kitchen garden of all manner of herbes, rootes, & fruites, for meate or sause used with us, and An Orchard of all sorte of fruit-bearing Trees and shrubbes fit for our Land together With the right orderinge planting & preserving of them and their uses & vertues. Collected by John Parkinson Apothecary of London. . . .

(Colophon:) London: Printed by Humfrey Lownes and Robert Young at the signe of the Starre on Bread-street hill. 1629.

First edition. Folio. 6 leaves, 612 pp., 8 leaves (index). Woodcut allegorical title page (by A. Switzer), woodcut portrait of the author, 110 full-page and 3 smaller woodcuts, decorative initials, head- and tailpieces. Some margins neatly repaired; otherwise very good copy, in dark-green morocco antique, gilt-lettered maroon morocco label.

PARKINSON (1567–1650), apothecary and herbalist, had a large garden in Long Acre (now in the heart of London), well stocked with many different plants. The last British writer of the period who belonged to the true lineage of herbalists, he was given the title of herbarist to Charles I. *Paradisi in sole paradisus terrestris* is a play on the author's name ("park-in-sun"). Detailed directions are given for the efficient laying out and organization of gardens, with the preferred locations for each species of plant. Of chemical and pharmacological interest are the descriptions of the properties of various plants and their roots, leaves, seeds, fruit, etc. The "most famous and beloved of early gardening books" (Rohde). Parkinson gives a remarkably complete picture of the seventeenth-century English garden, with much information not found in other botanical works. (Arber, 135; Blunt, 72; D.S.B., VII, 147; Ferchl, 394; Garrison-Morton, 1822; Henrey, I, 161; Knight, 22; Neu, 3083; Nissen, 1489; Rohde, 142; S.T.C., 19300; Watt, II, 733g; Wellcome, I, 4832)

PARKINSON, John

Theatrum Botanicum: The Theater of Plants. Or, An Herball of a large extent: containing therein a more ample and exact history and declaration of the physicall herbs and plants that are in other outbours, encreased by the accesse of many hundreds of new, rare, and strange plants from all the parts of the world, with sundry gummess, and other physicall materials, than hath beene hitherto published by any before; and a most large demonstration of their natures and vertues. . . .

London: Printed by Tho. Cotes. 1640.

First edition. Folio. 10 leaves, 1755, (1) pp., 1 leaf (errata). Finely engraved title page (by W. Marshall), including portrait of Parkinson and 2,714 large woodcut illustrations. Historiated woodcut capitals, head- and tailpieces. Exceptionally fine, crisp copy (rare thus), in old (not contemporary) sheep, maroon morocco label, gilt. Stamp on verso of letterpress title: Museum Britannicum. Duplicate for sale, 1769.

THE GREATEST of the English herbals and Parkinson's most important work, describing about 3,800 plants, almost double the number described in the first edition of Gerard's *Herball* (1597) and about a thousand more than are in Johnson's second edition of Gerard (1633). Compiled from various earlier botanical writings, including unpublished material left by L'Obel at his death, it also contains information from Goodyer, Tradescant, Turner, et al. Parkinson incorporates almost the whole of Gaspard Bauhin's *Pinax* (1623). Plants are classified according to their pharmacological properties, of which there is a comprehensive index. The "largest herbal in the English language" (Rohde). Newton owned a copy, but its present location is unknown (see Harrison, no. 1257; Villamil, p. 90). (Arbor, 136; Blocker, 303; Ferchl, 394; Garrison-Morton, 1823; Henrey, I, 80; Knight, 25; Neu, 3085; Nissen, 1490; Pritzel, 6934; Rohde, *Herbals*, 142; S.T.C. 19302; Thorndike, VIII, 62; Watt, II, 733h; Wellcome, I, 4833)

PARMENTIER, Antoine Augustin

L'Art de faire les Eaux-de-Vie, d'après la Doctrine de Chaptal; où l'on trouve les procédés de Rozier, pour économiser la dépense de leur distillation, et augmenter la spirituosité des Eaux-de-vie de vin, de lie, de marc, de cidre, de grains, etc.; suivi de l'art de faire les vinaigres simples et composés. . . .
Par Parmentier . . .

Paris: Chez Delalain fils, libraire, quai des Augustins, no. 38. An XIII—1805.

Second edition. 8vo. 2 leaves, 214 pp. With folding table and 5 engraved plates by Hulk (2 folding) of chemical apparatus and distillation equipment. Fine copy in original green quarter gilt-ruled morocco, marbled boards.

A DEFINITIVE WORK on the preparation of ethyl alcohol, the first chapter of which was contributed by Chaptal. Chapters on distillation equipment and the techniques of distilling (with references to Baumé, Moline, Richard, et al.) are followed by directions for the distillation of alcohol from various types of wine. The preparation of different kinds of aromatic vinegar is then described, with instructions for measuring the quality of alcohol and vinegar by using special hydrometers. The plates depict a typical distilling room, alembics, condensers, furnaces, receivers, hydrometers, etc. A rare and important book on this branch of chemical technology. Only one copy of this edition and only one of the first edition (Paris, 1801) are listed in N.U.C. (Bitting, 357; Ferchl, 394; Forbes, *History of Distillation*, 254, 387; Poggendorff, II, 363; Vicaire, 657–658)

PARMENTIER, Antoine Augustin

Expériences et Réflexions relatives à l'Analyse du Bled et des Farines. Par M. Parmentier, . . .

Paris: Chez Monory. 1776.

First edition. 8vo. iv, 194 pp., 1 leaf. Fine copy, printed in part on white and in part on bluish paper, in quarter calf antique, marbled boards, crimson morocco label gilt.

WRITTEN AS a polemical work in which Parmentier defends himself from attacks by B. G. Sage (see *Analyse des Blés*, Paris, 1776), this book contains original experiments on the chemical composition of wheat and flour and is a pioneering work on this important subject. "Typical and worthy of note are his chemical analyses of wheat and flour (1776), . . . Parmentier devoted considerable time to . . . the technology of bread-making" (D.S.B.). He introduced potatoes into France and popularized their use as food. In addition to the present work, he published a number of treatises of fundamental importance in nutrition and food chemistry. Bolton, Ferchl, and Poggendorff list an edition with this title, dated 1778. Rare. Not in the British Library and not in the usual early chemical libraries. (D.S.B., X, 325; Rothamsted, 209)

PARMENTIER, Antoine Augustin

Nouvel Aperçu des Résultats obtenus de la Fabrication des Sirops et Conservés de Raisins dans le cours de l'année 1812 . . . Avec des réflexions générales concernant les sirops et les sucres extraits des autres végétaux indigènes. Par A. A. Parmentier . . .

Paris: De l'Imprimerie Impériale. 1813.

First edition. 8vo. 2 leaves, 1–176, (2), 177–200, (2), 201–458 pp. With 4 folding engraved plates by Miller of industrial equipment, furnaces, etc. Very fine copy, uncut with wide margins, in gilt-ruled quarter morocco antique, marbled boards, maroon label, original blue wrappers bound in.



Parkinson, John. Theatrum Botanicum. London, 1640.

THE GREAT advocate of potatoes in hard times, Parmentier also spent several years studying the alternatives to imported cane sugar, which economic warfare with England (1806–1812) had made scarce and expensive. The present treatise on sugar extracted from grapes is a sequel to his *Aperçu des Résultats obtenus de la Fabrication des Sirops et Conservés de Raisins dans le cours de l'années 1810 et 1811* (Paris, 1812), which itself was a sequel to his *Traité sur l'art de fabriquer les sirops et les conservés de raisins, destinés a suppléere le sucre des colonies* (Paris, 1806). Numerous experiments are described on the industrial extraction and refining of sugar from raisins and several other fruits. Two of the plates have a leaf of explanation not included in the pagination. The *Rapport . . . sur le contours proposé pour le perfectionnement des sirops de raisins* (pp. 147–377) is by C. L. Cadet de Gassicourt, together with four prize essays by J. B. C. Siret, J. J. E. Poutet, G. S. Serullas, and J. Dejardin & Fournier fils. A milestone work in the chemistry and technology of sugar manufacture. (Bolton, *First Supplement*, 323; D.S.B., X, 325; Ferchl, 394; Poggendorff, II, 363; Wellcome, IV, 308)

PARNELL, Edward Andrew

Applied Chemistry; in Manufactures, Arts, and Domestic Economy. . . I. Preliminary Observations. II. Gas Illumination. III. Preservation of Wood. IV. Dyeing and Calico-Printing.

New York: D. Appleton & Co., 200 Broadway. Philadelphia. George S. Appleton, 148 Chesnut St. 1844.

First American edition. 8vo. xvi, 175, (1) pp. With 41 engravings in text and 4 specimens of dyed calico (pp. 140–141). Some leaves with minor foxing (as usual); otherwise very good copy in original blind-stamped, gilt-lettered green cloth.

THE ABRIDGED American edition of *Applied Chemistry* (London, 1844, 2 vols.; Cole, 1015), edited by Parnell. The English edition contains much more information, as well as twenty-three specimens of calico printing, versus only four in this American version. The London edition also covers subjects not treated in the present printing: e.g., glass manufacture, starch, soap, rubber, borax, sulphur, sulphuric acid, and soda. Ron describes this as “vol. I only” (of two); however, if a second volume appeared there is no bibliographical reference to it. (Edelstein, 3365; Ron, 41)

PARNELL, Edward Andrew

Elements of Chemical Analysis, Inorganic and Organic.
By Edward Andrew Parnell. . .

London: Printed for Taylor and Walton. 1842.

First edition. 8vo. xii, 310 pp., 1 leaf + 8 pp. (advertisements). Very good copy, uncut, in original blind-stamped purple cloth, spine gilt-lettered.

PARNELL WAS a student and chemical assistant of Thomas Graham, professor of chemistry at the University of London, to whom he dedicated this, his first work. In the preface he says that he has based the analytical procedures on those of “our two greatest authorities in analytical chemistry—Berzelius and Rose.” He admits his special indebtedness to the 1838 edition of Rose’s *Handbuch der Analytischen Chemie*, but states that several of the processes described herein “are of very recent invention, and new to treatises on the subject.” Although an important milestone in the development of modern inorganic and organic analysis, curiously, it is not mentioned by Szabadvary in his *History of Analytical Chemistry*. In the useful appendix Parnell describes methods for calculating the atomic constitution of a compound from its percentage composition as determined by analysis. An interesting table of atomic and molecular weights (pp. 297–299) is given, in which oxygen is 100 and hydrogen is 12.48 (O:H = 8:1). Parnell also published *Applied Chemistry* (London, 1844) and *Dyeing and Calico-Printing* (London, 1849). (Bolton, 720; Wellcome, IV, 309)

PARNELL, Edward Andrew

Elements of Chemical Analysis, Qualitative and Quantitative. . . A New Edition, revised throughout, and considerably enlarged.

London: Printed for Taylor and Walton. 1845.

Second edition. 8vo. xiv, 520 pp. + 24 pp. (advertisements). Spine faded; otherwise very good copy, partly uncut, in original blind-stamped purple cloth, gilt-lettered spine.

THE COMPLETELY revised, updated, and greatly expanded second edition of this excellent textbook (first: London, 1842). The dedication to Thomas Graham is reprinted verbatim from the first edition. In his preface Parnell says, “The considerable enlargement of the present edition is principally caused by the introduction of a much fuller account of the different reagents than the first edition contained, by an amplification of the second and third divisions on the subject of qualitative analysis, and by the introduction of several important processes for the analysis or valuation of various articles of commerce.” Scarce. Not in the usual bibliographies.

PARTICULARE

Particulare ex Universali. Oder Kurtzer Entwurff einer sonderbahren Artzney, so auch in denen gefährlichsten Kranckheiten Wunder thut. Deren Hoch-ansehnlichen des H. Röm. Reichs Academicorum Naturae Curiosorum, wie auch gesanten der grösten Kunst Besitzern und Liebhabern Judicio unterworffen. Von einem der die That eines wahren Philosophi mit Namen führet.

Nuremberg: Bey Joharnn Ziegern. 1710.

First edition. 12mo. 132 pp. Small woodcut figures on pages 127 and 129. Very good copy in quarter morocco antique, marbled boards, spine gilt-lettered.

A BOOK BY AN ANONYMOUS AUTHOR, ON THE PREPARATION OF THE philosopher's stone and the use of alchemical elixirs in treating various diseases. There are references to the Academia Naturae Curiosorum and the writings of Basil Valentine, Fabre, Libavius, Lull, Maier, Paracelsus, Ruland, et al. Alchemical works in the *Theatrum Chemicum* are cited several times. Extremely rare. Not in the usual chemical bibliographies. (Blake, 339)

PASCAL, Blaise

Traitez de l'Equilibre des Liqueurs, et de la Pesanteur de la Masse de l'Air. Contenant l'explication des causes de divers effets de la nature, qui n'avoient point esté bien connus jusques ici, particulièrement de ceux que l'on avoit attribuez à l'horreur du Vuide. . . .

Paris: En la Boutique de Charles Savreux. Chez Guillaume Desprez, au pied de la Tour de Nôtre-Dame du côté de l'Archeveché. 1664.

Second edition. 12mo. 13 leaves, 232 pp., 3 leaves. With 2 folding copperplates and woodcut on page 105. Fine copy, in contemporary speckled calf, gilt. Armorial bookplate (eighteenth century) of Antoine Moriau and inscription dated 1887 by Prof. Jules Cloquet on first free endpaper.

A CLASSIC TREATISE ON hydrostatics, the vacuum, and air pressure. Pascal (1623–1662) completed his researches on the laws of hydrostatics and the effects of the weight of the air in 1654, but the results were published posthumously by Perier (Paris, 1663). As the “fruit of several years of observations, experiments, and reflection, it [was] a remarkable synthesis of new knowledge and theories elaborated since the work of Stevin and Galileo” (D.S.B.). Here Pascal “enunciated his law that pressure applied to a confined fluid is transmitted equally through the fluid in all directions and that it acts upon the confining surfaces at right angles and with equal pressures in equal areas” (Dibner, no. 143). In addition to hydrostatics the famous Puy-de-Dôme experiments on the pressure of the air are covered. The last

part (pp. 210–232) describes Robert Boyle's experiments and observations on these subjects and gives a description of his air pump. Although the second edition is entirely reset, correcting typographical errors in the first printing, other errors crept in, necessitating a nine-item list of errata at the end of the index. A third edition appeared (Paris, 1698). (Caillet, 8351; Cushing, P137; D.S.B., X, 340; Honeyman, 2415; Partington, II, 513; Sotheran, Cat. 828 [1931], 3656)

PASCAL, Jean

La Nouvelle Découverte, et les Admirables Effets des Fermens dans le Corps humain, expliqués par des expériences & des raisonnemens tres solides. Par le Sieur Jean Pascal, Docteur en Medecine.

Paris: Chez Edme Couterot, ruë saint Jacques, au bon Pasteur. 1681.

First edition. 12mo. 12 leaves, 334 pp., 1 leaf (blank). Engraved frontispiece portrait of Pascal at age 21 (by J. Sauve). Very good copy, in original calf, gilt, maroon morocco label (worn, joints cracked).

THE FRENCH physician and iatrochemist Pascal (b. 1660) “put forward the chemical view that fertilisation consisted of a combination between the acid semen of the male and the ‘lixivious’ semen of the female, no doubt because in chemistry acids were regarded as male and alkalies female” (Needham). In general, utilizing the physiologic theories of Van Helmont and Sylvius, he tended to account for bodily changes by fermentation processes, and, like Sylvius, Pascal emphasized a knowledge of acids and alkalies in treating bodily systems. The book is dedicated to Antoine Daquin, physician to Louis XIV. (Edelstein, 1776; Ferchl, 395; Goldsmith, P587; Krivatsy, 8632; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 1, pp. 446–447; Needham, *History of Embryology*, 188, 248; Osler, 3628; Partington, II, 297; Roller, 433; Roller & Goodman, II, 282; Waller, 7215)

PASCALIS, Felix

Eulogy on the Life and Character of the Hon. Samuel Latham Mitchill, M.D. delivered at the request of the New York City and County Medical Society, in the Superior Court Room, City Hall, October 15th, 1831. By Felix Pascalis, M.D. . . .

New York: From the American Argus Press. 1831.

First edition. 8vo. 25, (1) pp. Some characteristic browning of paper; otherwise very good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, original printed wrappers bound in.

THE EARLIEST eulogy to be published on the celebrated American chemist Samuel Latham Mitchill (1764–1831), by his colleague Felix Pascalis (ca. 1750–1840). Born in North Hempstead, Long Island, Mitchill studied medicine under Samuel Bard, professor of chemistry at Columbia. He attended the lectures of Joseph Black at Edinburgh (M.D., 1786), then returned to New York. In 1792 he became professor of chemistry at Columbia, where “he was the first teacher in America to present Lavoisier’s ideas to his pupils” (Miles). He published *Nomenclature of the New Chemistry* (New York, 1794; Duveen & Klickstein, 140) and *Explanation of the Synopsis of Chemical Nomenclature and Arrangement* (New York, 1801; Duveen & Klickstein, 143). Mitchill was the first chemist to sit in the U.S. Congress after the adoption of the Constitution. Very scarce. Not in Bolton, Cole, Duveen, Smith, etc. (Edelstein, 1627; Miles, *American Chemists, and Chemical Engineers*, 1976, pp. 342–343)

PASLEY, T. H.

A Theory of Natural Philosophy, on Mechanical Principles, divested of all immaterial Chymical Properties, showing for the first time the Physical Cause of Continuous Motion. . . . London: Published by Whittaker & Co. 1836.

First edition. 8vo. (in 4s). 14 leaves, xciii, (1), 314 pp. Engraved frontispiece and 8 plates. Fine copy, uncut, in original cloth-backed plain boards, printed paper spine label.

A MOST BIZARRE work, in which the author attempts to develop a purely physical theory of matter. He claims that all matter is completely inert and devoid of chemical properties. What we perceive as acidity or alkalinity, for example, is attributed only to our senses: there are no such substances as acids and alkalis. His theories of attraction, heat, light, optics, electricity, chymical sciences, gases, and similar subjects are all inaccurate. The book is a masterpiece of early-nineteenth-century erroneous reasoning, based on complete ignorance of contemporary science. Pasley (dates and forenames unknown) was obviously an ingenious but unschooled crank, and no biographical information on him has been traced. An extremely rare book, unknown to the bibliographers.

PASTEUR, Louis

Études sur la Bière, ses Maladies, causes qui les provoquent, procédé pour la rendre inaltérable, avec une Théorie Nouvelle de la Fermentation . . .

Paris: Gauthier-Villars, Imprimeur-Libraire. 1876.

First edition. 8vo. viii, 387, (1) pp. With 12 engraved plates and 85 woodcut figures in text. Very fine copy complete with

half title (often lacking), in contemporary blue quarter morocco, gilt, marbled boards. From the library of the nineteenth-century French physiologist Marc Laffont, with his name blocked in gilt on front cover.

AFTER THE publication of his books on wine and vinegar, Pasteur’s researches were interrupted by his studies on the formidable silkworm disease that had devastated the French silk industry. His work on that disease occupied him for six years. In 1871 he resumed his research on fermentation, this time on the diseases of beer and their origin and prevention. This work on beer contains discoveries of fundamental importance in the sciences of biochemistry and bacteriology: e.g., absence of microorganisms in normal body fluids and fruits, purification of commercial yeasts, and the question of the transformation of one bacterial or fungal species into another. Practical methods for the brewing of beer are described, and the book is remarkable in that it contains Pasteur’s mature views on the chemical and biological nature of fermentation processes. Although he states (p. 271) “la fermentation est la consequence de la vie sans air,” he admits that some microorganisms (e.g., yeast) need small amounts of atmospheric oxygen for fermentation to proceed. The book is dedicated to the memory of his deceased father, Jean-Joseph Pasteur (b. 1791). (Bolton, 721; D.S.B., X, 377, 411; Duveen, 461; Edelstein, 1778; Garrison-Morton, 2485; Norman, 1658; Partington, IV, 750; Sparrow, *Milestones of Science*, 158; Waller, 10966)

PASTEUR, Louis

Studies on Fermentation: the Diseases of Beer, their Causes, and the Means of Preventing Them. . . . A translation, made with the author’s sanction, of “Études sur la Bière,” with notes, index, and original illustrations by Frank Faulkner and D. Constable Robb.

London: Macmillan & Co. 1879.

First English edition. 8vo. xv, (1), 418 pp., 1 leaf (advertisements). With 12 plates and 85 woodcut figures in text. Fine copy, uncut, in original publisher’s olive-green cloth, spine gilt-lettered.

THE ENGLISH translation of Pasteur’s classic *Études sur la bière* (Paris, 1876), by Frank Faulkner, the operator of the Brewery, St. Helen’s, Lancashire. In the preface Faulkner says that he has converted the French metric weights and measures and the centigrade temperatures into the English system, with which “practical men on this side of the channel are still most at home.” This translation is rendered more valuable than the French original because it contains Robb’s comprehensive index. (Bolton, 721; D.S.B., X, 411; Morgan, 606; Partington, IV, 750; Roller & Goodman, II, 284; Sotheran, Cat. 682 [1908], 3488 [“Scarce”]; Waller, 10974)

PASTEUR, Louis

Études sur la Maladie des Vers à Soie, moyen pratique assuré de la combattre et d'en prévenir le retour. . . . Tome I. La pébrine et la flacherie. Tome II. Notes et documents.
Paris: Gauthier-Villars, Imprimeur-Libraire. 1870.

First edition. 2 vols., 8vo. I: xii, 322 pp. With 36 plates, several in colors. II: vi, 327, (1) pp. With 1 plate. Superb copy in contemporary dark-brown quarter morocco, mottled boards, spines gilt-lettered. An important association copy from the library of Herbert McLean Evans (1882–1971), who discovered and isolated vitamin E. Bookplate in each volume: "Herbert McLean Evans Library of Medical Classics."

ONE OF the great classics of biology and biochemistry, in which Pasteur's brilliant researches led to his recommending measures that saved the French silk industry. Pasteur's work extended over a period of five years, and he demonstrated that the silkworms were being infected by two distinct diseases. His discoveries opened completely new areas of biology and began a new era in medicine, as well as giving a new view of living matter. His investigations led to immediate practical results, marking the beginning of the scientific study of animal pathology. Pasteur's researches have been termed "the vestibule of modern medicine" (Duveen). Pasteur "recognized the subtlety and importance of the questions this work raised about the interaction of parasite, host, and environment in the production of disease" (D.S.B.) and advised young physicians to study the present work. (Blocker, 305; Cushing, P140; D.S.B., X, 376, 411; Duveen, 460; Garrison-Morton, 2481; *Heirs of Hippocrates*, 1897; Norman, 1657; Osler, 1549; Roller & Goodman, II, 283; Smith, 378; Sparrow, *Milestones of Science*, 159; Waller, 11926)

PASTEUR, Louis

Études sur le Vin ses Maladies causes qui les provoquent. Procédés nouveaux pour le conserver et pour le vieillir. . . .
Paris: A l'Imprimerie Imperiale. 1866.

First edition. 8vo. viii, 264 pp. With 43 figures, mostly colored, on 32 plates and in text. Few neat marginal notes; otherwise very good copy in original quarter cloth, marbled boards.

PASTEUR CARRIED out researches of the greatest importance on the processes of winemaking and the diseases of wine. He demonstrated that wines are aged due to the slow penetration of atmospheric oxygen through the porous wood casks into which new wine was decanted. He proved that wines become diseased due to the growth of foreign microorganisms present in the original grape juice. His attempts to cure diseased wines with chemical antiseptics were not completely successful, but in further experiments he showed that a reliable and practical procedure for preserv-

ing wine was to heat it in closed vessels for an hour or two at 50–60°C. His process of "pasteurization" was thus announced. The process was in fact a revival of Nicolas Appert's invention published in 1810, which he had independently rediscovered and rescued from oblivion. Pasteur, however, had established his method based upon rigorous and carefully verified scientific experiments, whereas in the case of Appert the process was the result of an empirical technique. (Bolton, 721; D.S.B., X, 366, 411; Duveen, 460; Edelstein, 1779; Garrison-Morton, 2479; Norman, 1655; Osler, 1547; Partington, IV, 750; Roller & Goodman, II, 283; Waller, 10967)

PASTEUR, Louis

Études sur le Vin ses Maladies causes qui les provoquent. Procédés nouveaux pour le conserver et pour le vieillir. . . .
Paris: Librairie F. Savy. 1873.

Second edition. 8vo. 2 leaves, iv, 344 pp. With 32 plates in color and 25 woodcut engravings in text. Pristine copy in contemporary gilt-ruled dark-blue quarter morocco, marbled boards. Bound with: Pasteur, L., *Études sur le vinaigre* (Paris, 1868).

THE GREATLY enlarged updated, final, and best edition of this classic work on the chemistry and fermentation processes involved in winemaking. Pasteur patented his "pasteurization" process in April 1865 and published the first edition of this book in 1866. Almost immediately alternative claims concerning his method appeared. He "repeatedly defended his priority rights, even as he became increasingly informed of the long history of 'empirical' attempts to preserve wine. Eventually he admitted that he had been anticipated by Nicolas Appert" (D.S.B.). Pasteur was awarded the grand prize of the Exposition Universelle in 1867 for his process. He describes and illustrates the best apparatus for heating wine in the present edition. (Bolton, 721; D.S.B., X, 366; Ferchl, 396; Osler, 1548; Waller, 10968)

PASTEUR, Louis

Études sur le Vinaigre, sa Fabrication, ses Maladies, moyens de les prévenir; nouvelles observations sur la conservation des vins par la chaleur. . . .

Paris: Gauthier-Villars, Victor Masson et Fils. 1868.

First edition. 8vo. viii, 119, (1) pp. With 7 woodcut engravings in text. Mint copy in contemporary gilt-ruled, dark-blue quarter morocco, marbled boards. Bound with: Pasteur, L., *Études sur le vin* (Paris, 1873).

PASTEUR'S RESEARCHES on fermentation led him to study the conditions under which wine was converted to vinegar. Liebig had postulated that atmospheric oxidation of wine

turned it to vinegar by a catalytic chemical process. Pasteur proved that the alcohol in wine is oxidized via acetaldehyde to acetic acid by the presence of a microscopic fungus (*Mycoderma aceti*), then known as “mother of vinegar.” This biochemically correct explanation completely demolished Liebig’s purely chemical hypothesis. Pasteur published his researches in “a series of papers on acetic fermentation that linked theory with industrial practice and culminated in a long memoir (1864) and in *Études sur le vinaigre* (1868)” (D.S.B.). His classic *Mémoire sur la fermentation acétique* (1864) is reprinted in this book (pp. 41–119), following his lecture to the mayor and chamber of commerce of Orléans on vinegar and the conditions under which it is made. He proved that the diseases of vinegar, like those of wine, are prevented by his “pasteurization” process. (Bolton, 721; D.S.B., X, 365, 411; Duveen, 460–461; Edelstein, 1780; Garrison-Morton, 2480; Norman, 1656; Partington, IV, 750; Waller, 10969)

PASTEUR, Louis

Examen Critique d'un Écrit Posthume de Claude Bernard sur la Fermentation. . .

Paris: Gauthier-Villars, Imprimeur-Libraire. 1879.

First edition. 8vo. xxiv, 156 pp. With 2 engraved plates and illustrations in text. Mint copy, uncut with wide margins, in crimson quarter morocco antique, marbled boards, spine gilt-lettered and dated, original printed wrappers bound in.

IN JULY 1878 Berthelot published (in *Revue Scientifique*) the posthumous manuscript notes by Pasteur’s friend Claude Bernard (1813–1878), here reprinted, in which Bernard criticized Pasteur’s theory of fermentation. Bernard claimed to have isolated a soluble ferment capable of producing alcoholic fermentation independently of living yeast. In this full-length critique of Bernard’s manuscript, Pasteur devastatingly attacks Bernard’s experiments in which he believed that he had destroyed Pasteur’s theory of fermentation as “life without air.” “There was truth on both sides. Today we know that Berthelot and Bernard were wrong in accepting spontaneous generation of yeast in a fermentable medium and that they were right, in contrast with Pasteur, in claiming the existence of a soluble ferment, not living but nevertheless capable of causing alcoholic fermentation” (D.S.B.). (Bolton, 721; Cushing, P142; D.S.B., X, 378–380, 412; *Heirs of Hippocrates*, 1900; Norman, 1660; Osler, 1552; Reynolds, 3280; Roller & Goodman, II, 283; Smith, 378; Waller, 10970)

PASTEUR, Louis

Mémoire sur la Fermentation appelée Lactique . . . Séance du 3 août 1857.
(Lille, 1858).

First edition. 8vo. 7 leaves (pp. 13–26). Extract from *Mémoires de la Société Impériale des Sciences, de l'Agriculture et des Arts de Lille*, Ser. II, vol. 5 (1858). Fine copy, uncut with wide margins, in marbled boards antique, maroon label.

PASTEUR (1822–1895), professor of chemistry and dean of sciences at the University of Lille, in this epochal paper first published his research on lactic fermentation. Considered the beginning of the modern science of bacteriology, it demonstrated the connection between a specific fermentation (lactic) and the activity of a specific living microorganism (lactobacillus). “Pasteur was able to isolate, observe and propagate the yeast responsible for lactic fermentation, and to demonstrate that its activity was dependent on its environment” (Norman). The paper was read to the Société des Sciences . . . de Lille on 3 August 1857 and three months later redelivered to the Académie des Sciences in Paris. Soon after a very much abridged *Extract par l'auteur* appeared as less than four full pages in issue no. 22 of *Comptes rendus* (30 Nov. 1857). The *Extract* is what is cited by Horblit, no. 82. A great milestone in biochemistry, this paper containing the complete text is much rarer than that cited by Horblit. It was reprinted in *Annales de chimie et de physique*, 3rd ser., t. 52, pp. 404–418 (1858). (Bullock, *History of Bacteriology* [1938], 59–60; D.S.B., X, 362, 412; Garrison-Morton, 2472; Norman, II, 1653)

PASTEUR, Louis

Séance de l'Académie Française du 10 décembre 1885. Réception de M. Joseph Bertrand. Discours de M. Pasteur, Directeur de l'Académie Française.
Paris: Perrin et Cie. (1885).

First edition. 8vo. 27, (1) pp. Very fine copy, uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, original printed wrappers bound in. Presentation copy, with inscription in ink from Pasteur on half title: “Tres amical Souvenir à Mr. l'Abbé Bernard. L. Pasteur.”

THE SPEECH read by Pasteur to the French Academy on the election of the great mathematician Joseph Louis François Bertrand (1822–1900). “In 1856 Bertrand was elected to the Académie des Sciences, where in 1874 he succeeded the geologist Élie de Beaumont as *secrétaire perpétuel*. In 1884 [*sic*] he replaced the chemist Jean-Baptiste Dumas in the Académie Française. These high academic positions . . . gave him a position of national prominence in the cultural field” (D.S.B., II, 88). After paying tribute to the mathematical genius of Bertrand, Pasteur traces the development of chemistry from the early nineteenth century, with particular praise for the researches carried out by Dumas, who had died in 1884. A rare work, especially important as it is inscribed by Pasteur, who was a great friend of Bertrand (see R. Vallery-Radot, *The Life of Pasteur*, London, 1911).

MÉMOIRE

SUR LA

FERMENTATION APPELÉE LACTIQUE

Par M. L. PASTEUR, Membre résidant

Séance du 3 août 1857.

§ I. — AVANT-PROPOS.

Je crois devoir indiquer, en quelques mots, comment j'ai été conduit à m'occuper de recherches sur les fermentations. Ayant appliqué jusqu'à présent tous mes efforts à essayer de découvrir les liens qui existent entre les propriétés chimiques, optiques et cristallographiques de certains corps, dans le but d'éclairer leur constitution moléculaire, on s'étonnera peut-être de me voir aborder un sujet de chimie physiologique bien éloigné, en apparence, de mes premiers travaux. Il s'y rattache néanmoins très-directement.

Dans l'une de mes dernières communications à la Société, j'ai établi que l'alcool amylique, contrairement à ce que l'on avait cru

PASTRENGO, Guglielmo da

De Originibus Rerum Libellus Authore Gulielmo Pastregico Veronense. In quo agitur de scripturis virorum illustrium. De fundatoribus urbium. De primis rerum nominibus. De inventoribus rerum. De primis dignitatibus. Deque magnificis institutionibus. Expurgatus omni errore atque litura, nunc primum è tenebris eductus in lucem, in suffragium studentium à Michaelangelo Blondo, solerti rerum exploratore. . . .

(Colophon:) Venice: Impressum per Nicolaum de Bascarinis. 1547.

First edition. 8vo. 131 numbered leaves (final blank leaf lacking). Historiated woodcut initials. Few numerals shaved, first 3 gatherings very slightly water stained; otherwise fine copy in modern boards, maroon label, gilt.

THE EARLIEST historical and geographical dictionary: a book of great rarity. The humanist Pastrengo (Pastregicus, ca. 1290–1363) of Verona was a friend of Petrarca. Edited from the author's manuscript by Michael Angelo Blondo (1497–1565), well-known Renaissance scholar and scientist, the *prooemium* comprises a bibliography of classical and medieval authors. It is followed by lists of inventors, founders of cities, various geographical regions, natural products and their origins, and rulers and statesmen. Of significance to chemical historians are descriptions of metals, minerals, chemicals, drugs, etc. Brunet, who devotes a long note to this book, stresses the prodigious erudition of the author, emphasizing that much information is given not to be found in other works. "This book is of the highest degree of rarity. . . . After examining all the library catalogues . . . I can find only one other copy . . . it is in the British Museum" (Ferguson [1884], who states that Montfaucon, in 1702, said "it was as completely lost sight of in Venice [its place of publication] as if it had never existed. . . . Every writer has emphasised its rarity"). (Adams, P412; British Library, *S.T.C. Italian, 1465–1600*, p. 492; Brunet, IV, 428; Collison, 69; Ferguson, *Books of Secrets*, pt. III, 3–9; Sarton, III, 921–922; Stillwell, 868a; Thorndike, III, 567, V, 263; Watt, II, 736j)

PATENTS

Patents for Inventions. Abridgments of Specifications Relating to Acids, Alkalies, Oxides, and Salts. A.D. 1622–1866.

Printed by Order of the Commissioners of Patents.

London: Printed by George E. Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. 1869.

First edition. 8vo. xx, 1095, (1) pp. + 5 leaves (advertisements). Covers slightly water stained and small hole in imprint; otherwise fine, crisp copy, in contemporary pebbled cloth, spine gilt-lettered and dated.

AN IMPORTANT source of information on applied chemistry and technology, describing the large-scale preparation of acids, alkalies, oxides, and salts, as documented in the patents filed with the British Patent Office from May 1622 to December 1866. A one-paragraph summary of each patent is given. The list of inventors of processes includes many famous chemists and scientists in other disciplines. The detailed index includes the specific inorganic and organic gaseous, liquid, and solid compounds described, as well as dyes, pigments, and soaps. Not in the usual bibliographies.

PATENTS

Patents for Inventions. Abridgments of Specifications Relating to Acids, Alkalies, Oxides, and Salts. Division I. Acids, Chlorine, Sulphur, &c. Part II. A.D. 1867–1876.

London: Published and Sold at The Patent Office, etc. 1887.

First edition. 8vo. 1 leaf, x, 234 pp. Very good copy in contemporary pebbled cloth, spine gilt-lettered and dated.

A SEQUEL TO the *Abridgments of Specifications relating to Acids, Alkalies, Oxides, and Salts, A.D. 1622–1866* (London, 1869). This volume covers patents relating to acids, chlorine, sulphur, etc., from 1867 to 1876. Further volumes in this series were published. Not in the usual bibliographies.

PATIN, Charles

Traité des Tourbes Combustibles. . . .

Paris: Chez Jean du Bray, aux Espics-Meurs, & Pierre Variquet, à l'Enseigne du Gril, rue S. Jacques. 1663.

First edition. 4to. 10 leaves, 122 pp., 3 leaves. Engraved title vignette and magnificent engraved portrait of Patin (by Le Febure). Fine, crisp copy with wide fore- and lower margins, in original mottled calf, gilt. From the library of Michael Galliard, with his neat signature in ink on title page and eighteenth-century engraved bookplate.

AN IMPORTANT early work relating to the history of petroleum. Patin (1633–1693), eminent physician, antiquary, numismatist, and voluminous writer in Latin, French, and Italian, was a son of the well-known Guy Patin (1601–1672). He graduated in medicine (Paris, 1656) but was expelled from France in 1668 for importing certain scandalous prohibited books reflecting on the royal court. He traveled for several years, then settled in Padua, where in 1677 he was made professor of medicine. Interested in many subjects, he became one of the most distinguished numismatists of his age. This work deals with the use of turf as fuel, and the subject is closely connected with the origin of petroleum. The composition of turf, bitumen, and asphalt and their occurrence in Peru, the Middle East, and the Far East are covered. The combustible properties of high- and

low-sulphur turf and other fossil fuels with the then-current theories of combustion are discussed. Patin concludes that high-sulphur turf burns better, even though it emits more acrid smoke than the low-sulphur variety. Minerals, coal, salts, coral, borax, etc., are also described. In the second part of the work Patin proposes the formation of privileged commercial companies to exploit the occurrence of bituminous materials, including petroleum. Not in the usual bibliographies. (Ferguson Coll., 549; Goldsmith, P652; Neu, 3096a)

PAUL, Nicolas

The Report made to the National Institute of France, in the month of December, 1799, by Citizens Portal, Pelletan, Fourcroy, Chaptal, and Vauquelin, respecting the Artificial Mineral Waters prepared at Paris by Nicholas Paul, & Co. with Extracts from the Reports of the Society of Physicians of Paris, and the Faculty of Geneva; and other testimonies in favour of the same waters: to which are added, some Notes and Observations, by N. Paul. Translated from the French. London: Printed for N. Paul, by G. Woodfall, etc. 1802.

First English edition. 8vo. (in 4s). 4 leaves, viii, 64 pp. "Ex Libris Societ. Med. Edinen." neatly written in ink on title page; otherwise very good copy in modern boards.

A VERY RARE tract, printed for the author in only a small number, dedicated to "Benjamin Count of Rumford." Possibly the author's own copy: at the end of the "Address" is written "No. 7, Villier's Street, Strand." In the margin of page 28 in another contemporary hand is written "Mr. Paul ought to have shown everything to the Committee appointed by the Society." Apparently in the same hand (p. 35) in pencil is the derogatory note "We three Loggerheads be" referring to Chaptal, Fourcroy, and Vauquelin. The original appeared in *Annales de Chimie*, 33, 125–163 (1800). This interesting work deals mainly with the chemical composition of various natural mineral waters and those artificial mineral waters manufactured by Paul's company in Paris. Paul (1763–1806) later published *Rapports sur l'établissement des eaux minérales factices de MM. Triayre et Jurine* (Paris, 1810; Wellcome, IV, 316). In his preface Paul states that, in addition to Paris, he has "been strongly encouraged . . . to establish in London a laboratory, or manufacture of artificial mineral waters." (Duveen, 462; Smeaton, *Fourcroy*, No. 249)

PAULI, Johann

Chymisch-Medicinische Abhandlung von denen harnichtten Salzen und Geistern, dargestellt von D. Johann Pauli. Copenhagen: bey Johann Gottlob Rothen. 1770.

First edition. 8vo. 72 pp. Fine copy in contemporary speckled boards. Bound with: Simon, Johann Christian, *Die Kunst Salpeter zu machen* (Dresden, 1771); and Wiegleb, Johann Christian, *Fortgesetzte klein chymische Abhandlungen* (Langensalza, 1770).

A MONOGRAPH on the preparation, properties, and chemical reactions of ammonia and ammonium salts, with many references to earlier and contemporary chemists. The book is important in the history of coordination compounds, as the author describes the preparation of amines by the reaction of ammonia with various metal ions (e.g., copper, cobalt, mercury, and silver). On pages 60–61 Pauli describes Robert Boyle's preparation of ammonium sulphide (by distilling a mixture of sal ammoniac, chalk, and sulphur) and its ability to turn silver black. Pages 63–72 cover the medicinal uses of ammonia and ammonium salts. Ferchl (p. 397) lists another work by Pauli (*Abhandlung von den destillierten Wässern und brennenden Geistern*, Copenhagen, 1769) but does not mention the present title. Pauli (1732–1804) was a Danish chemist and physician. Not in Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Waller, Waring, Watt, etc. (Blake, 340)

PAULIAN, Aimé Henri

Dictionnaire de Physique Portatif; contenant les découvertes les plus intéressantes de Descartes & de Newton, & les Traités de Mathématique nécessaires à ceux qui veulent étudier avec succès la Physique moderne. . . .

Avignon: Chez la Veuve Girard & François Seguin, Impr. Libraires, à la Place S. Didier. 1767.

Third edition. 2 vols., 8vo. I: xxxii, 400 pp. II: 447, (1) pp. With 4 folding copperplates. Very good set, in original calf, gilt, double maroon morocco labels.

A SCIENTIFIC DICTIONARY based on Newtonian principles, containing detailed definitions and articles on astronomy, botany, chemistry, mathematics, metallurgy, physics, and related disciplines. Paulian (1722–1801), a Jesuit professor of physics at Avignon, compares the physical systems of Descartes and Newton and especially praises the latter. This is the best edition (first: Avignon, 1758; second: Avignon, 1760). Describing several French dictionaries published in the mid-eighteenth century, Neville and Smeaton state that this is "the first of scientific interest." All editions are scarce. (Gray, *Bibliography of Newton*, 130; R. G. Neville & W. A. Smeaton, *Annals of Science*, 38 [1981], 614; Poggendorff, II, 379)

PAULIN, Jacob

Dissertatio Gradualis de Primordiis Chemiae, quam . . . praeside Mag. Torb. Bergman, . . . publico examini submittit . . . Jacobus Paulin, Vestrogothus, . . . 4 Jun. Anno 1779.
Uppsala: Typis Johan. Edman. (1779).

First edition. 4to. 1 leaf, 58 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation on the origins of chemistry, presented by Paulin (dates unknown), with Torbern Bergman presiding. Paulin traces the history of chemistry from its beginnings in Egypt through the Greek and Roman period, with numerous references to earlier and contemporary writers. On page 47 he discusses the chemistry mentioned in the Bible and on page 52 touches on alchemy in ancient China. A very scarce work containing much information not readily available elsewhere. It was again published separately (Leipzig, 1780) and was included in Bergman's *Opuscula Physica et Chemica* (Leipzig, 1787, vol. 4). German and English translations also appeared, on which see Moström. Not in Blake, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Guaita, Neu, Poggendorff, Smith, Watt, etc. (Bolton, 145; Ferchl, 397; Moström, 139; Partington, III, 183; Waller, 11068)

PAULUS AEGINETA

Opus De Re Medica, nunc primum integrum Latinitate donatum, per Ioannem Guinterium Andernacum, Doctorem Medicum.

Paris: Apud Simonem Colinaeum. 1532.

First edition. Folio. 20 leaves, 48 pp., 4 leaves, 40 pp., 4 leaves, 128 pp., 4 leaves, 48 pp., 4 leaves, 24 pp., 4 leaves, 84 pp., 8 leaves, 158 pp. Large woodcut printer's device ("Father Time" on title page). Woodcut capitals on criblé ground. Roman letter. 7 parts in 1 volume. Very fine, wide-margined, crisp copy, in gilt-ruled old calf, maroon morocco label. From the library of Jonathan Couch (1789–1870), physician and naturalist (see D.N.B.), with 2 small stamps on title page.

A MEDICAL CLASSIC and the most complete system of operative surgery in ancient times. This first Latin translation is based on a new text, improved over that of the Aldine edition of 1528 in Greek by the study of additional manuscripts. The translator and editor, Johann Guenther of Andernach (1487–1574), one of the best-known humanists of his day and teacher of Vesalius at Padua, has added extensive commentaries. "Paul of Aegina (625–690) was the last of the great Byzantine physicians, the last important product of the school of Alexandria, and a compiler whose works were consulted well into the Renaissance. He was a skilled surgeon . . . [who] . . . devoted much attention to diseases

of the heart. The present book is Paul's only remaining complete work" (*Heirs of Hippocrates*, 29). The seventh book is "on pharmacy, with a short appendix on weights and measures, largely from Dioscorides, Galen, and Oribasius. . . . Paul gives the first clear description of making caustic potash" (Partington, I, 203). He also gives the earliest clear description of lead poisoning. Paul's work is invaluable for the light it sheds on medicine in the seventh century. Very rare. Not in Cushing, Ferchl, Neu, Reynolds, Waller, Wellcome, etc. (Blocker, 306; British Library, *S.T.C. French, 1470–1600, Supplement*, p. 59; Durling, 3551; Osler, 439; Stillwell, 473; Watt, I, 8m)

PAULUS AEGINETA

Pauli Aeginetae Medici Opera. A Ioanne Guinterio Andernaco Medico exercitatissimo summique iudicii conversa, & illustrata commentariis. Adiectae sunt annotationes Iacobi Goupyli medici Parisiensis, in aliquot singulorum librorum capita. Ioanne Baptista Camotio philosopho novissimè corrigente, cum quibusdam scoliis in margine positis.
(Colophon:) Venice: Aldus, apud Federicum Turrisanum. 1553.

First edition edited by Camotius. 8vo. 34 leaves, 383 folios, 1 leaf (colophon). Woodcut Aldine anchor device on title page and colophon leaf. Historiated woodcut capitals. Roman letter. Few minor stains; otherwise crisp copy, complete with both blank leaves, in early mottled calf, gilt, brown morocco label, front joint slightly wormed but sound.

THE FIRST edition to be edited by Johannes Baptista Camotius (ca. 1515–ca. 1581), based on the Jacques Goupyl (ca. 1525–1564) reworking of the Guenther translation (Lyons, 1551). Goupyl and Camotius have added useful notes to the original work. The British Library copy has the title page dated 1554 (second issue?), but the colophon is dated 1553, as here. An English translation of Paul's works, by Francis Adams, appeared much later (London: Sydenham Society, 1844–47, 3 vols., 8vo.). Very rare. Not in Blocker, Cushing, Ferchl, Neu, Osler, Reynolds, Waller, Watt, etc. (British Library, *S.T.C. Italian, 1465–1600*, p. 494; Durling, 3559; Wellcome, I, 4870)

PAUPAILLE, J.-J.

Résumé complet de la Chimie Inorganique, contenant l'exposé des principes généraux de la Science et l'Étude des corps inorganisés, simples et composés, précédée d'une Introduction Historique. . . .

Brussels: A. Wahlen et Galaud et Comp. 1826.

First Belgian edition. Sm. 8vo. 2 leaves, xiii, (1), 295, (1) pp. Occasional minor foxing; otherwise a good copy in original quarter sheep, marbled boards, maroon label gilt.

AN INTERESTING textbook on inorganic chemistry, with historical introduction (pp. 1–34), glossary of chemical terms (pp. 279–295), and table of the known metals, giving their color, specific gravity, discoverers and dates of discovery (pp. 180–181). Complete in itself, this is one of the volumes in the series *Encyclopédie portative*, edited by C. Bailly, under the auspices of several notable scientists (e.g., Champollion, Cuvier, de Jussieu, and Thenard). Although the title states *Orné de planches*, this copy appears never to have had plates. Bolton (p. 722) lists the first French edition (Paris, 1825) with different pagination, and Bolton (*First Supplement*, 327) also lists an edition in Italian (*Compendio completo di chimica inorganica*, Milano, 1834, 12mo.). No reference to the present Brussels edition has been found.

PAYEN, Anselme

Instruction Pratique et Programme des Prix relatifs à l'extraction du sucre des betteraves dans les petites exploitations rurales, ainsi qu'aux moyens de perfectionner cette industrie et de hâter ses développemens.

(Paris:) Imprimerie de Mme Huzard (née Vallat la Chapelle). N.d.

First edition. 8vo. 32 pp. Very good copy, uncut with wide margins, in brown quarter calf antique, marbled boards, red morocco spine label gilt.

THE AGRICULTURAL and industrial chemist Payen (1795–1871) studied privately under Chevreul and Vauquelin. “Payen’s first industrial venture was the manufacture of borax, which until then had been imported; but more significant was his advocacy of animal charcoal (the carbonaceous residues from the Grenelle works) as superior to wood charcoal for decolorizing purposes in the recently established beet-sugar industry. He also had his own beet-sugar factory at Vaugirard” (D.S.B., X, 436). The present undated report to the Société Royale et Centrale d’Agriculture describes all aspects of the chemical processes involved in the extraction of sugar from sugar beets. For improving and accelerating the industrial development of sugar extraction the Société awarded a prize. Not in the usual bibliographies.

PAYEN, Anselme

Mémoire sur les Bitumes, leur Exploitation, et leurs Emplois utiles, publié à l'occasion d'un rapport à la Société d'Encouragement sur les Produits Bitumineux des Mines de Lobsann, au nom des trois comités réunis: des arts chimiques, économiques et d'agriculture.

Paris: De l’Imprimerie de Madame Huzard (née Vallat La Chapelle). 1824.

First edition. 8vo. 2 leaves, 64 pp. Fine copy in contemporary quarter calf, marbled boards, spine gilt. Bound with: D’Arcet, J. P. J. and Thenard, L. J., *De l'emploi des corps gras comme hydrofuge* (Paris, 1828), and works by Polonceau and Schwickardi.

ORIGINALLY A DIRECTOR of a beet-sugar factory, Payen (1795–1871) later became professor of industrial chemistry in the Conservatoire des Arts et Métiers and published on a wide variety of subjects concerned with chemical technology. He introduced the name “cellulose” (1839), and his lectures appeared in 1842–43, entitled *Manuel du Cours de Chimie Organique appliquée aux Arts Industriels et Agricoles, professée par M. Payen* (ed. J. Garnier, 2 vols.). In the present work Payen covers the history and uses of bitumen from antiquity to his own time, with many references to the writings of contemporary chemists. Very scarce. Not in D.S.B., Duveen, Edelstein, Morgan, Partington, Waller, etc. (Bolton, 724; Ferchl, 397 [wrong date: 1825]; Poggendorff, II, 380; Smith, 380)

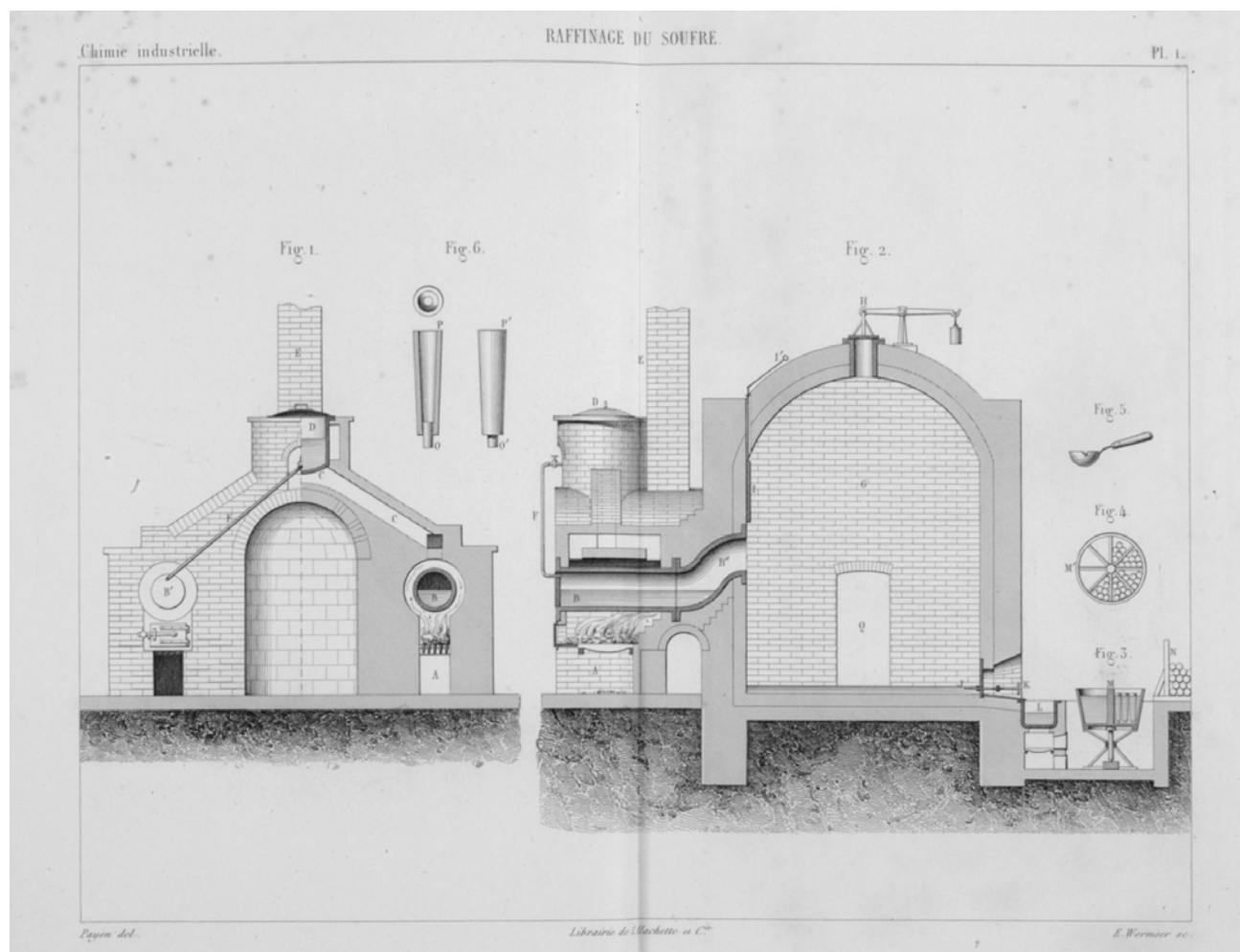
PAYEN, Anselme

Précis de Chimie Industrielle à l'usage des écoles préparatoires aux professions industrielles et des fabricants. . . .

Paris: Librairie de L. Hachette et Cie. 1849.

First edition. 2 vols., 8vo. I (text): 2 leaves, 622 pp. With 71 woodcut figures in text. II (plates): 2 leaves, 29 engraved plates of large-scale chemical plants (27 double page, 2 folding); plates 11 and 12 finely hand-colored. Pristine copy in original unlettered yellow boards.

AFTER SUPERVISING his own beet-sugar factory, Payen began teaching industrial chemistry in 1829 at the École Centrale des Arts et Manufactures. Ten years later he was also appointed to teach at the Conservatoire des Arts et Métiers, although he did not abandon his industrial interests. This encyclopedic treatise, his most important publication, provides an in-depth view of the state of chemical technology in the mid-nineteenth century. Divided into two main parts (inorganic and organic chemistry), the inorganic section describes processes for the large-scale manufacture of gases, acids, alkalies, salts, cements, mortars, plasters, glass, etc. The organic section covers the manufacture of chemicals from plant and animal sources (e.g., cellulose, starch, sugars, beer, cider, wines, alcohol, vinegar, acetic acid, paper, animal charcoal, phosphorus from bones, fertilizers, and illuminating gas and its chemical by-products). The first edition is scarce. Other editions: second (1851), third (1855), fourth (1859), fifth (1867), sixth (1877–78). German translation (1872–74); English (1878). (Bolton, 724; Ferchl, 398; Poggendorff, II, 380 [wrong date: 1850]; Sotheran, Cat. 750 [1914], 13033)



Payen. Précis de Chimie Industrielle. Paris, 1849.

PAYEN, Anselme

Théorie de l'Action du Charbon Animal, 1. Sur les matières colorantes; 2. Dans son application au raffinage du sucre. Présenté au concours ouvert par la Société de Pharmacie de Paris . . . Additions relatives aux matières premières utiles à la fabrication du noir animal. Quelques considérations sur le problème de la révivification du noir proposé par la Société d'Encouragement. . .

Paris: Chez Bachelier, Libraire. 1822.

First separate edition. 8vo. 55, (1) pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with original pink wrappers bound in. From the library of John Yudkin (1910–1995), professor of physiology and founder of the first chair of nutrition at the University of London.

REPRINTED FROM the *Annales de l'Industrie rationnelle et étranger* (VI, 149), this work discusses animal charcoal and

Payen's theory as to the reason it decolorizes dyes and also its use in sugar refining. He describes numerous experiments and at the end summarizes his conclusions in sixteen paragraphs. Waste animal charcoal was a by-product of Payen's manufacture of ammoniacal liquors, and he was the first to make bone charcoal on a large scale for sugar refining. In association with Bussy he carried out the first investigation into the reason charcoal acts as a decolorizing agent, and he developed a process for revivifying the charcoal after use. Not in the usual bibliographies.

PAYEN, Anselme

Traité Complet de la Distillation des principales substances qui peuvent fournir de l'alcool, vins, grains, betteraves, fécule, tiges, fruits, racines, tubercules, bulbes, etc., etc. . .

Paris: Imprimerie et Librairie d'Agriculture et d'Horticulture de Mme Ve Bouchard-Huzard. 1858.

First edition. 8vo. 2 leaves, 352 pp. With 33 woodcuts in text and 14 folding engraved plates. Fine copy in contemporary quarter calf, gilt, marbled boards, red morocco label.

A TREATISE ON the distillation of ethyl alcohol from fermented organic materials. Throughout his life Payen was interested in carbohydrates and, with Boussingault, determined the composition of cellulose, which he named in 1839. He published many books and papers on sugars, dextrin, diastase, starch (measuring the sizes of granules of different kinds), etc. Forbes states that this work is "far more complete" in its coverage of distillation equipment than any other handbook to date. The text figures and detailed plates illustrate many different types of industrial distillation plants and machinery. Bolton mistakenly dates the first edition 1857. Other editions: second (1861), fifth (1866). A German translation by E. O. Fromberg appeared (Quedlinburg, 1858). (Bolton, 725; Ferchl, 398; Forbes, *History of Distillation*, 332, 474; Poggendorff, II, 380; Sondheimer, 1199)

PAYEN, Anselme, and CHEVALLIER, Jean Baptiste Alphonse

Traité Élémentaire des Réactifs, leurs préparations, leurs emplois spéciaux et leurs applications à l'analyse. . . .

Paris: Chez Bachelier, Gendre et Successeur de Mme. Ve. Courcier. 1822.

First edition. 8vo. viii, 223, (1) pp. With 2 folding engraved plates of apparatus. Verso of half title signed in ink by Chevallier and Payen. Fine copy in dark-brown gilt-lettered boards antique.

DEDICATED TO Nicolas Vauquelin by his students, Payen and Chevallier, this is the "first French treatise on chemical reagents" (Zeitlinger [i.e., the first to be written by Frenchmen]). It was probably inspired by the translation into French by Jean René Riffault des Hêtres (1754–1826) of the second edition of *A practical treatise on . . . chemical tests* (London, 1818) by Friedrich Christian Accum. The authors describe the preparation of numerous reagents and their use in the analysis of inorganic and organic compounds, including minerals and substances derived from plants and animals. Chevallier (1793–1879), a distinguished chemist (who signed the half title), collaborated with and coauthored several works with Payen. (Bolton, 725; Duveen, 462 [omits plates]; Edelstein, 1812; Ferchl, 397; Poggendorff, II, 380; Roller & Goodman, II, 288; Smith, 380; Soth-eran, Cat. 800 [1926], 11733)

PAYEN, Anselme, and CHEVALLIER, Jean Baptiste Alphonse

Traité Élémentaire des Réactifs, leurs préparations, leurs emplois spéciaux et leurs applications à l'analyse. . . .

Paris: Chez Thomine, Libraire . . . et chez les Auteurs. 1825.

Second edition. 8vo. (I–vii), viii, (v), vi–vii, (viii), (9), 10–579, (580–582). With 3 folding engraved plates of apparatus. Verso of half title signed in ink by Payen and Chevallier (in the latter's hand). Very fine copy in gilt-ruled quarter calf antique, green boards.

THE GREATLY enlarged second edition of this important work, again dedicated to Nicolas Vauquelin. "Among the additions are those to Chapter 8 on apparatus (344–411 in dictionary form) and the new chapter on poisonous chemicals" (Cole). Other editions: third (1829–30), supplement (1841). Bolton mistakenly designates the third edition as the second. (Cole, 1018; Wellcome, IV, 321)

PAYEN, Anselme, and CHEVALLIER, Jean Baptiste Alphonse

Traité de la Pomme de Terre; sa culture, ses divers emplois dans les préparations alimentaires, les arts économiques, la fabrication du sirop, de l'eau-de-vie, de la potasse, etc. Par MM. Payen et Chevallier.

Paris: Chez Thomine, Libraire-Editeur, Rue de la Harpe, No. 78. 1826.

First edition in book form. 8vo. viii + 160 pp. 3 engraved plates. Very good copy in contemporary quarter sheep, marbled boards, spine gilt-ruled.

THE FIRST edition in book form of a memoir presented before the Société Royale d'Agriculture, which awarded the authors a gold medal. The researches in this book have been greatly expanded over those reported in the memoir and cover every aspect of the botany and chemistry of the potato. Topics include the cultivation of the potato, fertilizers for it, the preparation of foods, extraction of potato starch, manufacture of bread, animal fodder, preparation of alcohol by fermentation, extraction of soda, and wine made from potatoes. It is a milestone work in chemical technology. Chevallier (1793–1879) was a distinguished chemist who collaborated with Payen and coauthored several works with him. Scarce. Not in Duveen, Morgan, Partington, Smith, etc. (Bolton, 725; Ferchl, 397; Poggendorff, II, 380; Wellcome, II, 337)

PEACHAM, Henry

The Compleat Gentleman: Fashioning Him absolute in the most Necessary and Commendable Qualities, concerning Mind, or Body, that may be required in a Person of Honor. To which is added the Gentlemans Exercise or, An exquisite practise, as well for drawing all manner of Beasts, as for making Colours, to be used in Painting, Limming, &c. . . . The Third Impression much enlarged, especially in the Art of Blazonry, by a very good Hand.

London: Printed by E. Tyler, for Richard Thrale, at the signe of the Cross-Keys at St Pauls Gate. 1661.

Third edition. 4to. Engraved title (by Fr. Delaram, dated 1626), letterpress title, 4 leaves, pp. 1–304, 4 leaves, pp. 305–455 (1). Numerous woodcuts in text (arms, many colored by a contemporary hand, and other figures). Neat contemporary annotations in several margins and on rear endpapers. Fine copy, in original gilt-ruled calf.

PEACHAM (ca. 1576–ca. 1643), M.A., Trinity College, Cambridge (1598), was a mathematician, student of heraldry, musical composer, and accomplished artist who painted, drew, and engraved portraits and landscapes (see D.N.B.). The *Compleat Gentleman* (first: 1622; second: 1634) is his most important book. The present final and best edition (edited by Thomas Blount) contains much more information, and Dr. Samuel Johnson drew all of the heraldic definitions in his *Dictionary* (1755) from this edition. In three books all the knowledge a well-educated gentleman was supposed to have in the seventeenth century is presented. Sections on nobility, duties of parents, education of children, history, cosmography, poetry, music, antiquities, heraldry, painting, drawing, etc., are included. Of particular interest to the chemical historian are details of the preparation of pigments, colors, glazes, and other substances (pp. 362–393) for use in painting, glazing, etc. There is a woodcut of an oven for annealing glasses and objects painted with colored glazes (p. 392). (Watt, II, 739h; Wing, P943)

PEALL, Thomas

Syllabus of a Course of Lectures, on the Veterinary Art, for the Year 1802. By Thomas Peall . . .

Dublin: Printed by Graisberry and Campbell, No. 10, Back-Lane. 1802.

First edition. 8vo. 7, (1) pp. Fine copy. Bound with: Higgins, William, *A Syllabus of a Course of Chemistry* (Dublin, 1801); Lynch, James, *Syllabus (on) Natural and Experimental Philosophy* (Dublin, 1802); and Wade, Walter, *Syllabus . . . on Botany* (Dublin, 1802).

THE RARE first printed syllabus of the course on the care of horses delivered to the Dublin Society in 1802 by their professor of veterinary medicine, Thomas Peall (d. 1825). In eighteen lectures he covers the history and importance of the veterinary art; its laws; the anatomy, physiology, and care of horses; their diseases; proper diet; and related subjects. Peall was also veterinary surgeon in the Royal Artillery and published an important book, *Observations on Diseases of the Horse* (Cork, 1814; Wellcome, IV, 322; London, 1815; Watt, II, 739r)

PEARSON, George

Heads and Notes of a Course of Chemical Lectures. By George Pearson, M.D. F.R.S. . . .

London: Printed by Henry Reynell. 1806.

First edition. Sm. 4to. iv, 220 pp. Very fine crisp copy, in modern quarter cloth, boards, spine gilt-lettered. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

AS SENIOR physician at St. George's Hospital, London, Pearson lectured for many years on chemistry and medicine. This synopsis of his course on chemistry is very interesting, as it gives an excellent account of the state of chemistry at the beginning of the nineteenth century. "As a lecturer he was plain, distinct, comprehensive, and impressively energetic. . . . His lectures were always popular, and to the last he commanded a numerous class" (Munk, vol. II, pp. 343–344). Pearson was the first to accept the anti-phlogistic theory and translated the *Nomenclature chimique* in 1794. The present work is extremely rare. It is not mentioned by Ferchl, Munk, Poggendorff, or Watt, each of whom gives long lists of Pearson's publications. Neither the D.S.B. nor Partington mention it, and this title is not listed in the catalogues of the major early chemical collections (e.g., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, and Smith). (Sondheimer, 1202)

PEARSON, George

Observations and Experiments for investigating the Chymical History of the Tepid Springs of Buxton; together with an account of some newly-discovered, or little known properties of substances relating to several branches of chemistry, and animal and vegetable life; to which are prefixed, a chronological relation of the use of Buxton-Water from the earliest records to the present time, sketches of a history of the atmosphere of the Peake, and of the external form and internal structure of the mountainous regions of Derbyshire: intended for the improvement of natural science and the art of physic; in two volumes. . . . By George Pearson, M.D.

London: Printed for J. Johnson, . . . 1784.

First edition. 2 vols., 8vo., in 1. I: xvi pp., 2 leaves, 327, (1) pp. II: 1 leaf, 227, (1) pp., 14 leaves (index), 1 leaf (errata). With 1 copperplate (J. Whitehurst del. 1784) facing page 150 in volume I. Neat inscription in ink in an eighteenth-century hand on both title pages (*Ex Libris Societatis Medicae Edinensis*); otherwise a very good copy, in contemporary marbled boards, rebaked in calf antique, with maroon and dark-blue gilt-lettered labels.

PEARSON (1751–1828), a pupil of Joseph Black, received the M.D. at Edinburgh in 1773 and F.R.S. in 1791. He practiced as a physician in Doncaster and London and later became head physician at St. George's Hospital, London. Pearson was an excellent chemist, and this book on Buxton waters contains much on the up-to-date chemistry of the period, as well as descriptions of many analytical techniques and reagents. For details on his chemical investigations and discoveries, see the D.S.B. and Partington. Very scarce. Not in Bolton, Cushing, Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Smith, Waller, etc. (Blake, 341; D.S.B., X, 446; Ferchl, 398; Partington, III, 695; Poggendorff, II, 383; Waring, 786; Watt, II, 739e)

PEART, Edward

The Anti-Phlogistic Doctrine of M. Lavoisier critically examined, and demonstratively confuted. In which its absurdities are exposed, and clearly proved to arise from a deficiency in its principles; and that defect is supplied, and an explanation given, upon such principles as nature evidently employs and reason proves to be indispensably necessary. To which is added an appendix, consisting of strictures on Dr. Priestley's experiments on the generation of air from water; and of criticisms on the remarks made by the reviewers on the author's former writings. By E. Peart, M.D. &c.

London: Printed for W. Miller, Old Bond Street, and Mrs. Murray, Fleet Street. 1795.

First edition. 4to. 4 leaves, 151, (1) pp. Very fine copy, unpressed and uncut, in the original blue boards, spine unlettered. Neat signature in ink (W. C. Atkinson 1837) on title and small release stamp of the Wellcome Library on verso.

ONE OF the author's most important works, in which he criticizes the phlogiston theory of Stahl as well as the antiphlogistic theory of Lavoisier. Peart proposes his own theory, in which he contends that "mercury is not a simple, un-compounded substance" and that "caloric is not a simple element; it is composed of two principles, one of which combining with the earth of mercury restores it to its metallic state; the other, with oxygen, forms pure air." He also objects to the new antiphlogistic nomenclature and compares Lavoisier's system (unfavorably) with his own. Priestley is then taken to task for his book on the supposed

generation of air from water. Finally, Peart attempts to defend his hypotheses against various reviewers who have written disparagingly of his earlier publications. A curious and interesting book that demonstrates the confusion that existed in chemical theory before Lavoisier's work was fully accepted. Very rare. Not in Blake, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Smith, Sondheimer, Waller, etc. (Bolton, 726; Ferchl, 399; Partington, III, 490, 622; Poggendorff, II, 385; Watt, II, 740x)

PEART, Edward

The Generation of Animal Heat, investigated. With an introduction, in which is an attempt to point out, and ascertain, the elementary principles, and fundamental laws of nature; and apply them to the explanation, of some of the most interesting operations, and striking appearances of chemistry. By E. Peart, M.D.

Gainsborough: Printed by H. Mozley; and sold by J. Edwards, Pall-Mall, London, and C. Elliot, in Parliament Square, Edinburgh. 1788.

First edition. 8vo. (in 4s). 1 leaf, 114 pp., 1 leaf (errata). Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE EARLIEST of several publications on physical and chemical phenomena, by the English physician Peart (ca. 1756–1824), who practiced in Knightsbridge and Butterwick. He was one of several chemists of the period who, faced with the experimental work of Lavoisier, attempted to devise a new system that incorporated the old phlogiston hypothesis. In the long introduction Peart rejects the theories of Lavoisier, Priestley, Crawford, and Scheele and proposes to explain chemical phenomena by adopting ether, phlogiston, acid, and earth as the four principles or elements of nature. "A fixed particle in an atmosphere of ether forms earth; in an atmosphere of phlogiston it forms an acid-producing substance; the two active principles attract one another" (Partington, who calls Peart a "crank," along with Robert Harrington). Peart also published works on magnetism, electricity, physiology, medicine, etc., the titles of which are listed by Watt. Partington gives the titles of other chemical books by Peart. A very scarce work by an opponent of Lavoisier's New Chemistry. Not in Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Sondheimer, Waller, etc. (Blake, 341; Ferchl, 399; Partington, III, 490; Poggendorff, II, 385; Smith, 380; Watt, II, 741e)

PECHEY, John

A Plain Introduction to the Art of Physick. Containing the Fundamentals, and Necessary Preliminaries to Practice. Whereby the Reading of Practical Authors will be render'd easie and intelligible to the Young Student. To which is added, the Materia Medica contracted. And Alphabetical Tables of the Vertues of Roots, Barks, Woods, Herbs, Flowers, Seeds, Fruits, Juices and Gums, of Animals and things taken from them, of Minerals, &c. Also a Collection of choice Medicines Chymical and Galenical. Together with a different way of making the most celebrated Compositions in the Apothecaries Shops. . . .

London: Printed for Henry Bonwicke, at the Red Lion in St. Paul's Church-yard. 1697.

First edition. 8vo. 8 leaves, 390 pp., 1 leaf (advertisements). Fine copy in old marbled boards, gilt-lettered sheep spine. Neat signature in ink on verso of title leaf: "Ebenezer Coutts Book, 1769."

PECHEY (1655–1716), a medical writer, graduated M.A., New Inn Hall, Oxford (1678), practiced in London, and was admitted a licentiate of the College of Physicians in 1684. He published several medical treatises, and "his methods of advertisement were those of an apothecary rather than of a physician" (D.N.B.). The present work contains much of interest on the pharmaceutical chemistry and materia medica of the period, which the author says in the preface "was chiefly collected from Etmuller and Margravius." Over half the volume is on these subjects (pp. 199–390). Not in the usual chemical and medical bibliographies. (J. J. Manget, *Bibliotheca Scriptorum Medicorum*, Geneva, 1731, vol. II, part 1, p. 477; Watt, II, 741e; Wing, P1027)

PECHEY, John

Promptuarium Praxeos Medicae. Seu, Methodus Medendi, praescriptis celeberrimorum Medicorum Londinensium concinnata. Et in ordinem Alphabeticum digesta. A Joanne Pechey, M.A. . . .

London: Impensis Henrici Bonwicke, ad Insigne Rubri Leonis in Coemeterio Paulino. 1693.

First edition. 12mo. 2 leaves, 272 pp., 1 leaf (errata). Neat contemporary manuscript index on front two blank leaves, and a few marginal notes; otherwise fine copy in calf antique, gilt, maroon morocco label.

A PHARMACEUTICAL CHEMICAL work containing a valuable compendium of medicines and recipes, many of the prescriptions being given in full. At the end is an "Admonitum" for Pechey's own cathartic pills ("Pilulae Catharticae nostrae"), sold from his house in Basing Lane. Munk erroneously attributes this work to John Peachi, M.D. A continental edition appeared, based on this London edition

(Amsterdam, 1694); also a second edition (London, 1700). (Krivatsy, 8735; Munk, I, 430; Norman, 1675; Wing, P1028)

PECKSTON, Thomas Snowdon

The Theory and Practice of Gas-Lighting: containing much original matter relative to coal-gas, and an entirely new treatise on the economy of the gases, procured for illuminating purposes, from oil, turf, &c. By T. S. Peckston, Civil Engineer. The second edition, carefully corrected, adapted to the present state of the science, and, illustrated by appropriate plates.

London: Printed for Thomas and George Underwood, . . . and Ogle, Duncan, and Co. . . . 1823.

Second edition. 8vo. xii, 444 pp. With 14 engraved plates (some folding). A superb copy, entirely unpressed and uncut, in original blue boards, rebacked, with printed paper label on spine.

ONE OF the classic early works on the chemical technology of manufacturing coal gas. The second edition (first: London, 1819) has been substantially rewritten, incorporating new material with particular reference to the construction and design of the retorts. Peckston shows how by-products of the destructive distillation of coal (to produce gas) can be converted to salable materials (e.g., tar, ammoniacal liquor, ammonium carbonate, and ammonium chloride). "Clegg's successor at The Gas Light and Coke Company, T. S. Peckston, wrote the first modern textbook on gas. He established principles that were to govern its manufacture for at least seventy-five years" (Sir Arthur Elton, in Charles Singer et al., *A History of Technology* [1958, IV], p. 270). According to the preface, the author planned and superintended the construction of the gasworks at Southampton, Portsea, Newport (Isle of Wight), Dudley, Brentford, and Dublin. Very scarce. Not in Duveen, Edelstein, Morgan, Partington, Sondheimer, etc. Bolton (p. 727) lists only the first (1819) and third (1841) editions, and Smith (p. 381) lists a Dublin (1819) edition.

PEIRCE, Robert

The History and Memoirs of the Bath: containing observations on what cures have been there wrought, both by bathing and drinking those waters. An account of King Bladud, said to be the first founder of the baths. With a philosophical preface, of several experiments and remarks, relating to the origin, quality, and nature of baths in general, and of these in particular. By Robert Peirce, M.D. Near sixty years physician in Bath.

London: Printed for Henry Hammond Bookseller in Bath. 1713.

First edition, second issue. 8vo. 16 leaves, 399, (1) pp. With folding copperplate bird's-eye view of the city of Bath (F. H. Hove sculp.). Fine, crisp copy in contemporary paneled calf, rebaked, original maroon morocco label preserved.

PEIRCE (or Pierce, 1622–1710), physician, of Winchester and Lincoln College, Oxford (M.A., 1650; M.D., 1661), was elected F.R.C.P. in 1689 and practiced successfully at Bath, with many famous physicians sending their patients to him. The first issue appeared at Bristol in 1697 (Wing, P2163), and the second issue comprises the sheets of the first, with a new title page bearing a London imprint. The divisional title page (p. 247) carries the original imprint (Bristol: W. Bonny and H. Hammond, 1697). In his preface the author discusses the chemical properties of Bath waters and refers to Boyle. Peirce also published two papers in the *Philosophical Transactions*, 1685. An important and rare balneological work. Not in Cushing, Osler, Waller, etc., or the usual chemical bibliographies. (Blake, 352; Munk, I, 479; Waring, 781; Watt, II, 742t)

PELIGOT, Eugene Melchior, and DECAISNE, Joseph

Recherches sur l'Analyse et la Composition Chimiques de la Betterave à Sucre, . . . et sur l'Organisation Anatomique de cette Racine. (Mémoires présentés à l'Académie des Sciences de Paris, le 28 novembre 1838).

Paris: Librairie Scientifique et Industrielle de L. Mathias (Augustin). 1839.

First edition. 8vo. viii, 50 pp. + 1 leaf (advertisements). With 1 folding engraved plate. Occasional slight foxing; otherwise very good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated. From the library of John Yudkin (1910–1995), physiologist and founder of the first chair of nutrition at the University of London.

PELIGOT (1811–1890) was assayer to the Paris Mint, then became professor of applied chemistry at the Conservatoire des Arts et Métiers. He published many researches with Dumas and others and established the identity of diabetic sugar and glucose (see Partington, III, 689). Written in collaboration with the Belgian botanist Decaisne (1807–1882), the first part of the present work describes Peligot's researches on the composition of beet sugar (the disaccharide sucrose). The same year (1839), Peligot went to Guadeloupe and, with two others, prepared a report (1840) on the great waste and uneconomic use of a single sugar mill. In the second part Decaisne describes the botanical structure of the sugar beet. The plate (drawn by Decaisne and engraved by E. Taillant) illustrates the anatomical details of the plant. (Bolton, 727; Ferchl, 399; Poggendorff, II, 389)

PELLEREAU, François

Chimie Minérale ou Traité Complet des Métaux, des Oxydes et des Acides, d'après une nouvelle méthode, avec l'indication de tous les réactifs qui servent à faire reconnaître ces substances, et des secours ou contre-poisons à administrer en cas d'empoisonnement par ces corps. . . .

Paris: Béchét jeune, . . . et a Boulogne-sur-Mer. 1838.

First edition. 8vo. 605, (1) pp. Old stamp on title (Université de France Ecole Normale); otherwise a fine copy in contemporary quarter calf gilt, marbled boards.

A COMPREHENSIVE TREATISE, dedicated to Caventou, on metals, oxides, and acids. PellerEAU (dates unknown), a pharmaceutical chemist at the Ecole Spéciale in Paris, claims to have classified the subjects covered by a new method. At the end he discusses organic acids (e.g., acetic, benzoic, citric, gallic, and tartaric) and their salts. Pharmaceutical uses of all compounds are described. Bolton lists a later edition (Boulogne, 1839, 8vo.). Evidently very scarce, there is no reference to the author or this title in the usual bibliographies. (Bolton, 727)

PELLETAN, Pierre

Mémoire sur l'Éclairage par le Gaz tiré du Charbon de Terre, pour servir de complément à l'ouvrage de M. Accum, sur le même sujet. Lu à l'Académie Royale des Sciences, le 9 décembre 1816. . . .

Paris: J. G. Dentu. 1817.

First edition. 8vo. 2 leaves, iv, 40 pp. With folding engraved plate. Crisp copy, uncut and with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original plain blue wrappers bound in.

A SIGNIFICANT WORK describing improvements in the chemistry and technology of coal-gas manufacture. Pelletan (1782–1845) wrote the book after an extended visit to England, during which he had lengthy discussions with Accum, Clegg, Winsor, et al., and visited several gasworks. He praises Accum's *A practical treatise on gas-light* (London, 1815), the third edition of which was translated into French (Paris, 1816) by F. A. Winsor. The meter, invented by Samuel Clegg, for measuring and regulating the flow of coal gas is described (pp. 26–38) and illustrated in the plate. Pelletan, an expert chemist who published a *Dictionnaire de chimie* (Paris, 1821–24, 2 vols.), was a professor of medicine in Paris. One of the rarest books on early coal-gas technology. Unknown to the usual bibliographers. (Ferchl, 400; Poggendorff, II, 391)

PELLETIER, Bertrand

Memoires et Observations de Chimie de Bertrand Pelletier, . . . Recueillies et mis en ordre, par Charles Pelletier, . . . et Sédillot jeune, . . .

Paris: Chez Croullebois, Fuchs, Théophile Barrois jeune, Huzard . . . 1798.

First collected edition. 2 vols., 8vo. I: iii, 416 pp. II: 2 leaves, 492 pp. With engraved frontispiece portrait of Pelletier (Blanchard sculp.) in volume I and 5 folding copperplates of chemical apparatus (Sellier sc.). Fine set, uncut with wide margins, in mottled calf antique, gilt, marbled boards, maroon morocco labels. A presentation copy, inscribed in ink on each half title to the Italian chemist Carlo Ermenegildo Pini (1739–1825) by Pelletier's son, Charles: "De la part de Ch. Pelletier a Mr. Pinni" [*sic*]. Old stamp in lower margin of title pages ("Collegio di S. Alessandro in Milano").

THE CHEMICAL papers of Pelletier (1761–1797), dedicated to his master and friend D'Arcet, posthumously published by his son Charles and Sédillot, who wrote the long *Éloge de B. Pelletier* (pp. vii–iii). An "enthusiastic follower of Lavoisier" (Duveen), Pelletier carried out important research on compounds of phosphorus, arsenic, lead, platinum, strontium, molybdenum, tin, and other metals. He also devised new methods for making soap and refining metal for bells. At first an assistant to D'Arcet, Pelletier then became an apothecary and finally a professor at the École Polytechnique. He died at the early age of thirty-six as the result of inhaling chlorine. Watt describes him as "a Chemist of considerable eminence." (Bolton, 728; D.S.B., X, 497; Duveen, 463–464; Edelstein, 1815; Ferchl, 400; Neu, 3114; Partington, III, 565–566; Poggendorff, II, 392; Sotheran, Cat. 750 [1914], 13081 ["Rare"]; Watt, II, 743d)

PELOUZE, Theophile Jules, and FREMY, Edmond

Cours de Chimie Générale par J. Pelouze . . . et E. Fremy.
Paris: Chez Victor Masson. 1848.

First edition. 4 vols., 8vo. I: 2 leaves, xxix, iv, xci, 360 pp. II: 2 leaves, 828 pp. III: 2 leaves, 950 pp. IV: 2 leaves, 32 pp.; 49 double-page plates of chemical apparatus and large-scale manufacturing plants (engraved by E. Wormser). Very fine set in original quarter calf, maroon marbled boards, spines gilt. Armorial bookplates: Bibliothèque de Mouchy.

THE MAGNUM opus of Pelouze (1807–1867) and Fremy (1814–1894), and one of the most comprehensive French treatises on chemistry and chemical technology of the mid-nineteenth century. Pelouze studied under Gay-Lussac, whom he succeeded at the École Polytechnique. Later Pelouze succeeded Thenard and Dumas at the Collège de

France. He became president of the Commission of the Mint in 1848 and afterwards a member of the Municipal Council. Fremy was at first assistant to Pelouze at the École Polytechnique, then professor there and in the Musée d'Histoire Naturelle. Both men were excellent chemists who made numerous discoveries in organic and inorganic chemistry, on which see Partington. Volumes I and II cover inorganic chemistry, while volume III covers organic and biochemistry. Volume IV, the atlas, contains forty-nine finely engraved plates depicting laboratory apparatus and experiments, also pilot plant and large-scale chemical manufacturing equipment. This work gives a clear picture of the state of chemistry and the manufactures dependent thereon at the time of publication. A second edition (Paris, 1854–56, 6 vols.; Cole, 1028) and third (final) edition (Paris, 1865, 7 vols.) appeared. A milestone of mid-nineteenth-century chemical literature. (Bolton, 729; D.S.B., I, 499; Ferchl, 401; Partington, IV, 395; Poggendorff, II, 394)

PEMBERTON, Henry

A Course of Chemistry, divided into Twenty-Four Lectures, formerly given by the late learned Doctor Henry Pemberton, . . . Now first published from the Author's Manuscript by James Wilson, M.D.

London: Printed for J. Nourse, Bookseller in Ordinary to His Majesty. 1771.

First edition. 8vo. xl, 341, (1) pp., 1 leaf (advertisements). Edges of title leaf stained; otherwise very fine copy, in original tan calf, spine richly gilt, maroon morocco label.

PEMBERTON HAD delivered an excellent course of lectures on chemistry at Gresham College since 1730 and for many years thereafter; however, he never published his lectures in full, issuing only *A scheme for a course of chymistry* (London, 1731; 15 pp.). James Wilson, his lifelong friend, inherited Pemberton's numerous manuscripts and in August 1771 published the complete draft of the twenty-four lectures he had taught, together with a reprint of the above *Scheme* and a valuable biography of Pemberton. The course covered heat, chemical processes, and chemicals prepared from minerals, metals, animals, and plants. In his discussion on the calcination of metals, Pemberton claimed that the calx is formed by absorption of something that "is from the air" (p. 245), thus foreshadowing the discovery of oxygen by Priestley in 1774. Not in Blake, Duveen, Edelstein, Ferguson Coll., Neu, Smith, etc. (Bolton, 729; Cole, 1029; D.S.B., X, 501; Ferchl, 402; Ferguson, II, 178 [not in Young Coll.]; Partington, II, 764; Poggendorff, II, 398; Roller, 437; Watt, II, 743q)

PEMBERTON, Henry

The Dispensatory of the Royal College of Physicians, London, translated into English with Remarks, &c. . . .

London: Printed for T. Longman and T. Shewell, . . . and J. Nourse . . . 1746.

First edition. 8vo. x, 419, (1) pp. Fine copy, in original gilt-ruled speckled calf, rebounded, crimson morocco label.

THE FIRST English translation of the important and completely updated fifth edition of the *Pharmacopoeia Collegii Regalis Medicorum Londinensis* (London, 1746), to which Pemberton had contributed all of the information on the correct methods of preparing the chemicals used in pharmacy. To this English translation Pemberton has added (pp. 1–126) the “narrative” of the proceedings of the committee selected by the Royal College of Physicians to revise and correct the pharmacopoeia, together with his own further updated remarks on the best methods of preparing chemicals. (Blake, 348; Blocker, 344; D.S.B., X, 501; Ferchl, 402; Ferguson Coll., 551; Matthews, *History of Pharmacy*, 80; Norman, 1693; Osler, 6089 Poggendorff, II, 398; Watt, II, 743q)

PEMBERTON, Henry

A View of Sir Isaac Newton's Philosophy.

London: Printed by S. Palmer. 1728.

First edition. 4to. 25 leaves, 407, (1) pp. With 12 folding engraved plates depicting 163 figures, 12 ornamental vignettes and tailpieces (including arms of Sir Robert Walpole), and 5 initials, all engraved by J. Pine after J. Grison. Very fine large paper copy, contents pristine, in original paneled calf (joints cracked), maroon morocco label. Engraved armorial bookplate (eighteenth century) of James Frampton.

PEMBERTON (1694–1771), who studied under Boerhaave, edited the first English translation (1746) of the fifth edition of the London *Pharmacopoeia*. Invited by Newton to edit the third (1726) edition of the *Principia*, the present “study of Newton’s philosophy is interesting as being the account of a close friend. The preface contains the author’s recollections of Newton, especially in his old age. There is also a poem on Sir Isaac by Richard Glover (poet and M.P., 1712–1785) written in his sixteenth year; the author’s introduction to Newton’s method of reasoning in philosophy; and a long list of subscribers” (Babson). The mathematician George Lewis Scott (1708–1780) recommended this treatise to the historian Edward Gibbon (1737–1794) as a good elementary introduction to Newton. Typographically the book is important as it is the first to be printed in any of William Caslon’s (1692–1766) roman types. With

its fine headpieces, initials, well-balanced pages, and superior quality paper, it is a sumptuous example of the best English printing of the period. Clearly it was intended as a showpiece for the new type. Translations into Italian (1733, 1745), French (1755), and German (1793) appeared. (Babson, 98; D.S.B., X, 501; Gray, 132; Poggendorff, II, 398; Wallis, 132)

PENA, Petrus, and LOBEL, Matthias de

Stirpium Adversaria Nova, perfacilis vestigatio, luculentaque [sic] accessio ad Priscorum, presertim Dioscoridis & Recentiorum, Materiam Medicam. Quibus propediem accedet alters pars. Qua conjectaneorum de plantis appendix, de succis medicatis et metallicis sectio, antiquae & novatae medicine lectionum remedium thesaurus opulentissimus, de succedaneis libellus continentur. Authoribus Petro Pena, & Mathia de Lobel, Medicis.

London: Thomae Purfoetij, 1570–71. (Colophon dated January 1571).

First edition. Folio. Fine engraved title page with royal arms and solar system at top and map of Britain and Europe below. 10 leaves, 455, (1) pp., 1 leaf. Historiated woodcut initials and numerous fine woodcut illustrations of plants throughout. Three printed slips tipped in at pages 33, 151, and 365 (should be at p. 11). Fore-edge of title renewed, blank margins of pages 29–30 and colophon leaf repaired. Lower corner of pages 1–2 (sig. A1) missing but neatly repaired in facsimile on matching old paper incorporated into original leaf; otherwise a fine, crisp copy in contemporary unlettered calf, rebounded.

RARE FIRST edition of this splendid and famous Elizabethan herbal, dedicated to Queen Elizabeth, and with the privilege of the king of France (facing p. 1). “After Turner’s herbal the next important botanical book to be published in England is Pena and de l’Obel’s *Stirpium adversaria nova* . . . with the title-page dated 1570 and the colophon 1571. . . . The chief importance of this herbal lies in its system of classification which is better than that used by any contemporary botanist. The arrangement is based on the difference of leaf character . . . Hind considers that the anonymous title plate was probably engraved by Remigius Hogenberg . . . who worked in England. as an engraver” (Henry, pp. 26–28). “The work in which the system of classification that gave L’Obel his reputation is set forth” (Arber, pp. 90–91). The extraction and purification of sugar from cane is described (pp. 19–22), as are many other subjects of chemical interest. Not in Waller, Wellcome, etc. (D.S.B., VIII, 435–436; Durling, 3587; Henry, 289; Partridge, II, 267; S.T.C., 19595)



Pena and Lobel. *Stirpium Adversaria Nova*. London, 1570–1571.

PENINGTON, John

Chemical and Economical Essays, designed to illustrate the connection between the theory and practice of chemistry, and the application of that science to some of the arts and manufactures of the United States of America. "It is a pity so few chemists are dyers, and so few dyers chemists." By John Pennington.

Philadelphia: Printed by Joseph James. 1790.

First edition. Sm. 4to. viii, 200 pp. With 3 engraved plates (in photo-facsimile) facing pages 12, 44, and 148. Very good copy in contemporary speckled calf, spine gilt-ruled, maroon morocco gilt-lettered label. Signature in ink on recto of first free endpaper ("Robt. Montgomery March 21st, 1797 price 7/-").

ONE OF the earliest American chemical works to be published following the War of Independence from Great Britain. Written in a patriotic spirit, it was frequently used by chemists of the time. Pennington (1768–1793), who was only twenty-two, dedicated this book to Caspar Wistar, Jr., M.D., professor of chemistry "in the College of Philadelphia" (i.e., University of Pennsylvania). "It is not a text book of descriptive chemistry, but it does emphasize the value to society of many chemical products" (E. F. Smith, *Old Chemistries* [New York, 1927, pp. 18–21]). Topics covered include detailed discussions of earths, salts, acids, alkalies, chemical attractions, calcination of metals (using a modified version of the phlogiston theory), ore analysis, Prussian blue, minerals, soap, and vegetable dyes. Pages 100–111 comprise a defense of the doctrine of phlogiston, with references to Stahl, Priestley, Lavoisier, Black, Fourcroy, Cavendish, Crawford, Scheele, et al. Although all copies were intended to have plates, because comments on the plates are keyed to the text, many copies were issued without them. Evans makes no mention of plates, and other copies checked lack plates. It is probable that there was a delay in the production of the plates, and the young author (anxious to receive credit for his work) passed out copies without them. Very rare. Not in Blake, Cushing, Duveen, Ferchl, Morgan, Neu, Partington, Poggendorff, Waller, Watt, etc. (Bolton, II, 329; Edelstein, 3382; Smith, 381)

PENOT, Bernard Georges

Apologia. Bernardi G. Penoti, . . . in Duas Partes Divisa ad Josephi Michellii Middelburgensis Medici scriptum, quo Bern. P. . . sententiam de pseudotemporistis, in praefatione Dialogi inter Naturam & Filium Philosophiae expositam turpi inscitia & calumnia impudenti invertit. Cui sequentia opuscula adjuncta sunt: De Physici Lapidis materia, & quibus signis dignoscatur. Item de multiplici igne lapidis. Frankfurt: E Collegio Paltheniano Sumtibus Jonae Rhodii. 1600.

First edition. 8vo. 199, (1) pp., 16 unnumbered leaves. Woodcut printer's device on title page (repeated on the 2 other divisional titles, viz. pp. 97 and 167). Woodcut capitals, head- and tailpieces. Several pages misnumbered (wrong pagination in parentheses): 145–160 ("147–162"), 172–173 ("170–171"), 176 ("174"), 198–199 ("168–169"). Some leaves slightly embrowned (characteristic of period); otherwise very good copy in original vellum, rebaked in old vellum, with pigskin ties.

AN ALCHEMICAL work addressed to Josephus Michellius (fl. 1530–1600), who "became engaged in controversy with Libavius against whom he published an *Apologia Chymica* in 1597, with a preface to the senate and people of Middelburg" (Thorndike, V, 648). In part I of the present book Penot traces the long history of alchemy, discusses its legitimate uses, states that it is a gift from God, and mentions the different varieties of antimony that are used in alchemical processes. In the second part he points out the many errors, absurdities, and contradictions that have been written by Michellius in that author's *Apologia Chymica*. The physical axioms of Johannes Pontanus are discussed (pp. 167–195) as are his commentaries on the philosopher's stone. The final sixteen leaves comprise a friendly letter to Penot's friend Andrea Libavius, in which are discussed the works of Paracelsus, Ruland, Birckmann, Zwinger, Joachim Vadianus, et al. Very rare. Not in Duveen, Ferguson Coll., Wellcome, etc. (British Library, *S.T.C. German, 1455–1600*, p. 681; Ferchl, 402 [wrong date: 1606]; Ferguson, II, 179; Partington, II, 269)

PENOT, Bernard Georges

Tractatus Varii, de Vera Praeparatione et Usu Medicamentorum Chymicorum nunc primum editi. . . . Quae hoc libro diversa tractantur, versa pagina exhibebit.

Frankfurt: Apud Joannem Feyrabend, impensis Petri Fischeri. 1594.

First edition. 8vo. 256 pp. Woodcut on title page (repeated on the 3 other divisional titles). Woodcut head- and tailpieces. Roman letter. Very good copy in original limp vellum, gilt armorial crest on each cover. Two unidentified sixteenth-century signatures on title page. Armorial bookplate of John Earl of Bute on verso of title and another armorial bookplate on front pastedown endpaper.

"A COLLECTION OF tracts on medical chemistry divided into 4 parts. The 2nd, 3rd and 4th parts have separate titles and dedications. The larger part of the tracts contained in this collection is written by the author, but there are also tracts by Paracelsus, Raymundus Lullius and by anonymous authors. At the beginning of the 3rd part (p. 160) there is a poem by Oswald Crollius" (Duveen). Ferguson gives an erroneous list of the contents, and Caillet (no. 8502) cites only the reprint in *Theatrum Chemicum*. The preparation of

many acids, alkalies, salts, and organic compounds with their chemical and medicinal properties are described. Penot (Penotus, ca. 1522–1620), born at Port-Sainte-Marie in Guienne, studied at the University of Basel, where he espoused the doctrines of Paracelsus and devoted himself later in life to alchemy and the pursuit of the philosopher's stone. A supporter of Libavius, he died in extreme poverty. Penot is reputed to have said that if he had an enemy whom he wished to injure he would urge him to pursue alchemy. Rare. Not in British Library, Thorndike, Watt, etc. (Bolton, 730; Durling, 3589; Duveen, 464; Ferchl, 402; Ferguson, II, 180 [not in Young Coll.]; Ferguson Coll., 553; Neu, 3120; Partington, II, 269; Poggendorff, II, 399; Waller, 7297; Wellcome, I, 4890)

PENOT, Bernard Georges

Tractatus Varii, de Vera Praeparatione et Usu Medicamentorum Chymicorum nunc primum editi . . . Quae hoc libro diversa tractantur, versa pagina exhibebit. Editio tertia prioribus emendatio.

Ursel: Ex officina Cornelii Sutorii; sumtibus Ionae Rhodii Bibliopolae. 1602.

Third edition. 8vo. 256 pp. Woodcut on title page (repeated on the 3 other divisional titles). Woodcut head- and tailpieces. Fine copy in old vellum, spine lettered in ink. Withdrawal stamp of Wellcome Library on verso of title leaf. Armorial bookplate: Corn. Henr. à Roy.

A CLOSE PAGINARY reprint of the first edition (Frankfurt, 1594). Although designated to be the third edition on the title page, this is probably the second issue of the second (first Ursel) edition, as the last divisional title page (p. 211) is dated 1601; the others are undated. The "imprint on the title page appears to have been altered by inserting a second I between the C and I" (Krivatsy). No genuine second edition is known. This copy has an important provenance, having belonged to Cornelius Henricus à Roy (1750–1833), a distinguished Dutch physician. Roy amassed an enormous medical library, the catalogue of which ran to six volumes (Amsterdam, 1830–1834; Waller, 18964). Wellcome (IV, 571–572) lists several medical works by Roy. (Ferguson Coll., 553; Krivatsy, 8784; Wellcome, I, 4891)

PENTZKY, Christian Wilhelm

Dissertatio Inauguralis Chémico-Médica sistens Phosphori Urinae Analysin et Usus Medicum. . . Praeside . . . Andrea Elia Büchnero . . . pro gradu doctoris . . . Christianus Wilhelm Pentzky Wratislavia-Silesius.

Halle: Litteris laberianis. (1755).

First edition. 4to. 36 pp. With elaborate woodcut capitals, head- and tailpieces. Fine copy in cloth antique, spine ink-lettered and dated.

A DOCTORAL DISSERTATION on phosphorus by Pentzky (dates unknown), presented under the direction of Andreas Elias Buechner (1701–1769), professor of medicine and natural philosophy at the University of Halle and president of the Leopoldine Academy (see Poggendorff, I, 334). Part I (pp. 7–25) describes the preparation of elementary phosphorus from urine, as well as its physical properties and chemical reactions. The works of Boerhaave, Hanckewitz, Hellot, Juncker, Macquer, Marggraff, Stahl, and other chemists are cited. Part II (pp. 25–28) briefly describes the medicinal uses of phosphorus and its compounds. Not mentioned by E. N. Harvey (*History of Luminescence*) in his extensive discussion of phosphorus. This interesting and rare work was translated into German in 1757. (Ferchl, 402; Waring, 611)

PEPPER, John Henry

The Playbook of Metals including personal narratives of visits to coal, lead, copper, and tin mines. With a Large Number of Interesting Experiments relating to Alchemy and the Chemistry of the Fifty Metallic Elements. . . .

London: George Routledge and Sons. N.d. (1861).

First edition. 8vo. viii, 502, (2) pp. With woodcut frontispiece and 265 woodcut figures in text. Fine copy in original gilt and blind-stamped pictorial cloth.

AN INFORMATIVE and entertaining book for young people, on all aspects of the history, mining, smelting, and metallurgy of the metals then known. There is a woodcut (p. 259) depicting the obverse and reverse of the "new bronze penny piece" dated 1860. The first chapter describes the dreadful abuse of children just prior to the publication of this book, in which they were put to work in coal mines at the age of four. Women and young girls are shown crawling through low and narrow shafts dragging carts laden with coal. Pepper states that, thanks to the recent efforts of Lord Ashley, an act was just passed "which abolished for ever the labour of women in coal mines, and . . . no children for the future should work in coal pits who were of less age than ten years." Fortunately, employing children in mines is now quite unthinkable. Pepper (1821–1900), an analytical chemist, was professor of chemistry at the Royal Polytechnic, London, and honorary director there from 1852 to 1872. He published popular scientific works based on his lectures (see D.N.B.). (Partington, IV, 687)

PERCIVAL, Thomas

Essays Medical and Experimental, on the Following Subjects; 1. On the Columbo Root. 2. On the Orchis Root. 3. On the Waters of Buxton and Matlock in Derbyshire. 4. On the Medicinal Uses of Fixed Air. 5. On the antiseptic and sweetening powers, and on the varieties of Factitious Air. 6. On the Noxious Vapours of Charcoal. 7. On the Atrabilis. 8. On the Sea Salt. 9. On Coffee. To which are added, Select Histories of Diseases, with remarks; and proposals for establishing more accurate and comprehensive bills of mortality. . . .

London: Printed for Joseph Johnson, No. 72, St. Paul's Church-Yard. 1773.

First edition. 8vo. xvi, 267, (1) pp., 1 leaf (advertisements). Very fine copy in quarter calf antique, plain boards, maroon label.

THE SECOND volume of Percival's *Essays* (London, 1767, 1773, 1776) and the first edition of this text. Each volume is complete in itself. Of importance in the history of chemistry are the essays on the mineral waters of Buxton and Matlock (pp. 53–70), the medicinal uses of fixed air (carbon dioxide, pp. 71–80), factitious airs (hydrogen, carbon dioxide, pp. 81–91), noxious vapors of charcoal (including an early description of carbon monoxide poisoning, pp. 92–109), sea salt (pp. 113–121), coffee (pp. 122–129), and columbo root (pp. 130–138). The purely medical essays also contain interesting chemical information. (Blake, 34.3; Cushing, P208; Ferchl, 402; Partington, III, 690; Waring, 138, 299, 786; Watt, II, 745u; Wellcome, IV, 333)

PERCIVAL, Thomas

Experiments and Observations on Water: Particularly on the Hard Pump Water of Manchester. . . .

London: Printed for J. Johnson, in Pater-Noster-Row. 1769.

First edition. 8vo. (in 4s). 4 leaves, 80 pp. Fine copy, with half title, in maroon half calf antique, marbled boards, spine gilt-lettered and dated.

A STUDENT AT Warrington Academy and friend of Priestley, Percival (1740–1804) toured the Continent, graduating M.D. (Leyden, 1765) with a dissertation called *De frigore*. Elected F.R.S. (1765), his publications appeared in the *Philosophical Transactions*. He began to practice medicine in Manchester in 1767. From weekly meetings in his house the Manchester Literary and Philosophical Society was founded (1781), with Percival as president. In 1783 he attempted to found a dissenting academy in Manchester similar to the Warrington Academy, and Dalton was one of the teachers. In this work on the properties of water, Percival describes twenty chemical experiments and comments on the effects of hard and soft waters from various sources in brewing, dyeing, bleaching, tanning, etc. There

are many references to earlier as well as contemporary chemists. A note in ink (p. 51, correcting “ten” to “3”) is presumably by Percival. The introduction is dated 1768, which Ferchl and Poggendorff erroneously give as the date of publication. Partington (III, 690) discusses Percival and his work but does not mention this title. (Blake, 343; Cole, 1030; Ferchl, 402; Poggendorff, II, 401; Waring, 758; Watt, II, 745t; Wellcome, IV, 333)

PERERIUS, Benedictus

Adversus Fallaces et Superstitiosas Artes, id est, de Magia, de Observatine Somniorum, & Divinatione Astrologica. Libri tres.

Ingolstadt: Ex Officina Typographica Davidis Sartorii. 1591.

First edition. 8vo. 3 leaves, 256 pp., 4 leaves (index). Woodcut Jesuit vignette on title. Roman and italic letter. Very good copy, rebound in old vellum, spine gilt.

PERERIUS, PEREIRA, or Pereyra (1535–1610), a Jesuit of Valencia, published two well-esteemed books on science and magic. His first (*De Communibus omnium rerum naturalium principiis*, Rome, 1562), on the common principles of natural things (based on the *Physics* of Aristotle), was used as the text on natural philosophy taught in Jesuit schools. His second work (as here) is in three books: on natural magic, observance of dreams, and astrological divination. One of the longest chapters (book I, ch. 12) is on alchemy, with discussions of the works of Aegidius, Averroes, Avicenna, Cardan, Lacinio, Mirandulanus, et al. Pererius claims that there is no decisive argument against transmutation but states that the process is extremely difficult, which leads many alchemists into deceitful practices. For a full account of the author and this work, see Thorn-dike. Partington (II, 272) says that Sennert quoted Pererius. Essentially unchanged editions appeared later, some with altered wording of their titles. Not in Caillet, Durling, Ferguson Coll., Verginelli, Watt, etc. (Adams, P654; British Library, *S.T.C. German*, 682; De Backer-Sommervogel, VI, 504; Gardner, II, 939; Graesse, 52; Palau, 218835; Rosenthal, 3010; Stalla, *Ingolstadt*, 1690; Thorndike, VI, 409–413; Wellcome, I, 4902)

PERERIUS, Benedictus

De Magia, de Observatione Somniorum, et de Divinatione Astrologica, libri tres. Adversus Fallaces, et Superstitiosas Artes. Auctore Benedicto Pererio Valentino Societatis Jesu. Accesserunt indices duo, Primus est Caputum, & Disputationum. Alter Rerum Verborumque copiosus.

Cologne: Apud Joannem Gymnicum sub Monocerote. 1598.

First Cologne edition. 8vo. 3 leaves, 236, (1) pp., 3 leaves (index). Roman and italic letter. Woodcut printer's device on title and Jesuit woodcut vignette on verso. Woodcut initials, head- and tailpieces. Fine copy in original limp vellum, spine lettered in contemporary manuscript.

ALTHOUGH THE wording of the title is different, this is a reprint of the first edition of *Adversus fallaces et superstitiosas artes* (Ingolstadt, 1591). The Ingolstadt printing was quickly followed by other editions: e.g., Venice, 1591; Lyons, 1592 (Caillet, 8518; Guaita, 1966; Ferguson Coll., 554; Rosenthal, 3011). The present edition was reprinted at Lyons in 1602 and 1603; Cologne, 1612; and Paris, 1616. An English translation appeared, entitled *The Astrologer Anatomiz'd* (London, 1661 and 1674; Wing, P1465A and 1466). Not in the usual chemical bibliographies. (Blocker, 309; British Library, *S.T.C. German*, p. 682; Durling, 3592; Thorndike, VI, 410; Wellcome, I, 4904)

PEREYRA, Benito

De Magia. De Observatione Somniorum, et de Divinatione Astrologica, libri tres. Adversus fallaces, et superstitiosas artes. . . . Accesserunt indices duo, primus est capitum, & disputationum. Alter rerum verborumque copiosus.

Cologne: Apud Joannem Gymnicum sub Monocerote. 1598.

Third (first Cologne) edition. 8vo. 3 leaves, 236, (1) pp., 3 leaves (index). Roman letter. Woodcut printer's device on title and woodcut vignette on verso. Woodcut initials, head- and tailpieces. Fine copy in original limp vellum, spine ink-lettered.

PEREYRA, OR Pereira (Benedictus Pererius Valentinus, 1535–1610), a Jesuit of Valencia, produced two books on magic and science, which were well esteemed. His first, on the common principles of all natural things (*De communibus omnium rerum naturalium principiis*, Rome, 1562), is based on the *Physics* of Aristotle and was used as a text in Jesuit schools in teaching natural philosophy. The author's second work (as here) is in three books, on magic, observance of dreams, and divination by astrology. The first edition (Ingolstadt and Venice, 1591) was quickly followed by another (Lyons and Venice, 1592; Caillet, 8518; Guaita, 1966; Ferguson Coll., 554; Rosenthal, 3011). The present edition was followed by those of Lyons, 1602, 1603; Cologne, 1612; and Paris, 1616. An English translation appeared as *The Astrologer Anatomiz'd* (London, 1661 and 1674; Wing, P1465A and 1466). One of the longest chapters is on alchemy, with references to the works of Avicenna, Averroes, Cardan, Lacinio, et al. Pereyra claims that there is no decisive argument against transmutation but states that the process is extremely difficult, which leads many alchemists into deceitful practices. For a full account of Pereyra and this work, see Thorndike. Partington (II, 272) says that Sennert

quoted Pereyra. Rare. Not in the usual chemical bibliographies. (British Library, *S.T.C. German*, p. 682; Durling, 3592; Thorndike, VI, 410; Wellcome, I, 4904)

PEREZ, Vicente

El Secreto a Voces. Arcanidades de los Polvos de Aix, en la Provenza, descubiertas á los embates del Agua. Diseccion anathomica de las partes de que se componen estos Polvos, y razon primordial de sus efectos. Hecha por el Doct. D. Vicente Perez, de la Real Academia de Solidistas, vulgó el Medico del Agua. Quien la dedica a la Excma. Sa. Da. Maria Cayetana de Isassi, Marquesa Viuda de Santa Cruz, &c. Impresso en Madrid con las licencias necessarias: Reimpreso en Barcelona en casa Joseph Altés. Vendese en Casa Joseph Avinyó Librero á la subida de la Carçel.

(Colophon: Barcelona, Mayo 24. de 1753).

Second (first Barcelona) edition. 4to. 13 leaves, 42 pp. Woodcut printer's device on title. Several fine woodcut head- and tailpieces. Very good copy, in half morocco antique, marbled boards, spine gilt-lettered and dated.

PEREZ, A FAMOUS physician of Toledo, advocated the use of the waters of Aix-en-Provence in the treatment of diseases. This work was published simultaneously in Madrid and Barcelona and is based on *Tratado del origen de las enfermedades, y del uso de los polvos purgantes de J. Aylhaud* (Avignon, 1751). Jean Ailhaud (1674–1756), a noted French physician, published several works on the waters and powder of Aix (see Wellcome, II, 20). The powder was obtained by evaporating the mineral waters of Aix and possessed purgative properties owing to the presence of calcium and magnesium sulfates and carbonates. Perez here discusses the chemical analysis of the mineral waters and powder therefrom, with reference to the works of Herman Boerhaave, Friedrich Hoffmann, and other chemists. A rare book, of interest in the history of chemistry, balneology, and medicine. Duveen (p. 465) describes the Madrid (1753) edition, with same collation. This Barcelona edition is not mentioned by the usual authorities.

PEREZ DE VARGAS, Bernardo

De Re Metalica en el qual se tratan muchas y diversos secretos del conocimiento de toda suerte de minerales, de como se deven buscar ensayar y beneficiar, con otros secretos e industrias notables, assi para los que tratan los officios de oro, plata, cobre, estano, plomo, azero, hierro, y otros metales, como para muchas personas curiosas . . .

Madrid: en casa de Pierres Cosin. 1569.

First edition. 8vo. 20 leaves (last blank), 206 numbered folios, 2 leaves (1 with woodcut printer's device, 1 blank). Colophon dated 1568. Roman letter. Ornamental woodcut capitals and

13 text woodcuts of chemical apparatus. Few leaves with minor water stains; otherwise very good copy in early vellum.

THE FIRST modern work on metallurgy in Spanish, preceding by more than seventy years Barba's *Arte de los metales* (1640), which is usually considered the first Spanish text on the subject. It is of great American interest because of the prefatory letter by Diego de Meneses, which has been overlooked by all the usual bibliographers of Americana. An owner of several mines in Peru and New Spain, De Meneses states that this work will be of value to New World miners who have labored without adequate knowledge of efficient smelting and assaying practices. The book is based on the two greatest metallurgical texts of the sixteenth century: Agricola's *De re metallica* (1556) and Biringuccio's *De la pirotechnia* (1540). Neither work was translated into Spanish during the early period. Thus, while the Spanish had the greatest access of any nation to the metals and minerals of the New World, it was only with the publication of this book that they had a metallurgical text in their own language. The contents of this extremely rare work are discussed by Hoefler (II, 55–57) and by Partington (II, 65). (Annan, 35; Brunet, V, 1089; Duveen, 596; Ferchl, 403; Gmelin, *Geschichte der Chemie*, I, 363–364; Honeyman, 2453; Lenglet-Dufresnoy, III, 320; Neu, 3123; Palau, 222669)

PEREZ DE VARGAS, Bernardo

Traité Singulier de Méallique, contenant divers secrets touchant la connoissance de toutes sortes de Métaux & Minéraux, la maniere de les tirer des Mines, de les essayer & de les purifier; avec d'autres Secrets et Tours de mains rares tant pour les Orfèvres, Jouailliers, Affineurs, Fondeurs, Chaudronniers, Potiers d'Etaing, Coûteliers, Plombiers, Forgerons, Serruriers, que pour tous ceux qui travaillent sur les Métaux, & principalement pour ceux qui ont des Mines à cultiver & faire valoir, leur enseignant la manière de les mettre à profit, & d'en abrégier le travail & les dépenses; et plusieurs autres secrets concernant les Métaux, comme les départir étant mêlés tous ensemble, sans Eau de départ, &c. . . . Paris: Chez Prault pere, Quay de Gêvres, au Paradis. 1743.

First French edition. 2 vols., 12mo. I: xxxvi, 380 pp., 2 leaves. II: xii, 371, (1) pp., 1 leaf (blank). With large folding engraved plate (containing 14 figures of chemical apparatus). Very fine copy in original mottled calf, spines gilt-ruled and dated, maroon morocco labels. Bookplate: Kenney Collection.

THE FRENCH translation by G. G. (otherwise unknown) of the *De re metallica* (Madrid, 1569) by the sixteenth-century Spanish mining expert and chemist Perez de Vargas. The work is divided into nine books that encompass all aspects of contemporary metallurgy. "Book I draws largely from

Albertus Magnus and deals with alchemy as a possible science. Book II gives the composition of metals on the old theories. . . . Book III deals in eight chapters with the metals. . . . Book IV deals in fifteen chapters with the semi-metals. . . . Books V to VII are mere summaries of Agricola's *De Re Metallica*. . . . Book VIII contains 'Secrets', a collection of recipes for niello, tempering steel (including files), engraving on metals with aqua fortis (the metal being waxed), gilding metals with gold amalgam, and alchemical secrets . . . with figures of distillation apparatus" (Partington). Duveen gives an erroneous pagination for volume I: i.e., twenty-four pages of preliminary matter rather than thirty-six pages. (Brunet, V, 1809; Duveen, 597; Neu, 3124; Partington, II, 65)

PERNETY, Antoine Joseph

Dictionnaire Mytho-Hermétique, dans lequel on trouve les Allégories Fabuleuses des Poetes, les Métaphores, les Énigmes et les Termes Barbares des Philosophes Hermétiques expliqués. . . . Paris: Chez Bauche, Libraire. 1758.

First edition. 8vo. 2 leaves, xx, 546 pp., 3 leaves. Fine copy in original mottled calf, spine richly gilt, tan morocco label.

A BENEDICTINE MONK in the abbey of St. Germain-des-Pres, Pernety (1716–1801) went as chaplain in 1763 with the expedition to the Falkland Islands under Bougainville, about which he later published an account. On his return he attempted to get the regulations of the order relaxed. Finding his efforts useless he left the order and became royal librarian at Berlin. A devoted student of alchemy and the cabala, Pernety believed that the whole of ancient mythology was merely a long, sustained allegory of the preparation of the philosopher's stone. This theme is present in the *Dictionnaire*, which is one of the few alchemical lexicons in the vernacular. "It professes to give explanations of all the curious words used by Paracelsus and other writers, and what is perhaps still more useful to the readers of Hermetic books, the explanation of the synonyms and common words used in a peculiar way found in these books" (Ferguson, who has a long biographical note on Pernety). The second edition, a reprint of the first, appeared almost thirty years later (Paris, 1787; Blake, 344; Bolton, 71). (Caillet, 8525; Duveen, 466; Ferchl, 404; Ferguson, II, 181–182; Ferguson Coll., 554; Guaita, 823; Hall, 124; Heym, *Ambix*, I [1937], 59; Neu, 3126; Smith, 382; Watt, II, 747e; Wellcome, IV, 338)

PERRET, Jean Jacques

Mémoire sur l'Acier, dans lequel on traite des différentes qualités de ce métal, de la forge, du bon emploi & de le trempe. Ouvrage couronné par la Société des Arts de Geneve le 19 Decembre 1777. Par Jean-Jacques Perret, . . .
Paris: Chez Veuve Desaint, Nyon l'aîné, . . . 1779.

First edition. 8vo. viii, 214 pp., 1 leaf. With large folding copperplate depicting 12 figures. Fine copy with wide margins, in contemporary speckled half calf, boards, maroon morocco gilt-lettered label, spine gilt.

A CLASSIC WORK on the preparation and properties of different types of steel, particularly that used in cutlery, which was awarded a prize in 1777 by the Geneva Society of Arts. "One indication of a good steel . . . is the rose. A good description and essentially accurate explanation of the rose was given in 1771 by Jean Jacques Perret. Perret used nitric acid to distinguish between iron and steel" (C. S. Smith, *Sources for the History of the Science of Steel 1532–1786* [Cambridge, Mass., 1968, pp. 71 and 98]; also A. N. Sisco and C. S. Smith, *Réaumur's memoirs on steel and iron* [Chicago, 1956, pp. 158, 178, and 203]). Pffingsten translated this work into German (Dresden, 1780). Perret (1730–1784) also published *La pognotomie; ou, l'art d'apprendre a se raser soi-meme* (Paris, 1769) and *L'art du coutelier* (Paris, 1771–72, 2 vols.). The first razors made from steel that would keep a sharp edge were invented by Perret. A rare book. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Ferchl, 404; Sotheran, Cat. 750 [1914], 13138 ["Rare"])

PERRET, Jean Jacques

Herrn Perret's Abhandlung vom Stahl, dessen Beschaffenheit, Verarbeitung und Gebrauch. Eine gekrönte Preisschrift. Aus dem Französischen übersetzt. Mit Kupfern.
Dresden: In der Waltherischen Hofbuchhandlung. 1780.

First German edition. 8vo. 164 pp. Large folding engraved plate (with 10 figures) at the end. Few stains on fore-edges; otherwise a good copy in contemporary half calf, boards, spine gilt. From the Prince Fürstenberg library, Donaueschingen, with small stamp on verso of title page.

AN IMPORTANT book on the manufacture and properties of steel, which first appeared as *Mémoire sur l'acier, dans lequel on traite des différentes qualités de ce métal, de la forge, du bon emploi, et de la trempe* (Paris, 1779). "On lui doit l'invention du rasoir à rabot, et d'un instrument destiné à faire la section de la cornée transparente dans l'opération de la cataracte. On se servait depuis longtemps pour polir

l'acier d'un procédé anglais; Perret, désirant soustraire l'industrie française à cette humiliante supériorité, composa une potée au égale en qualité à celle de l'Angleterre, et l'Académie des Sciences lui accorda les plus grands éloges" (*Biogr. Gen.*). For his *Mémoire sur l'acier* Perret was awarded the prize of the Société des Arts de Genève. The French edition is rare, and this first German edition is even rarer. According to Ferchl (p. 401) another German edition appeared later (Berlin, 1783). The present edition of 1780 was translated by Johann Hermann Pffingsten (1751–1799), director of mines at Schemnitz and inspector of the salt-peter works at Magdeburg and Halberstadt. This work on steel is not mentioned by Poggendorff or Ferchl in their long lists of publications by Pffingsten. Unknown to the usual bibliographers.

PERRINET D'ORVAL, Jean Charles

Essay sur les Feux d'Artifice pour le Spectacle et pour la Guerre. Par Mr. P. d'O.
Paris: Chez Coustelier, Quay des Augustins; près la rue Gist-le-Coeur. 1745.

First edition. 8vo. xii, (4), 224 pp. With 13 copperplates depicting many kinds of fireworks and other pyrotechnic equipment. Fine copy in original speckled calf, spine gilt, maroon morocco label.

AN OFFICER in the French Army Corps of Engineers, Perrinet d'Orval (1707–1780) describes in this book, his first on pyrotechnics, all kinds of fireworks used for festive occasions, as well as in warfare. Divided into five sections, the first covers the chemicals with which fireworks are made, their proportions in mixtures, and the fabrication of various types. The second concerns fireworks used in the air, the third those for use on the ground, the fourth those used on the water, and the fifth those employed in waging war. There is a detailed description (pp. 153–181) of the "Spectacle pirique donné sur le theatre de la Comedie Italienne," carried out by Ruggieri and Bolonois in July 1743 and given before the king. The author provides a classification of rockets, and his writings on fireworks were used by Diderot and d'Alembert for the *Encyclopédie*. Zeitlinger describes this work as "rare." (Brook, *History of Fireworks*, 269; Neu, 3128; Philip, P060.1; Sotheran, Cat. 773 [1919], 2831; Cat. 879 [1947], 3320)

PERSON, David

Varieties: or, A Surveigh of Rare and Excellent matters, necessary and delectable for all sorts of persons. Wherein the principall Heads of diverse Sciences are illustrated, rare secrets of Naturall things unfoulded, &c. Digested into five Bookes, whose severall Chapters with their Contents are to be seene in the Table after the Epistle Dedicatory. By David Person, of Loghlands in Scotland, Gentleman. . . .

London: Printed by Richard Badger, for Thomas Alchorn, and are to be sold at his shop, in Pauls Church-yard, at the signe of the green-Dragon. 1635.

First edition. 4to. 25 leaves, pp. 1–47, (5), 49–93, (3), (4), 97–190, (6), 177–208, 217–256, (4), 105, (1). Pagination erratic, collation complete with all required blank leaves (included in pagination), and the rare original divisional title page (sign. Aa1), which in most copies is canceled (as the author's name is spelled "Pierson") and replaced by bifolium Aa² (also present in this copy). Four separate divisional title pages for parts II–V. Main title within woodcut border. Woodcut historiated capitals, head- and tailpieces. Very good copy, in late-eighteenth-century dark-blue half sheep, plain boards.

A SURVEY OF the scientific knowledge of the time. Person (fl. 1635), a Scotsman, "must have been well known, for among those who commend his cyclopaedia are Drummond of Hawthornden and Arthur Jonston" (Ferguson, *Books of Secrets*, I, pt. 4, pp. 19–20). Book four discusses "Curiosities," including the discovery of America by Columbus (pp. 199–202) and the compass. There is much of chemical interest throughout the work, especially book five, which contains a chapter entitled "Salamandra, or A short Treatise of the Philosophers Stone" (pp. 33–54; recte, 48). A rare book, usually found in poor condition. Not in Ferguson, Partington, Sabin, Thorndike, etc. (Duveen, 466; Ferguson Coll., 555; Morgan, 616; Neu, 3129; S.T.C., 19781; Wellcome, I, 4918)

PETER, John

A Treatise of Lewisham (But Vulgarly Miscalled Dulwich) Wells in Kent. Shewing the Time and Manner of, their Discovery, the Minerals with which they are Impregnated, the severall Diseases Experience hath found them good for; with Directions for the Use of them, &c. By John Peter Physician.

London: Printed by Tho. James for Sam. Tidmarsh at the Kings-head in Cornhil. 1680.

First edition, first issue. 12mo. 12 leaves, "88" pp. (recte 108; pp. 97–108 are misnumbered 77–88; i.e., pagination repeated). Fore-edge of title leaf neatly repaired and a few leaves very lightly embrowned; otherwise very good copy in original blind-ruled unlettered calf, rebaked. An interesting association copy, with signature in ink on inside front cover of "Elizth Evance

Sydenham," and inscription in ink on recto of first flyleaf: "A. C. Cowburn From Mrs. Bowdler Janry 1845. Chester Sgre."

THE EARLIEST work on the mineral waters of Lewisham (now a suburb of London), of chemical interest for the discussions of salts, and analytical tests for them, in the waters. Of Peter, a physician, no biographical notice has been located. On page 78 he gives an analysis of the waters, "which I have found by Evaporation, Sublimation, Precipitation &c. . . . to consist of Nitrous Salt, Alum, and some Sulphur." Quoting Dr. J. Macpherson (*Our Baths and Wells*, London, 1871), Waring states: "This well was known sometimes as Sydenham, sometimes as Dulwich. There was a second well discovered near Dulwich, but it never had the repute of the one at Sydenham." This copy belonged to Mrs. Bowdler, wife of Thomas Bowdler (1754–1825), editor of the famous "Bowdlerized" *Family Shakespeare* edition of 1818. The second issue of this very rare work appeared in 1681 (Krivatsy, 8820; Wing, P1692). Not in the usual bibliographies. (Waring, 796; Watt, II, 749b; Wing, P1691)

PETERSEN, Carl

Kort Afhandling, om Metallernes Calcinationer i Eld . . . under Joh. Got. Wallerii . . . Den 13 Junii Ar 1761. Af Carl Petersen Stockholmsbo.

Stockholm: Tryckt hos Lnrents [*sic*] Ludvig Grefing. (1761).

First edition. 4to. 2 leaves, 19, (1) pp. Large woodcut headpieces and initials. Light stain along bottom edge; otherwise very good, wide-margined copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT Swedish dissertation on the calcination of metals by fire, with references to eighteenth-century theories of the formation of metallic calxes (i.e., oxides). Discussions include the theory of phlogiston and the absorption of "fire particles." The calcination of copper, iron, lead, antimony, tin, bismuth, mercury, silver, gold, and other metals is discussed in detail, with explanations of why certain metals readily form calxes, while others (such as silver and gold) do not. There are references to the works of seventeenth- and eighteenth-century chemists (e.g., Borrichius, Kunckel, and Vogel). Experiments on the formation of calxes by heating metals with fused saltpeter are also described. Significant for its theories of combustion and calcination before Lavoisier's correct explanations of these phenomena, this very rare work is briefly mentioned by Partington (who had never seen it). Wallerius was professor of chemistry at Uppsala, and Petersen was one of his most distinguished students. A Latin translation of this

work is included in Wallerius' *Disputationem Academicarum* (Stockholm & Leipzig, 1780–81, 2 vols.: in vol. II, pp. 217–246). (Ferchl, 405; Partington, III, 171)

PETRARCA, Francesco

Francisci Petrarchae de Remediis Utriusq(ue) Fortunae. Libri II.

(Colophon:) Venice: In Aedibus Alexandri Paganini Inclito Lauretano Principe. IIII Idus Novem., 1515.

First Venice edition. 24mo. 8 leaves, 336 leaves (numbered in bottom margin). Initial guide letters. Printed in Paganini's upright gothic-italic type. Fine, crisp copy, in original unlettered calf-backed oak boards, pastedowns from an early-sixteenth-century vellum manuscript.

PETRARCA (Petrarch, 1304–1374), famous Italian poet and “the first humanist and first modern lyric poet” (*Encyclopaedia Britannica*), began the *De remediis* in 1354 and finished it in October 1366. Immediately popular, it circulated in manuscript and was printed in incunabula editions (e.g., Esslingen: Conrad Fyner, ca. 1475; see Stillwell, 476), and was later edited by Nicolaus Lucarus (Cremona, 1492). The present “pocket-sized” edition is printed in Paganini's smallest upright gothic-italic type, possibly designed by Francesco Griffo. It is one of the first books in the celebrated series of Latin and Italian classics published in small formats by Paganini over the ensuing two decades. This diminutive Petrarch is one of only a handful to use the present unique type. A famous work, in the form of a dialogue, on the fortunes and misfortunes of human life. Dialogue 111 (*De Alchimia*, folios 147v–148v) discusses alchemy and the deceptions of its practitioners. Other sections cover gems and minerals, poisons, pharmacy, medicines, etc. Only two copies of the present edition are listed in N.U.C. (Cornell, Harvard). Extremely rare. (British Library, *S.T.C. Italian, 1465–1600*, p. 506; Brunet, IV, 567; Cornell Univ., *Petrarch a Catalogue*, p. 20, col. 3; Panzer, VIII, no. 750)

PETTUS, John

Fodinae Regales. Or the History, Laws and Places of the Chief Mines and Mineral Works in England, Wales, and the English Pale in Ireland. As also of the Mint and Mony. With a Clavis Explaining some difficult Words relating to Mines, &c. . . .

London: Printed by H.L. and R.B. for Thomas Basset at the George in Fleetstreet, near Cliffords Inne. 1670.

First edition. Folio. 8 leaves, 108 pp., 4 leaves. Portrait frontispiece of Pettus at age 57 (by W. Sherwin, in beautiful impression), 2 large copperplates of arms of mining societies in text, and 2 full-page engravings of mining sites. Very fine copy with wide margins, in original paneled calf, rebacked, maroon

morocco label. Armorial bookplate: William Constable, F.R.S. (d. 1791).

THE FIRST book published by Sir John Pettus (1613–1690), deputy governor of the royal mines for over thirty-five years. “This rare work is very valuable for giving an account of the state of mining in England during the XVIIth century. It was undertaken at the request of Prince Rupert and Lord Shaftesbury. Large extracts from it are given in Hunt's ‘British Mining.’ The fine portrait is to be found only in a few copies of the work, it having evidently been subject to the ravages of the grangerizer or print-seller of the past” (Zeitlinger). This title is not in D.N.B. The six-page “Clavis” at the end is the earliest attempt at a glossary of mining terms in the English language. William Sherwin (1645–1711) was the first British engraver to work in the mezzotint technique, and the portrait shows the deep velvety black tone, approaching the effect of a mezzotint. Pettus is better known for his translation of Ercker's work on mining and metallurgy, published under the title *Fleta Minor* (London, 1683). (Annan, 9; Duveen, 468; Ferguson, II, 186 [not in Young Coll.]; Ferguson Coll., 557; Hoover, 634; Partington, II, 106; Smith, 384 [imperf.]; Sotheran, Cat. 750 [1914], 13183; Wing, P1908)

PETZOLDT, Georg Paul Alexander

Lectures to Farmers on Agricultural Chemistry. . . .
London: Taylor & Walton. 1844.

First edition. 8vo. xii, 299, (1) pp. + 4- pp. (advertisements). Fine, crisp copy, uncut, in original blind-stamped purple cloth, spine (faded) gilt-lettered.

A TRANSLATION by the chemist William Gregory (1803–1858) of the *Populäre Vorlesungen über Agriculturchemie* (Leipzig, 1844) of Petzholdt (1810–1889), professor of husbandry and technology at the University of Dorpat. In eighteen lectures the author teaches the importance of ascertaining the chemical composition of various types of soil and how to treat them with animal, vegetable, and chemical fertilizers to increase the production of plant growth. This “little work . . . will furnish the necessary amount of chemical information for the purposes of the farmer. He will learn enough from it to satisfy him that science is not to be despised, and if it open his mind to the reception of the important truths made known by the great chemists of the present age, and enable him to derive from the writings of Liebig especially, all that has been of late discovered relating to agriculture, the design of the writer will be accomplished” (preface). A second edition appeared (London, 1846). Poggendorff (II, 420) and Ferchl (p. 407) cite the German edition (1844) but not the English translation. Very scarce. Not in Browne, D.S.B., etc., or the usual chemical bibliographies. (Bolton, 734)

Fodinae Regales.

23

As they are Blazon'd.

Silver with a Mount Vert. A Man working within a Mine, with two Hammers and a Lamp, all in their proper colours on a Chief Azure. A Cake of Copper between a Bezant and a Plate on a Wreath Silver and Azure. A Demy man (called in Dutch the Schicht Master) with an Escoccheon on his Breast Or and Azure per Bend inverted; in one of his Hands an Instrument called a Wedge, and in the other Hand a Compass, Gold mantled, Silver doubled Azure, supported with two Men, the one called the Hammer-man, with a Hammer on his Shoulder; and the other the Smelter, with a Fork in his Hand; all in proper colours.

THE ARMS
OF THE SOCIETY FOR THE
MINERAL AND BATTERY WORKS,
Given also Anno 10. Eliz.



Pettus. Fodinae Regales. London, 1670.

PEZOLD, Johann Diderich

Dissertatio Inauguralis Chemica de Reductione Antimonii, quam consentiente illustri medicorum ordine in Academia Georgia Augusta pro obtinendis summis in medicina et chirurgia honoribus publice die (blank) Jul. A. MDCCLXXX. defendet auctor Joannes Didericus Pezold Hannoveranus. Göttingen: Litteris Frid. Andr. Rosenbusch. (1780).

First edition. 4to. 2 leaves, 32 pp. Very good copy in maroon quarter morocco, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation on the conversion of antimony to its calx, written during the period in which Lavoisier was successfully overthrowing the phlogiston theory. Pezold (dates unknown), of Hanover, discusses the relative merits of the phlogistic and antiphlogistic theories, with references to earlier and contemporary chemists (e.g., Jean Rey, Boyle, Scheele, and Priestley). He describes forty-two experiments, and those on the calcination of antimony and its ores (e.g., the sulphide) prove beyond doubt that the calx always weighs more than the original metal. Despite numerous references to Lavoisier and his definitive experiments on calcination in overthrowing the phlogiston theory, this work by Pezold has been completely overlooked by Duveen, Klickstein, and other chemical historians who have written on Lavoisier, probably owing to its considerable rarity. There is no copy in any of the great early chemical libraries. (Ferchl, 407)

PFÄHLER, Johann Gottfried

De Salium Crystallisatione nonnulla pro licentia gradum, honores et privilegia medicinae doctoris rite impetrandi in Academia Patria solenni eruditorum censurae subijcti die IX. Februarii A. O. R. MDCCLXXV. Johannes Gothofredus Pfähler Argentinensis. H. L. Q. C.

Strassburg: Ex Typographia Kürsneriana. (1775).

First edition. 4to. 22 pp. Very good copy with wide margins, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

IN THIS dissertation for the M.D. degree, Pfähler (dates unknown) lists the solubilities of thirty inorganic salts in water at temperatures ranging from ambient to the boiling point (p. 8). The work is well documented with references to the writings of earlier and contemporary chemists, those of Rouelle, Spielmann, Baumé, and Lavoisier being frequently quoted. On page 19 the author describes the crystalline habits of fourteen salts. Very scarce. Not in Blake, Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Ferchl, 407)

PFEIFFER, Michael

Propempticon Inaugurale de Arcano Tartari ad Mentem Boerhaavii pro Pauperibus Parando.

Jena: Litteris Jo. Friderici Ritteri. (1745).

First edition. 4to. 8 pp. Crisp copy in maroon quarter cloth, marbled boards, spine gilt-lettered and dated. Bound with: Lausberg, Johann, *De Tenesmo Haemorrhoidali* (Halle, 1744).

A DISSERTATION ON the preparation and chemical and medicinal properties of potassium acetate, by Pfeiffer (b. 1721), a student of Johann Adolph Wedel (1675–1747), professor of medicine and chemistry at Jena (see Partington, II, 317). The preparation of “arcano tartari” from “salt of tartar” (potassium carbonate) and vinegar (dilute acetic acid) is described, with references to Boerhaave’s *Elementa Chymiae* (Leyden, 1732), which is the best procedure recommended. On pages 7–8 there is a biographical account of Pfeiffer. Very rare. Not in Blake, Waller, Waring, or the chemical bibliographies. (Ferchl, 570)

PHAEDRO, Georg

Physicall and Chymicall Works, Composed by Geor: Phaedro, surnamed the Great, of Gelleinen; viz. 1. His Physicall and Chymicall Practise. 2. His Physicall and Chymicall cure of the Plague. 3. His lesser Chirurgery. 4. His Chymicall Fornace. Being the Chymicall way and manner of Cure of the most difficile and incurable diseases; as also the preparing those Secrets; with the Elucidation of the Characteristicall Coelestiall Physick. Selected out of the Germane and Latine Language; By the industry of John Andreas Schenckius of Graffenberg, Doctor of Physick.

London: Printed for William Sheares, at the Bible in St Pauls Churchyard, near the little North doore. 1654.

First English edition. 8vo. 8 leaves, 133 pp. A superb copy, in the finest possible condition, all edges gilt, sumptuously bound in full mottled calf antique, spine and covers richly gilt, by Bayntun-Riviere (Bath, England).

PHAEDRO, OR Fedronis von Rhodoch, was a celebrated German physician (fl. 1566) and an ardent supporter of Paracelsus. This English translation by Nicholas Culpeper is of the author’s *Opuscula iatro-chemica quatuor* (Frankfort: J. Wolphius for A. Hummus, 1611), edited by J. G. Schenck and containing the four principal works he originally published in the 1560s and 1570s. In addition to detailed descriptions of the iatrochemical medicines, the book is very important as it gives the chemical preparations of acids, alkalies, salts, and other materials and thus sheds light on sixteenth-century practical chemistry. There were three editions of this work in the seventeenth century: this of 1654, which was reprinted in 1656, and a third edition, which

appeared with the title *The Art of Chymistry*, 1674. Bolton, Duveen, Ferguson, and Neu mention the 1674 edition, and Duveen (whose copy was imperfect) emphasizes its rarity. The author and this work were unknown to Ferchl, Osler, Partington, Smith, Thorndike, Waite, and Waller. Wing, P1955, lists only three copies of the 1654 edition, including the Cushing copy (P246), now at Yale. Extremely rare. (Watt, II, 752f)

PHARMACOPOEIA COLOGNE

Dispensarium Usuale pro Pharmacopoeis inclytæ Reipublicæ Coloniensis. Ad requisitam petitionem amplissimorum, strenuorum, Nobilium, atq; Prudentium & Fortium Procerum, Coss. Procoss. q; venerandi sanctiq; Senatus eiusdem florentissimæ Reipublicæ.

Cologne: Apud heredes Arnoldi Birkmanni. 1564.

First edition, first issue. 8vo. 1 leaf, 198, (5) leaves + 8 blank leaves. Roman and italic letter. Woodcut printer's device on title. Full-page woodcut of furnace (f. 65), half-page woodcut of furnace and still (f. 181), and 3 smaller woodcuts of apparatus (ff. 182 and 183). Fine copy in contemporary blind-stamped pigskin over oak boards, with original brass clasps and catches, fifteenth-century manuscript vellum endpapers. Front cover with "H. P. M." at top and "M. C. A." at bottom; back cover with "D" top and bottom.

THE EXTREMELY rare first issue of the first edition of the third official German pharmacopoeia. It is the first to appear for the city of Cologne and is of considerable iatrochemical importance. "The first official pharmacopoeia in Germany was the *Dispensatorium* of Valerius Cordus, issued in 1546 and made official for the imperial city of Nuremberg. [This] was followed within 20 years by pharmacopoeias for Augsburg (compiled by Adolf Occo in 1564) and Cologne (1565). . . . Most comprehensive of the three is the *Dispensarium Coloniense*, providing not only an official formulary but also a textbook type of information about the drugs. This latter concept became predominant among European pharmacopoeias up to the end of the 18th century" (Sonnedecker). In the second issue of 1565 the wording of the title is different after the word "Coloniensis." Also seven of the eight blank leaves at the end have additional text not in the first issue (see Wellcome). No other copies of the first issue (as here) have been located. The 1565 second issue is in the British Library and the Wellcome Library. (British Library, *S.T.C. German, 1455-1600*, 217; Wellcome, I, 4981; Sonnedecker, *Kremers and Urdang's History of Pharmacy*, 87)

PHARMACOPOEIA LONDINENSIS

Pharmacopoeia Collegii Regalis Medicorum Londinensis.
London: Apud T. Longman, T. Shewell, et J Nourse. 1746.

Fifth edition. 4to. xvi, 174 pp. Engraved frontispiece (J. Mynde sculp.) and woodcut vignette on title page. Very fine, large-paper copy, printed on thick paper, in original gilt-ruled sprinkled calf, spine gilt, maroon morocco label. Armorial bookplate (eighteenth century): John Mills.

DEDICATED TO George II, this important work set the standard for British pharmacopoeias for the remainder of the eighteenth century and the nineteenth until 1864, when it was replaced by the *British Pharmacopoeia*. The Royal College of Physicians of London, whose buildings are illustrated in the beautiful frontispiece, first published the *Pharmacopoeia Londinensis*, in 1618, and three editions followed until the fourth in 1721. Long in preparation, the present fifth edition is a completely new work. Begun in 1738 by the president and censors of the college, the chemical experiments and preparative methods were carried out by Dr. Henry Pemberton (1694-1771), who was an "excellent chemist." A friend of Sir Isaac Newton, Pemberton superintended the third edition of the *Principia* (1726). Descriptions of the preparation of the chemicals used in pharmacy are clear, with quantitative directions and the exact laboratory techniques to be employed. Munk (III, 382-385) discusses this edition in detail and emphasizes its importance. (Blake, 349; Ferguson, II, 178 [not in Young Coll.]; Kremers & Urdang, 51; Matthews, *History of Pharmacy*, 79; Neu, 3214; Norman, 1692; Waller, 7386)

PHILALETHA, Eirenaeus

Secrets Reveald: or, An Open Entrance to the Shut-Palace of the King. Containing, The greatest Treasure in Chymistry, Never yet so plainly Discovered. Composed by a most famous English-man, Styling himself Anonymus, or Eyraeneus Philaetha Cosmopolita: Who, by Inspiration and Reading, attained to the Philosophers. Stone at his Age of Twenty three Years, Anno Domini, 1645. Published for the Benefit of all English-men, by W. C. Esq; a true Lover of Art and Nature.
London: Printed by W. Godbid for William Cooper in Little St. Bartholomews, near Little-Britain. 1669.

First edition. 8vo. 15 leaves, 120 pp., 3 leaves. Corner missing from leaf of contents (affecting several words); otherwise very good copy, in calf antique, gilt-lettered on spine.

ACCORDING TO Ferguson, this edition was made from the original manuscript and is not a translation of *Introitus Apertus ad Oclusum Regis Palatium* (Amsterdam, 1667), which was edited by Johann Lange. The penultimate leaf (p. 119) states: "This work was begun in the Year 1645, and

SECRETS *Reveal'd:*
 OR,
 An OPEN ENTRANCE
 TO THE
Shut-Palace
 of the KING:
Containing,
 The greatest TREASURE in
CHYMISTRY,
 Never yet so plainly Discovered.

Composed
 By a most famous ENGLISH-MAN,
 Styling himself ANONYMUS,
 or ETRÆNEUS PHILALETHA
 COSMOPOLITA:

Who, by Inspiration and Reading,
 attained to the PHILOSOPHERS STONE
 at his Age of Twenty three Years,
Anno Domini, 1645.

Published for the Benefit of all *English-men,*
 by W. C. Esq; a true Lover
 of Art and Nature.

*London, Printed by W. Godbid for William Cooper
 in Little St. Bartholomews, near Little-Britain, 1669.*

Philaetha. Secrets Reveal'd. London, 1669.

ended by me, who have made and do profess these Secrets, yet desire not applause, but to be helpful to a sincere Searcher of this Secret Art." The name Eirenaeus Philaletha is obviously a pseudonym, and the true identity of the author remains unknown. Philaletha has often been confused with George Starkey. However, they cannot be the same person (although they met about 1646 in America), as on the title page of this work it is plainly stated that Philaletha was aged twenty-three in 1645, which makes the year of his birth 1622. As Starkey was not born until 1627, Philaletha was clearly a different person. The confusion between these two men has apparently arisen because Philaletha gave Starkey some of his alchemical manuscripts, and Starkey quoted and incorporated them in some of his works. (Cushing, P259; D.S.B., XII, 616; Duveen, 470; Edelstein, 2204; Ferchl, 409; Ferguson, II, 192; Ferguson Coll., 559; Mellon, 125; Neu, 3258; Smith, 387; Watt, II, 752y; Wing, 85288)

PHILANDER, Joachim

Vitulus Aureus: the Golden Calf. Or, a Supplement to Apuleius's Golden Ass. An Enquiry Physico-Critico Patheologico-Moral into the Nature and Efficacy of Gold: The Prodigious Changes it causes in the Kinds of Men; so as sometimes to make a Fool become a Man of Parts, and a Man of Parts a Fool. With the Wonders of the Psychoptic Looking-Glass, Lately Invented by the Author. Joakim Philander, M.A. . . . London: Printed for T. Cooper, at the Globe in Pater-Noster-Row. 1749.

Second edition. 8vo. 2 leaves, vii, (1), 243, (1) pp. Very good copy, complete with half title, in gilt-ruled quarter calf antique, marbled boards, maroon morocco label.

A POLITICAL AND social satire in the form of alchemical, medical, and optical experiments. The first edition (London, 1739) is virtually unobtainable. A German translation appeared (Hamburg, 1745; Ferchl, 409; Ferguson, II, 197–198; Neu, 3262; Wellcome, IV, 374). This English edition is very rare. Not in Blake, Watt, or the usual bibliographies. (British Library Catalogue [Readex edition], vol. 20, p. 178, col. 738)

PHILLIPS, Richard

A Grammar of Chemistry; in which the principles are familiarized by easy and entertaining experiments. By the Rev. D. Blair . . .

London: Printed for Richard Phillips, . . . 1809.

First edition. 12mo. iv, 174 pp., 1 leaf, 35, (1) pp. (list of books by R. Phillips). With 6 engraved plates of chemical apparatus (Cooper sculp.). Fine copy in original gilt-ruled sheep, dark-blue morocco label, gilt. Armorial bookplate: Esther Acklom.

SIR RICHARD PHILLIPS (1767–1840), publisher, friend of Joseph Priestley, and author of this and other introductory textbooks, had a very colorful career in several widely different occupations. He wrote under various pseudonyms, in this case Rev. D(avid) Blair. A very well-written elementary text, with a useful glossary of chemical terms (pp. 143–170) and a price list of chemicals and apparatus (pp. 171–174). Several American editions appeared: e.g., first, Philadelphia, 1810; second, 1817 (Duveen, 82); third, 1819; fourth, 1823 (Bolton, 737; Smith, 388). The present rare first English edition is not listed in any of the early chemical bibliographies. (Watt, I, 119p)

PHILLIPS, Richard

A Grammar of Chemistry, wherein the principles of the science are familiarized by a variety of easy and entertaining experiments; with questions for exercise, and a glossary of terms in common use. By the Rev. D. Blair. . . . Corrected and revised by Benjamin Tucker, . . .

Philadelphia: Published and sold by David Hogan. 1819.

Third American edition. 12mo. 184 pp. With engraved frontispiece (Kneass sc.) depicting a "Pneumatic Tub" (with gas jars) and the "Economical Apparatus of Dr. Woodhouse" (distillation equipment). Good copy in contemporary gilt-ruled tree calf, green morocco label, gilt. From the library of the American zoologist Charles Atwood Kofoid (1865–1947), with his bookplate on front pastedown endpaper.

AN AMERICAN edition of this popular textbook, which first appeared in London in 1809 and was reprinted in Philadelphia in 1810 and 1817. The editor, Tucker, states in the preface to this edition that he has "judged it expedient to give a more full and satisfactory explanation of the different species of attraction, as well as of simple and compound affinity." (Bolton, 737; Smith, 388)

PHILLIPS, Richard

A Million of Facts, connected with the studies, pursuits, and interests of mankind, serving as a common-place book of useful reference on all subjects of research and curiosity. Collected from the most respectable modern authorities. . . . Second edition. Revised, corrected, and improved with additions.

New York: Conner & Cooke, Franklin Buildings. 1835.

Second American edition. 8vo. 338 pp. Some water staining at front and back; otherwise good copy in contemporary gilt-ruled calf.

A USEFUL WORK of general knowledge of the period (first edition: London, 1832). Entries of chemical importance

include chymistry (the American form of the word sometimes used at that late date), electricity, heat, mineral kingdom, etc. The section "Chymistry" (pp. 126–145) gives a summary of the theories and practice of the science. The American edition first appeared in 1833. Not in the usual chemical bibliographies.

PICO DELLA MIRANDOLA, Giovanni Francesco

De Auro Libri Tres. Opus sane aureum in quo de Auro tum aestimando, tum conficiendo, tum utendo ingeniose & docte disseritur. Cum explicatione perutili & periocunda complurium, tam Philosophie, quam facultatis Medice arcanorum. Ferrara: Excudebat Victorius Baldinus Typographus Ducalis. 1587.

Second (first Ferrara) edition. 8vo. 8 leaves, 133, (1) pp., 1 leaf. Large alchemical woodcut on title page and historiated woodcut capitals. Roman and italic letter. Exceptionally fine, crisp copy, entirely uncut and with wide margins. Splendidly bound in full maroon morocco antique, covers with double gilt fillets and center gilt ornaments, inner dentelles gilt, spine gilt-lettered and dated.

AN IMPORTANT Renaissance alchemical work listing five ways of transmuting base metals into gold, originally written about 1515 but first printed much later (Venice: J. B. Somaschus, 1586, 4to.). The author (ca. 1469–1533), an eminent Italian philosopher and theologian, was a nephew of the great Joannes Picus Mirandulanus (1463–1494). The editor, Caesar Caprius, states in his dedication that the manuscript was given to him after Pico's death by his daughter Julia. "While not minimizing the difficulties of transmutation . . . making gold by art . . . is easier today when metals and minerals are mined which were unknown to antiquity . . . [he] gives some recent instances of successful transmutation. . . . Jurists and schoolmen are cited pro and con as to alchemy" (Thorndike, who says that this work is of "dubious authenticity"). Ferguson describes a later edition (Ursel, 1598). The text was reprinted by Zetzner (*Theatrum chemicum*, 1613) and by Manget (*Bibliotheca chemica curiosa*, 1702). Uncut copies of this edition are very rare. Only the first edition (1586) is listed in Bolton, Ferguson Coll., Waite, etc. (British Library, *S.T.C. Italian, 1465–1600*, p. 514; Duveen, 474; Ferchl, 411; Ferguson, II, 203 [not in Young Coll.]; Neu, 3275; Rosenthal, 689; Thorndike, V, 540; Wellcome, I, 5027)

PICOT DE LA PEYROUSE, Philippe Isidore

Traité sur les Mines de Fer et les Forges du Comté de Foix, Par M. De La Peirouse, Baron de Bazus, &c. des Académies des Sciences de Stokholm, de Toulouse; Correspondant de l'Académie des Sciences de Paris, de la Société Royale d'Agriculture, &c. &c. . . .

Toulouse: De l'Imprimerie de D. Desclassan, Maître-es-Arts, Imprimeur de l'Académie Royale des Sciences. 1786.

First edition. 8vo. 4 leaves, xvii, 388 pp., 2 leaves. With 6 folding engraved plates (Gaitte sculp.). Very fine copy, crisp and spotless, in half vellum, patterned boards.

BARON PICOT DE LA PEYROUSE (1744–1818), born in Toulouse, was *avocat général* à la Chambre des Eaux et Forêts of the Toulouse Parliament, inspector of mines in Paris, and professor of natural history in the Central School of Toulouse. From 1800 to 1806 he was also mayor of Toulouse. The present book deals with all aspects of the mining of the iron ores of Foix, their proper means of smelting, the fabrication of cast and wrought iron, the conversion of iron into good quality steel, etc. There are references to the use of manganese to produce specially hardened steels. The works of Bergman, Born, Guyton de Morveau, Kirwan, Monnet, Scheele, Woulffe, and other writers on iron and steel chemistry and metallurgy are discussed. In addition to the present very comprehensive work, the author published papers in the *Journal de physique* on manganese minerals and other minerals found in the Pyrenees. He also published papers in the *Mémoires de Toulouse* on the barometric height of mercury on various mountain peaks and a description of a meteorite. The present work, the author's only book, was translated into German by D. L. Gustav Karsten with the title *Abhandlung über die Eisenbergwerke und Eisenhütten in der Graffschaft Foix* (Halle, 1789), a copy of which is in the Hoover Collection (No. 638). A milestone work in the chemistry and metallurgy of iron. Rare. Not mentioned by Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Hoover, Neu, Partington, Smith, Waller, Watt, etc. (Ferchl, 399; Poggendorff, II, 444)

PICTET, Marc Auguste

An Essay on Fire. By Mark Augustus Pictet . . . Translated from the French, under the inspection of the author, by W. B. M.D.

London: Printed for E. Jeffery, Pall Mall. 1791.

First English edition. 8vo. 8 leaves, 304 pp. With large folding frontispiece of apparatus (H. L'Eveque Sculp.) and 2 folding tables (facing pp. 163 and 166). Fine copy, with half title, in contemporary tree calf, richly gilt spine, red and dark-green morocco labels.

PICTET (1752–1825), a Swiss lawyer, was influenced by H. B. de Saussure to study science and was appointed to the chair of philosophy at the Geneva Academy when de Saussure retired. His most important research, a series of experiments on the nature of heat and hygrometry, appeared as *Essai sur le feu* (Geneva, 1790), which is here translated into English by W. Belcombe. The *Essai* “was intended to be the first volume in a work entitled *Essais de physique*, but no further volumes were published” (D.S.B.). In the preface Pictet states that he had delayed publishing the book and had been anticipated in some of his discoveries and interpretations by “Mr. Lavoisier, in his *Elementary Treatise of Chemistry*, . . . having considered the modifications of fire in a manner very analogous to mine.” Pictet correctly explains the formation of dew, and his theory was completed in 1814 by W. C. Wells. Zeitlinger describes the English edition as “rare.” A German translation by S. J. Kapff appeared (Tübingen, 1790; Duveen, 652). (Cole, 1037; D.S.B., X, 603; Smith, 389; Sotheran, Cat. 750 [1914], 13317; Watt, II, 756d; Wolf, II, 210)

PICTET, Mark August

An Essay on Fire. By Mark Augustus Pictet . . . Translated from the French, under the inspection of the author, by W. B. M.D.

London: Printed for E. Jeffery, Pall Mall. 1791.

First English edition. 8vo. 8 leaves, 304 pp. With 2 folding tables (facing pp. 163 and 166). Fine copy, with half title, in contemporary tree calf, spine richly gilt, red morocco label.

ANOTHER COPY of this well-known work, absolutely complete as issued without the frontispiece. Owing to the large size of the folding frontispiece, copies that contain it have a definite indentation of the title leaf and the first several leaves. As many copies (e.g., British Library and Smith) have no frontispiece, it appears that it was not issued with all copies. The present copy plainly never had the frontispiece, as the printing of the title page is faintly offset onto the verso of the half-title leaf. No priority of issue has been established for copies with or without the frontispiece, and they are otherwise identical.

PICTET, Raoul Pierre

Mémoire sur la Liquéfaction de l'Oxygène la Liquéfaction et la Solidification de l'Hydrogène et sur les Théories des Changements des Corps. Par M. Raoul Pictet. . .
Geneva: J. Sandoz. 1878.

First book edition. 8vo. 108, (4) pp. With 3 folding plates and 1 woodcut illustration (apparatus for liquefying gases). Fine copy, uncut with wide margins, in modern blue cloth

boards, printed paper label on spine, original printed wrappers bound in.

A SWISS MILITARY officer, Pictet (1846–1929) studied physics and chemistry in Geneva and Paris (1868–1870), then returned to Geneva and devoted himself to experimentation in the physics of low temperatures. The present work records the methods he employed to liquefy so-called permanent gases and describes the first really practical process for the large-scale liquefaction of oxygen. The first account of Pictet's experiments was presented to the French Academy (in *Comptes Rendus*, 1877, v. 85, p. 1214) together with similar experiments on the liquefaction of gases by Louis Paul Cailletet (1832–1913). “It was Pictet's researches that led to a scientific achievement which at once made him internationally famous. . . . Cailletet and Pictet had worked independently and by different methods. While Cailletet's method had been to compress, cool, and expand the gas to be liquefied, Pictet had employed the ‘cascade’ process, in which the refrigeration cycles of three different cooling media with successively lower critical temperatures were arranged in series, so that the gas liquefied first would act as a coolant in the liquefaction of the next. . . . Although Cailletet could establish a priority of a few weeks, Pictet has been allowed to share the credit for the first liquefaction of an atmospheric gas. His claim also to have liquefied hydrogen was later shown to be based on error” (D.S.B.). A very scarce milestone work in the history of chemistry and physics. (Bolton, 739; Cajori, *History of Physics*, 1929, p. 213; D.S.B., X, 604; Magie, *Source Book in Physics*, 1963, pp. 194–196; Travers, *Experimental Study of Gases*, 1901, pp. 183–184).

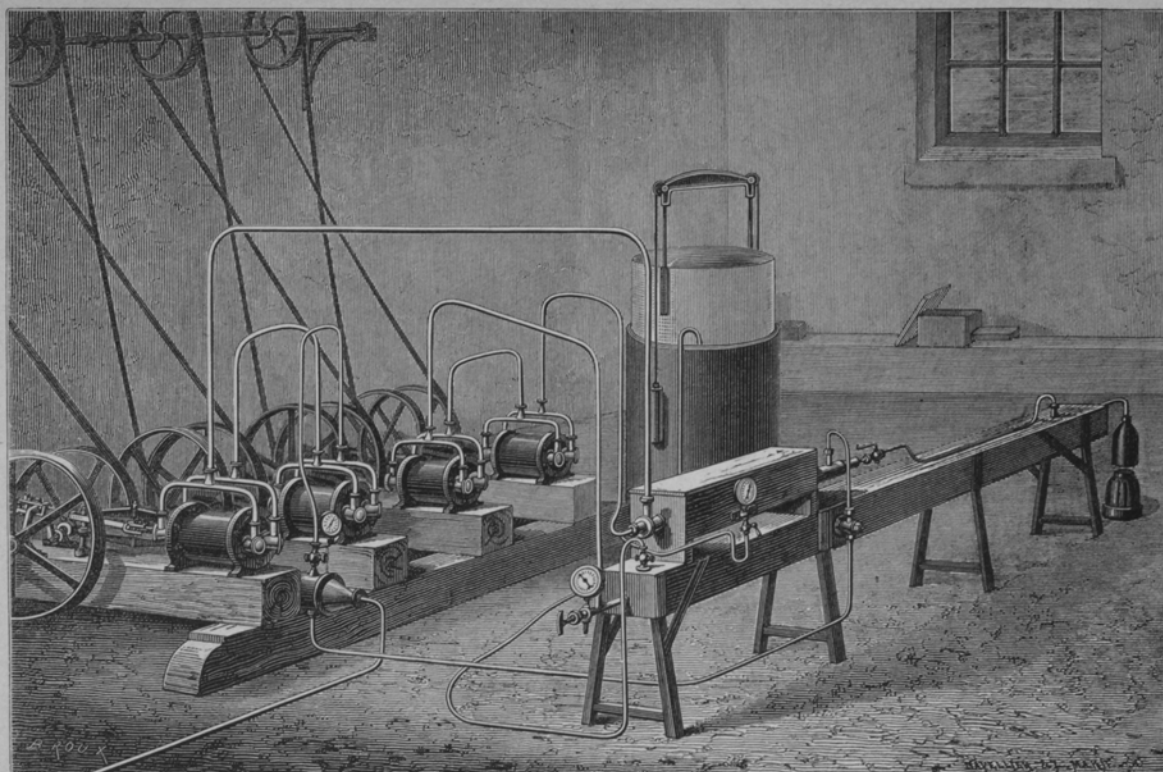
PIGOT, Francis

An Abstract of the Present State of the Mines of Bwlchyr-Eskir-Hyr; and of the Material Proceedings of the Committee, appointed for the Management thereof. Published for the Information and Satisfaction of the absent-Partners, and at their Request.

N.p., n.d. (London, 1700).

First edition. Folio. 4 pp. Bound with: Shire, William, *A Familiar Discourse or Dialogue Concerning the Mine-Adventure* (London, 1700).

PIGOT (fl. 1700) was secretary of the company formed by Sir Humphrey Mackworth (1657–1727) to exploit and develop the very rich silver, copper, and lead mines of Sir Carbery Price (d. 1695) in Cardiganshire, Wales. Mackworth purchased the shares in the mines on Price's death in 1695. This *Abstract* is based on William Waller's *An Essay on the Value of the Mines, Late of Sir Carbery Price* (London, 1698) and is of mining, metallurgical, and chemical



Appareils de M. R. Pictet servant à la liquéfaction des gaz permanents.

Pictet, Raoul Pierre. Mémoire sur . . . l'Oxygène. Geneva, 1878.

interest. Very rare. Wing (A139) cites only two copies (British Museum and Yale) and lists the work under "Abstract" rather than under "Pigot," the author. (Sotheran, Cat. 806 [1927], 14237; Wing, A139)

PIGOT, Francis

An Abstract of the Present State of the Mines of Bwylchyr-Eskir-Hyr; and of the Material Proceedings of the Committee, appointed for the Management thereof. Published for the Information and Satisfaction of the Absent Partners, and at their Request. By Order of the Committee.

London, Printed in the Year 1700.

Second edition. 8vo. 15 pp. Fine copy, in blind-ruled full tan calf antique, spine gilt-lettered and dated. Bound with: Shire, William, *A Familiar Discourse or Dialogue Concerning the Mine-Adventure* . . . (London, 1700).

THIS IS the first edition to be printed in an 8vo. format. The true first edition appeared on 2 folio leaves (4 pages), with no indication of place or date of publication. This second (first 8vo.) edition has a formal title page and was undoubtedly circulated separately, as well as being bound with Shire's *Familiar Discourse*, as here. Although signed on page 15 by Francis Pigot, Wing lists the work under "Abstract." Very rare. Wing A139A lists only three copies (Harvard, Yale, and Columbia).

PIHL, Andreas

Dissertatio Chemica de Arsenico, quam, . . . praeside Mag. Torb. Bergman, . . . publice ventilandam sistit Andreas Pihl, Westmannus, . . . die 7 Maji, Anni 1777.

Uppsala: Typis Edmannianis. (1777).

First edition. 4to. 1 leaf, 24 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN INTERESTING dissertation on arsenic and its compounds by Pihl (dates unknown), with Torbern Bergman presiding. Pihl first traces the history of arsenic and its minerals from the Greek and Roman period to the mid-eighteenth century, then discusses the preparation and properties of arsenic compounds. Pages 22–24 describe arsenical medicines and their uses. A rare monograph on an important subject. Not in the usual early chemical bibliographies. (Moström, 117; Partington, III, 182)

PIHLMAN, Johann, and TOCKLIN, Henric

Dissertatio Chemica, Theoriam Salium Acidorum Breviter Exhibens, quam . . . Publicae disquisitioni modeste submitunt Auctor Johannes Pihlman Philos. Magister, et Respondens Stipendiarius Regius Henricus Tocklin, Borea-Fennones, in Audit. Majori, die XXIV Novembr. Anni MDCCLVI. . . .

Åbo: Impressit Direct. & Typogr. Reg. Magn. Due. Finland, Jacob Merckell. (1756).

First edition. 4to. 4 leaves, 40 pp. Few minor stains; otherwise fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

PRESENTED AT the University of Åbo (now Turku), Finland, this well-documented dissertation on the theory of acids and salts refers to the works of many earlier and contemporary chemists. Acids are defined as substances containing small amounts of salt-forming matter, combined with variable quantities of "philosophical" earth, mercury, and sulphur. Salts are produced when acids react with certain "earths" (e.g., oxides, sulphides, and carbonates). The preparation, properties, and reactions of acidic, neutral, and alkaline salts are discussed. There are references to Newton (p. 15) and Boyle (p. 23). A monograph on acids and salts of significant historical interest. Very rare. Unknown to the usual bibliographers.

PILKINTON, W.

A Natural and Chymical Treatise of Agriculture, by the late Count Gustavus Adolphus Gyllenborg: with practical remarks and additions, by W. Pilkinton, . . . Published by subscription. Romsey: Printed by R. Sharp, Church-Street and Market-Place. 1822.

Second edition. 8vo. xlvii, (i), 210 pp. Fine, crisp copy, uncut and unpressed, in the original green cloth, paper label on spine. From the library of Job Lousley, noted nineteenth-century bibliophile of Hampstead Norris, Berkshire, with his signature in ink, dated 1848, on the title page and page 196. Lousley's appraisal is written neatly on the title page: "A valuable work full of good remarks and observations."

THE TITLE page and preface state that this work is based on *The Natural and Chemical Elements of Agriculture* (London, 1770) of Count Gustavus Adolphus Gyllenborg (fl. 1761), which itself was prepared under the direction of the famous Swedish chemist Johan Gottschalk Wallerius (1709–1785), the "father of agricultural chemistry" (D.S.B.). No information has been found on Pilkinton except that given in the title, that he was a "Land Surveyor, Valuer of Estates, and late Secretary to the East Devon Agricultural

Society." Published in Romsey, Hampshire, the first edition appeared at Plymouth (1818). A long list of subscribers to the first and second editions appears on pp. ix–xliii. An important book on agricultural chemistry, which closely follows the John Mills' English translation (1770), with some additions by Pilkinton. Bolton (p. 506) describes the Mills' edition as "one of the earliest scientific treatises on agricultural chemistry." A very rare book on which I have found no bibliographical reference except Morgan (p. 71), who describes the first edition (1818).

PINCOT, Daniel

An Essay on the Origin, Nature, Uses, and Properties, of Artificial Stone: together with Some Observations upon common natural Stone, Clays, and Burnt Earths in general. In which the Durability of the latter is shewn to be equal, if not superior, to the hardest Marbles. Being the Result of many Experiments. By Daniel Pincot . . .

London: Printed by Richard Hett; and sold by C. Marsh . . . F. Newbery . . . and by the Author, at the Manufactory . . . 1770.

First edition. 8vo. 79, (1) pp. Fine copy, uncut with wide margins, in half calf antique, marbled boards, maroon label, spine dated.

PINCOT (fl. 1770), of whom nothing seems to be known, describes himself on the title page as an "rtificial Stone Manufacturer." The material described herein appears to have been some kind of earthenware, made from burnt clay, the experimental details on which are not precisely disclosed. Singer's *History of Technology* (IV, 446–447) states: "The Italians had long produced . . . terracotta. About the middle of the eighteenth century attempts were made to popularize this material in England." "I can find no record of this work or its author" (Duveen). (Duveen, 475; Neu, 3282; Sotheran, Cat. 750 [1914], 13345 ["Rare"]; Watt, II, 758a)

PINI, Carlo Ermenegildo

Opuscoli di Ermenegildo Pini C. R. B. inseriti nelle Memorie della Societa Italiana 1792 uno de' quali contiene Osservazioni sulla nuova Teoria e Nomenclatura Chimica come inammissibile in Mineralogia; nell'altro si stabilisce Una generale, straordinaria, e breve inondazione del globo terrestre, come unica cagione delle rivoluzioni, che per l'azione delle acque v'intervennero da che fu abitato.

N.p., n.d. (Verona, 1792).

First separate edition. 4to. 2 leaves, 60, 112 pp. Mint copy with wide margins, in original gilt-ruled half sheep, speckled boards, tan label.

THE EMINENT mineralogist Pini (1739–1825) was professor of natural history at Milan and a member of the Order of the Barnabites. "This volume is an offprint of two articles published in *Memorie della Societa' Italiana*, vol. VI, 1792. The first is a criticism of the new French chemistry and the new chemical nomenclature. There are chapters on the composition of water, hydrogen and oxygen, caloric, combustion, affinity, etc. In the final chapter the author gives his arguments for not applying the new nomenclature to mineralogy. The works of Guyton de Morveau, Lavoisier, Kirwan, Brisson, and others are cited. The second memoire is geological, dealing with the changes in the terrestrial globe produced by the action of water" (Cole). A superb example of late-eighteenth-century Italian fine printing. Bolton gives the place of publication as Modena. (Bolton, *First Supplement*, 336; Cole, 1039; Ferchl, 413; Poggendorff, II, 455; Smith, 390)

PINI, Carlo Ermenegildo

Sulla Metachimica ossia Nuova Teoria e Nomenclatura Chimica. Lettera del P. Pini C.R.B. al Sig. Conte Marco Carburì . . .

Milan: Nella Stamperia di Giuseppe Marelli. 1793.

First edition. 8vo. 48 pp. Very fine copy, in quarter vellum antique, marbled boards.

IN 1792 PINI published in the *Memoirs of the Society Italiana* his *Osservazioni sulla nuova teoria e nomenclatura chimica come inammissibile in mineralogia*. A naturalist from Verona, Giuseppe Tommaselli (1733–1818) took up the defense of the French chemists in his *Risposta alle osservazioni del Padre Ermenegildo Pinsi sulla nuova teoria e nomenclatura chimica . . .* (Verona: eredi Moroni, 1793; 2 leaves, 36 pp.; Ferchl, 539). Dated 6 November 1793, the present work is Pini's reply to Tommaselli's *Risposta*. It contains further attacks on the new French nomenclature and antiphlogistic theories of Lavoisier and his followers and is addressed to Marco Carburì (1731–1808), professor of chemistry at the University of Padua, an adversary of the new chemistry. This rare work deserves further study, as Lavoisier's system of nomenclature had been introduced into Italy by the publication of Pietro Calloud's *Metodo di Nomenclatura Chimica* (Venice, 1790; Duveen & Klickstein, 148). (Bolton, *First Supplement*, 336; Ferchl, 413)

PISTORIUS, Israel

Disputatio Physica de Terra et Igne, quam D.O.M.A. in celeberrima Academia Wittenbergensi praeside M. Job. Andrea Lucio, Dresd. publicè ventilandam proponit Israel Pistorius Valle-Joachimicus. In auditorio minori, ad diem XXVII. Julii horis pomerid.

Wittenberg: Typis Johannis Röhneri, Acad. Typogr. 1650.

First edition. 4to. 8 leaves (unpaginated). Fine copy in modern boards. Bound with: Laurentius, C., *De aere* (1650) and *De aqua* (1650); and Scultetus, I., *De elementis* (1649).

AN IMPORTANT dissertation by Pistorius (dates unknown) on the Aristotelian elements, earth and fire, presented at the University of Wittenberg under the direction of Professor Lucius, of Dresden. The physical and chemical properties of earth are first covered, with references to the works of Danaeus, Marcilius Ficinus, Pliny, Rothmann, Seneca, Sperling, et al. There are several important references to the great astronomer Tycho Brahe, whom Pistorius describes as "Nobilissimus," with quotations from his writings. The properties of fire are then discussed: its various types (e.g., visible and subterranean), chemical action, supposed nature, and other properties. The combustibility of bitumen, carbon, sulphur, and other materials is covered. Pistorius asks whether elemental fire can exist under a concave lens. References to fire in the works of Cardan, Tycho Brahe, Pliny, Scaliger, et al., are mentioned. Of significance to the development of early theories of fire and heat, this very rare work has remained unknown to bibliographers and historians of chemistry.

PITT, Robert

The Craft and Frauds of Physick Expos'd. The very low Prices of the best Medicines Discover'd. The Costly Medicines, now in greatest Esteem, such as Bezoar, Pearl, &c. As also the Distill'd Waters, Censur'd. And the too frequent Use of Physick prov'd Destructive to Health. With Instructions to Prevent being Cheated and Destroy'd by the prevailing Practice. . . .

London: Printed for Tim. Childe, at the White-Hart in St. Paul's Church-yard. 1703.

Second edition. 8vo. 12 leaves, 203, (1) pp., 4 leaves (index). Very good copy, in original blind-ruled sheep, rebacked, maroon morocco label.

BORN IN Blandford, Dorsetshire, and educated at Wadham College, Oxford, Pitt (1653–1712; M.D., 1681) herein bravely attacks the quack apothecaries and the folly of taking too many medicines. He reveals the small cost of many really useful chemical drugs and discloses the worthlessness of some of the expensive potions prescribed by physi-

cians to enrich themselves. Contemporary therapeutics and chemicals are described, and the aim of the author is to raise the standards of the medical profession, as well as to take the dispensing of important drugs out of the hands of unreliable apothecaries. The present enlarged second edition is preferable to the first (London, 1702; 192 pp.), as it includes the valuable "Index of Simples" and "A Table of the Distempers of Humane Bodies." (Blake, 354; Blocker, 315; Ferchl, 414; Matthews, *Royal Apothecaries*, 46; Munk, I, 446; Neu, 3294; Partington, II, 706; Thorndike, VIII, 102–103; Watt, II, 759y; Wellcome, IV, 395

PLANIS CAMPY, David de

Bouquet Composé des Plus Belles Fleurs Chimiques. Ou ajencement des préparations, & expériences es plus rares secrets, & Medicaments Pharmaco-Chimiques; prins des Minéraux, Animaux, & Végétaux. Le tout par une méthode tres-facile, & non commune aux Chimiques ordinaires. . . . Paris: Chez Pierre Billaine, rue S. Jacques, à la Bonne Foy. 1629.

First edition. 8vo. 16 leaves, 1005, (1) pp., 1 leaf (errata). Engraved title page, fine engraved portrait of the author (facing p. 1), 20 pages of woodcuts of chemical apparatus. Marginal annotations in a contemporary hand and 14 pages of manuscript index at the end; otherwise very good copy in original vellum.

AN ENCYCLOPEDIA work, in eleven books, on iatrochemistry and alchemy, describing the preparation of numerous chemical compounds as well as alchemical and medicinal secrets drawn from the animal, vegetable, and mineral kingdoms. At the end is a chemical dictionary (pp. 924–976), followed by an extensive list of chemical symbols (pp. 977–997). Planis Campy (1589–1644) was a surgeon in ordinary to Louis XIV and had previously published several medical works (see Caillet, Cushing, et al.). Ferguson states that his "name seems to have disappeared from the history of pharmacy and medicine." The copy in the Young Collection is very defective, lacking the first four books (i.e., 590 pp.). Very rare. Not in British Library, Duveen, Edelstein, Neu, Osler, Waller, etc. (Caillet, 8721 [wrong date: 1624]; Ferchl, 415; Ferguson, II, 204; Ferguson Coll., 565; Thorndike, VII, 188; Wellcome, I, 5080)

PLANIS CAMPY, David de

Les Oeuvres de David de Planis Campy . . . contenant les plus beaux traictés de la Medecine Chymique que les Anciens Auteurs ont enseigné. Oeuvre nécessaire a tous Medecins, Chirurgiens, Artistes, Arboristes, Distillateurs, & autres qui desirent se perfectionner en cet Art. . . .

Paris: Chez Estienne Danguy, Rue Saint Jacques à l'Image Saint Estienne, devant Saint Benoist. 1646.

First collected edition. Folio. 7 leaves, 752 pp., 1 leaf (blank). Title page in red and black, incorporating large engraved portrait of the author. Woodcuts of chemical apparatus and symbols. Woodcut capitals, head- and tailpieces. Few minor marginal wormholes; otherwise handsome copy in original gilt-ruled calf, rebacked, maroon morocco label.

THE DEFINITIVE, posthumously published edition of Planis Campy's works, which "contain the finest treatises of chemical medicine, corrected by the author before his death and increased by some hitherto unprinted" (Thorndike). Duveen and Verginelli describe copies with a different imprint: Chez Denys Moreau, Rue Saint Jacques à la Salemandre d'Argent, devant Saint Benoist. The imprint with Estienne Danguy appears to be rarer. Not in British Library, Caillet, Cushing, Osler, Waller, etc. (Duveen, 476; Ferchl, 415; Ferguson, II, 205 [not in Young Coll.]; Ferguson Coll., 565; Neu, 3297; Thorndike, VII, 188–189; Verginelli, 255)

PLANTÉ, Raimond Louis Gaston

The Storage of Electrical Energy and researches in the Effects created by Currents combining Quantity with High Tension. By Gaston Planté . . . From 1859 to 1879. Translated from the French by Paul Bedford Elwell.
London: Whittaker & Co. 1887.

First English edition. 8vo. 6 leaves, 268 pp., 1 leaf (blank). With photographic portrait frontispiece of Planté and 89 woodcut figures (some full page) in the text. Very good copy in original gilt-lettered green cloth.

A CLASSIC ELECTROCHEMICAL treatise by the French physicist Planté (1834–1889), including the main results of his researches contributed to the Académie des Sciences, or published in other scientific periodicals, from 1859 to 1879. The original edition appeared as *Recherches sur l'électricité* (Paris, 1879). Herein is described the invention by Planté in 1859 of the modern lead accumulator, or storage battery, for producing a steady electrical current. His battery consisted of two pieces of rolled sheet lead, dipping into dilute sulphuric acid. One piece was the anode and the other the cathode. On passing an electric current through the cell and reversing its direction several times, the anode became coated with lead dioxide and the cathode with spongy lead. "His cell had a higher electromotive force than any primary battery" (Cajori). In 1881 Camille A. Faure (1840–1898) improved the Planté cell by coating the lead plates with red lead, which increased the capacity of the cell. After this improvement commercial circles quickly became interested, and modern storage batteries were gradually developed. Partington (IV, 17) mentions Planté, but not this work. (Cajori, *History of Physics* [1929], 230; Singer, *His-*

tory of Technology [1958], V, 206; Sotheran, Cat. 845 [1935], 19460; Wheeler Gift, 2425)

PLAPPART, Leopold Francis

Dissertatio Inauguralis Chémico-Médica de Antimonio, quam auctoritate, et consensu illustrissimorum . . . virorum, . . . pro gradu doctoratus, . . . in medicina honoribus . . . publicae disquisitioni committit Leopoldus Franciscus Plappart, Styrus Franzensis, . . . in Palatio Universitatis die (blank) mensis Julii MD. C. CLXV.
Vienna: Typis Josephi Kurtzboeck . . . (1765).

First edition. 4to. 39, (1) pp. Woodcut head- and tailpieces. Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

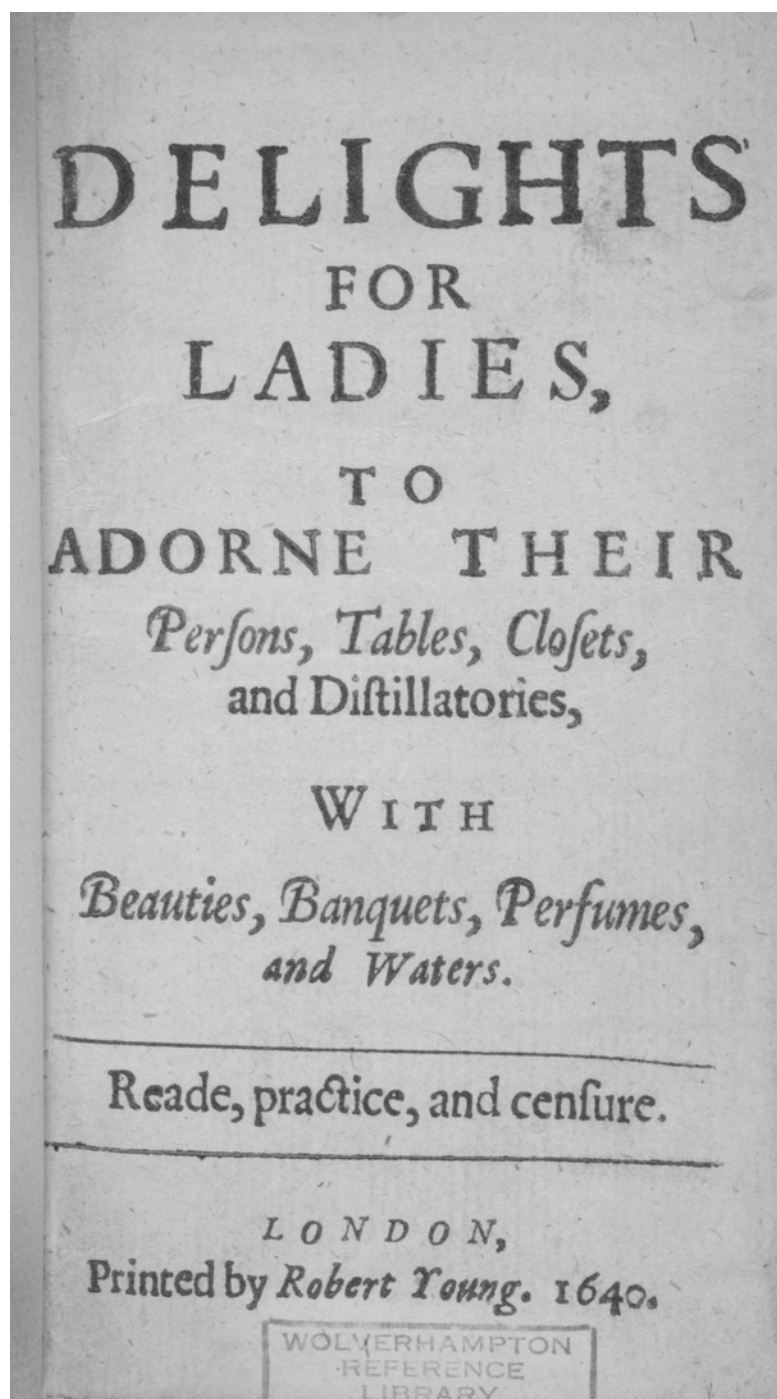
A DOCTORAL DISSERTATION on antimony and its compounds, describing their preparation, analysis, and medicinal uses. No biographical information has been found on Plappart, who came from Steiermark, a state in southeastern Austria that borders Yugoslavia. The author discusses the antimony minerals of Hungary, Saxony, Switzerland, and France. The processes for extracting antimony compounds from minerals are described, with references to Boerhaave, Geoffroy, Huxham, Lemery, Macquer, et al. Plappart also traces the history of antimonial medicines, mentioning Basil Valentine, Palmarius, Kunckel, and Sennert. Apart from Ferchl, this rare monograph has remained unknown to the early chemical bibliographers. (Ferchl, 415)

PLAT, Hugh

Delights for Ladies, to Adorne their Persons, Tables, Closets, and Distillatories, with Beauties, Banquets, Perfumes, and Waters. Reade, practice, and censure.
London: Printed by Robert Young. 1640.

12mo. Unpaginated, sign. A-H¹² (i.e., 189 pp. + 3 pp. blank). Each page of text with ornamental woodcut border. Small neat library stamp in lower blank margin of title and final page. Very good copy in blind-ruled dark calf antique, maroon morocco label.

THE SON of a London brewer, Plat (or Platt, 1552–ca. 1611), went to Cambridge (B.A., 1572), was a member of Lincoln's Inn, and published a work of poetry. Interested in "natural science, mechanical inventions, domestic economy, and especially in agriculture . . . his investigations into the effects of various manures, especially salt and marl, proved of genuine value" (D.N.B.). He carried out many practical experiments in alchemy, chemistry, and medicine—manuscripts on which subjects are in the British Library. A truly remarkable man, Plat was knighted by James I in 1605 for



Plat. Delights for Ladies. London, 1640.

his services as an inventor. In his *Delights for Ladies* (first, ca. 1600), divided into four sections, he describes “The Art of Preserving, Conserving, Candyng, &c.”; “Secrets in Distillation”; “Cookery and Huswifery”; and “Sweet Powders, Oyntments, Beauties, &c.” The work passed through numerous editions up to 1656, all of which are now very rare. Used in kitchens and home laboratories, many surviving copies are mutilated. Of the present edition only two copies are recorded: University of Glasgow and Harvard. Ferguson (*Books of Secrets*, I, part V, pp. 43–44) discusses the various editions. (Ferguson Coll., 566; S.T.C. 19987.5)

PLAT, Hugh

The Jewel House of Art and Nature: Containing Divers Rare and Profitable Inventions, together with sundry new Experiments in the Art of Husbandry. With Divers Chymical Conclusions concerning the Art of Distillation, and the rare practises and uses thereof. Faithfully and familiarly set down, according to the Authours own Experience. By Sir Hugh Plat of Lincolns-Inne, Knight. Whereunto is added, A rare and excellent Discourse of Minerals, Stones, Gums, and Rosins; with the vertues and use thereof, By D. B. Gent.

London: Printed By Elizabeth Alsop, and are to be sold at her house in Grubstreet, near the Upper Pump. 1653.

Third edition. 4to. 4 leaves, 232 pp. Title page within typographic border and woodcut on verso (giant ear of barley), 17 woodcut figures in text. Very good copy, all edges gilt, in old mottled calf (rejointed), 2 brown morocco labels.

THE FINAL and best edition of this fascinating compendium of 150 recipes, inventions, and experiments (first, 1594), containing the valuable addition on minerals (including the lodestone, p. 218) by the editor, Arnold de Boate (1606–1650). The book contains much of purely chemical interest. The second edition, also of 1653, bears the imprint Bernard Alsop. For the differences between the “Bernard” and “Elizabeth” editions, see Bent Juel-Jensen (*The Book Collector*, 1966, pp. 212–213). Duveen and Neu list the Bernard edition. (Blocker, 315; Ferguson, II, 207 [not in Young Coll.]; Ferguson Coll., 567; Ferguson, *Books of Secrets*, I, part 1, p. 17; Hoover, 644; Krivatsy, 9067; McDonald, 55; Perkins, 1354; Waller, 20124; Wing, P2391)

PLATIN, Johann P.

Dissertatio Physica do Gravitate Aëris, . . . sub praesidio Mag. Samuelis Duraei, . . . publice examinandam sistit Johannes P. Platin, Smolandus. . . . XVI. Maji, Anni MDCCLV.

Uppsala: Excud. Laur. Magnus Höjer, Reg. Acad. Typogr. (1755).

First edition. 4to. 1 leaf, 18 pp. With engraved plate (A.A. sc.) depicting 2 figures. Large woodcut headpiece and capital. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

ON THE density and pressure of the air, and their diurnal variability, with references to Boyle, Newton, Guericke, Hauksbee, et al. On pages 10–14 Platin calculates the height, weight, and volume of the atmosphere above the earth, comparing his results with those of earlier and contemporary scientists. A rare work on an important subject, to which no bibliographical reference has been found.

PLATTES, Gabriel

A Discovery of Infinite Treasure, Hidden since the Worlds Beginning. Whereunto all men, of what degree soever, are friendly invited to be sharers with the Discoverer, G.P. . . . London: Printed by I. L. and are to be sold by George Hutton, within the Turn-stile in Holborne. 1639.

First edition. 4to. 36 leaves, 92 pp., 1 leaf (errata). Blank leaf (sign. A1) lacking; otherwise fine copy in brown half morocco antique, cloth boards, spine gilt-lettered.

AN ORIGINAL genius in husbandry, Plattes (ca. 1600–ca. 1655) began his studies by declaring that improvements in crop yields could be achieved only by applying chemical knowledge to agriculture. This extremely important book “is a plea for the conservation of the nation’s agricultural and mineral resources. Waste is to be avoided and improved practices, based upon experimentation, are to be introduced” (Browne). Plattes states that crops derive their sustenance from the air and soil and observes that supplements to some types of soil are needed (e.g., plant ashes or chalk for acid soils, sand or salt for alkaline soils, and animal manures). Among his comments on chemistry, he urges (p. 24) the alchemists “to lay aside their Balderdash compositions and illiterate operations [and] leave off the practice for their owne good. . . . For not one in a thousand of the seekers finde that [which] they seeke; besides that I doe more than three quarters know that the Art is not so lucrous as they doe imagine.” It is sad to record that Plattes could not secure any support for his important new reforms to agricultural chemistry and “was found dead upon the street, a victim of want and starvation” (Browne). Two issues appeared in 1639 (priority unknown): one with the imprint “I. L., sold by George Hutton” (as here), the other with “J. E., sold by H. Moseley.” (Browne, *Source Book of Agricultural Chemistry*, 51–53; Ferguson, II, 208; Ferguson Coll., 567; Fussell, *Old English Farming Books*, 38–39; McDonald, *Agricultural Writers*, 78–84; S.T.C., 19998; Watt, II, 761p; Wellcome, I, 5100)

PLATTES, Gabriel

A Discovery of Subterranean Treasure, viz. Of all manner of Mines and Minerals, from the Gold to the Coale; with plain Directions and Rules for the finding of them in all Kingdoms and Countries. And also the Art of Melting, Refining, and Assaying of them is plainly declared, so that every ordinary man . . . may with small charge presently try the value of such Oares as shall be found either by rule or by accident. Whereunto is added a reall Experiment whereby every ignorant man may presently try whether any peece of Gold . . . be true or counterfeit, without defacing or altering the forme thereof . . . Also a perfect way to try what colour any Berry, Leafe, Flower, Stalke, Root, Fruit, Seed, Barke, or Wood will give: with a perfect way to make Colours that they shall not stayne nor fade like ordinary Colours. Very necessary for every one to know . . .

London: Imprinted by I. Okes, for Iasper Emery, and are to be sold at his shop at the signe of the Eagle and Child in Pauls Church-yard next Watlin-street. 1639.

First edition. 4to. 5 leaves, 60 pp. Fine copy, in original blind-ruled, calf, rebacked, maroon morocco label.

THE EARLIEST English work on mining and metallurgy and the first in English to describe the process of separating gold from silver with nitric acid. There are chapters on “the signes of Mines and Minerals” (lead, tin, iron, copper, silver, gold), “inferior Metals” (antimony, arsenic), and nonmetals (sulphur, talc, auripigmentum, glass, etc). Coal is discussed, and interesting observations are made on the gold and silver mines of Peru, New England, Virginia, the Bermudas, and other parts of the Americas. Plattes describes a process for making pure gold, but at a cost exceeding its value. The final chapter covers the extraction of plant pigments, with recipes for fixing the dyes to cloth using a mordant made from alum. Although he influenced many later writers, Plattes and his ideas were mostly neglected in his lifetime. (Annen, 6; Cole, 1042; Ferguson, II, 207–208; Ferguson, *Books of Secrets*, I, 17; Partington, II, 103; Ron, 844; Sabin, 63360; S.T.C. 20000; Singer, III, 63; Watt, II, 761p)

PLATTES, Gabriel

A Discovery of Subterranean Treasure: (viz.) Of all manner of Mines and Minerals, from the Gold to the Coal; with plain Directions and Rules for the finding of them in all Kingdoms and Countries. And also the Art of Melting, Refining, and Assaying of them is plainly Declared, so that every ordinary man, that is indifferently capacious, may with small charge presently try the value of such Oares as shall be found either by Rule or by Accident. Whereunto is added a Real Experiment whereby every ignorant man may presently try whether

any piece of Gold that shall come to his hands be True or Counterfeit, without defacing or altering the form thereof, and more certainly than any Goldsmith or Refiner could formerly Discern. Also a Pefect [sic] way to try what colour any Berry, Leaf, Flower, Stalk, Root, Fruit, Seed, Bark, or Wood will give: With a perfect way to make Colours that they shall not stain nor fade like ordinary Colours. Very necessary for every one to know, whether he be Traveller by Land or Sea, or in what Country, Dominion, or Plantation soever he shall Inhabit. By Mr. Gabriel Plattes.

London: Peter Parker, 1679.

Second edition. 4to. 2 leaves, 24 pp. Very good copy, bound in antique-style full calf, spine gilt lettered.

THIS WORK is important as it is the first in English on mining and metallurgy. Originally appearing (London, 1639) with the title *A Discovery of Subterranean Treasure*, a second issue (not edition) appeared (London, 1653), with a reset title page. The present is the true second edition, not the third, as stated by Wing. Another edition (or issue) appeared (London, 1684). It was also printed, with other works, in *A Collection of Scarce and Valuable Treatises upon Metals, Mines, and Minerals* (London, 1738 and 1740). Metals discussed include lead, gold, silver, iron, copper, antimony, and mercury. Nonmetals discussed include sulphur, arsenic, cinnabar, talc, auripigmentum, and glass. Coal is discussed on pages 18–21, and dyes and pigments derived from plants on pages 21–24. Plattes (d. 1644) was a clever and ingenious man who died destitute and starving on a London street. He bequeathed his papers to Samuel Hartlib. A very rare book. (Ferguson, II, 207 [not in Young Coll.]; Ferguson Coll., 568; Ferguson, *Books of Secrets*, Pt. III, 41; Fussell, 39; Partington, II, 103; Wing P2411)

PLATTNER, Carl Friedrich

Die Probierkunst mit dem Löthrobre, oder Anleitung, Mineralien, Erze, Hüttenproducte und verschiedene Metallverbindungen vor dem Löthrobre, mit theilweiser Anwendung des nassen Weges, qualitativ fast auf alle Bestandtheile, und quantitativ auf Silber, Gold, Kupfer, Blei und Zinn in kurzer Zeit zu untersuchen. . . .
Leipzig: Verlag von Johann Ambrosius Barth. 1835.

First edition. 8vo. xviii, 358 pp. With 2 large folding tables, and 3 folding engraved plates (blowpipes, balance, other apparatus). Fine, crisp copy, in modern patterned boards, black morocco label, gilt.

A CLASSIC WORK on the blowpipe and its use in the analysis of minerals. Plattner (1800–1858), who was the son of a miner, realized the importance of chemistry to the mining industry. He held various mining appointments and became professor of metallurgy and blowpipe analysis in

Freiberg (1842) and later in Bergrath (1856). "Having taken up the idea of quantitative mouth blowing assaying which was then almost unknown . . . he succeeded in devising trustworthy methods" (*Encyclopaedia Britannica*). "The best work following Berzelius's is that of C. F. Plattner" (Partington). There were translations into several foreign languages, and updated German editions appeared until 1897. Not in Cole, Duveen, Smith, etc. (Bolton, 742; D.S.B., XI, 34; Edelstein, 1835; Ferchl, 415; Partington, IV, 149; Pogendorff, II, 469)

PLATTNER, Carl Friedrich

The Use of the Blowpipe, in the Examination of Minerals, Ores, Furnace-Products, and other Metallic Combinations. . . . Translated from the German, with notes, by James Sheridan Muspratt . . . With a preface by Professor Liebig. . . . London: Taylor and Walton, Upper Gower Street. 1845.

First edition in English. 8vo. 10 leaves, 364 pp. Tables and text figures. Very good copy, uncut, in original blind-stamped green cloth, rebounded in matching cloth. Bookplate (dated 1901): Royal Institution of South Wales.

IN THE preface (dated December, 1844) the translator, Muspratt, states: "Plattner's *Probiertkunst mit dem Löthbrohre* has a very high reputation on the continent. It has been greatly and deservedly eulogized by four of the most eminent chemists of the day—Liebig, Berzelius, Rose, and Kane." This English translation "has been executed with as much fidelity as ability . . . its publication in England will be of essential service. . . . The present edition is further enhanced by Dr. Muspratt's annotations" (Liebig, preface dated 23 March 1844). This preface is not listed by Paoloni in his Liebig bibliography. (Bolton, 743; D.S.B., XI, 34; Partington, IV, 149; Sondheimer, 1261)

PLATTNER, Carl Friedrich, and MUSPRATT, James Sheridan

The Use of the Blowpipe in the Qualitative and Quantitative Examination of Minerals, Ores, Furnace Products, and other Metallic Combinations. . . . London: John Churchill, New Burlington Street. 1854.

Third English edition. 8vo. xviii, 405, (1) pp. + 16 leaves (publisher's advertisements, dated October 1854). Tables and text figures. Fine copy, uncut, in original blind-stamped purple cloth, spine gilt-lettered.

THE REVISED, greatly enlarged, and final edition edited by Muspratt (1821–1871), whose preface is dated October 1854. Although based on Plattner's original book, this edition has been largely rewritten and contains so many additions and improvements by Muspratt as to constitute a new

work. American editions appeared until 1875. (Bolton, 743; Duveen, 477)

PLENCK, Joseph Jacob von

Elementa Chymiae. . . .

Vienna: Apud Fridericum Wappler, et Beck. 1800.

First edition. 8vo. 328 pp. Natural flaw in title leaf repaired at an early date (no loss) and minor water stain on some leaves; otherwise good copy in original half calf, gilt, modern cloth sides.

A WORK ON pure and applied chemistry. Pure chemistry is divided into twelve categories, in which the author covers the chemistry of fire, light, gases, aqueous solutions, salts, earths, metals, inflammables, vegetables, animals, fermentation, and colors. Applied chemistry is divided into four categories: pharmaceutical, medicinal, economic (e.g., agricultural and brewing), and technical (e.g., glass, pottery and ceramics, dyes and pigments, tanning, and mineralogical). A second edition appeared (Leyden, 1801), also a German translation (*Anfangsgründe der Chemie*, Vienna, 1801). Rare. Not in Duveen, Edelstein, Ferguson Coll., Morgan, Partington, Smith, Sondheimer, etc. (Blake, 356; Bolton, 744; Ferchl, 416; Ferguson, II, 208 [not in Young Coll.]; Pogendorff, II, 472)

PLENCK, Joseph Jacob von

The Hygrology, or Chemico-Physiological Doctrine of the Fluids of the Human Body, translated from the Latin of J. J. Plenck, of Vienna, Professor of Chemistry, &c. By Robert Hooper, . . .

London: Printed for T. Boosey, No. 4, Old Broad-Street; W. Mudie, Edinburgh; and W. Gilbert, Dublin. 1797.

First edition in English. 8vo. 2 leaves, xxiii, (1), 270 pp. Fine copy in original half sheep, marbled boards, red morocco label.

THE FIRST translation into English of Plenck's *Hygrologia corporis humani, sive doctrina chemico-physiologica de humoribus, in corpore humano contentis* (Vienna, 1794). Translated by Hooper (1773–1835), physician and medical writer, this is one of his first publications (see D.N.B.). "The analysis of the Human Fluids, according to the laws of modern chemistry, has been, for some time, a desideratum in medicine; but until the present publication, no writer has exhibited a *complete view* of the subject. The great experience of the learned Author, . . . cannot but render it extensively useful in a chemical and physiological point of view" (preface). Numerous experiments on the substances in, and produced by, the human body are described. A milestone work in the early history of organic and biochemistry. At the end (pp. 259–270) is a list of the old and new nomenclature of

Lavoisier et al. German (Berlin, 1796) and French (Lyons, 1799) translations also appeared. Not in the usual chemical bibliographies. (Blake, 356; Bolton, 744; Ferchl, 416; Watt, I, 512n; Wellcome, III, 298)

PLENCK, Joseph Jacob von

Methodus Nova et Facilis Argentum Vivum aegris Venerea Labe Infectis Exhibendi. Accedit Hypothesis Nova de Actione Metallii huius in Vias Salivales. . . .

Vienna: Impensis Heredis Friderici Bernhardi. 1766.

First edition. 8vo. 8 leaves, 70 pp. Woodcut on title page, woodcut head- and tailpieces. Very good copy in dark-brown quarter morocco, marbled boards, spine gilt-lettered and dated. From the library of Dr. Brix von Wahlberg, court physician to Prince Fürstenberg, with inscription in ink at top of title: "Ex bibliotheca D: Brix de Wahlberg archiat: Fürstenberg."

ON THE uses of mercury in the treatment of venereal diseases, of biochemical interest for the detailed descriptions of fifteen experiments on the mixing of mercury with animal and vegetable fluids (e.g., mucus, albumen, blood, serum, bile, gum arabic, starch, and sugar). Plenck (1738–1807) refers to the work of Boerhaave, Crantz, Rosen von Rosenstein, van Swieten, et al. Very well received, this work was translated into English (London, 1767), German (Vienna, 1767), French (Nancy, 1768), Italian (Naples, 1783), and Portuguese (Lisbon, 1785). The author, a famous physician, became professor of botany and chemistry in the military medico-chirurgical academy in Vienna in 1783, and in 1798 he was raised to the rank of a Hungarian noble and received the secretaryship of the Joseph Academy. He published many works in surgery, obstetrics, medicine, botany, pharmacology, toxicology, and forensic medicine, as well as a chemical textbook, *Elementa Chymiae* (Vienna, 1800). Not in the usual chemical bibliographies. (Blake, 356; Waring, 472; Watt, II, 762n)

PLENCK, Joseph Jacob von

Toxicologia, ó Doctrina de Venenos y sus Antidotos. . . . Traducio del latin al castellano, de la ultima edicion, y aumentado por el Doctor D. Antonio Lavedan, . . .
Madrid: Imprenta de Don Fermin Villalpando, Impresor de Cámara de S.M.C. 1816.

First Spanish edition. 4to. viii, 299, (1) pp., 1 leaf (advertisement of medical and pharmacological books translated by Lavedan). Minor stain on top of back cover; otherwise fine, crisp copy in original Spanish tree calf, spine gilt, orange morocco label.

THE FIRST edition in Spanish of Plenck's celebrated *Toxicologia seu doctrina de venenis et antidotis* (Vienna, 1785), a deservedly popular, excellently arranged, and clearly writ-

ten work on all types of poisons and their antidotes. The book is an early classic of biochemistry, pharmacology, and toxicology. The present Spanish edition is valuable for the additions made by Antonio Lavedan, a professor of medicine and physician to the king of Spain, Ferdinand VII. Although not in the Young Collection, Ferguson (II, 208) mentions the *Toxicologia* (1785), as does Watt (II, 762); and Waller (no. 7530) lists the second Latin edition (Louvain, 1796). A German translation also appeared (*Toxikologie, oder Lehre von den Giften und Gegengiften*, Vienna, 1785; Bolton, 744). Very rare. No reference to this Spanish edition has been located in available bibliographies.

PLETZ, Martin

Dissertatio Physico Oeconomica de Nitro, . . . Praeside . . . Gustavo Harmens, . . . pro laurea philosophica obtinenda modeste submittit Martinus Pletz Scanus. Die XVI Maj. Anno MDCCXLVIII.

Lund: Typis Caroli Gustavi Berling, Directoris Officinae Typographicae Londini Gothorum. (1748).

First edition. 4to. 2 leaves, 32 pp. Large woodcut on page 16 (glass bell jar covering lighted candle, fed by bellows). Fine copy, in maroon quarter cloth antique, marbled boards, spine labeled in gilt: Harmens. Dissertations. 1748–1760.

A DISSERTATION ON the history, importance, and chemistry of niter (potassium nitrate); presented by Pletz under the direction of Gustav Harmens (1699–1774), professor of medicine at the University of Lund. The relationship between the burning of a candle under a bell jar immersed in water and the amount of air admitted or withheld from the jar is described in detail. References to experiments on niter by Boerhaave, Cox, Derham, Digby, Kircher, and others are cited. Rare. (Bolton, 515; Waring, 638; Watt, I, 467j)

PLINIUS SECUNDUS, Caius

Historia Naturalis.

(Colophon:) Venice: Reynaldus de Novimagio, 6 June 1483.

Ninth edition. Folio. 356 leaves (including first blank). 50 lines, roman letter, capital spaces blank, with guide letters in most cases. Very fine copy, absolutely complete, in eighteenth-century half vellum, boards.

PLINY THE ELDER (A.D. 23–79), educated in Rome, was a cavalry officer, colonial administrator, naval commander, and lawyer. He possessed a keen mind and unprejudiced curiosity, which led to his compiling the *Historia Naturalis*. The book was derived from a wide range of authors who are sometimes quoted uncritically. Divided into thirty-seven books, each has its list of supporting authorities. Pliny was killed while observing the eruption of Vesuvius. The noted

CAIVS PLINIVS MARCO SVO SALVTEM.

Ergratum est mihi q̄ tam diligenter libros auunculi mei lectitas: ut habere omnes uelis: quæ aeraque qui sint omnes. Fungar indicis partibus atq; etiã quo sint ordine scripti: notum tibi faciam: Est enim hæc quoque studiosis non iucunda cognitio: De laculatione equestri unus. Hunc cum prefectus ala militaret: pari ingenio curaque composuit. De uita Pompeii Secūdi duo: a quo singulariter amatus hoc memoriae amici quasi debitum munus exoluit. Bellorum Germaniae. xx. quibus omnia quæ cum Germanis gessimus bella collegit. Incoauit cum i Germaniã militaret: somnio motus. Astitit enim ei quiescenti Drusi Neronis effigies: qui Germaniæ latissime uictor ibi periit. Cõmendabat memoriam suam: orabatq; ut se ab iniuria obliuionis assereret. Studiosi tres: quos in sex uolumina propter amplitudinem diuisit quibus oratorem ab incunabilis instituit: & perfecit. Dubii sermonis octo scripsit sub Nerone nouissimis annis: cū omne genus studiorum paulo liberius & cretius periculosum seruitus fecisset. A fine. Aufidi Bassi. xxxi. Naturæ hystoriarum. xxxvii. opus diffusum eruditū: nec minus uarium q̄ ipsa natura. Miraris q̄ tot uolumina multaq; in his tam scrupulosa homo occupatus absoluerit? Magis miraberis: si scieris illū aliquādiu causas aditasse. Decessisse anno. vi. & quinquagesimo. Medium tēpus distētum: impeditumq; qua officii maximis: qua amicitia principū egisse. Sed erat acre ingenū: incredibile studium: summa uigilātia. Lucubrare a uulcanalibus incipiebat: non auspicandi causa: sed studēdi statim a nocte multa. Hyeme uero ab hora septima: uel cū tradissime octaua: saepe sexta. Erat sane somni parcissimi. Nōnunq̄ etiã inter ipsa studia instātis & differentis. An lucē ibat ad Vespasianum imperatorem. Nam ille quoq; noctibus utebatur. Inde ad delegatū sibi officium. Reuertus domum qd̄ reliquum temporis studiis reddebat. Post cibum saepe quem iter diu leuem & facilem ueterum more sumebat: aestate si quid ocii iacebat in sole. Liber legebatur annotabat. excerpebatq;. Nihil enim unq̄ legit: qd̄ non excerperet. Dicere etiam solebat nullum esse librum tam malum: ut non aliqua parte prodesset. Post solem plerūque frigida aqua lauabatur. Deinde gustabat: dormiebatq; minimum. Mox quasi alio die studebat in coenae tempus. Super hanc liber legebatur annotabat & quidem cursim. Memini quendam ex amicis cum lector quaedam pronuntiaffet perperam reuocasse: & repeti coegisse. Huic auunculum meum dixisse intellexeras? Nempe cū ille annuisset. Cur ergo reuocabas? Decem amplius uersus hac tua interpellatione perdidimus. Tanta erat parsimonia temporis. Surgebat aestate a luce. Coena hyeme intra primam noctis: & tanq̄ aliqua lege coegēte. Hæc inter medios labores urbisq; fremitum. In recessu solū balinei tēpus studiis exiebat. Cū dico balinei de interioribus loquor. Nā dū distringit tergitur que audiebat aliquid: autem dictabat. In itinere quasi solutus caeteris curis huic uni uocabat. Ad latus notarius cum libro & pugillaribus: cuius manus hyeme manicis munebatur: ut ne caeli quidem asperitas ullum studiis tempus eriperet. Qua est causa Romae quoq; sella uehebatur. Repeto me correptum ab eo cum ambularem. Poteras siquit has horas non perdere. Nam perire omne tempus arbitrabatur: qd̄ studiis nō impiretur. Hac intentione tot ista uolumina peregit electorumq; cõmentarios. clx. mihi reliquit. Opiostographos quidem minutissimis scriptos. Qua ratione multiplicat hic numerus. Referbat ipse potuisse se cum procuraret uendere in Hispania hos cõmentarios Lartio Licio. cccc. milibus nūmum aliquanto pauciores erant. Nonne uidetur tibi recordanti quātum legerit. quātum scripserit: nec in officiis ullis: nec in amicitia principum fuisse? Rursus cum audis qd̄ officiorum studiis laboris impenderit nec scripsisse satis: nec legisse: quid est. n. qd̄ non ille aut occupationes impedire: aut hæc instantia non possit efficere? Itaq; soleo ridere cum me quidam studiosum uocant: qui si compareret illi: sim desidiosissimus. Ego autē tm̄ quem partim publica: partim officia amicorum distringunt: quis ex istis qui tota uita litteris assident collatus illi non quasi seminio & inertie deditus erubescat.

aa ii

historian of science George Sarton has described this encyclopedia as “one of the most influential books ever published.” Besides containing the chemical knowledge known at the time of Christ, this great work covers anthropology, astronomy, biology, botany, geography, geology, mineralogy, physics, zoology, and other sciences. Circulated in manuscript for several centuries, the first printed edition (Venice: Johannes de Spira, 1469; Grolier, 84; Stillwell, 487) was quickly followed by later editions, the present being the ninth, edited by Philippus Beroaldus (1453–1505). “The *Natural History* of Pliny the Elder is more than a natural history; it is an encyclopaedia of all the knowledge of the ancient world” (P.M.M., No. 5). Beautiful early editions of Pliny in such fine condition are of considerable rarity. The British Library copy is slightly imperfect (lacks final leaf, containing the register). (British Library, *S.T.C. Italian, 1465–1600*, p. 526; B.M.C., V, 257; Goff, P794; Klebs, 786.9; Proctor, 4445; Watt, II, 762u; Wellcome, I, 5112)

PLINIUS SECUNDUS, Caius

The Historie of the World. Commonly called, The Naturall Historie of C. Plinius Secundus. Translated into English by Philemon Holland Doctor in Physicke.
London: Printed by Adam Islip. 1601.

First edition in English, first issue. 2 vols., folio, in 1. I: 26 leaves, 614 pp., 21 leaves. II: 6 leaves, 632 pp., 43 leaves. With final errata and imprimatur leaf. Large woodcut on each title page. Floriated woodcut initials, head- and tailpieces. Lacks blank leaf before title of volume I; otherwise an exceptionally fine, crisp copy with good margins, in contemporary mottled calf, covers gilt-ruled, rebaked with original gilt-tooled spine laid on, and original maroon morocco label.

THE FIRST appearance of Pliny in the English language and, as such, a very important edition. Philemon Holland (1552–1637), whom Thomas Fuller (in his *Worthies*: see D.N.B.) named the “translator general of his age,” was a physician who devoted most of his time to his English renditions of the classics, which were admired by both Southey and Hearne. The *Historie of the World* was his second and most popular work. “The Father of Natural History can hardly be accounted a chemist, but no bibliography of any branch of science, conceived on a historical basis, can afford to omit the *Natural History* of Pliny” (Bolton). “Pliny holds a place of exceptional importance in the tradition and diffusion of Western culture” (D.S.B., XI, 40). In the first issue (as here) both title pages bear the imprint “printed by Adam Islip.” The second issue has a cancel title with the imprint “Impensis G.B.” (i.e., Bishop). (Blocker, 316; Bolton, 744; Cushing, P319; Eales, 38; Hoover, 153 [not in Coll.]; Osler, 313; P.M.M., 5; S.T.C., 20029; Thornton & Tully, 21; Watt, II, 763a; Wellcome, I, 5127)

PLINIUS SECUNDUS, Caius

The Historie of the World: Commonly called, The Naturall Historie of C. Plinius Secundus. Translated into English by Philemon Holland Doctor of Physicke.
London: Printed by Adam Islip. 1634.

Second edition in English, first issue. 2 vols., folio, in 1. I: (“The first Tome”) 29 leaves, 614 pp., 21 leaves. II: (“The second Tombe”) 6 leaves, 632 pp., 43 leaves. Each title is dated 1634. Advertisement leaf at end of volume II. Large woodcut on each title, floriated woodcut initials, head- and tailpieces. Fine, crisp copy, in contemporary blind-ruled calf, rebaked, maroon morocco label, spine dated. Signature on first title page: “James Carnegie 1850.” Carnegie (1827–1905), poet and antiquary, was well known in his later years for antiquarian research (see D.N.B.).

A CLOSE REPRINT of the first edition (London, 1601). In the first issue (as here) both title pages bear the imprint “Printed by Adam Islip. 1634.” Volume I of the second issue has a cancel title with the imprint “and are to be sold by John Grismond” and is dated 1635, after Adam Islip. Not in D.S.B., Wellcome, etc. (Cushing, P320; Hoover, 649; P.M.M., 5; S.T.C., 20030; Sotheran, Cat. 780 [1922], 687 [“Rare”]; Watt, II, 763a; Wheeler Gift, 4a)

PLOMGREN, Charles Andreas

Disquisitio Chemica, de Calce Auri Fulminante, quam, . . . praeside Mag. Torberno Bergman, . . . Publico examini submittit Carolus Andreas Plomgren, . . . XVI Decemb. Anni MDCCCLXIX.
Uppsala: Apud Joh. Edman. (1769).

First edition. 4to. 3 leaves, 26 pp. Fine copy in maroon quarter morocco, marbled boards, spine gilt-lettered and dated.

DEDICATED to the prince of Sweden, this dissertation by Plomgren (dates unknown) was presided over by Bergman. “In his dissertation on fulminating gold (1769) Bergman showed that it is formed only in the presence of ammonia, inferred that it is a compound of ammonia and calx (oxide) of gold, explained its explosion as due to the sudden evolution of gas by the decomposition of the ammonia by removal of its phlogiston (its hydrogen), and proved that the gas evolved was . . . nitrogen” (Partington, III, 192). Plomgren traces the history of fulminating gold (an unstable ammine of gold) from the time of Basil Valentine (i.e., Johann Thölde) to the mid-eighteenth century, describing its preparation and properties. Rare. Not in the usual early chemical bibliographies. (Moström, 58; Partington, III, 182)

PLOT, Robert

De Origine Fontium, Tentamen Philosophicum. In praelectione habita coram Societate Philosophica nuper Oxonii instituta ad Scientiam naturalem promovendam. Per Rob. Plot. L.L.D. Custodiae Musaei Ashmoleani Oxoniae Praepositum et Regiae Societatis. Londini Secretarium.

Oxford: E Theatro Sheldoniano An. Dom. M.DC.LXXXV. Prostant apud Hen. Clements Bibliopolam Oxoniensem.

First edition, second issue. 8vo. (in 4s). 10 leaves, 187, (1) pp. Fine engraved frontispiece (M. Burg sculp.). Fine, crisp copy, in contemporary blind-ruled calf, rebacked, maroon morocco gilt-lettered label.

ALTHOUGH USUALLY described as the second edition, this is in fact the second issue of the first edition. The verso of the title page is dated 1 November 1684, and only one copy with the title page bearing the date 1684 is recorded by Wing P2582 (National Library of Scotland). The two so-called editions are otherwise identical, being composed of the same sheets. The book is dedicated to Elias Ashmole, and Plot was the first keeper of the Ashmolean Museum. Interesting both as an early work on the origin of springs and meteorology, extracts are given of writers who had written on rainfalls as the origin of springs from Aristotle to the time of publication. Plot presents evidence, from his own observations and those of contemporary geographers, that it is quantitatively impossible for all springs to be supplied only from rainfall, so that most must originate through subterranean channels from the sea. He classifies the different types of springs of Great Britain and the rest of the world. Directions are given for the analysis of spring waters by seventeenth-century chemical methods, with references to the works of Boyle, Hooke, Helmont, Ray, Rowzee, et al. Very scarce. Not in Bolton, Duveen, Edelstein, Ferchl, Ferguson, Neu, Partington, Smith, Waller, etc. (D.S.B., XI, 41; Poggendorff, II, 474; Thorndike, VII, 587; Waring, 775; Watt, II, 763p; Wing, P2583)

PLOT, Robert

The Natural History of Oxford-Shire, Being an Essay toward the Natural History of England. By R.P. LL.D. . . .

Oxford: Printed at the Theater . . . and are to be had there: and in London at Mr. S. Millers, at the Star near the West-end of St. Pauls Church-yard, etc. 1677.

First edition. Folio. 6 leaves, 358 pp., 7 leaves (last blank). Title page with large engraving of Britannia with Sheldonian Theatre and Oxford colleges in background. Engraving of arms of Charles II (the dedicatee) on leaf following title. Large folding map within border of 178 armorial crests (Michael Burghers sculp.) and 16 finely engraved plates (by M. Burghers). Complete with imprimatur leaf (dated 13 April 1676) and errata

leaf. Occasional minor embrowning (as usual); otherwise fine copy in original calf, rebacked, maroon morocco label.

PLOT (1640–1696) belonged to the new scientific school of which Robert Boyle was the chief exponent. As the first professor of chemistry at Oxford, Plot lectured three times a week from 1683 until he resigned at the end of 1689. Intended to be the first of a series on the natural history of the English counties, only the present work and *The natural history of Staffordshire* (Oxford, 1686) appeared. There is much of chemical, mineralogical, and geological interest, and his observations on rare plants and animals are valuable. Plate IX is reproduced by D. M. Knight (*Natural Science Books in English, 1600–1900*, London, 1972, p. 41). For further details on Plot, see Gunther and Partington. Two states of the title page exist, one undated and with Moses Pitts and S. Millers in the imprint (Wing, P2585). No priority of issue is known. (Freeman, 3038; Gunther, *Early Science in Oxford*, I, 251; Krivatsy, 9110 [imperf.]; Madan, 3130; Partington, II, 489; Poggendorff, II, 474; Thorndike, VIII, 50; Wing, P2586)

PLOT, Robert

The Natural History of Oxford-Shire, Being an Essay towards the Natural History of England. By Robert Plot, LL.D. Late Keeper of the Ashmolean Museum, and Professor of Chymistry in the University of Oxford. . . . The Second Edition, with large Additions and Corrections: Also a short Account of the Author, &c.

Oxford: Printed by Leon. Lichfield, for Charles Brome at the Gun near the West-End of St. Paul's Church, and John Nicholson at the King's-Arms in Little-Britain, London. 1705.

Second edition. Folio. 6 leaves, 366 pp., 5 leaves. Large folding map within border of 178 armorial crests (Michael Burghers sculp.) and 16 finely engraved plates (by M. Burghers). Very fine copy, in original paneled calf, rebacked, dark-blue morocco label, spine dated.

THE FINAL and best edition containing extensive additions to the first of 1677 and with information updating the original text. A brief biography of Plot has been added, together with the wording inscribed on the marble slab of his tomb in Borden Church, Kent. As in the first edition, the ten chapters cover the air, waters, earths, minerals, fossils, plants, animals, inhabitants, arts, and antiquities of Oxfordshire. Updated information is added at the end of each chapter. The map and plates are identical to those of the 1677 edition. There are many references to papers published in the *Philosophical Transactions of the Royal Society*. Numerous chemical experiments carried out on waters and minerals are described, with relevant works by Boyle, Hooke, Mayow,

Simpson, Wittie, and others cited. (Blake, 357; Hoover, 651; Partington, II, 489; Ward & Carozzi, 1802; Watt, II, 763n)

PLOT, Robert

The Natural History of Stafford-Shire. By Robert Plot, LLD. Keeper of the Ashmolean Musaeum and Professor of Chymistry in the University of Oxford. . . .
Oxford: Printed at the Theater. 1686.

First edition. Folio (in 4s). 8 leaves, 450 pp., 5 leaves (index), 2 leaves (proposals). Very large folding engraved map and 38 engraved plates by Michael Burghers and others (26 double page), including the very rare plate of "Armes omitted," which was issued with only a few copies. Large copperplate on title (seated figure of Britannia with Oxford University buildings, including Sheldonian Theater, in background), engraved head and tailpieces, and historiated capitals. A magnificent large paper copy (230 × 350 mm), finely bound in early-eighteenth-century full crimson morocco, spine richly gilt with raised bands, all edges gilt. From the libraries of Archibald Comitis De Gosford and William Morton Philips, with their fine armorial bookplates on the front pastedown endpaper.

THE SECOND and final of the series of works that Plot intended to write on the natural history of the English counties, the first being *The natural history of Oxford-Shire* (Oxford, 1677). As Plot possessed considerable chemical knowledge, being the first professor of chemistry at Oxford University, this important book contains much of interest on chemical subjects. The works of many earlier and contemporary writers are mentioned (e.g., Ruland's *Lexicon alchemiae*, Boyle's *Sceptical Chymist* and other titles by him, Hooke's *Micrographia*, Helmont's *Ortus medicinae*, Cardan's *Subtilitate and Varietate*, and Agricola's *De ortu*). There are numerous references to papers in the *Philosophical Transactions of the Royal Society*. The last two leaves ("Proposals") list the subscribers, including Elias Ashmole, Robert Boyle (six copies, two large paper), Kenelm Digby, John Evelyn, Nehemiah Grew, Martin Lister, and Sir Christopher Wren. Large paper copies are rare, especially when they contain the plate of "Armes omitted." (Hoover, 652; Watt, II, 763o; Wing, P2588)

PLUCHE, Noel Antoine

Histoire du Ciel, où l'on recherche l'Origine de l'Idolatrie, et les Méprises de la Philosophie, sur la formation des corps célestes, & de toute la nature. . . .

Paris: Chez la Veuve Estienne & Fils, rue S. Jacques, à la Vertu. 1748.

Nouvelle (fourth?) edition. 2 vols., 12mo. I: xxxvii, (3), 518, (2) pp. II: 2 leaves, 515, (1) pp. Volume I with frontispiece and 25 engraved plates (by J. P. Le Bas); none called for in volume II. Good copy in original mottled calf, spines gilt, maroon

morocco labels. Signatures (eighteenth century) in ink: Le Chev(allier) de Bertellet, and J. A. Cervera.

A POPULAR COMPENDIUM of Egyptology and ancient creation myths, with the original engraved plates of the first edition (Paris, 1739; D.S.B., XI, 44). Volume I is mostly on Egyptian mythology, apparently based on Warburton's studies of hieroglyphics, although Pluche disavows previous knowledge of Warburton's work. The plates are mostly illustrations of Egyptian and Greek iconography. Volume II contains a chronological review of theories of creation, with discussions of scientific subjects: e.g., alchemical principles (pp. 13–44); chemical and physical properties of matter (pp. 44–110); atomic theory (pp. 110–130); Aristotelian four elements (pp. 131–165); and Gassendi, Descartes, and Newton (pp. 169–348). References to Boerhaave, Boyle, Marriotte, Nollet, and others are scattered throughout the text. Pluche attempts to demonstrate the excellence of the physics of Moses, which supposedly conforms with the teachings of "both history and experimental physics." He also tries to prove that monotheism preceded polytheism. This work, like the works of John Ray, gives us a good view of the contemporary criticism of and a different vision than the eighteenth-century rationalism and the analytical perspective of the so-called Enlightenment. An English translation by J. B. De Freval appeared (London, 1740, 2 vols.; Wellcome, IV, 405). (Brunet, VI, 8183; Caillet, 8756; Wallis, No. 403.283)

PLUCHE, Noel Antoine

Spectacle de la Nature: or, Nature Display'd. Being Discourses on such Particulars of Natural History, as were thought most proper to Excite the Curiosity, and Form the Minds of Youth. . . . Translated from the Original French by Mr. (Samuel) Humphreys. . . .

London: Printed for R. Francklin, etc. 1739–1750.

Mixed English edition. 7 vols., 12mo. I (1750): xxiv, 323, (13) pp. II (1750): viii, 312 pp. III (1739): (2), vi, 358, (6) pp. IV (1749): (4), 356, (12) pp. V (1749): (4), 329, (1) pp. VI (1749): (4), xxxii, 308, (4) pp. VII (1749): (4), 323, (1) pp. Engraved frontispiece to each volume and 186 copperplates (many folding) throughout. Very good set in original gilt-ruled unlettered calf. Armorial bookplate (eighteenth century): Richard Cope Hopton, Canfrone, Hereford.

ORIGINALLY EDUCATED as a priest, Pluche (1688–1761) became principal of the college at Laon in 1717 but resigned in 1718 on religious grounds. He abandoned teaching for several years in order to write *Le Spectacle de la Nature* (Paris, 1732–1750, 8 vols.), which, being immediately successful, appeared in numerous editions and translations. The first English edition (London, 1733) was followed by at

least seven later editions by several translators. Most surviving copies comprise mixed editions, the present being volumes I, II IV, 7th ed.; III, 1st ed., by D. Bellamy, entitled *Nature Delineated*; V, VI and VII, 2nd ed. This encyclopedic work presented in a clear and simple way the principal phenomena of physics, chemistry, mechanics, technology, astronomy, natural history, etc. The wide-ranging nature of this treatise may well have influenced the later appearance of the even more comprehensive *Encyclopédie*. The excellent plates illustrate various arts and trades (e.g., architecture, printing, and shipbuilding), as well as geographical, astronomical and mechanical instruments, animals, plants, etc. (D.S.B., XI, 44; Wellcome, IV, 404)

POERNER, Karl Wilhelm

*Instruction sur l'Art de la Teinture, et particulièrement sur la Teinture des Laines, par M. Poerner: Ouvrage traduit de l'Allemand, par M. C****. Revu & augmenté de notes, par MM. Desmarests & Berthollet . . . Imprimé par Ordre du Gouvernement.*

Paris: Chez Cuchet, Libraire, rue & hôtel Serpente. 1791.

First French edition. 8vo. viii, 486 pp., 1 leaf (errata). Very fine copy in original tree calf, spine gilt, maroon label.

EDUCATED AS a physician, Poerner (1732–1796) gave private lectures on medicine and chemistry at the University of Leipzig (1769–96), was chief chemist at the famous Meissen porcelain factory (1770–96), and became councilor of mines in Saxony. He translated P. J. Macquer's celebrated dictionary of chemistry into German (Leipzig, 1767–69, 3 vols.) and published works on materia medica and mineralogy. Poerner was especially interested in dyeing, and his *Chymische Versuche zum Nutzen der Färbekunst* (Leipzig, 1772–73) appeared in three volumes. The present book on the chemical principles of dyeing fabrics is a shortened version of his German work, with processes updated since 1772. It was translated into French by "M. C.," who was not expert in the French language. The most serious errors were corrected, with additional notes, by the editors, N. Desmarests and C. L. Berthollet. The latter had published his important *Éléments de l'art de la teinture* (Paris, 1791) earlier the same year, which is mentioned in the advertisement (p. vii). Poerner also published an *Anleitung zur Färbekunst* (Leipzig, 1785). (Cole, 1046; Edelstein, 3403; Lawrie, 549; Ron, 848; Watt, II, 765t)

POLI, Giuseppe Saverio

Elementi di Fisica Sperimentale del Pubblico Professore Giuseppe Saverio Poli . . . Arricchiti d'Illustrazioni dell'Abate Antonio Fabris e di Vincenzo Dandolo e corredati di due Dizionarij di Nomenclatura chimica vecchia e nuova, nuova e vecchia. Edizione seconda Veneta nuovamente accresciuta e migliorata dagli illustratori. Tomo I. (-V.)

Venice: Dalla Tipografia Pepoliana . . . 1796.

Second Venetian edition. 5 vols., 8vo. I: xxviii, 262, (2) pp., 8 folding copperplates. II: xii, 210, (2) pp., 9 folding plates. III: xx, 315, (1) pp., 4 folding plates. IV: xii, 412 pp., 5 folding plates. V: xxvii, (1), 364, 123, (1) pp., 1 blank leaf. Very good copy, many lower edges uncut, in original pasteboards (spines of volumes I and II worn). Bookplate: Conrad Ferretti Esq.

A COMPREHENSIVE COURSE of experimental physics and chemistry, by Poli (1746–1825), professor in Naples. Dedicated to Ferdinando IV, king of Sicily, the book covers all aspects of eighteenth-century physics, chemistry, aerostation, magnetism, electricity, etc. Volume V, entitled *Fondamenti della Scienza Chimico-Fisica*, is valuable as it is entirely devoted to Lavoisier's new chemical nomenclature, in dictionary form by Vincenzo Dandolo, with the old and new terms compared. The first edition also appeared in five volumes (Naples, 1777). The first Venetian edition of 1795 is briefly mentioned by Duveen and Klickstein (*Bibliography of Lavoisier*) in a note to no. 151, but they had never seen a copy. The present edition of 1796 was unknown to Duveen and Klickstein. Poli was an important scientist who won an international reputation as well as membership in the principal academies of Italy and Europe. He was elected F.R.S. in 1779. There is no copy of this work in any of the early chemical libraries. Poggendorff (II, 494) mentions only a Naples edition (1787, 5 vols.). The biography of Poli is in the D.S.B. (XI, 66–67). Very rare. No bibliographical reference to the present edition has been located.

POLONCEAU, Antoine Remi

Note sur l'Emploi du Bitume pour les Toitures . . . Extrait des Annales de l'Institution Royale Agronomique de Grignon. Deuxième livraison. 1829.

Paris: Imprimerie de Mme. Huzard (née Vallat La Chapelle). 1829.

First edition. 8vo. 18 pp. Fine copy in contemporary quarter calf, marbled boards, spine gilt. Bound with: D'Arcet, J. P. J., and Thenard, L. J., *De l'emploi des corps gras comme hydrofuge* (Paris, 1828), and works by Payen and Schwickardi.

POLONCEAU (1778–1847), engineer in chief of the department of roads and bridges at Versailles, published works on

rivers, agricultural waters, building improvements based on advances in applied chemistry, etc., on which see Poggen-dorff. The present work describes various types of bitumen for covering and sealing the joints of roofs to prevent them from leaking, also mixtures of ground chalk and bitumen as sealing compounds. Poggendorff lists five other titles by Polonceau, but not this. Rare. Not in the usual chemical bibliographies.

POMET, Pierre

Histoire Generale des Drogues, traitant des Plantes, des Animaux, & des Mineraux . . . avec un discours qui explique leurs differens noms, les pays d'où elles viennent, la maniere de connoître les veritables d'avec les falsifiées, & leurs proprietéz, où l'on découvre l'erreur des anciens & des modernes . . .

Paris: Chez Jean-Baptiste Loyson, & Augustin Pillon . . . et Estienne Ducastin . . . 1694.

First edition. Folio. 8 leaves, 16, 232, 233j–264xxxj, 233–304; 108; 116 pp., 19 leaves. Engraved portrait frontispiece of Pomet at age 35 (by A. Le Clerc, Jr.) and over 400 figures on 188 copperplates in text. Title page in red and black. With the special appendix (16 pp.) and extra full-page engraved plate (“Maniere de purifier l'Argent vif”), which are usually missing. Fine, absolutely complete copy, in original calf, gilt, brown morocco label. Bookplate: Franz Sondheimer.

CHIEF APOTHECARY to Louis XIV, Pomet (1658–1699) collected drugs from many different countries and published the results of his researches in this beautifully illustrated work. Considered to be the first important French pharmacopoeia, it contains excellent engravings of plants and animals, as well as interesting genre scenes; indigo, sugar, and tobacco manufacture; whaling; silk culture; bee-keeping; tuna fishing; etc. In addition, there are chapters on mummies, the unicorn, etc., all with illustrations. According to Partington this work is superior to the *Pharmacopée universelle* (1698) of Nicolas Lemery. Detailed descriptions are given of the properties of minerals, metals, salts, and organic compounds used in the preparation of medicines. Several French editions appeared, the last in two volumes, 4to., published by his son (Paris, 1735). The work was translated into German (1717, 1735) and English (1712, 1725, 1737, 1748). (Caillet, 8811; D.S.B., VIII, 174; Ferchl, 419; Garrison-Morton, 1827.1; Goldsmith, P1273; Hunt, 391; Krivatsy, 9136 [imperf.]; Partington, III, 31; Thorndike, VIII, 101; Watt, II, 767n)

POMET, Pierre

A Compleat History of Druggs, written in French by Monsieur Pomet, Chief Druggist to the late French King Lewis XIV. To which is added what is further observable on the same subject, from Mess. Lemery and Tournefort, divided into three classes, Vegetable, Animal and Mineral; with their use in Physick, Chymistry, Pharmacy, and several other arts. . . .

London: Printed for J. J. Bonwicke, R. Wilkin, S. Birt, T. Ward and E. Wickstead. 1737.

Third English edition. 2 vols., 4to., in 1. I: 12 leaves, 224 pp. II: pp. 225–419, (9). Title page in red and black. Text in double columns. With 86 full-page engraved plates containing over 400 figures. Fine copy, in half calf antique, marbled boards, maroon label, spine dated.

THE ORIGINAL French edition (Paris, 1694) enjoyed considerable success and was extensively reviewed in the *Journal des Scavans* as well as the *Acta Eruditorum*. The anonymous editor of this English translation (first: London, 1712) dedicated it to Sir Hans Sloane and thanked him for the use of his *Natural History of Jamaica*. As stated in the title, in addition to being a translation of Pomet, the book incorporates information from the *Pharmacopée universelle* (Paris, 1698) of Nicolas Lemery and the *Materia Medica* (London, 1708) of Joseph Pitton de Tournefort. The first important treatise on the materia medica in English, this work contains numerous references to American animals, plants, and minerals and the drugs made from them. There is an interesting discussion of the preparation and properties of the phosphorescent Bolognian stone (pp. 409–410), but its only use at the time was as a depilatory. (Blake, 358; Blocker, 318; Harvey, 309; Neu, 3318; Partington, III, 31; Waller, 7552)

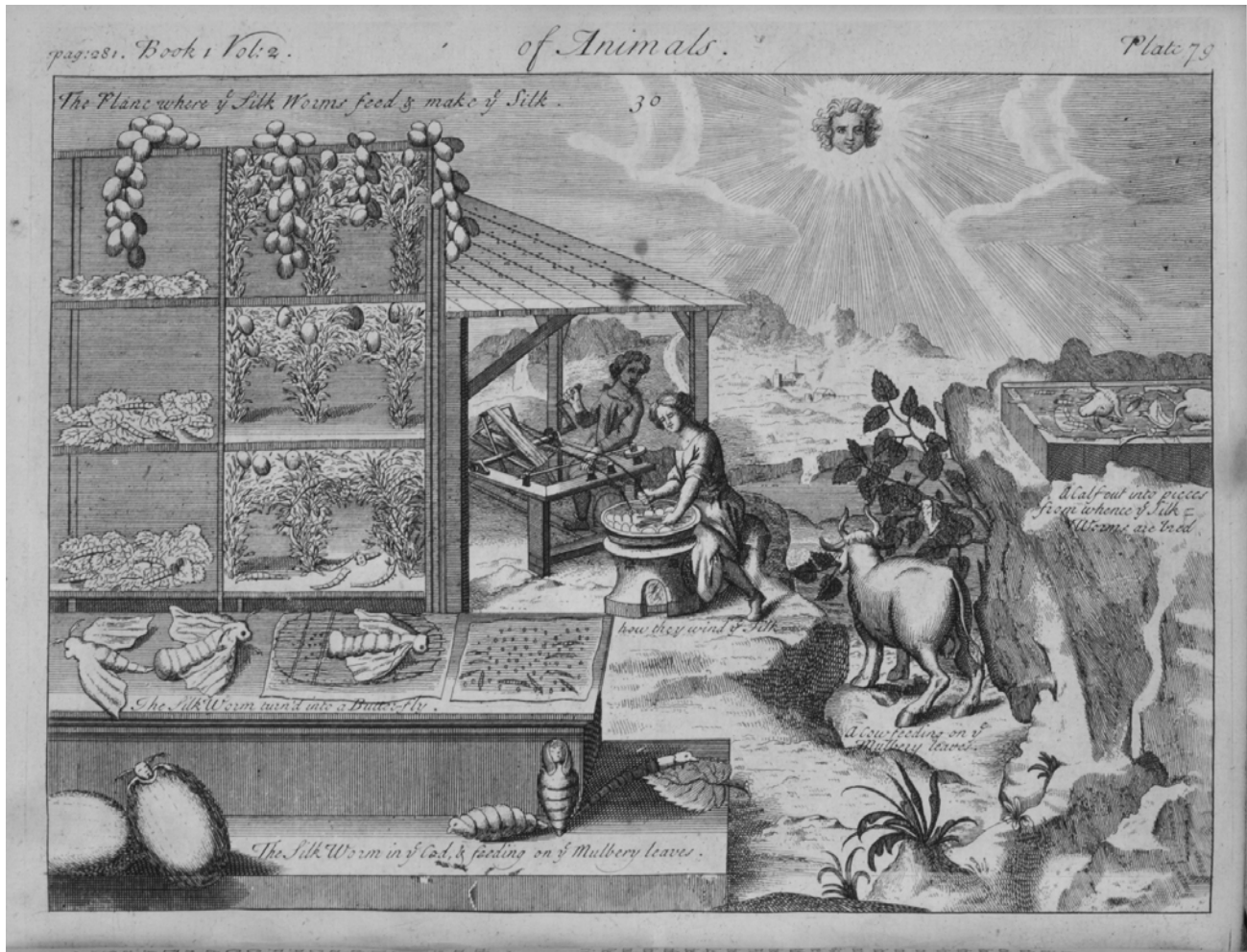
PONCELET, Polycarpe

Chimie du Gout et de l'Odorat, ou Principes pour composer facilement, & à peu de frais, les Liqueurs à boire, & les Eaux de senteurs.

Paris: De l'Imprimerie de P. G. Le Mercier, rue Saint Jacques, au Livre d'Or. 1755.

First edition. 8vo. xxvi, 27–390 pp., 1 leaf. Frontispiece of a family engaged in distilling (B. Audran Sculp.), headpiece of a laboratory (p. 27), and 6 copperplates of distillation apparatus. Occasional very minor foxing; otherwise fine copy, in contemporary marbled calf, spine richly gilt, maroon morocco label.

THE ABBE PONCELET (ca. 1720–1790), also known as Père Polycarpe, born at Verdun, was a celebrated agronomist, but little has been recorded of his life. This work on distillation describes the preparation and properties of distillates from plants and other natural products. Poncelet



Pomet. Compleat History of Druggs. London, 1737.

discusses “the chemistry of taste [and] states that the different flavours are vibrations acting with more or less force on the tongue. There is therefore a music of flavour like one of the ear, and he proceeds to construct scales of flavour which should be studied by the distiller” (Forbes). The volume is divided into four parts preceded by a *Dissertation préliminaire sur la salubrité des Liqueurs, & l’harmonie des saveurs*. At the end is a dictionary of plant materials that can be distilled (pp. 309–369), followed by a vocabulary of terms used in chemistry and the practice of distillation (pp. 370–384). A second edition with identical pagination appeared (Paris, 1766; Duveen, 480). (Bitting, 376; Blake, 358; Bolton, 747; Ferchl, 419; Ferguson, I, 154 [not in Young Coll.]; Forbes, 223, 490; Poggendorff, II, 496; Simon, *Biblio. Gastronomie*, 1212; Smith, 392; Vicaire, 171; Wellcome, IV, 413)

PONCELET, Polycarpe

Nouvelle Chymie du Gout et de l’Odorat, ou l’art de composer facilement & à peu de frais les Liqueurs à boire & les Eaux de Senteurs. Nouvelle Édition, entièrement changée, considérablement augmentée & enrichie d’un Procédé nouveau pour composer des Liqueurs fines sans eau-de-vie, ni vin, ni esprit de vin, proprement dit; de plusieurs Dissertations intéressantes, & d’une suite d’Observations physiologiques sur l’usage immodéré des Liqueurs fortes. . . . Paris: Chez Pissot, Libraire, Quai de Conti. 1774.

Third edition. 2 vols., 8vo., in 1. I: xlviij, 210 pp. II: 2 leaves (1 blank, lacking), 320 pp., 2 leaves. With 6 engraved plates of distillation apparatus (De la Gardette Sculp.). Neat contemporary notes in ink on half title and verso of final leaf of text; otherwise fine copy in original marbled calf, spine richly gilt, maroon morocco label.

THE GREATLY enlarged “nouvelle” (i.e., third) edition (first: Paris, 1755), “completely changed, considerably augmented and enriched with new processes.” Detailed descriptions are given of distillation methods, infusion, filtration, and other operations employed in the preparation of essential oils, flavours, perfumes, and spirits. The physiological effects of intoxication are discussed. “Ouvrage intéressant et recherché” (Caillet [with wrong date: 1773]). A few copies were issued with a frontispiece (described on p. xlii), which was not in the Wellcome or Cole Library copies, nor in three other copies Cole examined. From its fresh condition it is evident that the present copy was also issued without a frontispiece. Later editions appeared in two volumes: Paris, 1799/1800; Paris, 1819, much revised by Gauthier. (Bolton, 747; Caillet, 8822; Cole, 1048; Ferchl, 419; Ferguson, I, 154 [not in Young Coll.]; Forbes, 490; Neu, 3322; Poggendorff, II, 496; Vicaire, 171; Wellcome, IV, 413)

PONTOPPIDAN, Erich

The Natural History of Norway: containing, a particular and accurate Account of the Temperature of the Air, the different Soils, Waters, Vegetables, Metals, Minerals, Stones, Beasts, Birds, and Fishes; together with the Dispositions, Customs, and Manner of Living of the Inhabitants; interspersed with Physiological Notes from eminent Writers, and Transactions of Academies. In Two Parts. Translated from the Danish Original . . .

London: Printed for A. Linde, Bookseller to Her Royal Highness the Princess Dowager of Wales, in Catherine-Street in the Strand. 1755.

First English edition. 2 vols., folio, in 1. I: xxiv, 206 pp. II: viii, 291, (1) pp., 6 leaves (index). Large folding engraved map of Norway and 28 fine copperplates. Very fine copy, in original sprinkled calf, gilt-ruled spine, red morocco label. Armorial bookplate (eighteenth century) of Sir James Colquhoun of Luss, whose library was noted for its immaculate copies.

THE PRINCIPAL work of Pontoppidan (1698–1764), Danish author and theologian, bishop of Bergen and later chancellor of the University of Copenhagen. The original edition, *Förste Försög paa Norges naturlige Historie* (Copenhagen, 1752–54), was translated from Danish into English by Andreas Berthelson. The first part contains descriptions of the air, waters, soils, minerals, metallic ores, gems, and plants of Norway and is of considerable chemical and mineralogical interest. Part II describes the animals and people of Norway. Pontoppidan refers to the writings of many earlier and contemporary scientists (e.g., Aldrovandus, Bartholin, Boyle, Desaguliers, Leibnitz, Newton, Paracelsus, Swammerdam, and Worm). A major work of its kind, this copy is in almost as fresh a condition as it was when published in the mid-eighteenth century. (Eales, 1686; Harvey, 525; Hoover, 654; Ward & Carozzi, 1807; Watt, II, 768s)

PONYRKA, Dionysius

Dissertatio Inauguralis Medico-Chemica de Anathymiasi Cinnabaris quam . . . praeside gratiosae Facultatis Medicae consensu pro licentia summos in medicina honores et privilegia doctoralia . . . submittit . . . die 11 Novembris Dionysius Ponyrka Gluchowo-Russus . . .

Strassburg: Excudebat Joh. Henricus Heitz, Academiae Typ. 1780.

First edition. 4to. 1 leaf, 40 pp. Woodcut head- and tailpiece. Very fine copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

DEDICATED TO Catherine II of Russia, this dissertation contains a valuable bibliography of works that trace the history of cinnabar fumigation in the treatment of syphilis from

Greek and Roman times to the late eighteenth century. The writings of Astruc, Boerhaave, Spielmann, and van Swieten are particularly noticed. No information has been located on Ponyrka, a citizen of Russia, and the praeses is not named. Rare. (Waring, 498)

POOLE, Robert

The Chymical Vade Mecum: or, a Compendium of Chemistry. Extracted from the best Authors, but principally from the late celebrated Boerhaave. By R. Poole, M.D.

London: Printed for B. Duncomb, in Butcherhall-Lane, Newgate-Street. 1748.

First edition. 12mo. 1 leaf, viii, lx, 410 pp. Very good copy in gilt-ruled speckled calf antique, red morocco label. With eighteenth-century inscription in ink on half title: J. Milthorpe Surgeon, Topcliffe.

THE MEDICAL and theological writer Poole (1708–1752), after studying anatomy and chemistry, became a physician's pupil at St. Thomas's Hospital (London) and received his M.D. (Rheims, 1741). Returning to England he practiced medicine at the Middlesex Infirmary and at the Small-Pox Hospital (1746–48), of which he was one of the founders. "A very rare work, quite unknown to the author's biographer in D.N.B. It contains an interesting preface (pp. 60), saturated with the author's well-known religious spirit. 'He was not only a physician, but a religious enthusiast, who, as a friend and follower of George Whitefield, was not ashamed to be called a methodist' (D.N.B.)" (Zeitlinger). Largely based on Boerhaave's *Elementa Chemiae* (Leyden, 1732), this work discusses metals, semimetals, earths, salts, sulphides, plant and animal substances, the nature of fire, etc. Two hundred processes are described, mainly preparations of chemicals and pharmaceuticals. Tables of affinity (pp. 383–386) and miscellaneous tables (pp. xxxii–li) are included. In the appendix (pp. 387–410) reasons are given for instituting and encouraging the Middlesex County Hospital for the Small-Pox and Inoculation. No other editions appeared. (Blake, 359; Cole, 1049; Duveen, 480; Neu, 3326; Sotheran, Cat. 879 (1947), 2860; Wellcome, IV, 415)

POPP, Johann

Chymische Medicin von dem Nutz und gebrauch der distillierten Oelen, Extracten, Quintis essentiis, Aquis vitae, Balsamis, Floribus, Saltzen und Wassern, auss den Mineralibus, Animalibus und Vegetabilibus, zu allerley innerlichen und eusserlichen Artzneyen, recht und nützlichen zu gebrauchen: Sampt der Praeparation unnd Chymischen zubereitung, auch anderer vornehmen Sachen . . . beschrieben durch Iohannem Poppen, dieser zeit Fürstlichen Sachsischen Destillatorem zu Coburg. . . .

Frankfurt: Bey Egenolph Emmeln, In verlegung Simonis Schambergers. 1617.

First edition. 8vo. 8 leaves (last blank), 523, (1) pp., 2 leaves. With 2 woodcut figures of chemical apparatus in text (pp. 349–350). Signatures Ff and li misbound, but text complete. Small repair to bottom blank margin of title page; otherwise fine copy in unlettered blind-ruled paneled calf antique.

A TREATISE ON iatrochemistry by the alchemist and chemist Popp (Poppe, or Poppius, b. 1577), from Coburg, who published several other books on pharmaceutical chemistry. The present work contains much on distillation and the preparation of oils, acids, alkalies, and extracts from animal, mineral, and vegetable matter. Also described are the preparation of salts of metals, compounds of sulphur, and various sulphides. The author refers to the works of Beguin, Croll, Duchesne, Cesner, Paracelsus, Penot, Ruland, Sennert, Thölde, and other chemists. The whole book is severely practical, and the preface is signed by the illustrious chemist Andreas Libavius. A second edition appeared (Frankfurt, 1625; Krivatsy, 9159). Rare. (Ferchl, 420; Ferguson, II, 213; Thorndike, VII, 175; Watt, II, 769m; Wellcome, I, 5170)

PORDAGE, John

Göttliche und Wahre Metaphysica, oder Wunderbare, durch Erfahrung erlangte Wissenschaft der Ewigen und unsichtbaren Dinge, entdeckt durch D. Joh. Pordädsche, zweiter Band, in sich haltend drey Tractat als von der Ewigen Welt, von der Ewigen Natur, und von der Englischen Welt. Frankfurt und Leipzig: Verlegts Johann Martin Hagen, Buchhl. 1715.

First edition. 8vo. 360, 209, (1), 261 pp., 12 leaves, + 18 leaves (i.e., pp. 779–814 from another unidentified German theological work). With 10 woodcut figures in the text. Very good copy in contemporary unlettered half calf, marbled boards.

PORDAGE (1607–1681), son of a London grocer, preached at Reading, and in 1647 Elias Ashmole gave him a living as rector at Bradfield, Berkshire. From this he was ejected by the commissioners on the grounds of dealing with evil spirits. After trials lasting from 1651 to 1655 he was reinstated at Bradfield. In 1652 he gathered together a few followers of Jacob Böhme (1575–1624), the chief of whom was Mrs. Jane Leake (1623–1704), who claimed to have experienced visions. Her mystical beliefs fitted in well with those of Pordage, and they founded the Philadelphian Society for the Advancement of Piety and Divine Philosophy in 1670 at Bradfield (it later moved to London). The Philadelphians believed in a kind of nature pantheism, and the present work bases the knowledge of nature on the knowledge of the nature of God, often with references to Böhme.

It deals inter alia with theosophical alchemy, with chapters on the Aristotelian four elements, Paracelsian *tria prima*, philosopher's stone, transmutation, the relationship of chemical processes with God, etc. Partington (II, 128) and Ferguson (II, 215) discuss Pordage but not this work. Caillet (no. 8832) describes an alchemical work, and Watt (II, 769r) mentions two English titles by Pordage. No bibliographical reference to this extremely rare German work has been located.

PORTA, Giovanni Battista della

De Distillatione Lib. IX. Quibus certa methodo, multiplicate artificio, penitioribus naturae arcanis detectis, cuiuslibet mixti in propria elementa resolutio, perfecte docetur.
Rome: Ex Typographia Reu. Camerae Apostolicae. 1608.

First edition. 4to. 10 leaves, 154, (1) pp., 3 leaves. With woodcut printer's device on title and different device at end. Beautiful full-page copperplate portrait of Porta (within frame of chemical apparatus and other subjects, I. Laurus f.) and 35 woodcuts of distillation equipment in text. Decorative woodcut capitals, head- and tailpieces. Exceptionally fine copy, in original vellum, green morocco label. From the library of John Stuart (1713–1792), third earl of Bute, secretary of state to George III (see D.N.B.).

AN IMPORTANT book on distillation, being an expansion of the section in the *Magiae naturalis* (Naples, 1589). It is “of interest as giving a more comprehensive view of the application of distillation in the sixteenth century than is found in any other work of the period” (Stillman). “This book is as rare as it is beautiful. Ferguson, speaking of the reimpression (Strasburg, 1609), says that ‘the Roman edition is much the finer book.’ . . . The text is preceded by dedications to the author in Hebrew, Greek, Chaldee, Persian, Illyrian, and Armenian. Among the many fine woodcuts . . . the most curious are those depicting pieces of apparatus likened to different animals” (Duveen). There were four printings in Rome in 1608, all from different settings of type (see Wellcome), but no priority has been established. A German translation appeared (Frankfurt, 1611; Waller, 11208a). (D.S.B., XI, 97; Duveen, 481; Edelstein, 1842; Ferchl, 420; Ferguson, II, 216 [not in Young Coll.]; Ferguson Coll., 572; Forbes, 117; Honeyman, 2521; Neu, 3330; Partington, II, 24; Smith, 393; Stillman, 350; Waller, 11208b; Watt, II, 770d; Wellcome, I, 5211)

PORTA, Giovanni Battista della

De i Miracoli et Maravigliosi Effetti dalla Natura Prodotti. Libri IIII. Di Gio. Battista Porta Napolitano. Nuovamente tradotti di Latino in Volgare, & con molta diligenza corretti. Con due Tavole, una de' Capitoli, & l'altra delle cose piu notabili.

Venice: Appresso gli Heredi di Giacomo Simbeni. 1588.

Fifth Venice (first Simbeni) edition of Italian translation. 8vo. 16 leaves, 148 folios. Woodcut printer's device on title page and ornamental woodcut capitals. Italic letter. Very fine, crisp copy, in eighteenth-century calf, gilt, covers gilt-ruled, maroon morocco label.

AN ITALIAN translation of the *Magiae naturalis . . . libri IIII* (Naples, 1558) and a beautiful example of sixteenth-century printing. The translator is not named, but it was probably Porta himself. The first edition in Italian (Venice: L. Avanzo, 1560) was reprinted by Avanzo in 1562 and 1566. Other editions in Italian also appeared: e.g., Venice: A. Salicato, 1572; Turin: H. del Bevilacqua, 1582. The present edition is the first to be printed by the heirs of Jacomo Simbeni. Extremely rare. Not in British Library and not traced in available bibliographies.

PORTA, Giovanni Battista della

I Tre Libri de' Spirituali di Giovambattista della Porta Napolitano. Cioe d'inalzar acque per forza dell'aria.
Naples: Appresso Gio. Jacomo Carlino. 1606.

First edition in Italian. 4to. 98 pp., 1 leaf (colophon). Woodcut printer's device on title page, historiated woodcut capitals, head- and tailpieces. Numerous large woodcut illustrations in text. Minor water stain in lower margins; otherwise fine, crisp copy in contemporary vellum, with remains of ties. From the Fuerstenberg library, Donaueschingen, with stamp on verso of title leaf. Bound with: Heron Alexandrinus, *Spiritualium liber* (Urbino, 1575).

THE FIRST Italian translation, by Juan Escrivano, of Porta's *Pneumaticorum libri tres* (Naples: J. J. Carlinus, 1601). This edition was the “first to contain the illustration celebrated in the history of the steam engine” (Zeitlinger). It is a work on the mechanics of water and steam. On page 75 is the famous woodcut of the machine for raising a column of water by steam pressure, the condensation of the steam producing a vacuum into which the water flowed. The machine used steam pressure to expel liquid, whereas Hero of Alexandria used the pressure of expanding air. “Porta had thus introduced something new . . . [He] . . . accurately described the action of steam in producing a vacuum by condensation, and conceived an apparatus in which the vacuum . . . would be filled by water forced in by the pressure of the atmosphere” (Wolf). Porta's machine was not

اکئی کہ بود در آسمان قطب زمان
 علامہ علم و فاضل ادمیان
 افلاطون حکمت بقراط جہان
 در بحر معانی در یکتا و نہان

E Perfico.

H Aud aliter fulget rutilo virtutis olympo,
 Quàm Polus. Hunc celebrat fama, Minerva, decus.
 AEqualis Cooq; seni, doctiq; Platoni,
 Immensi est Sophia lucida concha maris.

Свѣ славе од свнта, н свака ташћна,
 Ка ѣур по ска лнта, би када чѣвена,
 Ни такаа ниће бнт, као ѣесѣ господина,
 Ки се порта зовѣ, племенита рода,
 Скоѣ славу совом, никор не посади,
 Срамотом велнкѣ, да не чѣѣ ѣади,
 Поклеѣ толнка, да ниѣедаи ѣазнк,
 На пѣлно сповндат, неѣе моѣн внк,
 Затѣ господина, окомѣ бѣд днка,
 н слава велнка, као жне до внка,
 Коѣ неѣе моѣн, ни гдормѣ попасни.
 а киѣ хтит тлачнт, нѣѣѣ ѣзвншнтн,

made use of, unfortunately, and it remained for Guericke and Boyle in the mid-seventeenth century to reinvestigate the means for producing vacua, using air suction pumps. As in Porta's other books, the woodcuts in this work achieve a high degree of clarity and artistic excellence. On page 76 there is a woodcut of a thermoscope or primitive thermometer. (British Library, *S.T.C. Italian*, 701; D.S.B., XI, 97; Middleton, 5; Osler, 3722; Poggendorff, II, 505; Riccardi, II, 310; Sotheran, Cat. 682 [1908], 3717 ["Rare"]; Watt, II, 770d; Wellcome, I, 5208; Wolf, I, 544)

PORTA, Giovanni Battista della

Magiae Naturalis, sive de Miraculis Rerum Naturalium Libri IIII. . .

Antwerp: Ex officina Christophori Plantini. 1585.

16mo. 296 pp., 4 leaves (index). Woodcut printer's device on title page and ornamental woodcut capitals. Roman letter. Good copy in original unlettered vellum.

PORTA (1535–1615), an Italian natural philosopher and mathematician, wrote this famous book on the secrets of nature (first ed.: Naples, 1558) at the age of fifteen. It comprises four books, which were enlarged in 1589 to twenty books. Topics covered include natural phenomena (book I); medicinal preparations (book II); alchemy, metallurgy, and glass (book III); and optics, with a chapter on the camera obscura that Porta improved and was the first to describe fully (book IV). Dedicated to Philip II of Spain, the text contains "all the old fables from Pliny, etc., without criticism" (Partington, who discusses the chemical content of this edition). Numerous editions and translations appeared. Earlier Plantin editions: 1560 (3 issues), 1562, 1564, and 1567. The present edition is possibly the last to be printed by Christophe Plantin (ca. 1520–1589), the Frenchman who ran the "outstanding Dutch printing-house of the sixteenth century . . . at Antwerp" (McKerrow, p. 279). Very rare edition. Not in British Library (Antwerp: Plantin, 1561 and 1564, only). (Partington, II, 17; Wellcome, I, 5183)

PORTA, Giovanni Battista della

Io. Bapt. Portae Neapolitani Magiae Naturalis Libri XX. Ab ipso autore expurgati, & superaucti, in quibus scientiarum Naturalium divitiae, & delitiae demonstrantur I De mirabilium rerum causis. II De varijs animalibus gignendis. III De novis plantis producendis. IIII De augenda suppellectili. V De metallorum transmutatione. VI De gemmarum adulterijs. VII De miraculis magnetis. VIII De portentosis medelis. IX De mulierum cosmetice. X De extrahendis rerum essentijs. XI De myropoeia. XII De incendiarijs ignibus. XIII De raris ferri temperaturis. XIII De miro conviviiorum apparatu. XV De capiendis manu feris. XVI De invisibilibus

literarum notis. XVII De catoptriciis imaginibus. XVIII De staticis experimentis. XIX De pneumaticis. XX Chaos. Cum Privilegio.

Naples: Apud Horatium Salvianum. D. D. LXXXVIII. (i.e., 1589)

First edition in 20 books. Folio (in 4s). 8 leaves, 303 pp., (1) blank. Fine elaborate woodcut title, woodcut portrait (Porta) on verso, numerous woodcuts and diagrams in text, woodcut historiated capitals, head- and tailpieces. Very fine copy in early-seventeenth-century Spanish marbled calf, covers gilt-ruled, with maroon morocco gilt-lettered label. From the library of Professor Franz Sondheimer (1926–1981), with his bookplate on the first free marbled endpaper. Other bookplates: Biblioteca del excmo. Señor Marques de Astorga (on sig. a2^r); Scott Library Collection, July 1930 (front pastedown endpaper).

THE VERY rare first and best edition of the complete work in twenty books. "Porta's most celebrated work is that on Natural Magic (*Magiae Naturalis*), which went through a great number of editions . . . and is a storehouse of very miscellaneous lore" (Partington). In his preface Porta says that it cost him an immense amount of effort to compile the information to write the book, which is much more scientifically important than the earlier version of the same name in four books (Naples, 1558). Of great interest to chemical historians are the books on transmutation of metals, chemical experiments, counterfeiting gems by chemical means, magnets, pharmaceuticals and drugs, cosmetics for women, distillation, tempering steel, fireworks, invisible writing, extracting alcohol from wine, etc. (D.S.B., XI, 98; Partington, II, 17; Wellcome, I, 5184)

PORTA, Giovanni Battista della

Natural Magick by John Baptista Porta, a Neapolitane: in Twenty Books: 1 Of the Causes of Wonderful things. 2 Of the Generation of Animals. 3 Of the Production of new Plants. 4 Of increasing Household-Stuff. 5 Of changing Metals. 6 Of counterfeiting Gold. 7 Of the Wonders of the Loadstone. 8 Of strange Cures. 9 Of Beautifying Women. 10 Of Distillation. 11 Of Perfuming. 12 Of Artificial Fires. 13 Of Tempering Steel. 14 Of Cookery. 15 Of Fishing, Fowling, Hunting, &c. 16 Of Invisible Writing. 17 Of Strange Glasses. 18 Of Statick Experiments. 19 Of Pneumatick Experiments. 20 Of the Chaos. Wherein are set forth All the Riches and Delights Of the Natural Sciences.

London: Printed for Thomas Young, and Samuel Speed; and are to be sold at the three Pigeons, and at the Angel in St. Paul's Church-yard. 1658.

First English edition. Folio. 4 leaves, 409, (1) pp., 3 leaves (index). Engraved title in compartments (by R. Gaywood), including portrait of Porta. Letterpress title, in red and black,

with woodcut. Several woodcut text illustrations. Fine, crisp copy, in maroon half calf antique, marbled boards, black morocco label.

THE ANONYMOUS English translation of the *Magiae naturalis libri XX* (Naples, 1589), the basis of Porta's reputation and "an extraordinary hodge-podge of material representing that unique . . . curiosity and credulity common in the late Renaissance" (D.S.B.). The most important book is number 17, in which Porta first suggests the combination of glass lenses to form a telescope or microscope. Porta was an accomplished scientist and member of the Lincean Academy, to which Galilei belonged. Another edition (or issue), with reset title, appeared (London, 1669; Wing, P2982A). Rare, especially with the engraved title. (Bolton, 1027; D.S.B., XI, 98; Edelstein, 1844; Ferguson, II, 216 [not in Young Coll.]; Ferguson Coll., 573; Ferguson, *Books of Secrets*, I, 15; Forbes, 496; Neu, 3335; Partington, II, 17; Smith, 393; Thornton & Tully, 260; Watt, II, 770b; Wheeler Gift, 64b; Wing, P2982)

PORTA, Giovanni Battista della

Phytognomonica . . . Octo Libris Contenta. In quibus nova, facillimaque affertur methodus, qua plantarum, animalium, metallorum, rerum denique omnium ex prima extimae faciei inspectione quovis abditas vires assequatur. Accedunt ad haec confirmanda infinita propemodum selectiora secreta, summo labore, temporis dispendio, & impensarum iactura vestigata, explorataque. . .

Naples: Apud Horatium Salvianum. 1588.

First edition, first issue. Folio. 330 pp., 12 leaves (last blank). Title within elaborate woodcut border, woodcut portrait of Porta (age 50) on verso; 32 half-page text woodcuts of plants and animals; historiated capitals, head- and tailpieces. Roman letter. Lacking the 12 leaves of index (as sometimes); otherwise fine copy in unlettered half vellum antique, marbled boards.

A "TREATISE ON the supposed relations between plants and animals" (Partington). The title page indicates that this work also deals with metals. A curious book, containing the first attempt to group plants according to their geographic locale and distribution. It is remarkable for the author's idea of applying herbs as remedies to those parts of the human and animal body to which they most nearly approximate in shape (i.e., the so-called doctrine of signatures). Of chemical interest are pages 302–320, which discuss, inter alia, the relationship of plants to stones and metals. The engravings "are of good quality" (Arber, p. 237). The second issue appeared in 1589 (Durling, 3734; Honeyman, 2520; Osler, 3718). Editions in octavo format were published: e.g., Frankfurt, 1591 (Cushing, P350; Ferguson, II, 216; Neu, 3336); Frankfurt, 1608 (Hoover, 655); and Rouen, 1650 (Caillet, 8863). (Arber, 251; Blocker, 318; British Library,

S.T.C. Italian, 1465–1600, p. 536; Cushing, P349; D.S.B., XI, 91; Ferchl, 420; Ferguson, II, 216 [not in Young Coll.]; Nissen, 463; Partington, II, 16; Thorndike, VI, 422; Waller, 7568; Watt, II, 770b; Wellcome, I, 5203)

PORTAL, Antoine

Istruzione sulla Cura degli Asfittici e degli Avvelenati del Sig. Professore Antonio Portal. Già tradotta dall'idioma francese ed ora ristampata per cura del Sig. Dottore Gaetano Moretti e dal medesimo arricchita di annotazioni ed aggiunte.
Pavia: Presso il Librajo Giovanni Torri Coi Tipi di Giovanni Giacomo Gapelli. 1820.

First Italian edition? 12mo. 191, (1) pp. Fine copy in original patterned boards, spine unlettered.

PORTAL (1742–1832), baron, professor of medicine and anatomy, and member of the Royal Academy of Sciences of Paris, was first physician to Louis XVIII. This is the Italian translation by Dr. Gaetano Moretti (who has added useful notes) of Portal's *Instruction sur le traitemens des asphixiés par le méphitisme* (first: Paris, 1796). The translation was probably made from the latest "nouvelle édition" (Paris, 1816). Of toxicological and chemical interest, the book discusses various gases (e.g., carbon monoxide and carbon dioxide) and the methods of reviving people asphyxiated by them. Also described are treatments for those who have been overcome by heat, have been bitten by rabid animals, or have ingested plant, animal, or fungal poisons. Cures are given for persons who have been poisoned by various chemicals: corrosive sublimate (mercuric chloride), arsenic, lead, etc. Rare. Not in the usual bibliographies.

PORTER, Arthur Livermore

The Chemistry of the Arts; being a practical display of the arts and manufactures which depend on chemical principles. With numerous engravings. On the basis of Gray's Operative Chemist, adapted to the United States; with treatises on calico printing, bleaching, and other large additions. By Arthur L. Porter, late professor of chemistry in the University of Vermont. Vol. I. (II.)
Philadelphia: Carey & Lea. 1830.

First edition. 2 vols., 8vo. I: 398 pp. II: 1 leaf, pp. 399–803, (1). With 71 engraved plates (1 folding) and 2 folding tables. One unnumbered plate facing plate 66 is marked "spoiled plate" in the engraving and is obviously a cancel, not present in another copy checked. Little minor foxing; otherwise a very good copy in contemporary sheep, spines gilt-ruled, blue gilt-lettered morocco labels (1 missing).

IN THE preface Porter (d. 1845) says that he was preparing a "small volume of essays on the bleaching of cotton and linen, calico printing, the manufacture of oil of vitriol, and

bleaching powder, and several other of the more important branches of the Chemical Arts." He adds that his publishers were "contemplating the republication of Gray's *Operative Chemist* (London, 1828) and asked him to edit it, incorporating his additions and corrections. The result was this encyclopedic and very important work covering all aspects of chemical technology as it existed in the first third of the nineteenth century. Curiously, Porter's biography is not in Miles' *American Chemists and Chemical Engineers* (Washington, D.C., 1976). Very scarce. Not in Duncan, Duveen, Edelstein, Ferchl, Morgan, Partington, Poggendorff, Waller, etc. (Bolton, 748; Smith, 394)

PORTER, George Richardson

A Treatise on the Origin, Progressive Improvement, and Present State, of the Manufacture, of Porcelain and Glass. London: Printed for Longman, Rees, Orme, Brown, and Green, Paternoster-Row; and John Taylor, Upper Gower Street. 1832.

First edition. 8vo. 1 leaf (engraved title page), xiv, 334 pp. + 1 leaf (variant title page) + 4 pp. (advertisements, bound in front). With engraved and printed title pages and 36 woodcut figures in text. Back sun-faded; otherwise fine uncut copy, in original purple cloth with printed spine label.

AN IMPORTANT book that covers every aspect of the history, chemistry, technology, and manufacture of porcelain and glass, including colored and optical glasses. Complete by itself, this volume forms part of the extensive *Cabinet Cyclopaedia* of Dionysius Lardner. Trained as a statistician, Porter (1792–1852) failed in business as a sugar broker, then devoted himself to economics and statistics. The statistical department of the British Board of Trade was established mainly under his supervision in 1834, and he became joint-secretary to the board in 1841. He also published *A Treatise on the Origin, Progressive Improvement and Present State of the Silk Manufacture* (London, 1831); *The Progress of the Nineteenth Century* (London, 1836–43); and other works. (Duncan, 10345)

PORTER, John Addison

Principles of Chemistry; embracing the most Recent Discoveries in the Science, and the Outlines of its Application to Agriculture and the Arts. Illustrated by numerous experiments, newly adapted to the simplest apparatus. By John A. Porter . . .

New York: Published by A. S. Barnes & Burr, 51 & 53 John Street. 1864.

First edition, second issue. 8vo. in 4s. 2 leaves, 474 pp. Woodcut on title and numerous woodcut illustrations in text. Good copy in original quarter dark-blue blind-stamped calf, green blind-stamped cloth covers.

A PUPIL OF Justus von Liebig, Porter (1822–1866) was professor of agricultural and organic chemistry at Yale College (now Yale University). Authorities whose works were consulted by Porter in the preparation of this introductory textbook (first issue: New York, 1857; Roller & Goodman, II, 320) include Berzelius, Gmelin, Graham, Gregory, Liebig, Payen, Regnault, Silliman, and Stockhardt. Divided into physics, chemical philosophy, and inorganic and organic chemistry; also covered are the daguerreotype and the chemistry of photography (pp. 327–332). Even counterfeiting of bank notes is described as being possible by the use of photography, as are the methods for thwarting counterfeiting. Of interest in the organic chemistry section is Porter's discussion of isomeric compounds. He correctly explains their differences by postulating different atomic arrangements in the molecules. Primitive woodcut figures illustrate the molecular "structure" of organic compounds. Bolton gives "1856, 12mo." for the first issue, probably in error. (Bolton, 748; Smith, 394)

PORZIO, Simone

De Rerum Naturalium Principiis. Simonis Portii Neapolitani Libri Duo: quibus plurimae, eaeque haud contemnendae quaestiones naturales explicantur.

Naples: Apud Gio. Mariam Scotum. 1561.

Second edition. 4to. 1 leaf, 49 folios. Large woodcut printer's device on title page and woodcut capitals. Italic letter. Very good, crisp copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

A FAMOUS AND important work in which the author develops the philosophical system of his teacher Pietro Pomponazzi (1462–1524), which denied the immortality of the soul. Dealing with such topics as matter, form, nature, fate, and chance, the author maintains that there is no astrological cause of accidental events (e.g., earthquakes and other calamities on Earth). Based on Aristotle's natural philosophy, there are discussions of chemical interest on the structure of matter, minerals, ores, metals, etc. A native of Naples, Porzio (Portius, 1497–1554) lectured on medicine and philosophy at Pisa and later at Naples. His other printed works, *De mente humano*, *De coloribus oculorum*, and *De puella germanica*, are also quite rare. Thorndike mentions the first edition (Naples: M. Cancer, 1553) and the third (Marburg: P. Egenolph, 1598), adding that "an earlier edition at Naples, 1561, is also listed." The first edition is a small quarto of eighty leaves. The present edition, an elegantly printed and much handsomer book, is described as an "ouvrage fort rare et curieux non cité par Brunet" (Guaita). Poggenдорff and Ferchl list only the first edition, while Watt and Wellcome list only the third. Not in the British Library or Cambridge University libraries. No edition listed in the usual chemical

and medical bibliographies. (Caillet, 8880; Guaita, 864; Thorndike, V, 273)

POTIER, Michael

Philosophia chymica, id est, methodus genuina auri et argenti solvendi, et exaltandi: ex fundamentis philosophiae naturalis fideliter adumbrate, per Michaelem Potier.

Frankfurt ad Moenum: Wolfgang Hoffman, impendio Joan. David Zunner. 1648.

First edition. 4to. 6 leaves, 131, (1) pp. Large woodcut printer's device on title page, woodcut headpieces and initials in text. Apart from some browning (characteristic of German paper of the period), a fine copy in nineteenth-century boards, with gilt-lettered green morocco label on spine.

POTIER, A FRENCH alchemist whose life spanned the late sixteenth and early seventeenth centuries, styled himself the first Hermetic philosopher of the age. "For many years he traveled over the whole of Europe, and finally settled in Dortmund. His vanity and reticence are displayed in his works. He made a boast of his knowledge of the secrets of the art, but could never be brought to give proofs of it. He ended his life, it is said, in the greatest poverty and neglect, early in the seventeenth century" (Ferguson). The present work is a paginary reprint of his *Fons chymicus id est: vera auri et argenti conficiendi* (Cologne, 1637), which has identical pagination. This first Frankfurt edition has errata on page 132, whereas in the Cologne (1637) edition page 132 is blank. The dedication to Emperor Ferdinand is dated 1631, and on page 131 Potier gives his address as Essen, as in the 1637 Cologne edition. On pages 46–48 Potier gives a description of himself in German, to avoid being confused with other persons who have adopted his name. In the present work Potier attempts to vindicate the scientific pursuits of true alchemists (such as himself) over the fraudulent practices of the many pseudo-alchemists then at work. He refers to works of Bernardus Trevisanus, Roger Bacon, Albertus Magnus, Geber, Lull, Flamel, Thomas Norton, and other alchemists, but, curiously, makes no mention of Basil Valentine (i.e., Johann Thölde), his contemporary. A very rare book. Not in Bolton, Caillet, Duveen, Guaita, Mellon, Neu, Partington, Smith, Thorndike, Waite, etc. (Ferchl, 421; Ferguson, II, 221)

POTIER, Pierre

Pharmacopoea Spagirica. Id est, Nova et Inaudita Rariora efficacissima ad gravissimos quosque morbos Remedia conficiendi ratio. Una cum duabus Centuriis Curationum mirabilium, & Observationum insignium, &c. [Containing 'Contra pestem' and 'Consilium contra diarrhoeam' by H. C. Agrippa.]

Cologne: Apud Matthaeum Smitz. 1624.

First Cologne edition. 2 vols. (in 3 parts), in 1. 12mo. I (1624): 6 leaves, 409, (1) pp. II (1625): 2 leaves, 235, (1) pp. III (1623): 190, (1) pp. Fine copy in contemporary overlapping vellum, spine neatly lettered in ink, unidentified early armorial crest on front cover.

THE ANJOU physician and chemist Potier (ca. 1581–ca. 1640) at age twenty began practicing medicine in Bologna, Italy, and later became royal physician and French councillor. He advocated spagyric medicines, opposed galenic remedies then in use, and promoted his "antihecticum" (antimony oxide containing tin) and other secret iatrochemical formulations of his own invention. Potier was one of the first to give a detailed description of the method of making the Bologna stone, which is contained in the present book (pp. 396–409). The Bologna stone was made by calcining the mineral barite (native barium sulphate), obtained from Monte Paterno, near Bologna. "The importance of the discovery of methods for preparing artificial phosphors cannot be overestimated" (E. N. Harvey). The discovery of processes for making a variety of phosphorescent materials in succeeding centuries eventually led to the development of the modern cathode-ray tube, television, and computers. Potier's *Pharmacopoea* is thus a significant milestone work in the chemistry of luminescent substances of the greatest economic importance. The Cologne (1624) edition unites the *Pharmacopoea spagirica* (first: Bologna, 1622) and the *Insignes curationes* (first: Cologne, 1616). (Ferguson, II, 219 [not in Young Coll.]; Harvey, 306–307; Kopp, IV, 42; Partington, II, 335; Schelenz, 495; Thorndike, VIII, 83; Wellcome, I, 5234)

POTIER, Pierre

Opera Omnia Medica, et Chymica.

Lyons: Sumpt. Ioan. Antonii Huguetan, in vico Mercuriali, ad insigne Sphaerae. 1645.

First French edition. 8vo. 6 leaves, 792 pp., 22 leaves. Title in red and black, with large woodcut. Ornamental woodcut head and tailpieces. Very good copy in original vellum (small piece of top corner of front cover gnawed away). Neat seventeenth-century inscription in ink on title: "Ex libris Petri Oharmanus."

THE POSTHUMOUS first collected edition of the works of Potier, edited by J. A. Huguetan, a publisher and bookseller in Lyons. In 1640 Potier was living in Bologna but was assassinated shortly thereafter by a treacherous friend, Sancassani. His two principal books, *Pharmacopoea spagyrica* (Bologna, 1622) and *De febribus* (Venice, 1615), both very rare, are here reprinted for the first time in French. Several editions appeared, the later ones being updated and edited by Friedrich Hoffmann (Frankfurt, 1698; Krivatsy, 9238). The *Pharmacopoea* is important for its descriptions of the

preparations of acids, alkalis, salts, the Bologna stone, and other compounds known in the earlier seventeenth century. (Ferchl, 421; Ferguson, II, 219 [not in Young Coll.]; Goldsmith, 1356; Krivatsy, 9236; Neu, 3341; Partington, II, 335; Poggendorff, II, 509; Thorndike, VII, 527, VIII, 83; Wellcome, IV, 422)

POTIER, Pierre

Petri Poterii Opera Omnia Practica et Chymica, cum annotationibus & additamentis utilissimis partier ac curiosi Friderici Hoffmanni, . . . Accessit nova doctrina de febribus, ex principiis mechanicis solide deducta. Cum indice locupletissimo.

Venice: Apud Sebastianum Coleti. 1741.

First Venice edition. 4to. 620 pp. Woodcut on title and several large historiated woodcut capitals in text. Very good copy in quarter calf antique, marbled boards, maroon label.

THE FIRST Latin edition printed in Italy of Potier's *Opera Omnia*, updated and edited by Friedrich Hoffmann (Frankfurt, 1698). The dedication is dated 1698. Essentially a reprint of the Huguetan edition (Lyons, 1645) but with two important additions: (1) *Petri Guissonii . . . epistolica dissertatio de anonymo libello (circa abbreviatum verae medicinae genus) ubi potissimum ventilatur principiorum chymicorum hypothesis*, addressed to Dr. Mignard (pp. 571–580); and (2) *Friderici Hoffmanni tractatio brevis et luculenta de febribus*, comprising Hoffmann's observations on fevers (pp. 581–605). Pierre Guisson, M.D., of Avignon, who spent time with Boyle in Oxford, put forward similar views in 1666 on the chemical elements (see Partington, II, 501). The appearance of Potier's works a century after they were originally published attests to their continued usefulness. Hoffmann's notes, with references to Boyle, are important. Ferguson, Partington, Watt, et al., cite the Hoffmann (1698) edition only. Two issues appeared in Venice in 1741, with the same pagination but different names in the imprint: (1) *Ex typographia Balleoniana* (Neu, 3342), and (2) *Apud Sebastianum Coleti* (as in this copy). No priority of issue has been established. Blake (p. 360) lists a Venice, 1741 edition, with 620 pages, but does not distinguish between the two issues. No bibliographical reference to the present rare issue has been located.

POTT, Johann Heinrich

Animadversiones Physico Chymicae circa varias Hypotheses et Experimenta D. Dr. et Consiliar. Elleri. Physikalisch Chymische Anmerkungen über verschiedene Sätze und Erfahrungen des Herrn Hofr. D. Ellers.

Berlin: Auf Kosten des Autoris. 1756.

First edition. 4to. 107, (1) pp. Immaculate copy in modern beige buckram, maroon morocco label. Old woodcut stamp of Wernigerode Library on title page (not affecting text). With signature in pencil of Robert M. Herbst (dated New York, Nov. 1933) on flyleaf.

A CRITIQUE OF the hypotheses and experimental researches of the famous chemist Johann Theodor Eller (1689–1760), with whom Pott engaged in a virulent dispute after severing his relationship with the Berlin Academy in 1754. The entire text appears first in Latin, then in German. Pott takes to task the work of Eller on minerals, salts, and metals, with numerous references to phlogiston, the *Physica Subterranea* of Becher, the works of Boerhaave, and many other contemporary chemists. Published at the expense of the author, not many copies were printed; thus it is now extremely rare. Ferchl apparently had never seen a copy, as he gives the wrong title: “physico-medicae” instead of “physico chymicae.” Robert M. Herbst was a descendant of the physiologist Ernst Friedrich Gustav Herbst (1803–1893), pupil and colleague of Johann Friedrich Blumenbach (1752–1840), the Göttingen physician, anthropologist, and polyhistor. (Ferchl, 421; Poggendorff, II, 510)

POTT, Johann Heinrich

Chymische Untersuchungen Welche fürnehmlich von der Lithoogognosia oder Erkänntniß und Bearbeitung der gemeinen einfacheren Steine und Erden Ingleichen von Feuer und Licht handeln.

Potsdam: Bey Christian Friedrich Voss. 1746.

First edition. 4to. 4 leaves, 88 pp. Large woodcut head- and tailpieces. Old stamps in margin of title page and on verso; otherwise very good copy in gilt-ruled quarter morocco antique, marbled boards, maroon morocco label, spine dated. Bound with: Pott, J. H., *Fortsetzung derer Chymischen Untersuchungen . . . Steine and Erden* (Berlin & Potsdam, 1751).

THE *Chymische Untersuchungen* and its supplement (*Fortsetzung*) present the results of a reported thirty thousand experiments by Pott, who had been commissioned by the king of Prussia to discover the secret of making porcelain as made at Meissen, in Saxony. Pott recognized four kinds of earths: clay, gypsum, limestone, and silica. “His usual method of investigation was to heat the various materials in a crucible and he thus ascertained the reactions of a number of substances in the dry way: his tables of such reactions are an early example of analysis tables” (Partington). The numerous reactions he carried out constitute a model of comprehensiveness in chemical study. Apart from their relevance to manufacture, the results were important for developing the theory of chemical affinity. Despite his many experiments, Pott never succeeded in making porcelain, “and that perhaps is the reason why Frederick the Great gave

Marggraf (a younger man) preferment over Pott in the Berlin Academy. . . . Pott held that phlogiston was the matter of fire but not of light" (D.S.B.). (Blake, 360; Bolton, 749; D.S.B., XI, 109; Edelstein, 1846; Ferguson, II, 221; Ferguson Coll., 575; Partington, II, 718; Poggendorff, II, 510; Sinkankas, 5227; Wellcome, IV, 423)

POTT, Johann Heinrich

Chymische Untersuchungen Welche fürnehmlich von der Lithogognosia oder Erkäntniss und Bearbeitung der gemeinen einfacheren Steine und Erden ingleichen von Feuer und Licht handeln. Zweyte Auflage, so von dem Autore an einigen Orten verbessert und mit einem neuen Anhang vermehret, darin die bishero zum Vorschein gekommene Beurtheilungen untersucht und verschiedene physicalisch-chymische Materien derer Gegner mit neuen Experimenten erläutert werden wie auch einem Register über alle drey Theile.

Berlin: bey Christian Friderich Voss. 1757.

Second (first Berlin) edition. 4to. 4 leaves, 88 pp.; 44 pp. (Neuer Anhang); 7 leaves (Register). Fine copy with wide margins, in contemporary marbled calf, spine richly gilt, light brown morocco label. From the library of the celebrated inorganic chemist Joseph William Mellor (1869–1938), with his bookplate depicting Khunrath's owl perched on a glass retort. Bound with: Pott, J. H., *Fortsetzung derer Chymischen Untersuchungen . . . Steine und Erden* (Berlin & Potsdam, 1751), and *Zweyte Fortsetzung . . . Steine und Erden* (Berlin, 1754).

THE SECOND edition of this important work (first: Potsdam, 1746), greatly expanded by the *Neuer Anhang sur Lithogognosie* (44 pp.), followed by a comprehensive index (Register) to the *Anhang* and the two supplements of 1751 and 1754. This is a significant association copy, as J. W. Mellor, director of research of the Ceramic Institute, Stoke on Trent, cites Pott's attempts to make porcelain in his *Comprehensive Treatise on Inorganic and Physical Chemistry* (London, 1922–37, 16 vols.). Partington (IV, 725) says that Mellor's "knowledge of chemical literature was unparalleled." (Bolton, 749; Ferchl, 421; Ferguson, II, 222 [not in Young Coll.]; Neu, 3343; Partington, II, 718; Poggendorff, II, 510; Wellcome, IV, 423)

POTT, Johann Heinrich

Dissertations Chymiques de M. Pott, Professeur de Chymie, & Membre de l'Académie Royale des Sciences de Berlin; Recueillies & traduites, tant du Latin que de l'Allemand, par M. Demachy, Apothicaire, Gagnant-Maitrise de l'Hotel-Dieu.

Paris: Jean-Thomas Herissant. 1759.

First French edition. 4 vols., 12mo. I: xxiv, 576 pp. II: 3 leaves, 586 pp. III: 3 leaves, 590 pp. IV: vi, 536 pp. Fine copy in contemporary mottled calf, spines gilt, maroon lettering labels. From the library of Professor Franz Sondheimer (b. 1926), with his bookplate on the front pastedown endpaper of each volume.

AN IMPORTANT work, containing translations into French by Jacques François Demachy (1728–1803) of all the Latin and German publications of Pott that had appeared between 1716 and 1757. A complete list of these publications is given in volume I, pages xix–xxii. It also includes extracts from the *Lithogognosie ou examen chymiques des Pierres et des Terres en general* (Paris, 1753), as well as a number of smaller papers. Volume IV contains extracts of disputes that Pott had with Eller, which Partington says "were especially virulent on both sides." These appear on pages 422–446 of volume IV. A bibliography of works cited by Pott (pp. 447–482) and a list of authors mentioned by Pott without specification of their works and of works without author's name (pp. 483–484) are also given in volume IV. The bibliography shows that Pott was extremely well versed in chemical literature from the fifteenth century to his own time. The approbation is signed by Macquer and dated 13 October 1757. This work and its contents are discussed in detail by Partington. Rare. Not in Caillet, Morgan, Newton-Harvey, Poggendorff, Reynolds, Rosenthal, Smith, Waller, Watt, etc. (Bolton, 750; D.S.B., XI, 109; Duncan, 10393; Duveen, 483; Ferchl, 421; Ferguson, II, 222 [not in Young Coll.]; Ferguson Coll., 575; Neu, 3346; Partington, II, 719)

POTT, Johann Heinrich

Fortsetzung derer Chymischen Untersuchungen, welche von der Lithogognosie, oder Erkäntniss und Bearbeitung derer Steine und Erden specieller handeln.

Berlin & Potsdam: bey Christian Friedrich Voss. 1751.

First edition. 4to. 4 leaves, 120 pp. Fine copy. Bound with: Pott, J. H., *Chymische Untersuchungen . . . Feuer und Licht . . .* (Potsdam, 1746).

THE FIRST supplement to *Chymische Untersuchungen* (1746), in which Pott describes his researches on the nature of stones and clays and his experiments attempting to make porcelain similar to that made at Meissen. (Bolton, 749; Ferchl, 421; Partington, II, 718; Poggendorff, II, 510; Sinkankas, 5227; Wellcome, IV, 423)

POTT, Johann Heinrich

Fortsetzung derer Chymischen Untersuchungen, welche von der Lithogéognosie, odor Erkäntniss und Bearbeitung derer Steine und Erden specieller handeln.

Berlin & Potsdam: bey Christian Friedrich Voss. 1751.

First edition. 4to. 4 leaves, 120 pp. Fine copy. Bound with: Pott, J. H., *Chymische Untersuchungen* (Berlin, 1757).

ANOTHER COPY of the first supplement to *Chymische Untersuchungen* (1716), here followed by the second supplement (Berlin, 1754).

POTT, Johann Heinrich

Lithogéognosie ou Examen Chymique des Pierres et des Terres en Général, et du Talc, de la Topaze & de la Stéatite en particulier, avec une Dissertation sur le Feu & sur la Lumière.

Par M. J. Pott . . . Ouvrages traduits de l'Allemand. (II:)

Continuation de la Lithogéognosie, où l'on traite plus particulièrement de la connoissance des Terres & des Pierres, & de la maniere d'en faire l'examen. Par J. H. Pott.

Paris: Chez Jean-Thomas Herissant, rue S. Jacques, à S. Paul, & à S. Hilaire. 1753.

First French edition. 2 vols., 12mo. I: viii, 431, (1) pp. With engraved plate (furnace and its parts). II: 267, (5) pp.; 93, (1) pp. (misnumbered 103), 1 leaf (blank). Fine copy in original marbled calf, spines richly gilt, beige leather labels.

THE FRENCH translation by d'Arclais de Montamy of the *Chymische Untersuchungen* (1746, 1751, 1754). "The serious study of chemical petrology by French chemists dates from 1753, when d'Arclais de Montamy published his translation of the 'Lithogéognosia' of J. H. Pott" (Guerlac, *Chymia*, V, 102–103). An incomplete so-called first issue by the same publisher appeared earlier in 1753 with the following pagination: viii, 431, (1), 93, (1) pp. The *Continuation* omits some of the tables of the German original (*Zweyte Fortsetzung*, 1754). The inconsistency between the date of the French translation (1753) and the date (1754) of the *Zweyte Fortsetzung* suggests that the *Continuation* may have been published early in 1754, despite the date (1753) on the title. The tables on pages 126–148 in the *Zweyte Fortsetzung* nowhere appear in this French translation. (Bolton, 749–750; Cole, 1054, 1055; D.S.B., XI, 109; Duveen, 483; Ferchl, 421; Ferguson, II, 222 [not in Young Coll.]; Hoover, 658; Neu, 3344; Partington, II, 718; Poggendorff, II, 510; Ward & Carozzi, 1813; Wellcome, IV, 423)

POTT, Johann Heinrich

Observationum et Animadversionum Chymicarum praecipue circa Sal Commune Acidum Salis Vinosum et Wismuthum Versantium Collectio Prima.

Berlin: Apud Johannem Andream Rüdigerum. 1739.

First edition. 4to. 4 leaves, 197, (1) pp. Title page in red and black. Large woodcut head- and tailpieces. Mint copy in original pale-yellow boards. Bound with: Pott, J. H., *Collectio Secunda* (Berlin, 1741).

BORN AT Halberstadt, Pott (1692–1777) studied at the University of Halle. He worked under Friedrich Hoffmann and Georg Ernst Stahl, both of whom were professors of medicine who separated chemistry from medical theory. An excellent, widely read, and industrious chemist, Pott became professor of theoretical chemistry at the Collegium Medicum-Chirurgicum in Berlin, where in 1737 he succeeded Caspar Neumann as professor of practical chemistry and director of the royal pharmacy. Interested in the history of chemistry, his principal researches were concerned with a systematic investigation of the composition of minerals and metals. The present collection comprises three tracts: the first (pp. 1–108) deals with the chemical reactions of common salt (sodium chloride); the second (pp. 109–133) with the reaction of alcohol with spirit of salt (hydrochloric acid) to produce volatile ethyl chloride; and the third (pp. 134–197) with the reactions of bismuth and its salts. Partington discusses these works in some detail and states that T. O. Bergman made use of Pott's historical introductions in many of his student dissertations. (Blake, 360; Bolton, 750; Cole, 1056; D.S.B., XI, 109; Edelstein, 1848; Ferchl, 421; Partington, II, 510; Poggendorff, II, 719; Waring, 288, 687; Wellcome, IV, 423)

POTT, Johann Heinrich

Observationum et Animadversionum Chymicarum praecipue Zincum, Boracem et Pseudogalenam, Tractantium Collectio Secunda.

Berlin: Apud Johannem Andream Rüdigerum. 1741.

First edition. 4to. 2 leaves, 120 pp. Title page in red and black. Large woodcut head- and tailpieces. Mint copy in original pale-yellow boards. Bound with: Pott, J. H., *Collectio Prima* (Berlin, 1739).

THE SEQUEL work to *Observationum . . . collectio prima* (Berlin, 1739), comprising a further three tracts. The first (pp. 1–54) deals with zinc and its compounds and is "an advance on anything published before, since the metal was then on the market, and Pott showed conclusively that it

was a peculiar metal. He obtained butter of zinc (anhydrous zinc chloride) by distilling zinc with corrosive sublimate (mercuric chloride). . . . In his dissertation on white vitriol (zinc sulphate) he showed that it contains zinc and sulphuric acid and prepared it by dissolving zinc in dilute sulphuric acid" (Partington). The second tract (pp. 54–105) is on the chemical reactions of borax and boric acid, while the third (pp. 105–120) deals with the chemistry of zinc blends (native zinc sulphide). (Bolton, 750; Cole, 1056; D.S.B., XI, 109; Ferchl, 421; Partington, II, 719–721; Poggendorff, II, 510; Waring, 686, 749; Wellcome, IV, 423)

POTT, Johann Heinrich

Zweyte Fortsetzung derer Chymischen Untersuchungen welche von der Lithogognosie oder Erkänntniss und Bearbeitung derer Steine und Erden in Anwendung derselben zur Bereitung Feuerfester Gefässe und Tiegel specieller handeln nebst Tabellen über alle drey Theile.

Berlin: bey Christian Friedrich Voss. 1754.

First edition. 4to. 8 leaves, 148 pp. With frontispiece of a furnace and its parts (F. H. Frisch sc. Berl.) and inserted 2-leaf table between pages 146–147. Fine copy. Bound with: Pott, J. H., *Chymische Untersuchungen* (Berlin, 1757).

THE SECOND and final supplement to Pott's main work, the *Chymische Untersuchungen* (1746). Here he summarizes his extensive experiments in a series of detailed tables (pp. 33–168) and describes the furnace he used (with plate) in his attempts to make porcelain. "In 1754 Pott gave up chemical work, broke with the Berlin Academy, and burned his papers" (D.S.B.). Quoting Thomas Thomson, Duveen states (p. 483) that Pott "was beyond question the most learned and laborious chemist of his day." (Bolton, 749; Ferchl, 421; Ferguson, II, 222 [not in Young Coll.]; Neu, 3343; Partington, II, 718; Poggendorff, II, 510; Wellcome, IV, 423)

POULLE, Alexandre

Positiones Chémico-Medicæ de Aëre Vitali, seu Dephlogisticato, tanquam novo sanitatis præsidio, ab auctore, Alexandro Poulle, ex urbe Draguignan apud Gallo-Provinciales, Artium Liberalium Magistro, nec-non Celeberrimæ Universitatis Medicæ Monspeliensis jamdudum alumno, pro primâ Apollinari laurea consequendâ, adstante summo numine, Propugnatae, in Augustissimo Ludovico Medico Monspeliensi, die 30 mensis Aprilis, anni 1784.

Montpellier: Apud Joannem-Franciscum Picot, Regis Universitatisque Medicinæ, Typographum unicum. 1784.

First edition. 4to. 64 pp. Very good copy in maroon half morocco antique, marbled boards, spine lettered and dated

in gilt. From the library of Professor Franz Sondheimer, but without his bookplate.

AN IMPORTANT and very rare dissertation on the chemical and medicinal properties of oxygen, in which the author (dates unknown) describes its preparation by various methods. The text is in French, with numerous references to the researches of Priestley, Lavoisier, Ingenhousz, Hales, Kirwan, Scheele, et al. Duveen states that it "is not recorded by the bibliographies." However, Waring (erroneously giving "pp. 48") and Watt mention the book. Not in Blake, Bolton, D.S.B., Edelstein, Ferchl, Ferguson, Ferguson Coll., Partington, Poggendorff, Smith, Waller, etc. (Duveen, 484; Neu, 3352; Sondheimer, 1280; Waring, 602; Watt, II, 772d)

POWER, Henry

Experimental Philosophy In Three Books: Containing New Experiments Microscopical, Mercurial, Magnetical. With some Deductions, and Probable Hypotheses, raised from them, in Avouchment and Illustration of the now famous Atomical Hypothesis. . . .

London: Printed by T. Roycroft, for John Martin, and James Allestry, at the Bell in S. Pauls Church-yard. 1664.

First edition. 4to. 12 leaves, 193, (1) pp. Large folding copperplate (9 figures of experiments with a Torricellian tube), 3 divisional titles (2 dated 1663), and woodcut text diagrams. As in all early copies, without the errata leaf added later. Fine, large copy, with imprimatur leaf, in contemporary calf, rebaked.

THE FIRST English work on microscopy, and the first in any language to describe the nature of metals when viewed through a microscope, as well as various minerals, seeds, insects, etc. Although the preface is dated 1 August 1661, the book was not published until 1664, just one year before Robert Hooke's great *Micrographia* (mentioned on p. 83). An eloquent example of the trend toward experiment in the mid-seventeenth century. Power (1623–1668), M.D., F.R.S., and friend of Sir Thomas Browne, describes experiments with the Torricellian tube and speculates on the vacuum to test Robert Boyle's hypothesis. In the section on magnetism, Power refutes Jacques Grandamici's magnetic experiments. The last section is on gases in coal mines and is of chemical interest. The conclusion bemoans the present state of education and insufficient grounding in experimental philosophy. Newton owned a copy of this work, now lost (see Harrison, 1344). (D.S.B., XI, 121; Eales, 465; Gartrell, 434; Harvey, 128; Krivatsy, 9250; Mottelay, 554; Neu, 3354; Osler, 3730; Partington, II, 554; Poggendorff, II, 516; Reynolds, 3398; Roper, 72; Thorndike, VIII, 211; Thornton & Tully, 100; Watt, II, 773m; Wheeler Gift, 155; Wing, P3099)

PRESTWICH, John

Prestwich's Dissertation on Mineral, Animal, & Vegetable Poisons; Containing a Description of Poisons in General, their manner of Action, Effects on the Human Body, and Respective Antidotes; With Experiments and Remarks on Noxious Exhalations from Earth, Air and Water. Together with Several Extraordinary Cases, and Elegant Engravings of the Principal Poisons of the Different Countries.
London: Printed for F. Newbery, the Corner of St. Paul's Church Yard. 1775.

First edition. 8vo. 2 leaves, iv, 331, (1) pp. Engraved title page and 11 copperplates (by J. Royce after drawings by Prestwich). Fine copy in original unlettered speckled calf. From the Bedford Medical Library, with old stamp on title.

A TREATISE ON poisonous substances, of toxicological and pharmaceutical chemical interest, with plates illustrating many species of poisonous plants. Prestwich (d. 1795) discusses several poisonous American plants and includes a chapter on curare. Also covered are the toxic effects of minerals, vapors of coal combustion (e.g., carbon monoxide and sulphur dioxide), exhalations from caves and mines (e.g., carbon dioxide and methane), and compounds of antimony, arsenic, copper, lead, mercury, etc. Not in the usual chemical and medical bibliographies. (Blake, 362; Bolton, 752; Neu, 3356; Watt, II, 775d)

PRIESTLEY, Joseph

Directions for Impregnating Water with Fixed Air; in order to communicate to it the peculiar Spirit and Virtues of Pyrmont Water, and other Mineral Waters of a similar Nature.
By Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, in St. Paul's Church-Yard. 1772. (Price One Shilling.)

First edition. 8vo. 1 leaf, iii, (i), 22 pp., 3 leaves (list of books by Priestley). With frontispiece of apparatus (by Butterworth, Leeds). Slight offsetting on title page; otherwise fine copy complete with printed paper slip on page 10 (usually missing), in half calf antique, marbled boards, maroon morocco label, spine dated.

THE SOLE English edition of the earliest separate publication on chemistry by Priestley, announcing his preparation of soda water and the siphon for dispensing it. Its appearance brought him immediate public recognition as an able chemist. His "settling in Leeds next to a brewery, with its ample supply of carbon dioxide, may explain why his first 'chemical' publication was [this] pamphlet" (D.S.B.). He passed carbon dioxide (prepared by reacting chalk with dilute sulphuric acid) into a flexible leather bag and then squeezed the bag to expel the gas into a gas jar full of water, inverted over water in a basin. The pipe from the

bag was made of glass or flexible leather. The printed slip attached to the blank lower margin of page 10 states: "N.B. If the pipe be made of leather it will generally be necessary to steep it in water about half an hour before it is used, in order to make it sufficiently air-tight." Of this method of making "Pyrmont water" he wrote, "I can make better than your import, and what cost you 5/- will not cost me a penny" (D.N.B.). Priestley's discovery of saturating water with carbon dioxide led to the creation of the modern mineral water industry. (Blake, 363; Blocker, 321; Bolton, 753; Crook, S444; D.S.B., XI, 144; Edelstein, 1852; Ferchl, 424; Neu, 3361; Osler, 1189; Partington, III, 247; Smith, 396; Waring, 314)

PRIESTLEY, Joseph

Maniere d'Impregner l'Eau d'Air Fixe, et de lui communiquer les propriétés de l'Eau de Pyrmont, & de toutes les Eaux minérales qui sont connues sous le nom d'Acidules ou Aériennes. Par M. Joseph Priestley. Ouvrage traduit de l'Anglois, par M. *** extrait du Journal d'observations sur la Physique, sur l'Histoire naturelle & sur les Arts & Métiers, par M. l'Abbé Rozier . . .
(N.p., n.d.: Paris, 1772).

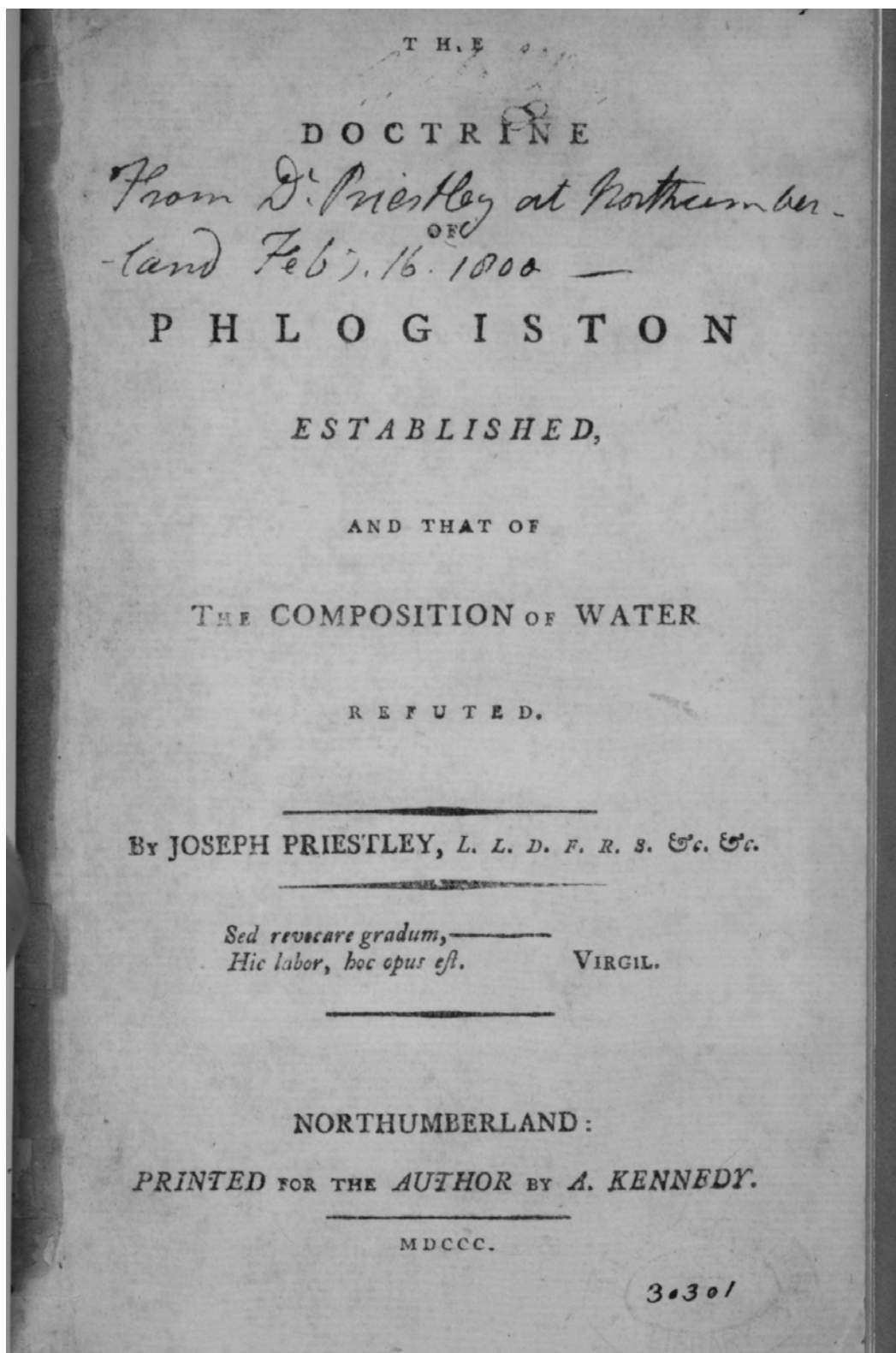
First French edition. 8vo. vi, 7–51, (1) pp. With folding engraved plate of apparatus (unsigned, reduced, and reversed). Fine copy in gilt-ruled quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE *Directions for impregnating water with fixed air* (1772) was "widely and favorably noticed; within the year it was translated into French, and it was an important factor in the awarding to Priestley of the Copley Medal of the Royal Society for 1773" (D.S.B.). A note printed at the bottom of the title page of this French edition states that the translation and publication were due to M. de Trudaine de Montigny. Translations into Italian by Giovanni Francesco Fromond appeared (1772; Cole, 1057; 1773; Crook, S513; Wellcome, IV, 436) and into German (Copenhagen and Leipzig, 1774; Partington, III, 248), the latter containing additional works by Joseph Black and William Henry. A very rare work, not "examined" by Crook who located only two copies: one in the Bibliothèque Nationale and one in the private library of John F. Fulton, New Haven. (Crook, S494; D.S.B., XI, 144)

PRIESTLEY, Joseph

The Doctrine of Phlogiston Established, and that of the Composition of Water Refuted. By Joseph Priestley, L.L.D.
F.R.S. &c. &c.

Northumberland: Printed for the Author by A. Kennedy. 1800.



Priestley. Doctrine of Phlogiston Established. Northumberland, 1800.

First edition. 8vo. xv, (i), 90 pp., 1 leaf (catalogue of books by Priestley). Fine, crisp copy, in full tan calf antique, with gilt-lettered crimson morocco labels on spine. Presentation copy to an unknown recipient (name carefully erased), inscribed in Priestley's characteristic handwriting in ink on the title page: "From Dr. Priestley at Northumberland Feby. 16, 1800."

A MARVELOUS COPY of Priestley's last book. "In 1800, when he confessed himself all but alone in his opinions, and appealed somewhat pathetically for a hearing, [Priestley] published his last book, *The Doctrine of Phlogiston Established*, of which the second edition in 1803 . . . shows no change of view" (D.N.B.). In this work Priestley attempted to defend the old phlogiston hypothesis against the New Chemistry of Lavoisier and his circle. On page 79 is Dr. (Samuel Latham) Mitchill's attempt to reconcile the two systems, while on page 80 Priestley claims the discovery of the emission of oxygen (dephlogisticated air) by the action of light on plants, contradicting the generally held belief that Ingenhousz discovered this phenomenon. Pages 81–87 reproduce letters from Priestley to Ingenhousz, and Ingenhousz to Priestley, with commentaries on both letters. Page 88 treats "Of the Discovery of dephlogisticated Air," in which Priestley again claims the discovery of oxygen, and gives a clear account of his meeting with Lavoisier and telling him of his discovery, when he, with Mme. Lavoisier, "expressed great surprise." He also mentions that "Mr. Scheele's discovery was certainly independent of mine, tho' I believe not made quite so early." At the end is a catalogue of twenty of Priestley's works, including six published in America. The second edition of 1803 contained some additions and was expanded to 119 pages. Both editions are of considerable rarity. Not in Bolton, Duveen, Ferguson, Morgan, Osler, Smith, Waller, etc. (Crook, S447; Ferchl, 425; Partington, III, 245; Poggendorff, II, 529; Watt, II, 776f)

PRIESTLEY, Joseph

Experiments and Observations on Different Kinds of Air.
By Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, in St. Paul's Church-Yard. 1774.

First edition. 8vo. 1 leaf, xxiii, (xxiv–xxviii), 324 pp., 2 leaves (errata and advertisements). With 2 folding engraved plates. Fine copy, with half title, in original gilt-ruled speckled calf, red morocco label. With corrections by Priestley in ink on 2 pages.

DEDICATED TO the earl of Shelburne, this is the first of the series of six celebrated volumes in which Priestley describes his famous experiments on various gases. Researches carried out before 1772 (previously published in the *Philosophical Transactions*) on carbon dioxide, hydrogen, hydro-

gen sulphide, and nitric oxide are described, as well as experiments made during 1773 and the first two months of 1774 on ammonia, nitric oxide, hydrogen, carbon dioxide, etc. The preface is dated "Feb. 1774," and as oxygen was not discovered until 1 August 1774, there is no reference to it. This volume is not numbered because (at the time) Priestley had not anticipated publishing further volumes. He continued his experiments on gases at a prolific rate, and a total of five more volumes appeared: two in 1775; one in 1777, with the same title; and three with different title in 1779, 1781, and 1786. The corrections in Priestley's hand (pp. 3 and 123) were incorporated in the second edition (1775) of the first volume. The correction (p. 123) is important: Priestley has crossed out "acid" and has written in the margin "air." His classic researches on various gases greatly advanced the progress of pneumatic chemistry. (Bolton, 753; Cole, 1060; Crook, S451; D.S.B., XI, 145; Horblit, 85; Neu, 3362; Norman, 1750; Partington, III, 244; Poggendorff, II, 529; Smith, 397; Waller, 11211)

PRIESTLEY, Joseph

Experiments and Observations on Different Kinds of Air . . .
London: Printed for J. Johnson, No. 72, in St. Paul's Church-Yard. 1775–1777.

First edition of vols. II and III, second of vol. I. 3 vols., 8vo. I (1775): 1 leaf, xxiii, (xxiv–xxviii), 324 pp., 2 leaves; 2 folding engraved plates. II (1775): xxviii, (xxix–xxxii), xxxiii–xliv, 399, (1) pp., 10 leaves; 3 plates (Basire sc.). III (1777): xxxiv, (6), 410, (1) pp., 6 leaves. With folding frontispiece. Fine set in original calf, rebaked, maroon morocco labels, spines dated. Bound with (vol. II): Priestley, J., *Philosophical Empiricism* (London, 1775).

THE SECOND edition of volume I contains corrections Priestley had made to the first edition (1774). The text is completely reset, and this volume was published merely to correct errata and other errors, not to announce new discoveries. Volume II, the first to be numbered, is extremely important as it announces Priestley's discovery of oxygen by heating the calx of mercury (mercuric oxide). Experiments on the new gas are described in detail (pp. 29–103). Although he first prepared oxygen on 1 August 1774, Priestley thought it was just another form of "air." He named it "dephlogisticated air" and showed that a glowing wood splinter reignited when exposed to oxygen; also mice were more frisky when they breathed it. Priestley correctly surmised a connection of oxygen with the respiration of animals and plants but failed to recognize its importance. Volume III describes his further research on oxygen and other gases (e.g., nitric oxide and nitrous oxide), including the collection of water-soluble gases over mercury (e.g.,

ammonia, sulphur dioxide, nitrogen dioxide, and hydrogen chloride), thus leading to their isolation and characterization of their properties. (Crook, S454, S452, S453; R. G. Neville, "Steps Leading to the Discovery of Oxygen, 1774: A Bicentennial Tribute to Joseph Priestley," *J. Chem. Education*, 51 [1974], 428–431; Wellcome, IV, 436)

PRIESTLEY, Joseph

Experiments and Observations on Different Kinds of Air, and other branches of Natural Philosophy, connected with the subject. In three volumes; being the former Six Volumes abridged and methodized, with many Additions. . . . Birmingham: Printed by Thomas Pearson; and sold by J. Johnson, St. Paul's Church-Yard, London. 1790.

First edition. 3 vols., 8vo. I: li, (1), 411, (1) pp.; 4 folding engraved plates. II: viii, 472 pp.; 3 folding plates. III: viii, 574 pp., 3 leaves (catalogue of books by Priestley); 2 folding plates. Half title in volume I, not required in II and III. Fine wide-margined set, unpressed and largely uncut, in gilt-ruled speckled half calf antique, marbled boards, maroon morocco labels, spines dated.

THE CONDENSED, revised, and updated version of the six volumes on "air" originally published between 1774 and 1786. It contains Priestley's final thoughts (with few exceptions) on the entire field of research on gases and constitutes one of his most important scientific publications. Among the many subjects covered is the discovery of oxygen, which Priestley called "dephlogisticated air." "In the condensed edition of his works, published in 1790, he described interesting experiments on the thermal conductivity of gases, which he found to be much the greatest in the case of hydrogen" (D.N.B.). Priestley also more fully describes herein his visit to Paris and his communications with Lavoisier on the discovery of oxygen (vol. II, pp. 108–110). This set is bibliographically of interest as it differs considerably from the pagination given by Cole, but is consistent with that given by Crook. Possibly these volumes were set in type on a different press by Thomas Pearson (or by another printer) and published simultaneously with the set described by Cole. This difference of typesetting and pagination appears not to have been previously reported. (Blake, 363; Cole, 1065; Crook, S460–462; Edelstein, 1858; Morgan, 131–132; Partington, III, 244; Smith, 397; Waller, 11212; Wellcome, IV, 436)

PRIESTLEY, Joseph

Expériences et Observations sur différentes especes d'Air. Traduites de l'Anglois de M. J. Priestley . . . Prix, 3 liv. broché.

A Berlin. Et se trouve a Paris: Chez Saillant & Nyon, Libraires, rue Saint Jean de Beauvais. 1775.

First French edition, first issue. 12mo. xxxvi, 434 pp., 1 leaf (additions and corrections). With 2 folding engraved plates. Mint copy in pristine condition, in contemporary quarter calf, gilt, marbled boards, maroon morocco label. Inscription (eighteenth century) in ink on front pastedown endpaper: "Malesherbes 268."

WHEN PRIESTLEY published the first volume of his epoch-making *Experiments and Observations on Different Kinds of Air* (London, 1774), he had not anticipated that he would publish two further volumes with that title. Jacques Gibelin immediately translated it into French and showed Priestley the translation when they met in Paris in October 1774. Priestley approved the French version, and at the end (pp. 432–434) Gibelin prints a letter addressed to him by Priestley on 19 January 1775, in which he reports some of his new experiments. Gibelin published the translation with the "A Berlin" (i.e., Paris) imprint in order to avoid the inevitable delay that resulted when permission to publish went through the usual French channels. The sheets of the first issue were reissued (Paris, 1777), followed by two more volumes, with the approbation and privilege in volume III. The 1775 first issue is extremely rare, and such a superb copy as this may be unique. Not in the British Library, Bibliothèque Nationale, or the usual bibliographies. N.U.C. lists one copy (Yale), and there is a copy at Cornell University. (Cole, 1066; Crook, S495; [1 copy: Medical Society, London]; Ferchl, 424; Wellcome, IV, 436)

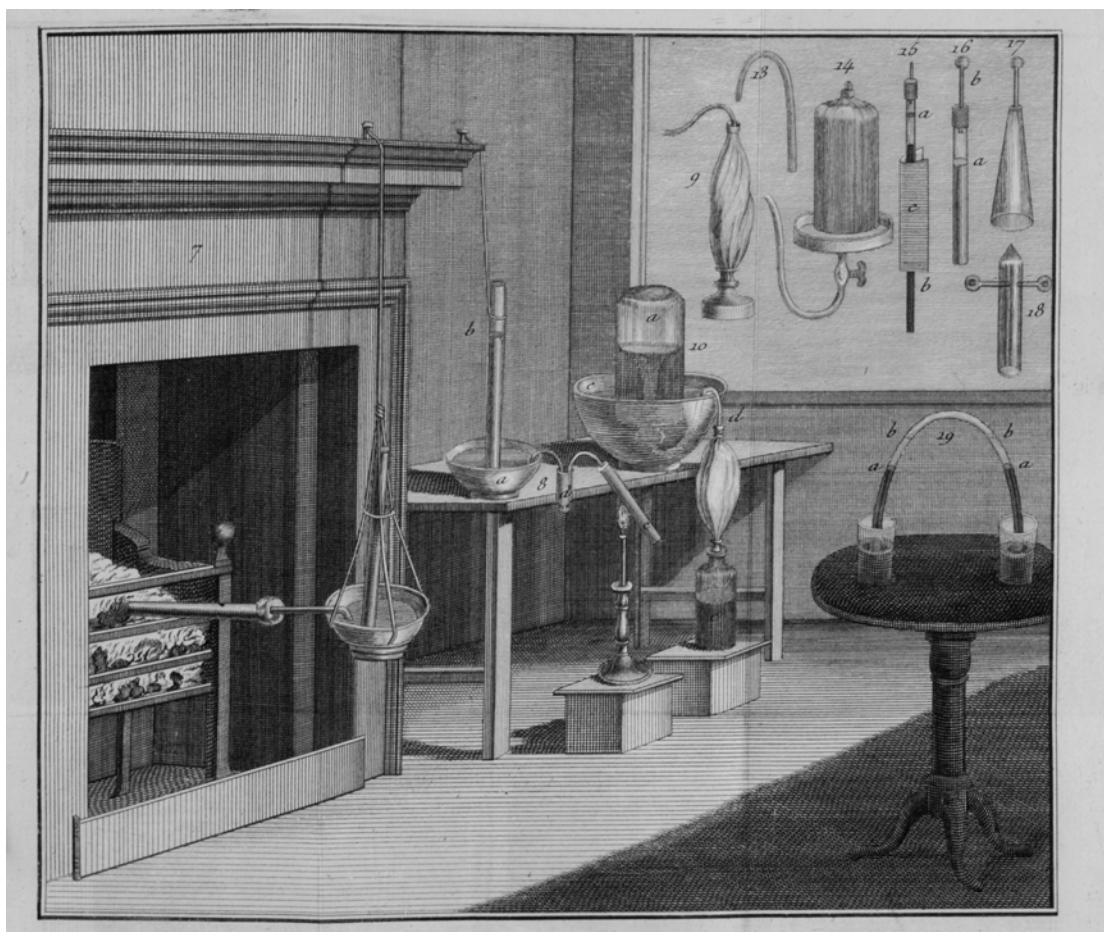
PRIESTLEY, Joseph

Expériences et Observations sur différentes especes d'Air. Ouvrage traduit de l'Anglois de M. J. Priestley . . . Par M. Gibelin . . .

Paris: Chez Nyon l'aîné, Libraire, rue S. Jean de Beauvais. 1777–1780.

First French edition, second issue of vol. I, first issue of vols. II–V. 5 vols., 12mo. I (1777): xxxvi, 434 pp., 1 leaf (additions and corrections); 2 folding engraved plates. II (1777): 2 leaves, lxii, 297, (1) pp.; 3 folding plates. III (1777): 4 leaves, iv, 352 pp.; 2 folding plates. IV (1780): lii, 404 pp.; 3 folding plates. V (1780): 2 leaves, 404 pp. Old woodcut stamp on each title page ("Société de Lecture de Geneve"); otherwise very fine set, unpressed and uncut, in original boards.

THE FIRST complete French translation, by Jacques Gibelin, of Priestley's *Experiments and Observations on Different Kinds of Air* (London, 1774, 1775, 1777; 3 vols., 8vo.). Volume III (pp. 263–264) reprints a letter from Priestley to Gibelin, dated 9 February 1776. Further additions are a treatise by the Duc de Chaulnes (III, 313–352) and by Felice Fontana (V, 139–302). A list of subscribers in volume II includes Baumé, Berthollet, Buffon, Cadet, Franklin, Jussieu, Lavoisier (eight copies), Macquer, Rouelle, and Sage.



Priestley. *Expériences et Observations sur . . . d'Air*. Paris, 1777–1780.

Volume V contains an extensive index. This edition was printed in small number: only 209 copies are accounted for in the list of subscribers. Complete sets are rare; volumes IV and V are “usually missing” (Partington). Cole gives a very detailed account of this edition. (Cole, 1067; Crook, 2496–2500; Duveen, 485; Ferchl, 424; Neu, 3365; Partington, III, 244; Smith, 397 [vols. I–III only]; Wellcome, IV, 436)

PRIESTLEY, Joseph

Experiments and Observations relating to the Analysis of Atmospherical Air; also, Farther Experiments relating to the Generation of Air from Water. Read before the American Philosophical Society, Feb. 5 and 19, 1796; and printed in their Transactions. To which are added, Considerations on the Doctrine of Phlogiston, and the Decomposition of Water. Addressed to Messrs. Berthollet, &c. By Joseph Priestley . . . Philadelphia, printed.

London: Reprinted for J. Johnson, in St. Paul's Church Yard. 1796.

First edition. 8vo. 31, (1) pp., 1 leaf (divisional title page), pp. (33)–(60). Fine copy in half calf antique, marbled boards, morocco label. Neat inscription (eighteenth century) in ink on title: “Ex libris Societatis Medicae Edinensis.” Bookplate: Franz Sondheimer.

ONE OF the last chemical works by Priestley, in which he complains that the new antiphlogistic theory of Lavoisier and his circle is taught in all the American schools. Throughout his life Priestley was a devout phlogistonist, and in the present work of 1796 he attempts to interpret his experiments according to the old theory. The second part, *Considerations on the Doctrine of Phlogiston*, with separate divisional title, is addressed to “Berthollet, De La Place, Monge, Morveau, Fourcroy, and Hassenfratz, the surviving answerers of Mr. Kirwan.” Priestley requests that these gentlemen give him an answer to his objections to the new theory of chemistry. Adet translated this work and answered it in his *Réflexions sur la doctrine du Phlogistique et la décomposition de l'Air* (Paris, 1798). Crook located only six copies (five in Great Britain, one in Geneva). (Blake, 363; Cole, 1073; Crook, S464; Ferchl, 425; Partington, III, 244;

Poggendorff, II, 529; Watt, II, 776f; Wellcome, IV, 437; Wheeler Gift, 602)

PRIESTLEY, Joseph

Experiments and Observations relating to Various Branches of Natural Philosophy; with a Continuation of the Observations on Air. By Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, St. Paul's Church-Yard. 1779, 1781, 1786.

First edition. 3 vols., 8vo. I (1779): xxxii, 490 pp., 1 leaf (errata); 1 folding engraved plate. II (1781): xvi, (11), xviii–xx, 408 pp., 3 leaves (catalogue of books by Priestley); 1 folding plate. III (1786): xxxii, 454 pp., 1 leaf (blank); 1 folding plate. Few leaves with very minor foxing; otherwise fine set in contemporary speckled calf, gilt fillets, rebounded, maroon morocco labels, spines dated. With arms of the "Society of Writers to the Signet" Library stamped in gilt on each cover.

THE SECOND series of Priestley's famous *Observations*, completing the six volumes of his great researches on gases. The first volume appeared without a volume number on the title page, as the author had not envisioned further volumes in the series. The titles of volumes II and III are numbered. Volume I contains a number of important new experiments, including an important note concerning the rival claims to the discovery of oxygen between the author, Scheele, and Lavoisier. Volume II comprises an analysis of Priestley's researches to 1781, and volume III describes his further experiments on gases to 1786, with corrections to several pages in ink, possibly in Priestley's handwriting. Partington discusses at length Priestley's work on various gases and points out that his opinions on the nature of dephlogisticated air (oxygen) varied among his publications of 1774–90. Volumes II and III carry a Birmingham imprint. (Blake, 363; Bolton, 754; Cole, 1064; Crook, S465–467; Duveen, 484; Edelstein, 1861; Neu, 3363; Partington, III, 244; Wellcome, IV, 436)

PRIESTLEY, Joseph

A Familiar Introduction to the Study of Electricity. By Joseph Priestley . . .

London: Printed for J. Dodsley, in Pall-Mall; T. Cadell, Successor to Mr. Miller, in the Strand; and J. Johnson, in Pater-noster Row. 1768.

First edition. 4to. 52 pp. With 4 engraved plates (2 folding). Half title misbound between pages viii and 9; otherwise very good copy in half calf antique, marbled boards, maroon morocco label, spine dated.

IN THE preface Priestley states that he published this work expressly for those who could not understand his larger

History of Electricity (London, 1767). It thus forms an introduction to that more detailed and comprehensive work. On the verso of the half title is an advertisement of "Electrical Machines" that will be ready for sale in March, constructed under the direction of Dr. Priestley. It would be interesting to learn if these machines were ever on the market and if any have survived. He describes the effects produced by passing electricity through gases at low pressure, stating (p. 38) that "some of the finest appearances of electric light are exhibited in *vacuo*." The four plates are from his *History of Electricity*, i.e., plates 2, 3, 6, and 7. Other editions appeared in 1769, 1777, and 1786. The first edition is very scarce: Crook located only eight copies (England, three; France, one; United States, four). (Crook, S471; Gartrell, 437; Wheeler Gift, 422)

PRIESTLEY, Joseph

Four Discourses intended to have been delivered at Philadelphia, by Joseph Priestley, L.L.D. F.R.S. published by desire of the author.

Northumberland: Printed by John Binns. 1806.

First edition. 8vo. 2 leaves, 87, (1) pp., 1 leaf (blank). Fine copy in contemporary half calf, marbled boards. Bound with (in vol. II): Priestley, J., *Memoirs* (London, 1807).

FOUR ESSAYS on theological subjects that Priestley had intended to present to an audience in Philadelphia but was prevented from doing so by his death in 1804. They appear here for the first time. The subjects are: 1. On the Duty of Mutual Exhortation (pp. 1–25); 2. On Faith and Patience (pp. 26–45); 3. On the change which took place in the Character of the Apostles after the Resurrection of Jesus Christ (Part I: pp. 46–62; Part II: pp. 63–87). These essays are of interest as they throw light on Priestley's theological views immediately before he died. His philosophy of life is summed up in Part II (p. 87): "Giving all diligence . . . let us add to our faith virtue, and to virtue knowledge, to knowledge temperance, to temperance patience, to patience godliness, to godliness brotherly kindness, and to brotherly kindness universal charity." Crook located only five copies of this rare work (three in Great Britain, two in the United States). (Crook, TR89)

PRIESTLEY, Joseph

Heads of Lectures on a course of Experimental Philosophy, particularly including Chemistry, delivered at the New College in Hackney. By Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, St. Paul's Church-Yard. 1794.

First edition. 8vo. xxviii, 180 pp., 4 leaves (catalogue of books by Priestley, listing 77 titles). Fine copy, unpressed and uncut with wide margins, in gilt-ruled half calf antique, marbled boards, maroon morocco label, spine dated.

THE SUBSTANCE of a course of thirty-six weekly lectures delivered by Priestley at the New College, Hackney (London), during 1791–94, after which he emigrated to America to join his sons in Pennsylvania. The New College was open to students of all religious persuasions, including Dissenters (see preface). The first twenty-nine lectures are on chemistry taught from the phlogistic viewpoint, which was beginning to become obsolete under the increasing weight of evidence to the contrary, adduced by Lavoisier and his coworkers. Topics covered include gases, acids, alkalies, combustible organic liquids (alcohol, ether), earths, and metals. Lecture 29, on “the Doctrine of Phlogiston, and the Composition of Water,” is of particular interest as Priestley attempts to defend the old theory and maintains that water is an elementary substance and that metals are mixtures. Lectures 30–36 are on heat (including animal heat), light, magnetism, and electricity. In lecture 4 (“Of Dephlogisticated Air”) Priestley modestly does not mention that he was the discoverer of oxygen. A pirated edition in duodecimo format appeared (Dublin, 1794; Cole, 1077), copied from the London edition. (Blake, 363; Bolton, 754; Cole, 1076; Crook, S477; D.S.B., XI, 146; Edelstein, 1869; Neu, 3368; Partington, III, 242; Poggendorff, II, 529; Smith, 398; Watt, II, 777e; Wheeler Gift, 590)

PRIESTLEY, Joseph

The History and Present State of Discoveries relating to Vision, Light, and Colours. By Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, St. Paul’s Church-Yard. 1772.

First edition. 4to. v, (i), xvi, 3 leaves (list of subscribers), 1 leaf (errata), 812 pp., 3 leaves (index), 3 leaves (catalogue of books). With folding engraved frontispiece of “Biographical Chart” (Butterworth sc. Leeds) and 24 folding copperplates containing 173 figures. Fine copy with wide margins, in original gilt-ruled calf, rebacked, dark-green morocco label.

ONE OF Priestley’s most important scientific books, and the second in which he had hoped to cover (but did not complete) the whole field of exact science. As in the case of *The History of Electricity* (1767), this is far more than a mere history of earlier works on the subject. In both volumes Priestley presents his own theories and experiments and analyzes the work of his predecessors in terms of more recent theories. It remained the only English history of optics for over 150 years. Priestley’s rejection of Newton’s concept of an “optical ether” is noteworthy. He adopted a

corpuscular theory of light similar to that proposed by Boscovich (*Theoria philosophiae naturalis*, Venice, 1763) and employed a variation of that theory to explain the formation of Newton’s rings. Of chemical interest, this work is the nearest approach to a general treatise on luminescence published in the eighteenth century. Topics covered include “light proceeding from putrescent substances . . . and phosphorus” (pp. 563–588) and “the property of some substances to imbibe and emit light, and especially the Bolognian Phosphorus” (pp. 360–383). The catalogue of books owned or consulted by Priestley is of bibliographical interest, as it lists the exact editions he used in writing this work. Much of his library was destroyed in July 1791, during the Birmingham Riots. (Blake, 363; Crook, S479; D.S.B., XI, 142; Harvey, *History of Luminescence*, 181–182; Partington, III, 244; Roller & Goodman, II, 327; Smith, 398; Waller, 15652; Wellcome, IV, 436)

PRIESTLEY, Joseph

The History and Present State of Electricity, with Original Experiments. By Joseph Priestley . . .

London: Printed for J. Dodsley . . . , J. Johnson and B. Davenport . . . , and T. Cadell . . . 1767.

First edition. 4to. 2 leaves, xxxi, (i), 736 pp., 4 leaves. With 7 folding engraved plates of apparatus (J. Mynde sc.) and 1 engraved “Chart of Biography.” Title page and plates lightly foxed; otherwise fine copy with wide margins, in original calf, spine richly gilt, red morocco label.

BORN IN Yorkshire and educated for the ministry, the great experimental chemist and theologian Priestley (1733–1804) was employed most of his life as a teacher or preacher. He published numerous works on theology, history, education, politics, and other subjects, as well as on scientific subjects. “Priestley’s scientific work was begun as a logical extension of his interests in education. The *History and Present State of Electricity* was conceived as a methodized account of previous discoveries and an assessment of contemporary electrical studies, to encourage further work on the subject” (D.S.B.). It is the first extensive history of electrical discoveries and theories. Written on the advice of Benjamin Franklin, this work describes a number of chemical experiments on carbon dioxide carried out by Priestley, as well as on the conductivity of inorganic salts. The *History* “gives a good account of the subject, largely based on original sources, and is still of value” (Partington). The proofs of this edition were corrected by Franklin and John Canton. (Blake, 363; Crook, S480; D.S.B., XI, 141–142; Edelstein, 1871; Ekelöf, 471; Gartrell, 443; Mottelay, 227; Partington, III, 244; Poggendorff, II, 529; Waller, 15653; Watt, II, 776e; Wellcome, IV, 435)

PRIESTLEY, Joseph

The History and Present State of Electricity, with Original Experiments. By Joseph Priestley . . . The second edition, corrected and enlarged.

London: Printed for J. Dodsley in Pall-Mall, J. Johnson and J. Payne in Pater-noster Row, and T. Cadell (Successor to Mr. Millar) in the Strand. 1769.

Second edition. 4to. 2 leaves, xxxii, 712 pp., 6 leaves. With 8 folding engraved plates of apparatus (J. Mynde sc.) and 1 engraved "Chart of Biography." Fine copy in original calf, spine richly gilt, dark-green morocco label.

THE ENLARGED second edition of this important work, containing an additional plate. Information is included chiefly from the publications of German and other Continental authors, the existence of which Priestley mentions in the preface were not known to him when he published the first edition (London, 1767). His experiments are clearly and accurately described, and in the second part he expounds his views on the scientific method, which were derived from Locke and possibly from Condillac. Priestley anticipated Henry Cavendish and Charles Augustin Coulomb in the important suggestion that electric attraction obeys the inverse square law, deducing this from experiments proposed by Franklin. He found that an electrified body is discharged by the proximity of flame and that carbon (blacklead, charcoal, graphite) and red-hot glass are conductors, and he explained the formation of rings (so-called Priestley rings) when an electrical discharge occurs on a metallic surface. He also showed considerable insight by pointing out the need for the measure of electrical resistance and proposed a method for measuring what is now called impedance, which at the time was not distinguished from resistance. Third (1772), fourth (1775), and fifth (1794) editions appeared, as well as French and German translations. (Crook, S481; Roller & Goodman, II, 327; Smith, 398)

PRIESTLEY, Joseph

Memoirs of Dr. Joseph Priestley, to the year 1795, written by himself: with a continuation, to the time of his decease, by his son, Joseph Priestley: and observations on his writings, by Thomas Cooper, President Judge of the 4th district of Pennsylvania: and the Rev. William Christie.

London: Printed for J. Johnson, No. 72, St. Paul's Church-Yard. 1806–1807.

First edition. 2 vols., 8vo. I (1806): 2 leaves, pp. vi, 128 (Memoirs), 129–222 (Continuation of Memoirs), 223–481 (misnumbered 469; Appendix Nos. 1–5), p. 482 (unnumbered, errata). II (1807): 2 leaves, pp. 482–824 (Appendix No. 6), p. 825 (unnumbered), 1 leaf (errata); x pp. (Catalogue of books by Priestley). Title pages of volumes I and II transposed;

otherwise fine copy in contemporary half calf, marbled boards, spines gilt-ruled, dark-blue morocco labels. Bound with (in vol. II): Priestley, J., *Four Discourses* (Northumberland, 1806).

THE PRIMARY source of information (partly autobiographical) on Priestley's life. Included are some of his miscellaneous writings and a catalogue of his books and papers. The appendixes comprise commentaries on Priestley's chemistry, metaphysics, politics, grammar, oratory, criticism, history, religious opinions, etc. Appendix 6 reviews Priestley's theological works. Bolton erroneously gives 1803 as the date of this edition (when Priestley was still alive) and includes a portrait that was added only to the copy in Bolton's possession. The present copy differs in pagination from that given by Crook. (Bolton, 234; Cole, 1085; Crook, H411–412; D.S.B., XI, 147; Duveen, 485; Edelstein, 1895; Partington, III, 239; Smith, 399 [vol. I only]; Wellcome, IV, 437)

PRIESTLEY, Joseph

Memoirs of the Rev. Dr. Joseph Priestley. To the year 1795. Written by Himself. With a Continuation, to the time of his decease. By his son, Joseph Priestley.

London: Reprinted from the American edition, by the several Unitarian Societies in England: and sold by Joseph Johnson, St. Paul's Church-Yard. 1809.

First edition. 12mo. 1 leaf, iv, 202 pp., 4 leaves (catalogue of books by Priestley). Fine copy, uncut with wide margins, in contemporary boards, black cloth back, spine dated.

THE FIRST separate English edition of Priestley's *Memoirs*, identical in wording and content to the text of the two-volume edition (London, 1806–1807), but without the additional matter. (Crook, H413; Partington, III, 239; Smith, 399)

PRIESTLEY, Joseph

Philosophical Empiricism: containing Remarks on a Charge of Plagiarism respecting Dr. H——s, interspersed with various Observations relating to Different Kinds of Air. By Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, St. Paul's Church-yard. 1775. (Price One Shilling and Six Pence.)

First edition. 8vo. 2 leaves, 86 pp., 1 leaf (errata), 2 leaves (Catalogue of books by Priestley). Insignificant tiny wormholes in blank lower margins of a few leaves; otherwise fine copy. Bound with: Priestley, J., *Experiments and Observations on Different Kinds of Air* (London, 1775, vol. II).

A DISPUTATIOUS REBUTTAL by Priestley to charges made by Dr. Bryan Higgins, who, in his *Syllabus of the Discourses*

and *Experiments* (London, 1775), had made a number of uncomplimentary statements about Priestley and his work on gases, as published in the *Experiments . . . on . . . Air* (London, 1774). Abetted by his friend Dr. Richard Brocklesby (1722–1797), Higgins had made several claims to the discovery of some of the gases that Priestley had, in fact, discovered. Although at first Priestley ignored the matter, Higgins persisted in accusing him of plagiarism. Very reluctantly, Priestley responded by publishing this work in order to set the record straight. Cole notes that there are minor variants in the title pages of reprints bound with later editions of Priestley's work on "airs." (Blake, 363; Bolton, 754; Cole, 1082; Crook, S488; Edelstein, 1880; Ferchl, 424–425; Neu, 3370; Partington, II, 244, 728; Pogendorff, II, 529; Smith, 399; Watt, II, 776x)

PRIMROSE, James

Popular Errors. Or the Errors of the People in Physick, First written in Latine by the learned Physitian James Primrose Doctor in Physick. Divided into foure Bookes. viz. 1. The first treating concerning Physicians. 2. The second of the Errors about some diseases, and the knowledge of them. 3. The third of the Errors about the diet, as well of the sound as of the sick. 4. The fourth of the Errors of the people about the use of remedies. Profitable and necessary to be read of all. To which is added by the same Authour his verdict concerning the Antimoniall Cuppe. Translated into English by Robert Wittie Doctor in Physick.

London: Printed by W. Wilson for Nicholas Bourne, at the South-entrance of the Royall Exchange. 1651.

First edition. 8vo. 12 leaves, 461, (1) pp., 4 leaves (index), 2 leaves (advertisements). Fine engraved title page (T. Cross sculpsit), printed title within typographical ornament border. Small piece missing from outer margin of leaf N2 repaired, only slightly affecting the word (but not legibility) at the end of 2 lines on each page. First signature of preliminary leaves wrongly folded; otherwise very good copy, in blind-stamped, paneled unlettered calf antique.

ORIGINALLY APPEARING as *De vulgi in medicina erroribus* (London, 1638; S.T.C. 20384), this translation by Robert Wittie (1613–1684) was carried out as a courtesy to his friend the author. Born in France of Scottish parents, Primrose (1580–1659) was educated at Montpellier (M.D., 1628) and practiced first at Hull and later at York with Wittie. Primrose is chiefly remembered for his opposition to William Harvey's doctrine of the circulation of the blood. The present work contains much of iatrochemical interest: e.g., "chymicall remedies"; "use of minerals"; "quicksilver is unhurtfull"; and "right use of tobacco." The "Antimoniall Cuppe" (first: London, 1640) is mentioned by Partington (III, 23). (Krivatsy, 9289; Munk, I, 199; Wing, P3476)

PRINCIPLES

The Principles of The Chymists of London Stated, with the Reasons of their Dissent from the Colledge of Physicians; as They were unanimously agreed on by them, at a Meeting in London; and are now Published, for the Information of the said Colledge, and Satisfaction of those that intend the Practice of Physick and also for Instructing the People in what is most useful for their Preservation. Part I. . . . (London:) Printed for the Authors. 1676.

First edition, 2 parts in 1 vol. 8vo. I: 2 leaves, 31, (1) pp. (i.e., signatures A–B8). II: 1 leaf, pp. "67–128" (i.e., signatures F–I8). Minor toning to title of second part and small old brown ink stains on last page; otherwise very good copy in blind-ruled dark-brown calf antique, spine richly gilt and stamped "Chymistry." Bound with: *The Second Part of the Principles of the Chymists of London Stated, &c.* (London: Printed for the Authors, 1676).

A CURIOUS BOOK on pharmaceutical chemistry in which the chemists of London defend themselves from the charges of incompetence made by members of the Royal College of Physicians in London. The jump in pagination from page 31 of part I to page 67 of part II, as well as the jump in the signatures (i.e., C–E8 absent), may imply a missing addenda to part I, or merely misnumbering of part I, and the meaning of the text of part II seems to follow logically. Possibly written by members of the Society of Apothecaries of London, this work is of great rarity. Only four copies are recorded by Wing (British Library; Glasgow, Hunterian Library; New York Academy of Medicine; and Yale). Of these libraries, two lack the second part. Unknown to the usual bibliographers of chemistry and pharmacy. (Wing, P3497)

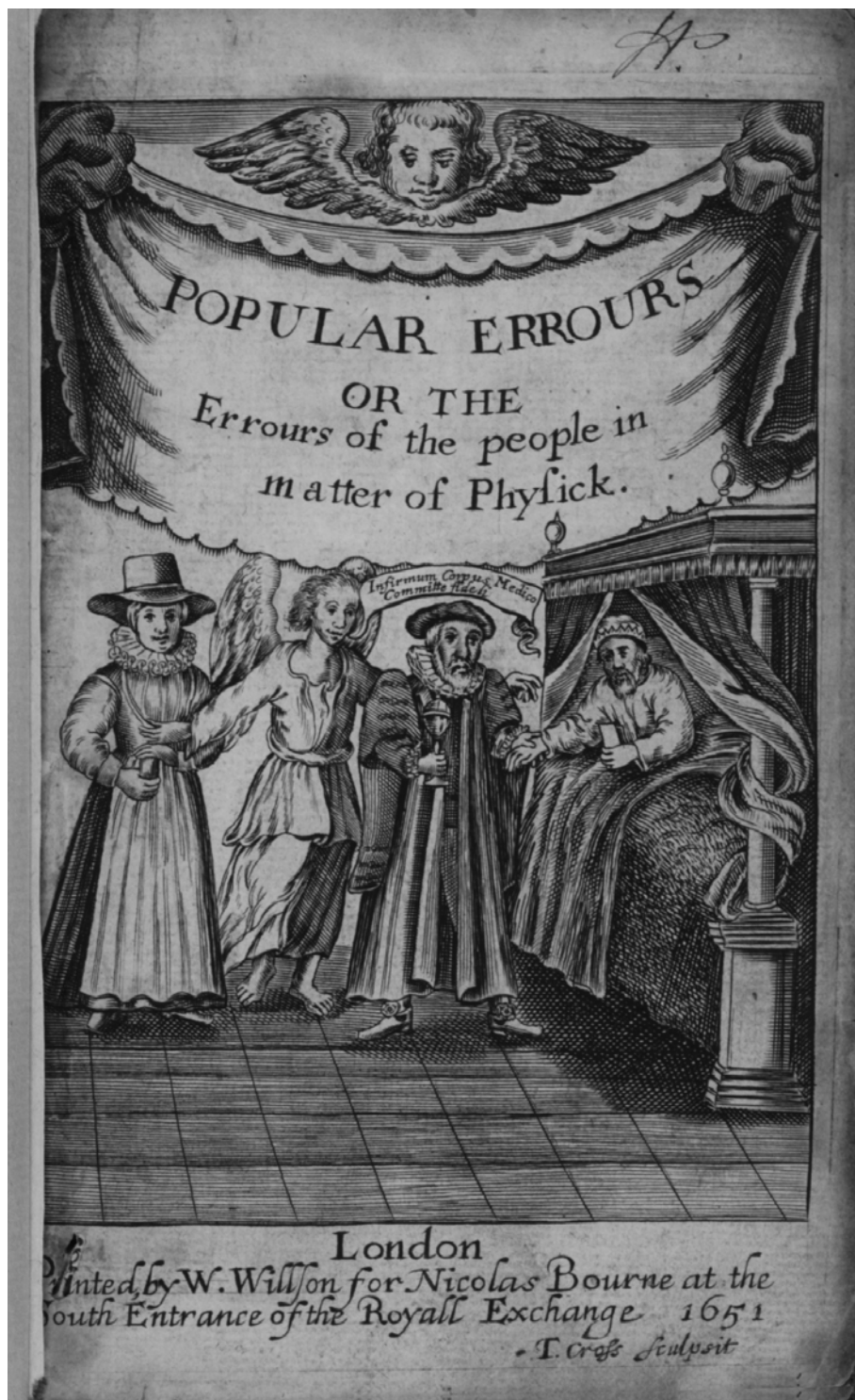
PRINGLE, John

A Discourse on the Different Kinds of Air, delivered at the Anniversary Meeting of the Royal Society, November 30, 1773. By Sir John Pringle Bart. President. Published at their request.

London: Printed for the Royal Society. 1774.

First edition. 4to. 1 leaf, 31, (1) pp. Fine, crisp copy, in brown quarter morocco, marbled boards, spine lettered and dated in gilt.

SIR JOHN PRINGLE (1707–1782), a pupil of Boerhaave, famous army physician, and later physician to King George III, was elected F.R.S. in 1745. He attained a position of great influence in scientific circles and in 1772 was elected president of the Royal Society. His book *Observations on the Diseases of the Army* (1752), a classic of military medicine, established his reputation in Great Britain and Europe. The present address was delivered to the Royal Society



Primrose. Popular Errours. London, 1651.

to commemorate the award of the Copley Medal to Joseph Priestley for his outstanding research on gases and especially for his work on oxygen. This paper was not published in the *Philosophical Transactions* but was reprinted in Pringle's posthumously published *Six Discourses* (London, 1783). Partington, who quotes only from the *Six Discourses*, evidently did not know of this genuine first edition. Translations into Italian (Naples, 1774) and Dutch (Franeker, 1776) appeared, on which see Blake (p. 363) and Bolton (p. 754), respectively. Very scarce. Not in Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Munk, Partington, Poggendorff, Waller, etc. (Blake, 363; Cushing, P397; Ferchl, 425; Neu, 3375; Smith, 400; Watt, II, 777z)

PRINGLE, John

Six Discourses, delivered by Sir John Pringle, Bart. when President of the Royal Society; On occasion of Six Annual Assignments of Sir Godfrey Copley's Medal. To which is prefixed the Life of the Author. By Andrew Kippis . . . London: Printed for W. Strahan; and T. Cadell, in the Strand. 1783.

First edition. 8vo. 1 leaf, v, (i), xcvi, (i), 1 leaf, 282 pp., 1 leaf (errata). Fine copy in contemporary calf, rebaked with original maroon morocco label preserved. Front cover stamped in blind: "C. Combe, M.D." From the library of Lady Jane Davy, wife of Sir Humphry Davy, with her engraved armorial bookplate on front pastedown endpaper.

THE FIRST collected edition of the six discourses by Pringle, although each discourse had earlier been published separately. The recipients of the Copley Medal were Joseph Priestley (on different gases), John Walsh (on the torpedo, or electric ray), Nevil Maskelyne (on the gravitational attraction of mountains), Captain James Cook (on preserving the health of mariners), James Bradley (on reflecting telescopes), and Charles Hutton (on the theory of gunnery). The ninety-seven-page biography of Pringle by his friend Andrew Kippis (1725–1795), containing references to Australia, is of interest to "Boswellians," as Kippis includes material supplied to him by James Boswell, Dr. Samuel Johnson's biographer. This is an important association copy, having come from the library of Lady Jane Davy, wife of Sir Humphry Davy. It is well known that Lady Davy was not scientifically inclined, so this volume must have belonged to Humphry Davy, Lady Davy having placed her bookplate in it after her husband died in 1829. The earlier owner of this copy, Dr. Charles Combe (1743–1817), was the famous numismatist and apothecary who helped the great anatomist William Hunter (1718–1783) collect coins from 1773. (D.S.B., XI, 148; Norman, 1758; Partington, III, 249; Wellcome, IV, 439)

PRIOR, Thomas

An Authentick Narrative of the Success of Tar-Water, in curing a great number and Variety of Distempers, with remarks and occasional papers relative to the Subject. To which are subjoined, Two Letters from the Author of Siris, shewing the Medicinal Properties of Tar-Water, and the best Manner of making it. . . .

Dublin printed London re-printed, for W. Innys, C. Hitch, and M. Cooper, in Pater-noster-row; and C. Davis, in Holbourn. 1746. (Price Two Shillings.)

First London edition. 8vo. 4, 192 pp. Very good copy in contemporary calf, rebaked, 2 maroon morocco labels gilt. Bound with: Berkeley, George, *Siris: a chain of philosophical reflexions . . . concerning . . . tar water* (London, 1744); and Hales, Stephen, *An account of some experiments . . . on tar-water* (London, 1745).

PRIOR (ca. 1682–1751), a philanthropist who promoted industrial works among the Irish protestants, in 1731 founded the Dublin Society for the promotion of agriculture, manufactures, arts, and sciences. In the present work he describes the beneficial effects of tar water in curing disorders ranging from stomach upsets to emphysema. There are numerous affidavits testifying to the good results produced by drinking tar water. Two letters from George Berkeley, author of *Siris* (1744), to Prior on the virtues of tar water are reprinted (pp. 169–187). The book is of pharmaceutical chemical interest but is not in the usual early chemical bibliographies. In addition to the present, Blake lists a new edition (London, 1746) and two American editions (Boston, 1749; Providence, 1793). (Blake, 364; Neu, 3376a [new ed., 1746, 88 pp. only]; Osler, 1077; Waring, 623; Watt, II, 7789)

PROBST, Andreas

Disputatio Philosophica ac Medica de Terris, quam ex publicis praecipue dissertationibus . . . Hermanni Conringii . . . sub eiusdem praesidio . . . Andreas Probst Brunsvicensis. Ad diem XV. Decembr. Anno MDCXXXIIX. . . . Helmstedt: Typis Henrici Davidis Mülleri, Acad. Typogr. 1678.

First edition. 4to. 16 leaves (unpaginated). Woodcut initials, head- and tailpieces. Fine, crisp copy, in maroon quarter morocco, marbled boards, spine gilt-lettered and dated.

A PHILOSOPHICAL, CHEMICAL, and medical dissertation on different kinds of metallic ores and earths. Probst, of Brunswick, presented this work under the direction of the famous chemist and physician Hermann Conring (1606–1681), who was reputed to be "the most learned man of his time in Germany" (Ferguson). The writings of Agricola,

Caesalpinus, Dioscorides, Galen, Theophrastus, et al., are cited. Conring himself published a dissertation with a similar title (*De terris earumque ortu et differentiis*, Helmstedt, 1638), and as the dedication is dated 1638, the present work appears to be an updated version. "Before Schook, Andreas Probst had treated of the disturbance of phantasy by melancholy" (Thorndike [VIII, 520], who refers to the *De phantasia eiusque per melancholiam affectione Exercitatio* [Berlin, 1654] by Probst). Manget (*Bibliotheca Scriptorum Medicorum*, 1731, vol. II, part 1, p. 551) discusses Probst and the *Phantasia* (1654), but the present title was unknown to him. No reference to this very rare work has been located in available bibliographies.

PROUT, William

Chemistry Meteorology and the Function of Digestion considered with Reference to Natural Theology. By William Prout M.D. F.R.S.
London: William Pickering. 1834.

Second edition. 8vo. xxv, (1), 570, (2) pp. With Aldine anchor device on title page and folding engraved map of the world (by C. Bradbury), colored in outline. Few minor marginal stains; otherwise very good copy in contemporary half calf, marbled boards, spine gilt in compartments, maroon morocco label.

ONE OF the pioneers of biochemistry, Prout (1785–1850) proved that gastric juice contains free hydrochloric acid. In this work he claims to have recommended iodine for cases of goiter to John Elliotson, who used it in 1819 at St. Thomas's Hospital, London. In 1815 Prout called attention to the closeness with which the atomic weights of the elements, expressed in relation to the atomic weight of hydrogen (taken as unity), approximated whole numbers. This theory, which came to be known as Prout's hypothesis, was substantiated nearly a century later with the discovery of isotopes. It is fully discussed in the present work, which forms volume VIII of the celebrated Bridgewater Treatises, published in memory of Francis Henry, earl of Bridgewater (d. 1829). The section "on the biochemistry of digestion was definitely in advance of its time. It was here that he discussed the three basic components of food—carbohydrates, fats, and proteins—and suggested that food was ultimately converted into blood" (*Heirs of Hippocrates*, 1905). In this work Prout coined the word *convection* and clearly set forth what is now called Avogadro's law. In the present edition (first: London, 1834), Prout has expanded the introductory material, made some alteration in the arrangement, and corrected errors. Bolton, Ferchl, and Poggendorff give the wrong date: 1833. (Bolton, 755; Cole, 1091; D.S.B., XI, 173–174; Ferchl, 427; Garrison–Morton, 3812; Partington, III, 713; Poggendorff, II, 539; Smith, 401; Wellcome, IV, 444)

PRUGGMAYR, Martin Maximilian

Scrutinium Philosophicum de vero Elixire Vitae, seu Genuino Auro Potabili Philosophico, quo non solum omnes humani corporis morbi quondam sanabantur, verum & immunda, ac leprosa corpora metallorum curabantur. Opus non minus utile, quam necessarium omnibus artis Hermeticae filiis, in quo docetur, quid scire, quidque vitare debeat Philosophiae Chemicae Studiosus . . .

Salzburg: Sumptibus Joannis Baptistae Mayr, Typographi Aulico-Academici. 1687.

First edition. 8vo. 16 leaves, 146 pp., 3 leaves. With the blank leaf B8. Fine copy, in mid-nineteenth-century quarter cloth, marbled boards, spine gilt-lettered.

BORN AT Voitsberg in Styria, Pruggmayr, a physician at Gratz, published medical papers in the *Miscellanea* of the Academia Naturae Curiosorum and was admitted a member of that society in 1690 under the name Parmenides. The dates of his birth and death are unknown. Mentioned by Lenglet Dufresnoy, Jöcher, and Gmelin, this is a treatise on alchemy, the preparation of the elixir of life, potable gold, transmutation of metals, the philosopher's stone, etc. It is "valuable for a chapter, 'quales libros vitare, & quos legere debeat tyro-chemicus,' and also for numerous references to alchemical writings" (Duveen). The *Catalogus Authorum* lists about 130 alchemical works that Pruggmayr had consulted. Duveen and Ferguson give the very long title. Duveen mentions a plate that is not in this or other copies examined; it must have been inserted into his copy. A rare book, a German translation of which appeared (Leipzig, 1790). (Bolton, 1028; Duveen, 488; Ferchl, 427; Ferguson, II, 229; Ferguson Coll., 578; Krivatsy, 9302; Parkinson & Lumb, 1968; Neu, 3383; Sotheran, Cat. 832 [1932], 5648 ["Rare"]; Waite, 298)

PRUNIER, Louis Léon Adolphe

Principes Azotés Cristallisables de l'Organisme Animal. Thèse présentée au Concours pour l'Agrégation (Section des Sciences Physiques) par L. Prunier . . .
Paris: Imprimerie Arnous de Rivière. 1878.

First edition. 4to. viii, 87, (1) pp. Very fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

PRUNIER (fl. 1878) was a pharmaceutical chemist who carried out a great deal of biochemical research on the organic compounds found in the human body. Working with both living and dead people, he isolated a large number of compounds from various body fluids. Presented to the Paris Faculty of Medicine, this thesis concerns the nitrogen-containing compounds that can be isolated in crystalline form from animals and humans. At the time of publication

the chemical composition of many of the compounds was either unknown or only partially known. Prunier's work on the isolation and purification of these compounds was thus of great importance to organic and biochemistry. The first chapter describes the preparation of crystalline hemoglobin and its combination with gases. Other biochemically important compounds described are hematin, bilirubin, biliverdine, indole, lecithin, many essential amino acids, glycoproteins, purines, urea, etc. Chemical equations, analyses of compounds, and other data are given. Prunier also published works on hydrocarbons in American petroleum (1879), opium (1879), and quercitin (1878; Bolton, *First Supplement*, 343; *Academic Dissertations*, 307), as well as articles on alcohols and phenols in Edmonde Fremy's *Encyclopédie Chimique* (Paris, 1892; Bolton, 54). The present significant work in the history of organic and biochemistry is very rare and is unrecorded by the usual bibliographers.

PSILANDERHIELM, Nils

Tal, om Mineral-Samlingar; hållit för Kongl. Vetenskaps Academien, vid Praesidii afläggning, den 1 Februarii 1755. Af Nils Psilanderhielm, Bergs-Rad.
Stockholm: Tryckt hos Lars Salvius. 1755.

First edition. 8vo. 16 pp. Large copperplate vignette on title page. Good copy, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A SPEECH OF chemical interest on the collection of minerals, with references to the works of Cramer, Cronstedt, Henckel, Pott, Rinman, Swab, Wallerius, et al. Psilanderhielm (dates unknown) was an expert on Swedish mining. Rare. Not found in available bibliographies.

PUGH, S.

Observations mêlées d'expériences, tendant à prouver que l'acide muriatique oxigéné n'est pas une combinaison de l'acide muriatique et de l'oxigène; avec une explication de sa véritable composition, par S. Pugh, de Rouen.
Rouen: De l'Imp. des Arts. Thermidor An XII. 1804.

First edition. 8vo. 30 pp. Manuscript corrections in ink, presumably by Pugh, on pages 10 and 13. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN EARLY and historically important treatise on hypochlorous acid and its properties. The author, on whom no biographical information has been found, describes the preparation of hypochlorous acid (HOCl) by reacting in the cold oxides of lead, copper, iron, etc., with common salt (sodium chloride), niter (potassium nitrate), and sulphuric acid. He disagrees with Berthollet's hypothesis that the

bleaching action of hypochlorous acid is due to the liberation of oxygen, and also takes issue with similar experiments and conclusions of Fourcroy, Guyton-Morveau, Monnet, et al. At that time this was a subject on which there was much controversy. Partington (IV, 97) states that Balard first discovered free hypochlorous acid (*Annales de Chimie*, 57 [1834], 225); however, the present work clearly proves that Pugh prepared the free acid before 1804. Very rare. Not in the British Library and not listed in the usual early chemical bibliographies.

PULLI, Pietro

Istruzioni Teorico-Pratiche su la Raccolta del Nitro. Compilate per uso della Reale Amministrazione Generale delle Polveri, e de' Salnitri del Regno dall'Ispettor Generale della medesima Pietro Pulli . . .
Naples: Nella stamperia del Corriere con publica Autorita. 1808.

First edition. 8vo. 1 leaf (title), 2 leaves, 25 pp., 1 leaf (blank), 128 pp. With beautiful engraved title page (by P. Toro after a drawing by G. B. Cinquegrana) and 2 large folding plates (by P. Toro after drawings by Pulli). Fine copy, unpressed and uncut, in half calf antique, marbled boards, maroon morocco label, with original decorated paper wrappers bound in. Presentation copy, inscribed by the author in ink on verso of front flyleaf: "All'insigne all'onorato Sig. Landriani l'autore n'conoscenti."

AN INTERESTING and important work on the manufacture of saltpeter (potassium nitrate) for use in making gunpowder. Pulli (fl. ca. 1800) was general inspector of the administration of gunpowder and saltpeter for the Kingdom of Naples and a member of several distinguished scientific societies, which are listed in the title. The preface (25 pp.) contains a detailed history of saltpeter from earliest times to the end of the eighteenth century. There are many references to Lavoisier, Berthollet, Fourcroy, Kirwan, and other chemists throughout. In addition to technical advice in the text, the large copperplates depict tools, furnaces, and plans of the saltpeter factory. This copy was given by Pulli to the famous Italian chemist Count Marsiglio Landriani (1751–1815), who introduced the name "eudiometer." Landriani studied the formation of dephlogisticated air (oxygen) by the action of heat on saltpeter and measured the quantities produced by means of his eudiometers. He is best remembered for his important book *Ricerche Fisiche intorno Salubrità dell'Aria* (Milan, 1775). Duveen mentions that this rare book is "not recorded by the usual authorities." (Cole, 1094; Duveen, 488)

PURCHAS, Samuel

Purchas his Pilgrimage. Or Relations of the World and the Religions observed in all Ages and Places discovered, from the Creation unto this Present. . . . Much enlarged with additions through the whole worke. Containing a theologicall and geographycall historie of Asia, Africa, and America, with the Ilands [sic] adjacenty . . . With briefe descriptions of the countries, nations, states, discoveries, . . . and the most remarkable rarities of nature, or humane industrie, in the same. . . .

London: Printed by William Stansby for Henrie Fetherstone, and are to be sold at his Shop in Pauls Churchyard at the Signe of the Rose. 1614.

Second edition. Folio. 14 leaves, 918 pp., 18 leaves (index). Many decorative woodcut capitals, head- and tailpieces. Fine copy, in early-nineteenth-century half morocco, marbled boards.

THE SECOND, greatly enlarged edition of this important and famous history of the world. The index lists numerous entries on subjects of interest to the history of chemistry, medicine, geology, technology, and related topics: e.g., alchimie, amber, chimia, diamonds, druggs, emeralds, fire, fountains of pitch, frankincense, gold, magike (artificiall, naturall), medicines, mercury, metals, naphtha, opium (and other narcotics), poysons, purple dyes, salt, sugar, tobacco, and wines. There is much information on the strange practices then current in medicine and the sciences. The first edition, a smaller work, appeared in 1613. Purchas (ca. 1575–1626) graduated from Cambridge and was rector of St. Martin's Church, Ludgate (London), 1614–26. A man of great scholarship, he is remembered for his three books, each distinct but related, and each of which had the word

Pilgrim in the title (see D.N.B.). All of the “Pilgrim” volumes are very rare. Wellcome (I, 5292) lists the first edition (1613) only. (S.T.C., 20506)

PYE, Charles

The New Chemical Nomenclature, selected from the most distinguished Modern Writers on Chemistry, designed for the use of Students in Pharmacy, Druggists, Apothecaries, and others. It consists of two parts: the first of which exhibits the Scientific Arrangements in English and Latin: and the second contains the Same in English, disposed in alphabetical order. In both Parts the Old Names will be found on the right-hand Column, opposite the New. By C. Pye, Chemist.

London: Printed for the Compiler, by J. Bonsor, Salisbury Square; published by Longman and Rees . . . L. B. Seeley . . . Murray and Highley . . . W. Kay . . . J. Cumming . . . and I. and A. Arch . . . 1802.

First edition. 8vo. 35, (1) pp. Old stamp on verso of last leaf (King's Inns Library, Dublin); otherwise fine, crisp copy, in modern green pebbled cloth.

AN EXPOSITION of the new chemical nomenclature, based upon that of Lavoisier, Guyton de Morveau, Berthollet, and Fourcroy. Pye (1777–1864) was an excellent engraver, although he styles himself “chemist” in the title of this work. He also published *Provincial Coins and Tokens issued from 1787 to 1801, engraved in 55 plates* (London, 1802) and *A Dictionary of Ancient Geography* (London, 1803). According to Duveen, this work is “unknown to the usual biographers” (i.e., bibliographers). It is, in fact, extremely rare. (Bolton, *First Supplement*, 343; Duveen, 489–490; Watt, II, 783t)

QUANDT, Christian Friedrich

Dissertatio Inauguralis Medico-Physica de Nitri Vi Gelante: . . . pro gradu doctoris medicinae et chirurgiae . . . XVI Aprilis MDCCXCI. Publice defendet auctor Christ. Fridericus Quandt Lusatus.

Jena: Ex Officina Fiedleriana. (1791).

First edition. 4to. 19, (1), 8 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of Quandt (1766–1806), physician at Niesky, on the preparation of freezing mixtures and their use in medicine. Although the cooling produced by the dissolution of niter (potassium nitrate) in water is the subject chiefly discussed, other salts are also covered (e.g., ammonium chloride). The cooling produced by the rapid evaporation of organic liquids (e.g., ether) is described. The final eight pages comprise a biographical account of Quandt and the faculty at Jena, by the praeses, Ernst Anton Nicolai (1722–1802), professor of chemistry and medicine (see Partington, II, 768). Various titles by Nicolai and Quandt are listed by Poggendorff (II, 282 and 547), but not the present work. Rare. Not in the usual bibliographies. (Waring, 639)

QUARIN, Joseph

Theses de Salium Differentiis, et Usu, . . . praesidis, . . . domini decani, . . . Disquisitioni committit Josephus Quarin Austriacus Viennensis . . . die (blank) Mensis Anno MDCCLIII.

(Vienna:) Typis Jo. Thomae Trattner. (1753).

First edition. 4to. 2 leaves, 24 pp. Fine, crisp copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original marbled wrappers bound in.

THE DOCTORAL dissertation of the celebrated Viennese physician Quarin, on the medicinal uses of different kinds of salts, classified according to their animal, vegetable, or mineral origin. Specific salts discussed include niter (with reference to Pliny, William Clarke, et al.), tartar, borax, common salt, sal ammoniac, and Glauber's salt. Distinction is made between alkaline, neutral, and acidic salts. Sugar is described as a "salt." The preparation of sulphuric, hydrochloric, and nitric acids is covered. Blake, Waller, and Watt list works by Quarin, but not this. Very rare. Not located in available chemical and medical bibliographies.

QUATTRAMI, Evangelista

La Vera Dichiaratione di Tutte le Metafore, Similitudini, & Enimmi de gl'antichi Filosofi Alchimisti, tanto Caldei & Arabi, come Greci & Latini, usati da loro nella descrizione, & compositione dell'Oro potabile, Elissire della vita, Quinta essenza, & Lapis Filosofico. Ove con un breve discorso della generatione de i metalli, & quasi di tutte l'opere di natura, secondo i principii della Filosofia, si mostra l'errore, & ignoranza (per non dir l'inganno) di tutti gl'Alchimisti Moderni. . . .

Rome: Appresso Vincentio Accolti, in Borgo novo. 1587.

Sole edition. 4to. 12 leaves, 230 pp., 13 leaves (last blank). Roman and italic letter. Woodcut arms on title page. Historiated woodcut capitals, head- and tailpieces. Printer's device on verso of penultimate leaf. Old library stamp on title (unobtrusively erased) and top of title leaf strengthened with contemporary paper; otherwise an excellent copy, crisp and clean, in original limp vellum.

QUATTRAMI (Quadramio, fl. 1586–1597), a native of Gubbio (Umbria), was a doctor of theology and monk of the Order of Eremites of Saint Augustine. He became herbalist to Alfonso, last duke of Ferrara, as well as herbalist and distiller to Cardinal d'Este, and pursued chemistry and botany for pharmaceutical purposes. The present work is a spirited exposure of the frauds and deceptions of the alchemists and in a sense is comparatively modern in its condemnation of these charlatans. Ferguson gives a long account of the author and his works. (Bolton, 1029–1030; British Library, *S.T.C. Italian, 1465–1600*, p. 545; Durling, 3781; Duveen, 491; Edelstein, 1908; Ferchl, 428; Ferguson, II, 232; Ferguson Coll., 580; Neu, 3390; Smith, 402; Wellcome, I, 6937)

QUEMISET

L'Art d'Apprêter et Teindre toutes sortes de Peaux. Contenant plusieurs découvertes & réflexions, tant sur les opérations qui précédent, que sur celles qui concernent & suivent la teinture des Marroquins, Vaches tannées, Peaux chamoisées, passées en mégie, &c. . . .

Paris: Chez Ch. Ant. Jombert Père, Libraire du Roi pour l'Artillerie & le Génie, rue Dauphine. 1775.

First edition. 12mo. xxi, (3), 526, (2) pp. Few marginal damp stains at beginning and end; otherwise fine copy, uncut and unpressed with wide margins, in half calf antique, marbled boards, maroon morocco label.

QUEMISET WAS dyer to King Louis XVI and the famous Gobelins tapestry manufactory. According to the author this is one of earliest works on the tanning and dyeing of leathers based on sound chemical principles. It describes

many improvements on the techniques employed by Lande. There are complete accounts of the tanning of leathers (e.g., morocco, cowhide, sheepskin, and russia), as well as of dyeing to achieve various effects. Rare. Not in British Library or the usual chemical bibliographies. (Edelstein, 3421; Lawrie, 564 [wrong date: 1773]; Ron, 864)

QUINCY, John

Pharmacopoeia Officinalis & Extemporanea: or, A Compleat English Dispensatory, In Four Parts. Containing I. The Theory of Pharmacy, and the several Processes therein . . . II. A. Description of the Officinal Simples, with their Virtues and Preparations, Galenical and Chymical. III. The Officinal Compositions; being such of the London and Bates's Dispensatory, as are now in use: together with some others of Uncommon Efficacy, taken from the most Celebrated Authors. IV. Extemporaneous Prescriptions, distributed into Classes suitable [sic] to their Intentions in Cure. . . .

London: Printed for A. Bell at the Cross-Keys and Bible in Cornhill, T. Varnam and J. Osborn at the Oxford-Arms in Lombard-Street, and W. Taylor at the Ship in Pater-noster-Row. 1718.

First edition. 8vo. xvi, 618 pp., 27 leaves (indexes). Very good copy, in original gilt-ruled calf, rebacked, spine gilt-lettered and dated.

QUINCY (d. 1722) was trained as an apothecary and practiced medicine in London after he received the M.D. degree in 1712 from Edinburgh for his *Medicina Statica Britannica*. He published several treatises on pharmaceutical chemistry and medicine (see D.N.B.). Ferguson provides details of the main facts of Quincy's life. The present work contains much on the preparation of inorganic and organic chemicals used in pharmacy, as well as defining and explaining the various operations of practical chemistry. One of the most popular of Quincy's works, fifteen progressively updated editions appeared throughout the eighteenth century, the last in 1782. Quincy was a close associate of Dr. Richard Mead and based his chemistry on John Friend's

Praelectiones Chymicae (London, 1709). The first edition is very scarce. (Ferguson, II, 239 [not in Young Coll.]; *Heirs of Hippocrates*, 712; Neu, 3407; Partington, II, 760)

QUINCY, John

Praelectiones Pharmaceuticae; or a Course of Lectures in Pharmacy, Chymical and Galenical; explaining the whole Doctrine of that Art. By the late Learned Dr. John Quincy. Published from his original Manuscript, with a Preface, by P. Shaw, M.D.

London: Printed for E. Bell in Cornhil, J. Senex in Fleetstreet, W. Taylor in Pater-Noster-Row, W. and Jo. Innys in St. Paul's Church-yard, and J. Osborn in Lombard-street. 1723.

First edition. 4to. 2 leaves, xv, (1), 212 pp. Historiated wood-cut capitals, head- and tailpieces. Very fine copy, uncut with wide margins, in contemporary green half roan, boards, spine gilt-lettered. From the library of the surgeon and antiquary Thomas Joseph Pettigrew (1791–1865), with armorial book-plate.

THE COURSE of lectures on pharmaceutical chemistry given at his own house by Quincy, and one of his last works. This beautifully printed book was edited and posthumously published by Peter Shaw, whose first work it was. Dedicated by Shaw to Quincy's friend Joseph Collet, the preface contains a brief account of Quincy's life and accomplishments. "The lectures here presented the public are the same he read in these courses. And that nothing might be wanting to render them complete, care has been taken to add, by way of Appendix, the Doctor's 'mechanical account of the operations of medicines on a human body' which by reason of its excellence, . . . has a just title to the place assigned it" (preface). This copy has a distinguished provenance, having belonged to Thomas Joseph Pettigrew, F.R.S. (1827), author of the *Medical Portrait Gallery* (London, 1838–1840, 4 vols.; Garrison-Morton, 6711). (Blake, 369; Blocker, 326; Ferchl, 429; Ferguson, II, 239 [not in Young Coll.]; Neu, 3420; Partington, II, 760; Schelenz, 566; Watt, II, 786j)

R., L. D. T.

Secrets pour Teindre la Fleur d'Immortelle en Diverses Couleurs, avec la Maniere de la cultiver. Pour faire des pastes de differentes odeurs fort agreables, et pour contrefaire du Marbre au naturel, propre pour toute sorte d'ouvrages figurez. Par F. L. D. T. R.

Paris: Charles de Sercy. 1690.

First edition. 12mo. 77, (1) pp. Late-eighteenth- or early-nineteenth-century stamp on title page and page 51 (Js. Ae. Rabaut Pr.). Historiated head- and tailpieces. Good copy in original limp vellum.

AN EXTREMELY rare little book of secrets of considerable chemical interest, dealing with natural and mineral dyes and pigments, and perfumes. Pages 55–77 describe preparations for varnishing, gilding, and simulating marble. No bibliographical reference to this work has been found. It is not in the British Library and is not mentioned in Ferguson, in *Books of Secrets*, or in the catalogue of the celebrated Ferguson Collection at Glasgow University.

RABIQUEAU, Charles

Le Spectacle du Feu Elementaire, ou Cours d'Electricite Experimentale. Ou l'on trouve l'explication, la cause & le Mechanisme du Feu dans son origine, de la dans les corps, son action sur la bougie, sur le bois, & successivement sur tous les Phenomenes Electriques; ou l'on devoile l'abus des pointes pour detruire le Tonnerre: on y explique en outre la cause de la chute des corps au centre de la Terre, celle de l'ascension de l'eau dans les tuyaux capillaires, &c. Que le Feu est le ressort, de l'air l'agent du Méchanisme de l'Univers. . . .

Paris: Chez Jombert . . . Knapen . . . Duchesne. 1753.

First edition, first issue. 8vo. 2 leaves, 296 pp., 2 leaves. With 10 folding engraved plates of apparatus and experiments. Fine copy in original mottled calf, spine gilt, maroon morocco label.

A COLLECTION of electrical researches inspired by the publication of the French edition (Paris, 1752) of Benjamin Franklin's book. In a course given at his home, Rabiqueau (ca. 1730–1783) carried out well over one hundred experiments on static electricity. He concluded that fire (of which electricity was believed to be a variety) is the spring and air is the agent of the mechanism of the universe. He discusses the nature of electrical discharges, suggests a theory of the composition of electricity, describes its generation by different methods, its color, the production of an "electrical odor" (i.e., ozone), etc. Topics of chemical interest are included. Two issues appeared, of which this is the first. The sheets of this issue were reissued later (ca. 1756), with additional matter: (2), 14 pp. (*Lettre electrique sur la mort de M. Richmann*), 34 pp. (*Relation curieuse et interessante pour*

le progres de la physique et de la medecine). Professor Richmann, of St. Petersburg, was electrocuted in 1753 while experimenting with atmospheric lightning. Most extant copies are signed by Rabiqueau, but this copy is unsigned. (Blake, 369; Cole, 1099; Ekelöf, 365; Gartrell, 451; Motteley, 204; Neu, 3424; Roller & Goodman, II, 337; Wheeler Gift, 381)

RABUTEAU, Antoine Pierre Athanase

Étude Expérimentale sur les Effets Physiologiques des Fluorures et des Composés Métalliques en général. Thèse pour le Doctorat en Médecine présentée et soutenue le 17 mai 1867 par Antoine Pierre Athanase Rabuteau né a Saffres (Côte-d'Or) . . .

Paris: Imprimerie de E. Martinet. 1867.

First edition. 4to. 151, (1) pp. Very fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL thesis of the celebrated physician Rabuteau (1836–1885), dedicated to the professors of the Paris medical faculty, including the chemists Wurtz and Saint-Claire Deville. It is of considerable biochemical interest as it describes the action of fluorides and other compounds of metals on animals and humans. Divided into two parts, the first discusses metallic fluorides, and the second covers other salts of metals. Details are given of the preparation and properties of each fluoride (and other type of salt) and their physiological action (if any) on animals (e.g., rabbits) and humans. A table of atomic weights and specific heats of metals is given (pp. 57–58). Based on his experiments, Rabuteau enunciated a biochemical law, namely, that metal salts are more physiologically active the less their specific heats. This statement appears to be an oversimplification in light of modern research. Rabuteau published works on toxicology (1873) and urology (1875), and a *Traité élémentaire de chimie médicale* (1878). (Waring, 162)

RAEDLE, Joachim

Theses Inaugurales Medico-Chemicae, quas deo favente jussu et autoritate gratiosi medicorum ordinis inclytæ Academiae. Basileensis supremo pro gradu doctoris asclepiadei rite & legitime consequendo publica ventilatione propugnabit Joachimus. Raedle ex Hausen Hechingano Suevus Die 28. Septembr. Anno MDCCLXXIV.

Basel: Typis Joh. Schweighauser. (1774).

First edition. 4to. 8 pp. Woodcut head- and tailpieces. Fine copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A RARE DOCTORAL dissertation presented at the University of Basel on several chemical topics: acids, alkalies, salts, indicators, mineral waters, etc. No biographical information on Raedle or this work has been found in the usual bibliographies.

RAITH, Johann Conrad

Dissertatio Physica de Elementis, . . . praeside Dn. Rudolpho Jacobo Camerario, Philos. & Med. Doct. Phys. Profess. Ordinario, . . . pro Laurea Magisteriali, defendet Johannes Conradis Raith, Brackenheim . . . Die (blank) Martii, in Aula Philosophorum Nova.
Tübingen: Typis Georg-Henrici Reisi, Senioris. 1692.

First edition. 4to. 20 pp. Very fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the Aristotelian four elements by Raith, on whom no details have been found. The title states that he was from Brackenheim. Rudolph Jacob Camerarius (1665–1721), the praeses, was professor of botany at the University of Tübingen. In three chapters Raith covers the elements as components of the world, as parts of simple bodies, and as they were believed to exist in chemical compounds and metals. Numerous topics are discussed, including the Paracelsian *tria prima*, fire, minerals, metals, transmutation, salts, acids, alkalies, and calcination. On pages 18–20 there are complimentary appraisals of the work in Latin, French, Arabic, German, Hebrew, Greek, and other languages. Very rare. Unknown to the usual authorities.

RALEIGH, Walter

The Historie of the World. In Five Bookes. . . .
(Colophon:) London: Printed for G. Lathum and R. Young. 1634.

Fifth edition. Folio, 2 parts in 1 vol. 33 leaves, 555, (1) pp. + 669, (1) pp., 27 leaves. Engraved title page by Elstrack (dated 1614, as in first edition) and leaf “The Minde of the Front.” Letterpress title page with large portrait of “Ralegh” (Sim: Pass Sculp.), 6 double-page engraved maps, 2 double-page engraved plans (battles), and 3 large woodcuts in text (genealogies). Woodcut capitals, head- and tailpieces. Very fine copy with generous margins (some uncut), in original unlettered calf.

SIR WALTER RALEIGH, or Ralegh (ca. 1554–1618), soldier, seaman, courtier, author, and explorer, was the first to settle English colonists in Virginia. He was a favorite of Elizabeth I and, in addition to politics and writing poetry, was interested in scientific studies, including alchemy and iatrochemistry. He ran into disfavor with James I and was imprisoned in the Tower of London. There “Ralegh occupied

himself with chemical experiments, assaying of metals, and with the composition of his ‘History of the World.’ The first and only volume to be completed was published in 1614. It begins with the creation and extends to the first century B.C. . . . It was very highly esteemed in the 17th century and offers some fine passages of English prose” (*Encyclopaedia Britannica*). The book contains subjects of scientific (including chemical) interest. Earlier editions: 1614, 1617, 1621, and 1628. Editions of this popular work continued to appear up to 1687. “The success of Raleigh’s *History* . . . can perhaps be explained by the very fact that it is not a work of history in the academic sense but a political tract of immediate applicability” (*Printing and the Mind of Man*, 117). (S.T.C. 20641)

RAMAZZINI, Bernardino

Essai sur les Maladies des Artisans, traduit du Latin de Ramazzini, avec des notes et des additions: par M. de Fourcroy, Maître-des-Arts en l’Université de Paris, & Etudiant en Médecine. . . .
Paris: Chez Moutard, . . . 1777.

First French edition. 12mo. 1 leaf, lxxvi, 573 (3) pp. Fine, crisp copy, in contemporary mottled calf, spine gilt, maroon morocco gilt-lettered label. Complete with dedication leaf to De Lassone (signed * in bottom margin), not mentioned by Smeaton.

RAMAZZINI (1633–1714) was the first to deal adequately with occupational diseases. His book, entitled *De morbis artificum diatriba* (Mutinae: A. Capponi, 1700), was the first systematic treatise on the subject. This French translation is important as it is the first publication of the great chemist Antoine François de Fourcroy (1755–1809), appearing while he was still a medical student. The Société Royale de Médecine requested Fourcroy to carry out the translation, which is based on the revised edition (Padua, 1713) and dedicated to the president of the society, Lassone. It is preceded by a long introduction by Fourcroy, which he read to the society on 12 November 1776. In it he proposed a classification of occupational diseases and gave an account of the history of Ramazzini’s work and its sources. Fourcroy added many notes, original observations, and other additions. The book is of great medical, toxicological, and biochemical interest as it covers diseases of miners, lead poisoning of potters, slow poisoning of metal workers, and related topics. The Latin edition of 1700 was translated into English in 1705, and a new English translation by Wilmer Cave Wright appeared in 1940. For details on this French edition, see W. A. Smeaton, *Fourcroy* (Cambridge, 1962, pp. 3–4). See also George Rosen, *The History of Miners’ Diseases*, pages 108–120. This French translation is not mentioned by Bolton, Cushing, D.S.B., Duveen, Ferchl,

Ferguson, Ferguson Coll., Morgan, Neu, Osler, Poggen-dorff, Smith, Thornton, Waller, Watt, etc. (Blake, 370; Partington, II, 297; Smeaton, No. 104)

RAMMELSBERG, Carl Friedrich

Handbuch der Krystallographischen Chemie von C. F. Rammelsberg . . .

Berlin: Verlag von P. dennrenaud. 1854.

First edition. 8vo. xvi, 410 pp. With 401 woodcuts in text and 7 large folding leaves (comprising 14 tables). Old stamp on title ("J. A. Pabst"); otherwise very fine copy in original marbled boards, rebacked in gilt-ruled calf antique, maroon morocco label, spine dated.

ONE OF the great books of nineteenth-century chemical crystallography, giving full details on the crystallographic habit and structure of the elements, inorganic and organic compounds. Rammelsberg (1813–1899) studied under Mitscherlich (to whom this work is dedicated) and Rose in Berlin. In 1874 he succeeded Rose as professor of inorganic chemistry at the University of Berlin. He analyzed numerous minerals, and his researches on crystallography are very important. His "most important works were compilations on mineral chemistry and on chemical crystallography" (D.S.B.). A supplement appeared in 1857. (Bolton, 759; D.S.B., XI, 271; Ferchl, 431; Poggendorff, II, 562; Roller & Goodman, II, 339; Sondheimer, 1315)

RAMSAY, William

Elements and Electrons. By Sir William Ramsay . . .

London and New York: Harper & Brothers. 1912.

First edition. 8vo. x, 173, (1) pp. + 3 leaves (adverts). Fine copy in original blind-stamped red cloth, spine gilt, top edge gilt, fore- and lower edges uncut.

AN IMPORTANT work that traces the development of chemical and physical atomic theory from the ancients, through Dalton, to the twentieth century, with special emphasis on the electronic theory of atomic constitution and its role in the linking of atoms. Chapter VIII discusses electrons, chapter IX puts forward the theory that the electron is the simplest "element," and chapter X discusses the possibility of transmuting the elements, thus foreshadowing nuclear fission, which was experimentally achieved by Rutherford in 1919 (see *Phil. Mag.* [1919], 2, 537). (D.S.B., XI, 283; Roller & Goodman, II, 340; Thornton & Tully, 226)

RAMSAY, William

Essays Biographical and Chemical. By Sir William Ramsay . . .

London: Archibald Constable & Co. Ltd. 1908.

First edition. 8vo. viii, 247, (1) pp. With plate and line diagrams in text. Fine copy, top edge gilt, others uncut, in original gilt-lettered blue cloth.

THE PRODUCT of the author's mature years, the book is divided into two sections: I. Historical Essays (pp. 1–114); II. Chemical Essays (pp. 115–247). The historical part provides details on the lives and work of early chemists, including Boyle, Cavendish, Davy, Graham, and Joseph Black, with the contributions of Lord Kelvin and Berthelot in separate chapters. The "Chemical Essays" cover a diversity of subjects: e.g., "How discoveries are made," "Becquerel Rays," "What is an element?" "The Periodic Arrangement of Elements," "Radium," and "What is Electricity?" The vast knowledge of the author is presented in an easy style. (D.S.B., XI, 283; Morgan, 648; Partington, IV, 916)

RAMSAY, William

The Gases of the Atmosphere the History of their Discovery.

By William Ramsay . . .

London: Macmillan and Co., Ltd. 1896.

First edition. 8vo. viii, 240 pp. With frontispiece portrait of Stephen Hales and 7 plates (portraits of Boyle, Mayow, Black, Rutherford, Priestley, Lavoisier, and Cavendish). Very fine copy, uncut, in original publisher's blue cloth. Unique presentation copy, neatly inscribed in ink on recto of first flyleaf: "To Lord Rayleigh, with kind regards from W. Ramsay."

A WONDERFUL ASSOCIATION copy, being the copy presented by the author, Ramsay, to Lord Rayleigh, both of whom were Nobel Prize winners in 1904 for their collaboration in the discovery of the first of the rare gases, argon, in 1894. In the present important work, Ramsay traces the discovery of nitrogen, carbon dioxide, oxygen, and, of course, argon, with full references to the great chemists of the past (Boyle, Mayow, Hales, Black, Priestley, Scheele, Cavendish, Lavoisier, and others). "Ramsay's most important work was the discovery of argon in collaboration with Lord Rayleigh" (Partington). A classic book in the history of chemistry. Later editions appeared, each updated by Ramsay: London, 1900, 1905 (Smith, 403), 1915 (Edelstein, 1916). (Bolton, *First Supplement*, 30; D.S.B., XI, 283; Knight, 236; Partington, IV, 916; Roller & Goodman, II, 340)

III. Arsenide.

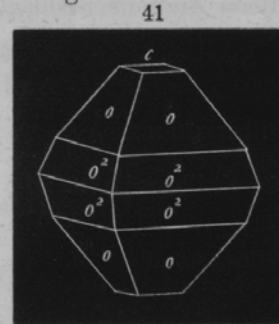
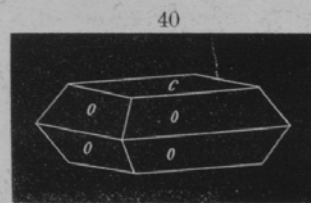
Viertel Arseniknickel. (Plakodin.) Ni^4As .

Ein angebliches Mineral, nach *Breithaupt* zwei- und eingliedrig, vielleicht aber ein Hüttenprodukt, und die Krystalle mit denen von Ni^3As identisch.

Drittel Arseniknickel. (Kobaltspeise.) Ni^3As .

Viergliedrig. $a : c = 1 : 1,124$. *G. Rose*.

Quadratische Tafeln durch Vorherrschen der Endfläche c , mit Zuschärfung der Ränder durch das Hauptoktaeder o ; Fig. 40. Ausserdem das zweifach schärfere o^2 . Fig. 41.



$$\begin{aligned} o &= a : a : c \\ o^2 &= a : a : 2c \end{aligned}$$

$$c = c : \infty a : \infty a$$

2A	2C	D
$o = *106^\circ 28'$	$115^\circ 39'$	$32^\circ 10'$
$o^2 = 95 \quad 10$	$145 \quad 5$	$17 \quad 28$

Berechnet.

$$\begin{aligned} o : c &= 122^\circ 10' \\ o : o^2 &= 165 \quad 17 \\ o^2 : c &= 107 \quad 28 \end{aligned}$$

Nicht deutlich spaltbar.

G. Rose: Poggend. Ann. 28, 433.

Halb Arseniknickel, Ni^2As , als Rothnickelkies sechsgliedrig(?).

Einfach Arseniknickel, NiAs , als Weissnickelkies regulär.

Arsenikkobalt. Die mit dem Namen Speiskobalt bezeichneten Substanzen sind oft isomorphe Mischungen von Nickel- und Kobalt-, von Kobalt- und Eisen- und von Nickel-, Kobalt- und Eisenverbindungen = R^mAs^n . Sie krystallisiren zum Theil regulär.

RAMSAY, William

The Life and Letters of Joseph Black, M.D. By Sir William Ramsay . . . With an introduction dealing with the life and work of Sir William Ramsay by F. G. Donnan, F.R.S.

London: Constable and Company Ltd. 1918.

First edition. 8vo. xix, (1), 148 pp. + 2 leaves (advertisements). With 7 photographic plates (including frontispiece portrait of Black). Fine copy, uncut with wide margins, in original red cloth, spine gilt-lettered. From the library of the great physical chemist Frederick George Donnan (1870–1956), with his bold signature (“F. G. Donnan”) in ink on first flyleaf.

JOSEPH BLACK was a favorite of William Ramsay, who discusses his life and letters in detail in this posthumously published work. Donnan wrote the introduction, in which he reviews Ramsay’s many important researches, as well as noting the “amazing quickness and perpetual activity of his mind [and] constant source of inspiration to his students.” A friend and collaborator of Ramsay at University College, London, Donnan “is particularly remembered for his thermodynamic interpretation of the principles governing the diffusion of ions through semi-permeable membranes (Donnan equilibrium), described in a series of papers 1911–14” (T. I. Williams, *Biographical Dict. of Scientists* [1969, p. 149]). A fine association copy. (D.S.B., XI, 283; Duveen, 82; Edelstein, 316; Partington, III, 131; Roller & Goodman, II, 340; Waller, 16493)

RAMSAY, William, and YOUNG, Sydney

Note on a Comparison of the Vapour-Pressures of Argon with those of other Substances.

February 7, 1895.

First edition. 4to. In: *Philosophical Transactions of the Royal Society* (1895), pp. 257–259. Fine copy in modern brown buckram, spine gilt-lettered; presented by William Ramsay to the physicist Ernest Howard Griffiths (1851–1932). Bound with: 3 other papers on argon, by Lord Rayleigh and William Ramsay, William Crookes, and Karol Stanislaw Olszewski.

AN IMPORTANT paper in which Ramsay and Young compared the critical vapor pressures of argon with those of benzene, ethyl alcohol, and oxygen. From the results they obtained they confirmed “that argon is a definite, hitherto unknown constituent of the atmosphere.” Young (1857–1937), a physical chemist, “was a pioneer in the separation and specification of pure organic compounds, and clarified crucial thermodynamical relationships for solids and liquids” (D.S.B.). He worked under Ramsay at University College, Bristol (1882) and became professor there in 1887. (D.S.B., XIV, 560)

RANCHIN, François

Oeuvres Pharmaceutiques de M. Francois Ranchin, Conseiller, Médecin et Professeur du Roy, Chancelier en l'Université de Médecine a Montpellier. Assavoir, un Traicté general de la Pharmacie. Ensemble un docte Commentaire sur les quatre Theoremes & Canons de Mesué. Avec Deux excellens Traictes, l'un des simples Medicamens Purgatifs, & l'autre des Venins. . . .

Lyons: Chez Pierre Ravaud, en rue Mercière, à l'enseigne S. Pierre. 1624.

First edition. 8vo. 18 leaves, 980 pp., 10 leaves. Woodcut printer's device on title page. Numerous woodcut initials, head- and tailpieces. Paper very lightly embrowned; otherwise fine copy in contemporary gilt-ruled calf, rebacked, spine gilt-lettered and dated.

ONE OF the most celebrated physicians of his time, Ranchin (ca. 1565–1641) was for thirty years chancellor of the medical faculty at Montpellier, where he superintended the rebuilding of the anatomical amphitheater. Although principally on iatrochemistry, this book contains sections of purely chemical interest, with descriptions of the preparation of many recognizable compounds. The present first edition is extremely rare. There is no copy in the Bibliothèque Nationale or the British Library, and the latter has only the second edition (Lyons, 1628; Goldsmith, R156). Imperfect copies of the second edition (Ferchl, 432) are cited by Neu (3427) and Wellcome (I, 5330). Neither Linden (*De scriptis medicis*, 1662) nor Manget (*Bibliotheca Scriptorum Medicorum*, 1731) knew this title or edition, although they both list later works by Ranchin. (Bayle and Thillaye, 333–334; Hirsch, IV, 718)

RAPPORTO

Rapporto su le Latrine Mobili e Senza Puzza de' Sri. Cazeneuve e Compagnia, con un Supplimento, letti alla Societa reale e centrale di Agricoltura di Parigi, dai commissari i Signori conte Dubois, Huzard, ed Hericart de Thury, nell'adunanza del di 19 agosto 1818. Aggiuntovi un Appendice sull'Urato.

Parigi (Paris): Nella Stamperia della Signora Huzard. Aprile 1820.

First edition in Italian. 8vo. 66 pp., 1 leaf (blank). With 2 folding copperplates (depicting portable privies and their parts). Fine copy, from the library of Hericart de Thury, with his stamp on page 65. Bound with: Hericart de Thury, *Des Fosses d'aisances mobiles . . .* (Paris, 1818), and 7 other works on the same subject (q.v.).

THE ITALIAN translation of *Rapport sur les Fosses Mobiles et Inodores de MM. Cazeneuve et Compagnie . . .* (Paris, 1818),

by Dubois, Huzard, Hericart de Thury, and Neufchateau (q.v.). Not mentioned by the usual bibliographies.

RASPAIL, François Vincent

Nouveau Systeme de Chimie Organique, fondé sur des méthodes nouvelles d'observation; par F. V. Raspail. . .
Paris: Chez J. B. Baillière. 1833.

First edition. 8vo. 96, 576 pp. 1 folding table and 12 folding engraved plates (7 colored). Very good copy in contemporary marbled boards, rebaked and recorned in modern calf, spine gilt-lettered and dated.

A CLASSIC BOOK in which the microscope was successfully employed in organic chemistry. It also deals with the atomic theory, biochemistry, medicinal chemistry, etc. Raspail (1794–1878) was a very capable chemist, physician, and political reformer. He wrote several books on chemistry, medicine, and natural history but was arrested and jailed at Sainte-Pélagie for his political opinions. During his imprisonment he wrote, and had smuggled out, his *Reforme Pénitentiaire: Lettres sur la Prison de Paris* (Paris, 1839). He was banned from France in 1855, and in 1834 the present work was placed on the Index. Although important in nineteenth-century science, including chemistry, he is not mentioned by Partington. For details on Raspail, see the D.S.B. (XI, 300–302) and Weiner, *Raspail: Scientist and Reformer* (New York, 1968). In 1834 English and German translations appeared, and in 1838 the second French edition was published (see Smith, p. 405). Not in Caillet, Morgan, Waller, etc. (Bolton, 761; D.S.B., XI, 302; Duveen, 496–497; Edelstein, 3424; Ferchl, 432; Poggendorff, II, 571; Sondheimer, 1318)

RASPAIL, François Vincent

A New System of Organic Chemistry, Translated from the French of F. V. Raspail; with notes and additions, by William Henderson, M.D. Lecturer on Materia Medica in the Universities of Aberdeen.

London: Sherwood, Gilbert, & Piper, &c. 1834.

First English edition. 8vo. lxxvi, 77–602 pp. With 5 folding tables and 12 folding engraved plates (some colored). Very good copy, bound in dark-blue modern half morocco, marbled boards, spine gilt-lettered and gilt-ruled, by Bernard Middleton. From the library of Professor Franz Sondheimer (1926–1981), with his bookplate on the front pastedown endpaper.

IN THE PREFACE the translator says that he considered “M. Raspail’s book as almost the first that gave any feasible promise of successfully unravelling the intricacies of Vegetable and Animal Chemistry. . . . The chief excellence of

the Work may be briefly stated to consist, in viewing Organic Chemistry as one connected and indivisible whole, instead of considering it, as has usually been done, as made up of two independent and unconnected departments.” This English translation of Raspail’s *Nouveau Systeme de Chimie Organique* (Paris, 1833) is enhanced by the addition of information from the works of Berzelius and other contemporary chemists. Henderson (1810–1872) was a famous homeopathist (M.D. Edinburgh, 1831), on whom see the D.N.B. This English translation is much rarer than the original French edition of 1833, itself a scarce work. Not in Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Osler, Partington, Poggendorff, Smith, Waller, etc. (Bolton, 761 [wrong date: 1843]; Sondheimer, 1319)

RASPAIL, François Vincent

Nouveau Systeme de Physiologic Végétale et de Botanique, fondé sur les méthodes d'observation, qui ont été développées dans le Nouveau Systeme de Chimie Organique, accompagné d'un Atlas de 60 planches d'analyses dessinées d'après nature et gravées en taille douce. Par F. V. Raspail.

Paris: Chez J.-B. Baillière. 1837.

First edition. 3 vols. 8vo. (2 vols. text, 1 vol. atlas). I: xxxi, (1), 599, (1) pp. II: viii, 658 pp., 1 leaf (errata). 4 folding tables. III: 91, (1) pp. 60 steel-engraved plates on thick paper. Very good copy in contemporary dark-blue quarter calf, gilt, marbled boards.

AN IMPORTANT sequel to the author’s *Nouveau Systeme de Chimie Organique* (Paris, 1833) and the first work in which the microscope was successfully employed in organic chemistry. A new system of botanical physiology is proposed, based on the methods of observation of plant cells with the microscope developed in the work of 1833. “Raspail belonged to the group of biologists who prepared the way for the rise of the cell theory. Although it would be too strong to call him the creator of the modern concept of the cell, the definitions and descriptions he gave of the cell are truly remarkable. On the basis of precise observation he described the general characteristics of the plant cell long before Mohl, who was unaware of Raspail’s existence” (D.S.B.). Marc Klein (D.S.B.) lists this among Raspail’s “most important writings.” Not in Bolton, Caillet, Duveen, Edelstein, Ferchl, Osler, Partington, Poggendorff, Smith, Waller, etc. (B.M.C. [Nat. Hist.], IV, 1646; Brunet, 4840; D.S.B., XI, 302; Hirsch, IV, 673; Pritzel, 7418; Sondheimer, 1320)

RATIONALL PHYSITIAN'S LIBRARY

The Rationall Physitian's Library. Containing these most Excellent Books following; in that Order they ought to be Read and Studied. 1. Vol. Of Natural Phylosophy . . . 2. Vol. Of Anatomy . . . 3. Vol. Of the Institutes . . . 4. Vol. Of the Practice of Physick . . . 5. Vol. Of Chyrurgery . . . 6. Vol. Histories of Famous and Rare Cures . . . 7. Vol. The London Dispensatory . . . By Abdiab Cole . . . W. R. and Nich. Culpeper . . .

London: Printed by Peter Cole and Edward Cole, Printers and Book-sellers, at the Sign of the Printing-press in Cornhil, near the Royal Exchange. 1661.

First edition. Folio. Broadside, printed on recto only. Bound with: Riverius, Lazarus, *The Practice of Physick* (London, 1661); and *Four Books of . . . Riverius* (London, 1658).

A BOOKSELLER'S ADVERTISEMENT of medical and pharmaceutical books. Wing lists only two copies. Extremely rare. Although it appears to be a separate work, Parkinson and Lumb list this as part of *The Practice of Physick* (London, 1661), by Lazarus Riverius. (Krivatsy, 9735; Parkinson & Lumb, 2041; Wing, R305A)

RATTRAY, Sylvester

Aditus novus ad occultas sympathiae et antipathiae causas inveniendas: per Principia Philosophiae naturalis, ex Fermentorum artificiosa anatomia hausta, patefactus a Sylvestro Rattray, Med. Doct. Glasguensi Scoto. Natura est arcanorum suorum interpres fidissima, nam quae in uno aliquo genere obscurius exhibet, ea luculentius in alio explicat. Tübingen: Impensis Johannis Henrici Reisii. 1660.

First Continental edition. 12mo. 216 pp. Fine copy in original gilt-ruled mottled calf, gilt, maroon morocco label.

RATTRAY (fl. 1641–1666) graduated from St. Andrews in 1644, studied medicine, and received the M.D. (ca. 1652) at Glasgow, as stated in the title of the present work. The *Aditus novus* (Glasgow, 1658; Wing, R308) was the first medical book printed in that city. The Tübingen edition, the first to appear on the Continent, was again reprinted in the *Theatrum sympatheticum* (Nuremberg, 1662). An adherent of Helmont, Rattray discusses the sympathy and antipathy of animals, vegetables, and minerals, with attempts at chemical explanations in terms of ferments and action at a distance. He believed that “all things which used to be thought mixed substances are made of water alone . . . impregnated with ferments. All generation and corruption is by force of ferments. . . . Rattray denies that corpuscles or material effluvia are emitted, but believes that ferments by their spiritual rays cover a certain sphere of action. . . . [he] has no use for atomism” (Thorndike, who discusses this

work in detail [VIII, 15–18]). Partington states that Rattray rejected Helmont's *Archeus* but retained his theory of ferments. Very rare. Partington and Watt cite the Glasgow (1658) edition only. Not in Bolton, D.S.B., Duveen, Edelstein, Neu, Osler, Smith, etc. (Ferchl, 432; Ferguson, II, 244 [not in Young Coll.]; Ferguson Coll., 584; Thorndike, VIII, 15; Waller, 7754)

RAU, Gottlieb Martin Wilhelm Ludwig

De Acido Benzoico Memorabilia Quaedam. Specimen ex decreto gratiosi medicorum ordinis pro venia docendi in Academia Regia Friderico-Alexandrina publice defendet Gottl. Mart. Wilbel. Ludov. Rau Medicinae Doctor. D. II Maii MDCCCI.

Erlangen: Typis Adolph Ernst Junge. (1801).

First edition. 8vo. 16 pp. Very good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of the Erlangen physician Rau (dates unknown), on the preparation and physical and chemical properties of benzoic acid, and its use in medicine. One of the earliest monographs on the subject; the author refers to the works of Fourcroy, Goettling, Gren, Neumann, Scheele, Vauquelin, et al. Unknown to the usual chemical authorities. (Waring, 287)

RAULIN, Joseph

Parallèle des Eaux Minérales d'Allemagne, que l'on transporte en France, & de celles de la meme nature qui sourdent dans le Royaume, avec des Remarques sur l'analyse des Eaux minérales en général. Fait par Ordre du Gouvernement. Par M. Raulin . . .

Paris: De l'Imprimerie Royale. 1777.

First edition. 12mo. xxiv, 303, (1) pp. Fine copy in original marbled sheep, gilt, covers ruled in gilt, brown morocco label.

A COMPREHENSIVE TREATISE on mineral waters, in which Raulin compares those imported at considerable cost from Germany with the waters that occur in France. In seven sections, detailed analyses of the waters from Germany and Bohemia are described. He concludes that the citizens of France can save a great deal of money by availing themselves of the naturally occurring waters in their own country. The book is entirely chemical in content. The fifth and sixth sections (pp. 191–252) comprise a supplement to the fourth chapter of Raulin's *Traité Analytique des Eaux Minérales* (Paris, 1772). Duveen (*Supplement*, 598) lists an undated reprint of extracts of Raulin's works on mineral waters (Paris, ca. 1890). Not in Watt or the usual bibliographies of chemistry. (Blake, 372; Ferchl, 433; Hirsch, IV, 734; Poggendorff, II, 575; Wellcome, IV, 477)

RAULIN, Joseph

Traité Analytique des Eaux Minérales en Général; de leurs propriétés, et de leur usage dans les maladies; fait par ordre du Gouvernement; par M. Raulin, Docteur en Médecine. Paris: Chez Vincentury. 1772.

First edition. 12mo. xvi, 356 pp., 2 leaves. Fine copy in contemporary mottled calf, gilt, brown leather label (spine slightly defective).

RAULIN (1708–1784), a famous physician at Nirac and later at Paris, was an expert chemist who published several authoritative works on the mineral waters of France. In the present book there is a detailed description of the composition and methods for analyzing mineral waters. The first 127 pages are entirely on chemistry, and pages 270–312 comprise an alphabetical list of mineral spas found in France, with comments on each, from Abbecourt to Youset. A sequel volume, quite independent of this, appeared in 1774. Duveen (p. 497) and Neu (3433) list a very short work on mineral waters by Raulin, but not the present title. Raulin was a fellow of the Royal Society. Not in Caillet, Cushing, Edelstein, Ferguson, Ferguson Coll., Osler, Partington, Reynolds, Smith, Waller, etc. (Blake, 372; Bolton, 762; Ferchl, 433; Poggendorff, II, 575; Watt, II, 792c)

RAY, John

A Compleat Collection of English Proverbs; also the most Celebrated Proverbs of the Scotch, Italian, French, Spanish, and other Languages. The whole Methodically Digested and Illustrated with Annotations, and proper Explications. . . . To which is added . . . A Collection of English Words not Generally Used, with their Significations and Original in two Alphabetical Catalogues; the one of such as are proper to the Northern, the other to the Southern Counties. With an Account of the Preparing and Refining such Metals and Minerals as are gotten in England. . . . Augmented with many Hundreds of Words, Observations, Letters, &c.

London: Printed by J. Hughs, near Lincoln's-Inn-Field: for J. Torbuck, in Clare-Court, Drury-Lane; O. Payne, at Horace's Head, and T. Woodman, at Camden's Head, both in New-Round-Court, in the Strand. 1737.

Third (first united) edition. Two parts in 1 vol., 8vo. I: viii, 319, (1) pp. II: 150 pp., 1 leaf (advertisements). Separate divisional title page to part II. Fine copy, in original calf, rebacked, maroon morocco label.

RAY WAS an indefatigable collector, and during his travels around England in the late 1660s he collected local proverbs, which he first published in 1670. He also collected unusual words used in local dialects, as well as mining practices, and published these first in 1674 (Partington, II, 103). These two works were first united in the present third edi-

tion, which also includes Ray's observations on local metallurgical and chemical industries. The notes on the silver refining in Cardiganshire, tin smelting in Cornwall, and iron work in Sussex, and on the green vitriol, red lead, alum, and salt works in various counties are of special interest as they are a source of technical terms in use at the time. (Freeman, 3129; Watt, II, 792z)

RAY, John

Miscellaneous Discourses Concerning the Dissolution and Changes of the World. Wherein the Primitive Chaos and Creation, the General Deluge, Fountains, Formed Stones, Sea-Shells found in the Earth, Subterraneous Trees, Mountains, Earthquakes, Vulcanoes, the Universal Conflagration and Future State, are largely Discussed and Examined. . . . London: Printed for Samuel Smith, at the Prince's Arms in St. Paul's Church Yard. 1692.

First edition. 8vo. 10 leaves, 259, (9) pp. Sign. a⁴ (contents and list of 16 of Ray's works) is misbound at the end. Very good copy, with imprimatur leaf, in original calf, gilt, maroon label.

A DEEPLY RELIGIOUS man and brilliant naturalist, Ray (1627–1705) has been described as the “father of natural history . . . and as a botanist he has won the highest commendation from his greatest successors” (D.N.B.). An early writer on the erosive effects of running water and the encroachment of the sea, in this book he discusses the Noachian flood, geological history, and the origin of fossils. He first originates the modern use of the term *species* and correctly comments on the formation of springs. His main work on mineralogy, geology, and paleontology, the book is also of chemical interest. Speaking of fire, he maintains that it comprises three parts: 1. rarified particles in rapid motion; 2. a “nitrous Fewel from the Air”; and 3. a “Sulphureous Pabulum which it acts and preys upon by the name of Fewel” (pp. 142–144). The verso of page 259 is a list of sixteen books by Robert Boyle. (D.S.B., XI, 317, 318; Geikie, *Founders of Geology*, 74; Keynes, 81; Keynes, *Bibliotheca Bibliographica*, 3537; Norman, 1795; Ward & Carozzi, 1843; Wellcome, IV, 479; Wing, R397)

RAY, John

Philosophical Letters between the late Learned Mr. Ray and several of his Ingenious Correspondents, Natives and Foreigners. To which are added those of Francis Willughby Esq. The Whole consisting of many curious Discoveries and Improvements in the History of Quadrupeds, Birds, Fishes, Insects, Plants, Fossiles, Fountains, &c. Published by W. Derham, . . .

London: Printed by William and John Innys, Printers to the Royal Society, at the Prince's Arms in St. Paul's Church-yard. 1718.

First edition. 8vo. 4 leaves, 376 pp., 5 leaves (index) + 1 leaf (advertisements, including list of Ray's works). Woodcut figures in text. Very good copy, in original paneled calf, rebacked, spine gilt-ruled, maroon morocco label. Presentation copy from William Derham, inscribed on front pastedown endpaper: "Given by the Author to Cass. Chandos" (probably James Brydges [1673–1744], first duke of Chandos: see D.N.B.). Heraldic bookplate of Augusta Anna Brydges dated 1766 and her inscription on free endpaper dated 1761.

AFTER RAY died in 1705 his papers were given to his friend and fellow naturalist William Derham (1657–1735), who published in this book those letters of the greatest scientific interest. Throughout his life Ray had carried on a vigorous correspondence with many notable scientists in Great Britain and Europe (e.g., Francis Willughby, Martin Lister, Henry Oldenburg, Hans Sloane, and Tancred Robinson). The letters cover the period from 1662 to 1704 and discuss a wide variety of topics of interest in biology, botany, chemistry, geology, mineralogy, natural history, and other sciences. This work was reprinted by the Ray Society in 1848. (Blake, 372; D.S.B., IV, 40; Eales, 813; Freeman, 3140; Keynes, *Ray*, 109; Norman, 1798; Osler, 979; Watt, I, 298j, II, 793e; Wellcome, II, 451)

RAY, John

Select Remains of the Learned John Ray, M.A. and F.R.S. With his Life, by the Late William Derham, D.D. Canon of Windsor, and F.R.S. Published by George Scott, M.A. and F.R.S.

London: Printed and Sold by Ja. Dodsley, in Pall-Mall; and J. Walter, at Charing-Cross. 1760.

First edition. 8vo. vii, (i), 336 pp. Engraved portrait frontispiece of Ray (by W. Hibbart; Bathon Sculp., 1760) and 3 engravings in text. Fine copy, in original gilt-ruled calf, rebacked, maroon morocco label, spine dated.

PUBLISHED BY Ray's nephew, George Scott, this volume contains a hundred-page *Life of Mr. Ray* by his friend William Derham (1657–1735), which is the basic biography of the great English naturalist. Ray's manuscript diaries of his three extensive journeys throughout Great Britain in 1658, 1661, and 1662 are reprinted. Everything of scientific interest that he saw is described: minerals, ores and metals, natural spas and their chemical analyses, fossils, animals, and plants. His visits with famous people are discussed, as are his tours of cities, cathedrals, etc. Four letters from Ray to Derham (1702–1704) are reprinted at the end. (Blake, 372; D.S.B., XI, 318; Eales, 815; Keynes, *John Ray*, 110; Watt, II, 793e)

RAY, John

The Wisdom of God Manifested in the Works of the Creation: in Two Parts; viz. The Heavenly Bodies, Elements, Meteors, Fossils, Vegetables, Animals, (Beasts, Birds, Fishes, and Insects) more particularly in the Body of the Earth, its Figure, Motion, and Consistency, and in the admirable Structure of the Bodies of Man, and other Animals, as also in their Generation, &c. With Answers to some Objections. . . .

London: Printed for William Innys, at the Prince's Arms in S. Paul's Church yard. 1714.

Sixth edition, corrected. 8vo. 12 leaves, 17–405, (3) pp. (complete). Very good copy in original blind-stamped paneled calf.

ONE OF the author's most popular and important books (first, 1691), this work passed through four revised, and several posthumous, editions. As the title indicates, the whole range of human knowledge is covered, with much of scientific (including chemical) and medical interest. In his *Bibliography* of Ray, Keynes does not mention an engraved frontispiece portrait for this sixth edition, but some copies have one, as in the seventh edition of 1717. This copy appears never to have had the portrait of Ray and is thus complete as issued. (D.S.B., XI, 317; Eales, 812; Freeman, 3134; Keynes, 65; Watt, II, 793c)

RAYGER, Karl

Observationum Medicinalium Centuria, A. D. Paulo Spindlero hic Posonii quondam consignata, nunc collecta, in ordinem redacta, Scholiis propriisque observationibus aucta. Accessit D. Martini Rulandi Sen. Thesaurus Medicus. Continens aurea Medicamenta pro omni aetate & Sexu contra omnes morbos, longo tempore collectus & conscriptus pro filiis suis omnibus cum notis hinc inde interspersis Studio & Opera Caroli Raygeri M.D. Cum Gratia & Privilegio Sac. Caes. Majestatis.

Frankfort: Typis & Sumpt. Philippi Fieveti. 1691.

First edition. 4to. 1 leaf, 12, 180, 150 pp. (wrongly numbered 152: pp. 77–78 of last section omitted, but pagination complete). Title printed in red and black, with large woodcut in red. Separate divisional title page to *Thesaurus Medicus*. Fine copy, rebound in full calf antique, spine gilt-lettered and dated.

THIS CENTURY of medical observations was originally compiled by Paul Spindler over a period of twenty-seven years of practice in Austria and Hungary and was left in manuscript form. In his preface Rayger describes how he took Spindler's manuscript, brought it up-to-date, and published it as the present book. The preface is dated December 1689, and the one hundred chapters are mainly on medical subjects. The last 150 pages are of considerable pharmaceutical chemical interest, as they reprint the *Thesaurus*

Rulandinus (1591) of Martin Ruland (the Elder) (1532–1602). Ferchl (460) states that other editions of the *Thesaurus Rulandinus* appeared in 1628, 1679, and 1680, but he does not mention the present version of 1691, which Rayger renamed *Thesaurus Medicus*. This work was apparently copied from a version dated 1601, according to the wording of the divisional title. No reference to an edition of 1601 has been found, however, so if copies exist today they must be of extreme rarity. Ferchl (433) briefly mentions the *Thesaurus Medicus* (1691) but not Rayger or this version appended to Spindler's work. Possibly the *Thesaurus Medicus* was published separately, but we cannot be sure of this. Thordike (VIII, 234) briefly mentions Rayger but not this title, which is missing from the great libraries of early medicine, pharmacy, and chemistry and is obviously of considerable rarity.

RAYLEIGH, Lord, and RAMSAY, William

Argon, a New Constituent of the Atmosphere.
January 31, 1895.

First edition. 4to. In: *Philosophical Transactions of the Royal Society* (1895), pp. 187–241. With 8 woodcut figures in text. Fine copy in modern brown buckram, spine gilt-lettered. Presentation copy to the Welsh physicist Ernest Howard Griffiths (1851–1932), with slip of blue paper (on p. 187) inscribed in ink: "Yours ever sincerely W. Ramsay." Bound with: 3 other papers (1895) on argon, by William Crookes, Karol Stanislaw Olszewski, and William Ramsay and Sydney Young.

AN OFFPRINT of outstanding importance in which the discovery of the first inert gaseous element, argon, is reported. "The original paper in the *Philosophical Transactions* will undoubtedly rank as a classic, the investigation having been a particularly brilliant one" (Ernst von Meyer, *History of Chemistry* [1906, p. 435]). Ramsay (1852–1916), F.R.S. (1888), won the Nobel Prize (1904) for his discovery (jointly with Lord Raleigh) of argon and the determination of its properties. Earlier (1894) Ramsay had found that nitrogen (prepared by four different chemical methods) was 0.5 percent less dense than atmospheric nitrogen. Ramsay then collaborated with the physicist Lord Rayleigh (John William Strutt, 1842–1919) and discovered argon. For this ingenious research Lord Rayleigh also received the Nobel Prize (1904). Partington discusses the subject in detail. This paper is the first appearance in print to give details of this classic investigation. It is a revised version of the paper originally submitted to the Smithsonian Institution, but the Smithsonian paper did not appear until May 1896. (Bruno, *The Tradition of Science*, 192–193; Dibner, *Heralds of Science*, 50; D.S.B., II, 279, XIII, 102–103, 106; Partington, IV, 917; Roller & Goodman, II, 345)

RAYLEIGH, Lord, and RAMSAY, William

Argon, a New Constituent of the Atmosphere. By Lord Rayleigh and Professor William Ramsay.
Washington: Published by the Smithsonian Institution. 1896.

First book edition. Large 4to. 2 leaves, 43, (1) pp. With 5 woodcut figures. Very fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with original printed paper wrappers bound in.

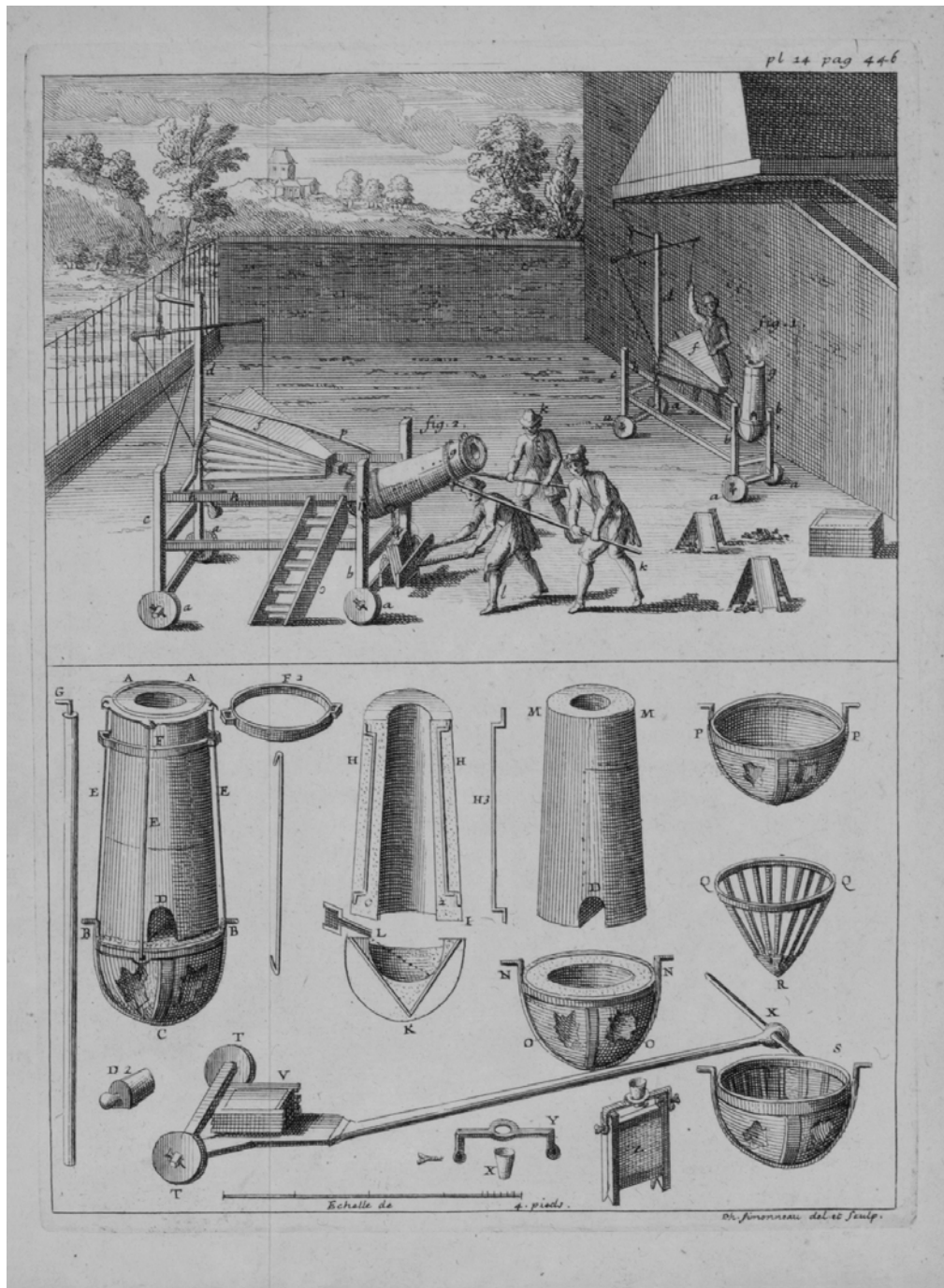
THE FIRST edition in book form of the original discovery of argon. "The present memoir was submitted by Lord Rayleigh and Professor Ramsay, in competition for one of the Hodgkins fund prizes offered by the Smithsonian Institution in a circular dated March 31, 1893. The competition closed December 31, 1894; and on August 9, 1895, the Award Committee, having completed its examination of the 218 papers submitted by contestants, granted the first prize, of \$10,000, for a treatise embodying some new and important discovery in regard to the nature or properties of atmospheric air, to Lord Rayleigh, of London, and Professor William Ramsay, of the University College, London, for the discovery of 'Argon,' a new element of the atmosphere. . . . The memoir is here presented in the form in which it was submitted to the Committee. A revised version, re-edited, with additional matter, was, with the consent of the Smithsonian Institution, published in the *Philosophical Transactions*" (S. P. Langley, May 1896). Both scientists were awarded the Nobel Prize (1904) for their discovery of argon, Rayleigh for physics and Ramsay for chemistry. (D.S.B., II, 279; Duveen, 497; Edelstein, 2216; Norman, 2029; Roller & Goodman, II, 345; Smith, 405)

RÉAUMUR, René-Antoine Ferchault de

L'Art de Convertir le Fer Forgé en Acier, et l'Art d'Adoucir le Fer Fondu, ou de faire des Ouvrages de fer fondu aussi finis que de fer forgé. . . .
Paris: Chez Michel Brunet, Grand Salle du Palais, au Mercure Galant. 1722.

First edition. 4to. 10 leaves, 566, (2) pp. With 17 folding copperplates. Very fine copy with wide margins, in original mottled calf, spine richly gilt, maroon morocco label.

A CLASSIC WORK on metallurgical chemistry in which the great French scientist, technologist, and member of the Académie Royale des Sciences Réaumur (1683–1757) first revealed the correct processes for converting iron into steel. A "towering landmark in siderurgical literature" (C. S. Smith, *Sources for the History of the Science of Steel, 1532–1786*, p. 64). Partington describes this as the author's "most



Réaumur. L'Art de Convertir. Paris, 1722.

useful publication" and discusses the contents, stating that it "laid the foundations of the steel industry in France." Réaumur's experiments on the carburization and tempering of iron to render it malleable for casting into cannons led to his discovery of the Réaumur process. "In this 'Art of converting iron into steel and of rendering cast iron ductile' he revealed for the first time hitherto secret details of the process and came very close to the correct explanation of the nature of steel, that it is iron combined with a small quantity of carbon" (Hoover). The memoirs contained in this work were originally presented to the academy in 1720, 1721, and 1722. The fine plates illustrate the equipment and processes for converting iron into steel. An English translation by A. G. Sisco and C. S. Smith appeared in 1956. (Bolton, 762; Cole, 1100; D.S.B., XI, 328–330, 335; Hoover, 677; Neu, 3435; Partington, III, 64; Poggendorff, II, 580; Singer, III, 28; Smith, 407; Sotheran, Cat. 682 [1908], 3917 ["Very Rare"]; Watt, II, 794k; Wolf, II, 530)

RÉAUMUR, René-Antoine Ferchault de

An Essay on the Mystery of Tempering Steel. Wherein the Effects of that Operation are fully considered. Extracted from the Works of the celebrated Mons. Réaumur. By J. Savigny. London: Printed for G. Searlsy, at No. 1, in Ludgate-street. 1771.

First (only) edition. 8vo. (in 4s). xvi, 44 pp. Good copy in modern marbled boards. Signature (late eighteenth century) in ink on half title: M. Place His Book.

AN ENGLISH translation of part of Réaumur's classic *L'Art de convertir le fer forgé en acier* (Paris, 1722), comprising only a single chapter on the hardening of steel (i.e., part I, chap. ii). In the preface the translator, Savigny, apologizes for not knowing French very well, never having had "an opportunity of leaving his native kingdom to improve himself in the language." According to A. G. Sisco and C. S. Smith (*Réaumur's Memoirs on Steel and Iron*, 1956, p. 376): "His errors . . . seem to be due to ignorance of metallurgy rather than of French." Although briefly mentioned by Cole (under No. 1100), this work is not in the usual bibliographies.

RECUEIL DE PIECES

Recueil de Pieces concernant les Exhumations faites dans l'enceinte de l'Eglise de Saint Eloy de la ville de Dunkerque. Imprimé & publié par ordre du Gouvernement. Paris: De l'Imprimerie de Monsieur. 1783.

First edition. 8vo. 87, (1) pp. Woodcut of royal arms on title page. Very good copy in contemporary quarter calf, speckled boards, with morocco label ("Mélanges"). Bound with: Dubuisson, F. R. A., *Mémoire sur les Acides Natifs du Verjus, de*

l'Orange, et du Citron (Paris, 1783), and 7 other chemical tracts.

A COLLECTION of memoirs on the chemical analysis of exhumed bodies from the ground under and immediately surrounding the church of St. Eloy at Dunkerque. In 1782 it became necessary to construct new pillars in the church. Bodies had been buried there from 1452 to 1777, and, under the direction of Hecquet, chief surgeon of the Hôpitaux du Roi, permission was obtained to exhume these remains. A team of chemists was summoned to analyze the soil as well as the bodies that had been buried in close contact. This work reports the findings of three chemists well known for their researches on the disinfection of cesspits: Louis Guillaume Laborie (d. 1800), Antoine Augustin Parmentier (1737–1813), and Antoine Alexis Cadet de Vaux (1743–1828). Attempts were made to overcome the stench emitted by the numerous bodies in various advanced stages of decomposition. Chemical treatments included quicklime, vapors of hot resins, strongly heated niter, vinegar, alcohol, and other chemical mixtures. Hecquet describes the work carried out from February through April 1783. This tract, printed by royal edict, throws light on late-eighteenth-century chemical methods for combating potential health hazards. Rare. (Blake, 373)

RECUEIL DES MEMOIRES

Recueil des Memoires les plus interessants de Chymie, et d'histoire Naturelle, contenus dans les Actes de l'Académie d'Upsal, et dans les Memoires de l'Académie Royale des Sciences de Stockolm [sic]; Publiés depuis 1720 jusqu'en 1760. Traduits du Latin & de l'Allemand. . . .

Paris: Chez Pierre Fr. Didot le jeune, Quai des Augustins, à S. Augustin. 1764.

First edition. 2 vols., 12mo. I: xii, 336 pp. II: iv, 337–687, (1) pp. Fine copy in original mottled calf, spines richly gilt, maroon morocco labels.

AN INTERESTING collection of important contributions by Swedish chemists to the transactions of the academies of Uppsala and Stockholm between 1720 and 1760, translated into French by Auguste Roux and Baron d'Holbach. Included are memoirs by G. Brandt (on arsenic, cobalt, sea salt, hydrochloric acid, vitriols, the difference between soda and potash); A. F. Cronstedt (on the discovery of nickel, three new iron ores, gypsum and zeolite); J. Faggot (on gunpowder); C. Polhem (on iron and steel); S. Rinman (on iron mines); A. Schwab (on antimony and glass); H. T. Scheffer (on potash, pinchbeck, and the history of the separation of metals); H. Urlander (on dyeing); and J. G. Wallerius (on the nature of earth from water, plants and animals, copper

and niter). The progress of chemistry in Scandinavia during this period is discussed by Partington. (Bolton, 1140; Cole, 1101; Duveen, 499; Edelstein, 2723; Guerlac, *Chymia*, V, 101; Neu, 3440; Partington, III, 159, 168–169, 172–174, 176; Wellcome, IV, 487)

REDMOND, William

The Principles and Constituence of Antimony. By William Redmond, M.D. . . . *The Second Edition.*

London: Printed by S. Chandler, in Holborn; and sold by John Curtis . . . and W. Bristow. 1763.

First edition, second issue. 8vo. (in 4s). 1 leaf, 49, (1) pp. Fine copy in half calf antique, marbled boards, maroon morocco label.

A COLLECTION OF seven letters (pp. 29–49) on the chemistry and medicinal properties of antimony and its compounds. In the first part Redmond (fl. eighteenth century) covers the history of antimony, referring to the works of Basil Valentine, Boyle, Glauber, Paracelsus, Tachenius, et al. He considers metallic antimony to be a compound of a sulphurous mineral acid, a bituminous matter, a leadlike mercurous metal, and a vitrifiable earth. Outlines of experiments are presented in support of his ideas. Redmond, a member of the Society for the Encouragement of Arts and Sciences, claims to have made “regulus of antimony” (i.e., metallic antimony) malleable. Members of the society questioned this assertion, and Redmond attempts in his letters to defend his experiments. The title page states this to be the second edition, but in fact it is the second issue of the first edition (London, 1762), with a reset title by the same publisher. Cole notes that in this issue leaf F2 is signed F3, as in the first issue. Only the first issue is in Duveen, Ferchl, Neu, Waring, and Watt. (Blake, 374; Cole, 1102; Duveen, 499; Ferchl, 435; Ferguson Coll., 586; Neu, 3450; Smith, 408; Sondheimer, 1325; Waring, 237; Watt, II, 795f; Wellcome, IV, 489)

REECE, Richard

The Chemical Guide, or Complete Companion to the Portable Chest of Chemistry; being, an Epitome of Modern Chemistry. By Richard Reece, M.D. . . .

London: Printed for Longman, Hurst, Rees, Orme, and Brown, Paternoster-Row. 1814.

First edition. 12mo. xxiv, (2), 335, (1) pp. With errata leaf and large woodcut of “Guyton’s Portable Laboratory” (p. 333). Very fine copy, uncut with wide margins, in original blue boards, printed paper label on spine.

A RARE BOOK that was intended to accompany Reece’s “Portable Laboratory.” The chemistry set, or “portable laboratory,” came into use at the end of the eighteenth century, and with the advent of lectures at the Royal Institution and other places chemical experiments by amateurs and professionals became a popular pastime. Reece dedicated this, his only purely chemical book, to George Pearson (1751–1828). A very successful London physician, Reece (1775–1831) sold drugs and “chemical preparations of the purest quality” at the Chemical and Medical Hall, in Piccadilly. He also sold portable chests of chemistry, drugs, minerals, and apparatus, as well as popular medical works he had published. Cole correctly indicates that some of the experiments described in the present work are extremely dangerous and could result in violent explosions (e.g., preparation of mercury fulminate or the grinding together of sulphur and potassium chlorate), yet Reece offers no precautions. (Cole, 1103; Sotheran, Cat. 750 [1914], 13986; Wellcome, IV, 490)

REGLEMENT

Reglement pour la Teinture des Étoffes de Laine, & des Laines servant a leur fabrication. Du 15 janvier 1737.

(Colophon:) Dijon: Chez A. J. B. Auge, seul Imprimeur du Roi.

First edition. 4to. 34 pp. Fine copy, unpressed, with wide fore- and lower margins, in modern boards, printed paper label on spine.

ONE HUNDRED and three rules for dyers, which were evidently the successors of the *Instruction générale pour la teinture des laines et manufactures* . . . (Paris, 1671, 12mo.), issued under the direction of Colbert. From the text it is certain that they were drawn up in 1737. Pages 27–34 are entitled *Instruction sur le debouilli des laines; destinées à la fabrique, des tapisseries*, comprising twenty-eight rules on the boiling of wool to be used in the making of the eighteenth-century tapestries for which France is famous. Extremely rare. Not in Blake, Edelstein, Lawrie, etc.

REGNAULT, Henri Victor

Cours Élémentaire de Chimie.

Paris: Victor Masson, Langlois et Leclercq. 1854.

Fourth edition. 4 vols., 8vo. I: 2 leaves, 419, (1) pp. II: 2 leaves, 405, (1) pp. III: 2 leaves, 460 pp. IV: 2 leaves, 554 pp. With 689 woodcut illustrations (actually far more, as many woodcuts are multiple). Very fine, crisp copy, in original half calf, marbled boards, tastefully rebacked to match, black leather labels gilt.

AN EXCELLENT set of the penultimate edition, the first having appeared in 1847–49 (4 vols., 8vo.). The fifth and final

edition was published six years later (Paris, 1860; 4 vols., 8vo.). Volume I contains an excellent introduction to chemical crystallography, and in volume III there are many illustrations of metal production. Volume IV covers organic chemistry. As a model of clarity, this textbook deservedly became very popular and was translated into almost every European language. Regnault's later research was almost entirely on physics and physical chemistry, and his experiments were carried out with great accuracy. He became professor of physics at the Collège de France and director of the porcelain factory at Sèvres (1854). Sondheimer (no. 1326) lists the third edition (Paris, 1851). Partington cites only the first and fifth editions. No edition in Duveen, Edelstein, Morgan, Smith, Waller, etc. (Bolton, 763; Ferchl, 436; Poggendorff, II, 588)

REGNAULT, Henri Victor

Recherches relatives a faction de la vapeur d'eau à une haute température sur les métaux et sur les sulfures métalliques; essai d'une nouvelle classification des métaux d'après leur degré d'oxidabilité.

(Paris: Imprimerie de E.-J. Bailly et Cie. 1836).

First edition. 8vo. 54 pp., 1 leaf blank. Fine, crisp copy, uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original blue wrappers bound in.

A CLASSIC THESIS, presented by Regnault (1810–1878) before the faculty of sciences at the Académie de Paris. Approved by Dulong on 17 September 1836, the thesis describes Regnault's important experiments on the chemical action of steam at high temperatures on metals and metallic sulphides. As the result of these experiments, Regnault proposed a new classification of metals, which he divided into six categories according to their oxidizability. A rare work, which later led to valuable industrial processes for the preparation of hydrogen by the action of high-temperature steam on metals (e.g., iron). The thesis was reprinted in the *Annales de Chimie*, 62, 337–388 (1836). Regnault was one of the most talented French chemists of the nineteenth century and in 1836 succeeded Gay-Lussac as professor of chemistry at the École Polytechnique. For details of his numerous researches, see D.N.B., Partington, etc. Not in D.S.B., Duveen, Edelstein, Morgan, Smith, Sondheimer, Waller, etc. (Bolton, *Section VIII, Academic Dissertations*, 313 [wrong date: 1837]; Ferchl, 436; Partington, IV, 396; Poggendorff, II, 589)

REGNER, Laurentius

Dissertatio Physico-Mechanica de Ascensu Coni Duplicis Libero, . . . praeside Mag. Samuele Duræo, . . . II. Jun. An. MDCCLXXVI, pro gradu, . . . Laurentius Regner, Ostro-Gothus.

Uppsala: Apud Johan. Edman, Reg. Acad. Typogr. (1776).

First edition. 4to. 1 leaf, 16 pp. With folding engraved plate (L. Regner sc.) depicting 9 figures. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

A PHYSICO-MECHANICAL dissertation describing a machine for cutting pieces from cone-shaped bodies, for experimental purposes, with a detailed mathematical treatment of the subject. The author refers to works by Desaguliers, s'Gravesande, Musschenbroek, et al. No bibliographical information has been traced on Regner or this work.

REGOLAMENTI

Regolamenti sopra i Nitri, e Polveri.

Venice: Er Francesco Andreola Stampatore Regio in Campo S. Angelo. 1806.

First edition. 8vo. 64 pp. Woodcut on title page. Fine copy in modern unlettered boards. Bound with 2 Italian theological works, each published in 1803.

ON THE laws regulating the production, purification, and use of niter (potassium nitrate) in the manufacture of gunpowder of the highest quality, a subject of great importance at the time. Pages 4–15 discuss naturally occurring niter and that made artificially, with its purification. Pages 15–17 cover the manufacture of gunpowder, and pages 18–64 are mainly on the laws relating to niter and gunpowder. Rare. Not in the usual bibliographical sources.

REIBEHAND, Christoph

Filum Ariadnes das ist: Neuer Chymischer Discurs von den grausamen and verführischen Irrwegen der Alchymisten, dadurch sie selbst und viel Leute neben ihnen verleitet werden, und dann, was doch endlich der rechte ubralte einige Weg zu dem allerhochsten Secreto sey, wie darinnen zu procediren, und welcher gestalt auch particularia zur Hand gebracht werden können. Alles durch selbst-eigene Experientz erkläret und an Tag gegeben durch Heinr. von Batsdorff, Hermundurum. Denen sind noch beygefüget LXXIX. Grosse und sonderbahre Wunder, so bey einem Special angegebenen Subjecto theils von der Natur, theils aber in der gefuhrten Arbeit sich befunden haben.

Gotha: Verlegts Jacob Mevius. 1718.

Final edition. 8vo. 8 leaves, 136 pp. Woodcut initials, head- and tailpieces. Imprint shaved; otherwise fine copy in modern mottled boards, unlettered cloth spine.

THE FINAL edition of this well-known alchemical work by Reibehand (fl. 1636), who wrote under the pseudonym Heinrich von Batsdorff. Divided into three parts, the first covers metals (iron, copper, lead, tin, mercury); the second describes the "rechten Weg" to prepare the philosopher's stone, with its use in transmutation; and the third discusses other important details on alchemical processes. The first edition of 1636 was reprinted in 1639, 1647, 1690, and the present (1718) edition. Caillet, Duveen, Rosenthal, Smith, Waite, et al., list various editions (1636–1690) but not this, which is scarce. There is no edition in Blake, Bolton, Edelstein, Mellon, Partington, Waller, Watt, etc. (Baumer, *Bibliotheca Chemica*, 1782, p. 97; Ferchl, 436; Ferguson, II, 249 [not in Young Coll.]; Ferguson Coll., 588; Kopp, *Die Alchemie*, II, 369; Neu, 3461; Schmieder, *Geschichte der Alchemie*, 1832, p. 377)

REICHENBACH, Karl Ludwig Friedrich

Researches on Magnetism, Electricity, Heat, Light, Crystallization, and Chemical Attraction, in their relations to the Vital Force. By Karl, Baron von Reichenbach . . . Translated and edited, at the express desire of the author, with a preface, notes, and appendix, by William Gregory . . . Parts I. and II. . .

London: Taylor, Walton, and Maberly . . . Edinburgh: MacLachlan & Stewart. 1850.

First English edition, second issue. 8vo. 1 leaf, xlv, (3), 463, (1) pp. + 8 pp. (publisher's catalogue). With 3 folding lithographic plates and 23 woodcuts in text. Fine copy, uncut, in original publisher's blind-stamped patterned cloth, spine gilt.

REICHENBACH (1788–1869) published papers during the 1830s on compounds isolated from beechwood tar. He gave these compounds fanciful names, the only ones of which to survive are creosote (a mixture of phenols) and paraffin (a mixture of liquid or solid aliphatic hydrocarbons). About 1844 Reichenbach believed that he had discovered a universal "vital force" that supposedly permeates all matter (different from gravitation), to which he gave the name "od." He claimed that objects in total darkness emitted "odic light," by means of which they could be photographed. His study of this phenomenon originally appeared as *Untersuchungen aber den Magnetismus*, a supplement to Liebig's *Annalen der Chemie*, 1845. "Wohler complained about the publication and Liebig said he was ashamed but was brought to publish it by insupportable pressure" (Partington). Of chemical interest, this very strange work was translated into English by William Gregory (as here). It was "printed and

ready by early 1848" (see p. xlv) but was prevented from publication by the "outbreak of the German revolution" until 1850. The present work is a reissue of *Physico-physiological researches* (London, 1850), with a new half title and title page (see Wellcome). A rival English translation by John Ashburner appeared (London, 1851; Gartrell, 917), as well as an American edition (New York, 1851). (D.S.B., II, 360; Gartrell, 918; Mottelay, 140; Partington, IV, 401; Wheeler Gift, 1188; Wellcome, IV, 497)

REID, David Boswell

Academical Examinations on the Principles of Chemistry, being an introduction to the study of that science. . . .
Edinburgh: Printed for Adam Black, North Bridge; and Longman and Co. London. 1825.

First edition. 2 vols., 12mo. I: xx, 471, (1) pp. II: x, 542 pp. Old stamps on titles and preliminary leaves; otherwise fine set in original half calf, marbled boards, rebacked, maroon labels, spines dated. Presentation copy inscribed in ink on verso of half title of volume I: "The Royal Medical Society with the compliments of the author." From the library of Professor Franz Sondheimer (1926–1981), with bookplate.

THE SON of Peter Reid (1777–1838), educational reformer at Edinburgh University, David Boswell Reid (1805–1863) studied medicine at Edinburgh (M.D., 1830). He gave private lessons on chemistry (1826–1847). During 1828–32 he was assistant to Professor Thomas Charles Hope, giving a popular course in practical chemistry to an average of two hundred students each year. He was also an inventor and published a work entitled *Ventilation* (1844). His system of ventilation was adopted in the new Houses of Parliament. Later, he went to the United States, joined the Columbian Chemical Society (the first such American society), and became U.S. government medical inspector to the Sanitary Commission. Published when he was only twenty, this (his first) work is an introduction to inorganic and organic chemistry. Written in question-and-answer form in a clear and concise style, it was praised at the time as "an excellent compendium of chemical knowledge for the use of the medical student" (see *London Medical Repository and Review*, II, 508). Partington (III, 722) briefly mentions Reid, but not this title. (Bolton, 766; Cole, 1106; Sondheimer, 1327)

REID, David Boswell

Directions for Using the Improved Sliding Scale of Chemical Equivalents; with a Short Explanation of the Doctrine of Definite Proportions. . . .
Edinburgh: Printed for MacLachlan & Stewart, . . . and John Dunn, etc. 1831.

First separate edition. 8vo. 40 pp., 1 leaf (advertisement). With engraved "Table of Equivalents by Weight and by Volume." Very fine copy, in maroon, quarter cloth antique, marbled boards, spine lettered in gilt. Bound with: *Literary and Philosophical Society (of Newcastle) Chemical Lectures* (Newcastle, n.d.).

AN IMPORTANT work on Dalton's atomic theory and chemical equivalents, in which hydrogen is designated as unity and oxygen has the value eight. By choosing hydrogen as the standard of comparison, rather than oxygen, fractional numbers are avoided. This system is still employed. Reid included an abbreviated version of the text in his *Elements of Practical Chemistry* (Edinburgh, 1830, pp. 408–442). In the present work he made numerous additions. By the statement "second edition" on the title, Reid meant that the text included in his *Elements* (1830) was regarded by him as the first edition. Not in Cole, Duveen, Edelstein, Smith, etc. (Bolton, *First Supplement*, 348)

REID, David Boswell

Elements of Practical Chemistry, comprising a series of experiments in every department of chemistry, with directions for performing them, and for the preparation and application of the most important tests and reagents. . . . Edinburgh: Maclachlan and Stewart. 1830.

First edition. 8vo. xxxix, (1), 511, (1) pp. With 123 figures in text and large folding table of "Equivalents by Weight and Volume" (facing p. 442). Very fine, crisp copy, uncut, in original green cloth, rebaked, later printed paper label on spine. Presentation copy, inscribed in ink on verso of dedication leaf: "To George Sinclair Esq. With the sincere esteem and best wishes of his obliged friend, the Author."

AT THE time this work appeared Reid was experimental assistant to Professor Thomas Charles Hope at the University of Edinburgh, to whom he dedicated the book. A useful and clearly written treatise on practical chemistry, it contains primitive chemical equations. The first part presents a systematic series of mainly inorganic chemical experiments designed to teach the student laboratory skills. The second part discusses chemical equivalents, acidimetry, alkalimetry, chemical apparatus, electricity and galvanism, batteries, specific gravity, freezing mixtures, weights and measures, thermometry, etc. On the flyleaf at the end is written in ink: "After having frequently consulted and read extracts from this excellent work, I finished a complete and careful perusal of it at the Pavilion Brighton. Frid(ay) Oct. 22, 1830." There are several loosely inserted pieces of paper written in shorthand, one of which is dated 22 October 1830. George Sinclair (1786–1834) was the author of *Hortus Gramineus Woburnensis* (1816), which describes experiments with grasses made when he was gar-

dener to the duke of Bedford at Woburn Abbey, under the superintendence of Sir Humphry Davy. The first flyleaf is stamped "John George Tollemache Sinclair. 1840." (Bolton, 766 [gives 1831]; Cole, 1107; Roller, 470; Sondheimer, 1328; Sotheran, Cat. 682 [1908], 3935)

REID, David Boswell

Elements of Chemistry, Theoretical and Practical. . . . Edinburgh: Maclachlan, Stewart & Co. 1839.

Third edition. 8vo. xlvii pp., 2 leaves, 905, (1) pp., 1 leaf. With 612 woodcut illustrations in text. Fine, crisp copy, in blue quarter calf, cloth, spine gilt-lettered and dated.

GREATLY ENLARGED edition of this excellent textbook (first, 1830). On page xv there is a table of chemical equivalents and symbols of the elements, with hydrogen taken as unity. Other tables of equivalents appear in the text (e.g., pp. 628–645). Pages 902–903 describe the photographic processes of Daguerre and Fox Talbot, then newly announced. Reid adds that "as the subject appears to engage very general attention at present, some more minute and practical details will very soon be laid before the public." Not in D.S.B., Edelstein, Ferchl, Morgan, Partington, Poggendorff, etc. (Bolton, 766; Duveen, 501; Smith, 409; Sotheran, Cat. 750 [1914], 14004)

REINEGGS, Jacob

Systematis Chemicæ ex Demonstrationibus Tyrnaviensibus Pars Naturalis et Experimentalis Theoretica quas sub gloriosissimis auspiciis Augustissimæ Romanorum Imperatricis Mariæ Theresiæ Apostolicæ Hungariæ et Bohemiæ Reginæ Archiducis Austriae, &c. &c. In Alma, ac Celeberrima Universitate Tyrnaviensi pro consequenda prima Doctorali Medicinæ Laurea publicæ disquisitioni submittit Jacobus Reineggs, Saxo in Aula Majori Academica Mense Majo Anno MDCCLXXIII.

Tyrnau: Typis Collegii Academici Soc. Jesu. 1773.

First edition. 8vo. 3 leaves, 86 pp., 2 leaves. Signature A1 (blank) not present; otherwise a very good copy, in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt, with the original floral paper wrappers bound in.

A SUBSTANTIAL THESIS on chemistry presented by Reineggs (1744–1793) at the University of Tyrnau (Trnava), which was then in Hungary but is now in Slovakia. Reineggs was born in Eisleben, but after receiving his medical degree he went to live in Russia to practice medicine in St. Petersburg, where he later died. He is mainly remembered for his book on the Caucasus. A rare work, which is not mentioned by most of the early chemical bibliographies. (Ferchl, 437; Poggendorff, II, 597)

REISCH, Gregorius

Margarita Philosophica (totius philosophiae rationalis, naturalis et moralis principia dialogice duodecim libris complectens).

(Colophon:) Freiburg im Breisgau: Joannem Schott. 1503.

First edition. 4to. 302 leaves (signatures i⁸, 1⁶, 2–4⁸, a–q⁸, r⁶; A–B⁸, C⁴, D–K⁸, It–M⁶; as–dd⁸, ee⁴, ff⁶), last leaf (ff⁶) blank. Full-page allegorical woodcut title page, full-page printer's device at end, and 15 full-page woodcuts, including representations of grammar, logic, rhetoric, arithmetic, music, geometry, astronomy, astrology, natural science, childbirth, and hell. Numerous other woodcut illustrations in text, including cuts of mining and distillation, 2 folding musical diagrams, initial letters supplied in red throughout, and large folding woodcut map of the world at the end. An exceptionally fine, crisp copy, in early-nineteenth-century mottled boards, rebaked in calf antique, spine gilt-ruled, with maroon morocco label. Bookplates: Lansdowne and John Houlton.

A REMARKABLY FINE copy of the first modern encyclopedia to appear in print. As a summary of the university curriculum at the beginning of the sixteenth century, this richly illustrated post-incunabulum is important for the history of science, medicine, and learning. Written in dialogue form between a master and his pupil, it is divided into twelve books covering grammar, logic, arithmetic, music, geometry, astronomy, astrology, natural philosophy, and other subjects. Books 8 and 9, of chemical interest, discuss ores, niter, salts, elements, fire, metals, alchemy, transmutation, etc., with references to Hermes, Avicenna, Geber, Lully, Arnaldus de Villa Nova, Albertus Magnus, et al. Signature E4v shows a mining scene, and E5r an alchemist in his laboratory. Reisch (d. 1523), prior of the Carthusian monastery Mons. S. Joannis at Freiburg, was the confessor of Maximilian I. "The first modern encyclopedia of any importance" (Duveen [p. 501], referring to the 1517 edition). "The work was an instant success" (Collison, p. 75). "L'édition de 1503 est fort bien executé" (Brunet). Extremely rare, especially with the world map. Most surviving copies are imperfect. (Ferguson, *Book of Secrets*, V, 17; Thorndike, V, 138; Wellcome, I, 5409)

REMARKS

Remarks on Mr. Thomas Henry's Improved Method of preparing Magnesia Alba; With an easy Chemical Process for procuring it, in the utmost Perfection, without leaving any gritty Remainder. To which is added, An Appendix. By a Physician.

London: Printed for John Bell, No. 132, in the Strand. (Price One Shilling and Sixpence) N.d. (1775).

First edition. Sm. 4to. 1 leaf, 62 pp. Fine copy in modern tan cloth, spine gilt-lettered.

IN SEPTEMBER 1771 Thomas Henry (1734–1816) published "an improved method of preparing magnesia. 'Henry's magnesia' was long a favourite domestic remedy" (Partington, III, 691). His memoir appeared in the *Medical Transactions of the Royal College of Physicians* (London), (1772), 2, 226–234, and was reprinted in the author's *Experiments and Observations* (London, 1773). Henry made a profitable business from the manufacture and sale, for medicinal purposes, of magnesia alba (basic magnesium carbonate) and calcined magnesia (magnesium oxide). The anonymous physician in the present work takes Henry to task for the gritty matter that remained in some of Henry's preparations and shows how this can be removed by boiling and thoroughly washing the magnesia alba. The preparation of magnesia alba involved the reaction of Epsom salt (magnesium sulfate) with purified alkali carbonates (from potash), which precipitated the magnesia. An important work on magnesia alba, with numerous references to contemporary chemists (e.g., Joseph Black, Samuel Glass, Geoffroy, Macquer, and Lewis) and their researches on the subject. Very rare. Not in Bolton, Cushing, Duveen, Ferchl, Ferguson, Neu, Osler, Partington, Smith, Waller, etc. Watt (IV, *Magnesia*) gives the date of this title as 1776. (Wellcome, III, 249)

REMER, Wilhelm Herrmann Georg

Lehrbuch der polizeilich-gerichtlichen Chemie. Von D. Wilh. Herrm. Georg Remer.

Helmstedt: bei C. G. Fleckeisen. 1803.

First edition. 8vo. xxxii, 454 pp. Fine copy, uncut, in the original boards, paper label on spine. From the Prince Fürstenberg library, Donaueschingen, with old stamp on verso of title page.

THE FIRST book on forensic chemistry and a milestone in the history of this important subject. Remer (1775–1850) was professor of medicine and director of the Ambulator Klinik of Helmstadt and Königsberg. In this work he advocates government regulations of food and drink to ensure higher and more dependable quality, as well as inspection and control, for the improvement of the health of the people. Definitive chemical tests are described for determining impurities in food, beverages, and chemical materials in common use. Also described are the preparation of pure chemical reagents for carrying out analyses. Remer urges the establishment of chemical laboratories run by the police to aid in the detection of criminal activities. The work was translated into other languages: French by Bouillon-Lagrange (Paris, 1816), Italian by Chiappari (Milan, 1818), and Russian (St. Petersburg, 1818). The third and final German edition appeared in 1827. All editions are rare. Not in the usual early chemical libraries. (Bolton, 768; Ferchl, 438; Partington, II, 729; Poggendorff, II, 602–603)



Reisch. Margarita Philosophica. Freiburg im Breisgau, 1503.

REMER, Wilhelm Herrmann Georg

Lehrbuch der polizeilich-gerichtlichen Chemie. . . .
Helmstädt: in der G. G. Fleckeisenschen Buchhändlung.
1827.

Third edition. 2 vols., 8vo. I: xviii, 373, (1) pp. II: 2 leaves, pp. (375)–850. Fine, crisp copy, in contemporary speckled half calf, marbled boards, spines gilt, orange leather labels.

THE GREATLY enlarged, revised, and final edition of this important work on forensic chemistry, containing bibliographical information on earlier works dealing with poisons, their detection, and analysis. Not in Duveen, Edelstein, Ferguson Coll., Morgan, Smith, Sondheimer, Waller, etc. (Bolton, 768; Ferchl, 438; Hirsch, IV, 703; Partington, II, 729; Poggendorff, II, 603)

REMMETT, Robert Butler

Dissertatio Medica Inauguralis de Opii Usu in Morbis Inflammatoriis. . . . Ex auctoritate . . . Gulielmi Robertson, . . . Pro gradu doctoris, . . . Robertus Butler Remmett, Britannus. . . . Ad Id. Septemb. . . .
Edinburgh: Apud Balfour et Smellie. 1773.

First edition. 8vo. 2 leaves, 35, (1) pp. Fine, crisp copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of Remmett (dates unknown), presented under William Robertson (1721–1793), principal of Edinburgh University. It is dedicated to Andrew Duncan, M.D. (1744–1828), celebrated physician and professor at Edinburgh (see D.N.B.). Waring (quoting *Duncan's Medical Commentaries*, 1774, vol. 2, p. 19) states: "The object of this thesis is to remove the prejudices which existed at the time to the use of opium in inflammatory affections." Of primarily medical and pharmaceutical interest, the works of many earlier and contemporary chemists and physicians are cited. Watt states that Remmett was a physician at Plymouth. Both Waring and Watt mistakenly date this work 1774. Scarce. Not in Blake, Osler, Reynolds, Waller, or the usual chemical bibliographies. (Blocker, 333; Waring, 588; Watt, II, 798i)

RENAUDIN, Philibert

Réflexions sur l'Air atmosphérique, ses alterations, son influence sur le corps humain; et moyens de corriger son infection dans les hôpitaux, spécialement celui de Lyon Par P. Renaudin, . . .

Lyon: De l'Imprimerie de Ballanche et Barret, . . . et se distribué chez l'Auteur, . . . An 5. (1797).

First edition. 8vo. 64 pp. Fine copy in contemporary half calf, boards, gilt-lettered crimson label, spine gilt-ruled. From the library of Dr. Domingo Vidal, eighteenth-century Spanish physician, with his inscription in ink on title page ("ex libris Vidal"). Bound with: Gohier, J. B., *Observations et Expériences* (Lyon, 1807), and 3 other works.

AN INTERESTING work on the chemical composition of the air and its contamination by other gases in hospitals, which was at the time and still remains an important subject. Renaudin (dates unknown) was "ancien chirurgien interne du grand Hôtel-Dieu, et membre de la Société des amis médecins de Lyon." He refers to the great discoveries regarding the composition of the atmosphere and the gases recently isolated by contemporary scientists (e.g., Black, Ingenhousz, Priestley, Lavoisier, and Scheele). Duveen (p. 502) describes a sequel to the present work, a dissertation by Renaudin, entitled *Quelques idées chimiques, physiologiques et médicales sur l'air atmosphérique. . . .* (Montpellier, 1798). Not in Bolton, Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Blake, 378)

RENAUDOT, Eusebe

A General Collection of Discourses of the Virtuosi of France, upon Questions of all Sorts of Philosophy, and other Natural Knowledg. Made in the Assembly of the Beaux Esprits at Paris, by the most Ingenious Persons of that Nation. Render'd into English by G. Havers, Gent.

London: Printed for Thomas Dring and John Starkey, and are to be sold at their Shops, at the George in Fleet-street near Clifford's-Inn, and the Miter between the Middle-Temple-Gate and Temple-Bar. 1664.

First English edition. Folio. 8 leaves, 580 pp., 1 leaf (blank). Very fine copy, in original blind-ruled calf, rebounded, maroon morocco label. Signature (eighteenth century) of John Blagrave, Calcot Place, Berkshire, on endpaper and title page; also bookplate of University of Wisconsin, from which this volume was sold ca. 1960, when it was replaced by the Duveen copy.

THE TRANSLATION by George Havers of the first hundred conferences of the *Recueil general des questions traitées es conferences du Bureau d'Adresse* (Paris, 1636–55), compiled by the physician Théophraste Renaudot (1586–1653) and his son, Eusebe (d. 1679), which may be considered the first scientific periodical. The *Conferences*, published weekly from 1633 to 1642, reported discussions of a wide range of scientific (including chemical) topics carried on at meetings open to the public. These meetings bear some comparison with those of the Invisible College, which preceded the Royal Society; however, they were attended by a much larger audience, and the speakers remained anonymous in

the published reports. The *Conferences* predate by thirty years the *Journal des savants*, usually considered the first scientific periodical. (Duveen, 502–503; Edelstein, 2724; Harvey, 96; Krivatsy, 9559; Neu, 3473; Watt, I, 475a; Wing, R1034)

RENAUDOT, Eusebe

Another Collection of Philosophical Conferences of the French Virtuosi, upon Questions of all Sorts; for the Improving of Natural Knowledge. Made in the Assembly of the Beaux Esprits at Paris, by the most Ingenious Persons of that Nation. Render'd into English, by G. Havers, Gent. & J. Davies of Kidwelly, Gent.

London: Printed for Thomas Dring and John Starkey, and are to be sold at their Shops at the George in Fleet-street neer Clifford's-Inn, and the Miter between Middle-Temple-Gate and Temple-bar. 1665.

First English edition. Folio. 8 leaves, 496 pp. Last 4 leaves from another copy; otherwise fine copy. Bound with: Renaudot, E., *A general collection of discourses of the virtuosi of France* (London, 1664).

THE SECOND and final volume of this important collection, complete in itself, is sometimes bound separate from the first volume published in 1664. It comprises the translation by George Havers and John Davies (ca. 1627–1693) of *Conferences* 101–240 of the *Recueil general des questions traitées es conferences du Bureau d'Adresse* (Paris, 1636–55), compiled by Théophraste and Eusebe Renaudot. “Among the 240 problems discussed . . . are a number of topics of alchemical or chemical interest, such as: Whether it be good to use Chymical Remedies. Of Mineral Waters. Of the Generation of Metals. Of the Fraternity of the Rosie-Cross. What Paracelsus meant by the Book M. Of the Art of Raimond Lully. Of the Bezoar. Of Atoms. Of Natural Magick. Of the Sympathetical Powder, etc.” (Duveen). There are also discussions on freezing and thawing, glass, gold, iron, magnetism, precious stones and their origin, volcanoes and subterranean fire, wines, etc. The contents of these two volumes are discussed in detail by Harcourt Brown (*Scientific Organizations in Seventeenth Century France, 1620–1680*, 1934, pp. 17–31). (Duveen, 502–503; Krivatsy, 9560; Neu, 3473; Watt, I, 475a; Wellcome, III, 225; Wing, A3254 or R1033A)

RENOU, Jean de

A Medicinal Dispensatory, Containing the whole Body of Physick: Discovering the Natures, Properties, and Vertues of Vegetables, Minerals, & Animals the manner of Compounding Medicaments, and the way to administer them. Methodically digested in Five Books of Philosophical and Pharmaceutical Institutions; Three Books of Physical Materials Galenical and Chymical. Together with a most Perfect and Absolute Pharmacopoea or Apothecaries Shop. Accommodated with three useful Tables. Composed by the Illustrious Renodaeus, Chief Physician to the Monarch of France; and now Englished and Revised, By Richard Tomlinson of London, Apothecary.

London: Printed by Jo. Streeter and Ja. Cottrel; and are to be sold by Henry Fletcher at the three gilt Cups neer the west-end of Pauls. 1657.

First English edition. Folio. 28 leaves, 216 pp., 4 leaves, pp. 217–472, “471–738” pp., 12 leaves. (Pagination erratic, but catchwords and text complete). Engraved title page in compartments (Cross sculpsit), with inset portraits of Renou and Tomlinson. Longitudinal half title at end. Letterpress title and dedication leaf strengthened at fore-edges, and engraved title laid down; otherwise fine, crisp copy, in dark-green morocco antique, spine gilt-lettered and dated.

THE ENGLISH translation of Renou's *Dispensatorium Galeno-Chymicum* (Paris, 1608), possibly the most influential pharmacopoeia of the first half of the seventeenth century. Renou (fl. 1608, latinized Renodaeus), of Coutances in Normandy, graduated at Paris, became royal councillor and physician, and was devoted to pharmacy, for the progress of which he “did a good deal [and] overturned a multitude of popular errors about the virtues of plants and animals” (Ferguson). This English translation, by the Puritan apothecary Richard Tomlinson, is especially rare. Ferguson mentions that there is a copy in the British Museum and cites a reference to it in William Cooper's *Catalogue of Chymicall Books* (London, 1675), but it was not in the Young Collection. (Ferchl, 439; Ferguson, II, 254; Krivatsy, 9568 [imperf.]; Neu, 3476; Wing, R1037A)

RENEWICK, James

First Principles of Chemistry; being a familiar introduction to the study of that science. . . . By James Renwick, LL.D.
New York: Harper & Brothers. 1842.

First edition, second issue. 12mo. 444 pp. (pp. 411–435 not numbered). With 154 woodcut figures in text. Good copy in original quarter calf, gilt, pebbled cloth. Signature in ink on recto of first free endpaper: D. D. Slade 1845 Fremont Med. School.

THE TEXTBOOK used by Renwick at Columbia College, containing "every chemical theory and fact with which the student can with propriety be required to be familiar" (preface, p. iv). Gases, nonmetals, metals, salts, organic chemistry, analysis, etc. are covered, and there is a useful glossary of scientific terms (pp. 411–433). Very scarce. No copy in the usual early chemical libraries. Bolton (p. 770) lists only the first issue (1840) and a later edition (1852).

RENWICK, James

Inaugural Discourse, delivered on the Fourth Day of January, 1821, by James Renwick, A.M. . . . Published by order of the Board of Trustees.

New York: Printed by C. S. Van Winkle. 1821.

First edition. 4to. 31, (1) pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with original printed wrappers bound in. The copy of Clement C. Moore (1779–1863), well known for his authorship of the poem "The Night before Christmas" (1823).

RENWICK'S LECTURE inaugurating the first course of experimental philosophy at Columbia is of special interest for his views on the content and divisions of natural philosophy, particularly as chemistry was still considered a part of it. "For the present year (1821) Chemistry will be introduced as part of the general course. . . . It is . . . connected in almost every direction with the principles and facts of Natural Philosophy" (p. 19). There are references to Newton, Franklin, Scheele, Cavendish, Priestley, Lavoisier, Davy, et al. Renwick (1792–1863), professor of natural and experimental philosophy and chemistry at Columbia from 1820 to 1853, inaugurated the course of experimental sciences at Columbia and wrote several textbooks on physics and chemistry. A delightful association copy, having belonged to C. C. Moore, who was senior trustee of Columbia College (now Columbia University). Renwick dedicated his *Elements of Mechanics* (Philadelphia, 1832) to Moore. Scarce. Not in Bolton, Duveen, Miles, Morgan, Partington, etc. (Edelstein, 1938; Smith, 410)

REPORT

Fosses Mobiles Inodores. Report of the Medical Society of Lyons, (President M. Amard,) upon the Moveable Inodorous Conveniences of Messrs. Cazeneuve & Co., made during the Session of April 16, 1819, by Messrs. Grogner, Terme and Tissier, Recorder.

(N.p.) (Dated at end: June 1819).

First edition in English. 8vo. 5, (1) pp. Caption title. Fine copy. Bound with: Hericart de Thury, *Des fosses d'aisances mobiles* . . . (Paris, 1818), and 7 other works on the same subject (q.v.).

ON PAGE 5 it is stated that this report is "Translated from the original French for Messrs. Fauche-Borel and Company, who are the only authorised importers of the above Invention into Great Britain." Not mentioned by the usual bibliographies.

REPORT

Fosses Mobiles Inodores. Society for the Encouragement of National Industry. Report upon the Moveable, Inodorous Conveniences extracted from the minutes of the general meeting of Wednesday, 13th January, 1819.

(N.p.) (Dated at end: June 1819).

First edition in English. 8vo. 10 pp. Caption title. Fine copy. Bound with: Hericart de Thury, *Des fosses d'aisances mobiles* . . . (Paris, 1818), and 7 other works on the same subject (q.v.).

THE ENGLISH translation of a report describing recent improvements in the inodorous portable privy invented and patented by Messrs. Cazeneuve & Co. The improved privy is now fitted with "stools, which require no effort . . . in opening or shutting the cover." The lavatory seat "quickly shuts of itself, the moment that the spring . . . no longer receives pressure." There is a suggestion that a company be formed to collect "so great a quantity of urine," which can be sold "at a low price" as fertilizer. If these privies "were generally adopted in Paris, they would produce many hundred tuns of urine per day, which might lead to some new species of industry." The suggestion is made that the urine could be used to make various chemicals, saltpeter, used in dyeing, etc. Not mentioned by the usual bibliographies.

REPORT

Report made by the Commissioners of the Royal Medical Society of Marseilles, in France, upon the Moveable, Inodorous Conveniences.

(N.p.) (Dated at end: June 1819).

First edition in English. 8vo. 8 pp. Caption title. Fine copy. Bound with: Hericart de Thury, *Des fosses d'aisances mobiles* . . . (Paris, 1818), and 7 other works on the same subject (q.v.).

THE ENGLISH translation of a report by the Royal Society of Marseilles on "the apparatus which has been submitted to them by Mr. Aleaume, and for which Mr. Cazeneuve has obtained a patent." The patent describes the construction of a portable, reputedly inodorous privy, which catches solid excrement on screens, allowing urine to collect below. The solids are taken to a place of collection, dried, ground to powder, and then used as fertilizer. An interesting work relating to agricultural chemistry and also to the gradual evolution of the modern lavatory, a subject that has been

given very little attention by historians of chemistry and technology. Not mentioned by the usual bibliographies.

REPORTS

*Reports made upon the Patent Moveable, Inodorous Conve-
niences, by the Royal and Central Agricultural Society of
France, with a Supplement by the Comte François de Neuf-
château; the Royal Medical Society of Marseilles; the Society
for the Encouragement of National Industry; the Medical
Society of Lyons; the Society of Emulation of Rouen, and the
Medical Society of Paris. Translated from the French.*

London: Printed by Schulze and Dean. 1819.

First English edition. 8vo. 2 leaves, 15, (1) pp. Fine copy, with neat inscription in ink on verso of flyleaf facing title page ("Monsieur Hericart de Thury"). Bound with: Hericart de Thury, *Des fosses d'aisances mobiles* . . . (Paris, 1818), and 7 other works on the same subject (q.v.).

THE FIRST English translation of "the happiest and most important discoveries which France has witnessed in the nineteenth century." The invention of odorless, portable chemical toilets is described. Included are details on the conversion of night soil into a rich "commodious and inodorous manure; producing a calcareous vegetative manure from urine." A very rare work in the history of agricultural chemistry, technology, and sanitary engineering. Not mentioned by the usual bibliographies.

RESTA, Carolo

De Igne Propositiones Physicae Pio VI. P.O.M. nuncupatae a comite Carolo Resta Patritio Mediolanensi Collegii Nazareni Convictore.

Rome: Ex Typographia Joannis Zempel. 1786.

First edition. 4to. in 8s. vii, (1), 56 pp. Woodcut papal armorial crest on title page, woodcut capitals, head- and tailpieces. Mint copy with very wide margins (some uncut), in later marbled boards with contemporary vellum spine.

DEDICATED TO Pius VI (Giannangelo Braschi, 1717–1799), who was pope from 1775 to 1799, this interesting work is a superb example of eighteenth-century Italian fine printing. The book concerns the nature of fire and contains "a thorough discussion of phlogiston. There are references to Macquer, Scheele, Crawford, Priestley, Lavoisier, Bergman, Black and others" (Cole). Of Resta, who lived in Milan, nothing appears to be recorded. The copy described by Cole has an inserted frontispiece portrait of Pius VI, dated 1782, four years before this work was printed. Extremely rare. Not in N.U.C. or the Supplement. Unknown to the usual bibliographers. (Cole, 1110)

RETZIUS, Anders Jåhan

Dissertatio Academica de Natura ac Indole Chemiae Purae Praeside Doct. Christiano Wollin . . . Publico examini submittit Andreas Jahannes Retzius Scanus ad diem XI Febr. MDCCLXIV.

Lund: Typis Reg. Aulae Camer. & Direct. Caroli Gustavi Berling. (1764).

First edition. 4to. 1 leaf, 76 pp. Fine, wide-margined copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of the celebrated Swedish chemist Retzius (1742–1821), presented under the direction of the professor of chemistry and pharmacy at Lund, Christian Wollin (1730–1798). The history of chemistry is briefly covered, with special reference to the theory of phlogiston, of which Retzius was one of the last supporters. Chemistry is defined as a science that is governed by natural laws. The analysis of inorganic and organic substances is discussed, and the writings of Boyle, Newton, and many later chemists are cited. This important work gives an excellent review of chemical thought in the mid-eighteenth century. Very rare. Unknown to the usual bibliographers.

RETZIUS, Anders Jåhan

Einleitung in die Lehre von den Arzeneyen des Pflanzen-Reichs . . . Aus dem Lateinischen ubersetzt und mit einigen Anmerkungen versehen von Johann Friedrich Westrumb . . .

Leipzig: in der Joh. Gotfr. Miillerschen Buchhandlung. 1786.

First edition in German. 8vo. 6 leaves, 84 pp. Very good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN INTRODUCTORY textbook on the chemical and medicinal properties of plants, being a translation of the *Prolegomena in pharmacologiam regni vegetabilis* (Leipzig, 1783). The translation from Latin into German was made by J. F. Westrumb (1751–1819), the well-known pharmaceutical chemist, who has added useful notes and observations. Retzius describes many organic acids, salts, oils, and other valuable chemicals that can be made from, or extracted from, plants. A friend of Scheele, whose researches he cites, Retzius also refers to the works of other contemporary chemists. Not in the usual chemical bibliographies. (Blake, 379)

RETZIUS, Anders Jåhan

Försök til Mineral-Rikets Upställning i en Handbak at nyttja vid Föreläsningar . . .

Lund: Tryckt uti Berlingska Boktryckeriet. 1795.

First edition. 8vo. 2 leaves, 1–223, 242–374 (pp. 224–241 omitted in pagination: text complete). Fine copy, in original half calf, marbled boards, gilt spine, tan label.

ORIGINALLY A demonstrator (1764) in Lund, Retzius went to Stockholm in 1768, where he met and worked with Scheele until 1770, and then returned to Lund. He became professor of chemistry in the Carolinian Institute, Stockholm (1798), and was probably (according to Partington, III, 200) “the last phlogistonist.” Based on Cronstedt’s *Försök til Mineralogie* (1758), this excellent work on mineralogical chemistry is arranged according to the Linnaean system. Minerals are classified as salts, combustibles, stones, and metals (fixed, volatile, proper metals, and semimetals). Those minerals supposedly rich in phlogiston are described on pages 77–95. Numerous references to papers by Bergman, Crell, Cronstedt, Kirwan, Marggraff, Rinman, Scheele, et al., are cited. The appendix discusses the chemical composition of various types of lava. (Ferchl, 440; Poggen-dorff, II, 611)

REUSS, Albrecht Reichard

Dissertatio Inauguralis Chemico-Medica sistens Disquisitionem Analyticam Arcani Tartari quam auspice Deo propitio, consensu gratiosae Facultatis Medicae, in Alma Regia Fridericiana praeside Dn. D. Joanne Junckero Professore Med. Publ. Ordinario, Domino Praeceptore suo Pie Venerando, Pro Gradu Doctoris Horis Locoque Consuetis Ad d. (left blank) Sept. Anno MDCCXXXIII. Eruditorum Examine Submittit Auctor Respondens Albertus Reichardus Reuss Horrhemio-Württembergensis.

Halae Magdeburgicae (Halle): Typis Ioannii Christiani Hilligeri, Acad. Typogr. (1733).

First (only) edition. 4to. 48 pp. Large woodcut (view of Halle) as headpiece to signature A2r. Fine copy in antique style maroon half morocco, marbled boards, gilt-lettered and dated on spine.

THE DOCTORAL dissertation of Reuss, a distinguished pupil of Johann Juncker (1679–1759), who was himself a pupil of Stahl. The subject of this dissertation is tartar and the products that can be made from it by chemical means. The formation of tartar, a whitish material that separates from wine in casks, is described. Tartar is now known to be composed mainly of potassium hydrogen tartrate. The products obtained by the destructive distillation of tartar are

described, and by this means potassium carbonate was produced. It is unlikely that the tartar described in this work was pure potassium hydrogen tartrate, as it is often contaminated with potassium acetate. Indeed, the formation of acetic acid by the distillation of tartar is mentioned. There are references to, and quotations from, the works of Helmont, Boerhaave, Homberg, Starkey, Jungken, Juncker, Stahl, Hoffmann, et al. Neu and Waring list this work under the praeses, Juncker. One of the very earliest monographs on tartar; Waring lists only the *De Arcano Tartari* (Jena, 1730) earlier than this. Not in Bolton, Duveen, Ferguson, Partington, Poggen-dorff, Smith, Watt, etc. (Ferchl, 440; Neu, 2101; Waller, 7912; Waring, 635)

REUSS, August Christian

Dissertatio Inauguralis Chemico-Medica de Sale Sedativo Hombergii. . . Praeside . . . Theoph. Corer. Christi. Storr Pro gradu doctoris medicinae proponit die (blank) Sept. MDCCLXXVIII. Auctor respondens August Christian Reuss Holsato-Rendsburg . . .

Tübingen: Litteris Fuesianis. (1778).

First edition. 4to. 44 pp. Fine copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A SIGNIFICANT DISSERTATION on the preparation, physical properties, and chemical reactions of boric acid, the so-called sedative salt of Homberg, which he first obtained in 1702 by distilling green vitriol (ferrous sulphate heptahydrate) with borax (sodium biborate). The researches of many contemporary chemists are cited, and the preparations of a number of borates are described (e.g., ammonium, calcium, cobalt, copper, lead, magnesium, mercury, potassium, silver, sodium, tin, and zinc). Born at Rendsburg, Reuss (1756–1824) became professor of medicine at Tübingen in 1783. He invented a new type of chemical oven and published a description of it (Leipzig, 1782; Neu, 3484). Very rare. Unknown to Waring and not in the usual bibliographies. (Ferchl, 440; Poggen-dorff, II, 613)

REUSS, Ferdinand Friedrich von

Dissertatio Inauguralis Medica, sistens Examen Vasorum Figulinorum Patriae, Calce Plumbi Obductorum, nec non ad eorum correctionem tentamina et consilia. Quam praeside G. C. C. Storr . . . publice defendendam scripsit Ferdinand. Frideric. Reuss, Tubingensis.

Tubingae A.D. (blank) April. MDCCC. Typis Reiss et Schmidianis. (1800).

First edition. 8vo. 43, (1) pp., 2 leaves (last blank). Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of von Reuss (1778–1852), on the manner in which lead is slowly introduced into food and drink, producing lead poisoning. He condemns the use of cooking vessels made of lead and of utensils of other metals containing small amounts of lead. Of considerable chemical interest, with numerous references to the works of contemporary chemists. The author was professor of chemistry at the University of Moscow (1807–1830) and is remembered as the discoverer of the important phenomenon of electroendosmosis (i.e., the movement of water through a semipermeable partition across which an electrical potential is applied), in 1807. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Partington, Smith, Waller, etc. (Ferchl, 441, Poggendorff, II, 615)

REY, Jean

Essays de Jean Rey . . . Sur la Recherche de la cause pour laquelle l'Estain & le Plomb augmentent de poids quand on les calcine. Nouvelle Édition. Revue sur l'Exemplaire original, & augmentée sur les Manuscrits de la Bibliothèque du Roi, & des Minimes de Paris. Avec des Notes, par M. Gobet.

Paris: Chez Rouault, Libraire, rue de la Harpe. 1777.

Second (first Gobet) edition. 8vo. xxxii, 216 pp. With 2 full-page engraved plates (pp. 19 and 28). Fine copy in maroon Levant morocco, covers gilt-ruled, inner dentelles gilt, spine richly gilt and dated. A beautiful (1972) binding by John P. Gray, Cambridge, England. From the library of Denis I. Duveen, with his bookplate on front pastedown endpaper. Described in Duveen's *Bibliotheca Alchemica et Chemica* (London, 1949).

A MILESTONE WORK in the history of chemistry, describing for the first time that metals gain in weight on calcination (by combining with the then-unknown oxygen of the air). The first edition (Bazas, 1630) is extremely rare: only seven copies are known. Also rare, this second edition contains a new preface and footnotes by the editor, Nicolas Gobet. Reprinted is a letter by Pierre Bayen, who first drew attention to the *Essays* in 1775; letters between Rey and Mersenne; experiments on the manipulation of air over water by Moitrel d'Element (first published in 1719); etc. Lavoisier originally believed the 1777 *Essays* to be a forgery, but by 1792, in his *Mémoires de Chimie*, he gave an appreciative account of Rey's book. Rey (d. 1645) studied medicine at Montpellier (M.D., 1609). The *Essays* was his reply to the apothecary Pierre Brun's request for an explanation why tin and lead increased in weight when heated. (Bolton, 772; Cole, 1111; D.S.B., XI, 389; Duveen, 505; Edelstein, 1942; Ferguson Coll., 595; Hoover, 683; Partington, II, 631; Roller & Goodman, II, 356; Waller, 11216; Wolf, I, 332)

REYHER, Samuel

Experimentum Novum, quo Aquae Marinae Dulcedo, Die VI. Febr. Ann. MDCIIC. examinata, describitur.

Kiel: Prostat Lipsiae apud Joh. Sebast. Riechel. Typis Joach. Reuman, Acad. Typogr. (1697).

First edition. 4to. 16 pp. With 1 engraved plate. Fine copy in dark brown quarter morocco antique, marbled boards, spine gilt-lettered and dated.

REYHER (1635–1714) graduated in law (Leyden, 1665) and became professor of law and mathematics at the University of Kiel. He published books on many diverse subjects, including astronomy, chemistry, physics, meteorology, and mathematics. The present work describes the experiments he made on 6 February 1697, in which the freshness of the ice from frozen salt water was examined. "He broke the ice, which was a foot thick, and found that bits of it tasted sweet. The water next to the ice underneath was also destitute of salt, but when he siphoned out water from lower beneath the surface, it proved to be salt. He gives pictures of ice . . . and offers two reasons for the phenomena. The first is compression of the water and . . . expression of the saline particles. For he believes that, while water cannot be compressed by machines, as air can, it is very easily compressed by cold. The second reason is the heaviness of salt, because of which it spontaneously seeks the bottom" (Thorndike). The upper half of the plate shows the scene of the experiments, and the lower half depicts the instruments used. In his chapter on Boyle, Partington mentions Reyher's observation that ice from seawater gives fresh water. At the end this work is dated 15 March 1697, but it is wrongly dated 1677 and 1679 by Partington and Poggendorff. Without mentioning this title, Ferguson (II, 261) gives an account of Reyher. Very rare. Not in N.U.C. (Partington, II, 509; Poggendorff, II, 617; Thorndike, VIII, 231)

REYNIER, Jean Louis Antoine

Du Peu, et de quelques-uns de ses Principaux Effets. Par M. Reynier . . .

Lausanne: Chez Mourer, Cadet, Libraire. Et à Paris, Chez La Grange, Libraire, rue S. Honoré, vis-à-vis le palais Royal & le Licée. 1787.

First edition. 8vo. vi, 304 pp. With folding printed table facing page 152 (water, metals, glass, their density, specific heat, etc). Fine copy in original "cat's paw" sheep, spine gilt.

A NATIVE OF Switzerland, Reynier (1762–1824) was an officer with the French Army in Egypt, held several positions in the government, and was a member of various scientific societies. A scarce book, which was "originally intended as a preliminary section to a work on the influence of climate on living things, the author decided to

issue this introduction to the history of fire as a separate work" (Cole). The four sections of the book comprise (1) The nature of fire and phlogiston; (2) Heat, its propagation and effects (mentioning Lavoisier and Wilke); (3) The chemical properties of various gases, including inflammable, acidic, and phlogisticated, with references to Fontana, Kirwan, Landriani, Lavoisier, Macquer, van Marum, Priestley, and others; (4) The increase in weight of metals on calcination, loss of phlogiston, differences between combustion and calcination, etc. (Cole, 1112; Edelstein, 1947; Ferchl, 442; Poggendorff, II, 619)

RHADES, Joachim Jacob

Dissertatio Inauguralis Medico-Chemica de Ferro Sanguinis Humani aliisque Liquidis Animalium quam numinis auspicio consensu gratiosi ordinis medici pro obtinendis summis in medicina honoribus publico eruditorum examini subjicit auctor Joachimus Jacobus Rhades Megapolitanus die XV. Septembris MDCCLIII.

Göttingen: Typis Jo. Christophori Ludolphi Schultzii Academiae Typographi. (1753).

First edition. 4to. 1 leaf, 46 pp., 2 leaves. Large woodcut headpieces on pages 1 and 3. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the iron content of blood and other human body fluids. The great Swiss physiologist Albrecht von Haller (1708–1777) left Göttingen in 1753, and this work was written by one of his last pupils there. At the end is a brief but laudatory letter from Haller. Rhades (dates unknown) describes numerous chemical experiments on the calcination, distillation, acidification, etc., of blood in his attempts to determine its iron content, with references to Boerhaave, Boyle, Hoffmann, Homberg, et al. He also describes experiments on serum, fat, amniotic fluid, etc. Of great interest for the light it sheds on eighteenth-century analytical chemistry and biochemistry. Rare, not in the usual early chemical collections. (Ferchl, 442; Partington, III, 599; Waller, 7920)

RHENANUS, Johann

Johannis Rhenani, Medici Celeberrimi, Opera Chymiatrica, quae hactenus in Lucem prodierunt omnia, a plurimis, quae in prioribus editionibus irreperant, mendis vindicata, & selectissimis medicamentis aucta, inque unum fasciculum collecta, quorum catalogum versa indicabit pagina. Francofurti Sumptibus Conradi Elfridi. 1635.

First collected edition, first issue. 8vo. 16 leaves, 367 pp. Folding table ("Tabula Chymiotecnica") before page 1. Pages 181 (with woodcut), 273, and 327 are divisional title pages. 44 woodcuts of chemical apparatus in text. Large

alchemical copperplate on title page. Paper slightly browned in places (characteristic of this period); otherwise a very good copy in the original overlapping vellum, spine lettered in ink at an early date. From the library of Professor Franz Sondheimer (1926–81), with his bookplate on the front pastedown endpaper.

THE FIRST collected edition of the chemical and pharmaceutical works of Rhenanus. Ferguson points out that there are two issues, of which this is a copy of the first issue. The second issue has a reset title page without the copperplate and omits the dedication and a divisional title. Rhenanus (dates unknown) was a physician who worked for the landgrave Moritz of Kassel. Ferguson describes the book fully. The first 179 pages describe chemical apparatus and operations. Pages 181–257 are a dissertation on the philosopher's stone written in German by an anonymous author, now first translated into Latin. Pages 258–271 are the response of Rhenanus, in which he quotes earlier and contemporary writers on the philosopher's stone (e.g., Geber, Ripley, Arnaldus, Lull, and Sendivogius). Pages 273–326 are an *Antodotarium Pestilentiale*, with pharmaceutical and chemical preparations. Finally, pages 327–367 describe various physical and chemical tests that can be made on normal and pathological urines. The alchemical engraving on the title of Basil Valentine's *De Rebus Naturalibus* (Frankfurt, 1676) is a close but re-engraved copy of that on the title of this work. Duveen erroneously states that they are identical. Later editions appeared in 1641, 1668, and 1676. (Duveen, 506; Ferchl, 442; Ferguson, II, 264 [2nd issue]; Neu, 3489; Partington, II, 180; Smith, 412; Thorndike, VIII, 117; Wellcome, I, 5469)

RHETI, Johann Friedrich

Commentatio in jus feudale commune, qua non solum textus omnes qui corpori juris Justiniani nexi sunt enodantur, et ex recessibus Imperii affinitibus ceu jure novissimo suppletur, . . . Cui accessit index materiei conveniens.

Frankfurt: Impensis Haeredum Jobi Wilhelmi Fincelii, Litteris Christophori Zeitleri. 1673.

First edition. 4to. 4 leaves, 482 pp., 37 leaves (index). Title page in red and black. Very good copy in contemporary vellum. Bound with: Kirchmaier, Georg Caspar, *Institutiones metallica* (Wittenberg and Leipzig, 1687); and 3 other books on law.

A RARE BOOK ON German feudal common law, which occasionally touches on topics of scientific (including chemical) interest. Rheti was praeses for a thesis of 1672 on the natural harmony of astronomy and chiromancy (see Thorndike, VII, 369). No other reference to this author or his works has been located.

RHUMELIUS, Johann Pharamund

Medicina Spagyrica oder Spagyrische Artzneykunst. In weicher I. Compendium Hermeticum, darinnen die Kranckheiten in gemein in ihrem Ursprung zu erkennen, und wie sie zu curiren. II. Antidotarium Chymicum, darinnen allerhand Chymische Medicamenta. III. Jatrium Chymicum, darinnen unterschiedliche Kranckheiten auff Spagyrische Weiss zu curiren gelehret wird. Erstlich von Johanne Pharamundo Rhumelio, Stuckweiss an Tag geben, jetzo aber mit Hinzuthuung Pharmacopoeae Chymicae und Herbarii Hermetici zusammen gelesen, und in gewisse Ordnung gebracht. Editio Secunda.

Frankfurt: In Verlegung Christian Hermsdorffs. 1662.

Second edition. 12mo. 30 leaves (including engraved title), 769 (misprinted 169) pp., 11 leaves. Woodcut printer's device on letterpress title. Fine copy in contemporary blind-ruled calf, red morocco label gilt, spine gilt-ruled.

AN ALCHEMICAL and iatrochemical work of considerable interest, which is fully described by Ferguson. The first edition has exactly the same pagination (Frankfurt: Joh. Hüttnner, 1648; see Waller, 7931). There is a discussion of the philosopher's stone and its use in medicine and the transmutation of metals. Rhumelius (1574–1630), a younger son of Johann Conrad Rhumelius, originally settled in Neumark, but being a Roman Catholic he moved to Nuremberg, where he later died. He was an alchemist and physician, but little is recorded of his life. Under the pseudonym Solomon Raphael he published several other works. Ferchl (p. 442) mentions an edition of Frankfurt, 1657, possibly in error. Rare. Caillet (9371) and Thorndike (VII, 193) mention the first edition of 1648 but not the present one. Not in Bolton, D.S.B., Duveen, Edelstein, Osler, Partington, Rosenthal, Smith, Watt, etc. (Ferguson, II, 267 [imperf.]; Ferguson Coll., 597; Neu, 3495)

RIBAUCOURT, Pierre de

Éléments de Chimie Docimastique, à l'usage des orfèvres, essayeurs, et affineurs; ou théorie chimique de toutes les Opérations usitées dans l'Orfèverie, l'art des Essais, & l'Affinage, pour constater le titre de l'Or & de l'Argent, & purifier ces deux Métaux de l'alliage des autres Substances Métalliques; avec un abrégé des principales propriétés qui caractérisent les Matières Métalliques en général; une explication des principaux termes de l'Art; & un précis sur l'Histoire Naturelle de toutes les Substances qui sont employées dans ces diverses Opérations. . . .

Paris: Chez Buisson. 1786.

First edition. 8vo. 1 leaf, x, 317, (3) pp. Fine copy in original speckled calf, gilt, covers gilt-ruled.

AN UNCOMMON and extensive manual of applied chemistry for assayers and workers in gold and silver. In the introduction Ribaucourt (1739–1806) states that his father was a goldsmith from whom he learned the practical side of assaying, while he acquired the chemical theory through experiments he made in Baume's laboratory and from the lectures of Rouelle. The text follows the course he had given for the past six years in his own laboratory. He describes all of the chemical operations used by artisans, with the appropriate theory. A Spanish translation was published (Madrid, 1791, 4to.; Bolton, 773). Not in the usual chemical libraries. (Bolton, 773; Cole, 1113; Edelstein, 3980; Ferchl, 442; Sotheran, Cat. 907 [1954], 339)

RICHARD, Jérôme

Histoire Naturelle de l'Air et des Météores. Par M. l'Abbé Richard. . . .

Paris: Chez Saillant & Nyon, Libraires, rue Saint Jean-de-Beauvais. 1770, 1771.

First edition. 10 vols., 12mo. I: 4 leaves, lxxix, (1), 481, (7) pp. II: 2 leaves, 528 pp. III: 2 leaves, iv, 551, (1) pp. IV: 2 leaves, 560 pp. V: viii, 532 pp. VI: 1 leaf, v, (1), 552 pp. VII: 2 leaves, 468 pp. VIII: viii, 528 pp. IX: viii, 496 pp. X: viii, 467, (1) pp. Very fine set in original mottled calf, spines richly gilt.

AN ENCYCLOPEDIA treatise on air and atmospheric phenomena by Richard, who compiled this work as a sequel to Buffon's great *Histoire Naturelle*. The physical, chemical, and meteorological properties of the air are considered from every standpoint, with reference to the latest experimental observations. The condition of the atmosphere all over the world is discussed. Various types of exhalations and gases are also described, with explanations based on the phlogiston theory. Volumes I–VI were published in 1770, and volumes VII–X in 1771. Born in Dijon, Richard (dates unknown) was canon of Vezalet and was (according to Osler) a zoologist. He also published *La théorie des songes* (Paris, 1766; Osler, 3798) and studied the speculative and mystical theories of the thirteenth-century theologian Saint Bonaventura. (Roller & Goodman, II, 359; Wellcome, IV, 520)

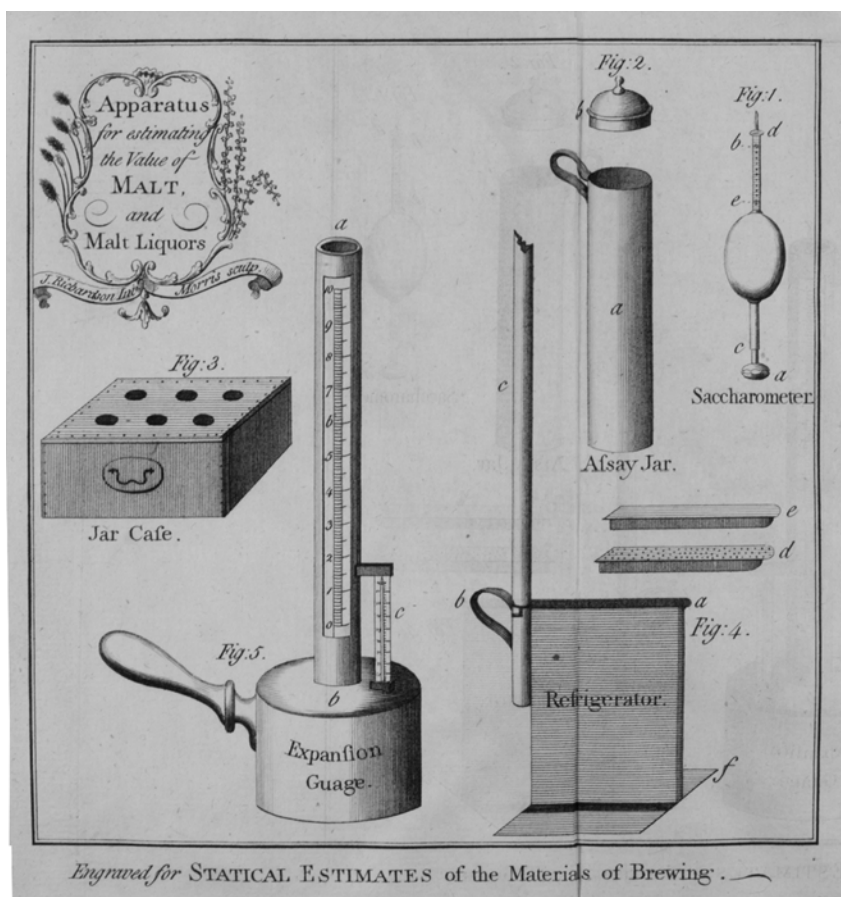
RICHARDS, Joseph William

Aluminium: its history, occurrence, properties, metallurgy and applications, including its alloys. By Joseph W. Richards, A.C., . . .

Philadelphia: Henry Carey Baird & Co. 1887.

First edition. 8vo. xx, 346 pp., 31, (1) pp. (Baird's catalogue of books). 16 engravings in text. Fine copy in original blind-stamped cloth, spine gilt, floral endpapers. Signature in pencil on flyleaf: "Henry Booth, 1887."

Richardson, John. *Statistical Estimates . . . of Brewing*. London, 1784.



THE FIRST book in English on aluminum and a milestone in the literature of this subject. The only monographs on aluminum prior to this were by Tissier (1858) and H. St. Clair Deville (1859), both in French, and by Mierzinski (1885) in German. Richards (1864–1921) covers every aspect of the subject in great detail. Further editions appeared in 1890 and 1896. For a biography of Richards, see Wyndham D. Miles, *American Chemists and Chemical Engineers*, Washington, 1976, pp. 406–407. Scarce. Not in D.S.B., Duveen, Edelstein, Hoover, Morgan, Partington, etc. (Bolton, 773; Miles, 406; Smith, 413; Sotheran, Cat. 750 [1914], no. 14176)

RICHARDSON, John

Statistical Estimates of the Materials of Brewing; or A Treatise on the Application and Use of the Saccharometer; An Instrument constructed for the Purposes of regulating to Advantage the Oeconomy of the Brewhouse; and of establishing the Means of producing Uniform Strength in Malt-Liquors; Including a definite Estimate of the intrinsic Value of different Malts, the Produce of English, Scotch, and Foreign Barley; the specific Gravities of Worts, from which several

Kinds of Ale and Porter are made; the Attenuation of the Density of fermentable Fluids, by the Action of Fermentation; the Portion of Spirit generated by that Action, in Beers of different Lengths; the Mode of estimating the Strength or Inebriating Quality of fermented Liquors; with some Propositions for effecting a very considerable Saving in the Consumption of Malt. By J. Richardson. . . .

London: Printed for G. Robinson, J. Sewell, T. Browne, C. Elliott, Luke White, and T. White. 1784.

First edition. 8vo. xx, (4), 243, (1) pp., 4 leaves. With folding engraved frontispiece (depicting the saccharometer and apparatus for assaying malt and malt liquors). Signed by the author in ink (p. 243). Very fine copy in original tree calf, rebound with contemporary richly gilt spine laid on, dark-blue morocco label. Armorial bookplate (eighteenth century): John R. Lucas.

RICHARDSON (ca.1770–1800), the Hull (Yorkshire) brewer of whose life nothing appears to have been recorded, was the “first to bring to the knowledge of brewers the use and value of the saccharometer, as Combrune in 1762 had first recommended the use of the thermometer” (D.N.B.). He was the first writer to treat the subject of brewing scientifically. Of chemical interest, this work discusses acids and

alkalies, the production of fixed air (carbon dioxide) in fermentation, analysis of malt liquors, distillation of alcohol, etc. Rare. (Ferchl, 443; Sotheran, Cat. 800 [1926], 12616; Watt, II, 802t)

RICHARDSON, William

Designed chiefly for the Use of Manufacturers. The Chemical Principles of the Metallic Arts; with an account of the principal diseases incident to the different artificers; the means of prevention and cure; and a concise introduction to the study of chemistry. By W. Richardson, Surgeon, F.S.A.Sc. Birmingham: Printed by Thomas Pearson; and sold by R. Baldwin, Pater-Noster Row, London. 1790.

First edition, first issue. 8vo. 47 leaves (mispaginated cii), 1 leaf, 201, (1) pp., 2 leaves. With 3 folding tables. Old half cloth, marbled boards. Very good copy, with stamps of the Birmingham Library on title page and its release stamp on front pastedown endpaper.

AN IMPORTANT and certainly one of the earliest English books on diseases resulting from working in the mining and extractive metallurgy industries. Part I (pp. xix–cii) is an introduction to chemistry; part II (pp. 1–82) covers metals and their salts; part III (pp. 171–186) discusses metallic calxes and precipitates; and part IV (pp. 187–201) describes the principal diseases of miners and smelters, with directions for their prevention and cure. The sheets of this edition were reissued in 1806 with a new title page. The 1790 edition was translated into German (Leipzig, 1792). Ferguson gives brief biographical details of Richardson, saying that he was a surgeon in Birmingham and member of the Society of Antiquaries of Scotland. The author died about 1791, according to Ferguson, but the *Biographical Dictionary of Living Authors of Great Britain and Ireland* (London, 1816, p. 294) states that Richardson was alive in 1814. This book appears to be his only publication. Not in Cushing, Edelstein, Garrison-Morton, Hoover, Morgan, Osler, Partington, Poggendorff, Waller, etc. (Blake, 381; Bolton, II, 352; Duveen, 508; Ferchl, 443; Ferguson, II, 269–270; Neu, 3505; Smith, 414; Watt, II, 803j)

RICHTER, Jeremias Benjamin

Anfangsgründe der Stöchyometrie oder Messkunst chymischer Elemente von J. B. Richter . . .
Breslau & Hirschberg: bey Johann Friedrich Korn dem Aeltern. 1792–1794.

First edition. 4 parts in 3 vols., 8vo. I (1792, 1794): xliv, 236 pp.; 180, (2) pp.; 1 folding copperplate (containing 3 figures). II (1793): xxii, 363, (1) pp. III (1793): xvi, 304, (2) pp.; 1 folding engraved plate (containing 6 figures). Mint set with wide

margins, in marbled boards antique, gilt, green morocco labels. Old stamp on verso of title pages: Berlin Natural History Society.

ONE OF the very great rarities in chemical literature, in which the mathematician and chemist Richter (1762–1807) gives the first complete exposition of his “law of neutrality” (i.e., law of reciprocal proportions or equivalents). He states that chemistry should be “especially accessible to mathematics because its basic problem is to determine the exact proportions of the components of every compound. . . . The experiments that led Richter to the law of neutrality grew out of his interest in determining the combining proportions of compounds. . . . Richter had published his early stoichiometric researches as general descriptions. From his basic assumption that chemistry is a branch of applied mathematics, he offered his results as unassailable mathematical truths. He did not include accounts of his experimental work until he brought out (in 1793) the second volume of the *Anfangsgründe*, in which he also offered his first speculations on the series of masses” (D.S.B.). Richter originally described his law of equivalents in general terms in the first volume of his *Ueber die neuern Gegenstände der Chemie* (Breslau & Hirschberg, 1791), later volumes of which form a continuation of the *Stöchyometrie*. A great milestone work in chemical literature, the importance of which is fully discussed by Partington, who describes it as “excessively rare.” In superb condition, this set is as fresh as the day it was printed. (Cole, 1116; D.S.B., XI, 434–436; Partington, III, 674–688; Wolf, II, 380)

RICHTER, Jeremias Benjamin

Ueber die neuern Gegenstände der Chymie . . .
Breslau, Hirschberg & Lissa in Stidpreussen. 1799, 92, 93, 95, 95, 96, 96, 97.

First edition of vols. 2–8, second edition of vol. 1. 8 vols. in 2 vols. I (1799): xvi, 112 pp. II (1792): 2 leaves, (97)–140 pp. III (1793): xviii, 233, (1) pp. IV (1795): xii, 132 pp. V (1795): viii, 148 pp., 1 engraved plate. VI (1796): xx, 224 pp., 1 leaf (errata). VII (1796): xxiv, 112 pp. VIII (1797): xvi, 132 pp. Small repair to blank margin of volume I; otherwise fine set in contemporary half sheep, marbled boards, spines gilt, red and black morocco labels. Old stamp on title of volume V: “K.K. Artillerie Comity.”

A GREAT RARITY of chemical literature and one of the two most important works by Richter. It contains descriptions of his many experiments arising from his interest in determining combining proportions of compounds that led him to his “law of neutrality.” In volume I (first edition, 1791), here in the second enlarged printing, Richter presents this law. The fourth volume gives the fullest description of the

law. He invented the term for that part of chemistry that deals with quantitative relations between reacting compounds: i.e., stoichiometry. Part I is mainly on the separation and purification of metals. Part II concerns carmine blue. Part III presents Richter's intermediate oxidation theory. Parts IV and V contain tables of specific gravities and material on aerometers, thermometers, and oxidation. Part VI describes organic acids. Part VII again deals with oxidation theory and Part VIII discusses various metals and salts. This set lacks the final three volumes published in 1798, 1800, and 1802 (as in the set described by Cole). Richter showed "clearly that the weights of two substances that are equivalent in one chemical reaction are equivalent in other chemical reactions" (Wolf). Not in Blake, Duveen, Edelstein, etc. (Bolton, 775; Cole, 1117; D.S.B., XI, 438; Ferchl, 443; Partington, III, 675; Poggendorff, II, 635; Wolf, *Hist. Science, 18th cent.*, 380)

RIDOLFI, Cosimo

Saggio sul Termolampo a Legno di Cosimo Ridolfi.
Florence: Presso Gaspero Ricci. 1817.

First edition. 8vo. 56 pp. With folding engraved plate (containing 17 figures). Fine large paper copy, uncut with wide margins, in half calf antique, marbled boards, maroon morocco label.

PROBABLY THE earliest original Italian book on gas lighting, preceding G. Aldini's *Prodromo di ricerche sperimentali sul gas illuminante* (Milan, 1818; Bolton, *First Supplement*, 63), which is usually described as the first Italian work on this subject. Ridolfi (fl. 1817) contends that lamps lit with gas generated from wood are more economical and effective than are those that burn gas from coal and other substances. His "thermolamp" and apparatus for generating gas are illustrated in the detailed plate. Of chemical interest and importance in the early history of gas lighting, this very rare work is unrecorded in the usual bibliographies.

RIGG, Robert

Experimental Researches; Chemical and Agricultural. Spewing Carbon to be a Compound Body, made by Plants, and Decomposed by Putrefaction. By Robert Rigg, F.R.S.
London: Smith, Elder and Co., 65, Cornhill. 1844.

First edition. 12mo. xii, 264 pp. + 24 pp. (publisher's catalogue, dated October 1843). With errata slip facing page xii. Fine copy, uncut, in contemporary boards, rebaked, original printed paper label on spine. Presentation copy, inscribed in ink on first free endpaper: "James Steel Esq. from his old Friend the Author." From the library of the Edinburgh physician and biographer Henry Lonsdale (1816–1876), with his signature in ink on first free endpaper.

A CURIOUS WORK, in which Rigg (1792–1861), F.R.S. (1839), attempts to prove by a series of chemical and agricultural experiments that carbon is not an element but a compound. His "experiments and observations on the amounts of carbon supplied by manures and the carbon dioxide of the atmosphere and that in plants leads him to decide that carbon is made in the plants themselves. The book is critical of Liebig's theory of the carbon cycle and of the theory of photosynthesis" (Cole). This copy has a distinguished provenance, having belonged to Dr. Henry Lonsdale, the partner of Dr. Robert Knox (1791–1862), the celebrated Edinburgh anatomist and ethnologist (see D.N.B.). Not in Browne, Waller, Wellcome, or the usual chemical bibliographies. (Bolton, 777; Cole, 1119)

RIGOUT, A.

De la Recherche Micro-Chimique des Principes Immédiats de l'Économie Animale. Thèse pour le Doctorat en Médecine, présentée et soutenue le mercredi 30 août 1865 par A. Rigout, né a la Chapelle-Saint-Denis (Seine) . . . Ex-préparateur de chimie à la Faculté de Médecine de Paris.
Paris: A. Parent, Imprimeur de la Faculté de Médecine. 1865.

First edition. 4to. 110 pp., 1 leaf (blank). Fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

DEDICATED TO the famous chemists Dumas and Wurtz, this doctoral thesis describes the detailed research that Rigout carried out over several years on the microscopical examination of chemicals isolated from animals and humans. Compounds are divided into two broad classes: inorganic (pp. 9–23) and organic (pp. 24–105). Preparative methods for isolating chemicals from tissues are described, as are their physical and chemical properties. The use of the microscope for characterizing chemicals is emphasized. The works of earlier and contemporary chemists are cited (e.g., Berzelius, Chevreul, Dumas, Funke, Gerhardt, Liebig, Pasteur, and Robin). Rare. An important contribution to the history of biochemistry. Unknown to the usual bibliographers.

RINMAN, Sven

Anledningur til Kunskap om den gröfre Jern- och Stal-Förädlingen och des Förbättrande, upteknade af Sven Rinman, . . .

Stockholm: Tryckt i Köngl. Tryckeriet, hos Henr. Foug. 1772.

First edition. 8vo. 8 leaves, 368 pp. Fine, crisp copy, uncut and unpressed, in half calf antique, marbled boards, maroon morocco label, gilt, spine dated, original limp boards bound in.

THE FIRST major publication by the great Swedish metallurgist and iron technologist Rinman (1720–1792), who was a “first-rate inventor and skilled scientist, . . . known as the ‘father of the Swedish iron industry’” (D.S.B.). An extensive manual on the refinement and improvement of iron and steel, containing many chemical experiments. It precedes by ten years his great textbook of iron metallurgy, to which it forms an introduction. Rinman investigated many minerals before the blowpipe and discovered the green pigment (Rinman’s green) formed by heating zinc oxide with cobalt salts. Partington (III, 178) discusses Rinman’s important chemical and metallurgical researches but does not mention the present work, which was apparently unknown to him. A German translation appeared (Vienna, 1790), and a second Swedish edition (Falun, 1829). Rare. Not in Annan, Blake, Hoover, Tylecote, Watt, etc., or the usual chemical bibliographies. (D.S.B., XI, 463; Ferchl, 446; Poggendorff, II, 646; C. S. Smith, *Sources for the History of the Science of Steel, 1532–1786*, 1968, p. 254)

RINMAN, Sven

Försök till Järnets Historia, med tillämpning för Slögder och Handtverk, . . .

Stockholm: Tryckt hos Fetter Heszberg. 1782.

First edition. 2 vols., 4to. I: 5 leaves, (13)–62, 471, (1) pp. With engraved plate attached to page 137. II: 1 leaf, (473)–1083, (1) pp. With engraved plate attached to page 908. The title page of each volume is engraved. Fine set, with wide margins, in original tree calf, spines richly gilt, maroon and green morocco labels.

THE FIRST comprehensive textbook on the metallurgy and manufacture of iron and steel, containing accounts of numerous important and original experiments carried out by Rinman. He “devoted his working life to the metal industries. As director of mining and metallurgy and as adviser to proprietors and managers of mines and iron works all over Sweden. . . . Rinman made substantial theoretical and practical contributions to the improvement of iron and steel production methods, especially of charcoal blast furnaces. His works . . . are highly esteemed sources for knowledge of iron and steelmaking during the eighteenth century, both in Sweden and in the countries he visited” (D.S.B.). The first volume contains an interesting chapter in which the author develops his theory of the increase in weight of metals on calcination; it also deals with the making of magnets and compass needles. Rinman’s magnum opus, and

one of the great books of eighteenth-century metallurgy. German translations appeared (Berlin, 1785; Liegnitz, 1814). Rare. Not in the usual bibliographies of chemistry and metallurgy. (Bolton, 150; Ferchl, 446; Partington, III, 178, 614; Poggendorff, II, 646; C. S. Smith, *Sources for the History of the Science of Steel, 1532–1786*, 1968, pp. 254, 260)

RIPLEY, George

Chymische Schrifften des Hochgelehrten, Fürtrefflichen und weitberhümten Philosophi Georgii Riplaei, Canonici Angli. Darinnen vom gebenedeyeten Stein der Weisen und desselben kunstreicher praeparation gründlich gelehret wird, zuvor durch den Hochgelehrten Herrn Nicolaum Barnaudum Chymicum zu Lateinischer Sprache publiciret, jetzo aber Allen Filiis doctrinae zum besten durch einen Liebhaber der Kunst in Deutsche Sprache gebracht, und in Druck gegeben Anno 1624.

Gedruckt in verlegung Johan Birckners, Buchhandlers in Erffurt. (1624).

First German edition. 8vo. 1, 113 (i.e., 111) pp. (Signatures A–G⁸). Black letter. Paper very slightly embrowned as usual; otherwise fine copy in contemporary German blind-stamped vellum over oak boards, with original brass clasps (one lacking) on vellum thongs. Bound with: Mizauld, Antoine, *Neunhundert Gedachtnuszwürdige Geheimmusz und Wunderwerck* (Basel, 1615), and 2 other works.

THE FIRST German translation of the works of George Ripley (ca. 1415–1490), an Englishman who became “a canon-regular of St. Augustine at Bridlington, and devoted himself to the study of physical science and especially of alchemy” (Ferguson). After traveling in France, Germany, and Italy, in 1478 he returned to England believing he was in possession of the secret of transmutation. His best known work, *The Compound of Alchymy* (London, 1591), written in verse compiled in 1470, is here translated into German prose, together with Nicholas Barnaud’s *Quadriga Aurifera* (Leyden, 1599) and several shorter texts. *The Compound of Alchymy* is divided into twelve “gates,” which describe the processes leading to the preparation of the philosopher’s stone and the transmutation of metals. Ashmole reprinted the work in his *Theatrum Chemicum Britannicum* (London, 1652). Very rare. (Duveen, 511; Ferchl, 446; Ferguson, II, 276; Ferguson Coll., 601 [imperf.]; Neu, 3521; Watt, II, 805u)

Försök
till
Järnets Historia,
med Tillämpning,
för
Slögder och Handtwerk,
Författadt
af
Gwen Rinman,
Apehoruti Kongl. Bergs Collegio, Directör
öfwer Swartsmidet, Riddare af Kongl. Wasa-
Orden, Ledamot af Kongl. Swenska Wetenskaps
Academien och af Kongl. Patriotiska Sällskapet.

Första Bandet.

Stockholm, tryckt hos Petter Hesselberg År 1782.

RISUGDASBIUS, Samuel

Samuelis Risugdasbii M.D. Gespräch vom Stein der Weisen, nebst der rechten Materia, daraus der Lapis Philosophorum gemacht wird, Deme noch beygefügt Achatii Myconii U.D.J. Kurtzer Bericht vom Stein der Gesundheit und des Reichthums.

Frankfurt & Leipzig: bey Johann Friedrich Fleischer. 1747.

Second edition. 8vo. 32 pp. Paper moderately embrowned (owing to poor quality); otherwise good copy in dark-brown quarter morocco antique, marbled boards, spine gilt-lettered, original marbled wrappers bound in.

AN ALCHEMICAL work on the philosopher's stone (first: Leipzig, 1608; Duveen, 512–513; Neu, 3526), by an anonymous physician who conceals his identity with the pseudonym Risugdasbius. A note in "old handwriting" on the verso of the title of the 1608 edition owned by Duveen states that the work is by Johannes Chrysippus Fanianus, a sixteenth-century Basel lawyer. The second part (pp. 20–32), in Germanic verse, deals with the medicinal uses of the philosopher's stone and is by a person (evidently an iatrochemist) who conceals his name with the pseudonym Achatium Miconium, or Myconius. Very rare. Unknown to the usual bibliographers. (Ferchl, 447; Ferguson, II, 279; Wellcome, IV, 208, 532)

RIVERIUS, Lazarus

Four Books of that Learned, and Renowned Doctor, Lazarus Riverius. Containing Five hundred and thirteen Observations, or Histories, of Famous and Rare Cures; most of which were his own. The other [sic] were communicated to him by twentyfour several Famous Physitians and Chyrurgions, whose names are printed to each of them. Unto which is added, A lift [sic] Book, being Select Medicinal Counsels of John Fernelius, Chief Physitian to the King. All Englished. By Nicholas Culpeper . . . These Histories and Observations are often mentioned, and referred unto, in these Seventeen Famous Books of Riverius, called, The Practice of Physick. . . . London: Printed by Peter Cole, Printer and Book-seller, at the Sign of the Printing Press in Cornhil, near the Royal Exchange. 1658.

First edition. Folio. 9 leaves (including longitudinal title), pp. 1–118, 219–463, (1), 10 leaves. (i.e., 363, [1] pp.; badly paginated but text complete). Fine copy in contemporary calf, rebacked. Bound with: Riverius, L., *The Practice of Physick* (London, 1661); and *The Rationall Physitian's Library* (London, 1661).

A MEDICAL TREATISE containing chemical remedies for curing or alleviating the numerous diseases and conditions described. The section by Fernelius begins on page 323 and that by Simon Petreus on page 408. The ten leaves at the

end comprise an alphabetical table of diseases. Rare. (Cushing, R173; Krivatsy, 9735; Neu, 3530; Wing, R1555)

RIVERIUS, Lazarus

Lazari Riverii Consiliarii et Medici Regii, atque in Mons-peliensi Universitate Medicinae Professoris, Observationes Medicae & Curationes Insignes. Quibus accesserunt Observationes ab aliis communicatae.

London: Typis Milonis Flesher. 1646.

First edition. 8vo. 4 leaves, 451 pp., 2 leaves. Very good copy in contemporary vellum, lettered in ink on spine. Bookplate on front endpaper: Warren R. Dawson, F.R.S.E., F.S.A.

A WORK PRIMARILY of pharmaceutical chemical interest. Partington (III, 1), who briefly mentions the Montpellier physician Riviere (Riverius, 1589–1655), says that his medical writings contain many excerpts from Sennert, but he does not mention the present title. Garrison and Morton (no. 2727) cite only the author's *Opera Medica Universa* (Frankfurt, 1674) and state that Riviere was the first to note aortic stenosis. The preface to this book is dated Paris, 7 April 1646. Very rare, Wing listing only three copies (none in America). (Waller, 8009; Watt, II, 806w; Wing, R1557)

RIVERIUS, Lazarus

The Practice of Physick, Wherein is plainly set forth, the Nature, Cause, Differences, and Several Sorts of Signs: Together with the Cure of all Diseases in the Body of Man. With many Additions in Several places never Printed before. In Twenty and Four Books. . . . Written in Latin, and in English. By Lazarus Riverius . . . Nicholas Culpeper . . . Abdiab Cole . . . and W. R. . . . There is now added an Alphabetical Table of Diseases. Also the Idea of Practical Physick in twelve Books. And four other Books; 1. Of Natural Phylosophy. 2. Of Chyrurgery in six Parts. 3. Of the Whores Pox. 4. Of the Gout. All in two Volums [sic]. By Daniel Sennertus, John Johnston, and Abdiab Cole. . . .

London: Printed by Peter Cole, and Edward Cole, Printers and Book-sellers, at the Sign of the Printing-press in Cornhil near the Royal Exchange. 1661.

Third edition? Folio. 13 leaves, 645, (1) pp. Fine copy in contemporary calf, rebacked, spine gilt-lettered. Bound with: Riverius, L., *Four Books of . . . Riverius* (London, 1658); and *The Rationall Physitian's Library* (London, 1661).

POSSIBLY THE third edition (first, 1655) of this medical and pharmaceutical-chemical work. Riverius was among the first to introduce chemistry into the medical curriculum and was a proponent of the use of antimony compounds for therapeutic purposes. Rare. (Krivatsy, 9735; Wellcome, IV, 534; Wing, R1559B)

RIVERIUS, Lazarus

The Practice of Physick, in Seventeen several Books. Wherein is plainly set forth, The Nature, Cause, Differences, and Several sorts of Signs; Together with the Cure of all Diseases in the Body. By Nicholas Culpeper . . . Abdiah Cole . . . and William Rowland . . . Being chiefly a Translation of the Works of . . . Lazarus Riverius . . . To which are added Four Books containing Five hundred and thirteen Observations of Famous Cures. By the same Author. And a Fifth Book of Select Medicinal Counsels. By John Fernelius. With a Table of the Principal Matters treated of therein. As also a Physical Dictionary . . .

London: Printed by John Streater, and are to be sold by George Sawbridge, at the Bible on Ludgate Hill. 1672.

Ninth edition? Folio. 6 leaves, 1–594, 611–645, (1) pp.; 6 leaves, 1–120, 221–463, (1) pp., 16 leaves. Pagination erratic, text complete. With engraved frontispiece containing portraits of Lazarus Riverius, Nicholas Culpeper, Abdiah Cole, and John Fernelius (Cross fecit). Contemporary signature in ink (“John Kening”) on verso of frontispiece and 8-line early manuscript (“Receipt for the Ague”) on verso of page 645; otherwise very good copy in quarter calf antique, marbled boards, maroon morocco label.

POSSIBLY THE ninth edition of this well-known iatrochemical and medical treatise, containing *The practice of physick* and the *Four Books* of Riverius, as well as Fernel’s *Select medicinal counsels*, all of which are here united into one volume. The *Four Books* has a separate divisional title page. At the end the *Physical Dictionary* (sixteen leaves) defines many obsolete medical and iatrochemical words and is followed by an alphabetical table of diseases. (*Heirs of Hippocrates*, 461 [1668 edition]; Krivatsy, 9736; Wellcome, IV, 534; Wing, R1563)

RIVERIUS, Lazarus

The Secrets of the Famous Lazarus Riverius, Councillor & Physician to the French King, and Professor of Physick in the University of Montpellier. Newly Translated from the Latin, by E.P. M.D.

London: Printed for Daniel Brown, at the Black Swan and Bible without Temple-Barr. 1685.

First English edition. 8vo. 4 leaves, 124 (recte 125), (3) pp. (N.B. From p. 112 onwards, pagination incorrect). Signatures A⁴, B–I⁸. Lacks blank leaf (A1), and title page laid down (no loss); otherwise very good copy in contemporary calf, repaired and rebaked, maroon morocco label, gilt, spine dated. Neat early-eighteenth-century manuscript notes in ink on rear flyleaves, describing pharmaceutical chemical preparations (e.g., essence of sulphur).

THE FIRST translation into English of the pharmaceutical “secrets” of Riverius, which describe the preparation of many recognizable chemical compounds. These descriptions throw light on the range of chemicals available to the seventeenth-century physician. The identity of the translator, “E.P. M.D.,” is not revealed. Ferguson (*Books of Secrets*) describes this as “a medical collection, not mentioned by either Watt or Lowndes, and not included in any list of the author’s works which I have consulted. This is an interesting book. It gives the preparation of a large number of compounds and their medicinal virtues and uses.” Very rare. Not in the usual chemical and medical bibliographies. Wing (1951 ed.) lists only two copies: the British Museum and Glasgow University. (Ferguson, *Books of Secrets*, I, part IV, p. 23; Ferguson Coll., 603; Wing, R1565)

RIVINUS, Augustus Quirinus

D. A. Q. R. Manuductio ad Chemiam Pharmaceuticam.
Leipzig: Typis Goezianis. N.d. (ca. 1690).

First edition. 12mo. 120 pp. Very fine copy in the original vellum. Bound with: Rivinus, A. Q., *Physiologicae Theses*, N.p., n.d.; and Rivinus, A. Q., *Notitia Morborum Compendiosa* (Leipzig, n.d.).

RIVINUS (1652–1723) graduated M.D. at Helmstädt in 1676 and in 1691 obtained the chair of physiology and botany at Leipzig. He was particularly talented in botany and proposed a new system, which, although not adopted, gained him admission to the Royal Society of London. His works are mainly on botany, but he also published on medicine, pharmacy, and the present book on chemistry. The *Manuductio* comprises twelve chapters on chemical processes and products (e.g., distillation, acids, alkalies, salts, tinctures, essences, extracts, sublimation, precipitates, and calcination). Rivinus was a distinguished scientist and, according to Ferguson, was always spoken of in the highest terms. The second edition (Nuremberg and Altdorf, 1720) is listed by Ferguson. The first edition is very rare, and no reference to it has been found in available bibliographies. It was even unknown to J. J. Manget in his comprehensive bibliography of Rivinus (see *Bibliotheca Scriptorum Medicorum*, 1731, pp. 81–83).

RIVINUS, Augustus Quirinus

D. A. Q. R. Notitia Morborum Compendiosa.
Leipzig: Typis Joh. Georgii. N.d. (ca. 1690).

First edition. 12mo. 44 leaves, unpaginated, last blank (signatures A–C¹², D⁸). Very fine copy in the original vellum. Bound with: Rivinus, A. Q., *Manuductio ad chemiam pharmaceutica*. (Leipzig, n.d.); and Rivinus, A. Q., *Physiologicae theses* (Leipzig?, n.d.).

A WORK OF peripheral chemical interest, consisting of seventy-four long paragraphs on various diseases and their treatment with pharmaceutical preparations. Very rare. Not mentioned by available bibliographies.

RIVINUS, Augustus Quirinus

D. A. Q. R. Physiologicae Theses.
N.p., n.d. (Leipzig? ca. 1690).

First edition. 12mo. 20 leaves, unpaginated (signatures A¹², B⁸). Very fine copy in the original vellum. Bound with: Rivinus, A. Q., *Manuductio ad chemiam pharmaceuticam* (Leipzig, n.d.); and Rivinus, A. Q., *Notitia morborum compendiosa* (Leipzig, n.d.).

A SERIES OF forty-nine propositions on physiological subjects, of some chemical interest for discussions on the function of the circulation of the blood in respiration, fermentation, metabolism, pancreatic juices, etc. Very rare. No reference to this work has been found in available bibliographies.

ROBERTS, George

A Catechism of Chemistry; intended to assist the learner in attaining a knowledge of the Sciences of Nature; by unfolding to his view the various substances discovered by professors, and the processes they undergo to render them beneficial to mankind. . . .

London: Printed by Bensley and Sons, . . . for Pinnock and Maunder. N.d. (ca. 1825).

Fourth edition. 12mo. 69, (1) pp., 1 leaf (advertisements). With engraved frontispiece ("Mentor unfolding the Gates of the Laboratory of Chemistry") and woodcut figures in text. Crisp copy in cloth-backed boards antique.

AN INTRODUCTORY textbook for young people, with a glossary of chemical terms (pp. 67–69). Roberts (d. 1860) is described on the title page as "Master of Rodden Classical and Commercial Seminary, near Frome" (Somerset). He became mayor of Lyme Regis, Dorset (1848–49 and 1854–55), and published several works, including *An etymological and explanatory dictionary of the terms and language of geology* (1839) and the *Life, Progresses, and Rebellion of James, Duke of Monmouth* (1844). His biography is briefly listed in the D.N.B. and Poggendorff. The present work is not mentioned in the usual chemical bibliographies and is rare.

ROBERTS, George

A Catechism of Electricity, being a short introduction to that science; written in easy and familiar language. Intended for the use of young people. . . .

London: Printed by Bensley and Sons, . . . for Pinnock and Maunder. N.d. (ca. 1820).

First edition. 12mo. 68 pp., 2 leaves (advertisements). With engraved frontispiece ("Dr. Franklin demonstrating the identity of Lightning and Electricity") and woodcut figures in text. Crisp copy in cloth-backed boards antique.

AN INTRODUCTORY textbook, with chapters on electrostatics, galvanism, the voltaic pile, electrolysis of water, the electroplating of metals, and other subjects of chemical interest. The author refers to the electrical researches of Boyle, Guericke, Hauksbee, Grey, Nollet, Beccaria, Priestley, Franklin, Galvani, et al. The Wheeler Gift catalogue (No. X790) lists the second edition but wrongly describes it as being published in Berlin, 1822. Rare. Unknown to Ekelöf, Mottelay, etc.

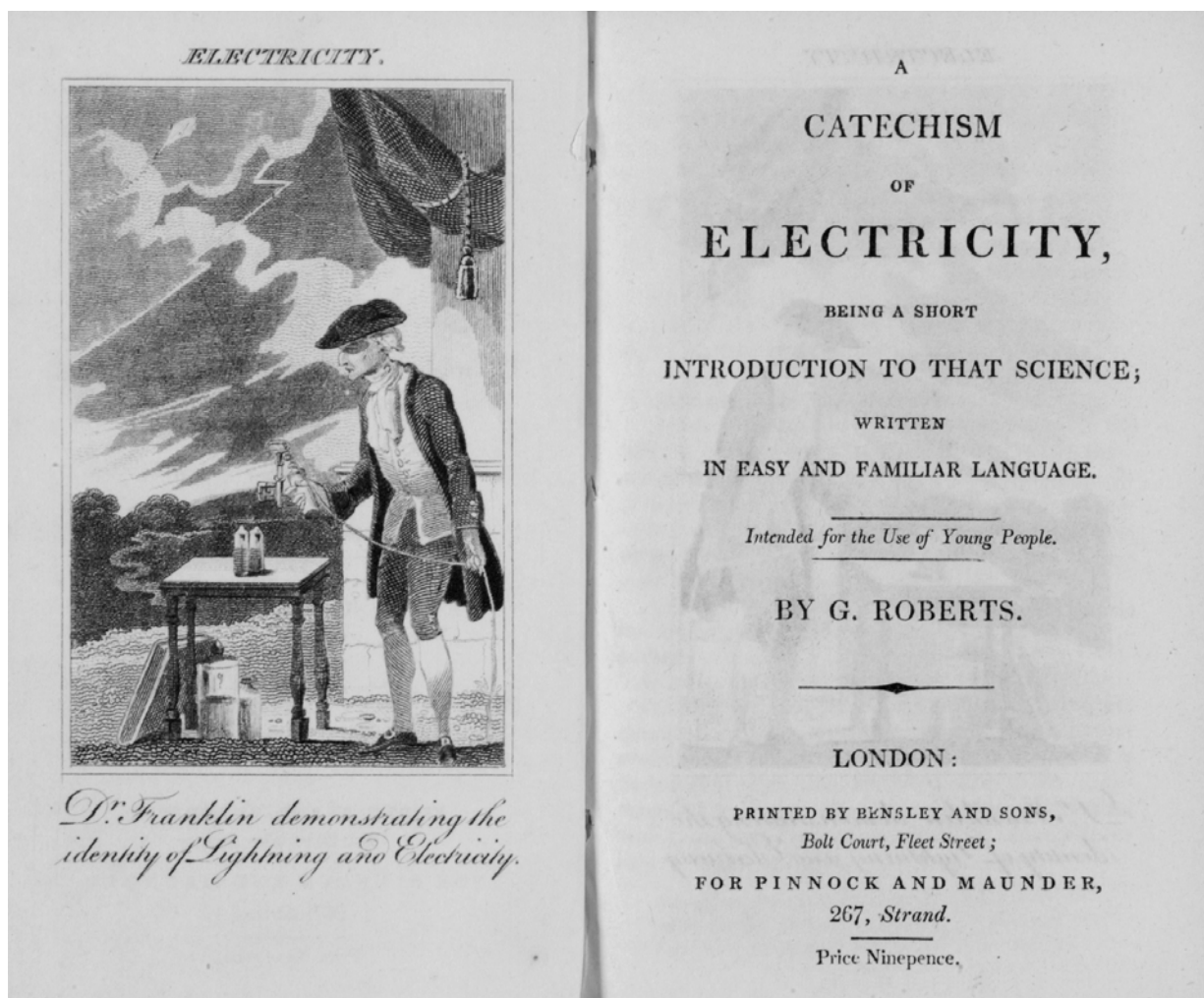
ROBERTSON, Henry

A General View of the Natural History of the Atmosphere, and of its connection with the sciences of medicine and agriculture; including an essay on the causes of epidemical diseases. By Henry Robertson, M.D. . . .

Edinburgh: Printed by Abernethy Walker, for W. Laing, etc. 1808.

First edition. 2 vols., 8vo. I: xvi, 403, (1) pp. II: vii, (1), 4406 pp., 1 leaf (blank). Fine copy complete with both half titles, uncut with wide margins, in original blue boards, printed paper labels on spines. Armorial bookplates. William Ralston Patrick of Roughwood.

THE IMPORTANCE of the atmosphere to plants, animals, and human beings prompted Robertson (dates unknown) to compile the information contained in this treatise. The first volume covers light, heat, electricity, physical properties of the atmosphere, and meteorology. Volume II discusses subjects of chemical importance, including eudiometry, oxidation, combustion, oxygen, nitrogen, carbon dioxide, etc. Also covered are the roles played by oxygen in respiration, fermentation, and putrefaction. The works of Berthollet, Black, Crawford, Dalton, Davy, Fourcroy, Guyton de Morveau, Ingenhousz, Kirwan, Lavoisier, Priestley, Scheele, and many others are cited, some with bibliographical references. "Far the best work that has appeared on those points of agricultural connexion" (Zeitlinger). In the final chapter the author discusses the causes of epidemical contagion and its relationship with the "miasma" of marshes. (Cole, 1121; Perkins, 1462; Roller & Goodman, II, 365;



Roberts. Catechism of Electricity. London, ca. 1820.

Ronald, 433; Sotheran, Cat. 682 [1908], 4040; Watt, II, 808k; Wellcome, IV, 538)

ROBINSON, Thomas

An Essay towards a Natural History of Westmoreland and Cumberland. Wherein an Account is given of their several Mineral and Surface Productions, with some Directions how to discover Minerals by the External and Adjacent Strata and Upper Covers, &c. To which is Annexed, a Vindication of the Philosophical and Theological Paraphrase of the Mosaick System of the Creation, &c. By Tho. Robinson, Rector of Ousby in Cumberland.

London: Printed by J. L. for W. Freeman, at the Bible against the Middle-Temple-Gate in Fleetstreet. 1709.

First (sole) edition. 8vo. 8 leaves, 95, (1), 118 pp., 1 leaf (advertisements). Fine copy in paneled calf antique, gilt-lettered maroon morocco label.

ROBINSON (d. 1719), in addition to being a clergyman, published three books on natural history: *The Anatomy of the Earth* (1694), *New Observations on the Natural History of This World of Matter and This World of Life* (1696), and the present work. He was very interested in scientific matters, particularly mining, metallurgy, and chemistry, but was an amateur in these subjects. This is his final book, and in the preface he states that he has "been now Thirty Years concerned in the Inspection of Under-ground Projects" in the counties of Westmoreland and Cumberland. Chapters of importance to the chemical historian include discussions of heat and cold, mineral waters, various minerals, coal, precious stones, art of calcining and refining sulphurous copper ores, metals, and alloys. The second part has a separate title page and pagination but signatures continuous with the first part. Chemical concepts, the atomic theory, magnetism, etc., are discussed. Chapter XII (pp. 67–73, part 2), on the generation, growth, and transmutation of metals, states that "all Metals are generated of Sulphur and Quicksilver," the individual metals resulting from various mixtures. On pages 71–73 there is a discussion on transmutation of metals into gold by means of the philosopher's stone, showing the author to be a believer in alchemy. A rare book, apparently unknown to historians of science and not mentioned in the usual bibliographies. (Watt, II, 810m)

ROBSAHM, Charles Gustav

Dissertatio Chemica de Terra Asbestina, quam . . . praeside Mag. Torb. Bergman, . . . publice ventilandam sistit Carolus Gust. Robsahm, Vermelandus. . . Die 10 Julii, Anno 1782. Uppsala: Apud Johan. Edman. (1782).

First edition. 4to. 16 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation on the physical and chemical properties of asbestos minerals from various locations, by Robsahm (dates unknown), with Bergman presiding. Chemical analyses carried out on each type of asbestos are reported, and the results compared with those obtained by Cronstedt. Not in Blake, Bolton, Duveen, Ferchl, Ferguson, Ferguson Coll., Neu, Poggendorff, Smith, Waller, etc. (Edelstein, 1967; Möstrom, 199; Partington, III, 183)

ROCHAS, Henri de

La Vraie Anatomie Spagyrique, des Eaux Minerales, et de toutes les choses qui les composent, avec leurs qualitez & vertus, curieusement observées. . . .

Imprimé pour l'Autheur, et se vend, a Paris, Rue Baillet devant la Monnoye, au Baine Royal. 1636.

First edition, first issue. 2 vols., 8vo., in 1. I: 16 + 272 pp. (misnumbered 302). II: 8 leaves, 184 pp. (misnumbered 180). Few leaves lightly embrowned (owing to quality of paper); otherwise very good copy, in original unlettered vellum. From the library of a descendant of the author, with armorial bookplate of P. de Rochas d'Aiglun.

THE FIRST complete edition, of which the first part had appeared as *Traicté des observations nouvelles et vraye cognoissance des eaux minerales* (Paris, 1634). The author, whose father was made general of the mines of Provence by Henri IV, lived in Paris, where he was counselor and physician to the king. The first part, dedicated to Cardinal Richelieu, discusses the chemistry of mineral waters and ends with a chapter of alchemical interest (*De l'esprit universel*). The second part, dedicated to Chancellor Seguier, is divided into two sections, the first of which (pp. 1–59) is purely chemical, while the second describes the curative properties of the waters, based on case histories. A very rare book, privately printed for the author. Two issues appeared: the first (as here) with the above imprint, and the second, in which the first title page is dated 1637, with the imprint mentioning Pierre Billaine (see Edelstein, 1971; Ferguson, II, 282 [not in Young Coll.]; Wellcome, I, 5505). Thorndike (VIII, 274–77) devotes four pages to Rochas, and Partington (III, 8–9) also discusses his various writings, but neither mention this title. Not in the British Library or the usual bibliographies. (Caillet, 9539; Duveen, *Supplement*, 604)

ROGIER, Gideon Herman de

Dissertatio Academica de Impedimentis Philosophiae Naturalis, . . . moderante . . . Mag. Samuele Duraeo, . . . 8 Junii 1764. Pro laurea obtinenda . . . Gideon Herm. de Rogier, O. Gothus. Uppsala. (1764).

First edition. 4to. 1 leaf, 16 pp. Large woodcut head- and tailpieces. Signature in ink on title: Mag. Doe. Ellnander. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

ON THE difficulties of carrying out meaningful scientific experiments, particularly in physics and chemistry, with references to Francis Bacon, Descartes, Galileo, Huygens, Newton, Torricelli, et al. No reference has been found to the author or this work.

ROHAULT, Jacques

Traité de Physique. . . .

Paris: Chez la Veuve de Charles Savreux Libraire Juré, au pied de la Tour de Nostre-Dame, à l'Enseigne des trois Vertus. 1671.

First edition. 2 vols., 4to., in 1. I: 16 leaves, 378 pp. II: 382 pp., 4 leaves. With 3 folding copperplates and many woodcuts in text. Fine copy in original calf, strongly rebacked with contemporary gilt spine laid down. From the famous library of the duke of Palmella, the *premier grand* of Portugal, with his stamp (initials crowned) on title page of volume I.

ROHAULT (1620–1675), professor of physics and mathematics in Paris, was a wholehearted supporter of the physical doctrines of Descartes, which he strongly defends in the present book. His “masterwork, the *Traité de physique* (1671), became the era’s leading textbook on natural philosophy. . . . The strength of the *Traité* and its contemporary appeal lay in Rohault’s ability to weave new experimental findings, as well as his knowledge of craft and chemical processes, within a verbal web of Cartesian mechanistic discourse” (D.S.B.). A large and well-illustrated section deals with light and vision, while other subjects include natural substances in general, earth, air, fire, magnetism, electricity, minerals, metals, salts, celestial objects, and animate beings, especially man. New machines and experiments are discussed, and the secrets of such various arts as chemistry, dyeing, gilding, refining, and other chemically based processes are described. Rohault eulogizes Descartes, claiming that the entire period between Aristotle and Descartes was barren as far as scientific discoveries are concerned. The second volume deals with the circulation of the blood (pp. 335–345) and its discoverer, “Hervée” (i.e., Harvey, p. 339). Many editions and translations appeared. (Cajori, 61; D.S.B., XI, 506; Harvey, 138; Honeyman, 2674; Mottelay, 129; Poggendorff, II, 678; Sotheran, Cat. 750 [1914], 14401 [“Rare”]; Thorndike, VII, 678–680; Watt, II, 813m; Wolf, I, 299)

ROHAULT, Jacques

Rohault’s System of Natural Philosophy, illustrated with Dr. Samuel Clarke’s Notes taken mostly out of Sir Isaac Newton’s Philosophy. With Additions. . . . Done into English by John Clarke, D.D. . . .

London: Printed for James Knapton, at the Crown in St. Paul’s–Church–Yard. 1723.

First edition in English. 2 vols., 8vo. I: 18 leaves, 285, (3) pp. II: 292 pp., 12 leaves (index). With 27 folding copperplates. Title pages in red and black. Fine copy in original speckled calf, covers with double gilt fillets, spines richly gilt, maroon morocco labels. An important association copy with armorial bookplates of John Ward (ca. 1679–1758), friend of Sir Isaac Newton.

THE FIRST English edition of Samuel Clarke’s (1675–1729) edition of Rohault’s *Traité de physique* (Paris, 1671). The textbook on physics used at Cambridge during this period was Théophile Bonnet’s poor Latin translation of Rohault’s *Traité* (Geneva, 1674). Clarke’s tutor, Sir John Ellis, urged him to prepare a more elegant Latin version, making use of his familiarity with Newton’s physics. A friend of Newton, Clarke appended to his Latin edition (London, 1697) numerous notes from the *Principia* (London, 1687). These notes “had the novel effect of turning a Cartesian treatise into a vehicle for disseminating the ideas of Newton” (D.S.B.). Samuel Clarke’s brother, John (1682–1757), prebendary of Canterbury and royal chaplain, translated the Latin text into the present English edition. The former owner of this copy, John Ward, was biographer and professor of rhetoric in Gresham College, London (1720–1758), and F.R.S. (1723). (Babson, 103; D.S.B., III, 294, XI, 509; Gjertsen, 117; Harvey, 139; Roller & Goodman, II, 369; Wallis, 143; Wellcome, IV, 549 [vol. I only]; Wheeler Gift, 260)

ROLEWINCK, Werner

Fasciculus temporum omnes antiquorum hystorias complectens.

(Lyons: Matthias Huss. 1495).

4to. 98 leaves (last leaf blank). Gothic type. Illustrated with 16 text woodcuts (including 5 repeats), 1 large woodcut of Christ with symbols of the Evangelists (folio 37), and many small text diagrams. Fine copy in blind-ruled reverse calf antique.

A HANDSOME COPY and fine example of early French printing. “The *Fasciculus Temporum* (Cologne, 1474) was the earliest chronological world history to be printed” (Adrian Wilson, *The Making of the Nuremberg Chronicle* [1978,

p. 39]). Compiled by the scholarly priest Rolewinck (1425–1502), the book passed through a number of fifteenth-century editions with important additions. Particularly noteworthy is the reference to the invention of printing at Mainz about 1457 (folio 89v, line 11). The fine woodcuts depict various cities, monstrosities, comets, plagues, earthquakes, etc. There are references to minerals, metals, salts, and other subjects of scientific interest. The detailed index lists Albertus Magnus, Aristotle, Hermes Trismegistus, Pliny, Seneca, and other ancient writers. The BMC notes of this edition: “The text proper ends with notes on the death of Matthias Corvinus in 1490 and the destruction of Otranto by the Turks, but an addendum on 97a mentions the return of Charles VIII of France from Italy towards the end of 1495 and the burial, about the same time, of a Franciscan, Johannes Bourgois, in the monastery of Notre Dame des Angers at Lyons.” The Wellcome Library has ten incunabular editions of this popular universal history from 1477 to 1490, printed at Speier, Venice, Rougemont, Strassburg, and Utrecht. (BMC, VIII, 265; Copinger, 2437; Gaff, R-277; Oates, 3195; Proctor, 8570; Schramm, 5120a)

ROLFINCK, Werner

Chimia in Artis Formam Redacta, Sex Libris comprehensa.
Jena: Samuel Krebs curabat. 1661.

First edition, first issue. 4to. 8 leaves, 443, (1) pp., 5 leaves (index). Large folding table (facing p. 76). Minor browning (as usual); otherwise very fine copy, in contemporary unlettered vellum. Bound with: Rolfinck, W., *Dissertationes chimicae sex* (Jena, 1660), and works by J. C. Friederic, L. Strauss, and G. W. Wedel.

ROLFINCK (1599–1673), M.D. (Padua, 1625), was the first professor of chemistry at Jena (1641) and established a large laboratory there in which he taught iatrochemistry. He also gave instruction in anatomy, surgery, and botany and was the first German to embrace Harvey’s theory of the circulation of the blood. He built the first anatomical theater at Jena and revolutionized the study of medicine at the university. The present book is a heavily revised version of Brendel’s work and was published with the same title. Although mainly on pharmaceutical chemistry, there is much on pure chemistry, as well as certain alchemical concepts and preparations. The author “seems to be making considerable strides away from alchemy and towards chemistry” (Thorndike). Partington discusses the contents. Rolfinck also published other chemical works and presided at many M.D. examinations. The second issue (Jena, 1662) was followed by several later editions: e.g., Geneva, 1671; Berlin, 1674; and Frankfurt, 1686. Rare. (D.S.B., XI, 511; Duveen,

514; Ferchl, 451; Ferguson, II, 283 [not in Young Coll.]; Krivatsy, 9822; Neu, 3544; Partington, II, 312; Thorndike, VIII, 133)

ROLFINCK, Werner

Chimia in Artis Formam Redacta, Sex Libris comprehensa.
Geneva: N.p. 1671.

Second (first Geneva) edition. 4to. 4 leaves, 443, (1) pp., 5 leaves. Large folding table (facing p. 76). Very light toning of paper; otherwise fine copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Non has Chemicum* (Jena, 1670), and other works by Rolfinck.

A PAGINARY REPRINT of the first edition (Jena, 1661). Chemical and alchemical symbols are used throughout instead of names. “Greek words and quotations are frequent, and even words in Arabic appear. . . . There are long branched tables summarising text” (Partington). The copy in the Wellcome Library is imperfect. (Ferchl, 451; Ferguson, II, 283; Ferguson Coll., 606; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Parkinson & Lumb, 2060; Partington, II, 312; Watt, II, 813r; Wellcome, IV, 550)

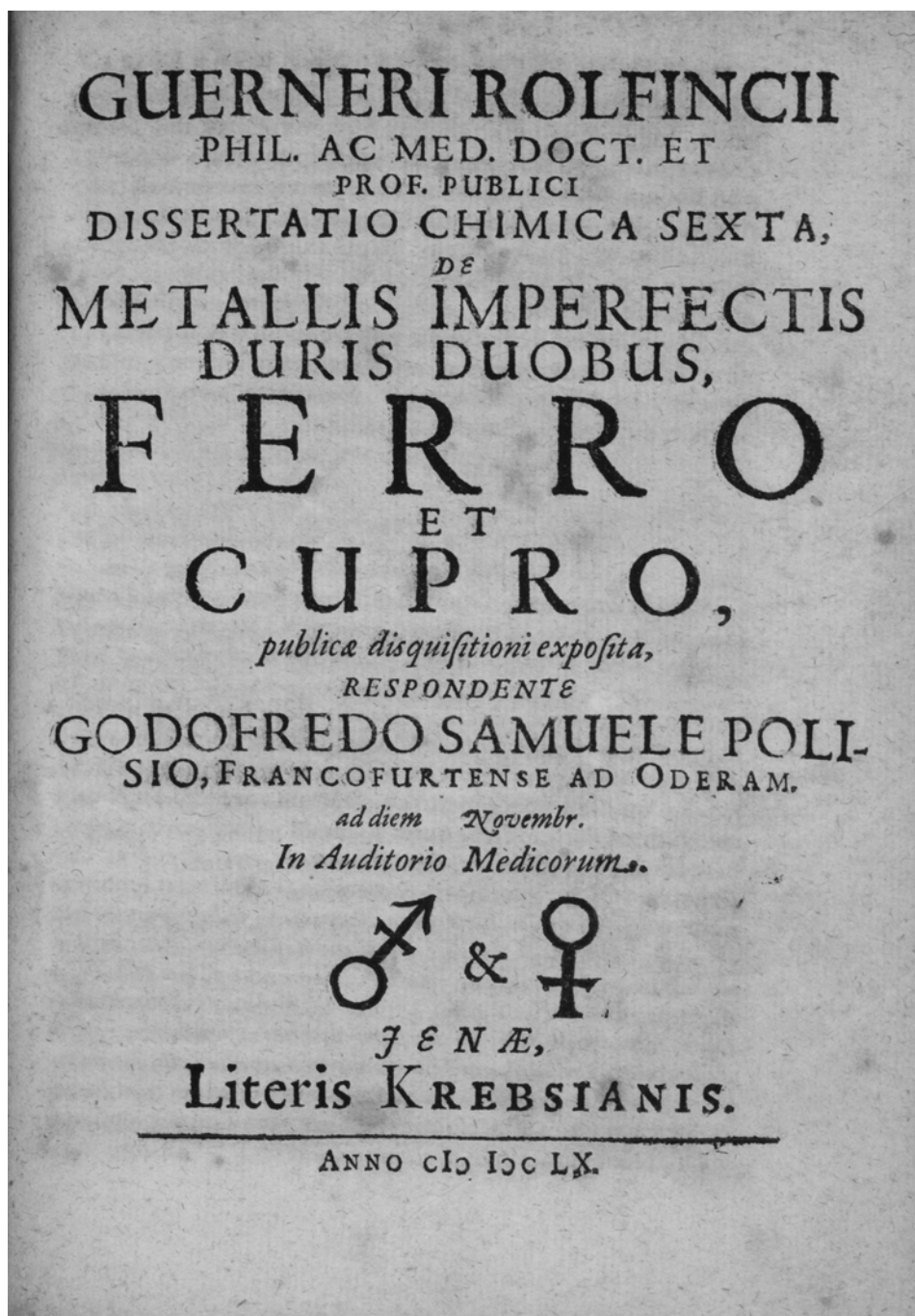
ROLFINCK, Werner

De Vegetabilibus, Plantis, Suffruticibus, Fruticibus, Arboribus in Genere Libri Duo.

Jena: Apud Petrum Brosseln, Bibliop. Typis Johannis Wertheri. 1670.

First edition. 4to. 10 leaves, 1–88 pp.; 89–96 ff.; 97–216 pp., 4 leaves. Title page in red and black. Very good copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Geneva, 1671).

A TREATISE ON plants and the medicinally useful organic and inorganic compounds that can be extracted from them, with references to ancient and modern authors. Rolfinck was the first professor of botany and chemistry at Jena and founded the botanical garden there in 1631. Multhaus (in D.S.B.) lists this work among the “major writings” by Rolfinck. (D.S.B., II, 511; Ferchl, 451; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Parkinson & Lumb, 2061; Pritzel, 7744; Wellcome, IV, 551)



Rolfinck. Ferro et Cupro. See *Chimia in Artis Formam Redacta*. Jena, 1661.

ROLFINCK, Werner

Epitome methodi cognoscendi & curandi particulares corporis affectus, secundum ordinem Abubetri Rhazae ad Regem Mansorem libro nono, Hippocraticis, Paracelsicis & Harveanis principiis illustratae & recognitae, Philiatorum in gratiam adornata, & Editione hac Secunda Triplici Indice Locupletata, cum nova praefatione & recensione Georgii Wolfgangi Wedelii . . .

Jena: Impensis Joh. Birckneri, Bibliop. Erfurt. Typis Johannis Nisi. 1675.

Second edition. 4to. 9 leaves, 396 pp., 8 leaves. Title page in red and black. Fine copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Geneva, 1671), and other works by Rolfinck.

DEDICATED TO the professor of medicine at Jena, Johann Theodor Schenck (1619–1671), this treatise describes cures for numerous diseases, with recipes for effective medicines derived from naturally occurring and chemically based materials. Organic compounds made from plants are especially recommended. The first edition (Jena, 1655; Wellcome, IV, 550) has been revised and updated by Georg Wolfgang Wedel in this edition. There is a new preface by Wedel (dated October 1674) and three indices. Multhau (in D.S.B.) lists this work among the “major writings” by Rolfinck. (D.S.B., XI, 511; Ferchl, 451; Krivatsy, 9826; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 88; Parkinson & Lumb, 2063)

ROLFINCK, Werner

Liber de Purgantibus Vegetabilibus, sectionibus XV absolutus.

Jena: Impensis Johan. Ludovici Neuenhahnii, Bibliop. Typis Johannis Wertheri. 1667.

First edition. 4to. 12 leaves, 454 pp., 3 leaves. Title page in red and black. Fine copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Geneva, 1671).

A COMPREHENSIVE WORK on the preparation of purgatives from many different types of plants. Details are given on the extraction of chemicals by applying pressure to the leaves, stems, fruit, and seeds of plants; also by solvent extraction, distillation, calcination, and other processes. Included are recipes from Arabic and Greek sources. A second edition appeared, with the same pagination (Jena, 1684). (Krivatsy, 9828; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Neu, 3546; Parkinson & Lumb, 2064; Waring, 176; Wellcome, IV, 551)

ROLFINCK, Werner

Non Ens Chemicum, Mercurius Metallorum et Mineralium.
Jena Johannes Wertherus curabat. 1670.

First edition, second issue. 4to. 4 leaves, 24 pp. Fine copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Geneva, 1671), and other works by Rolfinck.

AN INTERESTING work in which Rolfinck discusses “chemical non-entities,” i.e., phenomena that are improbable or impossible. Thus, Rolfinck did not believe in the astral quintessences of Paracelsus; palingenesis (e.g., resuscitation of plants from their ashes); the extraction of liquid mercury from vegetables; the *homunculus* of Paracelsus; the generation of gold in the human body; the spagyric salt, sulphur, and mercury of metals; the universal medicine; or the transmutation of metals into silver and gold or of one metal into another. By rejecting such long-held beliefs Rolfinck greatly assisted in clearing the way toward the birth of chemistry as a true science. The first issue (Jena, 1670; Krivatsy, 9893) did not contain the six-page (sign. A2–A4) dedication to Athanasius Kircher here present. Rare. Not in Ferchl, Ferguson, Ferguson Coll., Wellcome, etc. (D.S.B., XI, 511; Edelstein, 1976; Krivatsy, 9894; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Partington, II, 313–314; Thorndike, VIII, 135)

ROLFINCK, Werner

Ordo et Methodus generationi dicatarum partium, per anatomen, cognoscendi fabricam, liber onus, ad normam veterum & recentiorum scriptorum exaratus.

Jena: Curabat Samuel Krebs. 1664.

First edition. 4to. 8 leaves, 214 pp., 7 leaves. Very good copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Geneva, 1671), and 5 other works by Rolfinck.

A TREATISE ON the health, pathology, and anatomical function of the sex organs, conception, childbirth, and related subjects. Of biochemical interest are discussions on the composition of urine, kidney stones, blood, and other bodily fluids in health and disease. (Krivatsy, 9830; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Neu, 3547; Parkinson & Lumb, 2065; Wellcome, IV, 550)

ROLFINCK, Werner

Ordo et Methodus medicinae specialis Commentatoriae, . . . cognoscendi & curandi Dolorem Capitis, ad normam veterum & novorum dogmatum proposita. Praemittitur dissertatio de autoribus practicis.

Jena: Curabat Johannes Nisius. 1671.

First edition. 4to. 4 leaves, 245, (1) pp., 5 leaves. Very good copy in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Geneva, 1671).

A COMPREHENSIVE WORK on methods for controlling and curing severe headaches, dedicated to the iatrochemist and physician Georg Hieronymus Velsch (or Welsch, 1624–1677). Rolfinck describes the many methods employed and medicines prescribed from the time of the ancient Greeks, Romans, and Arabs to the present. Examples are given of chemicals prepared from minerals, salts, and plants used to treat headaches, with references to the works of Averrogs, Celsus, Croll, Galen, Helmont, Hippocrates, Paracelsus, Rhases, Sennert, Sylvius, and many other authors. (Krivatsy, 9833; Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Parkinson & Lumb, 2066; Wellcome, IV, 551)

ROMÉ DELISLE, Jean Baptiste Louis

Essai de Cristallographie, ou Description des Figures Géométriques, propres à différens Corps du Regne Minéral, connus vulgairement sous le nom de Cristaux, avec figures et développemens. Par M. de Rome Delisle, de l'Académie Électorale des Sciences utiles de Mayence.

Paris: Chez Didot jeune, Knapen & Delaguette. 1772.

First edition. 8vo. xxxii, 427 pp., 1 leaf. With 10 detailed folding copperplates (by Bresse) and 2 very large printed folding tables. Fine copy in later-nineteenth-century half calf, marbled boards, maroon morocco label gilt. Old red stamp of the Royal Society on half title, Library Regulations of the Geological Society (London) on front endpaper, and their notation of receipt of this volume in 1887 on verso of first free endpaper.

A MILESTONE BOOK that laid the foundation of modern crystallography, published twelve years before Haüy's treatise (1784). Romé Delisle (1736–1790) discovered the principle of the constancy of angles in crystals, which he first announced and demonstrated in this work. He identified 110 crystal forms (drawing upon Linnaeus, who had listed about 40), and described in minute detail the minerals that exhibited them. Whewell (quoted by Partington) regarded Romé Delisle as "one to whom, more perhaps than to any other person, crystallography owes its subsequent progress." The text is preceded by a valuable twelve-page bibliography of the subject, listing about 130 works, with annotations by the author. The book is of chemical as well as crystallographic interest. A German translation by C. E. Weigel appeared (Greifswald, 1777). Not in Blake, Bolton, Duveen, Edelstein, Ferguson Coll., Morgan, Smith, Sondheimer, Waller, etc. (D.S.B., XI, 521; Ferchl, 452; Hoover, 691; Mather & Mason, *A Source Book in Geology* [1967], 108–110; Partington, IV, 202–203; Poggendorff, II, 682; Sotheran, Cat. 682 [1908], 4061 ["Rare"]; Ward & Carozzi,

1906; Watt, II, 814u [wrong date: 1771]; H. B. Woodward, *History of Geology* [1911], 43)

RONALDS, Edmund, and RICHARDSON, Thomas

Chemical Technology; or, Chemistry in its Applications to the Arts and Manufactures. By Dr. Edmund Ronalds . . . and Dr. Thomas Richardson . . . With which is incorporated a revision of Dr. Knapp's "Technology." . . . Fuel and its Applications.

London: H. Bailliere, etc. 1855.

Second edition. 2 vols., 8vo. I: xvi, 386 pp. + 14 pp. (advertisements). II: (6), 387–799, (1), "32", 833–836 pp. With 6 folding plates (2 colored) and 433 woodcuts in text. Fine copy, uncut, in original publisher's blind-stamped cloth, spines gilt-lettered. Presentation copy inscribed in ink on half title of first volume by one of the authors: "To His Grace The Duke of Northumberland with Dr. Richardson's Compliments."

AN EXCELLENT, richly illustrated work, which presents a complete account of the subject as it existed in the middle of the nineteenth century. "This book originated as *Lehrbuch der Chemischen Technologie*, Braunschweig 1844 by Friedrich Ludwig Knapp (1814–1904) which was translated and edited with additions by Ronalds and Richardson London 1848–51. The second edition in English was rewritten and enlarged so as to form an essentially new work" (Cole). The whole of volume I (parts 1 and 2) deals with "Fuel and its applications." Three more parts were added on acids, alkalies, and salts, under the general editorship of Thomas Richardson and Henry Watts (III, 1863; IV, 1865; V, 1867). Each part was intended by the editors to be complete in itself, and they are rarely found together. "The book, which was recognised as a standard work, has been incorporated by C. E. Groves and W. Thorp in their *Chemical Technology*" (D.N.B.). Ronalds (1819–1889), professor of chemistry at Queen's College, Galway, was a nephew of Sir Francis Ronalds (1788–1873), the electrical researcher who studied under de Luc. (Bolton, 774; Cole., 1125; Sotheran, Cat. 682 [1908], 4062)

RONDELET, Guillaume

Opera Omnia Medica. Nunc ab infinitis quibus antehac scatebant mendis, studio & opera J. Croqueri Poloni Medicinae Doctoris, repurgata, & in gratiam medicinae studiosorum nitori suo restituta. Editio postrema, aliquot opusculis hujus Authoris nondum antehac editis aucta, quorum seriem sequens pagina indicat.

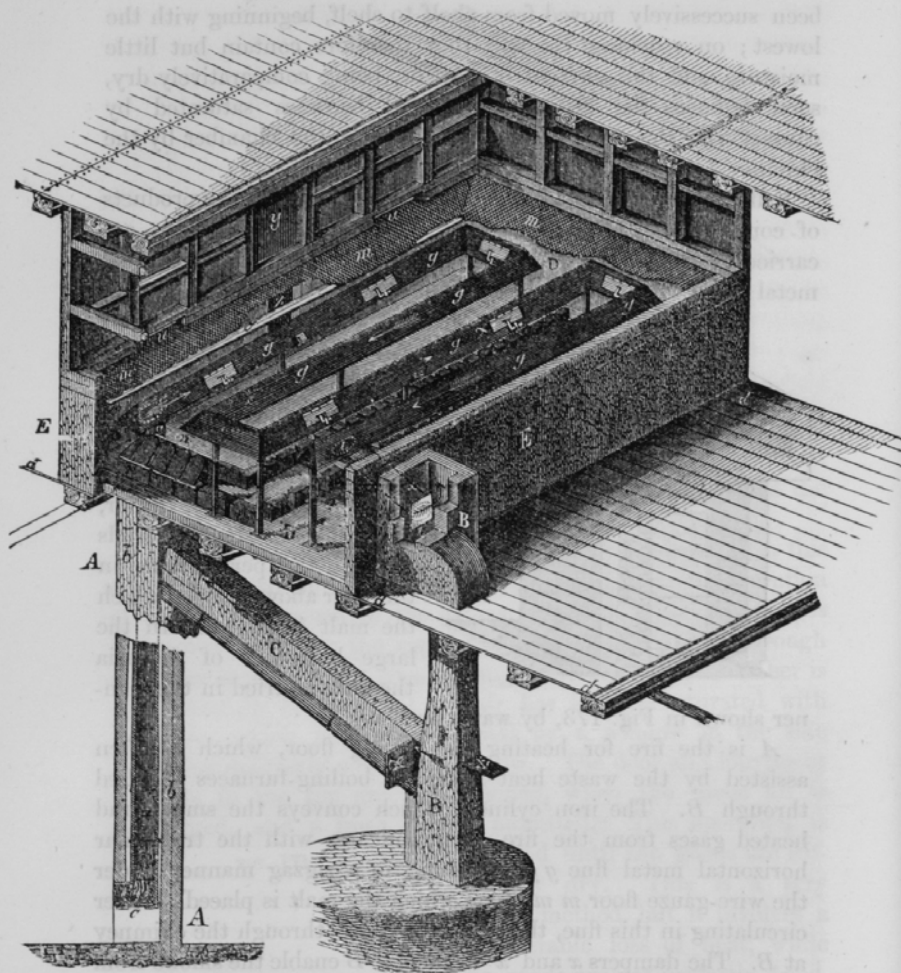
(Montpellier:) Apud Petrum & Jacobum Chouet. 1628.

Second (best) edition. 8vo. 8 leaves, 1359, (1) pp. Woodcut printer's device on title page. Very good copy in original overlapping vellum.

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DRYING MALT.

FIG. 173.



the smoke-flue, passes through the malt and dries it. The wire-gauze bottom, over which the malt is spread out, is supported by bars of iron.

The methods of drying manufactured goods by exposure to the radiant heat of surfaces, through which smoke or steam is passing, and the centrifugal application now so universally employed, involve no novel application of fuel.

THE FAMOUS naturalist and physician Rondelet (1507–1566) is remembered especially for his pioneering investigations on the fishes of the Mediterranean (*Libri de piscibus marinis*, Lyons, 1554–55). He also published books on iatrochemistry and the materia medica (e.g., *De materia medicinali et compositione medicamentorum brevis methodus*, which appeared in *Illustrium in re medica virorum*, Padua, 1556) and *Methodus curandorum omnium morborum corporis humani . . . de pharmaeopolarum officina* (Paris, 1570). The present second, corrected, and best edition (first: Montpellier, 1620) contains all the works of Rondelet. Almost four hundred pages are of iatrochemical importance, with descriptions of the preparation, properties, and medicinal uses of many chemicals known to sixteenth-century chemists. This rare edition is not mentioned by the usual authorities. (Goldsmith, R1101)

ROSCHIER, Daniel Friedrich

Dissertatio Chemica de Sulphate Calcis, . . . praeside Mag. Johanne Gadolin, . . . Pro gradu philosophico Publico examini subijcit Daniel Fridericus Roschier, Wiburgensis. In Auditorio Majori d. XXIX Maji MDCCCV. . .
Åbo: Typis Frenckellianis. (1805).

First edition. 4to. 1 leaf, 12 pp. Mint copy, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. 11 Dissertations. 1792–1805.

A DISSERTATION ON the history, mineralogy, crystallography, preparation, chemical and physical properties of calcium sulphate; presented by Roschier under the direction of the professor of chemistry at Åbo, Johan Gadolin. Gypsum, anhydrite, alabaster, selenite, and other forms of naturally occurring calcium sulphate are described, with references to the researches of contemporary chemists and mineralogists. The reaction of dilute solutions of calcium sulphate with acids (e.g., oxalic, phosphoric, tartaric) to form insoluble calcium salts is described. The phosphorescent properties of impure calcium sulphate are discussed. Quantitative data are given for the various forms of calcium sulphate, based on the analyses of Kirwan, Richter, and Wenzel. Rare. Unknown to the usual bibliographers.

ROSE, Gustav

Éléments de Cristallographie, par M. Gustave Rose (de Berlin). Traduit de l'Allemand par M. Victor Regnault, . . .
Paris: L. Hachette, . . . Firmin Didot Frères. 1834.

First French edition. 8vo. 2 leaves, 270 pp., 1 leaf. With 10 double-page engraved plates of crystals. Fine copy in contemporary tree calf-patterned boards. Bound with: Swebach des Fontaines, *Manuel Cristallographe* (Paris, 1792).

THE FRENCH translation of *Elemente der Kristallographie* (Berlin, 1833) by Gustav Rose (1798–1873), professor of mineralogy at the University of Berlin. The translator, Henri Victor Regnault (1810–1878), was only twenty-four years old, and this was his first appearance in print. In 1835 Regnault worked with Liebig, and in 1836 he succeeded Gay-Lussac as professor of chemistry at the École Polytechnique. “Rose’s *Elemente der Kristallographie*, in the first and second (1838) editions, represented the latest advances of the science at the time” (D.S.B.). The plates are sometimes bound as a separate volume. Gustav Rose was the younger brother of the famous chemist Heinrich Rose (1795–1864). Poggendorff (II, 692–694) gives a long list of Rose’s publications but does not mention this very scarce French translation. (D.S.B., XI, 539–540; Ward & Carozzi, 1913)

ROSE, Heinrich

A Manual of Analytical Chemistry. By Henry Rose . . . Translated from the German by John Griffin.
London: Printed for Thomas Tegg, 73, Cheapside; J. Cumming, Dublin; and R. Griffin and Co., Glasgow. 1831.

First English edition. 8vo. xvi, 200; 454 pp. Woodcut on title page and woodcuts of chemical apparatus in text. Very fine copy, in original half calf, marbled boards, 2 maroon morocco labels, spine gilt-ruled and dated.

ROSE (1795–1864) was acquainted with Berthollet, Biot, Gay-Lussac, Vauquelin, et al., in Paris and with Grotthuss and Mitscherlich in Germany. He worked on titanium (1819–21) with Berzelius in Stockholm and obtained a doctorate in Kiel (1821) with a dissertation on titanium compounds with oxygen and sulphur. At the University of Berlin he became associate professor (1823) and professor of chemistry (1835). “Rose’s work extended Berzelius’s on inorganic, analytical, and mineralogical chemistry; he published . . . an excellent book on qualitative and quantitative analysis . . .” (Partington). His *Handbuch der analytischen Chemie* (Berlin, 1825) was translated almost immediately by John Joseph Griffin (1802–1877) as the present work. In the preface Griffin states that he was in Germany when the *Handbuch* was published and “commenced the translation immediately.” The book is divided into two sections: part I (pp. 5–200) on qualitative analysis; part II (454 pp.) on quantitative analysis. A scarce work. (Bolton, 785; D.S.B., XI, 541; Partington, IV, 185; Szabadvary, 165; Wellcome, IV, 557)

ROSE, Heinrich

Traité Pratique d'Analyse Chimique, suivi de tables, servant, dans les analyses, à calculer la quantité d'une substance d'après celle qui a été trouvée d'une autre substance. Par Henri Rose. Traduit de l'allemand, sur la seconde édition, par A.-J.-L. Jourdan . . .

Paris: J.-B. Baillière, Libraire de l'Académie Royale de Médecine, etc. 1832.

First French edition. 2 vols., 8vo. I: xv, (1), 644 pp. II: xiv, 648, 97, (1) pp. With 2 folding engraved plates of chemical apparatus (by Ambroise Tardieu). Old stamps on title pages; otherwise very good copy in original gilt-ruled quarter calf, marbled boards, gilt stamp on each spine: École de Pharmacie de Paris.

THE FRENCH translation of Rose's milestone book on inorganic analysis. The well-known "group separation and systematic tests for acids were first clearly given in Rose's book" (Partington). The second edition of Rose's *Handbuch der analytischen Chemie* (Berlin, 1831) was translated into French by the pharmaceutical chemist Antoine-Jacques-Louis Jourdain (1788–1848) and appeared as the present work. Partington states that this "excellent book" was published in at least six French editions, each updated by Jourdain and others. The first French edition is rare, and Duveen (p. 516) lists only the third in French (Paris, 1843), with additional notes by Eugene Melchior Peligot (1811–1890). Not in D.S.B. or the usual bibliographies. (Bolton, 785)

ROSE, Heinrich

A Practical Treatise of Chemical Analysis, including Tables for Calculations in Analysis. By H. Rose. Translated from the French and from the fourth German edition. With notes and additions, by A. Normandy.

London: Printed for William Tegg and Co. 1848.

First edition. 8vo. xvi, 746 pp., 1 leaf (advertisements, dated 1848). With small woodcuts in text. Fine copy in original blind-stamped, pebbled green publisher's cloth, rebacked, with original gilt-lettered spine laid on. Bound with: Normandy, Alphonse René Le Hire, *Practical Introduction to H. Rose's Treatise on Chemical Analysis* (London, 1849).

ONE OF the most important books on analytical chemistry of the mid-nineteenth century. This volume covers every aspect of qualitative analysis in minute detail. The translator, Alphonse René Le Hire de Normandy (1809–1864), an analytical chemist, states in his preface that he has added notes in order to clarify the French and German texts. He points out that whereas the first English translation of 1831 (by John Joseph Griffin) contained only 200 pages on quali-

tative analysis, this considerably updated edition contains 746 pages. Rose's *Handbuch* deservedly passed through six editions in German, as well as translations into Dutch, English, French, Russian, and Spanish (see Bolton). (Bolton, 785; Cole, 1126; D.S.B., XI, 541; Partington, IV, 185; Sotheran, Cat. 750 [1914], 14471; Wellcome, IV, 557)

ROSE, Heinrich

A Practical Treatise of Chemical Analysis, including Tables for Calculations in Analysis. By H. Rose. Translated from the French and from the fourth German edition. With notes and additions, by A. Normandy. . . Vol. II. Quantitative.
London: Printed for William Tegg and Co. 1849.

First edition. 8vo. xiv, 857, (1) pp. With numerous woodcuts in text. Fine copy, bound uniformly with Rose's *A Practical Treatise of Chemical Analysis* (London, 1848), in original blind-stamped, pebbled green publisher's cloth, rebacked, with original gilt-lettered spine laid on.

DESIGNATED "VOL. II" on the title page, this volume (complete in itself) is the sequel to the first (not numbered) volume on qualitative analytical chemistry. One of the great works of mid-nineteenth-century chemistry, it covers every aspect of quantitative inorganic and organic analysis in considerable detail. The section on the analysis of organic compounds (pp. 752–784) is followed by extensive tables on the expansion of gases, atomic weights (of the fifty-four elements then known, based on oxygen = 100), molecular weights of compounds (mainly oxides, sulphides, salts), densities of gases, etc. Partington rated this treatise as "excellent," and he was almost never generous with praise. (Bolton, 785; Cole, 1126; D.S.B., XI, 541; Partington, IV, 185; Sotheran, Cat. 750 [1914], 14471; Wellcome, IV, 557)

ROSS, Alexander

The Philosophicall Touch-Stone: or Observations upon Sir Kenelm Digbie's Discourses of the nature of Bodies, and of the reasonable Soule. In which his erroneous Paradoxes are refuted, the Truth, and Aristotelian Philosophy vindicated, the immortality of mans Soule briefly, but sufficiently proved. And the weak Fortifications of a late Amsterdam Ingeneer, patronizing The Soules mortality, briefly slighted. . . .

London: Printed for James Young, and are to be sold by Charles Green, at the signe of the Gun in Ivie-lane. 1645.

First edition. 4to. 8 leaves, 131, (1) pp. With the required imprimatur leaf (sign. A1) before title. Fine, crisp copy, in half vellum antique, blue boards.

A FAMOUS REFUTATION of Sir Kenelm Digby's chief work, *Two Treatises: In the One of which, the Nature of Bodies; in the Other, the Nature of Mans Soule, is looked into* (Paris, 1644).

The theologian Ross (1591–1654), educated at Kings College, Aberdeen, was chaplain (ca. 1622) to Charles I and became vicar of Carisbrooke (Isle of Wight). He was immortalized by Samuel Butler in *Hudibras*: “There was an ancient sage philosopher that had read Alexander Ross over.” Ross compares his philosophy (which was strictly of the old-fashioned Aristotelian school) with that of Digby as “solid, wholesome meat,” as opposed to “a dish of Frogs or Mushrooms, though made savoury with French sauce . . . enunciating the true Aristotelian doctrine [compared with] Digby’s misuse of it.” The book contains much of scientific (including chemical) interest: e.g., discussions on the atomic theory of the ancients, constitution and composition of matter, nature of light, magnetism, color, and sound. (Duveen, 516; Krivatsy, 9953; Neu, 3558; Partington, II, 425; Sotheran, Cat. 682 [1908], 4086 [“Very Rare”]; Thordike, VII, 511; Watt, II, 816n; Wing, R1979)

ROSS, Alexander

The Philosophicall Touch-Stone: or Observations upon Sir Kenelm Digby’s Discourses of the nature of Bodies, and of the reasonable Soule. . . .

London: Printed for James Young, and are to be sold by Charles Green, at the sign of the Gun in Ivie-lane. 1645.

First edition. 4to. 8 leaves, 131, (1) pp. With imprimatur leaf (sign. A1) before title. Very good copy in contemporary blind-ruled calf, rebounded, red morocco label. Bound with: Digby, Kenelm, *Two Treatises* . . . (London, 1665).

ANOTHER COPY of this important work, which is “Probably the first English discussion of atomism after Digby’s *Two Treatises*.” (Rubin, *Sir Kenelm Digby, A Bibliography* [San Francisco, 1991, no. 221])

ROSSELLO, Timotheo

Della Summa de’ Secreti Universali in Ogni Materia. . . . Si per huomini & donne, di alto ingegno, come ancora per medici, & ogni sorte di artefici industriosi, & a ogni persona virtuosa accommodate. . . .

Venice: Per Giovanni Bariletto. 1565.

Second edition. Two parts in 1 vol., 8vo. I: 8 leaves + 152 numbered folios. II: 8 leaves + 152 numbered folios. Italic letter. Separate title to each part with large woodcut (also on final page of each part). Woodcut of distillation apparatus on folio 7 (first part). Very good copy, in old (probably seventeenth-century) paper-covered boards (worn). Rosicrucian engraved bookplate (dated 1900) on front endpaper.

A BOOK OF secrets of considerable alchemical and iatrochemical interest. Ferguson describes what is probably the first edition (Venice: Giovanni Bariletto, 1561), with iden-

tical foliation, as follows: “a general collection of receipts, and though the book is not bulky, it is so closely printed that it contains a great amount of matter. . . . It may be observed that Bariletto was also the publisher of the *Secreti* of Isabella Cortese. That book appeared in 1561, and has the same device on the title-page” (Ferguson, *Books of Secrets*, II, 3rd suppl., pp. 28–29). Of the author (fl. 1561) nothing has been recorded. Although few copies have survived, this work must have been very popular, as reprints continued to appear for well over a hundred years. Other editions: Venice: G. Bariletto, 1574–75 (Durling, 3948; British Library, *S.T.C. Italian, Suppl.*, p. 71); Venice, 1644 and 1677 (British Library, *Italian, 17th Century*, p. 796). This edition of 1565 is extremely rare and apparently unknown to the bibliographers.

ROSSI, Girolamo

Hieronymi Rubei Ravenn. De Destillatione Liber. In quo Stillatitorum liquorum, qui ad medicinam faciunt, methodus ac vires explicantur: et chemicae artis veritas, ratione, & experimento comprobatur.

Ravenna: Ex Typographia Francisci Thebaldini. 1582.

First edition. 4to. 8 leaves, 222 pp., 1 leaf (colophon, dated 1581). Large woodcut printer’s device on title, repeated on colophon leaf, numerous woodcut head- and tailpieces, and 7 woodcut figures of distillation apparatus in text. Fine copy, in the original pasteboards.

ROSSI (ca. 1539–1607), whose name is Latinized as Hieronymus Rubeus, was born in Ravenna, graduated in medicine and philosophy from the University of Padua, and became court physician to Pope Clement VIII. Later he retired to Ravenna, where he wrote a commentary on Celsus and this book on distillation, which is one of the most important on the subject to appear in the sixteenth century. Rossi refers to the works on distillation by earlier and contemporary authors (e.g., Avicenna, Geber, Albertus Magnus, Lully, Ulstadt, and Mattioli). Divided into four books, the first (pp. 1–56) describes distillation equipment and techniques. The second book (pp. 57–154) covers preparations of chemicals by distillation, and the third (pp. 155–203) gives prescriptions using the products of distillation. The fourth book (pp. 204–222) discusses chemical errors made by distillers, with the best methods to prepare certain compounds. Of considerable rarity, and although the British Library and Bibliothèque Nationale have this 1582 edition, only the 1585 and 1599 editions are listed by Wellcome and Duveen, respectively. Other editions: Basel, 1585; Venice, 1599, 1604. Not in Bolton, Caillet, Durling, Ferguson, Neu, Smith, Waller, Watt, etc. (Edelstein, 1999; Ferguson Coll., 608; Forbes, 524; Ferchl, 458; Partington, II, 87; Poggen-dorff, II, 711)

REGISTRVM.

† † ABCDEFGHIKLMNOPQRSTVXYZ.
Aa Bb Cc Dd Ee.

Omnes sunt duerni.



RAVENNÆ

Apud Franciscum Thebaldinum, Impress. Illustris, &
Reuerendis. Archiepisc. atq. Mag. Communitatis.

M D L X X I:

ROSSI, Girolamo

De Destillatione, Hieronymi Rubei Ravenn. Liber: In quo Stillatitiorum liquorum, qui ad Medicinam faciunt, methodus ac vires explicantur: Et Chemicæ artis veritas, ratione, & experimento comprobatur. Iampridem ab innumeris mendis repurgatus, & in usum studiosorum editus. Basel: Per Sebastianum Henricpetri. (Colophon: 1585 mense Septembri).

Second edition, corrected. 8vo. 4 leaves, 290 pp., 3 leaves. Printer's woodcut device on title and last leaf (verso), historiated woodcut capitals, 7 woodcuts of distillation equipment in text. Some gatherings browned, as is usually the case with Basel imprints of this period. Very good copy in contemporary limp vellum, with contemporary lettering in ink on spine.

THE CORRECTED second edition of this classic work on distillation and the first in octavo format. The first edition (Ravenna, 1582) is extremely rare, and this octavo edition is almost as rare. Only four copies are located in the National Union Catalogue. The woodcuts are copies of those in the 1582 edition but reduced in size. This is the only edition in the National Library of Medicine. Ferchl, Forbes, and Poggendorff mention an edition of Basel, 1586, possibly in error for this 1585 edition. Not in Bolton, Caillet, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Smith, Waller, Watt, etc. (Durling, 3949; Ferchl, 458; Forbes, 524; Partington, II, 87; Poggendorff, II, 711; Wellcome, I, 5601)

ROSSI, Girolamo

De Destillatione sive de stillatitiorum liquorum, qui ad medicinam faciunt, methodo, atque virebus: Hieronymi Rubei Ravenn. Liber. In quo Chemicæ artis veritas, ratione, & experimento comprobatur. Quarta editione ab auctore recognitus, ac multis locis locupletatus. . . Venice: Apud Joannem Baptistam Ciottum Senensem. 1604.

Fourth edition. 4to. 8 leaves, 181, (1) pp., 1 leaf (blank, lacking). Title in red and black, with woodcut printer's device. Woodcut capitals, head- and tailpieces. Woodcut figures in text of distillation apparatus. Old repairs to title leaf, 1 just shaving 2 letters; few insignificant marginal repairs, occasional minor browning; otherwise good, crisp copy in contemporary vellum, brown morocco label, gilt. From the library of Dr. Ladislao Reti, with his bookplate.

THE LAST edition to appear in the author's lifetime, containing his final additions and corrections to this magnum opus on the distillation processes and techniques of the sixteenth century. Forbes, who discusses the historical importance of this work, describes the contents of the 1582 and 1586 editions, but he evidently was not aware of the present,

very rare edition. Although there is a copy in the Bibliothèque Nationale, the 1604 edition is not in the British Library. Not in Bolton, Caillet, Duveen, Edelstein, Ferchl, Ferguson, Neu, Poggendorff, Smith, Waller, Watt, etc. (Ferguson Coll., 608; Partington, II, 87; Wellcome, I, 5602)

RÖSSLER, Balthazar

Speculum Metallurgiae Politissimum. Oder: Hell-polierter Berg-Bau-Spiegel, darinnen zu befinden: wie man Bergwerk suchen, ausschlörsen, mit Nutzen bauen, allent-halben wohl anstellen, befördern, dabey alles Gestein und Ertze gewinnen, fördern, rösten, schmelzen und zu gut machen, dann auch was darbey zu thun oder zu lassen, hierdber ein iedweder, so dem Bergwerck zugethan ist, wissen und verstehen soll. Allen Berg-Bau-liebenden, sie kommen in oder nicht in die Grube, item, Grund-Herren, Gewercken, Berg-Amlleuten, Berg- und Hütten-Vorstehern, Dienern und Arbeitern zu Nütz und Unterricht, und dem Edlen Bergwerck zum besten, mit allen dessen Begebenheiten und Brauchbarkeiten, aus eigner Erfahrung, als einer darzu gebohrnen Berg-Wurtzel, beschrieben von Balthazar Rösslern, Churfl. Sdchs. gewesenen Berg-Meistern, Stolln-Factorn und Marckscheidern in Druck gegeben, und mit Küpffern gezieret, durch dessen Enckel Johann Christoph Goldbergen, h.t. Königl. Pohln. und Churfl. Sdchs. Berg-Meistern, Marckscheidern und Stolln-Factorn, auch der Probier- und Feld-Mess-Kunst Ergebenen, zu Altenberge. Mit Königl. Pohln. und Churfl. Sdchs. Allerguddigsten Privilegio.

Dresden: Bey Johann Jacob Wincklern. Anno 1700.

First edition. Folio. 6 leaves, 168 pp., 27 leaves. With 25 full-page copperplates. (N.B. Single leaf signed aaa between signatures Zz2 and Aaa). Title printed in red and black. Large historiated woodcut initials. Paper lightly browned, characteristic of the period; otherwise a very good copy bound in modern boards covered with an antiphonal vellum sheet (sixteenth century?).

RÖSSLER (d. 1673), in connection with his idea that veins were due to the filling of open fissures, first directed attention to the significance of the druses (encrustations of small crystals) in the vein. A fine illustrated treatise on mining and extractive metallurgy, of chemical importance for its descriptions of dry and wet analyses of ores, smelting and refining processes, etc. Very rare. Not mentioned by the usual early chemical bibliographers. (Ferchl, 450; Hoover, No. 688; Sotheran, Cat. 773 [1919], 2953 ["Very Rare"]; Watt, II, 817c)

ROTHER, Gottfried

Kurtze doch gründliche Anleitung zur Chymie, darinnen nicht nur die in derselben vorkommende Operationes, und die aus denen Operationibus entstehende Producta, sondern auch die Praeparationes derer besten chymischen Medicamenten aus der berühmtesten Medicorum, sonderlich Ludovici, Wedelii, Stablii &c. Schrifften, nebst andern, die man sonst rar und geheim gehalten, aufrichtig gewiesen, und insonderheit. Die in dem andern Theile befindliche Prozesse allen Liebhabern zu besserem Gebrauch ins teutsche übersetzt uand beschrieben sind. . . .

Leipzig: Bey Caspar Jacob Eysseln. 1717.

First edition. 8vo. 6 leaves, 216 pp., 6 leaves. Fine copy in contemporary vellum. Bound with: Kunckel, Johann, *Collegium Physico-Chymicum Experimentale* (Hamburg and Leipzig, 1716).

ROTHER (1679–1710), a physician who practiced in Leipzig, was a diligent pupil of Stahl. He died at the early age of thirty-one, and this is his posthumously published textbook on pharmaceutical chemistry. It was very successful, the second edition appearing in 1721, with third and fourth editions in 1727 and 1733. Other German editions appeared, with changed titles. A French translation came out in 1741, and an English version was published as *A Synopsis, or, Short Analytical View of Chemistry* (London, 1743), which is very rare. The contents of this significant work are discussed by Partington, who says that the “book is very clear and practical” and “does not use the phlogiston theory explicitly.” Describing the French edition, Duveen says that it is an “important 18th century textbook.” Ferguson (II, 296) lists the second and third German editions and states that this is “one of the best and clearest manuals of its time.” All editions are rare, especially the first. This edition not in Duveen, Edelstein, Ferguson Coll., Neu, Smith, Waller, Watt, etc. (Blake, 388; Bolton, 787; Ferchl, 456; Ferguson, II, 296 [not in Young Coll.]; Partington, II, 687; Poggendorff, II, 702; Sotheran, Cat. 682 [1908], 4096)

ROTHER, Gottfried

Gründliche Anleitung zur Chymie, darinnen nicht nur die in derselben vorkommende Operationes, und die aus denen Operationibus entstehende Products, sondern auch die Praeparationes derer besten Chymischen Medicamenten aus der berühmtesten Medicorum, sonderlich Ludovici, Wedelii, Stablii, &c. Schrifften, nebst andern, die man sonst rar und geheim gehalten, aufrichtig gewiesen wird. Vierdte Auflage. . . .

Leipzig: bey Caspar Jacob Eysseln. 1733.

Fourth edition. 8vo. 6 leaves, 240 pp., 2 leaves. Superb copy in contemporary speckled calf, spine richly gilt, maroon morocco label gilt. Bound with: Rothe, Gottfried, *Anhang zu seiner Chymie* (Leipzig, 1733); and Willerdingen, Anna Sophia, *Göttliche wie such Natürliche und Elementische Erkantniss* (Frankfurt and Leipzig, 1739).

THE GREATLY enlarged and updated fourth edition of this celebrated work, German editions of which continued to appear until 1750. According to Bolton (p. 787) a so-called *vierte auflage* appeared with a Frankfurt and Leipzig imprint in 1750. The 1733 edition is very rare and is not mentioned by Bolton, Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Blake, 388)

ROTHER, Gottfried

Anhang zu seiner Chymie, handlend von denen Metallischen Saltzen und dem Schmerzstillenden Schwefel des Vitriols.
Leipzig: bey Caspar Jacob Eysseln. 1733.

Fourth edition. 8vo. 96 pp. Superb copy. Bound with: Rothe, Gottfried, *Gründliche Anleitung zur Chymie* (Leipzig, 1733), and a work by Willerdingen (q.v.).

THE SUPPLEMENTARY volume to Rothe’s textbook, dealing with the salts of metals and their chemical reactions. The first edition of the *Anhang* appeared in 1720 (Blake, 388), the second in 1723, and the third in 1727 (Ferguson, II, 296). The 1733 edition is not mentioned by the usual early chemical bibliographies and is rare. (Blake, 388)

ROTHER, Gottfried

Introduction à la Chymie, accompagnée de deux Traitez, l’un sur le Sel des Métaux, & l’autre sur le Souphre Anodyn du Vitriol. Par M. G. Rothe, Médecin de Leipzig. Avec une analyse raisonnée de l’Antimoine, & un Traité sur les Teintures Antimoniales, par M. Meuder, Docteur en Médecin. Traduit de l’Allemand par J.-L. Clausier, Médecin de Paris.
Paris: Chez Hyppolite-Louis Guérin, & Jacques Guérin. 1741.

First French edition. 12mo. 12 leaves, 503, (1) pp. Small woodcut vignette (dated 1738) on title page. An extremely fine copy, in pristine condition, in the original polished speckled calf, spine richly gilt, maroon morocco label gilt.

THE GREATLY enlarged, definitive French edition of this important work, containing translations by Clausier of the main text (viz. *Anleitung zur Chymie*), supplement (*Anhang*) on metallic salts, and another work by Rothe on the anodyne sulphur of vitriol. In addition there are translations of two works on antimony and its compounds by the Dresden

chemist E. P. Meuder, as listed in the title. The book ends with a *Supplement on Quelques nouvelles préparations du . . . médicinal*, describing antimonial medicines (pp. 499–503). Meuder was the first to prove that the mineral stibnite is a compound of metallic antimony and sulphur (Partington, II, 198). Scarce. Not in Blake, Edelstein, Ferguson Coll., Smith, Waller, etc. (Bolton, *First Supplement*, 361; Caillet, 9619; Duveen, 517; Ferchl, 456; Ferguson, II, 296 [not in Young Coll.]; Hoover, 696; Neu, 3564; Partington, II, 687; Poggendorff, II, 702; Watt, II, 817g)

ROTHERAM, John

A Philosophical Inquiry into the Nature and Properties of

Water. With Elegant Copper-Plate Figures of the several

Salts. By J. Rotheram, M.D. . . .

London: Printed for T. Longman, at the Ship in Pater-Noster-Row. 1743.

Sole English edition. 8vo. 4 leaves, 131, (1), 12 pp. Fine copy in half morocco antique, marbled boards, spine gilt-lettered. From the library of Professor Franz Sondheimer (1926–1981), with his bookplate on the front pastedown endpaper.

DEDICATED TO Dr. Peter Shaw by the translator, Alexander Macbean (d. 1784), who was one of the six amanuenses whom Dr. Samuel Johnson employed on his great *Dictionary* (1755). Johnson helped Macbean (when he was starving) by writing a preface to his *Dictionary of Ancient Geography* (1773). In the preface to this English edition Macbean states that “there was lately published a French translation of this work by M. Clausier, a Physician at Paris.” Pages 7–13, “An Account of the Chemical Writers,” give a useful list of the works considered to be of value to German chemists of the first quarter of the eighteenth century. Robert Boyle is not mentioned. As Partington says, “the book is very clear and practical” and free from any mysticism or alchemical jargon. This English translation is very rare. Not in Blake, Bolton, Duveen, Edelstein, Ferchl, Ferguson Coll., Morgan, Neu, Poggendorff, Smith, Waller, etc. (Ferguson, II, 296 [not in Young Coll.]; Partington, II, 687; Watt, II, 817h)

ROTHERAM, John

A Philosophical Inquiry into the Nature and Properties of

Water. With Elegant Copper-Plate Figures of the several

Salts. By J. Rotheram, M.D. . . .
Newcastle upon Tyne: Printed by I. Thompson, Esq.; and sold by J. Murray, Bookseller, in Fleet-street, London; and by W. Charnley and T. Slack, in Newcastle. (1770).

First edition. 8vo. 4 leaves, 132 pp. With folding plate of different crystalline salts (R. Beilby sculpt.). Fine copy, uncut

with wide margins, in contemporary provincial dark-blue half calf, marbled boards, spine gilt.

A WORK OF balneological interest in which the chemical and physical properties of water from many sources are examined. There are chapters describing a new and accurate method of measuring the specific gravity of various waters, the chemical analysis of hard and soft water, spring water, vitriolic coal water, mineral waters of Newcastle and its environs, Thames water, Tyne water, stagnant water, etc. The book is dedicated to the mayor and officials of Newcastle upon Tyne, who had requested the author to carry out a detailed investigation on the waters of different localities in order to determine their fitness for human consumption. A native of Newcastle, Rotheram (1751–1804) was a pupil of Torbern Bergman and Carl von Linne, under whom he graduated M.D. (1775) at Uppsala (see Neu, 2481). He became assistant professor of chemistry at Edinburgh in 1793 and was professor of natural philosophy at St. Andrews, 1795–1804 (see D.N.B.). Rare. Unknown to Duveen, Partington, Waring, etc. (Blake, 388; Poggendorff, II, 702)

ROTHMAN, Georg

Dissertatio Chemica, de Origine Oleorum in Vegetabilibus, quam, . . . praeside . . . Job. Gotschalk Wallerio, . . . pro gradu philosophico, publico examini modeste submittit, . . . Georgius Rothman, Med. Stud. Smolandus . . . XXVI Martii Anni MDCCLXI.

Uppsala. (1761).

First edition. 4to. 12 pp. Woodcut initial, head- and tailpieces. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the occurrence and formation of oils in plants by Rothman (dates unknown), presented under J. G. Wallerius. The different kinds of oily materials in plants are described, with references to the works of Boerhaave, Borrichius, Homberg, Kunckel, Macquer, et al. The purification of some oils by distillation and the reaction of alcohol with acids to produce esters and ethers are discussed on pages 5–10. Revised and reprinted in the *Disputationum Academicarum* (Stockholm and Leipzig, 1780, vol. 1, pp. 117–133) of Wallerius, this interesting contribution to the history of organic chemistry in the eighteenth century has been overlooked by chemical historians. Rothman later studied under S. Aurivillius and Carl von Linne (see Neu, 2425; Waller, 542, 5854). Not in the usual early chemical libraries. (Ferchl, 565; Partington, III, 170)

ROTHOVIUS, Isaac

Dissertatio Chemico Metallurgica, de Reductione Metallorum, . . . praeside, . . . Petro Adrian Gadd, . . . Publico bonorum examini modeste submittit Isaacus Rothovius, Job. Fil. Satacundensis. In Auditorio Superiori Die XXIII Junii, Anno MDCCLIX.

Åbo: Impressit Direct. & Typogr. Reg. Magn. Duc. Finland. Jacob Merckell. (1759).

First edition. 4to. 4 leaves, 20 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadd. Nine Dissertations. 1759–1778.

AN IMPORTANT dissertation on the extraction of metals from their ores, presented by Rothovius under the direction of Peter Adrian Gadd at Åbo, Finland. The production of metals is explained according to the theory of phlogiston. Methods for reducing ores of antimony, bismuth, copper, gold, iron, lead, mercury, silver, tin, and other metals are described, and the alchemical transmutation of metals is denied. Works by Becher, Boyle, Glauber, Kunckel and others are cited, and the utility of metals to mankind is discussed. Rare. Unknown to the usual bibliographers. (Ferchl, 169; Poggendorff, I, 826)

ROTH-SCHOLTZ, Friedrich

Bibliotheca Chemica. H. E. Collectio Auctorum fere omnium, qui de Naturae Arcanis, Re Metallica et Minerali, item de Melioratione Corporum artificiali etc. Hermetice scripserunt. Recensentur etiam diversae librorum editiones aliaque hujus generis manuscripta hactenus inedita. . . .

Nuremberg & Altdorf: Apud Haeredes Joh. Dan. Tauberi. 1735. Bibliotheca Chemica Rothsoltziana . . . *ibid.*, 1727–1729.

Second (greatly enlarged) edition of part I and first editions of parts II–V. 5 vols., 8vo., in 1. I: 80 pp. Title in red and black. Signature C2^v contains wording of a variant title: *Bibliotheca Chemica Roth-Scholtziana . . . Erstes Stuck Andere Auflage* (Nürnberg und Altdorf, Bey Johann Daniel Taubers . . . 1733. II: Zweytes Stucke, title page dated 1727. Pp. (49)–96. III: Drittes Stucke, title page dated 1727. 1 leaf, pp. 97–172. IV: Viertes Stucke, title page dated 1728. Pp. (173)–250. V: Funftes Stuck, title page dated 1729. Pp. (251)–328 (misnumbered 238). Fine engraved frontispieces of Nicolas Flamel, J. F. Helvetius, and Olaus Borrichius to parts III, IV, and V, respectively. Part I lacks portrait of Roth-Scholtz (as often); otherwise complete copy in boards, antique.

VERY RARE and important catalogue of books on alchemy, chemistry, metallurgy, and mineralogy by the Nuremberg book dealer Roth-Scholtz (1687–1736), on whom see Ferguson. Part I, containing only forty-four pages, origi-

nally appeared in 1727. In the second edition of part I, the author intended to incorporate everything in Borel's *Bibliotheca Chemica* (1654) not already in his own work. Unfortunately, he died before the work could be completed. "It only includes names as far as . . . the letter 'H', . . . it is the only really scholarly Alchemical bibliography we have, other than that of Ferguson" (Heym, *Ambix*, I [1937], 49). Not in Blake, Edelstein, Mellon, Partington, Smith, Sondheimer, Waller, Watt, etc. (Bolton, 27–28; Caillet, 9617; Duveen, 517–518 [imperf.]; Ferchl, 456; Ferguson, II, 297–298 [imperf.]; Ferguson Coll., 609; Neu, 3565)

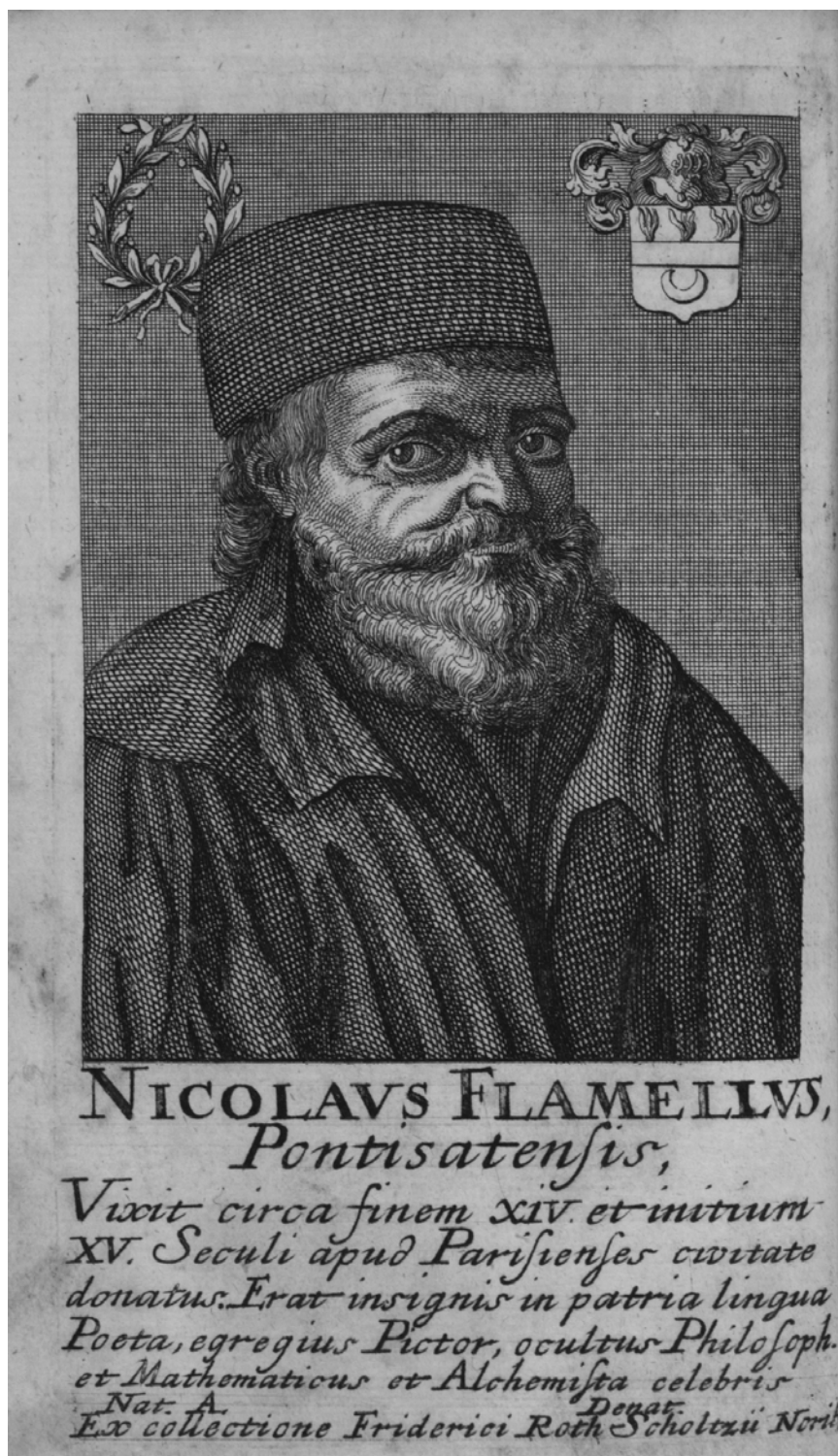
ROUELLE, Guillaume François, BAYEN, Pierre, CADET DE GASSICOURT, Louis Claude, and VENEL, Gabriel François

Analyses Chimiques des nouvelles Eaux minérales, vitrioliques, ferrugineuses, découvertes a Passy dans la Maison de Madame Calsabigi. Avec les propriétés médicinales de ces memes Eaux, fondées sur les Observations des Médecins & Chirurgiens des plus célèbres, dont on rapporte les Certificats authentiques.

N.p. 1757.

First edition. 12mo. 3 leaves, 130 pp., 3 leaves. Fine copy. Bound with: Cavallery, A., *Dissertation sur la cause de la chaleur et de la froideur des eaux minérales* (Bordeaux, 1739).

ROUELLE (1703–1770) was demonstrator in chemistry (1742–68) at the Jardin du Roi, and Lavoisier was one of many famous French chemists who were his pupils. He was a firm supporter of the phlogiston theory and an excellent experimenter. In this book descriptions are given of the chemical analyses carried out on the ferruginous mineral waters found on the estate of Madame de Calsabigi. Rouelle, Pierre Bayen (1725–1798), G. F. Venel (1723–1775), and L. C. Cadet de Gassicourt (1731–1799) analyzed specimens of the waters, and their reports throw much light on eighteenth-century analytical methods. Duveen (p. 518) describes a similar, though less complete work (Paris, 1755, 8vo., 29 pp.), and Bolton (p. 348) lists the same work under L. C. Cadet de Gassicourt. All of Rouelle's works are rare, and this title is the rarest. As the master of the distinguished chemists Lavoisier, Macquer, D'Arcet, Bayen, Venel, et al., as well as such nonscientists as Diderot, d'Holbach, Rousseau, and Turgot, Rouelle occupies a very important place in eighteenth-century chemistry and science generally (see D.S.B.). Not in Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Neu, Poggendorff, Smith, Waller, Watt, Wellcome, etc. (Partington, III, 73)



Roth-Scholtz. Bibliotheca Chemica. Nuremberg & Altdorf, 1727-1729.

ROUELLE, Hilaire Marin

Prospectus d'un Cours de Chymie expérimentale & théorique qu'Hilaire-Marin Rouelle, Demonstrateur en Chymie au Jardin du Roi, & Apothicaire de S. A. S. Monseigneur le Duc d'Orléans . . . ouvrira le 12 de novembre 1770, en sa maison rue Jacob, près la Charité; & dans lequel il exposera une analyse plus étendue que celle qu'on a eue jusqu'ici des Végétaux, des Animaux & des Minéraux. Ce Cours sera divisé en trois parties, suivant la distinction la plus requise des trois Regnes de la Nature.

(Colophon.) De l'Imprimerie de Didot, rue pavée. 1770.

First edition. 4to. 15, (1) pp. Caption title. Fine copy, in half morocco antique, marbled boards, spine gilt-lettered and dated.

HILAIRE ROUELLE (1718–1779) was the younger brother of Guillaume François Rouelle (1703–1770), the teacher of Lavoisier. He lived with Guillaume, assisted him with his chemical lectures, and succeeded him in 1768 as demonstrator in the Jardin du Roi. Published in Paris, the *Prospectus* announces the first course of theoretical and experimental lectures on chemistry that Hilaire planned to deliver at his house after the death of Guillaume. The approbation is dated 29 October 1770. A most informative publication on the scope of the courses on chemistry immediately preceding the Chemical Revolution of Lavoisier and his coworkers. Very rare. Not in N.U.C., D.S.B., Wellcome, etc. (Cole, 1133; Partington, III, 76)

ROUELLE, Hilaire Marin

Tableau de l'Analyse Chimique; ou Procédés du Cours de Chimie de M. Rouelle . . .

Paris: De l'Imprimerie de Vincent, rue des Mathurins. 1774.

First edition. 8vo. xxxi, (1), 182 pp., 1 leaf (errata). Very good copy in original quarter calf, blue patterned boards, spine gilt, maroon morocco label. Bookplates: C. J. Vaux Delauney, D.M. (eighteenth century); Jules Grouvelle (early twentieth century).

BASED ON the lectures of his late brother, Guillaume François Rouelle, Hilaire Rouelle here presents details of the course, together with many additions of his own, especially to the first two divisions: the vegetable and animal kingdoms. In the *avertissement* (p. xvii) the author states that he also had these lectures printed in quarto format, with one side of each leaf blank, presumably for students to take handwritten notes. Guillaume François Rouelle published little in his lifetime, so this work offers the fullest account of his interesting chemical activities. Without doubt these lectures are representative of those that were attended by Lavoisier. The copy described by Cole lacked two leaves (i.e., approbation and privilege), which are present in this copy. Very scarce. Not in Blake, Duveen, Ferguson, Ferguson

Coll., Smith, Watt, etc. (Bolton, 788; Cole, 1134; D.S.B., XI, 564; Ferchl, 457; Neu, 3568; Partington, III, 76; Poggendorff, II, 705; Wellcome, IV, 564)

ROULAND, N.

Tableau Historique des Propriétés et des Phénomènes de l'Air, considéré dans ses différens états et sous ses divers Rapports; par N. Rouland . . .

Paris: Chez Gueffier, Imprimeur-Libraire, au bas de la rue de la Harpe. 1784.

First edition. 8vo. xvi, 636 pp. Woodcut printer's device on title page. Fine unpressed copy, uncut with wide margins, in quarter morocco antique, marbled boards, maroon morocco label, spine blind-stamped, gilt-ruled in compartments, and dated.

AN EXHAUSTIVE treatise by Rouland (d. ca. 1820), dedicated to his teacher Sigaud de la Fond, whom Rouland succeeded as demonstrator of experimental physics at the University of Paris. Part I discusses the physical properties of air. Part II covers individual gases. Part III describes the atmosphere. Each part includes historical information, principles, and experiments. Of special interest in part II are chapters on fixed air, nitrous air, inflammable airs, and dephlogisticated air. Researches by Cavendish, Fontana, Ingenhousz, Lavoisier, Priestley, Volta, and others are described. Experiments by Lavoisier on hydrogen and the composition of water are discussed (pp. 414–418). Rouland admits that Lavoisier's results are persuasive and that his antiphlogistic theory might explain a number of phenomena, but he prefers to remain a phlogistonist. The use of inflammable air (hydrogen) for filling balloons and the recent ascents of the Montgolfier brothers, Pilâtre de Rosier, and Charles and Robert are described. The book was reviewed in the *Observations sur physique* (1784, vol. IX V, p. 237), where it was styled the "best treatise on air up to the present." Some copies (later issue?) have an errata leaf following page 636, but most copies do not. (Blake, 389; Bolton, 152; Cole, 1136; Edelstein, 1991; Ferchl, 457; Poggendorff, II, 705; Wellcome, IV, 565)

ROUX, Augustin

Recherches Historiques et Critiques, sur les différens moyens qu'on a employés jusqu'à présent pour refroidir les liqueurs, ou l'on en indique un connu de temps immemorial & pratique dans la plus grande partie de l'Univers, par lequel il est facile sans nulle dépense, & avec un soin très-léger, de se procurer dans les plus grandes chaleurs de fête, des boissons très-fraîches.

(Paris: n.p.) 1758.

First edition. 12mo. 1 leaf, 118 pp. Fine copy, in original mottled calf, richly gilt spine, tan morocco label. Bound

with: Macquer, P. J., and Baumé, A., *Plan d'un cours de chimie expérimentale et raisonnée* (Paris, 1757).

ORIGINALLY FROM Bordeaux and educated as a physician, Roux (1726–1776) became professor of chemistry and pharmacy at the Paris École de Médecine. In the present book, on the phenomenon of cooling and the production of freezing mixtures, Roux cites and discusses the observations of numerous authors, including Becher, Boerhaave, Boyle, Cullen, Fahrenheit, Geoffroy, Glauber, Kircher, Lemery, Mairan, Réaumur, and Stahl. Roux also describes his own experiments, and there is much of chemical interest in this work. The author also published *Mémoires de chimie* (Paris, 1764) and, posthumously, *Histoire naturelle des pierres et des minéraux* (Paris, 1781). Rare. (Ferchl, 458; Poggendorff, II, 706; Sotheran, Cat. 789 [1924], 6082)

ROVENZON, John

A Treatise of Metallica. But not that which was published by Mr. Simon Sturtevant upon his Patent, which is now by order cancelled and made voyd, by reason of his standing outlawed at the time of the grant, and so still continuing, and his neglect, and not performance of the workes. Whereupon privilege, by Patent, is granted by the Kings most excellent Majesty, to John Rovenzon, Esquire, for the making of Iron, and other Mettals and Materials with Sea-cole, Pit-cole, &c. for one and thirty yeares. . . .

London: Printed for Thomas Thorp. 1613.

First edition. 4to. 15 leaves (last blank). Blank leaf A1 lacking. Woodcut capitals, head- and tailpieces. Fine, crisp copy, in maroon morocco antique, covers gilt-ruled, spine gilt-lettered and dated.

THE EARLIEST work to describe the successful smelting of iron and other metals with coal rather than with charcoal made from wood. In 1611 James I had granted Simon Sturtevant a patent for his proposal that coal could be used in the manufacture of iron. Sturtevant published his book entitled *Metallica; Or the Treatise of Metallica* (London, 1612), but the information in it was imprecise, and the furnace for smelting iron was never constructed. His patent was voided and given to Rovenzon. In this book Rovenzon gives due credit to his assistant, “Maister Ferrour,” and describes (albeit obliquely) substances that can be made from pit coal (e.g., tar and pitch), which suggests that he first converted his coal to coke before using it to react with iron ore or the ores of other metals. He describes fluxes (e.g., borax, lime, sand, soap, and wax) for “the speedier and more perfect melting, separating, and purifying of Iron, and other mettals from their slagge, drosse, and cyndar.” A milestone work on metallurgical chemistry. Extremely rare. Only three copies in America. (Partington, II, 61; S.T.C. 21355)

ROWZEE, Lodwick

The Queens Wells. That is, a Treatise of the nature and vertues of Tunbridge Water. Together, with an enumeration of the chiefest diseases, which it is good for, and against which it may be used, and the manner and order of taking it. By Lodwick Rowzee, Dr. of Physick, practising at Ashford in Kent.

London: Printed for Robert Boulter, at the Turks-head in Cornhill, over against the Royall Exchange. 1671.

First edition, second issue. Sm. 8vo. 4 leaves + 79 pp. Woodcut headpieces and initial. Fine, crisp, unsophisticated copy in contemporary unlettered sheep, corners and head and foot of spine worn. From the library of Hugh Cecil, fifth earl of Lonsdale (1857–1944), with his engraved armorial bookplate on the inside front cover.

THE FIRST issue of this particular edition appeared the previous year (1670), printed for the publisher, Robert Boulter (Wing R2098, one copy only, in the British Library). The book first appeared with the title *The Queenes Welles* (London: J. Dawson, 1632), three copies of which are recorded in S.T.C., 21426. Waring states that there was also an edition of 1656, but no edition of that date is recorded by Wing. No biographical information on Rowzee has been found; however, on signature A4v of this 1671 issue *The Queens Wells* is advertised as being by “L. Rowzee, late Dr. of Physick.” Presumably this would place Rowzee’s death about 1670–71. He is not in Munk. Waring says that the book was reprinted in volume 8 of the *Harleian Miscellany*. As a physician practicing at Ashford in Kent, Rowzee recalls the recent visit of Queen Henrietta Maria (1609–1669), wife of Charles I, to take the waters, from which Tunbridge Wells derives its present title of Royal Tunbridge Wells. The book is of chemical interest as it refers to other mineral waters (e.g., those of Spa and Bath) and the salts, niter, alum, metals, bitumen, etc., that they contain. The Tunbridge waters are discussed on pages 34–79. The earl of Lonsdale, from whose library this copy came, was a famous sportsman (see D.N.B.). A rare book. Not in Duveen, Ferchl, Ferguson, Neu, Partington, Smith, Waller, etc. (Waring, 802; Watt, II, 819n; Wing R2099)

ROYAL COLLEGE OF PHYSICIANS

Pharmacopoeia Londinensis Collegarum, Hodie viventium studiis ac Symbolis ornatio.

Londini: (no printer or publisher) Anno 1662.

8vo. 9 leaves, 371 pp., 10 leaves (index). Fore-edges of title page and final leaf frayed (not affecting text); otherwise a good copy in old vellum.

A VERY RARE edition of this popular pharmacopoeia, of which Wing lists about twelve editions between 1650 and 1696 with the title *Pharmacopoeia Londinensis*, mostly in only one or two copies. No edition is listed by Duveen, Ferguson, Ferguson Coll., et al. Only the British Library and Cambridge University copies are listed by Wing, R2115.

ROYAL INSTITUTION

The Journal of the Royal Institution of Great Britain. . . .
London: John Murray, Albemarle-Street. 1831.

First edition. Five parts in 2 vols., 8vo. I: 6 leaves, iv, iv, iv, 655, (1) pp. + 8, (1) + 2 leaves + 5 leaves (ads.). With 4 lithographic plates (1 colored). II: iv, iv, 418 pp.; 3 lithographic plates. With errata slip. Numerous woodcuts in each volume. Very fine copy, unpressed, top edges gilt, fore- and lower edges uncut, in gilt-ruled half calf antique, red morocco labels, spines dated, with original printed wrappers bound in. Bound with: Royal Institution Syllabus of Lectures (London, 1831).

A SPLENDID SET of the first five parts (October 1830–December 1831) of this journal, which formed the sequel to *The Journal of Science and the Arts*, edited at the Royal Institution of Great Britain (from vol. 7 it appeared as *The Quarterly Journal of Science, Literature and the Arts*), volumes 1–29 (London, 1816–1830). Only two further volumes were published as *The Journal of the Royal Institution of Great Britain* (as here). A printed note on the verso of the back wrapper of number V states: “No. VI will be published in March, 1832.” An almost complete set of this very rare work, which is of special interest as it contains the one-leaf syllabus of William Thomas Brande and Michael Faraday announcing their *Plan of an extended and practical course of lectures and demonstrations on Chemistry, delivered in the laboratory of the Royal Institution* (1831). This syllabus is bound immediately before signature b in the first part (1830) and is similar in wording to items 110, 121, and 136 in Jeffreys’ *Bibliography of Faraday*. However, this version of the syllabus is unrecorded. Many of the great scientists of the period are represented in these volumes by important papers and book reviews (e.g., Berzelius, Brande, Browne, Daniell, Daubeny, Davy, Dumas, Faraday, Gay-Lussac, Liebig, Turner, Wheatstone, Whewell, and T. Young). Not in Bolton, Wellcome, etc. (Jeffreys, 178, 179)

ROYAL INSTITUTION

Syllabus of Lectures to be delivered in The Royal Institution of Great Britain, for the promotion, diffusion, and extension of science and useful knowledge, in the year 1831. . . .
London: n.p., n.d. (1831).

First edition. 8vo. 12 pp. Fine copy, uncut. Bound with: Royal Institution, *The Journal of the Royal Institution* (1831).

THE LECTURES on chemistry by William Thomas Brande comprise “the natural and chemical history of the metals, and their applications and uses in the arts.” Also included are the outlines of lectures on ornithology (by Vigor), vegetable physiology and botany (by Lindley), geology (by Webster), acoustics (by Willis). Also included are details on the objects of the Royal Institution, the theater for public lectures, the laboratory, the library, the museum, weekly and monthly meetings of members, terms of admission, etc. A notice (p. 10) states that “the Syllabus of Mr. Faraday’s Lectures will be printed after Easter.” Very rare. Not located in the usual sources.

ROYAL SOCIETY OF LONDON

Memoirs of the Royal Society; Being a New Abridgment of the Philosophical Transactions. Giving an Account of the Undertakings, Studies, and Labours of the Learned and Ingenious in many considerable Parts of the World; from the first Institution of that Illustrious Society in the Year 1665, to the Year of our Lord 1735 inclusive. The whole carefully abridg’d from the Originals, . . . with a Translation of the Latin Tracts, and the Theoretical Parts apply’d to Practical Uses . . .

London: Printed by G. Smith, in Stanhope-street, near Clare-market, for the Editor, etc. 1739–1741.

First edition of vols. II–X, second edition of vol. I. 10 vols., 8vo. I: vi, 516 pp., 4 leaves. II: 516 pp., 2 leaves. III: 516 pp., 2 leaves. IV: 513, (1) pp., 3 leaves. V: 514 pp., 3 leaves. VI: 514 pp., 3 leaves. VII: 515, (1) pp., 2 leaves. VIII: 516 pp., 2 leaves. IX: 514 pp., 2 leaves. X: 473, (1) pp., 3 leaves. Pagination erratic. Engraved frontispiece in volume I of a lady sitting in a laboratory, surrounded by scientific apparatus, biological specimens, etc. With 131 engraved plates (95 folding) by J. Hulett after G. Smith. Some labels missing or imperfect and joints tender; otherwise very good set in original gilt-ruled mottled calf. Armorial bookplates (eighteenth century): Robt. Austen.

AN EXCELLENT abridgment of the more interesting papers of the *Philosophical Transactions*, including much of chemical importance. In his preface the editor, Benjamin Baddam (fl. 1741), gives a brief history of the Royal Society. “A useful and handy abridgment of the very rare original series, with all the Latin tracts translated” (Zeitlinger). Complete sets, as here, are rare. Wheeler Gift (no. 315) lists a later edition of 1745. (Ferchl, 19; Sotheran, Cat. 875 [1946], 439 [“Rare”]; Watt, I, 61r)

ROYAL SOCIETY OF LONDON

The Philosophical Transactions and Collections, To the End of the Year 1700. Abridg'd and Dispos'd under General Heads. In Three Volumes. By John Lowthorp, M.A. and F.R.S. . . .

London: Printed for J. Knapton, R. Knaplock, R. Wilkin, etc. 1722, 1722, 1749.

Third edition of vols. I and II, fifth edition of vol. III. 3 vols., 4to. I: 6 leaves, iv pp., 32 leaves, 620 pp.; 7 folding plates. II: 2 leaves, 915, (1) pp.; 14 folding plates. III: 2 leaves, pp. 1–232, 223–342, 353–360, *353–*360, 361–688, 10 leaves; 12 folding plates. Volumes I and II in original unlettered paneled calf, and volume III in gilt-ruled calf, spine gilt, maroon morocco label. Fine copies of all 3 volumes. Armorial bookplates (eighteenth century) in volumes I and II (“Barba-villa”) and volume III (“Victor in Arduis”).

AN EXCELLENT abridgment, by John Lowthorp, of the principal papers appearing in the *Philosophical Transactions* from their beginning in 1665 to 1700. Dedicated to Sir Isaac Newton, president of the Royal Society, volume I contains papers on mathematics, astronomy, optics, mechanics, physics, etc. Volume II has papers on physiology, meteorology, pneumatics, mineralogy, magnetism, botany, agriculture, zoology, etc. Volume III comprises papers on anatomy, medicine, chemistry, philology, and miscellaneous subjects. Newton owned a set of the three-volume first edition (London, 1705; Harrison, 1307), the present location of which is not known. (Watt, II, 619q)

ROYAL SOCIETY OF LONDON

The Philosophical Transactions (From the Year 1700 to the Year 1720). Abridg'd and Dispos'd under General Heads. In Two Volumes. By Henry Jones, M.A. . . .

London: Printed by H. Parker, and Sold by G. Strahan in Cornhill, etc. 1721.

First edition. 2 vols., 4to. I: 24 leaves, 476 pp.; pp. 1–25, 18–19, 28–29, 22–23, 32–68, 73–76, 73–326, 4 leaves; 19 folding plates, and 1 folding table. II: 5 leaves, 435, (1) pp.; 268 pp., 12 leaves (index); 29 folding plates. Fine copies in original unlettered paneled calf. Engraved eighteenth-century armorial bookplates: Barba-villa.

AN ABRIDGMENT by Henry Jones (d. 1727) of the principal papers in the *Philosophical Transactions* from 1700 to 1720. Jones who attended Eton and was a fellow of King's College, Cambridge, was elected F.R.S. in 1724 (see D.N.B.). Volume IV, part I: papers on mathematics; part II: physiological papers. Volume V, part I: papers on anatomy and medicine; part II: philology and miscellaneous papers. A comprehensive index to these two volumes and the three

earlier volumes (covering the period 1665–1700) is included. Newton owned a set of this work (Harrison, 1308). (Watt, I, 619q)

ROYAL SOCIETY OF LONDON

The Philosophical Transactions (From the Year 1719, to the Year 1733). Abridged, and Disposed under General Heads. In Two Volumes. . . . By John Eames, F.R.S. and John Martyn, F.R.S. . . .

London: Printed for J. Brotherton, J. Hazard, W. Meadows, T. Cox, etc. 1734.

First edition. 2 vols., 4to. I: 4 leaves, xx, (2), 472 pp., 1 leaf; 402 pp.; 49 folding plates and 1 folding table. II: 1 leaf, pp. 403–752; 102 pp., 6 leaves; 38 folding plates. Fine copies in original unlettered paneled calf. Engraved eighteenth-century armorial bookplates: Barba-villa.

AN ABRIDGMENT by John Eames (d. 1744) and John Martyn (1699–1768) of the *Philosophical Transactions* from 1719 to 1733. Eames was a friend of Sir Isaac Newton. Martyn, botanist and apothecary, became professor of botany at Cambridge (1732–1768) and was the author of numerous scientific works (see D.N.B.). Volume VI, part I: mathematical papers; part II: physiological papers. Volume VII, part III: anatomical and medical papers; part IV: philological and miscellaneous papers. Volume VII contains a name and subject index to both volumes. (Watt, I, 326r; II, 651m)

ROYAL SOCIETY OF LONDON

The Philosophical Transactions (From the Year 1732, to the Year 1744). Abridged, and Disposed under General Heads, The Latin Papers being translated into English. By John Martyn, F.R.S. . . . In Two Volumes . . .

London: Printed for W. Innys, C. Hitch, T. Astley, etc. 1747.

First edition. 2 vols., 4to. I: xxviii, (2), 376, (2), 377–447, (1) pp.; 32 folding plates and 2 folding tables. Original gilt-ruled calf, spine richly gilt, maroon morocco label. II: 2 leaves, 503, (1) pp., 12 leaves (index to both vols.); 28 folding plates. Original gilt-ruled speckled calf, maroon morocco label. Fine copies of each volume. Engraved armorial bookplate (nineteenth century): Thomas Papillon, Esq.

THE ABRIDGMENT by John Martyn of the *Philosophical Transactions* from 1732 to 1744. Volume VIII, part I: mathematical papers; part II: physiological papers. Volume IX, part III: anatomical and medical papers; part IV: historical and miscellaneous papers. (Watt, II, 651m)

ROYAL SOCIETY OF LONDON

The Philosophical Transactions (From the Year 1743, to the Year 1750). Abridged, and Disposed under General Heads. The Latin Papers being translated into English. By John Martyn, F.R.S. . . . Volume the Tenth. . .

London: Printed for Lockyer Davis and Charles Reymers, against Gray's-Inn-Gate, Holborn, Printers to the Royal-Society. 1756.

First edition. 2 vols., 4to. I: xxviii, 797, (1) pp.; 37 folding plates. II: 1 leaf, pp. 799–1393, (1), 7 leaves (index to both vols.); 49 folding plates. Fine copies in original gilt-ruled calf, maroon morocco labels.

THE FINAL two volumes (designated as volume X) of the abridgment by John Martyn of the *Philosophical Transactions* from 1743 to 1750. Volume X, part I: mathematical papers; part II: physiological papers; part III: anatomical and medical papers; part IV: historical and miscellaneous papers. Complete sets of the eleven volumes of the abridgments from 1665 to 1750, by Lowthorp, Jones, Eames, and Martyn are rare, especially when (as here) all but the first three volumes are first editions. Later reprints of all volumes appeared. As complete sets of the original volumes of the 1665–1750 *Philosophical Transactions* are very rare, the present works are of considerable historical value. (Sotheran, Cat. 780 [1922], 255; Watt, II, 651m)

ROYAL SOCIETY OF LONDON

The Philosophical Transactions of the Royal Society of London, from their Commencement, in 1665, to the Year 1800; Abridged, with Notes and Biographic Illustrations, by Charles Hutton, LL.D. F.R.S. George Shaw, M.D. F.R.S. F.L.S. Richard Pearson, M.D. F.S.A. . . .

London: Printed by and for C. and R. Baldwin, New Bridge-Street, Blackfriars. 1809.

First edition. 18 vols., 4to. I: viii, xvi, 744 pp.; 16 plates. II: (2), xii, 684 pp.; 22 plates. III: (2), xii, 687, (1) pp.; 14 plates. IV: (2), xii, 720 pp.; 17 plates. V: (2), x, 708 pp.; 17 plates. VI: (2), x, 683, (1) pp.; 16 plates. VII: (2), x, 676 pp.; 17 plates. VIII: (2), xii, 732 pp.; 21 plates. IX: (2), viii, 700 pp.; 12 plates. X: (2), viii, 712 pp.; 16 plates. XI: (2), viii, 728 pp.; 17 plates. XII: (2), viii, 694 pp.; 18 plates. XIII: (2), viii, 736 pp.; 15 plates. XIV: (2), iv, 744 pp.; 8 plates. XV: (2), iv, 703, (1) pp.; 9 plates. XVI: (2), iv, 752 pp.; 8 plates. XVII: (2), iv, 752 pp.; 9 plates. XVIII: (2), iv, 798 pp.; 116 pp. (index to all vols.); 14 plates. Minor foxing to some plates; otherwise fine set in original gilt-ruled quarter calf, marbled boards.

EDITED BY Charles Hutton (1737–1823), mathematician; George Shaw (1751–1813), naturalist; and Richard Pearson (1765–1836), physician, this is by far the best abridged edition. Important papers are reprinted in full, the less impor-

tant are abridged, and those in Latin or a foreign language in the original are translated. In the preface the editors state that in 1809 the ten-volume abridgment made by Lowthorp et al., was “scarcely to be procured,” and they are confident that the present abridgment will “answer all the purposes of the more costly and scarcely procurable Transactions at large.” The numerous notes and authoritative biographies of important scientists make this work of additional historical value. Complete sets (as here) are rare. (Knight, 76; Poggendorff, I, 1163; Watt, I, 530p)

ROYAL SOCIETY OF LONDON

Abstracts of the Papers printed in the Philosophical Transactions of the Royal Society of London, from 1800 to 1830 inclusive. . . . Printed, by Order of the President and Council, from the Journal Book of the Society.

London: Printed by Richard Taylor, Red Lion Court, Fleet Street. 1832, 1833.

First edition. 2 vols., 4to. I (1800–1814): xx, 516 pp. II (1815–1830): xxvi, 448 pp. Very fine large paper set, uncut with wide margins, in contemporary green quarter cloth, boards, original printed paper labels.

A VALUABLE WORK containing abridgments of many papers of great importance in chemistry (e.g., those of Davy on the isolation of sodium, potassium, and other metals; and Dalton and Thomson on the atomic theory), as well as papers by Brande, Berzelius, Cavendish, Chenevix, Dulong, Faraday, Guyton de Morveau, Henry, Prout, Tennant, Ure, Wollaston, and many other chemists. In 1915 Zeitlinger described this work as “very scarce.” Although each volume is complete in itself, four other volumes appeared, bringing the abstracts of papers down to 1854. (Sotheran, Cat. 757 [1915], 14546)

RUHNBERG, Isaac Olaus

Dissertatio, Discrimen Veteris et Recentioris Theoriae Chemicæ, leviter adumbrans. . . . Praeside Carolo Pet Ohrling, . . . examini subjicit Isaac. Olaus Ruhnberg, Ostro-Gothus, in Academia Londini Gothorum die XXXI Martii MDCCXCVIII.

Lund: Literis Berlingianis. (1798).

First edition. 4to. 12 pp. Very good copy, uncut with wide margins. Bound with: Ekstrom, Carl, *Specimen academicum de corporum simplicium dubia simplicitate* (Lund, 1811).

AN IMPORTANT dissertation in which the old theory of phlogiston and the New Chemistry of Lavoisier are compared. Combustion and the reaction of oxygen with metals to form their calxes (oxides) are discussed, with reference to the works of Becher, Stahl, Bergman, Berthollet, Crell,

Fourcroy, Girtanner, Lavoisier, et al. Ruhnberg was a pupil of Ohrling at the University of Lund. Very rare. Unknown to the usual bibliographers.

RUIZ DE LUZURIAGA, Ignacio Maria

Mémoire sur la Décomposition de l'Air Atmosphérique par le Plomb. Par M. Luzuriaga . . .

Paris: Rue et Hôtel Serpente. 1784.

First separate edition. 8vo. 24 pp. Woodcut vignette on title. Very good copy in contemporary half calf, speckled boards, with morocco label ("Mélanges"). Bound with: Dubuisson, F. R. A., *Mémoire sur les Acides Natifs du Verjus, de l'Orange, et du Citron* (Paris, 1783), and 7 other chemical tracts (1731–1798).

AN INTERESTING work on the decomposition of atmospheric air by lead, which appeared at about the same time in the *Journal de Physique* (October, 1784). Then only twenty-one years of age, Ruiz de Luzuriaga (1763–1822), a Spanish physician, is described on the title page as "Pensionnaire du Roi d'Espagne pour la Chimie & la Médecine." Without rejecting the theory of phlogiston, he discusses experiments on oxidation and the formation of acids, with references to the works of Bergman, Berthollet, Crawford, Fontana, Kirwan, Lavoisier, Priestley, Scheele, Senebier, and other chemists. The author later published *Disertacion medica sobre el colico de Madrid* (Madrid, 1796; Blake, 393; Wellcome, IV, 587). Very rare. Not in the usual bibliographies. (Ferchl, 328)

RULAND, Martin, the Younger

Lexicon Alchemiae sive Dictionarium Alchemisticum, cum obscuriorum verborum, & rerum hermeticarum, tum Theophrast-Paracelsicarum phrasium, planam explicationem continens. . . .

Frankfurt: Cura ac sumtibus Zachariae Palthenii, . . . 1612.

First edition, first issue. 4to. 4 leaves, "471" (i.e., 487), (1) pp. N.B. Pages 481–487 misnumbered 465–471; page 479 misnumbered 945. Symbolic woodcut title-vignette and 2 woodcuts on page 22. A variant, with beginning of dedicatory epistle repeated on verso of last leaf (usually blank). Occasional marginal worming; otherwise very good copy, in original unlettered calf. Signature of Lionel Johnson (1867–1902), critic and poet, on flyleaf.

ONE OF the major contemporary sources on Paracelsus and the alchemical tradition of the Renaissance, this dictionary is very useful for its definitions of early terminology. It is "less mystical and more practical than some later ones" (Bolton). Frequently quoted by Jung, it is valuable for psychological studies. Ferchl, Ferguson, Wellcome, et al., mistakenly attribute this excellent work to the author's father,

Martin Ruland the Elder (1532–1602), but as the dedication is dated 20 April 1611, the younger Ruland is clearly the author. He died just after writing the dedication, on 23 April 1611. Newton owned a copy of this edition. The sheets of the 1612 edition were reissued (Frankfurt, 1661) with reset title and preliminaries. An English translation by A. E. Waite, privately printed in only six copies in 1893, was reprinted in 1964 in only 250 copies. (Bolton, 1041; D.S.B., XI, 607; Duveen, 520; Edelstein, 2002; Ferchl, 460; Ferguson, II, 302–303; Ferguson Coll., 613; Harrison, 1426; Heym, *Ambix*, I [1937], 58; Honeyman, 2703; Mellon, no. 68; Neu, 3579; Partington, II, 161; Smith, 424; Stillman, 552; Sudhoff, 291; Thorndike, VII, 160; Verginelli, 290; Waite, 302; Waller, 11223; Wellcome, I, 5638)

RULAND, Martin, the Younger

Problematum Medico-Physicorum Liber Primus (Pars Secunda). . . .

Frankfurt: E Collegio Musarum Paltheniano. 1608.

First edition. 8vo. 2 vols. In 1. I: 189, (1) pp., 9 leaves. II: 152 pp., 8 leaves (last blank). Woodcut device on title page of each volume. Fine copy in original vellum. Bound with: Ruland, Martin, the Younger, *Progymnasmata alchemiae* (Frankfurt, 1607).

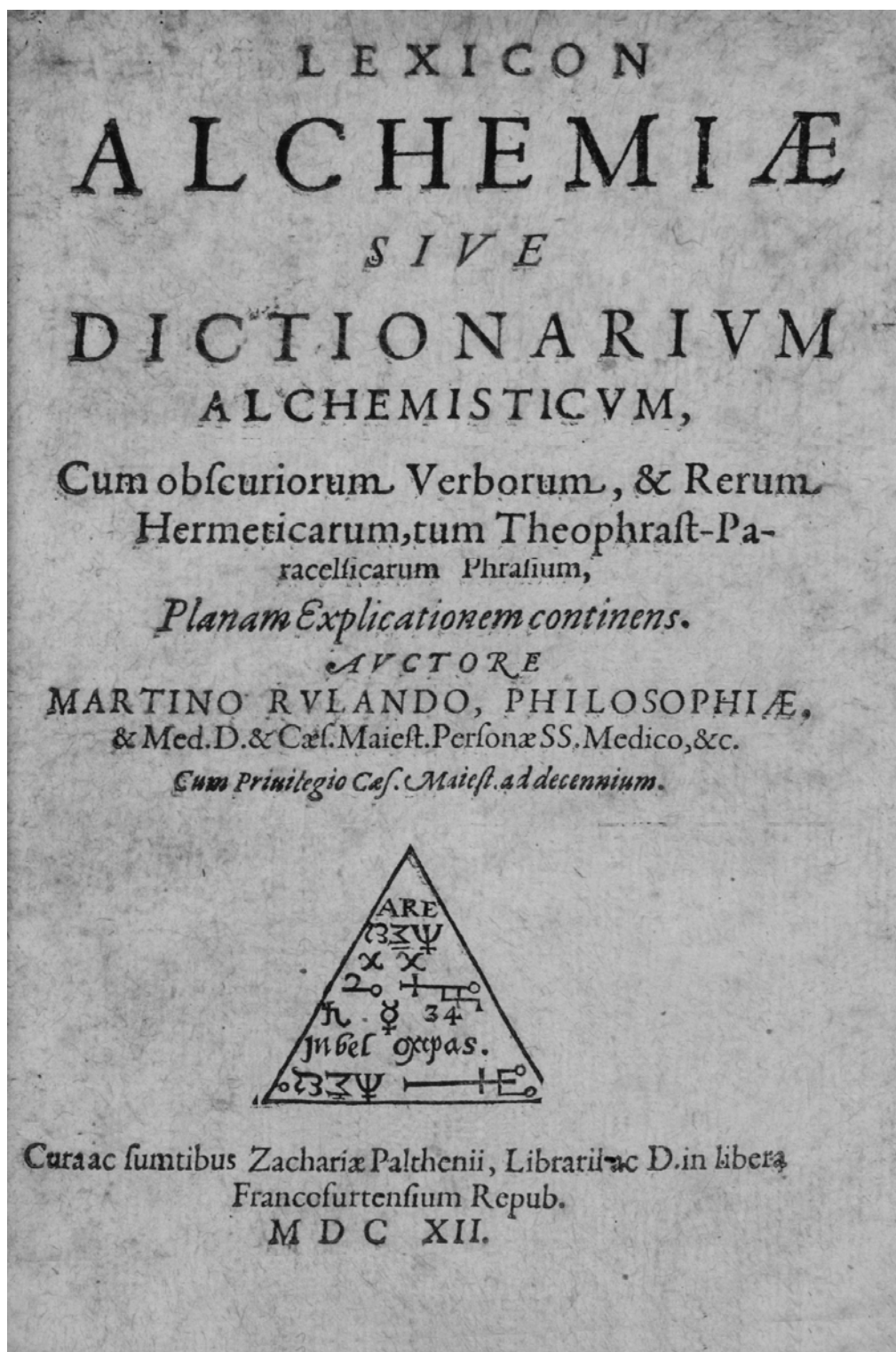
AN IATROCHEMICAL treatise, based on the doctrines of Paracelsus. Each volume contains 330 queries ("problema") on the utility of alchemically prepared medicines in treating a wide variety of diseases. There are numerous references to the use of acids, alkalies, salts, and various oils obtained from plants and animals. Each volume has its own index. Very rare. Unknown to almost all bibliographers. (Ferguson, II, 304 [not in Young Coll.]; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 99; Partington, II, 161)

RULAND, Martin, the Younger

Progymnasmata Alchemiae, sive problemata chymica, nonaginta & una quaestionibus dilucidata: cum lapidis philosophici vera conficiendi ratione. . . .

Frankfurt: E Collegio Musarum Paltheniano. 1607.

First edition, 3 parts in 1 vol. 8vo. 8 leaves, 254 pp., 1 leaf (blank), 136 + 165, (1) pp., 1 leaf (blank). Small woodcut printer's device on first title page. Third part (*Lapidis philosophici*) has separate title page with large woodcut device, repeated at end, dated 1606. Fine copy in original vellum. Old signature on main title: "Ludovic Jungerman, M.D." (1572–1653), professor of botany at Altdorf. Bound with: Ruland, Martin, the Younger, *Problematum medico-physicorum* (Frankfurt, 1608).



Ruland the Younger. Lexicon Alchemiae. Frankfurt, 1612.

AN IMPORTANT work comprising ninety-one questions on the principles of alchemy, the preparation of the philosopher's stone, transmutation of metals, usefulness of alchemy in medicine, etc. Ruland (1569–1611) graduated M.D. (Basel, 1587), and his interest in alchemy and iatrochemistry was due to the influence of his father, Martin Ruland the Elder (1532–1602). "The major aspects of Ruland's thought were his alchemical philosophy of nature and his advocacy of chemical medicines. . . . Ruland's works illustrate the tension between traditional Galenist medical theory and the reformist iatrochemists. . . . Salt, sulphur, and mercury . . . are the basis of all things; and the principal instrument for the study of nature is fire and the alchemical processes involving it. . . . Ruland argued that the transmutation of metals into gold was possible with the aid of the philosophers' stone, which was the universal medicine capable of curing all diseases" (D.S.B.). Ferchl, Ferguson, and Wellcome erroneously attribute this work to Ruland's father. (D.S.B., XI, 607; Duveen, 520; Edelstein, 2003; Ferchl, 460; Ferguson, II, 303; Ferguson Coll., 613; Neu, 3580 [imperf.]; Partington, II, 161; Sotheran, Cat. 800 [1926], 11902 ["Rare"]; Wellcome, I, 5637)

RUNGE, Friedlieb Ferdinand

Gründriss der Chemie von Professor Dr. F. F. Runge . . .
Munich: 1846, 1847.

First edition. 2 vols., 8vo. I (1846): iv, 333, (1) pp. II (1847): xxxii 316, (2) pp. With 245 mounted color samples (105 in vol. I; 140 in vol. II). Old library stamps on titles; otherwise fine copy in full maroon morocco antique, spines very richly gilt.

AN IMPORTANT treatise on the preparation, properties, and uses of inorganic pigments and dyes, by the codiscoverer of aniline dyes made from compounds isolated from coal tar. In 1828 Runge (1794–1867) was appointed extraordinary professor of chemistry at the University of Breslau. In 1831 he moved to Berlin and worked in a chemical factory in Oranienburg, owned by the Royal Maritime Society. "In this industrial laboratory he carried out his important study of synthetic dyes" (D.S.B., XI, 615). In these two volumes "the colors of chemical bodies, precipitates, etc., are indicated by pigments inserted on squares in the text" (Bolton). Scarce. Not in Cole, Duveen, Roller & Goodman, Ron, Smith, Wellcome, etc. (Bolton, 791–792; Edelstein, 3471; Ferchl, 460; Hein & Schwarz, *Deutsche Apotheker-Biographie*, II, 549; Partington, IV, 184; Poggendorff, II, 722)

RUPESCISSA, Joannes de

De Consideratione Quintae Essentiae rerum omnium, opus sanè egregium. Accessere Arnaldi de Villanova Epistola de Sanguine humano distillate. Raymundi Lullii Ars operativa, & alia quaedam. Michaelis Savanarolae libellus optimus de Aqua Vitae nunc valde correctior quam ante annos LXX editus. Omnia ad selectissimam materiam medicam, & morborum curationem, vitaeque conservationem mirabiliter facientia.

Basel: Per Conradum Waldkirch. 1597.

Second edition. 8vo. 292 pp., 2 leaves (index). Roman letter. Woodcut capitals, head- and tailpieces. Fine copy, in original unlettered blind-stamped overlapping vellum.

RUPESCISSA (Jean de Roquetaillade, fl. 1345–56) was a celebrated alchemist who lived at Aurillac in Aquitaine and was buried at Villefranche near Lyons. Thorndike (III, 347–369) devotes a whole chapter to this important "chemist and prophet." The *Consideration of the Fifth Essence* is his chief writing on alchemy. "This work possessed a marked individuality both in expression and arrangement, distinguishing it from other medieval alchemical treatises, and it created a correspondingly profound and wide impression" (Thorndike, who does not mention this edition). Rupescissa is now considered the founder of medical chemistry on the basis of the present work, which centers on the "elixir of youth" that the author found in the medicinal and preservative properties of ethyl alcohol (*aqua ardens*). His treatise ends on page 144 and is followed by similar texts by Arnald of Villanova (on the use of human blood in alchemy), Raymond Lull, Guglielmo Grataroli, and Michael Savanarola. The first edition (Basel, 1561; Duveen, 521; Smith, 254), containing many errors, has a dedication by Grataroli (dated May 1561) which also appears in this second, corrected, and best edition. Extremely rare. Not in British Library. (Durling, 2586; Duveen, *Supplement*, 334; Ferchl, 461; Ferguson, II, 306 [not in Young Coll.]; Ferguson Coll., 614; Multhaus, *Isis*, 45 [1954], 359–367; Neu, 2071; Wellcome, I, 5647)

RUSSELL, Richard

De Tabæ Glandulari, sive De Usu Aquae Marinae in Morbis Glandularum Dissertatio. Auctore Ricardo Russell, M.D. . . . (Oxford:) E Theatro Sheldoniano, Prostant venales apud Jacobum Fletcher, Oxon. & J. & J. Rivington, Lond. 1750.

First edition. 8vo. (in 4s). 4 leaves, (2), 3–235, (1) pp., 1 leaf (blank). Engraved title-vignette (J. Mynde sc.) and 7 engraved plates. Errata slip pasted on page 235. Fine copy in contemporary red morocco, all edges gilt, floriated gilt dentelles on covers, spine richly gilt, green morocco label.

ONE OF the earliest books on the use of seawater and seaweeds for the cure of enlarged glands. Russell (1687–1759), a surgeon and physician who lived in Lewes, Sussex, discusses the condition, diseases, and treatment of glands throughout the body, regarding them as one system, whether secretory or lymphatic. Long before iodine and iodides were discovered early in the nineteenth century, Russell suspected that seawater and seaweeds contained compounds beneficial to human health. “This work . . . was long held in high esteem, and deservedly so, as it contains much that is practically useful” (Waving, II, 771). The book contributed toward making the public aware of the therapeutic value of coastal living and in developing Brighthelmstone (Brighton) into a seaside resort, where “Russell Street” is named for the author. (Blake, 394; Blocker, 347; Ferchl, 461; Neu, 3605; Watt, II, 822t; Wellcome, IV, 593)

RUSSELL, Richard

A Dissertation Concerning the Use of Sea Water in Diseases of the Glands, &c. To which is added An Epistolary Dissertation To R. Frewin, M.D. By Richard Russell, M.D. & P.R.S. . . .

Oxford: Printed at the Theatre: and Sold by James Fletcher in the Turl, and J. and J. Rivington in St. Paul's Church-Yard, London. 1753.

First authorized English translation. 8vo. (in 4s). 1 leaf (imprimatur), xv, (1), 398 pp., 1 leaf (corrigenda). With engraved title-vignette (J. Mynde sc.) and 7 engraved plates. Fine copy, rebacked, maroon morocco label.

THE FIRST authorized translation, by Russell, of his *De Tabae Glandulari* (Oxford, 1750), containing additional information updated from that in the Latin edition and a long section (pp. 325–398) addressed to the physician Richard Prewin (ca. 1681–1761). Although primarily on medicine, this work discusses various salts found in seawater as well as those prepared in the laboratory. The engraved plates are identical to those in the original Latin (1750) edition. An earlier but unauthorized translation “By an Eminent Physician” appeared (London, 1752, 12mo.), which was also published at Dublin in 1752 (see Wellcome, IV, 593). Several augmented editions were published, the fifth and final being that of London in 1769. (Blake, 394; Watt, II, 822t; Wellcome, IV, 594)

RUTHERFORTH, Thomas

Ordo Institutionum Physicarum in Privatis Lectionibus . . .
Cambridge: Typis Academicis Excudebat J. Bentham, Impensis Gui. Thurlbourn Bibliopolae Cantabrigiensis. Prostant apud J. Beecroft Londini. 1743.

First edition. 4to. 6 leaves, 106 pp. With 31 copperplates (each containing several figures). Fine copy on heavy paper, in contemporary speckled calf, spine richly gilt.

EDUCATED AT Cambridge (M.A., 1733), Rutherford (1712–1771) was elected F.R.S. (1743) and received the D.D. degree in 1745. He was chaplain to Frederick, prince of Wales, and later to the princess dowager. In 1752 he was made archdeacon of Essex and became regius professor of divinity in 1756. Greatly interested in the natural sciences, he gave private lectures at Cambridge, and the present work summarizes his courses on mechanics, hydrostatics, pneumatics, hydraulics, optics, and astronomy. Although mainly on physics, there are references to chemical topics. In the list of books quoted John Friend's *Praelectiones Chymicae* (London, 1709), Stephen Hales' *Statical essays* (London, 1731), and other chemical works are mentioned. Numerous references are made to Newton, Cotes, Desaguliers, Molyneux, Musschenbroek, Rohault, et al. Plate 10 gives a good perspective view of an air pump. A second edition in Latin appeared (Cambridge, 1756). Watt lists this very scarce work under “Rutherford.” (Poggendorff, II, 727; Roller, 491; Sotheran, Cat. 682 [1908], 4148)

RUTHERFORTH, Thomas

A System of Natural Philosophy, being a Course of Lectures in Mechanics, Optics, Hydrostatics, and Astronomy; which are read in St. John's College Cambridge, by T. Rutherford D.D. F.R.S. . . .

Cambridge: Printed by J. Bentham, Printer to the University, for W. Thuribourn, Bookseller in Cambridge; and sold by J. Beecroft, at the Bible and Crown in Lombard-Street, London. 1748.

First edition. 2 vols. 4to. I: 12 leaves, 496 pp. II: 2 leaves, pp. 497–1,105 (7). With folding engraved map of the world and 31 folding copperplates (each containing several figures). Very good copy, unpressed and uncut with wide margins, in late-eighteenth-century half calf, marbled boards, maroon leather labels.

THE GREATLY enlarged English edition of Rutherford's *Ordo Institutionum Physicarum* (Cambridge, 1743), which comprised a course of private lectures he gave at Cambridge. To judge by the approximately one thousand subscribers whose names are listed herein, the lectures must have been extremely well received. In addition to the subjects listed in the title, there are discussions of chemical interest (e.g., air pump, gases, nature of fire, and properties of liquids and solids). “There are also elementary chapters on Acoustics and Meteorology under Hydrostatics. No mention is made of electricity or magnetism” (Zeitlinger). “Dr. Rutherford

continued Newton's teaching at St. John's College" (Babson). The map by Edmund Halley (vol. II, facing p. 636), originally drawn in 1700, shows California as an island, part of Australia (Hollandia Nova), the North Pole, but nothing of the South Pole. Only the first volume is in the Wellcome Library. (Babson: *Newton Bibliography, Supplement*, p. 23; Sotheran, Cat. 682 [1908], 4150; Wellcome, IV, 595)

RUTTY, John

An Account of some New Experiments and Observations on Joanna Stephens's Medicine for the Stone: with some Hints for reducing it from an Empirical to a Rational Use. With Remarks on Dr. Hales's Experiments on the same Subject; and some additional Experiments on the comparative Efficacy of dulcified Spirit of Nitre, Spirit of Salt, and the Juices and Decoctions of Onions, Leeks and Cellery, as Lithontripticks. Presented to the Royal Society Jan. 14. 1741–2. By John Rutty, M.D. To which is subjoined, An Account of the Effects of Soap-Lees taken internally, in the Case of James Jurin, M.D.

London: Printed for R. Manby, over-against the Old-Bailey on Ludgate-Hill. 1742.

First edition. 8vo. 2 leaves, viii, 56 pp. Very good copy, in calf antique, spine gilt-lettered. From the library of Dr. William Sargent, F.R.C.P., with his armorial bookplate on the front pastedown endpaper.

A CHEMICAL DISCUSSION ON Joanna Stephens' remedy for the stone, the announcement of which appeared with the title *Receipt for the Stone and Gravel* (London, 1739). Mrs. Stephens' preparation consisted of lime made by calcining egg shells and snails, and then making up the powder into pills with soap. This alkaline remedy met with much success, and the secret of its composition was purchased by the British government for 5,000 pounds, a considerable sum at that time. Rutty describes a number of experiments in which he attempted to dissolve or soften various types of calculi with Mrs. Stephens' formulation, as well as with soap lees, limewater, nitric acid, hydrochloric acid, citric acid, etc. He refers to other authors who had written on the subject (e.g., Van Helmont, Boerhaave, Hales, Geoffroy, and Hartley). The second edition appeared in 1745. Rare. Not in Bolton, Cushing, Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Garrison-Morton, Neu, Osler, Partington, Poggendorff, Smith, Waller, etc. (Blake, 395; Waring, 167; Watt, II, 823q)

RUTTY, John

An Essay towards a Natural, Experimental and Medicinal History of the Mineral Waters of Ireland. Wherein the several impregnating Minerals, being investigated by a Series of Experiments, each Water is reduced to its proper Class. The Virtues of such as have been used are given from practical Observations. Divers new Waters, especially of the Sulphureous and Vitriolic kind, are enumerated and more accurately described than hitherto. The Whole illustrated with Tables exhibiting a clear View of the Experiments in Concert, and a Comparison of the Irish to the English, and other foreign Waters. By John Rutty, M.D.

Dublin: Printed for the Author. 1757.

First edition. 8vo. 5 leaves, 478 pp. With 9 sets of tables (7 of which form part of the pagination) and 2 folding tables (not part of the pagination). Fine copy in contemporary speckled calf. Inscribed in ink on front pastedown endpaper: "To Joseph O'Kelly from his father, 25 Sepr 1867." Joseph O'Kelly (1832–1883), famous Irish geologist, graduated M.A., Trinity College, Dublin, 1860, and was secretary to the Irish Geological Survey (see D.N.B.).

A COMPREHENSIVE TREATISE on approximately 127 mineral waters of Ireland, in which their detailed chemical analyses, physical properties, and medicinal virtues are described. The text and tables throw much light on mid-eighteenth century analytical methods and chemical reagents. In his preface Rutty states that this work is an "extract" from *A Methodical Synopsis of Mineral Waters* (London, 1757, 4to.), compiled for the people of Ireland, "with a more minute account of some of the waters . . . than is contained in my larger work." Waring gives the correct pagination, imprint, and date but wrong title, obviously confusing this work with the *Methodical Synopsis* of the same date. Although containing an immense amount of chemical information, this work is not mentioned by the usual bibliographers of chemistry. Watt lists many of Rutty's works, but not this title. Rare. (Blake, 395; Waring, 776)

RUTTY, John

Materia Medica Antiqua & Nova, Repurgata & Illustrata; sive De Medicamentorum Simplicium Officinalium Facultatibus Tractatus Authore Johanne Rutty, M.D. Exhibens 1. Simplicia Nobis Veteribusque Communia, de quibus fere quicquid veri aut verosimile apud Graecos Veteres & Recentiores, Latinos & Arabes reperitur, seligitur, enarratur & Notis illustratur. 2. Simplicia Dubia & Noviter Detecta, quorum Vires indagantur & Observationibus atque Experimentis Recentiorum illustrantur. Adjectis Classibus Simplicium Secundum Qualitates & Operationes sensibiles. Opus XL. Annorum.

Rotterdam: Sumptibus Edwardi & Charles Dilly, Bibliopolarum Londinensium. 1775.

First edition. 4to. 4 leaves, xxx pp., 1 leaf (blank), 560, 87, (1) pp. Fine, crisp copy in contemporary speckled calf, rebacked, spine gilt-ruled, gilt-lettered maroon morocco label. From the library of the Society of Writers to the Signet, with their large gilt armorial crest on both covers.

PUBLISHED IN the year of his death, this is the author's magnum opus on the materia medica. Ruddy spent forty years compiling this, his most notable book. In addition to descriptions of natural products used in pharmacy, directions are given on the preparation of numerous inorganic and organic chemicals. Many chemical reactions are discussed, with references to contemporary and earlier authors. The D.N.B. states: "His last work . . . a Latin treatise on drugs, containing much learning, entitled *Materia Medica Antiqua et Nova*, . . . is still useful for reference." Evidently rare, this title is neither mentioned by the usual bibliographers of chemistry, nor is it in Cushing, Neu, Osler, Waller, Waring, et al. Blake (p. 395) mentions an edition "Londini, 1775. 560, 87 p." Watt (II, 823r) cites an edition "Lond. 1777." Possibly these refer to the present edition, as both Rotterdam and London are mentioned in the imprint. (Ferchl, 461)

RUTTY, John

A Methodical Synopsis of Mineral Waters, comprehending the most celebrated Medicinal Waters, both Cold and Hot, of Great-Britain, Ireland, France, Germany, and Italy, and several other Parts of the World. Wherein their several impregnating Minerals being previously described, and their Characteristics investigated, each Water is reduced to its proper Genus; and, beside the particular Analysis, the Virtues, Uses, and Abuses of the Water are described, in a Method Entirely New. Interspersed with Tables, tending to throw a Light upon this intricate Subject; and Abstracts of the principal Authors who have treated of Mineral Waters; and the Accounts, dispersed in the Acts of most of the learned Societies in Europe, are collected and properly digested. . . . London: Printed for William Johnston, at the Golden Ball in St. Paul's Church-Yard. 1757.

First edition. 4to. xvi, 660 pp., 4 leaves (indexes). With 54 leaves of tables. Pagination skips from page 413 to page 418, but text is complete. Title page in red and black. Fine copy, in original calf, rebacked, maroon leather label. Armorial bookplate (eighteenth century): Evelyn J. Shirley, Easington Park, Warwickshire.

RUTTY (1698–1775), a devout Quaker physician (M.D., Leyden, 1723), practiced in Dublin (1724–75). His most important purely scientific work is this monumental treatise on the chemistry of mineral waters. Dedicated to three illustrious chemists, Drs. Peter Shaw, Stephen Hales, and

Thomas Short, the book "comprises a series of inquiries and experiments carried on for many years, containing notices of 113 mineral springs in Ireland alone" (Waring). "A work of great chemical interest for the many . . . chemical analyses given" (Duveen). Praised by Dr. Samuel Johnson, it was reviewed in the *Philosophical Transactions*, volume 51 (1759), 275. (Blake, 395; Cole, 1140; Duveen, 522; Ferchl, 461; Ferguson Coll., 615; Neu, 3607; Partington, III, 124; Waring, 776)

RYDBERG, Johannes Robert

Recherches sur la Constitution des Spectres d'Émission des Éléments Chimiques. Par J. R. Rydberg. Avec quatre planches. Mémoire présenté à l'Académie Royale des Sciences de Suede le 13 Novembre 1889. Stockholm: Kongl. Boktryckeriet. P.A. Norstedt & Söner. 1890.

First edition. Large 4to. 155, (1) pp. With 4 lithographed plates (3 double page). *Kongl. Svenska Vetenskaps-Akademiens Handlingar*, vol. 23, no. 11. Very fine copy, uncut with wide margins, in pristine condition; bound in modern maroon quarter cloth, marbled boards, spine gilt-lettered and dated, original grey printed wrappers bound in.

ONE OF the classic works in the history of physics and chemical spectroscopy. Rydberg (1854–1919), professor of physics at the University of Lund, was renowned for his formula in atomic spectroscopy. "One of Rydberg's abiding interests was the periodic table of the elements. He attempted to relate the physical and chemical properties of an element to its position in the table, . . . This interest led him to spectrum analysis, and in 1890 he arrived at the formula that bears his name" (T. I. Williams, *Biographical Dictionary of Scientists* [1969, p. 456]). "Intuition led him rather rapidly to the establishment of a generally applicable formula, now known as Rydberg's Formula, with which could be summarized the observed material on the spectra of elements and in which the constants had different values for the different elements and spectral series. The special merit in Rydberg's Formula was that he introduced the wave number instead of the wave length for the spectral line in question. . . . R is a universal constant, now known as Rydberg's Constant" (Manne Siegbahn, in *Swedish Men of Science 1650–1950* [Stockholm, 1952, pp. 214–218]). In 1920 Siegbahn succeeded Rydberg at Lund. Rydberg's major work, containing fundamental contributions to the theory of atomic emission spectra, which were vital to the understanding of atomic structure. Very scarce. (D.S.B., XII, 44; Sondheimer, 1382; St. John Nepomucene, *Chymia*, 1960, vol. 6, pp. 127–145; E. Whittaker, *A History of the Theories of Aether and Electricity*, 1951, vol. 1, p. 376)

SABOR, Chrysostomus Ferdinandus von

Practica Naturae Vera, Oder Sonnenklare Beschreibung derer Natur-Geheimnisse, bestehend in wahrer Praeparation des Lapidis Universalis, Samt einem Kurtzem Anhang vom Antimonio und dessen sonderbaren Kräfften.

(Nuremberg:) Gedruckt 1735.

Second edition. 8vo. 4 leaves, 30 pp., 1 leaf (blank). With engraved frontispiece (author in frock coat in his laboratory). Geometrical figure (trapezium) on page 24. Fine copy in modern blue boards, printed paper label on spine.

AN ALCHEMICAL tract on the preparation and properties of the philosopher's stone. An appendix at the end is on antimony and its compounds. The name Chrysostomus Ferdinandus von Sabor is a pseudonym that conceals the real name of the author. The possible identity of the author is discussed by Ferguson, who quotes earlier bibliographers who suggest that the name Sabor may refer to Christian Friedrich von Steinbergen or to Christian Friedrich Sendimir von Siebenstern. Whether these two names belong to the same person or to two different people has not been settled. The first edition was published in 1721, printed at the expense of the Brothers of the Rosy-Cross. The preface of the present edition, which appears to be a reprint of the same text, is dated Nuremberg, October 1720. The 1721 edition is listed by Duveen, 549; Edelstein, 2026; Neu, 3834; Waite, 302; Verginelli, 291. Very rare. (Ferchl, 462; Ferguson, II, 310)

SADLER, John

An Explanation of Terms used in Chemistry. . . .

London: From the Press of the Royal Institution of Great Britain. 1804.

First edition. Sm. 4to. 22 pp. Fine, crisp copy, in nineteenth-century pebbled cloth. Bound with: Davy, Sir Humphry, *Outlines of a course of lectures on chemical philosophy* (London, 1804).

SADLER, OF whom little is known, worked as Davy's "chemical operator" (laboratory assistant) at the Royal Institution. Both Partington and Fullmer state that this work was designed to be issued with Davy's "Course of Lectures." The booklet was also sold separately, however, and copies occasionally appear in rare-book catalogues. An interesting work, arranged in dictionary form. Very rare. Not in D.S.B., Ferchl, Poggendorff, Waller, Watt, or the usual chemical bibliographies. (Bolton, 74; Fullmer, 46; Partington, IV, 35; Sotheran, Cat. 832 [1932], 5163)

SAGE, Balthazar Georges

Analyse des Blés, et Expériences propres à faire connoître la qualité du Froment, & principalement celle du son de ce grain. Avec des Observations sur les Substances végétales, dont les différentes Nations font usage au lieu de pain. . . .

Paris: L'Imprimerie Royale. 1776.

First edition. 8vo. 1 leaf, viii + 118 pp. Woodcut device on title, and woodcut head- and tailpieces. Few minor damp stains toward the end; otherwise a crisp copy in contemporary mottled calf, spine gilt, maroon morocco label. Bound with: Lapostolle, Alexandre Ferdinand Léonce, *Traité de la carie ou bled noire* (Amiens, 1787).

A DETAILED WORK on the analysis of various grains (e.g., corn, and wheat), including their distillation, with descriptions of the products obtained. Pages 88–104 discuss the preparation and properties of various acids obtained from beer, olive oil, horn silver (silver chloride), the oxidation of phosphorus, electrical discharges, etc. Pages 105–106 list different types of freezing mixtures. Ferguson mentions a portrait of Sage (by F. G. Colson, engraved by J. Beauvarlet), not present in this copy or in other copies examined. Rare. Not in Blake, Duveen, Edelstein, Morgan, Neu, Partington, Smith, Waller, Watt, etc. (Bolton, 795; D.S.B., XII, 68; Ferchl, 463; Ferguson, II, 313 [not in Young Coll.]; Ferguson Coll., 618; Poggendorff, II, 732)

SAGE, Balthazar Georges

Analyse des Blés, et Expériences. . . .

Paris: L'Imprimerie Royale, 1776.

ANOTHER COPY of the first edition. Bound with: Bucquet, Jean Baptiste Michel, *Mémoire sur la manière dont les animaux sont affectés par différens fluides aëriiformes. . . .* (Paris, 1778); and Sage, Balthazar Georges, *Expériences propres à faire connoître que l'alkali volatil fluor. . . .* (Paris, 1778).

SAGE, Balthazar Georges

L'Art d'Essayer l'Or et l'Argent; Tableau comparé de la coupellation des Substances métalliques, par le moyen du Plomb ou du Bismuth: Procédés pour obtenir l'Or plus pur qua par la voie du Départ. Avec figures. Par M. Sage.

Paris: De l'Imprimerie de Monsieur. 1780.

First edition. 8vo. xii, 112 pp., 2 leaves. With 4 folding engraved plates. Fine copy, uncut with wide margins, in half calf antique, marbled boards, spine gilt, crimson morocco label.

WRITTEN SHORTLY after Sage had been appointed professor of assaying at the Paris Mint (1778), in this work details are given of furnaces, apparatus, and assay balances.

Methods for purifying gold, silver, platinum, copper, and other metals by cupellation are described. Gold is purified by cupellation with lead and bismuth. Directions are given for the preparation of concentrated nitric acid. The older (Biringuccio, 1540) method of parting is described, in which mixtures of gold and silver are treated with nitric acid, which dissolves the silver, leaving the gold. A milestone text in the history of eighteenth-century metallurgical chemistry. Translations into German (Leipzig, 1782) and Spanish (Madrid, 1785) appeared. (Bolton, 795; Cole, 1142; D.S.B., XII, 68; Duveen, 523; Edelstein, 2028; Ferchl, 463; Hoover, 707; Neu, 3625; Partington, III, 98; Poggendorff, II, 732; Roller & Goodman, II, 390)

SAGE, Balthazar Georges

Arte de Ensayar Oro y Plata; bosquejo ó Descripción Comparativa de la Copelación de las Substancias Metálicas por Medio del Plomo ó del Bismuto; y Operaciones para sacar el Oro mas puro que por el Método de la Separación ó Apartado. Con las láminas correspondientes. Por . . . Mr. Sage . . . Traducido y añadido con algunas notas por el Dr. D. Casimiro Gomez de Ortega . . .

Madrid: Por Don Joachin Ibarra, Impresor de Camara de S.M. 1785.

First Spanish edition. 4to. 2 leaves, xi, (1), 98 pp. With 4 engraved plates (by Josef Muntanér). Very fine copy in original vellum, old ink-lettering on spine.

THE SPANISH translation, by Casimiro Gomez de Ortega, of *L'Art d'Essayer l'Or et l'Argent* (Paris, 1780), with valuable notes by the translator. Rare. Not in the usual chemical reference works. (Palau, 284765; Roller & Goodman, II, 390)

SAGE, Balthazar Georges

De la Formation de l'Air.

Paris: P. Didot l'ainé. 1815.

First edition. 8vo. 24 pp. Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813) and 7 other works by Sage.

AN ANACHRONISTIC work attempting to explain the formation of the two gases (nitrogen and oxygen) of the atmosphere as resulting from phlogistic emanations from the earth. Sage never accepted the antiphlogistic doctrine of Lavoisier and his circle. He refers to works by Guericke, Torricelli, Newton, Priestley, et al., but completely ignores the discoveries of Lavoisier and his coworkers. In an interesting autobiography (pp. 19–22) Sage says that he is now in his sixty-sixth year and briefly reviews his life and accomplishments, ending with a bibliography of his published works from 1769 to 1815 (pp. 23–24). Very scarce. Not in

Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Ferchl, 463; Poggendorff, II, 733)

SAGE, Balthazar Georges

De la Formation de la Terre Végétale nommée Humus, et de l'Effet des Engrais.

Paris: P. Didot l'ainé. 1816.

First edition. 8vo. 36 pp. Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813) and 7 other works by Sage.

ON THE rotting of vegetation and the formation of humus, its chemical analysis, and its use in agriculture as a fertilizer, with the contributions of the author to the subject. Scarce. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Ferchl, 463; Poggendorff, II, 733)

SAGE, Balthazar Georges

De la Nature et de la Production du Gaz Électrifiable.

Paris: P. Didot l'ainé. 1815.

First edition. 8vo. 2 leaves, 46 pp., 1 leaf (blank). Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813) and 7 other works by Sage.

A CURIOUS WORK in which Sage (using the phlogistic hypothesis) claims that an imponderable, electrifiable gas is the "essence of electricity." This gas, when combined with water, forms the clouds of the sky. Rejecting the theories of other physicists and chemists on the nature of electricity, on pages 36–44 he gives brief biographies of the writers on electricity to whom he refers in this bizarre work. Rare. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, Wheeler Gift, etc. (Poggendorff, II, 733)

SAGE, Balthazar Georges

Des Mortiers ou Cimens, expériences qui font connaître la cohésion que contracte la chaux avec les matières minérales, végétales ou animales . . . Seconde édition, augmentée de plusieurs observations.

Paris: De l'Imprimerie de Henri Agasse. 1809.

Second edition. 8vo. 36 pp. Very good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN ACCOUNT of Sage's experiments on cements was first presented as a paper, which he read before the Institut de France on 17 October 1808. In the present augmented work (first edition, 1808) Sage describes the numerous experiments he made in which a wide variety of minerals and

chemicals (e.g., oxides, hydroxides, carbonates, silicates, and sulphates) were incorporated into cement formulations. His objective was to discover which substances would produce the most useful and durable cements. A third edition appeared (Paris, 1809; Cole, 1148). (Bolton, 795; Ferchl, 463; Poggendorff, II, 732)

SAGE, Balthazar Georges

Description Méthodique du Cabinet de l'École Royale des Mines. Par M. Sage.

Paris: De l'Imprimerie Royale. 1784.

First edition. 8vo. 1 leaf, xvi, 487, (1), xi, (1) pp. Fine copy, uncut and unpressed, in half calf antique, marbled boards, maroon morocco labels gilt, spine dated. Bound with: Sage, B. G., *Supplément à la Description Méthodique . . .* (Paris, 1787).

AN IMPORTANT and detailed catalogue of the magnificent collection of minerals gathered together by the French School of Mines during a period of twenty-five years. Sage, director of the school, here provides descriptions of the minerals that were brought from all parts of the world and gives their chemical composition, mineralogical characteristics, and other properties, where known. In addition, details are given of the minerals that are used for the production of metals and alloys. Rare. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Hoover, Partington, Smith, Waller, Watt, etc. (Ferchl, 463; Ferguson Coll., 618; Neu, 3626; Poggendorff, II, 732)

SAGE, Balthazar Georges

Éléments de Minéralogie Docimastique, Par M. Sage . . .

Paris: Chez P. de Lormel, Imprimeur-Libraire de l'Académie Royale de Musique, rue du Foin. 1772.

First edition. 8vo. xxiv, 276 pp. With folding engraved plate (facing p. 262). Very fine copy in original mottled calf, rebaked with richly gilt spine and original brown morocco label. From the library of the earl of Bute (1719–1792), Sotheby auction, London, 3 July 1961.

A MINERALOGIST AND analytical chemist of the phlogistic school, Sage (1740–1824) was appointed professor of assaying at the Paris Mint in 1778. There he established a chair of mineralogy, and space was provided for him to form a great mineralogical museum. He devoted much attention to the museum, and under his direction it grew and flourished. “Romé de l'Isle and Chaptal were trained there, but Sage entertained a greater scheme for the education of mining engineers, and at last, as the result of a memoir by him, the École des Mines was established in 1783 by Louis XVI” (Ferguson). Sage opposed the antiphlogistic theory of Lavoisier and his circle. In the present work he describes

chemical experiments designed to gain an understanding of the composition of minerals. The book is in three parts: I. Mineral acids, fixed and volatile alkalies, salts and bitumens; II. Attempts to prove that simple earths are salts whose basis is absorbent earthy; and III. Metals, in which he attempts to prove that they are mixtures. Sage did much to focus attention in France on the analysis of minerals. However, he held peculiar ideas in chemistry, which are discussed by Partington. (Bolton, 795; Cole, 1143; D.S.B., XII, 68; Duveen, 523; Ferchl, 463; Neu, 3627; Partington, III, 98; Poggendorff, II, 732; Sinkankas, 5681)

SAGE, Balthazar Georges

Éléments de Minéralogie Docimastique. Par M. Sage. Seconde édition. . . .

Paris: De l'Imprimerie Royale. 1777.

Second edition. 2 vols., 8vo. I: xvii, (1), 339, (1) pp. II: 1 leaf, 400, xvi pp., 1 leaf (errata). Engraved portrait frontispiece of Sage in volume I. Engraved plate of chemical symbols and large folding printed table in volume II. Fine copy in original mottled calf, spines richly gilt, maroon and black morocco labels.

THE SUBSTANTIALLY enlarged second edition (first: Paris, 1772) of this work on assaying and mineralogical chemistry. It is based on the courses given by Sage at the Paris Mint and the École Royale des Mines. Many experiments described in the first edition have been repeated and the results corrected. New experiments are also described. “The work is divided into three parts as before with part III on the mineralogy of metals occupying all of vol. II. More docimastic procedures are given but the theory continues to be fanciful—phosphoric acid is the universal elementary acid and is the basis of light and fire, air is a combination of phosphoric acid, phlogiston and water, metals are composed of an earth peculiar to each and an acid combined with phlogiston, fixed air is a volatile marine acid, etc.” (Cole). (Bolton, 795; Cole, 1144; D.S.B., XII, 68; Ferchl, 463; Ferguson, II, 313 [not in Young Coll.]; Hoover, 708; Neu, 3628; Partington, III, 98; Sinkankas, 5683; Ward & Carozzi, 1944)

SAGE, Balthazar Georges

Expériences propres à faire connoître que ce qu'on nomme Acide phosphorique concret retiré des os calcinés, à la manière de M. Scheele, n'est point un acide à nu, mais combiné sous forme de Verre insoluble dans l'eau; c'est un Verre animal.

In: Mémoires de l'Académie Royale des Sciences.

Paris: l'Imprimerie Royale, 1777 (published 1780).

First edition. 4to. Pp. 321–323. Fine copy in half calf antique. Bound with: Lavoisier, A. L., *Ten Papers, 1778–1780.*

A DETAILED ANALYSIS of a specimen of calcium phosphate, which had been presented to the Académie by P.J. Macquer. Sage describes how elementary phosphorus can be prepared by roasting calcium phosphate with charcoal. In 1777 he discovered hypophosphoric acid, “which is formed along with phosphorous acid when sticks of phosphorus are exposed in a funnel to moist air.” (Partington, III, 97)

SAGE, Balthazar Georges

Expériences propres à faire connoître que l'alkali volatil fluor est le remède le plus efficace dans les asphyxies; avec des remarques sur les effets avantageux qu'il produit dans la morsure de la vipère, dans la rage, la brulure, l'apoplexie, &c. Par M. Sage . . . Troisième édition, augmentée.
Paris: De l'Imprimerie de Monsieur. 1778.

Third edition. 8vo. 2 leaves, xvi, 76 pp. Fine, crisp copy, in contemporary speckled calf, covers gilt-ruled, spine richly gilt, with maroon morocco lettering label. Bound with: Bucquet, Jean Baptiste Michel, *Mémoire sur la manière dont les animaux sont affectés par différens fluides aëriiformes* (Paris, 1778); and Sage, Balthazar Georges, *Analyse des blés* (Paris, 1776).

THE THIRD, final, and greatly enlarged edition describing Sage's remedy for reviving people and animals that had been made unconscious by asphyxiation or other causes. The first edition (Nancy, 1777) and second edition (Lyon, 1778) contain only fifty-seven and sixty-four pages, respectively. Sage describes his process for preparing a concentrated solution of ammonia in water. On pages 6–12, Sage describes how, on 10 May 1777, Lavoisier showed the asphyxiating power of carbon dioxide to Count de Falckenstein by placing a live bird into a vessel containing this gas (*air fixe*). The bird was soon pronounced dead by Lavoisier, but Sage took it and quickly revived it by placing its beak near alkali volatil fluor (i.e., ammonium hydroxide). The book contains numerous examples of the reviving power of ammonia and is of considerable chemical interest. Not in Bolton, Cushing, D.S.B., Ferguson, Morgan, Osler, Smith, Watt, etc. Waller (no. 8395) lists the second edition. (Blake, 397; Duveen, 523; Edelstein, 2029; Ferchl, 463; Ferguson Coll., 618; Neu, 3631; Partington, III, 98; Poggendorff, II, 732)

SAGE, Balthazar Georges

Exposé Sommaire des Principales Découvertes faites dans l'espace de cinquante-quatre années, par B.G. Sage, Fondateur et Directeur de la première école des mines, membre de la première classe de l'Institut Imperial. . . .
Paris: Firmin Didot. 1813.

First edition. 8vo. 38 pp., 1 leaf (blank). Fine copy, bound in contemporary tree calf, spine gilt, maroon morocco label let-

tered in gilt “Découvertes Particulieres,” with 8 other works by Sage.

A REVIEW SUMMARIZING the numerous researches in chemistry, physics, mining, metallurgy, and related sciences carried out by Sage during fifty-four years. Sage went blind in 1805, but it is to his credit that he continued to publish until 1818, despite his handicap. This list is useful as it describes what Sage considered to be his most important contributions to science. His role in organizing the great mineral collection of the Académie Royale des Sciences is described on pages 30 et seq. Very scarce. Not in Blake, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Smith, Waller, Watt, etc. (Bolton, 240; Partington, III, 97; Poggendorff, II, 733)

SAGE, Balthazar Georges

Mémoires de Chimie. Par M. Sage.
Paris: De l'Imprimerie Royale. 1773.

First edition. 8vo. vii, (1), 262, xxxviii pp., 1 leaf (errata). With folding engraved plate of chemical symbols. Large woodcut of royal arms on title page, woodcut head- and tailpieces. Very fine copy in original mottled calf, triple gilt rule on each cover, spine richly gilt with crown emblems, maroon morocco label.

A COLLECTION OF memoirs by Sage, most of which originally appeared in the *Mémoires de l'Académie des Sciences* (1766–1772). Analyses of many minerals and ores are described, mainly those containing arsenic, antimony, cobalt, silver, etc. Included are papers on “coal, glass, the crystallization of metals from amalgams, metallic calces and remarks on a table of affinities. . . . Of some interest is the paper on ‘animal salt’ (pp. 59–65) in which Sage describes the preparation of crystalline potassium ferrocyanide” (Cole). (Blake, 397; Bolton, 795; Cole, 1147; D.S.B., XII, 68; Duveen, 523; Edelstein, 2030; Ferchl, 463; Ferguson, II, 312; Neu, 3632; Partington, III, 98; Poggendorff, II, 312; Roller & Goodman, II, 390)

SAGE, Balthazar Georges

Mémoires Historiques et Physiques.
Paris: P. Didot, l'ainé. 1817.

First edition. 8vo. viii + 85 pp. With colored plate depicting a specimen of crystallized glass (Cloquet Del. et Sculp.). Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813), and 7 other works by Sage.

A COMPREHENSIVE WORK covering many physical and chemical topics, including electroscopes; thermometers; phosphorescence; formation of alkalies, acids, and salts; and crystallization and devitrification of glass (with plate). On

pages 83–85 Sage proudly describes the great admiration expressed by the emperor of Austria when he viewed the minerals at the *École Royale des Mines*. These collections were largely assembled by Sage himself at his own expense. The D.S.B. states that this work is of autobiographical interest. Rare. Not in Blake, Bolton, Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Partington, Poggendorff, Smith, Waller, Watt, etc. (D.S.B., XII, 68)

SAGE, Balthazar Georges

Opuscules de Physique.

Paris: P. Didot l'aîné. 1815.

First edition. 8vo. xiv pp., 1 leaf, 111 pp. Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813), and 7 other works by Sage.

A WORK ON a miscellaneous variety of subjects. Topics include a new type of marble, different types of electrical phenomena, Deluc's electroscope, preparation and properties of chlorine and iodine, acids produced by distilling wood, varieties of carbon, heat and cold, and assaying. On pages 74–85 he castigates Lavoisier, Guyton de Morveau, Fourcroy, Berthollet, et al., for overthrowing phlogistic chemistry and introducing antiphlogistic chemical nomenclature, and on pages 94–97 he implores the government to preserve the great mineral collections at the *École Royale des Mines* after his death. Rare. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Poggendorff, II, 733)

SAGE, Balthazar Georges

Opuscules Historiques et Physiques.

Paris: P. Didot, l'aîné. 1816.

First edition. 8vo. viii + 108 pp. Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813), and 7 other works by Sage.

A MISCELLANEOUS COLLECTION of writings on great scientists, physics, and chemistry. Topics of chemical interest include production of ammonia by plants and animals, tobacco and nicotine, extraction of purple dye from Indian beetles, various mephitic gases, atmospheric nitrogen (with references to Priestley), and acid gases. On page 83 there are early references to the halogens chlorine and iodine. Pages 101–103 describe extracts of tobacco used by South American Indians. Rare. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Poggendorff, II, 733)

SAGE, Balthazar Georges

Probabilités Physiques.

Paris: P. Didot, l'aîné. 1816.

First edition. 8vo. viii + 94 pp., 1 leaf (blank). Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813), and 7 other works by Sage.

A COSMOLOGICAL WORK in which Sage discusses celestial phenomena (e.g., light, meteors, and planets). Topics of chemical interest include origin of chalk, limestone, and coal; nature of acids; respiration; mephitic gases; insect and reptile venoms; and architectural abilities of bees, termites, and spiders. On pages 70–82 he begs the government to preserve, after his death, the great mineral collections at the *École Royale des Mines*, as he had assembled some of them at his own expense. Rare. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Poggendorff, II, 733)

SAGE, Balthazar Georges

Supplément à la Description Méthodique du Cabinet de l'École des Mines. Par M. Sage.

Paris: De l'Imprimerie Royale. 1787.

First edition. 8vo. 1 leaf, 156 pp. Fine copy, uncut and unpressed. Bound with: Sage, B. G., *Description Méthodique . . .* (Paris, 1784), q.v.

THE RARE supplementary volume to the *Description Méthodique* (1784), in which Sage gives new information on the minerals formerly described, plus descriptions of mineral specimens acquired during the 1784–87 period. The *Supplément* is rarer than the *Description*. Poggendorff and Ferchl wrongly date it 1786. (Ferchl, 463; Neu, 3626; Poggendorff, II, 732)

SAGE, Balthazar Georges

Vérités Physiques Fondamentales.

Paris: P. Didot l'aîné. 1816.

First edition. 8vo. 2 leaves, 66 pp., 1 leaf (blank). Fine copy, bound with the author's *Exposé sommaire* (Paris, 1813), and 7 other works by Sage.

A SUMMARY OF Sage's opinions, some of which are peculiar, on various theories in physics and chemistry—the latter based upon the theory of phlogiston, then defunct. Topics include chemical and physical attraction, chemical affinities, coal-gas illumination, origin of volcanoes and lava, composition of rocks, and preparation of chlorine. Rare.

Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Partington, Smith, Waller, Watt, etc. (Poggendorff, II, 733)

SAINT ETIENNE, Claude

Nouvelle Instruction pour connoître les Bons Fruits, selon les Mois de l'Année. Avec une Methode facile pour la connoissance des Arbres fruitiers, & la façon de les cultiver. Par Dom Claude S. Etienne Religieux Feüillant. Paris: Chez Charles De Sercy. 1678.

12mo. 4 leaves, 218 pp. Woodcut on title. Fine, crisp copy, in contemporary speckled calf, spine gilt. Bound with: Morin, Pierre, *L'Abregé des Bons Fruits* (Paris, 1675).

ETIENNE, OR Estienne, was a monk whose chief interest, apart from the practice of his beliefs, was the cultivation of fruit trees. This work is of some chemical interest since it refers to the fertilization of trees, the manufacture of various types of wines, and other matters of agricultural importance. The book is written from the point of view of the best fruits that are available at different times of the year. The first edition appeared eight years earlier (Paris: Charles De Sercy, 1670). According to Goldsmith, the second edition appeared in 1687, but that is probably a misprint for 1678, the date of this edition. Goldsmith lists the first edition (1670) under E4, but lists the second edition (1687) under S90, the author's name being given as Saint-Estienne.

SAINTE-ALBINE, Remond de

Observations sur le Plomb Laminé. Par M. B. Paris: De l'Imprimerie de Jacques Guerin, Quay des Augustins. 1731.

First edition. 8vo. 31, (1) pp. Woodcut ornament on title and woodcut headpiece (p. 3). Very good copy in contemporary quarter calf, speckled boards, with morocco label ("Melanges"). Bound with: Dubuisson, F. R. A., *Mémoire sur les Acides Natifs du Verjus, de l'Orange, et du Citron* (Paris, 1783), and 7 other chemical tracts (1743–1798).

A WORK ON the physical and chemical properties of laminated lead used for roofing purposes, with references to the chemists Geoffroy, Lemery, Réaumur, and others. Sainte-Albine (dates unknown) comments on the formation of rust (i.e., oxides) on lead by the action of moist air. He also notes that lead increases in weight on heating in air (i.e., formation of lead oxide). The author cites the use of laminated lead roofing in England, especially on important buildings (e.g., St. Paul's Cathedral). This work must have been well received, as Duveen describes the enlarged third edition (Paris, 1746), which contains three folding plates. "I can find no bibliographical record of this work" (Duveen).

SAINTPIERRE, Camille

De la Fermentation et de la Putréfaction. Thèse qui sera soutenue publiquement, le 4 Juin 1860 par Camille Saint-pierre, Docteur en Médecine. . . . Montpellier: Typographie de Boehm & Fils. Mai 1860.

First edition. 8vo. 128 pp. Fine copy in crimson half morocco antique, marbled boards, spine lettered and dated in gilt.

A SUBSTANTIAL DOCTORAL dissertation, dedicated to Pasteur, presented to the medical faculty of the University of Montpellier. The entire subject of fermentation is covered in four parts. The first part (pp. 15–28) traces the history of fermentation from the earliest period to 1860, with references to Van Helmont, Boerhaave, Stahl, Lavoisier, Liebig, Pasteur, et al. The second part (pp. 29–69) describes experiments carried out on the chemistry of fermentation, with equations, the researches of Liebig, Béchamp, Pasteur, et al., being discussed in detail. Possible explanations for the phenomenon of fermentation are given in the third part (pp. 71–102), with emphasis on the contact theory of Berzelius, the mechanical theory of Liebig, and the vital theory of the French chemists, particularly Béchamp and Pasteur. Saintpierre correctly concludes that fermentation is the result of chemical action by microorganisms. The fourth part (pp. 103–128) covers the medical aspects of fermentation and putrefaction. An important review of the entire field of fermentation by Saintpierre (dates unknown), a contemporary of Pasteur. Unrecorded by the usual early chemical and medical bibliographies. Apparently unknown to Pasteur scholars and historians of science and medicine.

SALA, Angelo

Anatomia Antimonii: id est Dissectio tam Dogmatica quàm Hermetica Antimonii; Usum, proprietatem, & vires ejus declarans: Auctore Angelo Sala, Vincentino Veneto. Leyden: Ex Officinâ Godefridi Basson. 1617.

First edition. 8vo. 16 leaves, 145, (7) pp. Woodcut device on title. Historiated woodcut capitals, head- and tailpieces. Fine copy in contemporary vellum, faint old ink-lettering on spine. Bound with: Sala, A., *Anatomia vitrioli* (Leyden, 1617), and 5 other works.

SALA (1576?–1637), a physician and able chemist, "was one of the founders of modern chemistry" (Osler). An opponent of quackery, he advocated chemical remedies, was an admirer of Paracelsus, and was "able to judge fairly the merits both of the chemical and galenic systems of medicine then in conflict" (Ferguson). "Sala's *Anatomy of Antimony* was issued in Latin in 1617, almost thirty years before Basil Valentine's *Triumphal Chariot of Antimony* was translated

into that language" (Thorndike). Sala discusses the chemical properties, virtues, and uses of antimony and its compounds, noting that they can be harmful to the human body if not employed correctly. Partington discusses this work in some detail. Rare. Not in Duveen, Edelstein, Krivatsy, Neu, Smith, Waller, Watt, etc. (Ferchl, 465; Ferguson, II, 316 [not in Young Coll.]; Ferguson Coll., 619; Osler, 3873; Partington, II, 277; Thorndike, VII, 168; Waring, 235; Wellcome, I, 5713)

SALA, Angelo

Anatomia Vitrioli, in duos Tractatus divisa: In quibus vera ratio Vitrioli in diversas substantias resolvendi accuratissimè traditur. Accedit arcanorum complurium ex substantiis istis deductorum . . . Omnia ex Italicà in Latinam linguam translata, studio & operâ I. P. C. B. Editio Tertia, ab Authore recognita.

Leyden: Ex Officinâ Godofridi Basson. 1617.

Third (first Leyden) edition, 2 parts in 1 vol. 8vo. 4 leaves, 25, (3), 29–107, (1) pp. Divisional title (p. 27). Woodcut devices on both titles. Woodcut capitals, head- and tailpieces. Fine copy. Bound with: Sala, A., *Anatomia antimonii* (Leyden, 1617), and 5 other works.

ONE OF the earliest monographs on vitriols (i.e., sulphates), especially ferrous and copper sulphate. As Sala knew only a little Latin, the Latin editions (first: Geneva, 1609; second: Geneva, 1613) were translated from the Italian. The book is in "two parts, the first treating of spirit of vitriol, oil of vitriol, salt of vitriol, sulphur of vitriol, earth of vitriol, vitriol rectified, vitriol regenerated . . . The second treatise [deals] with compounds in which vitriol [is] one of the ingredients" (Thorndike). Partington discusses this important work in detail, citing only the editions of 1609 and 1613. Not in Duveen, Ferchl, Neu, Waring, etc. (D.S.B., XII, 79; Ferguson, II, 316 [not in Young Coll.]; Ferguson Coll., 619; Krivatsy, 10131; Thorndike, VII, 168; Wellcome, I, 5708)

SALA, Angelo

Opera Medico-Chymica quae extant omnia. Frustulatim hactenus, diversisque linguis excusa, nunc in unum collecta, latinoque idiomate edita. Editio postrema auctior & emendatior . . . Huic ultima editioni accessit tractatus peculiaris Angeli Salae de erroribus Pseudochymicorum & Galenistarum, multum desideratus, & nunquam nisi seorsim editus . . .

Rouen: Sumptibus Joannis Berthelin, Bibliopolae. 1650.

First Rouen edition. 2 vols., 4to., in 1. I: 4 leaves, 749, (13) pp. II: 50 pp., 1 leaf. Engraved title page (depicting Hippocrates and Hermes, Adam and Eve, vineyard and fountain, miners at

work) and 10 woodcuts in text (pp. 555, 594, 665, 668–669). Separate title page to *Tractatus duo*. Fine copy in nineteenth-century gilt-ruled half russia (by W. Pratt, with name on spine), marbled boards.

THE ONLY edition printed in France of the collected works of Sala. First published in Germany (Frankfurt, 1647), other editions also appeared (e.g., Frankfurt, 1682, 1693, 1712). Sala "probably learnt chemistry in Venice from about 1593. Most of his works were composed from 1610 to 1630" (Partington). Eighteen of his important writings on antimony, vitriol, salt of tartar, opium, potable gold, sugar, and other compounds are contained in this volume. All are of considerable historical chemical interest. The dedication to the *Tractatus duo* is signed by Sebastian Schroder and dated 5 October 1648. Ferchl and Schelenz mistakenly give the imprint as Rome. Not in British Library, Duveen, Edelstein, Norman, Osler, etc. (D.S.B., XII, 80; Ferchl, 465; Ferguson, II, 316 [not in Young Coll.]; Ferguson Coll., 619; Krivatsy, 10129; Neu, 3639; Partington, II, 278; Schelenz, 481; Thorndike, VII, 169; Waite, 302; Watt, II, 827k)

SALA, Angelo

Ternarius Bezoardicorum & Hemetologia seu Triumphus Vomitoriorum. Dn. Angeli Salae . . . Gallico sermone latinitate . . . donati. Cum Exegesi Chymiatrica Andreae Tentzelii . . .

Erfurt: Impensis Johannis Birckneri . . . 1618.

First Latin edition. 8vo. 28 leaves, 278 pp., 1 leaf (blank). Small wormhole repaired on title leaf (with loss of one letter); otherwise very good copy in contemporary vellum. Bound with: Sala, A., *Anatomia antimonii* (Leyden, 1617), and 5 other works.

AN IATROCHEMICAL treatise describing the composition and virtues of purgative and vomitive medicines, including a variety of methods for the safe use of this type of therapy. Sala covers bezoartic substances from animal, vegetable, and mineral sources, including "antimonium muriatum," once thought to be antimony trichloride but now known to be antimony oxychloride. This work was published simultaneously with the *Exegesis Chymiatrica* of Andreas Tentzel (fl. 1614–1625), a German physician at Nordhausen, who published alchemical and medical books. Tentzel edited the present work by Sala and signed the dedication 20 July 1617. Tentzel appended his *Exegesis* to this work (as noted in the title), but copies of each title exist in their contemporary bindings separately, indicating that they were also published separately. Wellcome (I, 5712) lists only the 1630 Erfurt edition. (Duveen, 525; Ferchl, 465; Ferguson, II, 316 [not in Young Coll.]; Ferguson Coll., 620; Krivatsy, 10144; Partington, II, 277)

SALERNO, SCHOOL OF

L'Art de Conserver sa Santé, composé par l'École de Salerne. Traduction nouvelle en vers François, par Mr. B. L. M.
Paris: Par la Compagnie des Libraires. 1753.

First edition of this translation. 12mo. 104 pp., 2 leaves (index). Title in red and black, with woodcut ornament. Very good copy in contemporary calf, rebacked, with original gilt spine laid on. Bound with: Durade, Johann Georg, *Traité physiologique et chymique sur la nutrition* (Paris, 1767).

IN HIS preface the translator "B. L. M." states that this is the most complete version of the poetical work known by the name *l'École de Salerne*. The earlier versions by Curion (Frankfurt, 1612), Martin (Rouen, 1660), Du Four (1671), and René Moreau (Paris, 1673) are criticized. The history of this famous school of medicine from the eleventh century is given at the end (pp. 85–104). "By our standards it is not a scientific book, but a collection of popular, didactic verse, and as such it had an immense vogue for centuries" (*Printing and the Mind of Man*, 21). About three hundred editions have been published in various languages.

SALLWIGT, Gregorius Angius

Tractatus Mago-Cabbalístico-Chymicus et Theosophicus, von des Saltzes Ursprung und Erzeugung, Natur und Nutzen, wobey zugleich die Erzeugung derer Metallen, Mineralien und anderer Salien, aus dem Grunde der Natur bewiesen wird, . . . Aufgesetzt, von einem Emsigen Liebhaber der Ewigen Wahrheit, G. A. S.
Saltzburg: (no printer or publisher). 1729.

First edition in 4to. With 10 engraved plates (9 of which are folding) at the end; 9 of these plates are colored. An extremely fine, crisp copy, bound in the original vellum.

THE FIRST edition, in folio, appeared ten years earlier (Frankfurt, 1719). According to Ferguson, the name G. A. Sallwigt is probably a pseudonym for Georg von Welling. The present treatise on salt, discussed from the Rosicrucian standpoint, is the second part of Welling's *Opus Mago-Cabbalisticum*, which in its complete form did not appear until 1735. Goethe examined the work carefully in his *Dichtung und Wahrheit*. Very rare. (Duveen, 526)

SALMON, Guillaume

Dictionaire Hermetique, contenant l'Explication des Termes, Fables, Enigmes, Emblemes & manières de parler des vrais Philosophes. Accompagné de deux Traitez singuliers & utiles aux Curieux de l'Art. Par un Amateur de la Science.
Paris: Chez Laurent D'Houry, rue Saint Jacques, devant la Fontaine Saint Severin, au Saint Esprit. 1695.

First edition. 12mo. 6 leaves, 216 pp. Fine copy in early-eighteenth-century maroon morocco, all edges gilt. Eighteenth-century stamp on title ("Js. Ae. Rabaut Pr.") and nineteenth-century armorial bookplate of Chas. Benj. Caldwell, New Grange, Co. Meath. Bound with: Duclou, Gaston, *Traité philosophique de la triple preparation de l'or et de l'argent* (Paris: L. d'Houry, 1695).

SALMON (fl. 17th century), a physician of Paris, published several alchemical works, including *Bibliothèque des philosophes* (Paris, 1678), on which see Caillet. The *Dictionaire hermetique* explains the terms and processes employed by the alchemists and gives a list of the fifty-one authorities consulted by Salmon. Appended to the *Dictionaire* are two works by Gaston Duclou (ca. 1530–ca. 1590), with separate title page, signatures, and pagination. It appears that d'Houry also published the works by Duclou separately, as copies of the dictionary occur without them (cf. Caillet, Duveen). The privilege is dated 26 May 1695. One of the earliest chemical dictionaries to provide a good insight into the theories of the time, as well as defining materials otherwise difficult to identify. This work is described as "presque introuvable" by Guaita and Rosenthal. (Barbier, I, 975; Bolton, 74; Caillet, 9857; Duveen, 528; Ferchl, 123; Ferguson, I, 210; Guaita, 949; Heym, *Ambix*, I [1937], 59; Krivatsy, 3197; Neu, 3644; Rosenthal, 765; Wellcome, II, 465)

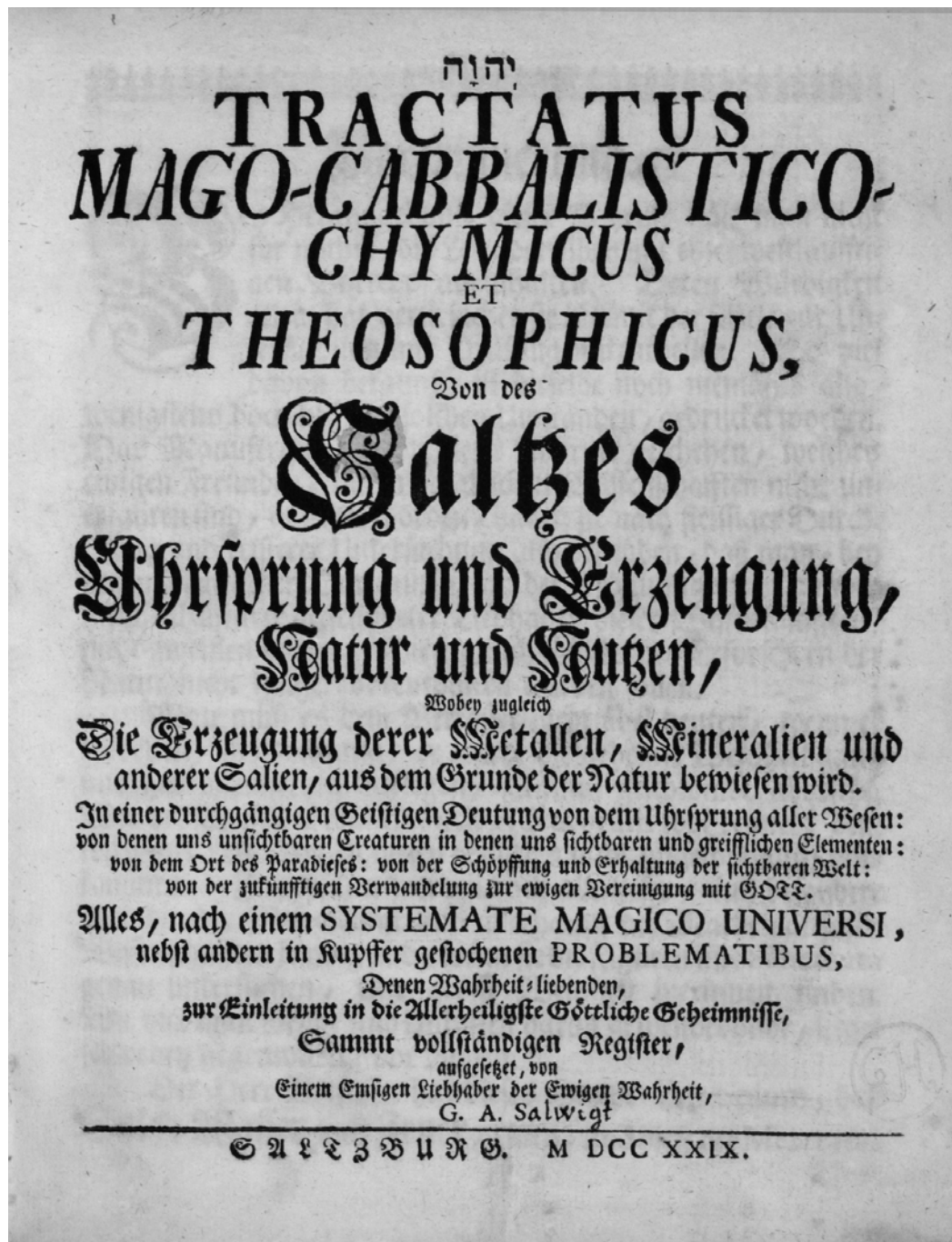
SALMON, William

Doron Medicum: or, a Supplement to the New London Dispensatory. In Three Books. Containing a Supplement: I. To the Materia Medica. II. To the Internal Compound Medicaments. III. To the External Compound Medicaments. Completed with the Art of Compounding Medicines: Observations and Exemplifications Chymical: An Idea of the Process of the universal Medicine of Paracelsus, taken from an Original Manuscript; Together with many rare Secrets of the Medical Art. . . .

London: Printed for, and sold by T. Dawks, T. Basset, R. Chiswell, M. Wotton, and G. Conyers. 1688.

Second edition. 8vo. 8 leaves, 776 pp., 28 leaves (index). Title within double rules and text in double columns. Lacks A1 (blank), half title present. Short tear in Pp8 affecting a few words (no loss); otherwise very good copy in original paneled calf, rebacked, corners restored, maroon morocco label.

THE FINAL, corrected, and most complete edition (first: London, 1683), intended to update Salmon's *Pharmacopoeia Londinensis, or, the new London dispensatory* (London, 1676, and later editions). The preparations of numerous inorganic and organic compounds are described. "Pages 377–401 contain a glossary which includes many chemical terms and Chapter XXVII is almost entirely alchemical in character"



Salwig. Tractatus Mago-Cabbalistico-Chymicus. Salzburg, 1729.

(Duveen). Facing the first page of text is a list of "The Medicinal Characters" (including many chemical symbols). (Cushing, S31; Duveen, 527; Ferchl, 466; Krivatsy, 10173; Neu, 3645; Watt, II, 829j; Wing, S427)

SALMON, William

The Family-Dictionary: or, Household Companion. Containing, in an Alphabetical Method, I. Directions for Cookery, . . . II. Making all sorts of Pastry, . . . III. Making of Conservees, . . . IV. The Making all kinds of Potable Liquors, . . . V. The Making of all sorts of Perfumes, . . . VI. The Virtues and Uses of the most usual Herbs and Plants, . . . VII. The Preparations of several Choice Medicines, . . . The Third Edition, Enlarged, with several Hundreds of Excellent Receipts. London: Printed for H. Rhodes, at the Star, the Corner of Bride-Lane, in Fleet-Street. 1705.

Third edition. 8vo. 4 leaves, 380 pp., 18 leaves (31 pp. index, 5 pp. publisher's catalogue). Text in double columns. Few tiny wormholes skillfully repaired; otherwise very good copy, in original paneled calf, rebacked, spine gilt-ruled and dated, maroon morocco label.

A RARE COMPENDIUM of useful information "accommodated to the use of Ladies, Gentlewomen, and such other Persons, whose Station requires their taking care of the House" (preface). The first edition (London: H. Rhodes, 1695) and second (London: H. Rhodes & R. Clavel, 1696) are listed by Wing under H. J. as numbers 66 and 66aA. Clear directions are given for making the chemicals used in pharmacy and other applications. Blocker (p. 350) lists a second edition (London: J. Rhodes, ca. 1705). The fourth and final edition, enlarged to 560 pages (London, 1710), is the only edition listed by Watt (II, 829k). (Blake, 398)

SALMON, William

Medicina Practica: or, Practical Physick. Shewing the method of curing the most usual diseases happening to humane bodies. . . . With the preparation of the Praecipulum, or Universal Medicine of Paracelsus. To which is added, the philosophical works of Hermes Trismegistus, Kalid Persicus, Geber Arabs, Artefius Longaevus, Nicholas Flamel, Roger Bachon, and George Ripley. All translated out of the best Latin editions, into English. . . . Together with a singular comment upon the first book of Hermes, the most ancient of philosophers. The whole compleated in three books. . . .

London: Printed by W. Bonny, for Tho. Howkins in George-Yard in Lombard-Street, and John Harris in the Poultry. 1692.

First edition, first issue. 8vo. 16 leaves, 472 pp., 1 leaf, pp. 433-696 (433-472 with duplicate pagination, but different text). Added engraved frontispiece portrait of Salmon at age

27 (by W. Sherwin) and 8 copperplates. Frontispiece and title page laid down, and upper corner of leaf H3 missing (with loss of 7 letters); otherwise very good copy, in early-nineteenth-century half calf, gilt, marbled boards.

AN IMPORTANT book because it contains English translations of alchemical texts originally published in Latin. Only the first 176 pages are on medicine. "The major part of the book consists of alchemical texts as enumerated on the title-page. Complete copies . . . are very rare" (Duveen). There is an interesting note on this work in the Mellon catalogue. At least three issues appeared in 1692, with various names added or omitted in the imprint of the main title page. Ferguson gives a detailed list of the alchemical works. (Cushing, S35; Duveen, 527; Ferguson, II, 318 [imperf.]; Ferguson Coll., 621; Heym, *Ambix* [1937], I, 53; Krivatsy, 10177; Mellon, 144; Osler, 3907; Parkinson & Lumb, 2161; Waite, 302; Watt, II, 829j; Wing, S434)

SALMON, William

Medicina Practica: or, Practical Physick. . . .

London: Printed for T. Howkins in George-Yard in Lombard-Street, J. Taylor at the Ship in St. Paul's Church-Yard; and J. Harris at the Harrow in the Poultry. 1692.

First edition, another issue. 8vo. 16 leaves, 472 pp., 1 leaf, pp. 433-696. With 8 copperplates (2 in photographic facsimile). Very good copy, in original unlettered paneled calf.

WING LISTS this as the third issue, although no priority of the second or third issue is known. Ferguson (II, 318) states that the "remainder copies were reissued with a new title-page: *Medicina Practica: or, the Practical Physician* (London, 1707)." (Wing, S434B)

SALMON, William

Pharmacopoeia Londinensis. Or, the New London Dispensatory in VI. Books. Translated into English for the publick good, and fitted to the whole art of healing. Illustrated with the preparations virtues and uses of all simple medicaments; vegetable, animal and mineral of all the compounds both internal and external: and of all the chymical preparations now in use. Together with some choice medicines added by the author. As also the Praxis of Chymistry, as it's now exercised, fitted to the meanest capacity. The fourth edition corrected and amended. . . .

London: Printed for T. Bassett, R. Chiswell, M. Wotton, G. Conyers, A. and I. Dawks; and are to be sold by Awnsham and John Churchill in Ave Mary Lane. 1691.

Fourth edition. 8vo. 8 leaves, 896, 865-876, 886-887, (3) pp. Very good copy, in contemporary calf, rebacked, spine gilt-lettered and dated.



Salmon, William. Medicina Practica. London, 1692.

THE FIRST official pharmacopoeia in England was the *Pharmacopoeia Londinensis* (London, 1618), published in Latin by the Royal College of Physicians. This was first translated into English by Nicholas Culpeper (1616–1654), who incorporated it into his *A physycall directory* (London, 1649; Wing C7540). The first English translation by Salmon (London, 1676; Wing S436A) was made from the third Latin edition. “We here present the World with a Translation of the *London Dispensatory*, lately Reformed by the Fellows, now living, of the Colledge of Physicians: being a Compendious Collection of the choisest Medicaments, whether Gallenical or Chymical yet known or in Request” (preface). The “Praxis of Chymistry” (pp. 806–863) describes practical chemical operations and processes, as well as the apparatus employed. Further editions appeared until the eighth (London, 1716; Blake, 349). (Waller, 8425; Wing, S440)

SALMON, William

Polygraphice: or the Arts of Drawing, Engraving, Etching, Limning, Painting, Washing, Varnishing, Gilding, Colouring, Dying, Beautifying and Perfuming. In seven books. . . . To which also is added, I. The one hundred and twelve Chymical Arcanums of Petrus Johannes Faber . . . II. An abstract of Choice Chymical Preparations . . . The fifth edition: enlarged with above a thousand considerable additions. Adorned with XXV copper sculptures; the like never yet extant. . . .

London: Printed for Thomas Passinger at the Three Bibles on London Bridge; and Thomas Sawbridge at the Three Flower de Luces in Little Brittain. 1685.

Fifth edition. 8vo. 32 leaves, 767, (1) pp. Engraved portrait frontispiece of Salmon (age 27 in 1675), engraved title page (both by W. Sherwin), and 23 copperplates (lacking plates 3 and 10, as often). Few early marginal notes; otherwise good copy in original calf, late-eighteenth-century rebacking.

SALMON (1644 or 1648–1713), an empiric physician in business near St. Bartholomew’s Hospital, London (1671), later styled himself “Professor of Physick” at the Blew Balcony by Fleet Ditch, and finally moved to Black-Fryers Stairs. Although very successful, he did not have a medical degree. First appearing in 1672, the present work was one of the most popular of his numerous books. “Though professing to deal with the arts of design it is far more comprehensive and includes the arts of dyeing and staining, alchemy, chemistry, chiromancy, arts of beautifying and perfuming, etc.” (Ferguson). The title calls for twenty-five plates, but most copies contain fewer (e.g., the Duveen copy also lacked plates 3 and 10). Rare. (Bolton, 797; Cushing, S39; Duncan, 11480; Duveen, 526–527; Ferguson, *Secrets*, I, 19–20, II, 6th Suppl., 65–66; Lawrie, 626; Neu, 3652;

Smith, 429; Sotheran, Cat. 682 [1908], 4193; Watt, II, 829j; Wing, S448)

SALMON, William

Seplasmus. The Compleat English Physician: or, the Druggist’s Shop Opened. Explicating all the particulars of which medicines at this day are composed and made. Shewing their various names and natures, their severall preparations, virtues, uses, and doses, as they are applicable to the whole art of physick, and containing above 600 chymical processes. A work of exceeding use to all sorts of men, of what quality or profession soever. The like not hitherto extant. In X. books. . . . London: Printed for Matthew Gilliflower, at the Black spread Eagle in Westminster-Hall, and George Sawbridge, at the Three Flower de Luces in Little Britain. 1693.

First edition. 8vo. 32 leaves, 1207, (1) pp. Lacking half title; otherwise very good copy, in original paneled calf, rebacked, spine gilt-lettered and dated. Bookplate: Denis Duveen.

“AN INTERESTING compilation . . . It may well be rare, as it is not mentioned by Ferguson (*Bibl. Chem. or Books of Secrets*), *Bibl. Osleriana*, Sotheran’s *Bibl. Chem. Math.* or the D.N.B. Book I is ‘Of Mettals and Minerals’” (Duveen). It is not in Sabin, although there are references to American plants, etc., and an account of Virginian snake root, which “is known to cure the biting of the Rattle Snake” (p. 801). A veritable storehouse of contemporary pharmaceutical chemical knowledge. Clean copies (as here) are very rare, as they were in constant daily use and usually read to pieces. It is possible that the preliminary leaves may have been set up by a different printer (or printers), as copies vary in the number of these leaves, although the text remains the same. The copy in the Waller collection has only twenty-eight preliminary leaves, while those at the universities of Manchester and Wisconsin have thirty-two, and others thirty-six. (Cushing, S43; Duveen, 528; Edelstein, 2032; Krivatsy, 10180; Neu, 3653; Parkinson & Lumb, 2164; Reynolds, 3680; Waller, 8426; Wing, S452)

SALT

A Theological and, Philosophical Treatise of the nature and goodness of Salt, out of the Holy Scriptures, learned Writers, and approved practise: Wherein the old vulgar conceit that Salt makes earth barren, is examined; and the much more ancient truth, that Salt is the great fructifier of the earth, is established. . . .

London: Imprinted by Felix Kyngston for Richard Boyle, and are to be sold at his shop in the Black Friars. 1612.

First edition. 4to. 4 leaves, 58 pp., 1 leaf (blank). Lacks A1 (blank), small piece missing from inner margin of 1 leaf (pp. 39–40), with loss of 3 or 4 letters; otherwise good copy, in quarter calf antique, marbled boards, maroon label, spine dated.

AN EARLY treatise on common salt and its uses in agriculture, with references to salt in the Holy Bible. The anonymous author divides his sources of information between about forty theological and thirty-five scientific writers (e.g., Aristotle, Avicenna, Fracastorius, Lemnius, Mizauldus, Pancirollus, Pliny, and Quercetanus). The running headline for most of the work is "New Compost for barren Land." The author shows how salt makes soil fruitful and talks of the goodness of honey and salt. He says on page 11: "To speake of the Salt of nature, that admirable quintessence I leave to the painful and patient (and much to be pitied) Chymists: to speake of the many sorts and kinds of artificiall Salt made by man." A very rare work that is not in the Library of the Ministry of Agriculture and Fisheries, London, and remained unknown to Browne, Fussell, Krivatsy, McDonald, Perkins, Waring, Watt, and Wellcome. (S.T.C. 24233)

SALTONSTALL, Winthrop

An Inaugural Dissertation on the Chemical and Medical History of Septon, Azote, or Nitrogene; and its Combinations with the Matter of Heat and the Principle of Acidity. Submitted to the public examination of the Faculty of Physic, under the authority of the Trustees of Columbia College in the State of New-York: William Samuel Johnson, LL.D. President: for the degree of Doctor of Physic, on the third of May, 1796. . . .

New-York: Printed by T. and J. Swords, Printers to the Faculty of Physic of Columbia College, No. 99 Pearl-Street. 1796.

First edition. 4to. 68 pp. Uncut with wide margins, stained and watermarked, hole in final leaf repaired (affecting a few letters); otherwise good copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated. Author's neat presentation inscription in ink to Samuel Barclay on title page.

AN EARLY American doctoral dissertation on nitrogen and the oxides of nitrogen, presented by Saltonstall (1775–1802) under the direction of Samuel Latham Mitchill (1764–1831), professor of chemistry at Columbia College (now Columbia University). Mitchill, who had published his *Remarks on the gaseous oxyd of azote or of nitrogene* (New York, 1795, 43 pp.; Blake, 306; Partington, III, 276), believed that nitrous oxide was very poisonous, but that was refuted by Sir Humphry Davy. Saltonstall discusses the chemical and medical properties of nitrogen and its oxides (especially nitric oxide and nitrogen dioxide). The appendix (pp. 49–68) reprints letters on chemical subjects by S. L. Mitchill and also an extract by Edward Bancroft on the ability of nitric acid to oxidize plant and animal products to a bright yellow substance (picric acid) of use in dyeing. (Bolton, 797; Edelstein, 2034; Ferchl, 466; Smith, 429; Waring, 580)

SALTPETER

Günstiger Vorschlag, die Salpeter-Erzeugung zu verbessern, dabei die Kosten zu verringern, Herrschaft und Publikum zu bereichern, und zugleich gänzlich zu erleichtern.
Tübingen: bei Gottlob Fridrich Hopffer. 1797.

First edition. 8vo. 30 pp., 1 blank leaf. Fine copy, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN INTERESTING work, by an anonymous author, on the economical preparation of pure saltpeter (potassium nitrate) from various sources, for use in the manufacture of gunpowder, which was then a subject of national importance. Karl Wilhelm Fiedler (b. 1758) published a work of similar title, *Gründliche Anweisung zur Salpeter-Erzeugung*, Casel, 1786 (Bolton, 439), but the present work is probably not by him (see Poggendorff, I, 745). Extremely rare. Not traced in available bibliographies.

SALTPETER

Loi sur la Fabrication du Salin; suivi d'une Instruction sur cette Fabrication. Imprimées par ordre du Comité de Salut Public. Extrait du procès-verbal de la Convention nationale, du vingt-neuvième jour de Germinal, l'an deuxième de la République française, une et indivisible.

Moulins: de l'Imprimerie de J. Maine et A. Guinemant, cours Beaurepaire. (1794).

First edition. 8vo. 14 pp., 1 leaf (blank). Fine copy in old vellum. Bound with: Lavoisier, A. L., *L'Art de fabriquer le salin et la potasse* (Paris, 1779), and several other works on saltpeter.

PUBLISHED ON 19 April (1794) without a formal title page, this work lists the laws relating to the selection and burning of plants to produce soda and potash (pp. 2–4). Then there are instructions to follow on treating the ashes to yield purified soda and potash (pp. 5–8), signed by Billaud-Varenne, Couthon, Robespierre, Carnot, Lindet, Collot-d'Herbois, and C. A. Prieur. Next come instructions on the extraction and purification of saltpeter from animal wastes, earths, and caves (pp. 9–14), by an anonymous author. A rare work, apparently unrecorded.

SALVENIUS, Fridericus

Dissertatio Chemico Halurgica, de Sale Sodomitico, . . . quam . . . moderante . . . Petro Adr. Gadd, . . . pro laurea, ventilandam sistit Fridericus Salvenius, Tavastensis. In Aud. Majori Die XXVII Maji, An. MDCCLXXVIII.
Åbo: Impressit J.C. Frenckell, R. Acad. Typogr. (1778).

First edition. 4to. 10 pp. Fine copy in maroon quarter cloth antique, marbled boards, spine labeled: Gadd. Nine Dissertations. 1759–1778.

A DISSERTATION ON sea salt, particularly that which occurs in the Dead Sea, presented by Salvenius under the direction of Peter Adrian Gadd, at Åbo, Finland. The history of the salt is discussed with references to the works of Bysching, Galen, Monnet, Strabo, Troil, et al. Chemical experiments are then described in which the salt is pyrolyzed to produce an alkaline residue and hydrochloric acid. In another experiment, it is shown that hydrochloric acid is produced by heating a mixture of salt and magnesium oxide with sulphuric acid. (Ferchl, 169; Partington, III, 179; Poggendorff, I, 826)

SAMUELSSON, Johann Söderling

Disputatio Physica de Fulmine & Lapide Fulmineo. . . . Praeside . . . Haraldo Vallerio . . . Publico bonorum examini summa qua decet, modestia offert . . . Johannes Söderling Samuelsson Holmensis, in Auditorio Gustav. Maj. ad diem 23 Junii A. 1698. . . .
Stockholm: Literis B. Joh. Georg. Eberdt. (1698).

First edition. 12mo. (in 4s). 1 leaf, 26 pp. Woodcut capital, head- and tailpiece. Very good copy, in brown quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION OF chemical interest on lightning, meteors, and electroluminescence by Samuelsson, presented under the direction of Harald Vallerius (1646–1716), professor of mathematics at the University of Uppsala. The origin of lightning and meteorites is discussed, with references to the works of Bartholin, Caesalpinus, Descartes, Paracelsus, Rohault, et al. Vallerius was interested in the aurora borealis, “which he explained as due to the reflection of the rays of the sun (below the horizon) by thin, light, six-sided ice plates, floating in the upper atmosphere” (Harvey, *History of Luminescence*, p. 256). Poggendorff (II, 1168) briefly mentions Vallerius but not the present work. Very rare. Not located in the usual bibliographies.

SANDBERG, Anders

De Reductione Metallorum per Metalla in Solutionibus Salinis Concitata Disquisitio, . . . praeside Jona Albino Engeström, . . . pro laurea p. p. Andreas Sandberg, . . . In Academia Carolina d. XI Junii MDCCCXXIII.
Lund: Literis Berlingianis. (1823).

First edition. 8vo. 16 pp. Fine copy, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated. Bound with: Hansson, Johann Peter, *Dissertatio . . . de simplicitate hydrogenii* (Lund, 1814).

AN IMPORTANT dissertation on the reduction of metallic salts by hydrogen, reducing agents, and metals. The reducing action of the electric current from a voltaic pile is

described, and the electroplating of metals is discussed. Sandberg (b. 1797) presented this work under the direction of Jöns Albin Engeström (1787–1846), professor of chemistry and physics at the University of Lund. Sandberg later studied theology and became pastor at Madesjö. Rare. (Ferchl, 468; Poggendorff, I, 670)

SANGIORGIO, Paolo

Analisi delle Acque che hanno sentita l'azione della Pila di Volta . . .

Milan: Presso Pirota e Maspero Stampatori-Libraii in Santa Margherita. 1805.

First edition. 8vo. 32 pp. Very fine copy on pale-blue paper, uncut, in maroon quarter cloth, marbled boards, spine gilt-lettered and dated. Bound with: 3 tracts by Pacchiani, 2 by Cioni and Petrini, and 1 each by Mascagni, and Thenard and Biot, all of 1805.

AN INTERESTING work in which the researches of Pacchiani on the electrolysis of water (including seawater) are critically examined, and an alternative explanation of the production of oxygen, hydrogen, hydrochloric acid, and hypochlorous acid is advanced. Sangiorgio (dates unknown), professor of chemistry in Milan, describes his experiments on the electrolysis of dilute solutions of sea salt and refers to the investigations of Ermenegildo Pini, Abate Mauro, P. Racagni, et al. Very rare. Not located in available bibliographies.

SANTANELLI, Ferdinando

Philosophiae Reconditae sive Magicae Magneticae Mumialis Scientiae Explanatio, ex qua omnia naturalia Miracula, & Admirabilia fluunt, ac in intimis atque occultis Naturae visceribus introitus aperitur omnibus, & per omnia. . . .
Cologne: (N.p.). 1723.

First edition. 4to. 4 leaves, 108 pp. Woodcut design on title page. Paper very lightly embrowned throughout; otherwise fine copy in contemporary unlettered green boards. From the library of the famous hermeticists A. T. and M. Atwood, with their signature dated 1859 on the front pastedown endpaper.

SANTANELLI (fl. 1700) was a physician who practiced in Venice and was also professor of medicine in the Royal Gymnasium at Naples. In the dedication to the Royal Society of London, the author says that although the book is small it contains and explains the most hidden things of science. He also mentions the difficulties he encountered when writing the book, as a war was raging all around his house at the time. Chemical and medical subjects are discussed, with a distinct alchemical bias. Chapter 14 is on magnets and magnetic sorcery. Methods for determining

the presence of demons in people are described in the appendix, as are procedures for exorcizing them. A contemporary manuscript note on the title page states that this work was written in 1696. Ferguson suggests that although the book bears a Cologne imprint it "looks as if it had been printed at London." The Duveen copy is in a contemporary binding with Maier's *Secretioris Naturae Secretorum* (Frankfurt, 1687), which implies that the work was printed in Germany. The paper is uniformly very lightly embrowned, which is characteristic of German paper of the period. (Blake, 401; Caillet, 9885; Duveen, 530; Ferchl, 468; Ferguson, II, 323; Neu, 3670; Wheeler Gift, 261)

SANTIAGO, Diego de

Arte Separatoria y Modo de Apartar todos los Licores, que se sacan por via de Destilacion: para que las Medicinas obren con mayor virtud, y presteza. . . . Con la manera de hazer el instrumento separatorio que invento el Autor, que es el mejor y mas facil que hasta oy se a visto . . .

Seville: Impresso en Sevilla por Francisco Perez. 1598.

First edition. 8vo. 8 leaves, 152 + 78 numbered folios, 2 leaves (index). Roman letter. Full-page woodcut coat of arms on recto of leaf following title. Woodcut capitals, head- and tailpieces. Top right-hand corner of title leaf repaired (just touching one letter); otherwise fine, crisp copy, in early-eighteenth-century Spanish calf, spine richly gilt, brown leather label.

A BEAUTIFUL COPY of a book covering all aspects of distillation and the purification of chemicals in sixteenth-century Spain. As the title states, this work contains descriptions of distillation apparatus invented by the author. Santiago, or Sanctiago (dates unknown), was royal distiller to King Philip II, to whom he dedicated his book on 7 February 1598. The *Libro segundo del arte separatoria* (78 folios, 2 leaves) at the end has the colophon: "Impresso in Sevilla, por Rodrigo Cabrera, en la casa que era Espital del Rosario, a la Magdalena. Anno de 1598." Of considerable interest to the historian of chemistry and chemical technology, this work was unknown to R. J. Forbes (*History of Distillation*). Extremely rare. Not in the usual bibliographies. (Durling, 4061)

SANTORIO, Santorio

Medicina Statica: being the Aphorisms of Sanctorius, translated into English, with large explanations. To which is added Dr. Keil's Medicina Statica Britannica with comparative remarks, and explanations. As also Medico-Physical Essays on I. Agues. II. Fevers. III. An elastic fibre. IV. The gout. V. The leprosy. VI. Kings-evil. VII. Venereal diseases. . . .
By John Quincy, M.D. . . .

London: Printed for W. and J. Newton, E. Bell, W. Taylor, and J. Osborn. 1723.

Third Quincy edition. 8vo. viii, 344 pp., 12 leaves, 116 pp. With engraved frontispiece (Santorio on his weighing scale) and folding copperplate. Woodcut capitals, head- and tailpieces. Divisional title page to Quincy's *Essays*, dated 1724. Good crisp copy in original speckled calf, maroon morocco label. From the library of the celebrated physician and philosopher David Hartley (1705–1757), inscribed in ink on flyleaf: "D. Hartley, Coll. Jesu Cant. Soc. Aug. 29, 1728."

THE FIRST edition of *Medicina statica* appeared "in 1614 and was an astounding success, going through many editions and translations for a century and a half. The book was first translated into English in 1676 and, in 1712, was translated by John Quincy in a series of editions that continued into the nineteenth century" (*Heirs of Hippocrates*, p. 125). Santorio (1561–1636), professor of medicine at Padua and Venice, "discovered insensible perspiration by living on the platform of a large balance, on which he worked and took his meals. With a daily diet of 8 lb. of food and drink he lost 5 lb" (Partington, II, 442). This volume also contains the works of James Keill (1673–1719) and J. Quincy (d. 1722) listed in the title, both of which are of biochemical interest. Other editions are cited by Blocker, Neu, Osler, and Waller. (Blake, 401; Cushing, S71; Watt, II, 786i; Wellcome, III, 381)

SAUNDERS, William

Dissertatio Medico-Chemica Inauguralis, de Antimonio: quam annuente summo numine . . . Gulielmi Robertson. . . . Academiae Edinburgenae praelecti . . . Pro gradu doctoratus . . . Gulielmus Saunders, A.M. Scotus. Ad diem 25 Octobris . . .
Edinburgh: Apud W. Ruddiman, J. Richardson, et Socios. 1765.

First edition. Sm. 4to. 2 leaves, 60 pp. Fine copy in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of the physician and chemist Saunders (1743–1817), who practiced in London at Guy's Hospital and was physician to George IV (when prince regent) in 1807. Saunders was a friend of William Cullen, and this dissertation on the chemistry of antimony and its compounds "gave ample proof of his attainments as a chemist" (Munk). Elected F.R.C.P. (1790) and F.R.S. (1793), Saunders published works on chemistry, medicine, and other subjects. An important work, which contains a summary of all that was then known on antimony. (Blocker, 352; Ferchl, 469; Munk, II, 399; Poggendorff, II, 754; Waring, 237; Watt, II, 833w)

SAUNDERS, William

A Treatise of the Chemical History and Medical Powers of some of the most celebrated Mineral Waters; with Practical Remarks on the Aqueous Regimen. To which are added, Observations on the use of Cold and Warm Bathing. By William Saunders, M.D., F.R.S. . . .

London: Printed and sold by William Phillips, George Yard, Lombard Street. 1800.

First edition. 8vo. 4 leaves, xx, 483, (1) pp. With folded printed table (analyses of 23 mineral waters). Fine copy in half calf antique, marbled boards, dark-green morocco label, spine dated.

A COMPREHENSIVE TREATISE on British mineral waters. The first 363 pages are mostly chemical in content, with much on inorganic and analytical chemistry. The remainder of the book describes the beneficial uses of mineral waters in medicine. "Saunders' work contains a great deal of practical information about British mineral waters" (Waring). (Blake, 402; Ferchl, 469; Munk, II, 401; Poggendorff, II, 754; Waring, 777; Watt, II, 833x)

SAUNDERS, William

A Treatise on the Chemical History and Medical Powers of some of the most celebrated Mineral Waters; With Practical Remarks on the Aqueous Regimen. To which are added, Observations on the use of Cold and Warm Bathing. By William Saunders, M.D., F.R.S. & S.A. . . . Second edition, enlarged.

London: Printed and sold by Phillips and Fardon, George Yard, Lombard Street. 1805.

Second edition. 8vo. xii, xx, 570 pp., 1 leaf (errata). With large folding printed table (analyses of 24 mineral waters). Fine copy in contemporary gilt-ruled calf, spine gilt, red morocco label.

THE CONSIDERABLY expanded and revised second edition of this work on British (and some Continental) mineral waters. The first edition (London, 1800) "met with a rapid sale [and was] favourably received by those who are most capable of appreciating its merits" (preface). An original tract by Dr. Alexander Marcet is included, containing "a very accurate analysis of the chalybeate Spa at Brighton." This tract was also published separately (London, 1805), in which Marcet acknowledged that it had appeared in the present edition of Saunders' work. Of great chemical interest, the second edition gives more information on analytical techniques and reagents than in the first edition. (Blocker, 352; Bolton, 800; Waring, 777; Watt, II, 833x)

SAUNIER DE BEAUMONT

Lettres Philosophiques, sérieuses, critiques, et amusantes, traitant de la pierre philosophale, de l'incertitude de la médecine, de la félicité temporelle de l'homme, de la nature de l'ame, des prétendus esprits forts qui révoquent en doute l'immortalité de l'ame: . . .

Paris: Chez Charles Robustel . . . 1748.

Second edition? 12mo. xii, 472 pp. Fine, crisp copy, in the original mottled calf, gilt, with gilt-lettered label.

A BEAUTIFULLY PRINTED edition comprising a collection of thirty-seven curious letters on many subjects of scientific and medical interest, as listed in the title. Blake, Caillet, Duveen, and Smith list the first edition: Paris, Chez Saugrain, 1733, 12mo., 473 pp. Blake (p. 402), Caillet (no. 9922), and Guaita (no. 2104) list an edition of 1748 in 2 volumes, 12mo., with a La Haye imprint. No reference to another copy with a Paris imprint, as here, has been found. Although "tome premier" appears on the title page, the book is complete. Part I occupies pages 1–240, and part II pages 241–472. The letter on the philosopher's stone (pp. 1–13) discusses the alchemical writings of Espagnet, Hermes Trismegistus, Raymund Lully, Arnaldus de Villanova, Flamel, Bernardus Trevisanus, et al.

SAUSSURE, Horace Bénédicte de

Défense de l'Hygrometre à Cheveu, pour servir de suite aux essais sur l'hygrométrie. Par Horace-Bénédict de Saussure, . . . Geneva: Chez Barde, Manget & Comp. . . . & se trouve à Paris, Chez Buisson. 1788.

First edition. 4to. 2 leaves, 60 pp., 1 leaf. With 1 copperplate. Woodcut on title page and woodcut headpiece on page 1. Slightly water stained; otherwise a very good, large paper copy. Bound with: Saussure, H. B. de, *Essais sur l'hygrométrie* (Neuchâtel, 1783). From the library of François-Vincent Raspail (1794–1878).

IN THE introduction Saussure states that although his *Essais* (1783) had been very well received by most scientists, there were three who had criticized his book. This *Défense* was written to answer the objections of Chiminello, Father Jean-Baptiste, and especially De Luc. "It is scarcely surprising that no one before De Saussure's time had thought of using such fragile fiber as hair. . . . Having thought of hair, De Saussure . . . searched no further, a fact that was emphasized by the most persistent of his critics, Jean André De Luc, who had indeed tried many different substances for use in hygrometry, fastening at last on whalebone strips cut across the grain. . . . In his *Défense* . . . De Saussure made a cutting remark, namely that the only three physicists who had attacked his *Essais* were inventors of hygrometers that

differed from his. Time has proved De Saussure to have been right" (Middleton). An 8vo. edition was published simultaneously with this in 4to. The *Défense* (in 4to. or 8vo.) is rare, most copies of the *Essais* (1783) being bound without it. Not in Blake, Bolton, Cushing, Duveen, Ferchl, Morgan, Partington, Smith, Waller, Watt, etc. (D.S.B., XII, 123; Edelstein, 2039; Middleton, *Invention of Meteorological Instruments*, pp. 101–107; Poggendorff, II, 756)

SAUSSURE, Horace Bénédicte de

Essais sur l'Hygrométrie. Ier. Essai. Description d'un nouvel Hygrometre comparable. II. Essai. Théorie de l'hygrométrie. III. Essai. Théorie de l'évaporation. IV. Essai. Application des théories précédentes à quelques phénomènes de la météorologie. Par Horace-Bénédict de Saussure, Professeur de Philosophie à Genève. . . .

Neuchatel: Chez Samuel Fauche Père et Fils. 1783.

First edition. 4to. xxiv, 367, (1) pp. With fine engraved headpiece (p. 1) and 2 copperplates of apparatus (1 folding). Fine, large-paper copy, in contemporary mottled calf, spine gilt in compartments, maroon morocco gilt-lettered label. From the library of the famous nineteenth-century scientist François-Vincent Raspail (1794–1878), with his small stamp on title page. Bound with: Saussure, H. B. de, *Défense de l'hygrometre a cheveu* (Geneva, 1788).

A MILESTONE WORK in chemistry, physics, and meteorology, which established hygrometry as an exact science. Primarily a physicist and geologist who explored and published on the Alps, Saussure (1740–1799) was the first to prove that air expands and becomes less dense the more humidity it contains. In these *Essais* he describes his experiments with the hair hygrometer of his invention and his theory of evaporation and hygrometry with their applications to meteorology. He also enunciates his theory of the evaporation of water in hydrogen, carbon dioxide, and other gases. Partington discusses the chemical aspects of this work. Cuvier regarded this book as one of the greatest contributions to science of the eighteenth century. The present copy has a distinguished provenance, having belonged to Raspail. An 8vo. edition was published simultaneously with this in 4to. format. Not in Bolton, Duveen, Smith, Sondheimer, etc. (Blake, 402; Cushing, S101; Daumas, *Scientific Instruments* [1972], 215; D.S.B., XII, 123; Edelstein, 2040; Ferchl, 469; Middleton, *Meteorological Instruments* [1969], 102; Middleton, *Theories of Rain* [1965], 120; Morgan, 676; Partington, III, 763; Poggendorff, II, 755–756; Sotheran, Cat. 682 [1908], 4219 ["Rare"]; Sparrow, *Milestones of Science* [1972], No. 174; Waller, 11432; Watt, II, 833d; Wolf, 326)

SAUSSURE, Horace Bénédicte de

Essais sur l'Hygrométrie.

Neuchatel: Chez Fauche Père et Fils. 1788.

First edition. 8vo. xii, 524 pp. With 2 folding copperplates and 11 folding tables in text. Woodcut on title and woodcut headpiece on page 1. A superb copy in mint condition, bound in contemporary Italian overlapping vellum, maroon morocco gilt-lettered label.

A SPLENDID COPY of the first 8vo. edition of this classic work, which was published simultaneously with the edition in 4to. format (q.v.). The 8vo. edition appears to be rarer than the 4to. For bibliographical references, see description of the 4to. edition.

SAVERY, Thomas

The Miner's Friend; or, An Engine to Raise Water by Fire, described, and of the manner of fixing it in mines; with an account of the several other uses it is applicable unto; and an answer to the objections made against it. . . .

London: Printed for S. Crouch, at the Corner of Pope's Head-Alley in Cornhill. 1702. Reprinted (by W. Clowes), 1827.

First edition thus. 12mo. 53, (1) pp. With engraved frontispiece portrait of Savery (by W. T. Fry), 18 small text woodcuts, and 4 copperplates illustrating the steam engine and its parts. Fine, crisp copy, uncut, in modern maroon quarter cloth, marbled boards, spine gilt-lettered, with original yellow printed wrappers bound in.

A REPRINT OF the first edition (London, 1702) of this classic work by Savery (1650?–1715), a military and mining engineer. The author, "having spent much of his youth in mining areas, turned his attention to the most urgent need of his day, the dewatering of mines. He introduced his pump in 1698, working on the 'pulsometer' principle, the first steam pump to be made commercially" (Annen). Savery's was the first practicable steam engine and was specially designed to deal with accumulation of water in Cornish mines. "This engine was used for supplying water to towns and private residences. It was also used in some mines, but not many, because of the dangers from boiler explosions, where the steam pressure had to be high in order to raise the water in considerable amounts to the height required" (Wolf). The present work, undoubtedly privately printed in few copies, is far rarer than the very rare original of 1702, which is cited by Annen (no. 13), Hoover (no. 713), Williams (p. 460), and Wolf (pp. 553–556). Not traced in available bibliographies.

SAXHOLM, Petrus

Dissertatio Historico-Politica de Ferro Svecano Osmund, quam . . . praeside . . . Mag. Andrea Brönwall, . . . Publico bonorum examini modeste subjicit Petrus Saxholm Westmannus. . . . 20 Decembr. 1725. . . .

Uppsala: Literis Wernerianis. (1725).

First edition. 4to. 4 leaves, 32 pp. With copperplate of smelting furnace and mechanical bellows (by J. Klopffer, engraved by E. A. Geringius, 1725), and 2 woodcuts in text (pp. 21 and 22). Very good copy, in quarter maroon cloth antique, marbled boards, spine gilt-lettered and dated.

A METALLURGICAL DISSERTATION on the history and political importance of the so-called Osmund steel produced in early-eighteenth-century Sweden, with references to Agricola, Isidorus, Lucretius, Vossius, et al. The writings of Lars Benzeltjärna (1680–1755) are particularly noticed. Of chemical interest, improved techniques in smelting various iron ores and the manufacture of steel are discussed. No information on Saxholm or the praeses, Andrea Brönwall, has been located in available bibliographies. Extremely rare.

SCACCHO, Fortunato

Thesaurus Antiquitatum Sacro-Prophanarum, in quo ex antiquis Graecis ac Latinis Scriptoribus, quidquid ad Nomina, Usum, & Abusum Oleorum, & Unguentorum, ex sacris habetur litteris, dilucide explicatur. . . .

The Hague: Apud Joannem Swart. 1725.

First Hague edition. Folio. 10 leaves, 578 pp., 39 leaves. Title page in red and black. Text printed in double columns (total 1155). Beautiful engraved title page (by J. van Vianen, dated Amsterdam, 1702) and numerous fine engravings in text. Very good copy, in original unlettered half calf, marbled boards.

TRANSLATED FROM ancient Greek and Latin manuscripts, this is an authoritative treatise on the oils, unguents, and perfumes known in antiquity, with their use in religious ceremonies and private life. Exact methods of preparation and purification of the chemicals and other substances from which these mixtures were made are described, with illustrations of the apparatus used. Based on archaeological discoveries, the plates show ovens, beakers, flasks, funnels, and other equipment. A mine of information on the chemical techniques and processes used in biblical times, this work is in three sections, which were first published in Rome between 1625 and 1638. There is a copious index to relevant locations in the Bible. An Augustinian, Scaccho was *sacristanus* at the papal chapel, and he dedicated this work to Maffeo Barbarini (1568–1644), who became Pope Urban VIII in 1623. (*Biogr. Univ.*, XLI, 2; Fürst, III, 256; Graesse, VI, 288; Hurter, III, 1072; Watt, II, 835t)

SCALIGER, Julius Caesar

Exotericarum Exercitationum Liber Quintus Decimus, de Subtilitate, ad Hieronymum Cardanum. . . .

Paris: Ex officina typographica Michaelis Vascosani, via Iacobaea, ad insigne Fontis. 1557.

First edition. 4to. 4 leaves, 476 folios, 32 leaves (last blank). Woodcut capitals and text diagrams. Roman letter. Fine copy, with wide fore- and lower margins (some untrimmed), in seventeenth-century gilt-ruled quarter vellum, speckled boards.

THE MONUMENTAL 952-page attack on the *De Subtilitate* (1550) of Girolamo Cardano (1501–1576). Scaliger (1484–1576), physician and natural philosopher, spent seven years on this work, continuing to ignore the corrections and improvements in Cardano's revised editions. "When Cardano failed to reply immediately, Scaliger, believing a false rumor that Cardano had died, was stricken with remorse and wrote a funeral oration in which he repented for the onslaught on his late opponent. Ironically, Cardano published his reply two years after Scaliger's death" (D.S.B.). Important as an encyclopedia of science and natural philosophy of the period, this work contains an immense amount of learning in chemistry, physics, and related disciplines. Cardano had defined a metal as a substance that melts with heat and hardens on cooling. Scaliger states that this definition excludes mercury and another metal found in Mexico, which no fire could melt. The metal was platinum ("orichalci," fol. 134 verso), and the present work is the earliest to allude to that element. Scaliger also discusses lodestones and magnetism. Other editions appeared at Frankfurt (1576, 1582, 1592, 1607) and Lyons (1615). Rare. (British Library, *S.T.C. French*, 396; Caillet, 9947 [imprint: Federicum Morellum, but colophon identical to present Vascosanus issue]; Cushing, S106; D.S.B., XII, 135; Durling, 4091; Duveen, *Supplement*, 342; Ferchl, 471; Harvey, 540; Motteley, 539; Partington, II, 10; Poggenorff, II, 765; Rosenthal, 211; Thorndike, VI, 293; Watt, II, 835w; Weeks, 408; Wellcome, I, 5806)

SCHARF, Johann

Primitiae Progymnasmatum Physicorum, disputationibus nonnullis generalioribus per zythmata [sic] insigniora magisque necessaria . . . proposita à M. Johanne Scharfio, Croppenstadense Saxone.

Wittenberg: Exscriptae typis Christiani Tham. 1621.

First edition. 4to. 4 + 8 + 8 + 8 + 8 + 8 + 6 + 10 + 10 + 16 + 12 leaves (all unpaginated). Occasional early neat marginal annotations in ink; otherwise fine, crisp copy in modern boards.

SCHARF, OR Scharff (1595–1660), of Kroppenstadt, near Halberstadt, studied at Wittenberg and became professor of philosophy there in 1627. Later he was made doctor of theology and became professor of theology in 1649. He founded a bursary of 500 gulden for poor students and upon his death left several works on physics, philosophy, logic, and theology. His *Manuale physicum* (Leipzig, 1657) is mentioned by Ferchl (p. 472), Ferguson (II, 328), and Thorndike (VII, 655–656). Scharf's teachings "adhered to the Aristotelian order . . . as drawn from the most ancient writers" (Thorndike). The present volume on physical (and some chemical) subjects contains eleven dissertations presented before the Wittenberg Academy by Scharf's pupils. Each is headed *Problematum physicorum*, as follows: 1) Erasmus Teurkauf, *Deo triuno*, 1621; 2) Henricus Anger, *De principiis rerum naturalium*, 1621; 3) Henricus Hempelius, *De natura*, 1621; 4) Daniel Polius, *De causis rerum naturalium*, 1621; 5) Melchior Polysius, *De casu & fortuna*, 1622; 6) Fabianus Hentschelius, *De quantitate*, 1622; 7) Jacob-Elias Gilbertus, *De qualitatibus rerum naturalium*, 1622; 8) Georgius Breunerus, *De motu & quiete*, 1622; 9) Andreas Ropilius, *De motu in specie*, 1622; 10) Johannes Emmichius, *De loco sive locabilitate & vacuo*, 1622; 11) Jacob-Elias Gilbertus, *De tempore*, 1622. Very rare. Not traced in available bibliographies.

SCHAUFFENBUEL, Franciscus Josephus

Dissertatio Inauguralis Medico-Chemica de Partibus Constitutivis Corporum Naturalium . . . pro summis in medicina honoribus et privilegiis doctoralibus . . . die XVIII. Martii Anno MDCCLXXXIV. Solemni eruditorum examini subjicit Franciscus Josephus Schauffenbuel Foro-Tiberiensis Helvetus. Strasburg: ex Officina Heitziana. (1784).

First edition. 4to. 1 leaf, 40 pp. Title page slightly soiled; otherwise a good copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

ON THE "constituent parts of natural bodies," discussing the composition and chemical reactions of various minerals, earths, clays, salts, acids, alkalies, metals, bitumen, amber, vegetable and animal products of distillation, etc. An interesting dissertation that attempts to show the unifying thread that exists throughout the mineral, vegetable, and animal kingdoms. The author, on whom no biographical information has been found, refers to the works of earlier and contemporary chemists, with particular emphasis on Black, Bergman, Scheele, Lavoisier, Pott, Macquer, et al. Very rare. Unrecorded by the usual bibliographers.

SCHEDIN, Anders

Chemisk Afhandling om Järnmalmes Proberande på Väta Vägen, . . . af praeses Mag. Torb. Bergman, . . . samt responders Anders Schedin, Uplänning . . . 24 Maji 1777. Uppsala: Tryckt hos Joh. Edman. (1777).

First edition. 4to. 3 leaves, 14 pp. Fine wide-margined copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT dissertation by Schedin (dates unknown) on the analysis of iron ores using wet chemical techniques, with Torbern Bergman presiding. The historical introduction traces the analysis of iron ores from the works of Ercker and Fuchs in the sixteenth century. A revised and enlarged edition in Latin appeared as *Dissertatio metallurgica de minerarum docimasia humida* (Uppsala, 1780), by Peter Castorin (Moström, 159). Again revised, it appeared in Bergman's *Opuscula physica et chemica* (Uppsala, 1780, vol. 2), from which English, French, German, and Russian translations were made. This original Swedish edition is rare. Not in the usual early chemical bibliographies. (Moström, 116)

SCHEELE, Carl Wilhelm

The Chemical Essays of Charles-William Scheele. Translated from the Transactions of the Academy of Sciences at Stockholm. With Additions.

London: Printed for J. Murray, No 32. Fleet-Street; W. Gordon and C. Elliot, Edinburgh. 1786.

First English edition. 8vo. xiii, (1), ii, 219, (1), 221–275, (1), 277–313, (1), 315–317, (1), 319–335, (1), 337–389, (1), 391–406 pp., 1 leaf (blank). Very fine (near-mint) copy, in original polished tree calf, crimson morocco label.

A MONUMENTAL WORK containing a collection of essays on discoveries by Scheele, which had been published in Swedish in the Stockholm Academy transactions. Franc Xaver Schwediauer (1748–1824), an Austrian physician with scientific interests who then lived in London, translated the essays into English. Owing to Schwediauer's imperfect knowledge of English, Thomas Beddoes corrected the translation, added notes, and published the book. In the preface Beddoes describes how the work was produced, referring to a "foreign gentleman" (Schwediauer) without naming him. Some of Scheele's most important memoirs are included: e.g., his discovery of hydrofluoric, nitrosulphonic, molybdic, tungstic, arsenious and arsenic acids among inorganic compounds; and benzoic, citric, gallic, lactic, malic, oxalic, uric, and other organic acids. Scheele also independently discovered or prepared chlorine, baryta, oxygen, hydrogen sulphide, glycerol, lactose, and other compounds. He obtained manganese salts and showed that they

color glass. He discovered "Scheele's green" (cupric arsenite) and made a strong solution of hydrocyanic acid from potassium ferrocyanide. Also described is Scheele's method of preserving vinegar by heating it in a vessel surrounded by boiling water (i.e., pasteurization a hundred years before Pasteur). At the end is an important account of Prussian blue (ferric ferrocyanide). (Blake, 405; Bolton, 802; Cole, 1167 [imperf.]; Duveen, 533 [Joseph Black's annotated copy]; Edelstein, 2043; Ferguson, II, 331 [not in Young Coll.]; Neu, 3697; Partington, III, 211; Smith, 432; Sotheran, Cat. 682 [1908], 4229 ["Very Rare"]; Waller, 11232)

SCHEELE, Carl Wilhelm

Mémoires de Chymie de M. C.W. Schéele, Tirés des Mémoires de l'Académie Royale des Sciences de Stockholm, Traduits du Suédois & de l'Allemand. Première Partie. (Seconde Partie). Dijon: Chez l'Éditeur . . . et se trouve à Paris, Chez Théophile Barrois jeune, Libraire, . . . Cuchet, Libraire, . . . 1785.

First French edition. 2 vols., 12mo., in 1. I: 2 leaves, vi, 269, (3) pp., 3 leaves (blank). II: 2 leaves, vi, 246 pp., 1 leaf (blank); 1 engraved plate of apparatus (facing p. 11). Fine copy with both half titles, in mid-nineteenth-century dark-blue quarter calf, speckled boards, spine gilt-ruled. From the library of H. P. Le Clerc (who signed the privilege, 8 July 1785), with his inscription in ink on first half title: "Bibliothèque de H. P. Le Clerc."

THE FRENCH edition of twenty-one memoirs (1771–1784) by Scheele, translated by Mme. Picardet from the *Transactions of the Royal Academy of Sciences, Stockholm* and from Crell's *Chemische Annalen*. It is important, as this collection is the first attempt to gather together Scheele's epoch-making papers. Guyton de Morveau added some notes and made revisions. Appearing here for the first time in a book is Scheele's discovery of uric acid (1776), the original paper being cited as Garrison-Morton, 668. Also included are his discoveries of chlorine, manganese, and baryta (1774); arsenic acid (1775); cupric arsenite (Scheele's green, 1778); molybdic acid (1778); silicon fluoride (1771, 1780); tungstic acid (1781); and several organic acids. Ferchl and Ferguson erroneously give the date of volume II as 1788. Collections in Latin by Hebenstreit (Leipzig, 1788–89, 2 vols.), in German by Hermbstädt (Berlin, 1793, 2 vols.), and in English (London, 1786) appeared after this French edition. An important copy, having belonged to Le Clerc, the official of the council that approved publication of this book. Rare. (Cole, 1168; Waller 11229)

SCHEELE, Carl Wilhelm

Chemische Abhandlung von der Luft und dem Feuer. Nebst einem Vorbericht von Torbern Bergman . . .

Uppsala & Leipzig: Verlegt von Magn. Swederus, Buchhändler; zu finden bey S. L. Crusius. 1777.

First edition. 8vo. 2 leaves (first blank), 16, 155, (1) pp., 2 leaves (Vorrede) misbound between pages 150–151. With engraved vignette on title page and 1 folding copperplate (containing 5 figures). Fine copy in original sheep, gilt, red morocco label.

A WORK OF fundamental importance in the history of chemistry, in which the Swedish chemist Scheele (1742–1786) announced his discovery of oxygen (in 1773) at least a year before Priestley independently published his own discovery (in August 1774). The appearance of Scheele's book was delayed because Torbern Bergman was two years late in delivering his promised preface. Scheele began his elegant experiments in 1770 and proved (by 1773) that atmospheric air consists of two gases: oxygen and nitrogen. He showed that oxygen "is necessary for combustion and respiration, and is absorbed by a number of solid substances, and can be artificially produced; the second gas (nitrogen) prevents combustion" (D.S.B.). Scheele's "fire air" (oxygen) could be produced from saltpeter, manganese dioxide, mercuric oxide, etc. He also announced several other important discoveries, including the photosensitive nature of silver chloride, which later led to photography. An experimental genius, Scheele "made more discoveries of first-rate importance with fewer opportunities and scantier appliances than any one else" (Ferguson). One of the great milestones of chemical literature, which Partington discusses in detail. Extremely rare. Not in Blake, Duveen, Ferguson Coll., Neu, Smith, Wellcome, etc. (Bolton, 802; Cole, 1162; Dibner, 41; D.S.B., XII, 147; Edelstein, 2046; Ferchl, 474; Ferguson, II, 331 [not in Young Coll.]; Horblit, 92; Moström, 115; Norman, 1905; Partington, III, 211, 220–229; Poggendorff, II, 776; Waller, 11225; Wolf, II, 207, 358)

SCHEELE, Carl Wilhelm

Chemical Observations and Experiments on Air and Fire.

By Charles-William Scheele . . . with a prefatory introduction, by Torbern Bergman; translated from the German by J. R. Forster . . . To which are added Notes, by Richard Kirwan, . . . with a letter to him from Joseph Priestley . . .

London: Printed for J. Johnson, No. 72, St. Paul's Church-Yard. 1780.

First English edition. 8vo. xl, 259, (1) pp. With engraved frontispiece (containing 5 figures). Very fine copy in original tan calf, maroon morocco label. From the library of the great chemist Joseph Black (1728–1799), with numerous annotations in pencil and ink in the margins and text.

THE ENGLISH translation, by John Reinhold Forster (1729–1798), of Scheele's *Chemische Abhandlung von der Luft und dem Feuer* (1777). Forster has included valuable notes by Kirwan (pp. 195–249) and a letter by Priestley (pp. 250–259). This important copy contains many notes and comments (in ink and pencil) by Black. For example, in a side note referring to Scheele's removal of carbon dioxide, Black comments (p. 86): "Why did he not make use of the caustic alkali." The companion volume of Scheele's *Chemical Essays* (London, 1786), which belonged to Black, is now in the Duveen Collection at the University of Wisconsin. Neither the Duveen copy nor this copy contains Black's signature, but the Duveen copy has been authenticated by the head librarian at the University of Edinburgh, and the writing in this copy is identical. The critical notes and corrections in this copy suggest that Black may have considered re-editing the book or possibly that these notes were meant to be included in his celebrated lectures. Black's library was sold in January 1800. (Bolton, 802; Cole, 1164; Duveen, 532–533; Edelstein, 2045; Ferguson, II, 330; Harvey, 654; Neu, 3700; Partington, III, 211; Poggendorff, II, 776; Smith, 433; Waller, 1122)

SCHEELE, Carl Wilhelm

Supplément au Traité Chimique de l'Air et du Feu de M. Scheele, contenant un Tableau abrégé des nouvelles découvertes sur les diverses espèces d'Air, par Jean-Godefroi Léonhardy; des Notes de M. Richard Kirwan, & une Lettre du Docteur Priestley à ce Chimiste Anglois, sur l'Ouvrage de M. Scheele; traduit et augmenté de Notes, & du complément du Tableau abrégé de ce qui a été publié jusqu'aujourd'hui sur les différentes espèces d'Air: par M. le Baron de Dietrich, . . . Avec la Traduction, par MM. de l'Académie de Dijon, des expériences de M. Scheele sur la quantité d'air pur se trouve dans l'atmosphère.

Paris: Rue et Hôtel Serpente. 1785.

First French edition. 12mo. xii, 13–214, (2) pp. Fine copy, unpressed and uncut with wide margins, in mottled polished calf antique (by Bayntun), maroon morocco label, spine dated.

THE *Supplément* contains important additions incorporated into the second German edition of Scheele's *Chemische Abhandlung von der Luft und dem Feuer* (Leipzig, 1782), namely, Leonhardy's survey of the new discoveries on gases (including many notes by the translator, Baron P. F. von Dietrich), remarks by Richard Kirwan, and a letter by Joseph Priestley. At the end (pp. 179–189) is a description of Scheele's experiments on the amount of "air pur" (oxygen) that is found in the atmosphere. There are indexes of subjects (pp. 190–208) and authors cited (pp. 209–214), both in the *Traité* (1781) and the present *Supplément*. Very rare.

Not in Duveen, Ferguson, Neu, Osler, etc. (Blake, 405; Bolton, 803; Caillet, 9953; Cole, 1166; Edelstein, 2053; Ferchl, 474; Partington, III, 211; Smith, 433; Waller, 11236)

SCHEELE, Carl Wilhelm

Traité Chimique de l'Air et du Feu, par Charles-Guillaume Scheele, . . . avec une introduction de Torbern Bergman, . . . Ouvrage traduit de l'Allemand, par le Baron de Dietrich . . . Paris: Rue et Hôtel Serpente. 1781.

First French edition. 12mo. xlv, 45–268 pp. With 1 folding engraved plate (Sellior Sculp.). Fine copy in original mottled calf, spine richly gilt, maroon morocco label.

THE FRENCH translation of Scheele's *Chemische Abhandlung* (1777), by the distinguished scientist Philippe-Frederic von Dietrich (1748–1793). A friend of D'Alembert, Diderot, Buffon, and Rousseau and author of several erudite works, Dietrich was later executed during the French Revolution. His notes to this work appear at the end of this volume (pp. 259–268). Lavoisier was enthusiastic in his review of Scheele's work in the memoirs of the French Academy and, together with Berthollet, applied for a printing privilege of the French edition on 8 August 1781. The second French edition, with the same pagination, appeared in 1787 (Blake, 405). Rare. (Bolton, 802; Cole, 1165; Duveen, 533; Edelstein, 2054; Ferguson, II, 331 [not in Young Coll.]; Neu, 3701; Partington, III, 211; Poggendorff, II, 776; Smith, 433; Waller, 11235)

SCHEFFER, Henrik Theophilus

Essai sur l'Art de la Teinture, . . . Commenté & développé par le célèbre Bergman.

Paris: Chez Buisson, Libraire, Hôtel de Mesgrigny, rue des Poitevins, No. 13. 1787.

First French edition. 8vo. 2 leaves, 143, (1) pp. Pages 106, 107, 110, and 135 misnumbered 306, 307, 310, and 13, respectively. Neat penciled numbers in margins and annotations on 2 pages; otherwise very good copy, in original tree calf, rebounded, spine gilt-ruled, maroon morocco label. From the library of the Swedish collector of books by or relating to Torbern Olof Bergman, Bertel Linder.

SCHEFFER (1710–1759), a student of Georg Brandt in the School of Mining at Stockholm, gave lectures and was an assayer and technical chemist. The present work comprises the French translation of Scheffer's posthumously published chemical lectures on dyeing, with additions by T. O. Bergman. In his article entitled "Eighteenth Century Theories on the Process of Dyeing" (*Isis*, 51 [1960], 21–30), J. J. Beer states that this work is a translation from the German edition by Christian Ehrenfried Weigel (1748). Partington

(who gives the wrong pagination) says that “Scheffer had an expert knowledge of dyeing.” There is a section on dyeing with indigo (pp. 101–108). (Cole, 1172; Edelstein, 3485; Lawrie, 636; Moström, 279 [not seen]; Partington, III, 175; Ron, 927)

SCHEFFER, Henrik Theophilus

Framlidni Directeuren Herr H. T. Scheffers Chemiske Föreläsningar, rörande Salter, Jordarter, Metaller, Vatten, Fetmor och Färgning; med Anmärkningar utgifne af T. B. Andra tilökta Uplagan, med två i Koppar stuckna Taflor. Stockholm: Hos Bokhandlaren Johan Dahl, på Stora Nygatan. 1796.

Third (first Hjelm) edition. 8vo. 9 leaves, 509, (1) pp., 8 leaves. With 3 folding copperplates (chemical symbols and affinity tables). Fine copy, in original half calf, gilt, marbled boards. From the library of Bertel Linder.

LONG AFTER Scheffer died (in 1759), his lectures on chemistry were published by Torbern Bergman from notes taken by Patrik Alstromer from 1749 to 1751. Bergman edited and revised the lectures and added extensive commentaries (first edition: Stockholm, 1775; second edition: Stockholm, Uppsala, and Åbo, 1779). Bergman died in 1784, and the present third, final, and best edition of this classic work was revised and updated by Petter Jacob Hjelm (1746–1813), the discoverer of molybdenum. The title page erroneously states that this is the second edition. Partington discusses the contents in detail. The sixth and last section (pp. 450–509) is on dyeing. Both Partington and Ron list only two plates. The first two plates are in Latin and are identical to those of the first edition (1775). This edition contains an additional plate in Swedish duplicating the first plate of chemical names and symbols. (Bolton, 804; Cole, 1170; Ferchl, 476; Moström, 296; Partington, III, 175; Poggendorff, II, 780; Ron, 928)

SCHENOK, Georg

De Elementis in Genere, sub praesidio M. Georgi Casp. Kirchmaieri, . . . in Electorali ad Albim Academia, respondens Georgius Schenck Creilsheimensis Francus. Ad d. XVII Dec. . . . M.DC.LIX. . . .

(Wittenberg:) Litteris Haered. Melchioris Oelschlegelii. 1659.

First edition. 4to. 8 leaves (signs. A–B4, unpaginated). Fine, crisp copy, in dark-brown quarter morocco antique, marbled boards, spine gilt-lettered and dated, original wrappers bound in.

A DISSERTATION on the properties of the four Aristotelian elements by Georg Schenck, of whose life nothing appears to have been recorded. The praeses was the alchemist Georg

Caspar Kirchmaier (1635–1700), professor at Wittenberg, who was then only twenty-four years old. A man of “immense attainments” (Ferguson), Kirchmaier excelled in chemistry, physics, metallurgy, mineralogy, medicine, and other subjects. This dissertation discusses topics of interest in the history of chemistry and physics, with references to the ancients as well as to contemporary writers. The *Institutiones Physicae* (Lübeck, 1647) of Johann Sperling (1603–1658) is especially noted, with commentaries on the atomic theory. The ability of the Aristotelian element fire to effect chemical reactions is discussed, as are the Paracelsian principles, minerals, metals, transmutation, etc.; with references to the work of Senguerd (signs. B3r–B4r). Not in Krivatsy, Watt, Wellcome, or the usual chemical bibliographies. (Ferchl, 273; Poggendorff, I, 1261)

SCHEPERS, Janus Dideric

Dissertatio Medica Inauguralis, de Auro ejusque Praeparatorum in Medicina Usu, . . . submittit Janus Didericus Schepers, Sancti Jacobi Parochia-Frisius. . . . XXIII Junii MDCCCXXXVIII. . . .

Groningen: Typis P. S. Barghoorn. (1838).

First edition. 8vo. 4 leaves, 36 pp., iv pp. Crisp, clean copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of the notable Friesian physician Schepers, presented at the University of Groningen. The author describes the preparation and medicinal uses of colloidal gold solutions and gold salts. Rare. Unknown to Waring and the usual bibliographers.

SCHERER, Alexander Nicolaus

Grundriss der Chemie. Für akademische Vorlesungen entworfen von Alexander Nicolaus Scherer.

Tübingen: in der J. G. Cottaischen Buchhandlung. 1800.

First edition. 8vo. 3 leaves, 453, (1) pp. Fine, crisp copy in contemporary marbled boards. Old stamp on title (Bibliothek der Königl. Landw. Hochschule zu Berlin) and verso of title (Z. Bibl. d. Berl. Naturf. Gesellsch.). From the library of Professor Franz Sondheimer, with his bookplate on front pastedown endpaper.

AN EXCELLENT synopsis of chemistry. “In 1800 he . . . published . . . his *Grundriss der Chemie zu Vorlesungen*, which contains a very clear account of the antiphlogistic system” (Ferguson). Pages 5–27 contain a bibliography of chemical literature (186 items), and there are numerous references to contemporary chemical publications throughout the volume. Pages 28–30 contain a list of works on the new nomenclature (twenty items), and pages 30–31 list works on

chemical symbolism (six items). Bolton mistakenly states that the book was published in Stuttgart. Very scarce. Not in Blake, D.S.B., Duveen, Morgan, Smith, Waller, Watt, etc. (Bolton, 805; Edelstein, 2062; Ferchl, 476; Ferguson, II, 333 [not in Young Coll.]; Partington, III, 598; Poggendorff, II, 789; Sondheimer, 1406)

SCHERER, Alexander Nicolaus

Kurze Darstellung der Chemischen Untersuchungen der Gasarten. Für seine öffentlichen Vorlesungen entworfen von D. Alexander Nicolaus Scherer . . .

Weimar: bey den Gebrüdern Gädicke. 1799.

First edition. 8vo. x, 62 pp. Leaf of contents (pp. ix-x) mis-bound between pages 56-57. Fine copy in original mottled sheep, floral endpapers, 2 red morocco labels, spine richly gilt. Bound with: Grindel, David Hieronymous, *Allgemeine Uebersicht der neuen Chemie* (Riga, 1799).

AN INTRODUCTION to the study of the gases then known. It is based on the lectures given by Scherer (1771-1824), who was educated in Jena and Weimar and became professor of physics in Halle (1800) and at St. Petersburg (1804). He was also counsellor of mines to the duke of Saxe-Weimar. An early supporter of the antiphlogistic doctrine of Lavoisier, in this work he briefly introduces the principles of chemistry and discusses gases in general, the atmosphere, oxygen, and combustion. The oxidation of metals and nonmetals, the formation of acids, and related matters are described, all from the point of view of the new antiphlogistic chemistry. There was a second German edition (Berlin, 1809) and an English translation of the present work (London, 1800). Very rare. Not in N.U.C., Cole, Duveen, Edelstein, Ferguson, Neu, Smith, etc. (Bolton, 805; Ferchl, 476; Partington, III, 598; Poggendorff, II, 789)

SCHERER, Alexander Nicolaus

A Short Introduction to the Knowledge of Gaseous Bodies.

By Dr. A. N. Scherer . . . Translated from the German.

London: Printed by J. W. Myers . . . for W. Treppass . . . Hatchard . . . and Manners and Millar, Edinburgh. 1800.

First English edition. 8vo. (in 4s). xv, (i), 17-110 pp. Fine copy with wide margins, in half calf antique, marbled boards, maroon morocco label, spine ruled in gilt.

THE ENGLISH translation of *Kurze Darstellung der chemischen Untersuchungen der Gasarten* (Weimar, 1799). The anonymous translator had added "A cursory view of the history of chemistry" (pp. 17-30), which is not in the German original, applauding the overthrow of the phlogiston theory by Lavoisier. The preparation and properties of all the then-known gases are described, with references to the

works of contemporary authors. Partington mentions this and other titles by Scherer. Ferchl and Poggendorff give long lists of Scherer's publications, but neither knew of this English translation. Ferguson gives an excellent biography of Scherer but was not aware of the *Kurze Darstellung* or its English translation. Very rare. Not in Cole, Duveen, Edelstein, Smith, etc. (Bolton, 805; Partington, III, 598; Watt, II, 837b)

SCHERER, Johann Baptist Andreas von

Geschichte der Luftgüteprüfungslehre für Aerzte und Naturfreunde. Kritisch bearbeitet von Johann Andreas Scherer . . .

Vienna: gedruckt und verlegt bei Christian Friedrich Wappler. 1785.

First edition. 2 vols., 8vo. I: 4 leaves, xvi, 214 pp. II: 2 leaves, 228 pp. With 1 folding engraved plate (containing 10 figures). Mint set in original half calf, boards, spines richly gilt in compartments, red and tan morocco labels.

AN EXTENSIVE historical treatise on eudiometry, including the experiments of Priestley and other investigators. Scherer played an important role in the discovery of the connection between the work of John Mayow in the seventeenth century and the theories of the antiphlogistic school about a hundred years later. In his doctoral dissertation (*Eudiometria*, Vienna, 1782) he had mentioned Mayow without grasping the connection, which he does in the present work (vol. I, note c; vol. II, p. 147). He also published a complete book on the subject (Vienna, 1793). Partington states that he had "not seen" this work. Scarce. Not in Fulton, *Bibliography of John Mayow*. (Blake, 405-446; Bolton, 154; Cole, 1177; Ferchl, 477; Partington, II, 580; Poggendorff, II, 787; Roller & Goodman, II, 404)

SCHERER, Johann Baptist Andreas von

Versuch einer neuen Nomenclatur für Deutsche Chymisten. . . .

Vienna: bey Christian Friedrich Wappler. 1792.

First edition. 8vo. 10 leaves, 208 pp., 8 leaves. Large folding printed table ("der neuen chymischen Nomenclatur") at the end. Fine, crisp copy, uncut and unpressed, in brown half morocco antique, marbled boards, maroon morocco label gilt, spine dated, original plain blue wrappers bound in.

AN IMPORTANT work that introduces the new chemical nomenclature of Lavoisier et al. to German-speaking chemists. "A much better attempt to establish a new German chemical nomenclature than that of Girtanner was the *Versuch einer neuen Nomenclatur für Deutsche Chymisten. . . .*" Scherer points out . . . that, in order to arrive at a complete improvement of the German chemical language, the most

eminent German chemists would have to collaborate. . . . he, therefore, has adapted it to the German with few modifications. The *Nomenclatur* is alphabetically arranged according to the new French names to which the Latin and German terms are added" (Duveen & Klickstein, *Bibliography of the Works of Lavoisier* [1954, p. 146]). The earliest attempt to translate the new French nomenclature into German was given in J. A. Götting's *Taschenbuch für Scheidekünstler und Apotheker* (1790). The second attempt was by C. Girtanner in his *Neue chemische Nomenklatur* (Berlin, 1791). The present work is the third attempt to make the French system intelligible to German readers. The complete German translation by Karl Freyherrn von Meidinger of the *Méthode de Nomenclature Chimique* (1787) did not appear until one year later (Vienna, 1793). Scherer (1755–1844), professor of chemistry at Vienna, published many works and translated the *Experiments upon Vegetables* (1779) of Jan Ingenhousz into German (Vienna, 1786–90, 3 vols.). Rare. Not in Blake, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Smith, Waller, etc. (Bolton, 74; Ferchl, 477; Partington, III, 483, 598; Poggendorff, II, 787)

SCHINDLER, Christian Carl

L'Art d'Essayer les Mines et les Métaux; Publié en Allemand par M. Schindlers, & traduit en François par feu M. Geoffroy, le fils, de l'Académie Royale des Sciences. Paris: Chez Jean-Thomas Hérisant, Libraire, rue S. Jacques, à S. Paul & à S. Hilaire. 1759.

First French edition. 12mo. xxi.v, 278 pp., 1 leaf (adverts.). Fine copy in original mottled calf, spine gilt, brown morocco label.

SCHINDLER, a late-seventeenth-century assayer of ores and minerals in the Freiberg region of Saxony, first published his book as *Metallische Prober-Kunst* (Dresden, 1697). Claude Joseph Geoffroy le fils (1685–1752) translated it into French, as the work was still popular in Germany even after fifty years. Before publishing, Geoffroy spent two years verifying the procedures. Details are given of the apparatus, crucibles, fluxes, and furnaces used in assaying; also the preparation of concentrated nitric acid, aqua regia, cements for lutes, etc. Balances necessary for accurate weighing of samples are described, as are the analysis of ores of antimony, bismuth, copper, gold, iron, lead, mercury, silver, and tin and alloys of these metals. Schindler was "the first assayer to give a method of assaying iron ore by fusion with reducing material to give a regulus of cast iron" (Singer). The manuscript of this work, left after Geoffroy died, was examined by the Royal Academy, which approved its publication. The advertisement leaf at the end lists books (with prices) by Baumé, Henckel, Lehmann, Lemery, Macquer,

Pott, Schluter, Shaw, Wallerius, and others. (Cole, 1179; Hoover, 721; Partington, II, 731, III, 57; Roller & Goodman, II, 406; Singer, *History of Technology*, III, 63; Sotheran, Cat. 832 ([1932], 6598)

SCHINZ, Salomon

Dissertatio Physico-Chemica de Stanni et ejus Miscelae cum Plumbo in Re oeconomica Usu. . . . Submittit Salomon Schinz. . . . Defendent Henricus Kesselringius, Salomon Quercetanus, Ludovicus Werdmyllerus, Casparus Meyerus. Ad d. 14 Martii.

Zurich: Ex Officina Gessneriana. 1770.

First edition. 4to. 1 leaf, 23, (1) pp. Mint copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION "ON alloys of tin and lead, and their use in industry" (Duveen). The praeses, Schinz, here combines the joint efforts of four of his students (named in the title). An important monograph on the physical and chemical properties of tin and lead and their compounds. The works of many contemporary chemists and mineralogists are cited. Not in Blake, Edelstein, Partington, Smith, etc. (Duveen, 534; Ferchl, 479; Neu, 3707; Poggendorff, II, 799; Waring, 692)

SCHINZ, Salomon

Dissertatio Physico-Medica Inauguralis, de Calce Terrarum et Lapidum Calcariorum. . . . Ex Auctoritate . . . Bernhardini de Moor, . . . Pro gradu doctoratus, . . . Salomon Schinz, Thurico-Helvetius. Ad diem 22 Maji 1756. . . .

Leyden: Apud Johannem Luzac. 1756.

First edition. 4to. 4 leaves, 49, (1) pp., 3 leaves (last blank). With copperplate (dated 1756, by A. Delfos, after Christ. Gottl. Geissler). Fine, crisp copy, with wide margins, top edges uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of Schinz (1734–1784), professor of physics and mathematics at Zurich, dedicated to his elder colleague Johann Gesner (1709–1790). Almost entirely chemical in content, this is essentially a monograph on calcium carbonate and its calcination product, lime (calcium oxide). Boyle's *Sceptical Chymist* is cited (p. 31), as well as the works of many other chemists. The copperplate depicts dissected eggs and their calcium carbonate shells. (Duveen, 534; Ferchl, 479; Hoover, 722; Neu, 3708; Poggendorff, II, 799; Waring, 295)

SCHLÜTER, Christoph Andreas

De la Fonte des Mines, des Fonderies, &c. Traduit de l'Allemand de Christophe-André Schlutter. . . . Le tout augmenté de plusieurs Procédés & Observations; & publié par M. Hellot, de l'Académie Royale des Sciences, & de la Société Royale de Londres.

Paris: Chez La Veuve Pissot, Jean-Thomas Hérisant, Pissot, fils, &c. 1750, 1753.

First French edition. 2 vols., 4to. I: xxx, (2), 424 pp. II: xvi, 661, (3) pp. Engraved frontispiece (by Audran after Le Lorrains) in volume I and 58 folding engraved plates (by B. Audran) in volume II. Fine set with very wide margins, in the original mottled calf, rebacked, spines gilt, maroon and black morocco labels. Armorial bookplates (nineteenth century): Library, Ragley Hall.

THE TRANSLATION into French of Schlüter's *Gründlicher Unterricht von Hütte-Werken* (Braunschweig, 1738) by the distinguished chemist Jean Hellot (1685–1766), who has improved the arrangement of the original work, adding numerous useful notes as well as a completely new chapter on the working of tin ores. "Though this book is called by Hellot a translation, it contains in fact a great deal of original matter; many processes not noticed by Schlüter are given, and many essential articles are introduced" (Thomas Thomson, F.R.S., quoted by Zeitlinger). The first volume is on assaying, and the second is on extractive metallurgy. Procedures for the chemical analysis of minerals, metals, and their salts are described, with many improvements and additions by Hellot. "Hellot also improved the manufacture of porcelain at Sèvres, and was the first important French industrial chemist" (Partington). A second edition appeared (Paris, 1764). (Ferchl, 480; Partington, II, 715, III, 68; Sotheran, Cat. 832 [1932], 6600 ["Rare"]; Ward & Carozzi, 1977; Watt, I, 482a; Wellcome, III, 239)

SCHLÜTER, Christoph Andreas

Gründlicher Unterricht von Hütte-Werken, worin gezeigt wird, wie man Hütten-Werke auch alle dazu gehörige Gebäude und Oefen . . . recht anlegen solle . . . und wie darauf die Arbeit bey Gold-Silber-Kupfer- und Bley-Ertzen, auch Schwefel-Vitriol und Aschen-Werken geführet werden müsse. Nebst einem . . . Probier-Buch, darin enthalten wie allerley Ertze auf alle Metalle zu probieren . . .

Braunschweig: gedruckt bey Friedrich Wilhelm Meyer. 1738.

First edition. Folio, 2 vols. in 1. I: 10 leaves, 612 pp., 34 leaves. II: 198 pp., 13 leaves. Fine engraved frontispiece (by G. D. Heumann after G. J. Arenhold), 2 engraved vignettes (by Arenhold), and 58 folding copperplates. Superb large paper

copy in pristine condition, in blind- and gilt-tooled original calf, richly gilt spine, tan morocco label. Armorial bookplate (eighteenth century): Georg Friederich von Steinberg.

A MAGNIFICENT COPY of the most important eighteenth-century book on mining, ore refining, metallurgical chemistry, smelting, and assaying. An official in British pay at Brunswick, Schlüter (dates unknown), "after practical experience in the Smelters of the Upper Hartz and Bohemia, succeeded his father as Director of the Lower Hartz Smelters and 'zehndner,' or tithe collector, to George II of England, to whom the work is dedicated. An outstanding work" (Annen). He "deals fully with the liquation process for separating silver from copper by lead, and by antimony sulphide; the desilverising of argentiferous regulus; the separation of gold and silver by sulphur; . . . amalgamation process used with silver ores . . . cupellation; refining copper by oxidation, etc." (Partington). Mining technology in England, Scotland, and Europe is described. The beautiful frontispiece shows a view of Goslar from the Rammelsberg, and the second volume is on assaying. A "great folio . . . one of the most important in the Agricola, Ercker, Löhneys tradition" (Hoover). (Annen, 42; Duveen, 534–535; Ferchl, 480; Hoover, 725; Partington, II, 715)

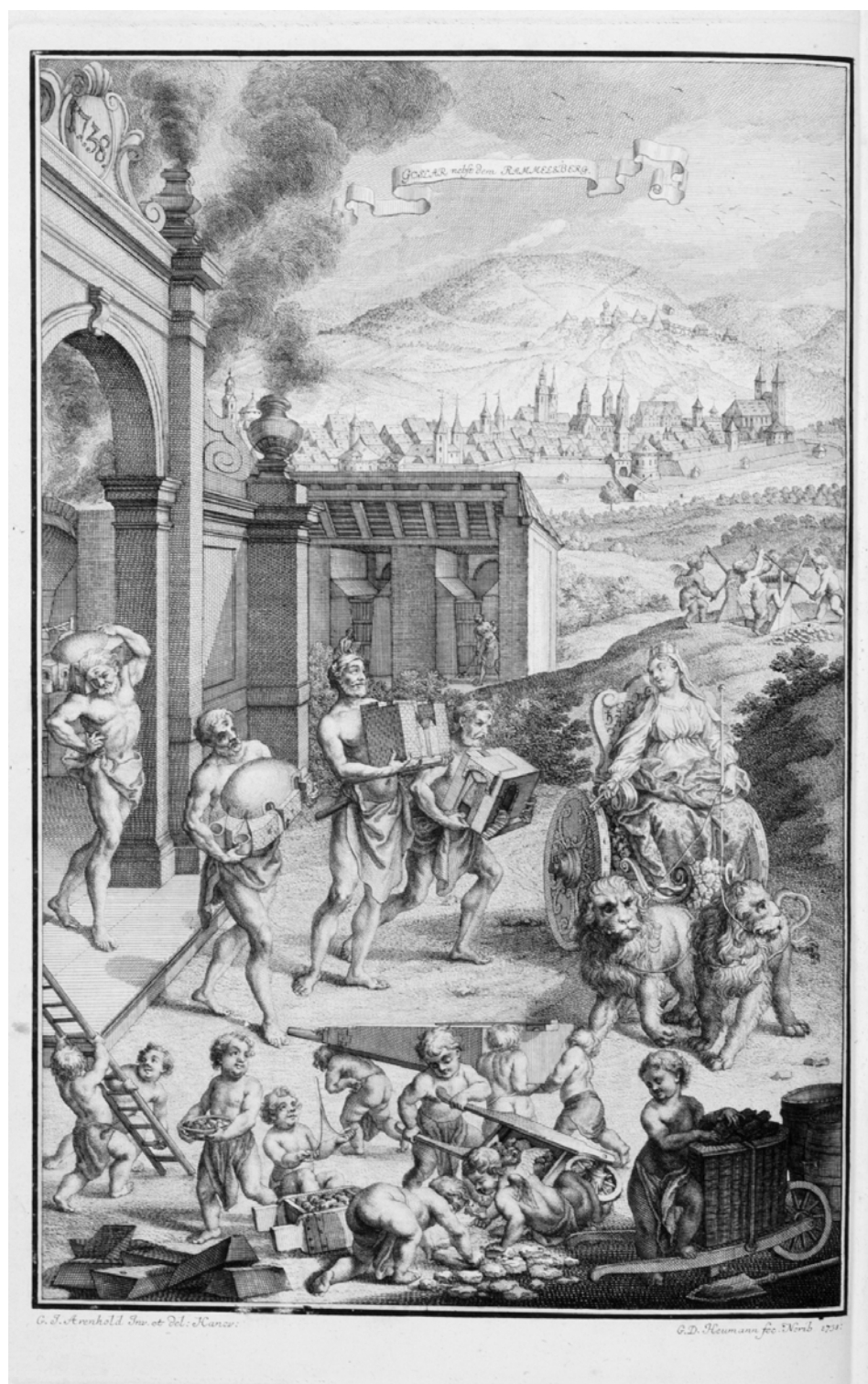
SCHMER, Christian

Disputatio Physica de Aqua, quam in illustri Academia Wittebergensi, sub praesidio . . . Dn. M. Johannis Sperlingen, . . . Publicè ventilandam proponit Christianus Schmer, Berolino Marchicus. Ad diem 12 Aprilis horis antemerid. In Auditorio Majori.

Wittenberg: Ex officinâ Typographicâ Michaelis Wendt. 1643.

First edition. 4to. 8 leaves. Fine, crisp copy, in quarter maroon morocco antique, marbled boards, spine gilt-lettered and dated. Bound with: Burger, Friedrich, *Disputatio physica de aqua* (Wittenberg, 1648).

A DOCTORAL DISSERTATION on the Aristotelian element water, of chemical interest. Sperling (1603–1658), professor of physics in the University of Wittenberg, presided over this work of Schmer, of whom nothing appears to be recorded. The author gives a historical account of water from the ancient Egyptians to his own time. Of chemical interest are his descriptions of the physical and chemical properties of water, with references to the works of Seneca, Scaliger, Zabarella, Averroes, et al. He also discusses the various types of water (e.g., rain, lake, river, and sea) and the salts dissolved therein. Very rare. Unknown to the usual bibliographers.



Schlüter. Gründlicher Unterricht. Braunschweig, 1738.

SCHMID, Gerhardt Andreas Rudolph

De Sale Ammoniaci dissertatio inauguralis medica . . . pro gradu doctoris medicinae ac chirurgiae die XXII Aprilis MDCCCLXXXVIII. Publice defendet auctor Gerh. Andr. Rud. Schmid Hannoveranus.

Göttingen: Typis H.M. Grape, Acad. Typogr. (1788).

First edition. 8vo. 2 leaves, 70, (2) pp. Fine copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

DEDICATED TO Johann Georg Zimmermann (1728–1795), who was probably the praeses, this dissertation is a valuable monograph on the preparation, physical and chemical properties, and reactions of ammonium chloride, with its medicinal applications. Obviously having done extensive research, Schmid (dates unknown) traces the history of this compound from earliest times (mentioning Dioscorides, Pliny, Serapion, et al.) to the late eighteenth century. Naturally occurring sal ammoniac as well as that prepared from ammonia and hydrochloric acid are discussed in detail, with references to the works of many chemists. Rare. Not in the usual bibliographies. (Waring, 226)

SCHMIDER, Sigismund

Antipathiae Physicae Phaenomena ad suas causas revocata, consentiente amplissimo philosophorum ordine sub praesidio M. Friderici Mentz, fautoris ac praeceptoris sui honoratissimi, publico eruditorum examini sistet autor responsurus, Sigismundus Schmiderus, Langenrensd. Misn. Phil. Baccal. & Med. Stud. D. XIV. Jan. MDCCVIII.

Leipzig: Literis Christiani Goezi. (1708).

First edition. 4to. Signatures A–E4 (unpaginated), E4 blank. Woodcut headpiece and capital on A2. Good copy in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt.

AN INTERESTING dissertation on natural physical phenomena and their apparent “antipathy,” of chemical importance, with references to Libavius, Mylius, Bartholin, Kircher, Boccone, Digby, Gassendi, et al. The “vegetation” of minerals and metals in the earth is discussed (signatures C1v and C2r). Schmider, or Schmieder (1685–1717), was a distinguished physician in Saxony. An extensive biography on him, mentioning the present dissertation, is given by J. J. Manget (*Bibliotheca Scriptorum Medicorum*, Geneva, 1731, vol. II, part 2, pp. 202–206). Rare. Apart from Manget (op. cit.), no other reference to this title has been found.

SCHMIDT, Johann August

Barytis Muriati Historia Medica. Scripsit Joannes Augustus Schmidt Med. D. Thoruni

(Hamburg?): Apud Vollmerum. 1794.

First edition. 8vo. 48 pp. Fine copy with wide margins, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A VALUABLE MONOGRAPH on the history, preparation, chemical properties, and medicinal uses of barium chloride, with numerous references to the works of earlier and contemporary chemists. The author praises Adair Crawford, who introduced the use of barium chloride in the treatment of scrofula in 1790. No biographical information has been located on Schmidt, a physician who was well versed in pharmaceutical chemistry. Rare. Not in the usual bibliographies. (Blake, 407; Waring, 286)

SCHMIED, Gottfried

Adspirante Jehova, Annuentibus Superioribus, Disputationem de Glacie, sub praesidio M. Danielis Petermanni, Misnens. Elect. Sax. Alumni, examini publico exponit Gottfried Schmied, Mühlbus. Thuring. Philos. & Medic. Studiosus, die 12. Febr. . . .

Leipzig: Literis Colerianis. 1670.

First edition. 4to. 10 leaves, unpaginated. Fine, crisp copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DOCTORAL DISSERTATION on ice in all its forms, by Schmied of Mühlhausen, presided over by Daniel Petermann at the University of Leipzig. The author discusses the physical, chemical, and meteorological aspects of ice and the phenomenon of cold, with references to earlier and modern authors (e.g., Pliny, Strabo, Cardan, Scaliger, Descartes, and Jonston). There is no mention of Boyle and the *Experimental History of Cold* (1665), so Schmied was apparently unaware of it. A very rare work, unknown to the bibliographers.

SCHMIEDER, Karl Christoph

Geschichte der Alchemie. . . .

Halle: Verlag der Buchhändlung des Waisenhauses. 1832.

First edition. 8vo. x, 613, (1) pp. Very good copy in original dark-blue marbled boards, orange paper label.

A STANDARD HISTORY of alchemy, containing much information. Schmieder (1778–1850), a mineralogist at Kassel, published several works on mineralogy, including a translation of *Theophrastus on Stones* (Freiberg, 1807). His book

of lasting importance is the present volume, valuable for its extensive bibliographies of early alchemical works, many of which are extremely rare or impossible to find described anywhere else. Schmieder regarded alchemy and chemistry as separate and quite distinct sciences and claimed that they had existed from ancient times independently. Using testimonies contained in the oldest alchemical books, he valiantly attempted to prove that transmutation of base metals is possible: a remarkably anachronistic stance for the early nineteenth century. A facsimile reprint appeared (Munich, 1927). (Bolton, 155; Duveen, 535; Ferchl, 481; Ferguson Coll., 630; Partington, II, xviii; Poggendorff, II, 822; Roller & Goodman, II, 409; Smith, 435)

SCHMUCK, Martin

De Occulta Magico-Magnetica Morborum quorundam curatione naturali, tractatus, Das ist: Wie man auff vorborgene natürliche Weise, durch angehenckte Aufflegungen, Fortpflanzung in Bäume und Thiere, auch andere Magische Art, vielerley Kranckheiten verhüten, vertreiben und beylen soll. Ein kurtzes Tractätlein, darinnen Mancherley Geheimnisse der Natur, so noch nicht an Tag kommen, offenbaret werden, durch L. M. S. L.

Nuremberg: Gedruckt and verlegt . . . bey Jeremia Dümlern. 1652.

Fourth edition? 8vo. 1 leaf, 76 pp., 1 leaf (blank). Paper very slightly embrowned; otherwise very good copy in original vellum. Bound with: Schmuck, Martin, *Secretorum Naturalium, Chymicorum & Medicorum, Thesauriolus* (Nuremberg, 1652, 1653).

PROBABLY THE fourth edition, preceded by those of 1636 (undated), 1642 (undated), and 1649, with different collations. Although mainly on medicine, the book is of pharmaceutical chemical interest. A magnetic cure of diseases by amulets is described. Smith (p. 435) describes the 1649 edition. The copy in the Wellcome Library is tentatively assigned the date 1642. Rare. Not in the usual chemical and medical bibliographies. (Ferguson, II, 337–338)

SCHMUCK, Martin

Secretorum Naturalium, Chymicorum & Medicorum, Thesauriolus, oder Schätzkastlein, darinnen 20 Natürliche, 20 Chymische, und 20 Medicinische Secreta, und Kunststücklein zu befinden. Durch vielfaltige Räisen, Mühe, und Gefahr colligiret, und an Tag gegeben, von Martino Schmucken, Lipsensi, der Artzney Licentiate.

Nuremberg: bey Jeremia Dümlern. 1652, 1653.

Two parts in 1 volume. 8vo. I: 79 (1) pp. II: 4 leaves, 103, (1) pp. With 2 woodcuts on page 14, 2 on page 56, and 1 on page 57. Paper very slightly embrowned; otherwise very good copy

in original vellum. Faintly written on front cover: "Licenciat. G. (?) Smüks, 1676." Bound with: Schmuck, Martin, *De Occulta Magico-Magnetica* (Nuremberg, 1652).

BORN IN Leipzig, Schmuck (ca. 1599–1640) received the licentiate in medicine at Leipzig (1626) for a thesis on kidney and bladder stones (*De calculo renum et vesicae*) presented under the direction of Johann Rupert Sultzberger. He practiced several years at Hersbruck near Nuremberg and died there. This book of chemical, pharmaceutical, medical, and natural secrets was published at Schleusingen in 1637 (part I) and Nuremberg (part II). Further editions (or issues?) appeared at Nuremberg in 1642 (Ferguson Coll., 630), 1649 (Interlibrum, Cat. 305), 1652 (present edition), and 1686 (Ferguson, *Books of Secrets*). Much of the book is of chemical interest. This copy has an important provenance, having belonged to a member of the Schmuck family. Duveen (p. 536) lists only the 1637 first part. Not in Bolton, Neu, Partington, Thorndike, etc. (Ferchl, 481; Ferguson, II, 338; Ferguson, *Secrets*, I, pt. 2, p. 43; Poggendorff, II, 823; Rosenthal, 772; Smith, 435)

SCHNAUBERT, Ludwig

Untersuchung der Verwandtschaft der Metalloxyde zu den Säuren. Nach einer Prüfung der neuen Berthollet'schen Theorie. . . .

Erfurt: in der Hennings'schen Buchhandlung. 1803.

First edition. 8vo. x, 126 pp. With folding table. Fine copy in original gilt-ruled half calf, speckled boards, maroon morocco label, gilt. Bound with: Berthollet, C. L., *Über die Gesetze der Verwandtschaft in der Chemie* (Berlin, 1802).

DEDICATED TO Berthollet, the present work is a study of the relationship of metal oxides and hydroxides with various inorganic acids, their relative reactivity, and the salts produced. The investigation was carried out to test the theories of affinity put forward in Berthollet's *Recherches sur les lois de l'affinité*. Schnaubert (dates unknown) was professor of chemistry at the University of Kharkov. Scarce. Not in D.S.B., Edelstein, Ferguson Coll., Morgan, Smith, Sondheimer, Waller, Watt, etc. (Bolton, 815; Duveen, 536; Ferchl, 482; Partington, IV, 579; Poggendorff, II, 824; Sotheran, Cat. 757 [1915], 14726)

SCHOCKWITZ, Johann

Ferax Metallorum atque Mineralium Dübensis Baltus, prope Schmidebergam, in Saxoniae Electorali Circulo, . . . Praeside Georgio Caspare Kirchmajero, . . . Responsuroque Johanne Schockwitz, Lipsiensi Misnico, . . . ad diem 1 Octobr. . . . Anno MDCXCII.

Wittenberg: Typis Christiani Schrödteri, Acad. Typogr. (1692).

First edition. 4to. 16 pp. Very good copy, in half calf antique, marbled boards, maroon morocco label. Bound with: Eckhardt, Christian, *De atomis* (Wittenberg, 1659).

A DISSERTATION ON the minerals of Saxony and the metals and salts that can be extracted from them, presented by Schockwitz under the direction of Georg Caspar Kirchmaier (1635–1700). The works of Agricola, Hauptmann, Mathesius, Pliny, Thurneisser, et al., are cited. An important dissertation on antimony pentasulphide was also published by Schockwitz, *De mirabili sulphuris, antimoniatu fixati efficacia in medicina* (Halle, or Leipzig, 1699), under the direction of Friedrich Hoffmann (see Partington, II, 698; Waring, 245). (Ferchl, 273; Krivatsy, 6435; Poggendorff, I, 1261)

SCHOEDLER, Friedrich Karl Ludwig

The Book of Nature: An Elementary Introduction to the Sciences of Physics, Astronomy, Chemistry, Mineralogy, Geology, Botany, Zoology, and Physiology. By Friedrich Schoedler . . . Edited from the fifth German edition by Henry Medlock . . . First division. *Physics, Astronomy, and Chemistry.*

London: Published by John Joseph Griffin and Co. . . . and Richard Griffin and Co., Glasgow. 1851.

First English edition. 8vo. vii, (1), 267, (1) pp. Numerous woodcut illustrations. Fine copy in original blind-stamped crimson cloth, spine richly gilt.

THE ENGLISH translation of *Das Buch der Natur* (Braunschweig, 1846), by Schoedler (1813–1884), professor of natural sciences at Worms and formerly chemical laboratory assistant to Liebig. The translator, Henry Medlock, senior assistant at the Royal College of Chemistry, London, was formerly a pupil of the great organic chemist August Wilhelm Hofmann. The book was apparently commissioned by the J. J. Griffin Company, whose partial catalogues of chemicals and apparatus in two parts (1849 and 1850; pp. 8, 17–20, 65–96) are bound with this copy. There is a full-page cross section of a locomotive (p. 69). A notice (verso of leaf following title) announces that the second division of this English translation is “nearly ready” for publication. (Bolton, 815; Ferchl, 483)

SCHOENBORN, Samuel

Manuale Medicinæ Practicæ Galeno-Chymicæ accessere Purgantia Secundum humores peccantes disposita. Strassburg: Sumptibus Eberhardi Zetzneri. 1657.

Third edition. 12mo. 4 leaves (including engraved title page by Pet. Aubry), 328 pp., 12 leaves (last 2 blank). Fine copy in unlettered vellum antique, marbled boards.

THE FIRST edition of this interesting and once popular iatrochemical work appeared at Danzig in 1637, with a second edition in 1642. The present 1657 edition is important as it is the first to contain the “Accesserunt purgantia secundum humores peccantes disposita.” The author, an eminent physician, describes the preparation of galenical and chemical medicines and discusses their uses. The fourth edition appeared in 1681. Very rare. Apart from Ferchl and Manget, no edition found in the usual early chemical and medical bibliographies. (Ferchl, 484; Manget, *Bibliotheca Scriptorum Medicorum*, Geneva, 1731, vol. 2, part 2, p. 210)

SCHOEPFFER, Theodosius

Tractatum Succinctum de Braxandi eidemque annis juribus, pluribus in foro frequentibus, & in vita communi toties obvenientibus quaestionibus, . . .

Frankfurt & Leipzig: Sumptibus Theodori Philippi Calvisii Bibliopolae Quedlinburg. 1677.

First edition. 4to. 4 leaves, 340 pp. Fine copy, in contemporary vellum. Bound with: Kirchmaier, Georg Caspar, *Institutiones metallicae* (Wittenberg & Leipzig, 1687), and 3 other works on law.

A RARE BOOK on the laws concerning the import and export of grain (e.g., barley, wheat), which is of chemical interest as it deals with laws governing the processes of malting, brewing, and the fermentation of grains to make spirituous liquors. Authors and their works that are cited include several well-known authorities: Alciatus, Barth, Cluverius, Goris, Klock, and Tabor. No information on the author or this work has been located.

SCHOLZ, Benjamin

Anfangsgründe der Physik als Vorbereitung zum Studium der Chemie von Dr. Benjamin Scholz. Mit einer Vorrede von Joseph Freyherrn von Jacquin.

Vienna: Im Verlage der Camesina'schen Buchhändlung. 1816.

First edition. 8vo. xii, (2), 506 pp. With 4 folding copperplates (containing 93 figures of apparatus). Occasional minor foxing (owing to quality of paper); otherwise fine copy in original half calf, blue boards, spine gilt-ruled, red and blue morocco labels.

SCHOLZ (1786–1833), professor of medicine at the University of Vienna, later became director of the royal porcelain and mirror factories of Austria. In this book, his first, which he wrote as a preparatory work to the study of chemistry, Scholz deals with motion, optics, heat, electricity, magnetism, and gases. He states in the preface that a thorough knowledge of physics is essential for the successful study of chemistry and that no textbook had yet appeared with this

design. The last section (pp. 394–488) is entirely on the physical and chemical properties of gases, with reference to the experiments of Berthollet, Dalton, Davy, De Luc, Fontana, Humboldt, Lampadius, Lavoisier, Priestley, Saussure, Scheele, Thomson, et al. The book was popular, and it passed through five editions in twenty-one years. The first edition is very rare. Not in the usual chemical bibliographies. Ekelöf, Gartrell, Mottelay, Wheeler Gift, etc. (Ferchl, 484; Poggen-dorff, II, 835; Roller & Goodman, II, 411)

SCHÖNBEIN, Christian Friedrich

De la Production de l'Ozone par Voie Chimique. . . (Extrait des Archives de l'Électricité No. 15, Supplément à la Bibliothèque Universelle de Genève.)
N.p., n.d. (Geneva, 1844).

First edition. 8vo. 123, (1) pp. Author's offprint. Very fine copy, uncut, in red quarter morocco antique, marbled boards, spine gilt-lettered and dated, original blue paper wrappers bound in.

SCHÖNBEIN (1799–1868), professor of chemistry at the University of Basel throughout his academic life, was a highly original thinker and investigator similar to his close friend Michael Faraday, with whom he corresponded in good English. This work contains the description of his discovery of the first allotrope of a gas—oxygen—which he named “ozone” because of its characteristic odor. Schönbein had originally announced his discovery of ozone in *Ann. Phys.* I, 616 (1840) but was not then certain that it was a distinct species. His careful research on the preparation and properties of ozone, which Schönbein now recognized as a distinct modification of oxygen, are presented here. He also carried out classical studies on hydrogen peroxide, the passivity of iron, on catalytic action, his discovery of guncotton, etc. It was long before full justice was done to the value of Schönbein's work, especially in physical chemistry, in which he was clearly ahead of his time. Very rare. Not in the usual bibliographies.

SCHÖNBERG, Petrus, HAEGGSTRÖM, Johannes, and EKENSTEDT, Jöns

De Conjunctione Chemica ejusque Rationibus Specimen Academicum. In Audit. Facult. Phil. die XVI Octobr. MDCCCXIII. P. I (II).

Upsaliae: Excudebant Stenhammar et Palmblad. Regiae Academiae Typographi. (1813).

First edition. 4to. 1 leaf, pp. 1–12, 2 leaves, pp. 13–24. Fine, crisp copy, uncut and unpressed, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

TWO RARE dissertations by three scientists on whom no information has been found. This is an early attempt to

determine the formulae of inorganic compounds based on their reaction with acids and alkalies. Specific examples are given of the combining weights of oxides of iron, uranium, etc., with acids to form salts. The works on stoichiometry of J. B. Richter and Wenzel are mentioned, as is the *Essai de statique chimique* (1803) of Berthollet. Works by Proust, Berzelius, Dalton, Wollaston, Gay-Lussac, Bergman, and other chemists are also noted. An apparently unrecorded and significant contribution to the early theories of chemical combination.

SCHOOCK, Martin

De Fermento et Fermentatione Liber, complectens multa singularia, speciatim rationem coctionis cibi in ventriculo.
Groeningen: Typis Johannis Colleni, Bibliopolae & Typographi. 1663.

First edition. 12mo. 670 pp. Title in red and black, with woodcut printer's device. Fine, crisp copy, in original blind-ruled speckled calf, rebaked, maroon morocco label, gilt, spine dated.

SCHOOCK (1614–1667), professor of logic and physics at Utrecht and Groeningen and opponent of the teachings of Descartes, published books on an amazing variety of subjects, ranging from the present work on fermentation and related phenomena to butter, sneezing, embryology, acoustics, astrology, and sea power. Thorndike describes this book on fermentation as an “omnibus compilation upon a particular topic” and discusses it at some length. There is much of chemical interest, and Schoock believed that most biological processes are the result of fermentation that occurs in the blood when it passes through the spleen. This idea was originally put forward by Helmont and developed further by Willis. The works of Beguin, Libavius, Paracelsus, and others are discussed as they relate to the chemical processes involved in fermentation. A rare book, mentioned by Partington in passing as he had not seen it. Not in the usual chemical bibliographies. (Ferchl, 485; Krivatsy, 10610; Partington, II, 240 [wrong pagination]; Poggen-dorff, II, 836; Thorndike, VII, 233, VIII, 321, 356, 521)

SCHORLEMMER, Carl

A Manual of the Chemistry of the Carbon Compounds; or, Organic Chemistry. By C. Schorlemmer, F.R.S. . . .
London: Macmillan and Co. 1874.

First edition. 8vo. xii, 512 pp. With 15 woodcut figures in text. Very good copy in original blind-ruled maroon cloth.

BORN IN Darmstadt, Schorlemmer (1834–1892) “after studying pharmacy at Heidelberg went to Giessen in 1859, where he studied chemistry under Will and attended Kopp's

lectures on the history of chemistry. In 1859 he became Roscoe's assistant in Owens College, Manchester, and in 1874 he became professor of organic chemistry there, the first chair of its kind in England, which he occupied until his death" (Partington). This excellent and important work describes "the present state of organic chemistry, which, owing to the rapid and brilliant development of this branch of science, is a somewhat difficult task" (preface). Schorlemmer later collaborated with Roscoe in writing the classic *Treatise on Chemistry*, the first volume of which was published in 1877, in English and German. Scarce. Not in Edelstein, Morgan, Smith, Sondheimer, etc. (Bolton, 816; Duveen, 537; Roller & Goodman, II, 412; Thornton & Tully, 225)

SCHORLEMMER, Carl

The Rise and Development of Organic Chemistry. Revised Edition. Edited by Arthur Smithells . . . London: Macmillan and Co. 1894.

Second edition. 8vo. xxvii, (1), 280 pp. With photographic frontispiece portrait of Schorlemmer. Fine copy, uncut, in original green cloth. Presentation copy by the publisher, with blind-embossed stamp on title page and first leaf of preface. From the library of the celebrated chemist Sir Philip Hartog (1864–1947), with his signature in ink (dated 1894) on half title and his handwritten notes and corrections in the text.

A DETAILED HISTORY of organic chemistry from the Roman period to the last decade of the nineteenth century. The shorter first edition (London, 1879) was translated by Claparede into French (Paris, 1885), and a revised and updated German version appeared (Braunschweig, 1889; Duveen, 537). This posthumous second (and best) edition was edited by the distinguished chemist Arthur Smithells (1860–1939), who has added an excellent biography of Schorlemmer (pp. xi–xxiv), as well as a comprehensive bibliography of his publications (pp. xxv–xxvii). Both the biography and bibliography contain handwritten notes and corrections by Sir Philip Hartog, who was a lecturer on chemistry at Manchester University and friend of Schorlemmer. Of interest is chapter IX, in which the cyclic structure of benzene is extensively discussed. The theories of Kekulé, Korner, Ladenburg, Baeyer, Strecker, Bamberger, Hantzsch, Kolbe, and others are covered. Zeitlinger described this edition as "scarce" in 1915. (Bolton, *First Supplement*, 40; Partington, IV, 775; Roller & Goodman, II, 412; Sotheran, Cat. 757 [1915], 14739)

SCHOTT, Gaspar

Mechanica Hydraulico-Pneumatica, qua praeterquam quod Aquei Elementi natura, proprietates, vis motrix, atque occultis cum aere conflictus, a primis fundamentis demonstratur; omnis quoque generis Experimenta Hydraulico-pneumatica recluduntur; & absoluta, Machinarum aqua & aere animandarum ratio ac methodus praescribitur. . . . Pars I. Mechanicae Hydraulico-pneumaticae Theoriam continet. Pars II. Ejusdem Praxin exhibet . . . Accessit Experimentum novum Magdeburgicum . . .

Würzburg: Sumptu Heredum Joannis Godefridi . . . Excudebat Henricus Pigrin . . . 1657.

First edition. 4to. 15 leaves, 488 pp., 8 leaves. Beautiful engraved title page, 46 copperplates (some folding), and 75 woodcuts in text. Fine, crisp copy, with half title, in original overlapping vellum.

THE FIRST book to describe Otto von Guericke's famous experiment with the Magdeburg hemispheres and the earliest illustrations of the air pump. This remarkable work stimulated Robert Boyle to have an air pump constructed, which led to his discovery of Boyle's law. The present book on hydraulics is in two parts, theoretical and practical, the first being illustrated with numerous woodcuts and the second with many fine copperplates depicting fountains, water clocks, thermoscopes, and other machines, including a section on hydraulic organs. The section "Experimentum novum Magdeburgicum" (pp. 441–488) contains the account of Guericke's experiments with the air pump in 1654. He gave his friend Schott details of his discoveries to include in the present book. Guericke's own book, the *Experimenta nova*, did not appear until 1672. Kircher's magnetic device to show the time of day is described (pp. 354–357). A pupil of Kircher in Rome, Schott (1608–1666) became professor of physics and mathematics at Würzburg. (Cajori, 74; Dibner, 55; D.S.B., XII, 210; Harvey, 106; Partington, II, 333; Poggendorff, II, 838; Thorndike, VII, 608; Wheeler Gift, 142; Wolf, I, 102)

SCHOTT, Gaspar

Technica Curiosa, sive Mirabilia Artis, Libris XII comprehensa; quibus varia experimenta, variaque Technasmata Pneumatica, Hydraulica, Hydrotechnica, Mechanica, Graphica, Cyclometrica, Chronometrica, Automatica, Cabalistica, aliaque Artis arcana, rara, curiosa, ingeniosa, magnamque partem nova & antehac inaudita, eruditi Orbis utilitati, delectationi, disceptationique proponuntur. . . .

Nuremberg: Sumptibus Johannis Andreae Endteri, & Wolfgangi Junioris Haeredum. 1664.



Schott. Mechanica Hydraulicopneumatica. Würzburg, 1657.

First edition. 2 vols., 4to., in 1. 21 leaves, 1044 pp., 8 leaves. Engraved title page (depicting Magdeburg hemispheres), portrait of dedicatee, Johann Philipp, armorial plate, and 60 engraved plates (some double page or folding numbered 1–39, two plates numbered 16, and plate 36 placed after plate 9; second series of plates numbered 1–21, but plates 17 and 18 on one sheet). Letterpress title in red and black. Occasional minor foxing; otherwise fine copy, in original calf, gilt, joints repaired.

ONE OF the most complete accounts of the physical experiments and technological inventions of mid-seventeenth-century science, especially valuable for its description of Guericke's research with the vacuum pump (plate 3) and for the first appearance of Guericke's letters to Schott (1661–62). Also described are Boyle's experiments with his vacuum pump since 1657, the date of publication of Schott's *Mechanica hydraulico-pneumatica*. Accounts are given of early investigations with the diving bell, Torricelli's experiments with the barometer, perpetual motion, chronometry, thermometers, and many other subjects. A richly illustrated treasure house in the history of the physical sciences. (Caillet, 10009; D.S.B., XII, 210; Duveen, 537; Ferchl, 485; Middleton, *Hist. of Barometer*, 374; Partington, II, 333, 515; Poggendorff, II, 838; Waller, 20243; Wheeler Gift, 155bis)

SCHRADER, Johann Gottlieb Friderich

Begyndelses Grunde til Experimental-Naturlaeren i den chemiske Deel, udarbeidede efter den nyere Theorie saavel til Ledetraad ved akademiske Forelaesninger, som og til Brug for Skolerne.

Copenhagen: Trykt paa A. Goldins Forlag, hos Sebastian Popp. 1797.

First Danish edition. 8vo. xxvi, (2), 326 pp., 1 leaf (blank). With 3 folding engraved plates (containing 66 figures). Good copy in original gilt-ruled half calf, marbled boards.

AN INTRODUCTORY textbook on chemistry and physics, translated into Danish from the first German edition (Hamburg, 1797) by the celebrated scholar Jacob Saxtorph (1771–1853), professor of philology at Roeskilde (see Poggendorff, II, 763–764). Schrader (1763–ca. 1819), the author, was professor of physics at the University of Kiel and later at St. Petersburg. Of chemical interest are discussions of metals, nonmetals, acids, alkalies, salts, etc., with tables of physical properties. A long section (pp. 193–248) includes the preparation and properties of gases (e.g., oxygen, hydrogen, nitrogen, ammonia, carbon dioxide, phosphine, nitric oxide, sulphur dioxide, hydrogen fluoride, and chlorine). Electricity and magnetism are extensively covered (pp. 263–326). German editions, with additions by Ludwig Wilhelm Gilbert (1769–1824), appeared at Hamburg in 1804 and 1812. No reference to the present extremely rare Danish edition has been located.

SCHROECK, Lucas

Memoria Welschiana, sive Historia Vitae Viri Celeberrimi Dn. Georgii Hieronymi Welschii, Augustani . . .

Augsburg: Impensis Theophili Göbelii. Typis Koppmayerianis. 1678.

First edition. 4to. 90 pp. Very fine copy, from the library of Elias Ashmole. Bound with: Welsch, G. H., *Hecatosteeae*. II. *Observationum physico-mediarum* (Augsburg, 1675); and Welsch, G. H., *Curationum propriarum* (Augsburg, 1681).

A LAUDATORY AND detailed biography of the celebrated Augsburg physician and iatrochemist Georg Hieronymus Welsch (1624–1677), by his close friend Lucas Schroeck (1646–1730), who was also a physician in Augsburg. Dedicated to the Academia Naturae Curiosorum, of which both Welsch and Schroeck were members; the author discusses Welsch's numerous publications as well as lists testimonials by his distinguished friends, including Johann Sigismund Elsholtz, Athanasius Kircher, Guerner Rolfinck, and Georg Wolfgang Wedel. Ferchl (p. 486) lists publications by Schroeck but omits the present work. (Krivatsy, 10663; Parkinson & Lumb, 2234; Waller, 17972)

SCHROEDER, Johann Christian

The Compleat Chymical Dispensatory, in Five Books: treating of all sorts of metals, precious stones, and minerals, of all vegetables and animals, and things that are taken from them, as musk, civet, &c. How rightly to know them, and how they are to be used in physick; with their several doses. The like work never extant before. Being very proper for all merchants, druggists, chirurgions, and apothecaries; and such ingenious persons as study physick or philosophy. Written in Latin, by Dr. John Schroder, that most famous and faithful chemist. And Englished, by William Rowland, Dr. of Physick. Who translated Hippocrates, Riverius, Platerus, Sennertus, Rulandus, Crato, and Bartholinus.

London: Printed by John Darby, for Richard Chiswell, and Robert Clavell, and are to be sold at the Sign of the Two Angels and Crown, in Little Brittain. 1669.

First edition in English. Folio. 5 leaves (incl. 2 blank), pp. 1–49, (1), 2 blank leaves, pp. 51–147, (1), 2 blank leaves, pp. 149–283, (1), 2 blank leaves, pp. 385–545, (1), 2 blank leaves, 6 leaves (index). Pages 285–384 omitted from pagination, but text complete. Inner margins of some leaves water stained; otherwise very good copy in contemporary reversed calf, rebacked, corners strengthened, maroon morocco label.

THE ENGLISH translation of *Pharmacopoeia medico-chymica* (Ulm, 1641), of which numerous editions in German appeared. It was “the universal textbook of German pharmacists for at least a century” (Kremers & Urdang). Praised by

Boerhaave, the contents of this important work are discussed by Thorndike (VIII, 88–91). This English translation remained unknown to Partington and to Thorndike. Schroeder (1600–1664), a very competent chemist who believed in alchemy, was municipal physician at Frankfurt. (Bolton, 818; Cushing, S154; Duveen, 537; Ferchl, 487; Ferguson, II, 344; Krivatsy, 10674; Neu, 3728; Smith, 437; Watt, II, 838u; Wing, S898)

SCHROEDER, Johann Christian

Pharmacopoea Schrödero-Hoffmanniana illustrata et aucta, qua composita quaeque celebriora, hinc mineralia, vegetabilia & animalia chimico-medica describuntur, atque insuper principia physicae Hermetico-Hippocraticae candide exhibentur. Opus . . . tum pharmacologorum & chymiatrorum, tum celeberrimorum inter recentiores practitorum, tum operum variorum . . . nec non curiosiorum rerum naturalium scriptorum nobilissimus medicamentis atque descriptionibus abunde ditatum. Compilavit Johannes Jacobus Mangetus . . . cum indicibus variis, tum capitum, tum rerum et verborum . . . Geneva: Sumptibus Samuelis De Tourne. 1687.

First edition, third issue. Folio. 28 leaves, 800 pp., 48 leaves. With 6 full-page engravings of chemical apparatus and several illustrations in text. Title page in red and black, with large woodcut. Numerous woodcut historiated capitals, head- and tailpieces. Text in double columns. Neat repairs to a few leaves (owing to minor wormholes, mainly marginal); otherwise very good copy, in modern maroon half morocco, marbled boards, spine gilt-lettered and dated.

A MASSIVE IATROCHEMICAL work containing an updated version of Schroeder's *Pharmacopoeia*, augmented with notes added by Friedrich Hoffmann (1626–1675) in his *Clavis pharmaceutica* (Halle, 1675) and edited with additional notes by the celebrated physician and compiler of treatises on chemistry and medicine Jean Jacques Manget (1652–1742). Also included are works by François Bernier (1620–1688), Martin Bernhard Bernitz (fl. 1651), and Andreas Cnöffel (d. 1658). A milestone in the literature of pharmaceutical chemistry, which is rendered valuable by the inclusion of comprehensive indexes in Latin, German, English, French, and Dutch. At least three issues of this rare work appeared with identical pagination: Cologne, 1683 (Neu, 3725); Cologne, 1684 (Duveen, 538); and the present issue. (Ferchl, 336, 487; Krivatsy, 10673)

SCHROETER, Karl

Dissertationem Inauguralem de Quartana Intermittente, pro licentia . . . doctoralia . . . Carolus Schroeterus, Sitta Lusatus . . . ad diem (blank) Julii . . .

Jena: Typis Samuelis Krebsii. 1670.

First edition. 4to. 24 leaves (unpaginated). Fine copy in contemporary unlettered vellum. Bound with: Rolfinck, Werner, *Chimia in artis formam redacta* (Geneva, 1671), and other works by Rolfinck.

THE DOCTORAL dissertation of Schroeter (dates unknown), on intermittent quartan fever (i.e., malaria), presented at the University of Jena under the direction of Werner Rolfinck, professor of chemistry. After discussing the symptoms of malaria, various chemical preparations and medicines are recommended for its cure; among them (sign. D2) are recipes containing quinine. Rare. Not in Krivatsy, Waring, etc. (Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 89; Wellcome, IV, 551)

SCHULTENS, Albert

Oratio Academica. In Memoriam Hermanni Boerhaavii, viri summi. Ex decreto Rectoris Magnifici et Senatus Academici habita. Die IV. Novembris, An. MDCCXXXVIII.

Leyden: Apud Johannem Luzac. 1738.

First edition. 4to. 4 leaves, 83, (1) pp. Title page with large copperplate vignette. Small section of upper inside blank margins scorched and minor ink stain on title; otherwise good copy in quarter pebbled cloth antique, marbled boards, old wrappers bound in, gilt-lettered and dated spine.

AN IMPORTANT and probably the earliest eulogy of Boerhaave and his chemical and medical works, by his friend Schultens (1686–1750). It is partly based on autobiographical notes left by Boerhaave. "In the summer of 1738 Boerhaave fell seriously ill, and he knew that he did not have long to live. He knew also that after his death an academic funeral oration was bound to be held. . . . It was his wish that his friend, the orientalist Prof. Alb. Schultens, should commemorate him. He made a number of notes on his life, referring to facts he wished not to have forgotten, such as his profound theological studies, his religious attitude and his illnesses. After his friend's death, Schultens found these notes between Boerhaave's manuscripts. He introduced them literally in his oration and took pains to see that they were printed in another, bolder letter-type, so as to be easily recognizable" (Lindeboom). (Blake, 409; Bolton, 180; Cohen, *Herman Boerhaave*, Utrecht, 1918, p. 155; Lindeboom, 104–105; Partington, II, 742; Waller, 16513)

SCHULTZ, Gottfried

I. N. J. Scrutinium Cinnabarinum seu Triga Cinnabriorum, quae sistit naturam cinnabaris antimonii nativae & factitiae vulgaris. Nec non Specifici Cephalici (des rothen Hertz- und Haupt-Pulvers) D. Johann. Michaelis, cum Appendice de emplastro magnetico hernias scrotales curante, ad enchiresin chemicam & clinicam praxin accommodatum, operâ & studiô Godofredi Schulzii, Med. D. & Practici in Patriâ Lutheri.
Halle: Sumpstibus Simon. Joh. Hübneri. 1680.

First edition. 8vo. 14 leaves, 192 pp., 2 leaves (errata). Engraved frontispiece. Title printed in red and black. Very good copy in green half morocco, cloth, spine gilt-lettered. From the British Museum with 2 stamps (one dated 1787) and the Wellcome Library with withdrawal stamp on verso of title page.

SCHULTZ, OR Schulz (1643–1698), born at Breslau, graduated M.D. at Padua (1671). He practiced medicine for a short period, but was appointed by the Academia Naturae Curiosorum to collect and edit the contributions of the physicians of Breslau. “His knowledge of languages enabled him to write a number of works. He had some skill also in natural history and astronomy, and he contributed papers to the Academy on these subjects” (Ferguson). The present definitive work is on the chemical and medicinal properties of cinnabar (native mercuric sulphide), antimony sulphide, and other insoluble sulphides (e.g., those of lead and arsenic). “Contains a description of a compound of cinnabar and dragon’s blood to which great medical virtues are ascribed.” (Waring, who mistakenly dates it 1679, lists this as the first of many works on cinnabar.) Manget (*Bibliotheca Scriptorum Medicorum*, 1731, vol. II, part 2, pp. 222–229) gives an extensive biography of Schultz. Thorndike (VIII, 242, 244) mentions Schultz but not this title. Not in Bolton, D.S.B., Partington, Smith, Waller, etc. (Duveen, 538; Edelstein, 2080; Ferchl, 490; Ferguson, II, 347; Ferguson Coll., 637; Neu, 3734; Rosenthal, 3114 [under Joh. Michaelis]; Waring, 497)

SCHULTZ, Gottfried

Schatzkammer rarer und neuer Curiositäten, in den allerwunderbahresten Würckungen der Natur und Kunst. Darinnen allerhand seltzame und ungemeyne Geheimmüsse, bewehrte Artzneyen, Wissenschaften und Kunst-Stücke zu finden. . . . Der andere Druck. Jetzo mit dem Dritten Theil von vielen Chymischen Experimenten und andern Künsten vermehret. Deme angehenget ist ein Tractat Naturgemässer Beschreibung der Coffee, Thee, Chocolate, Tabacks, und dergleichen. Mit Chur-Sächsischer Gnad. Befreyung nicht nachzudrucken.

Hamburg: Auff Gottfried Schultzens Kosten. 1686.

Second edition. 8vo. 4 leaves, 592 pp., 12 leaves (index). Paper lightly toned (as usual); otherwise very good copy in contemporary vellum, old ink-lettering on spine. Bound with: Stahl, Georg Ernst, *Ars Tinctoria Fundamentalis* (Frankfurt & Leipzig, 1683); and Stahl, Georg Ernst, *Ars Tinctoria Experimentalis* (Frankfurt & Leipzig, 1685).

AN EXTREMELY rare book of secrets, printed at the expense of the author, containing a great deal of information on pure and applied chemistry. As Manget does not list this title among those known to be by the physician Gottfried Schultz (1643–1698), the present work is presumably by a different man of the same name. “The compiler has not revealed his name, and it is a pity, for this work is a thoroughgoing receipt-book and a typical specimen of its class . . . [it] is of the most comprehensive and catholic description, including medicines, perfumes, fireworks, painting, fishing, colouring of marble and paper, extirpating of noxious insects, gardening, gilding, and what not” (Ferguson, *Books of Secrets*, I [pt. 2], 43–44; referring only to the third edition, Hamburg, 1689). Neither this edition nor the first is listed in the usual bibliographies.

SCHURER, Friedrich Ludwig

Q. D. B. V. Historia praecipuorum experimentorum circa analysin chemicam aëris atmosphaerici usumque principiorum ejus in componendis diversis naturae corporibus portio prior quam praeside Johanne Hermann . . . Solenni eruditiorum disquisitioni submittit die XXIX. Januarii A. C. MDCCCLXXXIX. Frider. Ludovicus Schurer Argentimensis auctor H. L. Q. C.

Strasbourg: Typis Joh. Henrici Heitz, Universit. Typogr. (1789).

First edition. 4to. 3 leaves, 66 pp. Title slightly dusty; otherwise a fine crisp copy with wide margins, in modern blue boards.

THE FIRST part of the M.D. dissertation of Schurer (dates unknown), professor of chemistry and physics at the Artillery School in Strasbourg, presented under Johanne Bernhard Hermann (1738–1800). Partington lists this among the early German works defending the antiphlogistic chemistry of Lavoisier. Schurer gives a bibliography of twenty-one authors on “factitious air” and describes eighteen experiments he has carried out supporting Lavoisier’s researches. The thesis was defended on 29 January 1789, and on 4 September of that year the author published the second part, in which experiments 19–23 are described. The publisher reprinted a second edition of both parts later in 1789 with the title *Synthesis oxygenii experimentis confirmata*, and Fr. Wolff translated it into German as *Abhandlung von Säurestoff und seiner Verbindung mit anderen Körpern. Aus dem lateinischen übersetzt und mit einigen Anmerkungen und*

Zusätzen vermehrt (Berlin, 1790). Both Duveen (p. 539) and Sondheimer (no. 1424) list the *Synthesis* but not the present very rare first edition. Not in Blake, D.S.B., Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Smith, Waller, Watt, etc. (Bolton, 822; Ferchl, 492; Partington, III, 493; Poggendorff, II, 869)

SCHURER, Friedrich Ludwig

Q. D. B. V. Historia praecipuorum experimentorum circa analysin chemicam aëris atmosphaerici usumque principiorum ejus in componendis diversis naturae corporibus portio altera . . . disquisitioni submittit die IV. Sept. MDCCLXXXIX. Frider. Ludovicus Schurer Argentinensis auctor H. L. Q. C. Strasbourg: Typis Joh. Henrici Heitz, Univ. Typogr. (1789).

First edition. 4to. 16 pp. Fine copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE SECOND and final part of the M.D. dissertation of Schurer, in which he describes five further experiments (XIX–XXIII) in support of the antiphlogistic chemistry of Lavoisier et al. The first part was defended on 29 January, and the present on 4 September 1789. The author cites several works by Lavoisier, including the just-published *Traité élémentaire de chimie* (Paris, 1789). For further information see the description of the first part. Evidently very rare by the end of the eighteenth century, as Gmelin (*Geschichte der Chemie*, 1799, III, 286) gives the wrong date (1790) and Partington copies the error. Not in Blake, D.S.B., or the usual bibliographies. (Partington, III, 493)

SCHWAERTZER, Sebald

Chrysopoeia Schwaertzeriana. Das ist: Sebaldi Schwaertzers, ehemahligen berühmten Churfürstl. Sächsischen Artisten und würrklichen Adepti, Manuscripta, von der wahrhafften Bereitung des Philosophischen Steins, . . . und mit einigen nützlichen Anhängen von verschiedenen curieusen Processen vermehret.

Hamburg: Bey Samuel Heil, in S. Johannis Kirche. 1718.

First edition. 8vo. 8 leaves, 186 pp., 2 leaves. 3 engraved plates (lacking). Title printed in red and black. Piece torn from signature L5, with partial loss of 5 or 6 lines of text on pages 169 and 170; otherwise a very good copy in modern calf, spine gilt-lettered and dated.

“THIS BOOK—from the MS. begun by Schwärtzer himself on St. Michael’s day, 1584—was edited, in part at least, by Tutschky” (Ferguson [II, 350], who gives a detailed biography of the author). Schwartzter (d. 1598), a German alchemist, had an interesting career and was highly regarded by Johann Kunckel (*Laboratorium Chymicum*, 1716, p. 586).

Caillet and Waller note that a complete copy should have six plates; however, the two copies in the Ferguson Collection are both imperfect (five and three plates, respectively), and the Young Collection copy has only three plates. The notice to the bookbinder (facing sign. A1) in this copy states that he should bind in three plates. It is possible that there were two issues in 1718, as the copies in Ferguson (Young Coll.) and Waller have pages (16), 184, whereas this copy has pages (16), 186, (4). In any event, the book is very scarce. Not in Blake, Bolton, Duveen, Edelstein, Guiata, Smith, Watt, etc. (Caillet, 10049; Ferchl, 494; Ferguson, II, 349; Ferguson Coll. 636; Waite, 302 [wrong date: 1618]; Waller, 11239)

SCHWEIGGER, Johann Salomo Christoph

Vermischte physikalisch-chemische Bemerkungen vom Prof. Dr. Schweigger. Aus einem Schreiben aus London d. 16. Aug. 1816 an Bergr. Döbereiner. Im September.
N.p. 1816.

First edition. 8vo. 16 pp. Very good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with original green paper wrappers bound in.

A SERIES OF observations on contemporary physical chemistry, with references to electrochemistry. The combustion of hydrogen and oxygen is discussed, with the conclusion that stoichiometric mixtures of 2:1 are optimal to produce water. The researches of Biot, Clarke (oxy-hydrogen blow-pipe), Davy (safety lamp), Richter (stoichiometry), Windsor (coal gas), Wollaston, and others are covered. Schweigger (1779–1857) was professor of chemistry and physics at Nuremberg and later at Erlangen. He “is perhaps best known as founder of the *Journal für Chemie und Physik*, of which he edited fifty-four volumes between 1811 and 1828” (D.S.B., XII, 254). “Schweigger assumed a permanent polarisation of atoms before Berzelius but his views received little attention” (Partington, IV, 176). Although Ferchl (p. 493) and Poggendorff (II, 873) list his many publications, the present rare work is not mentioned.

SCHWICKARDI

Dissertation sur un Nouveau Procédé de Construction de Maisons dites Babyloniennes, n'ayant pas les défauts, les désagréments, et évitant les dangers et l'insalubrité résultant de la manière actuelle de construire les batiments, et réfutation de quelques objections qui ont été faites a l'auteur contre ce genre de construction. Par Schwickardi, Architecte, Inventeur Mécanicien, Breveté. . .
Paris: Chez l'Auteur. 1825.

First edition. 8vo. 32 pp. Fine copy in contemporary quarter calf, marbled boards, spine gilt. Bound with: D'Arcet, J. P. J.,

and Thenard, L. J., *De l'emploi des corps gras comme hydrofuge* (Paris, 1828), and works by Payen and Polozeau.

SCHWICKARDI, AN ingenious architect, built a house incorporating "hanging gardens," following the ancient Babylonian tradition. The present work describes the means he employed to ensure that the roofs did not leak, by suitably caulking them with bituminous compositions of his own invention, formulated using sound chemical principles. No bibliographical record of the author has been found. Apparently distributed from the author's house (Rue Castiglione, No. 7, Paris), this work is very rare.

SCOFFERN, John

Chemistry no Mystery; or, a Lecturer's Bequest. Being the subject-matter of a course of lectures, Delivered by an Old Philosopher, and taken in short-hand by one of the audience, whose name is not known. Arranged from an Original Manuscript, and Revised, by John Scoffern . . .
London: Harvey and Darton. (n.d., but 1839).

First edition, first issue. 8vo. xiii, (3), 310 pp. + 1 leaf (advertisement: Scoffern's Private Medical Classes) + errata slip. With humorous frontispiece and title page, both engraved by George Cruikshank (lightly foxed as usual). Numerous small woodcuts in text. Fine copy, uncut, in half calf antique, gilt, marbled boards, maroon morocco label.

"EVEN GEORGE Cruikshank was attracted by the hilarious aspects of chemistry, and two of his drawings lend distinction to a modest little volume issued in London, in 1839, under the title *Chemistry No Mystery*" (John Read, *Humour and Humanism in Chemistry* [London, 1947], pp. 207–214). Read fully discusses the contents of this "easy and racy account of chemistry." Cole lists the contents of the twenty-one lectures. The engraved and printed title pages in the present very rare first issue are undated. In most copies the printed title page is dated 1839 in roman numerals: e.g., those described by Bolton, Cole, Duveen, Smith, and others. Zeitlinger described an undated copy in 1919 as "scarce." Not in Edelstein, Ferchl, Morgan, Poggendorff, Waller, etc. (Bolton, 824; Cole, 1188; Duveen, 540; Partington, IV, 103; Smith, 439; Sondheimer, 1426; Sotheran, Cat. 773 [1919], 2618)

SCOFFERN, John

Elementary Chemistry of the Imponderable Agents and of Inorganic Bodies, including Light, Heat, Electricity, and Magnetism; the Simple Chemical Bodies, and their Inorganic Compounds. By John Scoffern . . .
London: Houlston and Stoneman, 65, Pater-noster-Row; Wm. S. Orr and Co., Amen Corner. 1855.

First edition. 8vo. 2 leaves, viii, 528 pp. With woodcut portraits of Dalton, Davy, and Lavoisier (p. 1), and numerous woodcuts in text. Very fine copy, in original gilt-ruled half calf, marbled boards, 2 black morocco labels.

A VOLUME IN the series *Orr's Circle of the Sciences*, complete in itself. Originally intended as a new edition of William Henry's *Elements of Experimental Chemistry*, Scoffern has added so much material that this constitutes an entirely new work. Although written as an introduction to the chemistry of inorganic compounds, it provides an excellent survey of the knowledge of the subject during the mid-nineteenth century. Scarce. Not in Cole, Duveen, Morgan, Partington, Smith, Waller, etc. (Bolton, *First Supplement*, 378)

SCOFFERN, John

The Gold-Seeker's Chemical Guide. The Chemistry of Gold: its natural history, chemical properties, modes of mining, washing, and assaying gold ores, and hints for distinguishing them from similar substances found in connexion with them. By John Scoffern . . .

London: Wm. S. Orr and Co., Amen Corner; J. M'Glashan, Upper Sackville-Street, Dublin. (n.d., but 1852).

First edition. Sm. 8vo. viii, (3), 12–125, (1) pp. With colored frontispiece and 27 woodcuts in text. Very good copy, in original purple pebbled cloth, gilt-lettered spine faded.

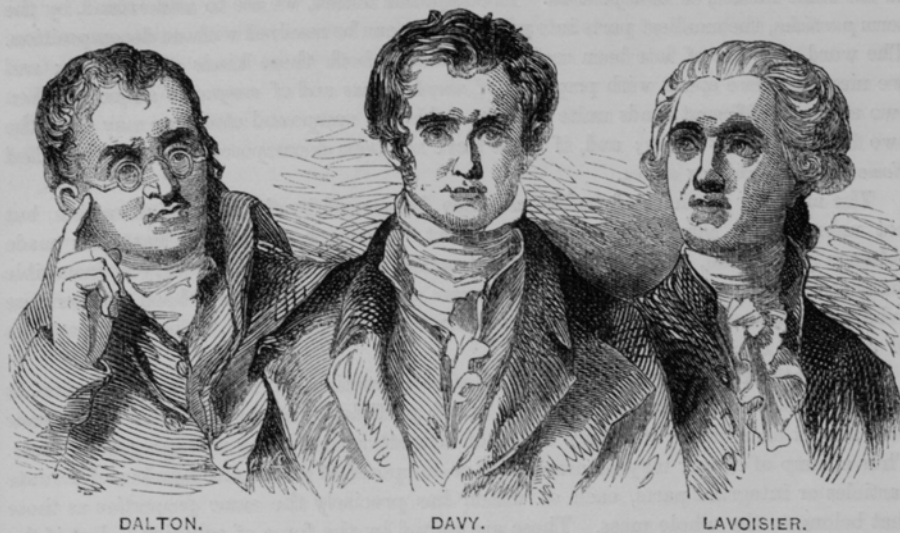
DEDICATED TO Michael Faraday, this useful (though hastily written) work was intended for use by gold miners and assayers. The preface is dated August 1852. Between 1848 and 1850 gold was discovered in California and Australia. This almost simultaneous event caused many British people to emigrate to the respective countries in search of gold and riches. Scoffern published this book for those people. This copy came from an Australian dealer, and it was presumably once the property of an Australian gold miner. Few copies of this tiny book have survived. Unknown to the usual chemical historians. Very rare. (Bolton, *First Supplement*, 378)

SCOFFERN, John

The Manufacture of Sugar, in the Colonies and at Home, Chemically Considered. By John Scoffern . . .

London: Longman, Brown, Green, and Longmans, Pater-noster-Row. 1849.

First edition. 8vo. viii, 160 pp. + 32 pp. (Longman catalogue). With woodcuts in text and hand-colored plate containing 6 figures. Presentation copy inscribed in ink on the first free endpaper: "With the Author's Compliments." Fine copy in original blind-stamped green cloth, front cover lettered in gilt,



DALTON.

DAVY.

LAVOISIER.

THE ELEMENTS OF CHEMISTRY.

Definition of Chemistry.—Chemistry is the science which investigates the quality and constitution of matter in all its relations, except those affecting visible motion and space. Its agencies involve all the grand forces of the universe except gravitation; which latter belongs to the department of mechanical philosophy. Even the force of gravitation, however, comes indirectly under the chemist's scope, as affecting the weight and the specific gravity of ponderable bodies. Its peculiarities, therefore, as contra-distinguished from those of the other forces, will have to be discussed.

All bodies, composing the material system of the universe, have a natural tendency to approach each other, whatsoever may be the distances at which they are placed. The operation of this force extends to the remotest parts of the sidereal system, and is one of the causes which preserve the stability of planets and comets in their orbits. The smaller bodies, also, that are under our more immediate observation, are influenced by the same power, and fall to the earth's surface, when not prevented by the interference of other forces. From these facts, the existence of a property has been inferred, which has been called *attraction*, or, more specifically, the *attraction of gravitation*. Its nature is entirely unknown to us; but some of its laws have been investigated, and successfully applied to the explanation of phenomena. Of these laws, the most important are, that the force of gravity acts on bodies directly in proportion to the quantity of matter in each; and that it decreases in the reciprocal proportion of the squares of the distances.

From viewing bodies in the aggregate, we may next proceed to contemplate them as composed of minute particles. These particles, it is probable, consist of solids, which are incapable of mechanical division, but are still possessed of the qualities or

unlettered spine. Although not marked by him, this copy came from the library of John Yudkin (1910–1995), founder of the first chair of nutrition at the University of London.

AN IMPORTANT and complete scientific account of the whole process of extracting and refining sugar. The book contains “numerous original investigations by the author to cheapen the manufacture of cane sugar” (Zeitlinger, who described it as “scarce” in 1908). Scoffern begins by defining the terms used, then continues with “Crystallization,” “History,” “Changes produced on Solutions of Sugar by various agencies,” “Extraction,” “Vacuum Pan,” “Colonial Process,” “Nature of Molasses,” “Purifying,” “Refining,” etc. Originally trained as a surgeon, Scoffern (1814–1882) became professor of chemistry at the Aldersgate College of Medicine. He published several excellently written works on chemistry, chemical technology, metallurgy, explosives, etc. A very rare book with a distinguished provenance. Not in the usual bibliographies. (Bolton, *First Supplement*, 378; Sotheran, Cat. 682 [1908], 4300)

SCOFFERN, John, FAIRBAIRN, William, and others

The Useful Metals and their Alloys including Mining Ventilation, Mining Jurisprudence, and Metallurgic Chemistry employed in the conversion of Iron, Copper, Tin, Zinc, Antimony, and Lead Ores; with their applications to the Industrial Arts. By John Scoffern . . . William Truran . . . William Clay . . . Robert Oxland . . . William Fairbairn . . . W. C. Aitkin . . . and William Vose Pickett.

London: Houlston and Wright, 65, Pater-noster-Row. 1857.

First edition. 8vo. 1 leaf, (6), 654 pp. With numerous plates and woodcuts in text. Very good copy, in original ornamental blind-stamped purple pebbled cloth, gilt, spine faded.

A VALUABLE TREATISE on the chemistry and metallurgy of the “useful metals,” as opposed to the “noble” or “precious” metals. A work by seven distinguished authors (with input from others), the practical and industrial uses of the metals listed in the title are described. Of particular importance is the description of an early version of the steelmaking process by Henry Bessemer (1813–1898), which he announced the previous year (1856). In Bessemer’s process, air was blown through molten pig iron to burn off most of the dissolved carbon. Sufficient heat was produced by the reaction to keep the charge hot and liquid: the result was “an extremely malleable mild steel” (*Encyclopaedia Britannica*). Bessemer’s patented process is described (pp. 360–363), and he was both knighted and elected F.R.S. in 1879. Fairbairn (1789–1874), a brilliant engineer, superintended the construction of the Menai Straits bridge with his friend George

Stephenson (1781–1848), inventor (simultaneously with Sir Humphry Davy) of a safety lamp for miners (1815) and founder of railways. (Bolton, *First Supplement*, 378; Roller & Goodman, II, 419; Smith, 439; Sotheran, Cat. 757 [1915], 14779)

SCOFFERN, John, and HIGGINS, William Mullinger

The Victoria Gold Valuer’s Ready Reckoner and Assayer’s Chemical Guide: being a manual descriptive of the ordinary as well as the scientific modes of conducting assays; with tables for ascertaining the carat value of gold, and its sterling value . . . The chemical instructions by J. C. Scoffern, M.B.; the calculations prepared by W. M. Higgins, F.G.S.

London: W. S. Orr and Co.; and J. Pullar and Co., Melbourne, South Australia. (n.d., but 1853).

First edition. Sm. 8vo. 4 leaves (misnumbered), (13)–115, (1) pp. + 71 leaves (tables) + 14, (2) pp. (Orr’s catalogue). With 27 woodcuts in text. Very good copy, in original purple pebbled cloth, gilt-lettered spine faded.

A COMPLETE COPY of the greatly expanded version of Scoffern’s *The Gold-Seeker’s Chemical Guide*, published a year earlier. The preface is dated January 1853. The dedication to Michael Faraday has been dropped from this edition, but the woodcuts are the same. The final leaves comprise detailed tables of the value of gold per ounce, expressed in pounds, shillings, and pence. The present updated edition must have proved extremely useful to Australian gold miners and assayers in the 1850s. Most copies were literally read to pieces. Very rare. Apparently unknown to the usual bibliographers.

SCOPOLI, Giovanni Antonio

Fundamenta Botanica Praelectionibus Publicis Accommodata. Pavia: In Typographeo Monast. S. Salvatoris Praesid. Rei Litter. Permitt. Anno 1783.

First edition. 8vo. 174 pp., 1 leaf (errata). Fine engraved vignette on title page (by Ramis) and 10 copperplates of 123 plants and their parts (by Ramis after drawings by Joseph Lanfranch). Fine copy, uncut and unpressed, in original pasteboards, rebaked in unlettered calf.

DEDICATED to the chemist Jacob Reinbold Spielmann et al., this botanical work contains matter of chemical interest, with references to Ingenhousz and Senebier on photosynthesis (p. 14). The works of Adanson, Gyllenborg, Lemery, Rozier, Wallerius, and others are also cited. Pharmaceutical chemical uses of plant products are extensively covered (pp. 116–169, et seq.). Not in Ferchl, Nissen, Partington, Poggendorff, etc. (Blake, 412; Pritzel, 8551; Soulsby *Add.*, 691b)

SCOPOLI, Giovanni Antonio

Fundamenta Chemiae Praelectionibus Publicis Accomodata.
Prague: Apud Wolfgangum Gerle. 1777.

First edition. 8vo. 3 leaves, 166 pp., 1 leaf (errata). Fine copy in original mottled calf, red and tan morocco labels.

SCOPOLI (1721–1788), professor of chemistry and botany at the University of Pavia (1777), translated Macquer's *Dictionnaire de Chymie* (Paris, 1778) into Italian (Pavia, 1783–84) and held a series of positions, including first physician to the mines at Idria in Carniola. Earlier (1766) he had been professor of chemistry, mineralogy, and metallurgy at the Chemnitz Mining Academy. He was “an outstanding botanist and chemist” (Ferguson). Part I of this rare textbook on the fundamentals of chemistry discusses objects and instruments: active (fire, air, water, salts, phlogiston) and passive (furnaces, apparatus, etc). Part II describes operations (calcination, reduction, solution, precipitation, distillation, sublimation, etc.) and their theory, products, and uses. The works of numerous earlier and contemporary chemists are cited. A corrected and enlarged edition appeared in 1779. (Baumer, 47; Bolton, 825; Ferchl, 494; Ferguson, II, 355 [not in Young Coll.]; Partington, III, 590; Poggendorff, II, 880)

SCOPOLI, Giovanni Antonio

Fundamenta Chemiae Praelectionibus Publicis Accomodata.
Editio altera aucta, & emendata.

Pavia: Apud Joseph Bolzanum Regiae Civitatis, ac Reg. Imp. Archigymnasii Typographum. Cum Approbatione. (1779).

Second edition. 8vo. 4 leaves, 238 pp., 9 leaves (index and errata). Woodcut on title page, woodcut head- and tailpieces. Fine copy on thick paper, in original gilt-ruled quarter vellum, ornamental painted boards.

THE CONSIDERABLY enlarged, corrected, and final Latin edition of this introductory textbook, the dedication of which is dated from Zurich (Ticini), 30 August 1778. Cole states that in the preface to his *Elementi di chimica* (Pavia, 1786) Scopoli gives the date of publication of this undated edition as 1779. There are references to the works of Hales, Macbride, Lavoisier, Priestley, and others on gases, but no reference to oxygen (discovered 1774), and the text is entirely based on the theory of phlogiston. Ferchl dates this edition 1778, and Neu suggests “1778?” while Partington and Poggendorff give the date as 1780. Translations into German (Vienna, 1786) and Italian (Pavia, 1779) appeared. (Bolton, 825; Cole, 1189; Ferchl, 494; Ferguson, II, 355; Neu, 3742; Partington, III, 590; Poggendorff, II, 880)

SCOTUS, Michael

Physionomia Laqual compilo Maestro Michael Scotto, a preghi de Federico Romano Impatore Huomo de gran scientia. Et è cosa molto notabile, e da tenir secreta, però che la è de gra[n]de efficacia e comprende cose secrete della natura, che basta ad ogni Astrologico. Et è diviso il ditto libro in quattro parte.
M.D.XXXVII.

(Colophon: Venice, Francesco Bimdoni, & Mapheo Pasini Compagni, February, 1537).

8vo. 60 folios. Title printed within elaborate woodcut border. Large woodcut on verso of final leaf. Printed in italics throughout and with guide letters. First and last few leaves with minor wormholes (not affecting legibility of text); otherwise a very good, crisp copy, in eighteenth-century half calf, speckled boards, spine gilt-ruled, with orange gilt-lettered label.

MICHAEL SCOTUS, Michael Scot, or Michael the Scot, was born in the south of Scotland, somewhere on the border, in the latter part of the twelfth century. His dates are given as c. 1190–1291. Tradition asserts that he was first educated at Oxford, then went to Paris, Bologna, Palermo, Toledo, and other places. He was tutor to the prince of Palermo, who afterwards became Frederick II, king of Sicily and emperor of Germany. Ferguson states: “It is probable that the treatise entitled *Physionomia*, and subsequently *De Secretis* . . . which is dedicated to the Emperor, was written early in the year 1209, and was intended as a gift to the Emperor on the occasion of his marriage. . . . the *Physionomia* was based partly on portions of Aristotle's works on animals, partly on the *Secreta Secretorum*, and partly on works by Rhazes.” Divided into three books, the work discusses human generation, complexions, and physiognomy: inter alia it is of some pharmaceutical chemical interest. Thorn-dike (vol. II, chapter 51) discusses the many aspects of Michael Scot's works, including his alchemical statements, and Ferguson (II, 355–360) also gives an extensive account. The *Physionomia* was widely circulated in manuscript and was printed as early as 1477, with many editions in the fifteenth, sixteenth, and seventeenth centuries. Very rare. (Ferguson Coll., 640)

SCUDAMORE, Charles

An Analysis of the Mineral Water of Tunbridge Wells, with some account of its medicinal properties. By Charles Scudamore, M.D. . . . To which are annexed some observations on the water with which Tunbridge Wells is chiefly supplied for domestic purposes. By Thomas Thomson, M.D. . . .

London: Printed for the author; and published by Longman, etc. 1816.

First edition. 4to. vi, 58 pp. Very good copy in nineteenth-century maroon pebbled cloth, spine gilt-lettered. Armorial bookplates: F. William Cock, M.D., and Sir Thomas Neame.

SIR CHARLES SCUDAMORE (1779–1849) studied at Guy's and St. Thomas's hospitals, London, and became M.D., Glasgow, 1814, and L.R.C.P., the same year. He practiced in London and was physician to Prince Leopold of Saxe-Gotha. Knighted in 1829, he maintained a lifelong interest in the medicinal properties of mineral waters, and this is his first publication. Later he published on the waters of Buxton (1820 and 1830) and Gräfenberg (1843). Annexed to this work are the analyses of Tunbridge Wells water, carried out in 1815 by the famous chemist Thomas Thomson (pp. 43–58). The descriptions of the reagents and techniques used are important, particularly as they relate to the detection of minute concentrations of lead. Rare. Not in Bolton, Duveen, Edelstein, Ferchl, Ferguson Coll., Partington, Smith, Waller, etc. (Munk, III, 127; Waring, 803; Watt, II, 841v)

SCUDAMORE, Charles

A Chemical and Medical Report of the Properties of the Mineral Waters of Buxton, Matlock, Tunbridge Wells, Harrogate, Bath, Cheltenham, Leamington, Malvern, and the Isle of Wight. By Charles Scudamore, M.D. . . . London: Printed for the Author, . . . and sold by Longman, etc. 1820.

First edition. 8vo. 6 leaves, 265, (1) pp. Fine copy in contemporary blue half calf, marbled boards, spine gilt-ruled, maroon morocco gilt-lettered label. Armorial bookplates: John Kent Spender, M.D., and A. Leonard Fuller.

THE AUTHOR'S most ambitious and complete work on the chemistry of English mineral waters, containing details on the analytical reagents and techniques used. "A brief geological sketch is given of the places visited by the author; the chemical analysis of each mineral water is then stated" (Waring). "To those acquainted with the difficult . . . details of chemical analysis, the accomplishment of an investigation so extensive will appear to be no trivial labour" (preface). Scudamore and the famous chemist J. G. Children carried out the analyses. An important and rare balneological work. The second edition appeared in 1833. Not in the usual early chemical bibliographies. (Munk, III, 128; Waring, 786)

SCULTETUS, Abraham

Disputatio Physica de Elementis in Genere, quam D. O. M. A. praeside M. Job. Andrea Lucio, Dresd. Disquisitioni publicae sistit Abrahamus Scultetus, Gubenâ-Lusatus. In auditorio minori, ad diem IV. Augusti horis antemeridianis. (Wittenberg:) Johannis Röhneri, Acad. Typogr. 1649.

First edition. 4to. 6 leaves (unpaginated). Fine copy in modern boards. Bound with: Laurentius, C., *De aere* (1650) and *De aqua* (1650); and Pistorius, I., *De terra et igne* (1650).

PRESENTED AT the University of Wittenberg, this dissertation on the physical and chemical properties of the four Aristotelian elements quotes works by Sennert, Sperling, et al. The possibility of transmuting the elements is discussed. No references to Lucius, the praeses, or to his pupil Scultetus, have been found. Very rare.

SEBASTIANI, Georg Heinrich

Dissertatio Inauguralis Physico-Chemico-Medica de Nitro eius relationibus et modo cum eius Acido Oleum Naphthae Parandi. . . . Pro Gradu Doctoris . . . Publico Eruditorum Examini Submittit Auctor et Respondens Georgius Henricus Sebastiani Erfordiensis. Die XXVIII. Martii Anno MDCCXLVI.

Erfordiae (Erfurt): Typis Joh. Christoph. Heringii Acad. Typogr. (1746).

First edition. 4to. 46 pp., 1 leaf. Fine copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

THE DISSERTATION of Sebastiani (dates unknown) for the M.D. degree at the University of Erfurt, 28 March 1746. Evidently a native of Erfurt, nothing is known of his life and work subsequent to this dissertation, which is of great interest and importance in the history of chemistry. After tracing the history of niter (potassium nitrate) from earliest times, its physical and chemical properties are described. Details on the preparation, properties, and reactions of nitric acid follow. Of interest in the history of organic chemistry are descriptions of the preparations of ethyl chloride (from sulphuric acid, common salt, and ethyl alcohol) and ethyl nitrate (from nitric acid, sulphuric acid, and ethyl alcohol). The isolation of ethyl chloride was an accomplishment, as this compound is extremely volatile (boiling point of 12.2°C). Ethyl nitrate (boiling point of 88.7°C) was easier to isolate. The preparation of ethyl nitrite is also described (from nitric acid and alcohol on long standing). The reactions of nitric acid with various metals and minerals are discussed, together with the works of earlier and contemporary chemists. This dissertation is specifically praised by

R. A. Vogel in his *Institutiones Chemiae* (Frankfurt & Leipzig, 1762, pp. 225–226). Rare. Not in Blake, Waring, or the usual bibliographies. (Ferchl, 495; Partington, III, 99)

SEBIZIUS, Melchior

Dissertationum de Acidulis Sectiones Duae: in quarum priore agitur de Acidulis in genere: in posteriore vero de Alsaciae Acidulis in specie: ita adornatae, ut etiam aliarum thermarum usui, sive bibantur, sive foris applicentur, plurimum in servire queant. . . .

Strassburg: Excudebat Wilhelmus Christianus Glaserus Acad. Typographus. (1627).

First edition. 8vo. 12 leaves, 713, (1) pp., 3 leaves (last blank). Engraved title page. Fine copy, in contemporary vellum. With oval armorial crest in gilt and the letters NGB LRI MD on each cover (i.e., initials of unidentified seventeenth-century physician).

SEBIZIUS (Sebisch, 1578–1674), a successful physician and professor of medicine at Strassburg, is reputed to have studied at twenty-seven universities and was the son of a famous physician of the same name. This comprehensive work on the use and abuse of the spas of Europe is of great chemical interest as it discusses the composition of the waters. There are numerous references to the writings of earlier and contemporary chemists and physicians. The acid content of various natural waters is covered, with experiments designed to determine their mineral content. Very rare. Not in the usual chemical and medical bibliographies. (Goldsmith, S537; Wellcome, I, 5905)

SECRETS

Secrets concernant les Arts et Métiers. Nouvelle édition, revue, corrigée & considérablement augmentée. . . .

Brussels: Par la Compagnie. 1755.

So-called *nouvelle édition*. 2 vols., 12mo. I: 20 leaves, 451, (1) pp. II: 8 leaves, 432 pp., 4 leaves. Fine copy, uncut and unpressed with wide margins, in original unlettered pasteboards.

A BOOK OF secrets of considerable interest in the history of chemical technology. The first volume describes secrets of engraving, metals (including transmutation), gilding, colors, pigments, adhesives, cements, varnishes, casting, molding, inks, winemaking, tobacco, spot removal, bleaching, etc. The second volume comprises “Le teinturier parfait,” in two parts, which describe the theory and practice of dyeing. First appearing in one volume (Paris, 1716), this anonymous work was augmented with the second volume on dyeing in the so-called *nouvelle* (i.e., second) edition (Nancy, 1721). Several other “nouvelle” editions followed. In his

Books of Secrets (II, supplement III, pp. 57–59) Ferguson describes the editions of 1716, 1721, and 1791, and the Ferguson Collection (University of Glasgow) contains the following editions: Paris, 1716; Rouen, 1724; Brussels, 1747; Caen, 1787; Paris, 1801. All editions are rare. No other copy of the present Brussels imprint has been located.

SECRETS

Valuable Secrets concerning Arts and Trades: or, approved Directions, from the best Artists, for the various Methods of engraving on Brass, Copper, or Steel. . . . Composition of Metals, of Varnishes . . . Cements . . . Glass . . . Colours . . . Lapis Lazuli . . . Gilding . . . Dying . . . Ink . . . Wines . . . Vinegars . . . Oils . . . of taking out spots and stains . . . Containing upwards of One Thousand approved Receipts relative to Arts and Trades. . . .

Dublin: Printed by James Williams. 1778.

First Irish edition. 12mo. 4 leaves, xxvii, (1), 312 pp. Fine copy, in original calf, spine gilt-ruled, maroon morocco label. Armorial bookplate (late eighteenth century): Thomas Rochfort.

A COMPREHENSIVE BOOK of secrets (first edition: London, 1775; Ron, 1062), many of them chemical and metallurgical. Of use to artisans, householders, farmers, tradesmen, etc., it is a translation of the first volume of an anonymous French work, entitled *Secrets concernant les arts et métiers* (Paris, 1716; Ferchl, 495; Ron, 962). The sections on glass-making are not mentioned by Duncan. The preface is dated 1 December 1774. Ferguson (*Books of Secrets*, II, 3rd suppl., 58) mentions a work of similar (not identical) title, giving no details but stating that it is an “important book.” An American edition appeared (Norwich, Connecticut, 1795; Smith, 491). Rare. (Edelstein, 3609; Ferguson Coll., 643; Ron, 1064)

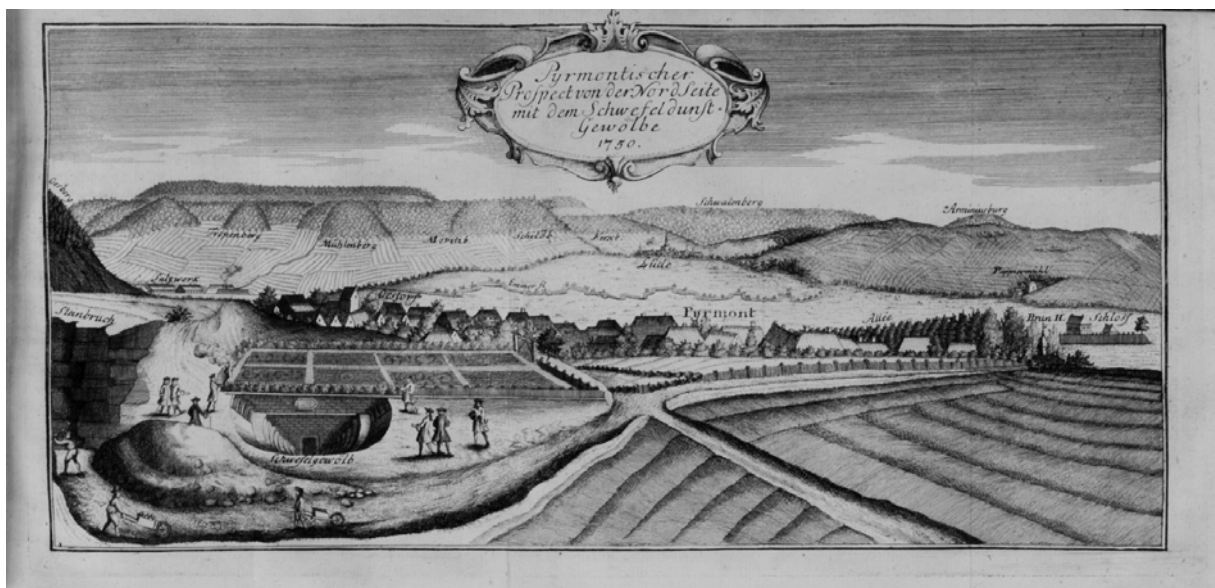
SEDEY, Franciscus Nicolaus

Dissertatio Chémico-Médico, de Sulphure, Spiritu ejus Volatili, et Acido Caustico. . . . Publicae disquisitioni submittit Franc. Nicol. Sedey Carniolus Labacensis. . . . M.DCC.LXVI.

Vienna: Typis Joannis Thomas de Trattnern. (1766).

First edition. 8vo. 63, (1) pp. Very good copy, all edges gilt, in contemporary tree calf, gilt fillets on covers, spine richly gilt.

DEDICATED TO the famous professor of medicine in Vienna, Heinrich Johann Nepomuk von Crantz (1722–1799), this important dissertation by Sedey (dates unknown) is on the chemical and medicinal properties of sulphur, sulphur dioxide, sulphurous acid, and sulphites. Almost entirely chemical in content, there are numerous references to the



Seip. Beschreibung der Pyrmontischen Mineralwasser. Hannover und Pyrmont, 1750.

works of earlier and contemporary chemists (e.g., Boyle, Becher, Stahl, Boerhaave, Homberg, Pott, and Macquer). Sedey discusses the chemistry of sulphur compounds and attempts to account for the acidity produced by the combustion of sulphur, referring to Meyer's theory of *acidum pingue*, on which Crantz also wrote (see Partington, III, 148). A rare and interesting work on combustion, acidity, etc., which has remained unknown to chemical historians. Not in the usual early chemical libraries. (Ferchl, 495; Neu, 3751)

SEIP, Johann Philipp

Beschreibung der Pyrmontischen Mineralwasser und Stahlbrunnen, derselben Historie, mineralischer Gehalt, Arzeneykräfte, Gebrauch und Nutzen, beydes vom Trinken und Baden; mit dem Anhang der Pyrmontischen Krankengeschichte, auch Landkarte, Prospect des Pyrmontischen Thals, und Abriss des Schwefeldunst-gewölbes. . .

Hannover und Pyrmont: im Verlag sel. Nicolai Försters und Sohns Erben Hof-Buchhandl. 1750.

Fourth, augmented edition. 8vo. 6 leaves, 588 pp., 22 leaves (index). With large folding engraved frontispiece and 2 other folding engraved plates (all depicting the Pyrmont district, sulphur mining, etc). Fine copy, in original half calf, mottled boards, contemporary printed paper label on spine.

BORN AT Pyrmont, Seip (1686-?), a physician, wrote his doctoral dissertation on the mineral waters of Pyrmont, *Dissertatio inauguralis physico-chemica de spiritu et sale aquarum mineralium praesertim Pyrmontanarum* (Göttingen: Johann F. Hager, 1748, 4to.). He dedicated it to Prince

Charles August Friederich, prince regent of Waldeck. Also dedicated to the prince, the present work is a greatly enlarged and updated version of his doctoral dissertation, in which Seip extolls the curative virtues of the Pyrmont waters with considerable discussion of their chemical composition. Although the present work was unknown to Partington (III, 124), he states that Seip recognized that the gas (carbon dioxide) in the Grotto del Cane is probably the same as that dissolved in Pyrmont water. These observations were published by Seip in the *Philosophical Transactions of the Royal Society*, 1737-1738 (vol. 40, 266, no. 448). Rare. Not in the usual bibliographies.

SELLIN, Eric Olaf

Dissertatio Chemica Animadversiones Celeberrimi Gmelin, in Theoriam Lavoisierianam, de Natura Acidorum Examinans. . . Praeside Mag. Job. Gadolin, . . . pro gradu publicae censurae subjicit Ericus Ol. Sellin, Angermannus. In Auditorio Majori die XX Junii MDCCCL. . .

Åbo: Typis Frenckellianis. (1801).

First edition. 4to. 2 leaves, 11, (1) pp. Mint copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. Nature of Acids. 1801-1802.

AN IMPORTANT dissertation on the nature and composition of acids, being one of a series of replies to Gmelin's rejection of Lavoisier's theory of acids, which appeared in Crell's *Chemische Annalen*, I, 291 (1796). Lavoisier had stated that all acids contain oxygen, but that is not strictly correct as this hypothesis excludes hydrochloric acid and the other halogen hydracids. Sellin presented this work

under the direction of Gadolin, professor of chemistry at Åbo. Rare. (Cole, 501; Partington, III, 235)

SENAC, Jean Baptiste

Nouveau Cours de Chymie, suivant les principes de Newton & de Sthall. Avec un Discours Historique sur l'Origine & les progresz de la Chymie. . . . Nouvelle edition revue & corrigée. . . .

Paris: Chez Jacques Vincent. 1737.

Second (final) edition. 2 vols., 12mo., in 1. I: 100 + 253 pp., 1 leaf. II: 1 leaf, 540 pp. Very good copy in contemporary speckled calf, rebacked in morocco, spine dated, maroon morocco label gilt. Old stamp on both titles (Medical Society of London), with release stamp of the Wellcome Library on verso of first title leaf.

A "PIONEERING WORK ON phlogiston chemistry" (Guerlac), which introduced Stahl's theory into France. At the same time it caused a revolution in chemistry by the application of Newton's principles to chemical doctrines. The present edition revises, corrects, and augments the first (Paris: Jacques Vincent, 1723), which contains numerous errors. Although published anonymously, the author is generally acknowledged to be Senac (1693–1770), the famous French physician who laid the foundations of cardiac pathology in his celebrated *Traité de la structure du coeur* (Paris, 1749). Partington discusses the contents of the present course of chemistry in detail. Scarce. Not in Cushing, Morgan, Smith, Sondheimer, Waller, Watt, etc. Edelstein and Poggendorff list only the first edition. (Bolton, 828; P. Brunet, *L'Introduction des Théories de Newton en France* [1931], pp. 121–124; D.S.B., XII, 303; Duveen, 542; Ferchl, 498 [wrong date: 1736]; Ferguson, II, 363 [not in Young Coll.]; H. Guerlac, *Lavoisier—The Crucial Year* [1961], p. 66; Neu, 3760; Partington, III, 58; Sotheran, Cat. 800 [1926], 11973)

SENAC, Jean Baptiste

Nuovo Corso di Chimica secondo i Principj di Newton, e di Sthall. Con un Discorso Storico sull'Origine, e Progressi della Chimica. Trasportato dalla Lingua Francese nella nostra Italiana Favella, e dedicato all'illustrissimo Signore Dr. Giambattista Paitoni Medico Fisico. . . .

Venice: Presso Michiel Pleunich a spese particolari. 1738.

First edition in Italian. 4to. 4 leaves, 479, (1) pp. Very fine, crisp copy, in the original white pasteboards, with gilt-lettered orange label on spine. Bookplate (eighteenth century) on front pastedown endpaper: Ad Bibliothecam Conventus Viennensis. F.F. Misericordiae. Signature (eighteenth century) in ink on page 479: Fr. Justinianus Klug.

FIRST ITALIAN translation of the *Nouveau cours de chymie* of Senac. The censorship license is dated 29 September 1737, and the date of registration is 9 April 1738. The privilege of the second French edition (Paris, 1737) is dated 18 July 1735, and the approbation is dated 8 January 1737. It is probable, therefore, that the Italian translation was made from the second and best French edition of 1737. The biography of Senac in the *Dictionary of Scientific Biography* (XII, 302–303) was written by W. A. Smeaton, who stated that only the second Italian edition (Venice, 1750) has been located (in the Wellcome Library, London). Smeaton conjectured correctly that "the first edition probably appeared in 1738." A beautiful example of eighteenth-century Italian printing. Extremely rare. Unknown to the usual chemical historians and bibliographers.

SENCKENBERG, Conrad Hieronymus

Dissertatio Medico-Chymica de Vegetatione Philosophica quam sub . . . D. Alberti Haller . . . MDCCXXXVIII. D. XXX. Aug. defendet auctor Conr. Hieron. Senckenberg medicinae et chymices cultor.

Göttingen: Sumtus fecit Michael Turpio. (1738).

First edition. 4to. 32 pp. Woodcut printer's device on title. Fine copy in maroon quarter calf antique, marbled boards, spine gilt-lettered and dated.

BEFORE LAVOISIER demonstrated their elementary nature, metals were believed to be mixtures and to grow in their ores in the ground. Presented under the direction of the celebrated Albrecht von Haller, this dissertation by Senckenberg (dates unknown) discusses the supposed growing ("vegetation") of metals in their ores, quoting theories put forward by earlier writers (e.g., Basil Valentine, Borrichius, Kircher, Kunckel, Becher, and Stahl). On page 12 the "composition" of silver, iron, copper, tin, and lead is given, and on page 32 that of antimony and bismuth. An important work in the history of metallurgical chemistry. Very rare. Senckenberg also published a paper on the mineral waters of Cheltenham (*Philosophical Transactions of the Royal Society*, 1741, vol. 41, p. 830). Not in Blake, Hoover, Tylecote, Ward & Carozzi, or the usual early chemical bibliographies. (Ferchl, 498; Waller, 8838)

SENDIVOGIUS, Michael

A New Light of Alchymie: Taken out of the fontaine of Nature, and Manuall Experience. To which is added a Treatise of Sulphur: Written by Micheel [sic] Sandivogius [sic]: i.e., Anagrammatically, Divi Leschi Genus Amo. Also Nine Books Of the Nature of Things, Written by Paracelsus, viz. Of the Generations Growthes Conservations Life: Death Renewing Transmutation Separation Signatures of Naturall things. Also a Chymicall Dictionary explaining hard places and words met withall in the writings of Paracelsus, and other obscure Authors. All which are faithfully translated out of the Latin into the English tongue, By J. F. M.D.

London: Printed by Richard Cotes, for Thomas Williams, at the Bible in Little Britain. 1650.

First edition in English. 4to. Three parts in 1 volume (parts 2 and 3 with divisional title pages). 8 leaves, 147, (1) pp.; 6 leaves, 14–5, (1) pp.; 25 leaves. Woodcut headpieces and capitals. Occasional neat pencil marginalia; otherwise very good copy in speckled calf antique, gilt.

SENDIVOGIUS (1556–1636), a Polish or Moravian adept, is reputed to have carried out a successful transmutation at the Polish court, as well as at Prague in 1604 before Emperor Rudolf. This famous work first appeared as *Novum Lumen Chymicum* (Paris, 1608), and many editions appeared in Latin, with translations into French and English. One of the most famous collections of alchemical tracts ever published, this English translation was probably made from the Venice (1644) edition, which first contained the *Tractatus de sulphure*. The tract by Paracelsus was compiled by John French, author of *The Art of Distillation* (London, 1651). Ferguson states that the *Chymicall dictionary* is an abridged and altered translation of Gerhard Dorn's *Dictionary Paracelsi* (Frankfurt, 1583). The present edition was an important sourcebook for Newton's study of alchemy. He owned and dog-eared a copy (see Harrison) and made at least two sets of notes on it (see Westfall, *Never at Rest*, pp. 290 and 299). (Bolton, 1045; D.S.B., XII, 307; Duveen, 544; Edelstein, 2091; Krivatsy, 10894; Mellon, 98; Neu, 3774; Partington, II, 427; Smith, 441; Waller, 11240; Watt, II, 832b; Wing, S2506)

SENDIVOGIUS, Michael

A Philosophical Account of Nature in General, and of the Generation of the Three Principles of Nature, viz. Mercury, Sulphur, and Salt, out of The Four Elements. Translated from the French. By John Digby, Esq.

London: Printed for John Hooke, at the Flower-de-luce, against St. Dunstan's Church in Fleet-Street; and Thomas Edlin, at the Prince's Arms, against Exeter-Exchange in the Strand. 1722.

First edition. 8vo. 6 leaves, 348 pp. Woodcut capitals, head- and tailpieces. Very good copy in contemporary unlettered gilt-ruled calf.

AN ENTIRELY new translation made from an unnamed French version of the *Novum Lumen Chymicum*. Nothing appears to have been recorded of the translator, John Digby, except that he also translated *Epicurus's Morals* (London, 1712) from the Greek. Possibly he was a descendant of Sir Kenelm Digby, who was interested in alchemy. This edition also contains a translation of the *Traité du Sel* (Paris, 1669) by Sendivogius: viz. *A Treatise, or Discourse upon Salt, the Third Principle of Minerals* (pp. 263–326). This is followed by *A Dialogue, which more amply discovers the Preparation of the Philosophical Stone* (pp. 326–348). The present translation is rarer than the John French editions of 1650 and 1674 (see R. G. Neville, *The Book Collector* [1958], 7, 79). (Blake, 351; Duveen, 545; Ferguson, II, 367 [not in Young Coll.]; Ferguson Coll., 646; Morgan, 691; Neu, 3776; Smith, 442)

SENDIVOGIUS, Michael

Traitez du Cosmopolite Nouvellement découverts. Où après avoir donne une idée d'une Société de Philosophes, on explique dans plusieurs Lettres de cet Auteur la Théorie & la Pratique des Veritez Hermetiques.

Paris: Chez Laurent d'Houry, rue Saint Jacques, devant la Fontaine Saint Severin, au Saint Esprit. 1691.

First edition? 12mo., 238 pp. Woodcut on page 225. Very good copy in original calf, gilt, rebaked with old spine laid on.

A COLLECTION of fifty-three letters on alchemy, purportedly written by Sendivogius, who was known in France as the Cosmopolite. The letters are dated from 9 February 1646 to 22 January 1647, with a further undated letter. As he died in 1636, these letters could not have been written by Sendivogius: they were written by an anonymous alchemist who attributed them to Sendivogius. In the beginning of the book a proposal is made to form a society of alchemists, and the rules of the society are set out in a series of articles. At the end of the book is a summary of the alchemical content of the letters, with a woodcut hieroglyph that illustrates the essence of the hermetic science. The present work should not be confused with the several French language editions of the *Novum Lumen Chymicum*, viz. *Cosmopolite, ou nouvelle lumière de la physique naturelle* (first: Paris, 1609). (Caillet, 10131; Duveen, 545; Ferchl, 498; Goldsmith, S606; Guaita, 972 ["Très rare"]; Neu, 3781; Partington, II, 427; Rosenthal, 784; Thorndike, VII, 158)

SENEBIER, Jean

Essai sur l'Art d'observer et de faire des Expériences . . .
Geneva: Chez J. J. Paschoud, Libraire. An X. (1802).

Second edition. 3 vols., 8vo. I: 2 leaves, 427, (1) pp. II: 2 leaves, 350 pp. III: 2 leaves, 295, (1) pp., 4 leaves (pagination erratic). Occasional neat early underlining, and old ownership stamp (J. P. Orfila) on half titles; otherwise very good set in nineteenth-century gilt-ruled quarter morocco, marbled boards.

THE FINAL, greatly enlarged, and best edition. The first edition (Geneva, 1775) was in two volumes, 8vo. In this work on the art of scientific discovery, Senebier summarizes his conclusions after a lifetime of research. "The three volume *Essai sur l'art d'observer . . .* (1802) sums up the fundamental theses of the experimental method. This work is impressive for the closeness of Senebier's thought to that of Claude Bernard and for the degree to which the ideas expressed in Bernard's *Introduction à l'étude de la médecine expérimentale* were formulated in the work of Senebier" (D.S.B.). "Ouvrage utile" (*Biogr. Gén.*). The text deals extensively with the methods of Newton, and the third volume contains much on chemistry, with references to Lavoisier, Priestley, et al. Scarce. (Bolton, 828; D.S.B., XII, 309; Ferchl, 498; Poggendorff, II, 904)

SENEBIER, Jean

Expériences sur l'Action de la Lumière Solaire dans la Végétation. Par Jean Senebier . . .

Geneva & Paris: Chez Briand, Libraire, hôtel de Villiers, rue pavée St. André-des-Arts. 1788.

First edition. 8vo. xvi, 446 pp. Fine copy in original mottled calf, spine richly gilt, maroon morocco label.

A CLASSIC WORK on photosynthesis. "In several works, but especially in *Expériences sur l'action de la lumière solaire dans la végétation* (1788), Senebier paid particular attention to the gas exchanges of green plants exposed to light. He was the first to observe that in sunlight such plants absorb carbonic acid gas and emit oxygen while manufacturing a substance with a carbon base" (D.S.B.). Of the four works by Senebier on photosynthesis listed by Partington, this is the rarest. Not in Duveen, Osler, Roller & Goodman, Smith, Waller, Watt, etc. (Blake, 414; Bolton, 828; Cole, 1198; D.S.B., XI I, 309; Ferchl, 499; Neu, 3788; Partington, III, 281; Poggendorff, II, 904; Pritzel, 8608)

SENEBIER, Jean

Mémoires Physico-Chymiques, sur l'influence de la lumière solaire pour modifier les êtres des trois règnes de la Nature, & sur-tout ceux du règne végétal. Par Jean Senebier . . .

Geneva: Chez Barthelemi Chirol, Libraire. 1782.

First edition. 3 vols., 8vo. I: xvi, 408 pp. II: viii, 411, (1) pp. III: viii, 412 pp. With 2 folding engraved plates. Old stamps on title pages ("Bibliotheca Bernensis" and H. R. Hoogenraad); otherwise very fine set in original gilt-ruled half calf, speckled boards, tan morocco labels. Bookplate: Dr. H. R. Hoogenraad.

AN IMPORTANT work in which the Swiss naturalist Senebier (1742–1809) demonstrated the basic principles of photosynthesis, reported by Ingenhousz in 1779. His greatest advance was to prove (herein) that the emission of oxygen by green plants in sunlight is dependent on a supply of carbon dioxide, one of the key points not sufficiently examined by Ingenhousz. He showed that leaves also perform their function when they are detached from the plant. In the absence of light, leaves in water "do not allow the air they contain to escape." He describes many quantitative experiments in which the volume of oxygen produced is proportional to the intensity of light. Senebier confirmed the main results of Ingenhousz and experimentally extended them in a valuable way by being more critical and wider ranging. Experiments of importance in the history of photography are described (vol. III, pp. 192 ff.). He exposed silver chloride under various thicknesses of paper and glass, and extended Scheele's experiments with the solar spectrum. He noted the time taken for each color to darken the silver salt and found that violet rays darken it much faster than red rays. Partington discusses the many important points made by Senebier in this work. (Blake, 414; Bolton, 828; Cole, 1199; Duveen, 546; Ferchl, 498; Gernsheim, *History of Photography*, 33; Neu, 3788; Partington, III, 281; Poggendorff, II, 904; Pritzel, 8606; Sotheran, Cat. 773 [1919], 2619 ["Rare"]; Watt, II, 844h)

SENEBIER, Jean

Recherches Analytiques sur la Nature de l'Air Inflammable; par Jean Senebier . . .

Geneva: Chez Barthelemi Chirol, Libraire. 1784.

First edition. 8vo. xxviii, 387, (1) pp. Fine copy in original quarter calf, marbled boards, spine richly gilt, brown morocco label.

AN EXTENSIVE treatise on the nature of inflammable air (hydrogen) generated by the action of dilute mineral acids on iron, steel, and other metals. Senebier often refers to the works of Lavoisier but "was a firm supporter of the phlogiston theory, and criticised Lavoisier's doctrines. . . . [He]

supposed that inflammable air contains phlogiston, water, and some of the acid used in its preparation (Lavoisier's earlier idea), but Kirwan showed that the last is insignificant and only accidental" (Partington). In the preface he writes that Priestley, Fontana, Volta, and Lavoisier had inspired him in his researches on gases. A whole chapter (pp. 277–297) is devoted to Lavoisier's experiments on the decomposition of water. In the last section (pp. 339–377), Senebier disputes Kirwan's view that inflammable air is identical to phlogiston. A German translation by Crell appeared (Leipzig, 1785), containing Kirwan's observations. An "important work" (Duveen). (Blake, 414; Bolton, 828; Cole, 1200; Duveen, 546; Duveen, *Supplement to A Bibliography of Lavoisier*, 109; Edelstein, 2097; Ferchl, 498; Neu, 3791; Partington, III, 280; Poggendorff, II, 904; Roller & Goodman, II, 425; Smith, 443)

SENEBIER, Jean

Recherches sur l'Influence de la Lumière Solaire pour métamorphoser l'air fixe en air pur par la végétation. Avec des expériences & des considérations propres à faire connoître des substances aëriiformes. Par Jean Senebier . . .

Geneva: Chez Barthelemi Chirol, Libraire. 1783.

First edition. 8vo. xxxii, 385, (1) pp. Very good copy, uncut with wide margins, in gilt-ruled half calf antique, marbled boards, red morocco label, spine dated.

THE VERSO of the title page of this volume indicates that it is a continuation of the *Memoires Physico-Chymiques* (Geneva, 1782, 3 vols.). In the preface Senebier states that these researches are "more chemical" than his earlier investigations. Further experiments are described in which fixed air (carbon dioxide) is converted to pure air (oxygen) when leaves placed in water are exposed to sunlight. He discusses the effects produced by the addition of acids and salts to the water, and shows that oxygen is formed in the leaves. The nature of various gases is described (e.g., hydrogen, oxygen, nitric oxide, and carbon dioxide). Senebier justifies the use of chemistry in the study of nature and in his preface praises the researches of Bergman, Lavoisier, Priestley, and Scheele. Despite his admiration of the experiments carried out by Lavoisier, Senebier could not accept the New Chemistry and (like Priestley) staunchly defended the theory of phlogiston. (Blake, 414; Bolton, 828; Browne, *Source Book of Agricultural Chemistry*, 150; Cole, 1201; Duveen, 546; Edelstein, 2098; Hofer, II, 540; Bleu, 3792; Partington, III, 281; Pritzel, 8607; Poggendorff, II, 904; Roller & Goodman, II, 425)

SENECA, Lucius Annaeus

Opera Philosophica. Epistolae. Suasoriae. Controversiae.

Venice: Bernardinus de Choris, de Cremona, and Simon de Luere, 5 October, 1490.

Folio. 216 leaves (3 unnumb., 147, 65 numb., 1 blank leaf).

Many capital spaces with guide letters, also spaces for Greek.

Printed in Roman type, 62 lines and headline to the page. Very wide-margined copy in contemporary Italian limp boards, with a few neat early marginal annotations.

A FINE AND important edition of one of the main sources for the classical Stoic tradition. Included as an appendix (the last sixty-five numb. leaves) is St. Jerome's letter to Seneca. Of particular interest is Seneca's scientific work, the *Quaestiones naturales* (leaves 88–110), which is "a collection of physical, astronomical, geographical, geological, and meteorological questions explained from the atomistic point of view. They . . . exerted a great influence throughout the Middle Ages. Special attention must be made of his account of the earthquake which did much damage in Campania on February 5, 63—the earliest detailed account of an earthquake. This led him to discuss earthquakes and volcanic phenomena. He distinguished three kinds of motion in quakes (succussio, inclinatio, and vibratio). Seneca was the first to express a belief in the progress of knowledge . . . this idea of progress is unique in ancient literature" (Sarton, I, 247–248). This edition is the first to contain the *Quaestiones naturales*. The *Suasoriae* and *Controversiae*, also in first edition, are by L. A. Seneca the Elder. The printers B. de Choris, de Cremona, and S. de Luere were active between 1488 and 1492 and printed about seventeen books during that period. (British Library, *S.T.C. Italian Books, 1465–1600*, 1986, p. 621; Goff, S-370; Hain, 14593; Palau, 307553; Watt, II, 845v)

SENECA, Lucius Annaeus

Opera quae extant omnia: coelii secundi curionis vigilantissima cura castigata, & in novam prorsus faciem, nimirum propriam & suam, mutata: quorum lectio non modò ad bene dicendum, verum etiam ad bene beatque; vivendum, pro desse plurimum potest. Post Herculeos insuper C.S.C. labores, Vincentii Pralli H. opera ac studio, innumeris in locis emendata ac restituta. Totius emendationis ratio, quidque superiori aeditioni accesserit, ex sequentibus statim cognosces. Accessit Index Rerum & verborum copiosus.

Basel: Ex Officina Hervagiana, per Eusebium Episcopium. 1573.

First edition. Folio (in 6s). 10 leaves, 582 pp., 11 leaves (large woodcut on verso of final leaf). Woodcut on title page and historiated woodcut capitals. Few leaves slightly browned (owing to quality of paper); otherwise a very good copy in

De paupertate

paup̄ est. Itē siq̄ desiderū suū clausit cū ip̄so loue de fœlicitate cōtēdat. Diuitiæ sunt magnæ ad legē nec cōposita paup̄tas. Res iniq̄ fœlicitas est secularis: ip̄sa se exagitat mouet crebrū. Nō uno in graue: alios in aliū irritat. Alios in potētā illos inflat, alios mollit. Si uis scire q̄ nihil mali sit in paup̄tate: cōpara iter se multum paup̄e & diuites. Sæpius paup̄ & fidelis ridet, nulla fœlicitudine concutitur: in alto est. Cura uelut nubes leuis transiit, hortū qui fœlices uocant hylaritas ficta est. hic enim grauis & sub purpura licet nō palam tristitia est, eo quidē grauior q̄ interdū non licet palā esse miseris. Sed inter erūnas cor ip̄sum excedentes necesse est latere fœlicē. abstahūt a recto diuitiæ, honores, potētia & cætera quæ opinione hominū cara sunt precio suo uita. Nescimus extimare res de quibus nō est fama. Sed cū rege natura deliberādū est. Nihil habēt ista magnificū q̄ mentes nostras in se trahat præter hoc quod mirari illa cōsueuimus. Nō enim quia concupiscēda. Sed illa laudant: quia laudāda sunt concupiscunt. hanc præcedentē causam habēt diuitiæ. Inflāt animos: Supbia & arrogantia pariūt. Inuidiā trahūt eo usq̄: mentē alienāt ut fama pecunie eos etiā nocitura delectet. Bona omnia culpa carere decet: pura sunt hæc non corrūpūt animos: nō sollicitant: extollunt quidē animos & delectant: sed sine timore. Quæ bona sunt fiducia faciunt: diuitiæ audaciam. Quæ bona sunt magnitudinē animi dant: diuitiæ insolentiam.

Explicit liber de paupertate.

In hoc uolumine continentur infrascripti libri Senecæ.

Primū Liber unus de moribus. Liber unus de formula honestæ uitæ: uel de quatuor uirtutibus cardinalibus. Liber unus ad Gallionē de remediis fortuitorum. Libri decem declamationū. Libri duo de Clementia ad Neronem. Libri septem de beneficiis ad Eburrium liberalem. Libri tres de ira ad Noatum. Liber unus de mundi gubernatione diuina prouidentia: & quare multa mala bonis uiris accidant. Liber unus de beata uita ad Gallionem. Liber unus de cōsolatione ad Martiam. Liber unus de cōsolatione ad Albinam matrē suam. Liber unus de tranquillitate uitæ ad Serenum. Liber unus quomodo in sapientem non cadit iniuria. Liber unus de breuitate uitæ ad Paulinum: cui continuatur liber unus de cōsolatione fratris ad Polybitum sine inscriptione & interuallo ex incuria famuli componētis: qui incipit Nostra cōpares firma sunt. Liber unus de liberalibus studiis ad Liberalem. Prouerbia. Libri septem questionum naturalium. Libri sex suaforiarū & cōtrouerfiarum. Epistolæ Senecæ ad Paulum & Pauli ad Senecam quatuordecim. Epistolæ ad Lucillum Centumugintiquinque. Ultimo liber de paupertate.

Impressum Venetiis per Bernardinum de Cremona & Simonem de Luero. Die, v. octobris, MCCCCXC.

Rubricæ epistolarum Senecæ ad Paulum & Pauli ad Senecam.

Incipit epistola Senecæ ad Paulum	Credo tibi Paule	I.
Senecæ Paulus salutem	Litteras tuas hilaris	I.
Seneca Paulo salutem	Quædam uolumina ordinauit:	I.
Senecæ Paulus salutem	Quoriamscunq̄ litteras tuas audio:	I.
Seneca Paulo salutem	Nimio tuo angimur secessu	I.
Senecæ & Lucillo Paulus salutem	De his quibus	I.
Anneus Seneca Paulo & Theophilo salutem	Profiteor bene	I.
Paulus Senecæ salutem	Licet non ignorem	I.
Seneca Paulo salutem	Scito te	I.
Paulus Senecæ salutem	Quotiens tibi scribo:	I.
Seneca Paulo salutem	Aue mi Paule charissime, Putas	I.
Seneca Paulo salutem	Aue mi Paule charissime, Si mihi	I.
Seneca Paulo salutem	Aue mi Paule charissime, Allegorice	I.
Paulus Senecæ salutem	Perpendenti tibi	I.

Rubrica libri de paupertate.

Incipit liber Senecæ de paupertate. Honeſta inquit Epicurus LXIII.

Rubricæ epistolarum Lucii Annei Senecæ ad Lucillum incipiunt.

De colligēda & assiſtēda fuga tēporis: & nō esse paup̄rē cui etiā modicū fati est. Epistola. Ita fac ergo II.
De mutatione locorū & multiplicium uoluminum lectiōne uitanda: & de commendatione paup̄tatis. si læta sit Epistola. II.
De modo eligēdi & colēdi amicū: & q̄ tam uitū est omnibus credere q̄ nulli, sicut uel semp̄ inquietū esse: uel semp̄ quiescere. Epistola. II.
De emēdādo animo & cōponēdo ad contēptū mortis: & q̄ magnæ diuitiæ sunt secūdū naturā cōposita

contemporary calf, rebounded with original richly gilt spine laid on, maroon morocco label gilt.

AN EXCELLENT edition of the complete works of Seneca (ca. 5 B.C.–A.D. 65), edited by Vincentius Prallius of Hamburg. The dedication to Bartholdo and Henrico Prallius is dated September 1573 (sign. a5), but the two preceding dedications are dated 1557, so it is probable that Prallius based this carefully edited edition on one published in 1557. There is a significant reference to the invention of printing (sign. a4) in Mainz by Ulrich Hann in 1440 and by Johann Gutenberg in 1450, unnoticed by historians. Signatures a5v–a8v comprise a discussion of Seneca by Erasmus of Rotterdam. Seneca, tutor of Nero, combined the atomism of Epikouros with the physics of Stoicism. “His *Quaestiones Naturales*, composed in A.D. 61–4, . . . discusses physical and natural phenomena from the point of view of the atomic theory” (Partington, I, 166). Metals, earths, and other chemical subjects are also covered. The *Quaestiones* contributed to the rediscovery of ancient science from the twelfth century to the Renaissance. (British Library, *S.T.C. German Books, 1455–1600*, 1962, p. 809)

SENGUERD, Arnold

Introductionis ad Physicam, libri sex. Editio tertia, prioribus auctior.

Amsterdam: Apud Joannem à Ravestein. 1666.

Third edition. 8vo. 4 leaves, 551, (1) pp. Woodcut ornament on title. Exceptionally fine, crisp copy in the original overlapping vellum.

SENGUERD (1610–1667) was professor of philosophy, physics, and metaphysics at the University of Utrecht from 1638 to 1648; he then succeeded Barlaeus as professor of philosophy in Amsterdam. His introduction to physics first appeared at Utrecht in 1644. Divided into six books it was immediately recognized as an important work, as it covers not only physics (as we now understand the term) but all of the sciences. Topics of chemical interest include discussions of the Aristotelian elements, so-called mixtures (i.e., chemical compounds), metals, transmutation, minerals, and stones. Original sources used by the author are well documented, and there are many references to earlier and contemporary scientists (e.g., Agricola, Libavius, Porta, Sennert, and Kircher). Rare. Poggendorff (II, 907) gives brief biographical details on Senguerd but does not mention this edition. Not in D.S.B., Neu, Partington, Waller, Watt, etc.

SENGUERD, Wolferd

Philosophia Naturalis, Quatuor Partibus. Primarias corporum species, affectiones, differentias, productiones, mutationes, & interitus, exhibens. Editio secunda, priore auctior.

Leyden: Apud Danielem à Gaesbeeck. 1685.

Second edition, first issue. 4to. 14 leaves, 432 pp., 16 leaves. Fine allegorical engraved title page (Ad. Schoonebeek fec.), letterpress title with woodcut, 5 folding copperplates, and numerous large engravings in text. Magnificent copy in contemporary paneled calf, rebounded, original maroon morocco label. From the library of the duke of Somerset, with engraved armorial bookplate; and bookplate of E. N. da C. Andrade, F.R.S.

SENGUERD (1646–1724), professor at the University of Leyden, gave lectures on natural philosophy during the academic year 1679–80, and this work is based on the material he presented. The first edition (Leyden, 1681, 4to.) contained only 302 pages. The second and best edition contains more information and was carefully revised. It was reissued in 1687. This edition is important as it is the first to describe the author's improved air pump, with a stopcock, which could be used for exhaustion as well as compression. Part I (pp. 1–154) deals primarily with mechanics and physics. Part II (pp. 155–242) covers astronomy. Part III (pp. 243–374) discusses topics of chemical interest, while part IV (pp. 375–432) deals with animals, plants, and man. Thorndike describes the contents in detail. Henry Zeitlinger described this copy as “very fine and large” in *Sotheran, Cat. 780* (1922), no. 785. Only the smaller 1681 edition is mentioned by Partington (II, 290), Poggendorff (II, 907), and Wheeler Gift (no. 192). Rare. (Krivatsy, 10901; Parkinson & Lumb, 2266; Thorndike, VII, 693)

SENNERT, Daniel

Danielis Sennerti Vratislaviensis, Doctoris et Medicinae Professoris in Academia Wittebergensi, Operum in Sex Tomos Divisorum. Tomus Primus (-Sextus). . . . Editio Novissima . . .

Lyon: Joannis Antonii Huguetan. 1676.

6 vols., folio, in 2. I: 20 leaves, 306 pp., 1 leaf. II: 2 leaves, pp. 309–808, 16 leaves. III: 8 leaves, 363, (1) pp. IV: 2 leaves, 363 [sic]–786 pp., 10 leaves. V: 6 leaves, 320 pp. VI: 1 leaf, pp. 323–696, 6 leaves. Title pages printed in red and black, with large woodcut on each. Fine frontispiece engraved portrait of Sennert in volume I. Full-page copperplate of chemical apparatus (vol. II, p. 758) and full-page copperplate of foetus in utero (including twins) in volume IV, page 731. Some occasional marginal worming; otherwise a very good copy in contemporary full mottled calf, spines gilt.

THE COMPLETE works of Sennert on medicine, pharmacy, and chemistry. According to Ferguson, "they passed through several editions, one of the best being that of Lyons, 1676, 6 vols. fol." (as here). Earlier (less complete) editions of Sennert's *Opera Omnia* are: 3 vols., fol., Paris, 1641; 3 vols., fol., Lyons, 1650; 4 vols. fol., Lyons, 1654–56; 3 vols., fol., Venice, 1645. Partington (II, 271–276) discusses Sennert's place in the development of iatrochemistry but does not mention the present edition of the collected works. Garrison and Morton state that this edition "is regarded as the best." Evidently very scarce, this work is not mentioned by Bolton, Caillet, Cole, Cushing, Duveen, Ferchl, Neu, Osler, Poggendorff, Smith, et al. (Ferguson, II, 372 [not in Young coll.]; Garrison-Morton, 61; Waller, 8860; Watt, 845b)

SENNERT, Daniel

De chymicorum cum Aristotelicis et Galenicis consensu ac dissensu liber I. Controversias plurimas tam Philosophis quam Medicis cognitu utiles continens: auctore Daniele Sennerto, Vratislav. Silesio, . . .

Wittenberg: Apud Zachariam Schurerum. 1619.

First edition. 8vo. 16 leaves, 709, (1) pp., 11 leaves. Woodcut device on title, woodcut head- and tailpieces. Pristine copy in original vellum. Decorative engraved armorial bookplate of Christian Ernst Graf zu Stolberg (dated 1721), and eighteenth-century stamp of Wernigerode Library on title.

AN IMPORTANT work in which the author presents his views on atoms and molecules based on the phenomena of sublimation, solution (including the dissolution of metals by acids), petrification, and related processes. Sennert (1572–1637), professor of medicine at Wittenberg from 1602, followed Paracelsus in the theory of salt, sulphur, and mercury as the constituents of matter but avoided the excesses of Paracelsus. References to Sennert's views on atoms and "corpuscles" (groups of atoms) occur in chapters VII ("De materia prima"), VIII ("De elementis"), XI ("De principiis chymicorum"), and XII ("De generatione et misione"). His views represent a revival of physical atomism and explain chemical reactions in terms of elementary particles, the properties of which remain constant, regardless of the nature of the compounds in which they are incorporated. The dedication contains an account of the changes effected in German medicine by the introduction of new chemical remedies during the previous thirty years. Sennert was the first to introduce chemistry as part of the university medical curriculum. Rare. Bolton, Ferguson, and Waller cite later editions. Not in Duveen, Edelstein, Osler, Smith, etc. (Caillet, 10145; Cushing, S183; Ferchl, 499; Ferguson Coll., 647; Neu, 3795; Partington, II, 272; Wellcome, I, 5920)

SENNERT, Daniel

De chymicorum cum Aristotelicis et Galenicis consensu ac dissensu liber: cui accessit appendix de constitutione chimiae . . .
Paris: Apud Societatem. 1633.

Third (first Paris) edition. 4to. 8 leaves, "434" (recte 428) pp., 6 leaves. Pagination skips: sig. R4 (p. 136) is followed by sig. S1 (p. 143), but text complete. Large copperplate title-vignette (alchemical "Sun": symbol for gold). Fine copy, in quarter vellum antique, marbled boards.

THE FIRST edition of Sennert's chief chemical work to be printed in Paris. It is the last to be updated and greatly augmented by the author and is certainly the best edition. A close reprint of the second edition (Wittenberg, 1629; 10 leaves, 434 pp., 6 leaves), the dedication is dated February 1629, from Wittenberg. The important *Appendix de constitutione chimiae* (pp. 385–434) is not in the first edition (Wittenberg, 1619). Rare. Not in British Library, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Smith, Watt, etc. (Ferchl, 499 [wrong date: 1632]; Thorndike, VII, 203; Wellcome, I, 5922)

SENNERT, Daniel

Epitome Naturalis Scientiae. Editio Ultima.

Amsterdam: Sumptibus Joannis Ravesteinii. 1651.

Final Amsterdam edition. Two parts in 1 vol., 12mo. I: 1 leaf (engraved title page), 6 leaves, 679, (1) pp., 11 leaves (index). II: 1 leaf (divisional title page), 44 unnumbered leaves. Fine, crisp copy, in original overlapping vellum.

THE *Epitome* comprises a summary view of the natural sciences and medicine, including much of interest in the history of chemistry. In the first edition (Wittenberg, 1618) Sennert first introduced his views on atomism, and several later editions appeared. The second part, *Auctarium Epitomes Physicae* (first: Wittenberg, 1635), is based on chapters 11 and 12 of Sennert's *De chymicorum cum Aristotelicis et Galenicis consensu ac dissensu* and is entirely on chemistry. The text of the present edition was reprinted in 1653 at Oxford (Wing, S2532). Thorndike (VII, 203–217) devotes a whole chapter to a discussion of Sennert and his important works. Not in Duveen, Edelstein, Ferguson, Ferguson Coll., etc. (Ferchl, 499; Partington, II, 271; Poggendorff, II, 908)

SENNERT, Daniel

Methodus Discendi Medicinam publice Anno 1636. Wittebergae praelecta iam autem D. Job. Magiri . . .
Marburg: Ex officina Jos. Diet. Hampelii. 1672.

First edition. 12mo. 1 leaf, 116 pp., 1 leaf (blank). Very good copy, in contemporary vellum. Bound with: Thomson, G., *Chymiatrorum acus magnetica* (Frankfurt, 1686).

A SYNOPSIS OF Sennert's medical and scientific lectures, with brief extracts from the writings of Johann Magirus at the end. Of chemical interest are references to the works of Beguin, Conring, Horst, Mynsicht, Paracelsus, Sala, et al. Part of the text is in German (pp. 69–92). Not in the usual chemical and medical bibliographies. (Manget, *Bibliotheca Scriptorum Medicorum* [1731], II, pt. 2, p. 253)

SENNERT, Daniel

Thirteen Books of Natural Philosophy: viz. I. Of the Principles, and common Adjuncts of all Natural Bodies. II. Of the Heavens, the World, and Elements. III. Of Action, Passion, Generation, and Corruption. IV. Of Meteors. V. Of Minerals and Metals. VI. Of the Soul in general, and of things Vegetable. VII. Of Animals or living Creatures. VIII. Of Man. Unto which is added Five Books more of Natural Philosophy in several Discourses. IX. Discourse 1. Of the Principles of Natural Things. X. Dis. 2. Concerning the Occult and Hidden Qualities. XI. Dis. 3. Of Atomes and Mixture. XII. Dis. 4. Of the Generation of Live Things. XIII. Dis. 5. Concerning the Spontaneous Generation of Live Things. Written in Latin and English. By Daniel Sennert, Doctor of Physick. Nicholas Culpeper, Physitian and Astrologer. Abdiab Cole, Doctor of Physick, and the Liberal Arts. London: Printed by Peter Cole, and Edward Cole, Printers and Book-sellers, and are to be sold at his Shop, at the sign of the Printing-press in Cornhill, neer the Royal Exchange. 1661.

First edition, second issue. Folio. 10 leaves, pp. 1–156, 341–530, 161–224 (pagination erratic, text complete). Some occasional light browning, and few tiny marginal wormholes repaired; otherwise near-fine copy, in blind-stamped paneled dark-brown calf antique, brown morocco label.

A RARE WORK (first issue: 1659) containing Sennert's chief contributions to chemistry and his views on other sciences, gathered, translated, and edited by N. Culpeper (1616–1654) and A. Cole (1610?–1670?). A brief (4 pp.) biography of Sennert precedes the main text. Complete in itself, this work forms part of the series of books entitled *The Rationall Physitian's Library* (London, 1661), edited by Cole and Culpeper. (Cooper, 342; D.S.B., XII, 313; Ferchl, 499; Ferguson, II, 371; Harvey, 253; Neu, 3801; Partington, II, 272; Wing, S2545)

SETTALA, Ludovico

Animadversionum et Cautioinum Medicarum libri septem: primo Mediolani in lucem editi, nunc vero revisi, emaculati & ab innumeris, quibus prior scatebat editio, mendis purgati, nunc primum in tanto exemplarium defectu pariter ac desiderio philiatris communicati, studio & opera Joannis Caroli Rosenberg . . .

Strassburg: Sumptibus Eberhardi Zetzneri. 1625.

Second (first Strassburg) edition. 12mo. 18 leaves, 330 pp., 21 leaves (index). Woodcut on title page and last leaf. Few leaves lightly embrowned owing to quality of paper; otherwise good copy in modern half vellum, marbled boards, crimson label. Old (seventeenth century) signatures in ink on flyleaf and title page: De la Rue, M.D.

SETTALA (Septalius, 1552–1633), a famous professor of medicine in Milan, was named “Protomedicus Lombardiae” by Philip II. The fruit of forty years of practice and therapeutic experience, this work was first published in Milan, 1614. Other editions appeared at Padua (1628–1630) and Dordrecht (1650). Ferguson states that this is Settala's “chief work.” Of iatrochemical interest, this edition was edited with corrections and additions by the Strassburg physician Johann Karl Rosenberg (fl. 1622–28), author of *Rhodologia . . . arcanis politicis, chymicis, &c.* (1631). A portrait of Settala appears in the *Musaeum historicum et physicum* (Venice, 1640, p. 183), by Giovanni Imperiale. (Ferguson, II, 377 [not in Young Coll.]; Hirsch, V, 373; Krivatsy, 11035; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 255)

SEVERINUS DANUS, Petrus

Idea Medicinae Philosophicae. Continens Fundamenta totius Doctrinae Paracelsicae, Hippocraticae & Galenicae. Authore Petro Severino Dano Philosophiae & Medicinae Doctore.

The Hague: Ex Typographia Adriani Vlacq. 1660.

Third edition. 4to. 4 leaves, 212 pp., 2 leaves (last blank). Fine copy in half calf antique, marbled boards, spine gilt-lettered. Bound with: Davisson, William, *Commentariorum in sublimis philosophi . . . Petri Severini Dani . . .* (The Hague, 1660). Withdrawal stamp of the Wellcome Library verso of title.

SEVERINUS (or Peder Sørensen, 1542–1602), iatrochemist and physician to the Danish kings Frederick II and Christian IV, was closely associated with Tycho Brahe at the Danish court. His most important work is the *Idea medicinae philosophicae* (first ed., Basel, 1571; second ed., Erfurt, 1616). “The *Idea* was a defense of the Paracelsian doctrines in opposition to the traditional medicine. . . . Much of the *Idea* . . . is devoted to the elements and the principles. The influence of traditional alchemy may be seen in the acceptance of both material and insensible elements . . . As the

first major synthesis of the Paracelsian corpus, the *Idea* . . . was highly influential. . . . Perhaps the greatest impact of the *Idea* . . . is to be found in the works of William Davisson . . . In 1660 Davisson's *Commentariorum* was published along with the . . . original text of the *Idea*" (D.S.B.). Another edition appeared at Rotterdam (1668). Partington (II, 163) discusses the work of Severinus but mentions only the 1571 edition of the *Idea*. Not in Cushing, Edelstein, Osler, Reynolds, Waller, Watt, etc. Scarce. (D.S.B., XII, 334–336; Duveen, 547; Ferchl, 501; Ferguson, II, 378; Ferguson Coll., 649; Neu, 3808; Thorndike, VII, 312, VIII, 125)

SEVRIN, L.-J.

Dictionnaire des Nomenclatures Chimique et Minéralogique Anciennes, comparées aux nomenclatures chimique et minéralogique modernes, d'après les ouvrages des chimistes et le Traité de Minéralogie de Mr. Haüy; auquel on a joint trois tableaux synoptiques destinés à offrir les principaux caractères des corps simples, et un quatrième tableau qui présente les caractères des acides; avec trois planches pour les signes chimiques. Par L.-J. Sevrin, Maître en Pharmacie. Paris: De l'Imprimerie de M.-J. Hénée. Chez Samson, Libraire. 1807.

First edition. 8vo. 2 leaves, 232 pp. With 5 large folding synoptic tables and 3 large folding copperplates of chemical symbols. Very good copy in tan calf antique, spine gilt-lettered and dated. From the library of Professor Franz Sondheimer, with his bookplate on the front pastedown endpaper.

AN IMPORTANT early dictionary of the new chemical and mineralogical nomenclatures. The chemical section occupies pages 31–144 and is divided into two parts: "Nomenclature ancienne et moderne" and "Nomenclature française et latine," preceded by a long and interesting introduction on the new discoveries in chemistry. The mineralogical section occupies pages 145–232, comprising two parts: "Nomenclature ancienne et moderne" and "Nomenclature moderne et ancienne." The plates showing symbols of chemical substances are an extension of those of Hassenfratz and Adet. The author, Sevrin, was a "master of pharmacy," but no other information on him or this work has been found. Very rare. Not in Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Partington, Poggendorff, Smith, Waller, Watt, etc. (Bolton, 76; Sondheimer, 1437)

SGOBBIS DA MONTAGNANA, Antonio de

Nuovo, et Universale Theatro Farmaceutico. Fondato sopra le preparazioni farmaceutiche scritte da' medici antichi, Greci & Arabi; principalmente da Galeno, e Mesue . . . Ampliato oltre le fabbriche . . . contenute ne gli antidotarii Veneti de Giorgio Melichio, aumentato da Alberto Stecchini . . . con quelle . . . composition ancora . . . da gli piu lodati scrittori . . . Venice: Nella Stamparia Juliana, . . . a spese dell'authore. 1667.

First edition, first issue. Folio. 6 leaves, 62 pp., 3 leaves, 880 pp., 1 leaf (blank), 16 leaves (index). Engraved allegorical title, letterpress title with large engraving, full-page plate (portraits of G. Melich, A. Stecchini, and A. De Sgobbis), 2 plates of chemical apparatus, and 1 plate of chemical symbols and terms. Fine copy, in original calf, richly gilt spine (repaired at foot), brown morocco label.

ONE OF the most important Italian pharmacopoeias of the seventeenth century, printed at the expense of the author. Owner of the famous Ostrich pharmacy in Venice, Sgobbis da Montagnana (1603–after 1667) herein provides complete directions for the management of a pharmacy, with details of the chemicals used and their preparation. "Here we see a real pharmaceutical encyclopedia, in some respects foreshadowing the later 'universal pharmacopoeias'" (Kremers & Urdang). Compiled from the Greek, Roman, and Arabic medical traditions, this work also includes the writings of Georg Melich (fl. 1585) and Alberto Stecchini (d. 1631). This first issue in its original binding does not contain the two additional leaves (between pp. 424–425); these were included only in later issues of this printing and in the second issue (not edition) of 1682, which has a reset title but identical pagination. The license is dated 17 March 1665, and the dedication 18 December 1667. Very rare. (Ferguson, II, 380; Kremers & Urdang, 59; Krivatsy, 11065)

SHARROCK, Robert

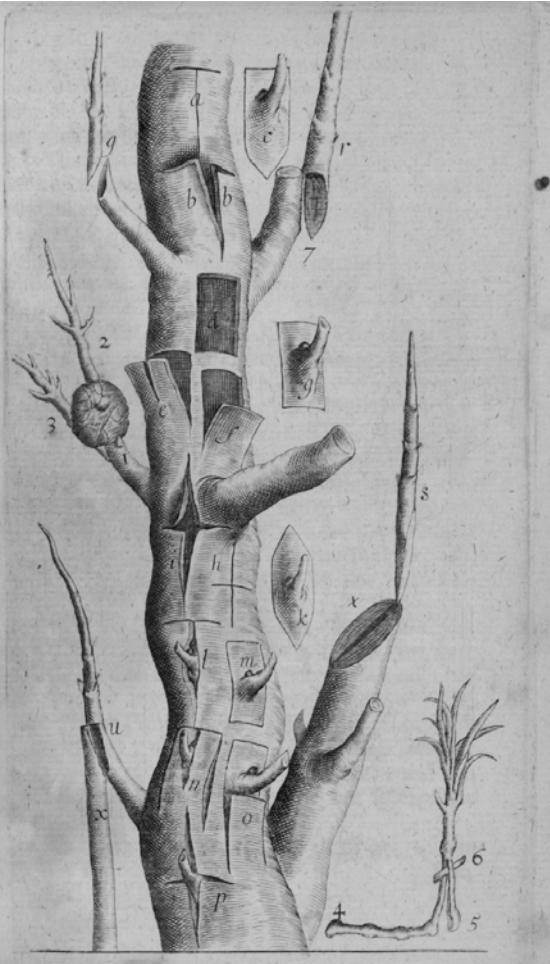
The History of the Propagation & Improvement of Vegetables by the concurrence of Art and Nature: shewing the several ways for the Propagation of Plants usually cultivated in England, as they are increased by Seed, Off-sets, Suckers, Truncheons, Cuttings, Slips, Laying, Circumposition, the several ways of Graftings and Inoculations; as likewise the methods for Improvement and best Culture of Field, Orchard, and Garden Plants, the means used for remedy of Annoyances incident to them; with the effect of Nature, and her manner of working upon the several Endeavors and Operations of the Artist. Written according to Observations made from Experience and Practice . . .

Oxford: Printed by A. Lichfield, Printer to the University, for Tho. Robinson. 1660.

The Exemplification of the Operations by the Figure.

- a Denotes the ordinary cutting of the Bark for Inoculation.
 b b The sides of the Bark, lifted up for the putting in of the Shield.
 c The Shield taken off with the Bud, which lies under the Stalk of the Leaf cut off.
 d The Shield put into the Stock to be bound up.
 e The Bark cut out in an oblong square, according to another usual way of Inoculation.
 f The Shield cut out for the fitting the dis-barked square.
 g The same Shield put into the Stock.
 h A variation of the fore-mentioned way, by cutting off the upper part of the oblique square, and binding the lower part down upon the Shield.
 i The Shield so put in to be bound up.
 k Another variation by slitting the Bark, that the Bud and Leaf may stand forth at e, and the Bark slit be bound down upon the Shield.
 l A cross cut for Inoculation.
 m The same cross cut lifted up in this Figure, somewhat bigger.
 n The Shield cut off to be put therein.
 o The Shield put in.
 p or q The cut of the Cyon or Stock for whip-grafting.
 r r The cut of Cyon and Stock for Shoulder-grafting.
 s The cut of the Cyons, and slit of the Stock for Grafting in the cleft.
 t The Stock set for Ablatation or approach.
 u The Cyon of the Branch for the same operation.
 1 2 The Branch that is to be taken off by Circumposition.
 3 The Branch that bears up the mould to the dis-barked place.
 4 The Branch of a Carnation to be laid.
 5 The joint where the slit begins.
 6 The next joint where the slit is propped open, with a piece of a Carnation Leaf put in.

Adde this at the 70th Page.



First edition, first issue. 8vo. 9 leaves, 150 pp., 1 leaf (advertisements). Full-page copperplate and explanatory leaf between pages 70–71. Some leaves mildly embrowned; otherwise very good copy, in blind-ruled calf antique, black morocco label, spine dated.

EDUCATED AT Winchester College and New College, Oxford, Sharrock (1630–1684) became prebendary of Winchester (1665) and archdeacon of Winchester Cathedral (1684) just before he died. He was a good friend of Boyle, and this book is dedicated “To the Honorable Robert Boyle Esq; The most worthy pattern of true Honor, and Learned Promoter of true Science.” Sharrock wrote the prefaces to several of Boyle’s early works (see Fulton). The present book, a truly scientific treatise, contains numerous references of chemical interest regarding the use of fertilizers and their action on the growth of plants. Fussell speaks approvingly of Sharrock, who was a forerunner of Grew and Ray in botanical research. Two issues, slightly different, are known (see Henrey, I, p. 271). (D.S.B., XII, 357; Fulton, 258; Fussell, I, 50; Henrey, I, 340; Keynes, 3810; Pritzel, 8648; Thornton & Tully, 133; Watt, II, 849q; Wing, S3010)

SHARROCK, Robert

The History of the Propagation & Improvement of Vegetables by the concurrence of Art and Nature . . . The Second Edition much Enlarged. . .

Oxford: Printed by W. Hall, for Ric. Davis. Anno Dom. 1672.

Second edition. 8vo. 8 leaves, 255, (1) pp., 1 leaf (errata) + 4 leaves (advertisements). Full-page copperplate and leaf of explanation between pages 118–119. Fine copy, in original unlettered blind-ruled sheep.

THE SECOND edition of this important work, enlarged to almost twice the size of the first (1660) of identical title. As in the original edition there are eight chapters, but here each has been partly or wholly rewritten with the addition of information gleaned from works published since 1660. There is also more of chemical interest, with references to works by Sir Kenelm Digby on niter and its use to make plants grow bigger (by supplying them with available nitrogen). Salts, lime, marl, and other substances, and their supposed chemical action, are discussed. The dedication to Robert Boyle again appears, unaltered in wording from that of the 1660 edition. On page 179 Sharrock states: “Salt-Peter . . . is like a Magnes which attracteth a like Salt that fecundeth the Air; for as the Cosmopolite sayes, there is in the Air a hidden food of life.” This statement clearly implies that Sharrock, and other contemporary authors, believed that air contains a life-supporting substance. We now

know that this is oxygen, and Sharrock supposed that this “spirit” is “drawn as it were by a Load-stone by the saline liquor that is imbibed into the seed.” The use of saltpeter and air for the germination of seeds was thus known at that time. An edition of 1666, mentioned by Watt, is presumably a ghost, as Wing lists no printing of that date. A third edition appeared (1694) with different title. (D.S.B., XII, 357; Fulton, 258; Fussell, I, 51; Henrey, I, 341; Keynes, 3811; Pritzel, 8648; Thornton & Tully, 133; Watt, II, 849q; Wing, S3011)

SHAW, Peter

Chemical Lectures, Publicly Read at London, in the Years 1731, and 1732; and since at Scarborough, in 1733; for the Improvement of Arts, Trades, and Natural Philosophy. By Peter Shaw, Physician at Scarborough.

London: Printed for J. Shuckburgh, at the Sun, next the Inner-Temple Gate in Fleet-Street; and Tho. Osborne, in Gray’s-Inn. (1734).

First edition. 8vo. xxiv, (2), 1–124, *125–*220, *193–*224, 125–284, 385–439, (9) pp. (pagination erratic, but text complete). Fine copy in original gilt-ruled calf, rebaked, red morocco label, spine dated.

A DIGEST of the course of twenty lectures presented by Shaw during 1731–1733, published during the winter of 1734 (see Gibbs, *Annals of Science*, vol. 7 [1951], 221). Shaw intended to demonstrate the great usefulness of chemistry in many aspects of life. These lectures helped to promote the newly founded Society for the Encouragement of Arts, Manufactures, and Commerce. Topics include the basic elements of chemistry, a glossary of terms, the agents (so-called instruments) of chemistry (fire, air, earth, water, and solvents), fermentation, analysis, and synthesis. Ten lectures cover practical applications: winemaking, dyeing, pyrotechnics, mineralogy, and metallurgy. In the final lecture Shaw makes suggestions for further improving chemistry as applied to the arts, including experiments on products that could be made in England: e.g., sal ammoniac (ammonium chloride), varnish from amber, harder glass (by adding borax), a silver amalgam, a useful glue, and a way to make copper more ductile. Not in Bolton, Morgan, Waller, etc. (Blake, 416; Cole, 1205; D.S.B., XII, 365; Duveen, 548; Edelstein, 2104; Ferguson, II, 381 [not in Young Coll.]; Neu, 3814; Partington, II, 760; Poggendorff, II, 918; Roller & Goodman, II, 428; Smith, 444; Watt, II, 850d)

SHAW, Peter

Chemical Lectures, Publicly Read at London, in the Years 1731, and 1732; and at Scarborough, in 1733; for the Improvement of Arts, Trades, and Natural Philosophy. By Peter Shaw, M.D., F.R.S. . . . The Second Edition, Corrected. London: Printed for T. and T. Longman, in Pater-noster-Row; J. Shuckburgh, in Fleet-Street; and A. Millar, in the Strand. 1755.

Second edition. 8vo. xxiv, 467, (9) pp. + 2 leaves (adverts.). Fine copy in original gilt-ruled calf, rebacked, brown morocco label.

THE CORRECTED and slightly enlarged second edition, containing references to subjects not in the first edition of 1734. The preface is dated "Scarborough, July 15, 1733." This information was omitted from the preface of the undated first edition. These lectures were extremely popular, and a generation of mid-eighteenth-century chemists learned from them. Shaw's style of writing is very clear, and a great deal of information is contained in this work. The lectures helped to keep alive an interest in chemistry in England at a time when most scientists were preoccupied with Newtonian physics. This edition of 1755 was translated into French (Paris, 1759). Not in Edelstein, Ferchl, Ferguson, Poggendorff, Waller, Watt, etc. (Blake, 416; Bolton, 830; Cole, 1206; D.S.B., XII, 365; Duveen, 548; Ferguson Coll., 650; Morgan, 699; Neu, 3815; Partington, II, 760; Roller & Goodman, II, 429; Smith, 444)

SHAW, Peter

Leçons de Chymie, Propres à perfectionner la Physique, le Commerce et les Arts. Par M. Pierre Shaw, Premier Médecin du Roi d'Angleterre. Traduites de l'Anglois. . . . Paris: Chez Jean Thomas Hérissant, rue Saint-Jacques, à S. Paul & à S. Hilaire. 1759.

First French edition. 4to. 2 leaves, cv, (3), 471, (1) pp. Very fine copy with wide margins, in original mottled calf, spine richly gilt, maroon morocco label.

THE FRENCH translation of Shaw's *Chemical Lectures* (London, 1755), which made this popular work available to Continental readers. The translator was Madame Thiroux d'Arconville (1720–1805), wife of a member of the Paris Parliament and president of the Parliament at Bordeaux. This remarkable woman scientist had attended Macquer's lectures at the Jardin du Roi and had also studied natural history and physics. To the present translation she has added notes and a ninety-four-page preliminary discourse that amounts to a history of applied chemistry. The *approbation* is signed by P.-J. Macquer. In addition to this work, Mme. Thiroux d'Arconville published *Essai pour servir à l'histoire*

de la putréfaction (Paris, 1766), based on her own researches. Her home was frequented by many of the leading scientists of the time: e.g., Fourcroy, Jussieu, Macquer, and Sage. (Blake, 416; Bolton, 830; Cole, 1207; D.S.B., XII, 365; Duveen, *Supplement*, 358; Ferchl, 502; Ferguson, II, 381; Smith, 445)

SHAW, Peter

The Dispensatory of the Royal College of Physicians in Edinburgh. Translated from the Latin, and illustrated with Notes, By Peter Shaw, M.D.

London: Printed for William and John Innys, at the West-End of St. Paul's. 1727.

First edition. 8vo. xi, (1), 281, (3) pp. Lacking 7 leaves (pp. 73–76, 89–94, 113–114, 189–190); otherwise very good copy, in original paneled calf, rebacked, maroon morocco label, spine dated.

A TRANSLATION OF the *Pharmacopoeia Collegii Regii Medicorum Edinburgensis* (Edinburgh, 1721), to which Shaw has added many valuable notes. The first part (208 pp.), in seventeen sections, describes substances used in medicine and pharmacy. At the end (pp. 209–266), "Chemical Medicines" are covered in three classes: preparations made from plants, animals, and minerals. Recognizable chemicals are described, including acids, alkalies, salts, metals, amalgams, sulphur and sulphides, oxides and hydroxides, and simple organic compounds. There are extensive notes, with particular reference to Shaw's translation of Boerhaave's *A New Method of Chemistry* (London, 1727). A fifth edition of this popular work appeared in 1753. (Blake, 348; D.S.B., XII, 366; Ferchl, 502; F. W. Gibbs, *Annals of Science*, VII [1951], 213; Munk, II, 193; Schelenz, 566; Watt, II, 850c; Wellcome, IV, 358)

SHAW, Peter

An Enquiry into the Contents, Virtues, and Uses, of the Scarborough Spa-Waters: with the Method of examining any other Mineral-Water. By Peter Shaw, Physician at Scarborough.

London: Printed for the Author, and are to be Sold by Fletcher Gyles in Holborn, and C. Ward and R. Chandler, at the Ship between the two Temple Gates in Fleet-Street, and at their Shop in Scarborough. 1734.

First edition, first issue. 8vo. viii, (2), 166 pp., 1 leaf (advertisement: Mineral Waters sold by John Fiddes). Fine copy in original speckled calf, gilt, covers with double gilt-rules, red morocco label.

A BALNEOLOGICAL WORK of considerable chemical interest, dedicated to Dr. Richard Mead (1673–1754), author of *A Mechanical Account of Poisons* (London, 1702). Shaw shows how, by the use of simple experiments, the composition of any given mineral water may be ascertained. Compounds found in mineral waters are described (pp. 34–80): e.g., various salts, alum, borax, mineral acids and alkalies, earths, “sulphurs” (i.e., sulphides), and “fumes, or spirits.” He outlines a general procedure for determining the contents of mineral waters (pp. 81–86), which amounts to a qualitative analysis. Part II (pp. 87–166) comprises a detailed series of experiments on the analysis of Scarborough Spa water, with a discussion of the specific compounds it contains. The sheets of this work, which were printed for the author, were reissued with Shaw’s edition of Friedrich Hoffmann’s *New Experiments and Observations upon Mineral Waters* (London, 1743). The reissue has a new fly title (with errata on verso), leaf of contents, and a four-leaf index; otherwise it is identical to the present 1734 edition. The advertisement at the end has six woodcuts of the seals of waters from Bath, Bristol, Pyrmont, Scarborough, and Spa. Not in Bolton, Cushing, Edelstein, Poggendorff, Smith, etc. (Blake, 416; Cole, 1208; D.S.B., XII, 365; Duveen, 548; Ferchl, 502; Ferguson, II, 381 [not in Young Coll.]; Munk, II, 193; Neu, 3816; Partington, II, 693; Waring, 800; Watt, IX, 850d)

SHAW, Peter

Essays for the Improvement of Arts, Manufactures, and Commerce, by Means of Chemistry: containing, I. An Essay for the farther advancing and applying Chemistry, in England, to the improvement of numerous Arts and Trades. II. An Essay to improve the British Distillery, in the hands of the Maltstiller, Rectifier, Compounder, and Apothecary; by directing the carrying on their several Works with greater Accuracy. III. An Essay to introduce an Art of concentrating Wines, Beers, and other fermented Liquors, or reducing their Bulk to Advantage, for Exportation and long Voyages. The Second Edition, Improved. By Peter Shaw . . .

London: Printed for T. Longman, in Pater-noster-Row, R. and J. Dodsley, in Pall-Mall. 1761.

Second edition. 8vo. xix, (1), 258 pp. Fine copy, in original gilt-ruled calf, rebounded, green morocco label. Engraved armorial bookplate (eighteenth century): Sir Lucius O’Brien, Bart.

DEDICATED TO the Society for the Encouragement of Arts, Manufactures, and Commerce, this work (according to the preface) owes its origin to Shaw’s study of the writings of Sir Francis Bacon, upon whose general plan it is based. In almost modern terms it pleads for the cultivation and de-

velopment of industries based on chemistry in England, which at that time had fallen into a sorry state. An important book in the history of chemical technology, it is an enlarged edition of the first (London, 1731). The appendix describes freezing mixtures made from a beaten mix of ice, salt, sal ammoniac, or niter. The original owner of this copy, Sir Lucius O’Brien (d. 1795), was an Irish politician who endeavored to remove trade restrictions between England and Ireland (see D.N.B.). Rare. Not in Blake, Cole, Duveen, Ferchl, Neu, Poggendorff, Waller, etc. (Bolton, 830; Ferguson, II, 381 [not in Young Coll.]; Partington, II, 760; Smith, 445)

SHAW, Peter

The Juice of the Grape: or, Wine preferable to Water. A Treatise, wherein Wine is shewn to be the Grand Preserver of Health, and Restorer in most Diseases. With many Instances of Cures perform’d by this Noble Remedy; and the Method of using it, as well for Prevention as Cure. With a Word of Advice to the Vintners. By a Fellow of the College. . . .

London: Printed for W. Lewis, under Tom’s Coffee-house, Covent-Garden. 1724.

First edition. 8vo. (in 4s). 2 leaves, xii, 56 pp. With 2 woodcut headpieces and 1 large woodcut tailpiece. Very good copy, in old half calf, marbled boards, spine unlettered.

SHAW (1694–1763), a successful physician who treated George II and George III, was educated in medicine and chemistry, in both of which he excelled. By royal mandate he was made an M.D. of Cambridge University (1751), admitted licentiate of the College of Physicians (1740), and elected F.R.C.P. (1754) and F.R.S. (1752). An excellent expositor of chemistry and medicine, Shaw published translations of “works by Hoffmann, Stahl, and Boerhaave, edited the works of Boyle and Francis Bacon and delivered courses of lectures on chemistry” (Partington). His first book was an edition of John Quincy’s lectures on pharmacy (*Praelectiones Pharmaceuticae; or a Course of Lectures in Pharmacy, Chymical and Galenical*, London, 1723). Published anonymously, the present work on wine and its medicinal virtues contains many amusing anecdotes, as well as being of chemical interest. One of the rarest titles by Shaw, its date of publication was unknown to Watt. (Blake, 416; D.S.B., XII, 365; Duveen, *Supplement*, 357; Neu, 3817; Partington, II, 760; Waring, 742; Watt, II, 850d)

SHAW, Peter

A Philosophical and Chymical Analysis of Antimony: giving a rational Account of the Nature, Principles, and Properties of that celebrated Drug, its various Chymical Preparations, and particularly, One that is not only an Effectual Cure for the present Distemper among the Cattle, but a Preservative from their being Infected. With Directions how to manage them while under Cure. And Several Critical Remarks on the Modern Authors who have treated of Antimony. By an Eminent Physician.

London: Printed for Joseph Davidson, at the Angel in the Poultry, Cheapside. 1747.

First edition. 8vo. 8vo. 2 leaves (half title, title), 88 pp., 1 leaf (appendix), 1 leaf (advertisements). Half title dusty; otherwise very good copy, uncut with wide margins, in early-twentieth-century marbled boards, printed paper spine label, dated.

PUBLISHED ANONYMOUSLY, this comprehensive work on the history, chemistry, and medicinal properties of antimony compounds contains numerous references to earlier and contemporary literature. Works cited include those by Basil Valentine, Boerhaave, Geoffroy, Glauber, Hoffmann, Kerner, Lemery, Mynsicht, Pott, Ruland, Sala, Sennert, Stisser, and Wedel. It contains "full accounts of all the standard antimonial compounds and preparations culled from numerous sources. This study was undertaken primarily to promote the use of certain antimonial medicines in the treatment of the 'cattle distemper,' following up Cromwell Mortimer's work in this field" (Gibbs, *Annals of Science*, vol. 7 [1951], 231). Waring wrongly dates this work 1744. Rare. (Blake, 416; Smith, 445; Waring, 237; Watt, II, 850d)

SHAW, Peter

Three Essays in Artificial Philosophy, or Universal Chemistry: viz. I. An Essay for the farther Application and Advancement of Chemistry in England. II. An Essay for the Improvement of Distillation, in the Hands of the Malt-Stillier, Rectifier, Compounder, and Apothecary. III. An Essay for Concentrating Wines, and other Fermented Liquors; or taking the Superfluous Water out of them to advantage. By Peter Shaw, M.D.

London: Printed for J. Osborn, and T. Longman, at the Ship in Pater-noster-Row. 1731.

First edition. 8vo. xv, (1), 192 pp. Fine copy in late-nineteenth-century marbled boards, printed paper label on spine. Inscribed in ink on title page: "Presented by the Executors of the late Dr. Manning"; also old stamp of "Norwich & Norfolk United Medical Book Society."

AN EARLY work on chemical technology and its promotion in England, with suggestions of subjects that merit

particular attention. As stated in the advertisement, it is adapted from Shaw's *Philosophical Principles of Universal Chemistry* (London, 1730) and is of greatest interest for its discussion of distillation, fermentation, and related processes. Thomas Manning (1772–1840), from whose library this copy came, was a close friend of the essayist Charles Lamb (1775–1834) and wrote several comments in pencil in the margins, including a reference to "Lamb's potion" (p. 65). Manning traveled in China for a number of years and was "considered the first Chinese scholar in Europe" (D.N.B.). He also published mathematical books. Not in Blake, Cole, Duveen, Edelstein, Forbes, Neu, Roller & Goodman, etc. (Bolton, 830; D.S.B., XII, 365; Ferchl, 501–502; Ferguson, II, 381 [not in Young Coll.]; Ferguson Coll., 650; Munk, II, 193.; Partington, II, 760; Poggendorff, II, 918; Smith, 445; Watt, II, 850c)

SHAW, Peter, and HAUKSBEЕ, Francis

An Essay for Introducing a Portable Laboratory: by Means whereof all the Chemical Operations are Commodiously Perform'd, for the Purposes of Philosophy, Medicine, Metallurgy, and a Family. By Peter Shaw, M.D. and Francis Hauksbee.

London: Printed for J. Osborn and T. Longman, at the Ship in Pater-noster-Row. 1730.

First edition, first issue. 8vo. 2 leaves (title page and dedication to Sir Hans Sloane), 75, (1) pp. (advertisement of Hauksbee's Portable Laboratory, p. 75 verso). Fine copy. Bound with: Shaw, Peter, *Philosophical Principles of Universal Chemistry* (London, 1730).

THE FIRST issue of the first edition is completely unrecorded. It differs from the usual so-called first edition of 1731 as follows: 1) the title page is formally similar to that of the 1731 second issue but does not have the words "With Sculptures" (between two horizontal rules); 2) the dedication leaf has different wording: the 1730 issue has "Are humbly recommended by . . .," whereas in the 1731 issue the words are "Are humbly submitted by . . ." The layout of the type is different in each issue, showing that in the 1731 second issue the dedication leaf was printed from a different setting of type. The first issue of 1730 does not have plates and therefore does not have the two leaves of the first gathering of the 1731 second issue, which describe the plates in that issue. Apart from these points, the two issues are identical: i.e., pages 1–76 are identical in both issues. It is possible that (in 1730) the authors never intended to publish this work with plates, as there is no mention of plates in the text. The following year (1731), when plates were available from the engraver, the authors then decided to include them in the second issue. The 1730 first issue is of the greatest rarity, possibly unique.

SHAW, Peter, and HAUKSBEЕ, Francis

An Essay for Introducing a Portable Laboratory: by Means whereof all the Chemical Operations are Commodiously Perform'd, for the Purposes of Philosophy, Medicine, Metallurgy, and a Family. With Sculptures. By Peter Shaw, M.D. and Francis Hauksbee.

London: Printed for J. Osborn and T. Longman, at the Ship in Pater-noster-Row. 1731.

First edition, second issue. 8vo. 2 leaves (title page and dedication), pp. v–viii (“An Explanation of the Plates”), 75, (1) pp. (advertisement of Hauksbee’s Portable Laboratory, p. 75 verso, as in first issue). With 8 folding copperplates, signed “J. Vander Gucht Scul.” Fine copy in original calf, covers with double gilt rules, rebacked, green morocco label, spine dated.

THE USUAL issue met with; the differences between the first and second issues are described under the 1730 first issue. The contents of this interesting book are discussed by F. W. Gibbs (*Annals of Science*, vol. 7 [1951], 218–220), who speaks approvingly of it and illustrates two of the plates of chemical furnaces. Partington, however, states that the subject matter of this work was “mostly purloined from Becher” (i.e., from Becher’s *Tripus Hermeticus Fatidicus*, Frankfurt, 1689). Not in Cole, Duveen, Ferguson Coll., Neu, etc. (Blake, 416; Bolton, 830; D.S.B., XII, 366; Edelstein, 2105; Ferchl, 501; Ferguson, II, 381 [not in Young Coll.]; Partington, II, 760; Poggendorff, II, 918; Smith, 444; Watt, II, 850c)

SHAW, Peter, and HAUKSBEЕ, Francis

Proposals for a Course of Chemical Experiments: with a View to Practical Philosophy, Arts, Trades, and Business. By Peter Shaw, M.D. and Francis Hauksbee.

London: May 12, 1731.

First edition. 8vo. 8 pp. Lightly toned fore-edges; otherwise very good copy in half calf antique, marbled boards, maroon morocco label, dated.

THE VERY rare prospectus for a course of lectures the two authors intended to give in 1731. Undoubtedly, Hauksbee (1688–1763), who manufactured laboratory equipment (furnaces, air pumps, etc.), teamed with Shaw, who was attempting to create an interest in commercial chemistry in England. The purpose of the course was to promote interest in chemical technology and to show the great practical utility of chemistry in all phases of daily life. The furnaces Hauksbee constructed were based on designs by Becher. “The experiments of this Course will be made upon a new Portable Furnace, whose Structure renders it readily convertible into all the various Furnaces in Use: Whence ‘tis not only suited to the making of Chemical Experiments,

but likewise to the Preparation of Chemical and Pharmaceutical Medicines; so as to answer Family Occasions, and a moderate Call of Business” (advertisement). The “General Heads of the Course” are divided into twenty-one categories. “The lectures were read by Shaw, while the experiments and demonstrations were prepared by Hauksbee” (Gibbs, *Annals of Science*, vol. 7 [1951], 220). The charge for the course was five guineas, and it would begin when twenty people had subscribed. Not in D.S.B. or the usual bibliographies. (Partington, II, 760; Wellcome, III, 224)

SHAW, Simeon

The Chemistry of the Several Natural and Artificial Heterogeneous Compounds, used in Manufacturing Porcelain, Glass, and Pottery. By Simeon Shaw, LL.D. . . .

London: Printed for the Author, by W. Lewis and Son, Finch-Lane. 1837.

First edition. 8vo. xlv, (2), 1–492, 493*–516*, 493–522, 481*–482*, 523–528, 529*–530*, 529–685, (1) pp. With engraved portrait frontispiece of Shaw. Woodcut figures in text. Fine copy, interleaved with blank paper, in original diapered green cloth, rebacked in gilt-ruled green calf, spine dated. From the library of Herbert Minton (1793–1858), celebrated maker of fine porcelain, with his engraved armorial bookplate on front endpaper.

A VERY RARE treatise on the chemistry of pottery and porcelain manufacture, of which only 250 copies were printed (declaration of the printer on slip following title leaf). The text is divided into three parts: I. Analysis and materials; II. Synthesis and compounds; III. Tables of the characteristics of chemical substances. The list of subscribers includes famous British chemists and porcelain makers: e.g., Josiah Spode, William Taylor Copeland, Thomas Thomson, William Davenport, Charles James Mason, and William Cooper. Possibly in error, Duncan lists the British Library copy with 732 pages. An important association copy. Minton was famous for the manufacture of the finest and most beautiful porcelain; the firm is still in business. A reprint appeared in 1900 (Bolton, *Second Supplement*, 172). (Bolton, 831; Duncan, 12215)

SHELDON, Carolus

Specimen Academicum, de Subversione Navium, . . . sub praesidio Mag. Samuelis Duraei, . . . subjicit Carolus Sheldon, . . . IV. Junii, Anni MDCCLVII.

Uppsala: Excud. L.M. Höjer, Reg. Acad. Typogr. (1757).

First edition. 4to. 31, (1) pp. With 2 large folding engraved plates (A. Åkerman sc.) depicting 10 figures. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radium* (Uppsala, 1776), and 30 other dissertations.

ON THE physical principles involved in the design and stability of the hulls of ships, their center of gravity, etc. A rare work on an important subject. No bibliographical reference to Sheldon has been traced.

SHERLEY, Thomas

A Philosophical Essay: declaring the probable Causes, whence Stones are produced in the Greater World. From which occasion is taken to search into the Origin of all Bodies, discovering them to proceed from Water, and Seeds. Being a Prodromus to a Medicinal Tract concerning the Causes, and Cure of the Stone in the Kidneys, and Bladders of Men. . . .

London: Printed for William Cademan, at the Pope's Head, in the Lower Walk of the New-Exchange. 1672.

First edition. 8vo. 8 leaves, 143, (1) pp. Few seventeenth-century manuscript notes on first free endpaper and in several margins; otherwise very good copy, in original unlettered, blind-ruled sheep, rebounded.

SHERLEY (or Shirley, 1638–1678) studied medicine in France and later became one of the physicians to Charles II. In this work, which is of considerable chemical as well as medical interest, he developed a theory of the formation of stones (petrification) in nature and in the human body. Making use of the writings of Paracelsus, van Helmont, Kircher, Sennert, Willis, and Boyle (especially *The Sceptical Chymist*, 1661), he based his ideas on an atomic theory. Like van Helmont, he postulated that “not only Stones, but all other Bodies, owe their Original to Seeds, and Water.” A Latin translation appeared (Hamburg, 1675) of this, Sherley's only original publication. His other works were translations from Mayerne, Moellenbrock, and Elsholtz (*The Curious Distillatory*, London, 1677). He also published a paper on inflammable gas from a ditch and earth near Wigan (*Philosophical Transactions of the Royal Society*, 1667, II, 482, no. 26). Despite the reference in the title to this being an introduction to another work, none ever appeared. (Adams, 102, 290; Ferchl, 502; Ferguson, II, 382 [not in Young Coll.]; Ferguson Coll., 651; Krivatsy, 11068; Thorndike, VII, 264; Waller, 8901; Watt, II, 852d; Wing, S3523)

SHIRE, William

A Familiar Discourse or Dialogue Concerning the Mine-Adventure. . . .

London: Printed in the Year 1700.

First edition, first issue. 8vo. 8 leaves, 160, 15 pp. Fine copy, in contemporary paneled unlettered sheep. Bound with: Pigot, Francis, *An Abstract of the Present State of the Mines of Bwlchyr-Eskir-Hyr*

Eskir-Hyr (N.p., n.d. [1700]); and Anonymous, *A List of all the Adventurers in the Mine-Adventure* (London: F. Collins, 1700).

PUBLISHED TO encourage public investment in Sir Carbery Price's silver, copper, and lead mines and smelting works in Wales, which Sir Humphrey Mackworth (1657–1727) bought when Price died (1695). Considered so rich and abundant in high-grade ores, these mines were called the “Welsh Potosi” after the silver mines in Bolivia. Mackworth formed the Corporation of the Governor and Company of the Mine Adventurers of England. Written in the form of a dialogue between “Two Noble Lords, a Learned Doctor of Divinity, and an Eminent Merchant of London,” this work makes a very good case for investing substantial sums of money in these unusually productive mines. Thomas Savery's (1650?–1715) engine for pumping mine water by means of steam power (1698) is described (p. 50) as “a very ingenious Invention.” In addition to its metallurgical and mineralogical interest, there are discussions of ore smelting, chemical analyses, etc. In the second issue the *Abstract* (here present as a separate four-page folio in two sheets) appears as a gathering with a divisional title page in octavo format. The two folio inserts (*Abstract* and *List*) were published separately and are so listed under Wing A139 and Wing L2377, respectively. Wing does not distinguish between the first and second issue of this work, and Watt (II, 853c) lists only the second edition (London, 1709; Hoover, 744). Rare. (Sotheran, Cat. 806 [1927], 14236; Wing, S3458)

SHIRE, William

A Familiar Discourse or Dialogue Concerning the Mine-Adventure. . . .

London: Printed in the Year 1700.

First edition, second issue. 8vo. 8 leaves, 160 + 15 pp. Fine copy in blind-ruled full tan calf antique, spine gilt-lettered and dated. Bound with: Pigot, Francis, *An Abstract of the Present State of the Mines of Bwlchyr-Eskir-Hyr* (London, Printed in the Year 1700. 8vo.).

THE VERY rare second issue of the first edition, in which Pigot's *Abstract* first appears in 8vo. format, with place and date of publication. The first edition of the *Abstract* appeared on two folio leaves (four pages), with no place or date of publication. The *Abstract* was undoubtedly circulated separately, as well as being bound with Shire's *Familiar Discourse*, as here, as it has its own signatures (a1–a8), distinct from those of the *Discourse*. Otherwise, the first and second issues of the *Discourse* are made up of identical sheets. Wing S3458 does not distinguish between the first and second issues.

SHORT, Thomas

An Essay Towards a Natural, Experimental, and Medicinal History of the Principle [sic] Mineral Waters of Cumberland, Northumberland, Westmoreland, Bishop-prick [sic] of Durham, Lancashire, Cheshire, Staffordshire, Shropshire, Worcestershire, Gloucestershire, Warwickshire, Northamptonshire, Liecestershire, and Nottinghamshire, Particularly those of Neville Holt, Cheltenham, Weatherstack, Hartlepool, Astrope, Cartmall &c. Wherein They are carefully examined and compared, their Mineral Contents are discovered and separated, their Uses shewn and explained &c. To which is added, a Short Discourse on Cold and Tepid Bathing, and A Table of the Temperature of all the Warm Waters in England, and most of the Cold Baths, from Carlisle to Gloucester and Oxford. Being the Second Volume of the Mineral Waters of England. By Thomas Short, M.D. of Sheffield.

Sheffield: Printed for the Author, by John Garnet near the Irish-Cross, Anno Dom: 1740.

First edition. 4to. 6 leaves, 330 pp., 1 leaf (errata). Fine copy in contemporary gilt-ruled calf, rebacked, preserving original gilt spine.

ALTHOUGH DESCRIBED as the second volume, this is a separate and distinct work from *The Natural, Experimental, and Medicinal History of the Mineral Waters . . .* (London, 1734), to which it forms a valuable sequel. Ninety-four mineral waters are discussed by name, "besides several others of less note." Numerous analytical chemical tests are described, many of which are tabulated. An important continuation of the author's investigations since 1734, in which the works of Boyle, Peter Shaw, Hoffmann, et al., are mentioned. On page 21–30 there is a useful glossary of terms used in chemistry, the materia medica, etc. A note at the end of the list of subscribers states that "the edition of this second volume is small." It is rarer than that of 1734, itself a very scarce book. Not in Bolton, Cushing, Duveen, Edelstein, Ferguson Coll., Neu, Partington, Smith, Waller, etc. (Blake, 417; Ferchl, 502; Osler, 3968; Poggendorff, II, 921; Waring, 776; Watt, II, 853y)

SHORT, Thomas

A General Chronological History of the Air, Weather, Seasons, Meteors, &c. in Sundry Places and different Times; more particularly for the Space of 250 Years. Together with some of their most Remarkable Effects on Animal (especially Human) Bodies, and Vegetables. . . .

London: Printed for T. Longman, in Pater-noster-Row; and A. Millar, in the Strand. 1749.

First edition. 2 vols., 8vo. I: xv, (1), 494 pp., 1 leaf (errata). II: 1 leaf, 536 pp., 4 leaves (index). Minor foxing of first few leaves in each volume; otherwise very good copy, in speckled half calf antique, gilt, marbled boards, maroon morocco labels, spines dated.

DEDICATED TO Dr. Richard Mead and published anonymously, this comprehensive work examines the influence of climate on mankind. Although anonymous, it is traditionally attributed to Thomas Short. Primarily of medical interest, the illnesses that occur in different climatic conditions are described, including the chemical medicines to cure them. Of importance is the information contained in "A Chronological Table of Meteors, Weather, Seasons, Diseases, &c." (vol. II, pp. 165–215). This table lists the dates of earthquakes, comets, tempests, and related matters from ancient times to the eighteenth century. Unknown to Cushing, Osler, Waller, Watt, etc. Rare. (Blake, 417; D.N.B., vol. 52, 154; Neu, 3822; Poggendorff, II, 921)

SHORT, Thomas

A General Treatise on Various Cold Mineral Waters in England, but more particularly on those at Harrogate, Thorp-Arch, Dorst-Hill, Wigglesworth, Nevill-Holt, and others of the like Nature. With their Principles, Virtues and Uses. Also a Short Discourse on Solvents of the Stone in the Kidneys and Bladder.

London: Printed for the Author; and sold by A. Millar, . . . W. Owen, . . . and W. Johnston. 1765.

First edition. 8vo. viii, 248 pp., 4 leaves. Fine copy in contemporary quarter calf, marbled boards, blue morocco label, gilt.

CERTAINLY THE rarest of Short's various writings on chemical and balneological subjects. As of 1974 there is no English auction record of this title. The D.N.B. (XVIII, 154) considers it "an original work showing careful observation." There are numerous chemical experiments on mineral waters. In addition, pages 215–248 describe many experiments carried out by Short on the solubility of kidney and bladder calculi in acids, alkalies, and neutral solutions. These experiments are historically important as they illustrate mid-eighteenth-century techniques of wet chemical analysis. This copy has the four unpaginated leaves at the end: "Of Cerated Glass of Antimony," which are usually missing, as they were added to only a very few copies. Watt gives the wrong date of publication (1766). Not in Bolton, Cushing, Duveen, Edelstein, Ferchl, Ferguson Coll., Neu, Osler, Partington, Poggendorff, Smith, Waller, etc. (Blake, 417; Waring, 776; Watt, II, 853z)

SHORT, Thomas

The Natural, Experimental, and Medicinal History of the Mineral Waters of Derbyshire, Lincolnshire, and Yorkshire, particularly those of Scarborough. Wherein, they are carefully examined and compared, their Contents discovered and divided, their Uses shewn and explained, and an Account given of their Discovery and Alterations. Together with the Natural History of the Earths, Minerals and Fossils through which the Chief of them pass. The Groundless Theories, and False Opinions of former Writers are exposed, and their Reasonings demonstrated to be injudicious and inconclusive. To which are added, Large Marginal Notes, containing a Methodical Abstract of all the Treatises hitherto published on these Waters, with many Observations and Experiments. As also Four Copper-Plates representing the Crystals of the Salts of Thirty four of those Waters. By Thomas Short, M.D. of Sheffield. . . .

London. Printed for the Author, and sold by F. Gyles over against Gray's-Inn in Holborn. 1734.

First edition. 4to. 10 leaves (including half title), xxii, pp. 1–198, 203–316, 315–359; 1 leaf (errata on verso). Pages 315–316 paginated twice. Collation complete, paginated as indicated. Engraved plate facing page 75 and 4 folding engraved plates of crystals at the end. Splendid copy in pristine condition, in original speckled calf (joints repaired).

A COMPREHENSIVE TREATISE on mineral waters that was ordered to be printed by Sir Hans Sloane, president of the Royal Society. Short was a very competent chemist, and this work is replete with chemical tests used to analyze mineral waters. In addition, there are valuable abridgements of works by other writers on spa waters (e.g., Allen, Deane, French, Simpson, and Stanhope). A sequel, independent of this volume, appeared in 1740. A very important work in the history of analytical and balneological chemistry, containing many original tests and observations. Poggendorff and Ferchl give the wrong date (1733). Not in Bolton, Cushing, Edelstein, Partington, Smith, Waller, etc. (Blake, 417; Duveen, 549 [lacks plate]; Ferchl, 502; Ferguson Coll., 651; Neu, 3824; Osler, 3968; Poggendorff, II, 921; Waring, 800; Watt, II, 853x)

SHORT, Thomas

A Rational Discourse of the Inward Uses of Water. Shewing its Nature, Choice, and Agreeableness to the Blood; its Operation on the Solids and Fluids; in what Constitutions and Times proper; how it promotes necessary, and abateth hurtful Evacuations: in what Diseases Restorative, and wherein Prejudicial. By Tho. Short, M.D.

London: Printed for Samuel Chandler, at the Cross-Keys in the Poultry. 1725.

First edition. 4to. X, 70 pp. Fine, crisp copy, in quarter calf antique, marbled boards, spine gilt-lettered and dated.

THE RARE first publication of Short (1690?–1772), dedicated to Sir Hans Sloane and Dr. Edward Strother, of chemical as well as medical interest, with references to Hooke, Leeuwenhoek, Cheyne, et al. Short was a celebrated physician who practiced in Sheffield and published extensively on mineral waters throughout his career. Not in Bolton, Cushing, Duveen, Edelstein, Ferchl, Ferguson Coll., Neu, Osler, Partington, Poggendorff, Smith, Waller, etc. (Blake, 417; Waring, 757; Watt, II, 853x)

SIBBALD, Robert

Scotia Illustrata sive Prodrromus Historiae Naturalis in quo Regionis natura, Incolarum Ingenia & Mores, Morbi iisque medendi Methodus, & Medicina Indigena accurratè explicantur: et Multiplices Naturae Partus in triplice ejus Regno, Vegetabili scilicet, Animalis & Minerali . . . Cum figuris aeneis. . . .

Edinburgh: Ex Officina Typographica & Jacobi Kniblo, Josuae Solingensis & Johannis Colmarii, Sumptibus Auctoris. 1684.

First edition. Folio, in 3 parts (each with divisional title page, the first dated 1683). 20 leaves, 102 pp., 3 leaves (index); 3 leaves, 114 pp., 3 leaves (index); 3 leaves, 37, (1) pp., 4 leaves (index, subtitle), pp. 41–56, 1 leaf. Engraved frontispiece (author's coat of arms) and 22 engraved plates (on 20 leaves). Large woodcut headpieces. Fine, wide-margined copy, in contemporary half calf, marbled boards, tastefully rebacked with dark-green morocco label. With engraved armorial bookplate of the earl of Ilchester.

THE FIRST book on the natural history of Scotland, including sheets of Sibbald's *Nuncius Scoto-Britannus*, 1683. The author covers all aspects of natural history, much of which is of chemical interest (especially book IV, part II, on minerals and metals). Sibbald (1641–1722), M.D. (Leyden, 1661), practiced in Edinburgh and became physician and geographer to Charles II, who both knighted and commissioned him to write this history of Scotland. Instrumental in founding the Edinburgh College of Physicians, Sibbald was appointed its president in 1684. In 1685 he established the medical school at the University of Edinburgh and became the first professor of medicine. He was an avid book collector all his life, his library being auctioned in February 1723 (Thornton). (Blocker, 363; D.N.B., vol. 52, 179; Eales, 1004; Freeman, 3405; Munk, I, 439–441; Newton Harvey, 578; Thornton, 275; Watt, II, 854p; Wing, S3727)

SICKINGEN, Karl Heinrich von

Versuche über die Platina mit zweien Kupfer Tafeln.
Mannheim: Gedruckt in der Hof- und Akademischen
Buchdruckerei. 1782.

First edition. 8vo. 1 leaf (title), 8 leaves, 324 pp., 1 leaf (errata). With engraved title page, folding engraved plates of apparatus. Old bookplate of Basel Natural History Museum and withdrawal stamps (title verso); otherwise mint copy in original speckled beige boards, spine gilt-ruled, orange label.

A VERY RARE work printed in a small number of copies: the "2" of 1782 being written by hand in ink. It described important early experiments on the chemistry and metallurgy of platinum, using aqua regia as a method of purification. Count von Sickingen (1737–1791), son of an alchemist, carried out a long series of experiments on platinum in his private laboratory in Paris, while he was ambassador of the Palatinate to the French court. He reported ninety-seven experiments, begun in 1772, to the Académie des Sciences in 1778, but they remained unpublished. Georg Adolf Suckow, professor of chemistry at the University of Heidelberg, believed that Sickingen's valuable work should appear in his native German and translated the experiments as the present book. Sickingen was the first to produce platinum in the form of wire and sheet. A detailed account is given by McDonald and Hunt (*A History of Platinum*, 1982, pp. 60–63), who illustrate the title of this work. (Bolton, *First Supplement*, 384; Ferchl, 502; Hoover, 745; Partington, III, 699; Poggendorff, II, 922)

SIEBMACHER, Johann Ambrosius

Wasserstein der Weisen, oder Chymisches Tractätlein, darin der Weg gezeigt, die Materia genennet, und der Process beschrieben wird, zu dem hohen Geheimniss der Universal-Tinctur zu kommen; dabey auch zwey sehr nützliche andere Büchlein der Gleichförmigkeit und Concordantz wegen angehängt: I. Johann von Mesung. II. Via veritatis, Weg der einigen Wahrheit. Vormahlen durch Lucas Jennis ausgegeben, nunmehr aber wiederum neu aufgelegt, und noch dabey gefüget zwey Responsa von dem F.R.C. so an etlichen ihro Zugethanen abgefertiget.

Frankfurt & Leipzig: in der Fleischerischen Buchhandlung. 1760.

Final edition. 8vo. 228 pp. With engraved alchemical frontispiece. Fine copy in blue boards antique.

THE FINAL edition of an important alchemical work. Siebmacher (d. 1611) lived in Nuremberg and Augsburg, and his book entitled *Wasserstein der Weisen* was "highly esteemed" (Ferguson) throughout the seventeenth and eighteenth centuries in Germany. Edited by Lucas Jennis, the

present edition is based on that of 1661 (preface dated 22 Jan. Anno 1661). The *Wasserstein* was translated into English (by "J. H.," otherwise unidentified) and was published with a tract by Paracelsus under the title *Paracelsus his Aurora, & Treasure of the Philosophers. As also the Water-Stone of the Wise Men; describing the matter of, and manner how to attain the universal Tincture* (London, 1659; Wing, B3540). The first edition (Frankfurt, 1609) was followed by editions of 1619, 1660, 1661, 1703, 1704, 1709, 1725, 1743, and the present one of 1760. Caillet, Duveen, Ferchl, Ferguson, Ferguson Coll., Rosenthal, and Smith list one or more of these editions but not the present one. All editions are rare, and none are listed by Mellon, Neu, Partington, Waite, Watt, etc. (Edelstein, 2107; Ferguson, II, 385 [not in Young Coll.]; Kopp, *Die Alchemie in Älterer and Neuerer Zeit*, 1886, p. 393)

SIEFFERT, Johann Michael

Dissertatio Inauguralis Chemica de Salibus Alkalinis . . . summis in arte medica honoribus . . . publice defendet auctor Joannis Michael Sieffert Elbingensis. Ad diem V Nov. MDCCLV.

Göttingen: Apud Eliam Lusac. (1755).

First edition. 4to. 2 leaves, 44 pp. Very good, wide-margined copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

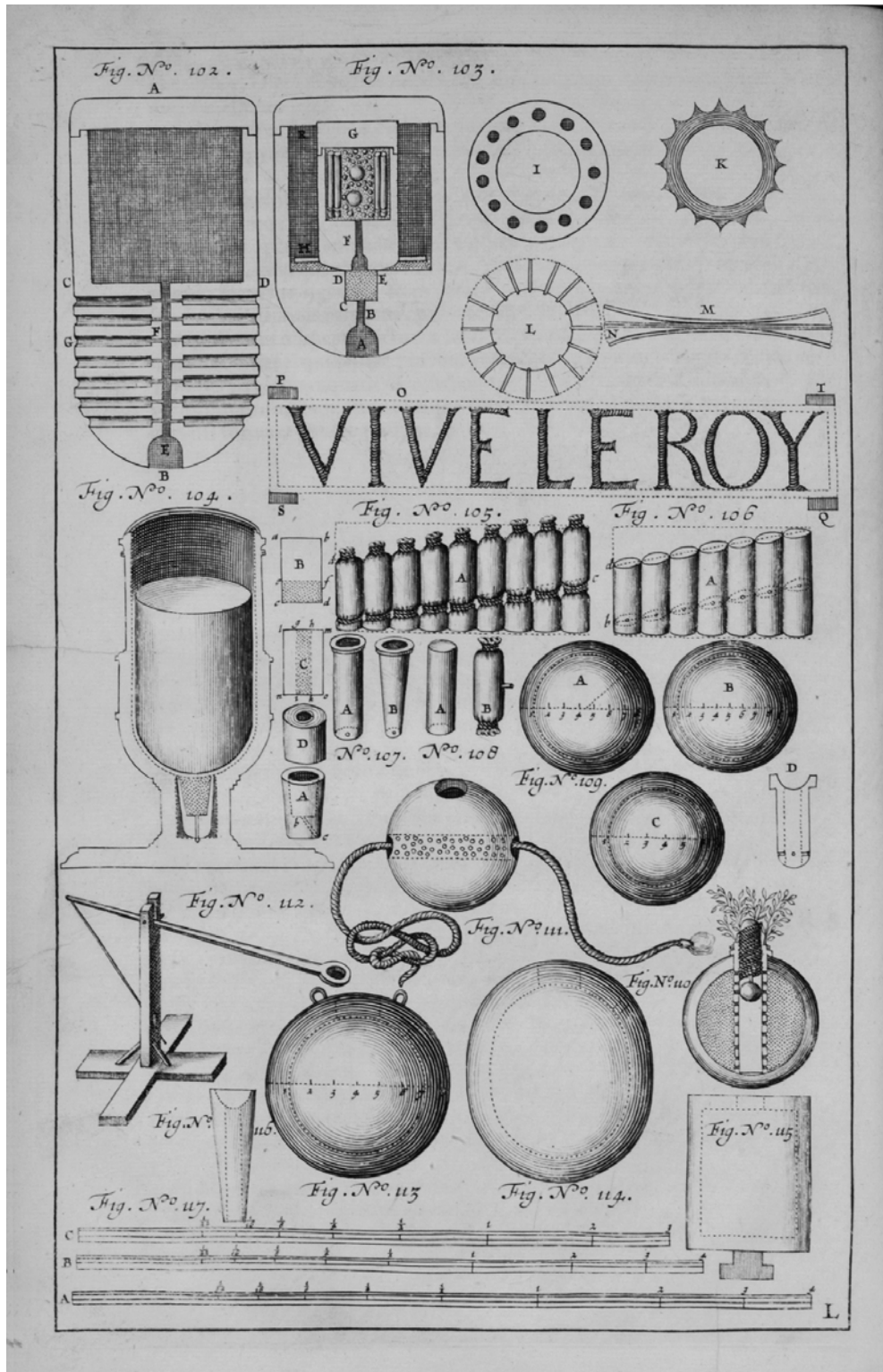
A DETAILED DISSERTATION on the preparation and properties of alkalies, of which two classes are described: fixed and volatile. Fixed alkalies are prepared by calcining plants, chalk, etc., to produce potash (potassium carbonate) and quicklime, respectively. Volatile alkali (ammonium hydroxide) is prepared by the destructive distillation of animal tissue. Sieffert (dates unknown) was a student at Göttingen; the praeses is not named. Rare. Not in the usual bibliographies. (Ferchl, 503; Waring, 105)

SIEMIENOWICZ, Casimir

Artis Magnae Artilleriae pars prima . . .
Amsterdam: Apud Joannem Janssonium. 1650.

First edition. Folio (in 4s). 8 leaves, 284 pp., 2 leaves. With engraved title page (by C. Siemienowicz) and 22 full-page copperplates (1 folding). Faint water stain on first 5 leaves; otherwise fine copy in contemporary gilt-ruled calf, with skillfully rebacked old-style richly gilt spine, maroon label.

SIEMIENOWICZ, lieutenant-general of the Ordnance to the king of Poland (John Casimir), had intended to write a two-part complete treatise on artillery and pyrotechnics, but only the present first part was finished when the author died in 1650. The second part never appeared. One of



Siemienowicz. Artis Magnae Artilleriae. Amsterdam, 1650.

the greatest seventeenth-century books on the subject, this "classic *Great Art of Artillery* (1650) . . . has perhaps provided more material for plagiarists than any other work; it was not until 1729 that a complete and authentic translation into English by George Shelvocke was published, by order of the Surveyor-General of the Ordnance, but it then still remained the outstanding work in both military and civil branches of the subject" (Brock). Shelvocke had to work from the French translation by Pierre Noizet (Amsterdam, 1651), owing to the rarity of the present edition. The book contains the mathematical and physical foundations of artillery, as well as basic information on the technology of metals and explosives. Many types of rockets are discussed and illustrated, with the various formulations of gunpowder used as propellants. Some rocket techniques usually believed to be of recent origin are described: e.g., multi-staged rockets, stabilized with wings. In addition to recreational fireworks, devices used in warfare include balls that vomit offensive gases and poisons (from scorpions, toads, and mad dogs), bombs that float on water, and fire-rain. (Brock, *Pyrotechnics*, 158, 183; Brock, *Hist. Fireworks*, 37, 41; Philip, S130.1, p. 134)

SIGAUD DE LA FOND, Joseph-Aignan

Dictionnaire de Physique . . .

Paris: Rue et Hôtel Serpente. 1781, 1782.

First edition. 5 vols., 8vo. I: xii, 704 pp. II: 1 leaf, 658 pp. III: 1 leaf, 651, (1) pp. IV: 1 leaf, 629, (3) pp. V (*Supplément*, 1782): xii, 559, (1) pp. With 17 folding copperplates. Fine set in original mottled calf, spines richly gilt, maroon and green morocco labels. Two bookplates (eighteenth century) in each volume: Maynon de farcheville and Fourqueux.

A COMPREHENSIVE ENCYCLOPEDIA containing related material from chemistry and, to a lesser extent, from natural history. "In some cases direct quotations from other authors are used, credit being given, e.g., 'Laboratoire,' in part, is taken from Macquer's *Dictionnaire de Chymie*" (Cole). It "supercedes Paulian's dictionary" (*Obs. sur phys.* [XVI, 1780], 478). The *Dictionnaire de physique portatif* (Avignon, 1758) of Aimé Henri Paulian (1722–1801) was "the first of scientific interest" (Neville & Smeaton, *Annals of Science* [1981], 8, 614). The present work is the next earliest dictionary of physics and "is still of value for its descriptions of contemporary physical instruments" (Zeitlinger). Sets with the supplementary fifth volume are rare. The *Supplément* contains topics of chemical interest, including a description of the pyrometer newly invented by the author's nephew, Rouland. Only the first four volumes are in the Wellcome Library. (Cole, 1211; D.S.B., XII, 428; Poggen-dorff, II, 927; Roller, 513; Sotheran, Cat. 828 [1931], 3801)

SIGAUD DE LA FOND, Joseph-Aignan

Dictionnaire des Merveilles de la Nature. Par M. A.J.S.D. Paris: Rue et Hôtel Serpente. 1781.

First edition. 2 vols., 8vo. I: 1 leaf, iv, 493, (1) pp. II: 1 leaf, 476 pp., 2 leaves. Fine copy in original tree calf, gilt, with large gilt armorial crest on each front cover. From the libraries of Madame la Comtesse Constance Rzewusha née Princesse Lubomerska, and Henricus Liber Baro de Gudenus, with eighteenth- and nineteenth-century bookplates.

A DETAILED, ELEMENTARY, and popular encyclopedia on all types of scientific phenomena. In addition to topics of general interest (e.g., rainbows, divining rods, caverns, earthquakes, lightning, meteors, and fires), numerous subjects of chemical importance are covered (e.g., marsh gases with references to Priestley, Volta, et al.; fermentation; the chemical basis of odors mentioning Boyle; putrefaction; spontaneous combustion; and natural and artificial phosphors). Second (Paris, 1790, 2 vols.) and third (Paris, 1802, 3 vols.) editions in French appeared, as well as translations into German (Leipzig, 1782, 2 vols.) and English (London, 1803). (D.S.B., XII, 428; Ferchl, 503; Neu, 3839; Poggen-dorff, II, 927)

SIGAUD DE LA FOND, Joseph-Aignan

Éléments de Physique Théorique et Expérimentale, pour servir de suite à la Description & Usage d'un Cabinet de Physique expérimentale . . .

Paris: Chez P. Fr. Gueffier, Libraire-Imprimeur, au bas de la rue de la Harpe, à la Liberté. 1777.

First edition. 4 vols., 8vo. I: xii, 677, (3) pp. II: 2 leaves, 565, (1) pp. III: 2 leaves, 550, 29, (1) pp. IV: 2 leaves, 632 pp. With 25 folding copperplates of apparatus. Bindings somewhat worn; otherwise fine set, in original mottled calf, gilt, dark-green morocco labels.

ALTHOUGH PRIMARILY on physics, this work contains much of purely chemical interest and importance: e.g., differences between physical mixtures and chemical compounds, affinity, Paracelsian *tria prima*, Becher's *terra pinguis*, Stahl's theory of phlogiston, atoms and molecules, crystallization, double decomposition of salts, sympathetic inks, chemical indicators, precipitation, sublimation, preparation of various gases and their collection over water or mercury, theories of calcination, acids and bases, and the nature of fire. There are many references to the researches of Boyle, Gue-ricke, Hales, Boerhaave, Newton, Macquer, Priestley, Lavoisier, Guyton de Morveau, and others. A second edition appeared, revised and enlarged by Rouland (Paris, 1787, 4 vols.; Partington, III, 105; Poggen-dorff, II, 927). The work was also translated into Spanish by D. Tadeo Lope (Madrid,

1787–89, 6 vols.; Gartrell, 488). Not in Ekelöf, Gartrell, or Wheeler Gift. (Cole, 1212; D.S.B., XII, 428; Sondheimer, 1443)

SIGAUD DE LA FOND, Joseph-Aignan

Essai sur Différentes Espèces d'Air, qu'on désigne sous le Nom d'Air Fixe, pour servir de suite & de supplément aux Élémens de Physique du même Auteur. . . .

Paris: Chez P. Fr. Gueffier, Libraire-Imprimeur, au bas de la rue de la Harpe, à la Liberté. 1779.

First edition. 8vo. 4 leaves, xvi, 400 pp. With 5 folding copperplates of apparatus. Mint copy, in original mottled calf, spine richly gilt, maroon morocco label.

AN IMPORTANT treatise in which are described the preparation, properties, and chemical reactions of several gases, including carbon dioxide, nitric oxide, hydrogen, oxygen, sulphur dioxide, hydrogen chloride, hydrogen fluoride, and ammonia. There are numerous references to the earlier experiments of Boyle, Hales, Helms, Magellan, Nooth, et al. The author repeatedly extols the great work of Priestley and also speaks highly of Black, Chaussier, Fontana, Gerardin, Lavoisier, Meyer, Venel, Volta, and others. In 1776 Sigaud assisted Macquer in experiments showing that water is produced when hydrogen burns in air. Pages 227–284 describe these experiments, which greatly helped Cavendish, Lavoisier, and Monge in their later investigations on the composition of water. (Blake, 418; Bolton, 833; Caillet, 10188; Cole, 1213; Duveen, 550; Edelstein, 2108; Ferchl, 503; Ferguson Coll., 653; Neu, 3840; Partington, III, 105; Poggendorff, II, 927; Smith, 447)

SIGAUD DE LA FOND, Joseph-Aignan

Essai sur Différentes Espèces d'Air-Fixe ou de Gas, pour servir de suite & de supplément aux Élémens de Physique du même Auteur. . . . Nouvelle Édition, Revue et Augmentée, par M. Rouland. . . .

Paris: Chez P. Fr. Gueffier, Libraire-Imprimeur, au bas de la rue de la Harpe, à la Liberté. 1785.

Second edition. 8vo. xxviii, 499, (1) pp. With 8 folding copperplates of apparatus. Very fine copy, in original calf, spine richly gilt, maroon morocco label.

THE SECOND, final, and best edition (first: Paris, 1779), revised and considerably enlarged by N. Rouland, a pupil and assistant of the author. It contains the latest information on gases; descriptions of the eudiometers of Fontana and Volta; an account of the balloon ascents of Charles and Robert Montgolfier; reports on the experiments of Cavendish, Lavoisier, and Monge, and on the decomposition of water by Lavoisier and Meusnier; a description and illus-

tration of the apparatus devised by Rouland for producing water by the combustion of hydrogen (so-called inflammable air); a survey of the experiments of Ingenhousz, Priestley, Senebier, etc. Plates I–V are identical to those of the first edition. On the verso of the half title, Sigaud de la Fond advertises private lessons in his *Cabinet de Physique* and offers to provide sets of apparatus. (Blake, 418; Bolton, 833; Cole, 1214; Duveen, 551; Edelstein, 2109; Ferchl, 503; Neu, 3841; Partington, III, 105; Poggendorff, II, 927)

SIGAUD DE LA FOND, Joseph-Aignan

Leçons de Physique Experimentale. . . .

Paris: Chez Des Ventes de la Doué, Libraire, rue Saint Jacques, vis-à-vis le Collège de Louis-le-Grand. 1767.

First edition. 2 vols., 12mo. I: 1 leaf (half title), xv, (1), 424, (2) pp. II: 2 leaves (half title, title), 501, (1) pp., 1 leaf (blank). With 18 folding engraved plates. Very fine set, in original mottled calf, spines richly gilt, maroon morocco labels. From the library of Prince Liechtenstein, with armorial bookplate in each volume.

THE FIRST edition of the author's first book. Sigaud de la Fond (1730–1810), who succeeded the Abbé Nollet at the Collège Louis-le-Grand, taught courses in anatomy, physiology, and experimental physics. After several appointments, in 1795 he became professor of physics and chemistry at the École Centrale, in Bourges. An able and versatile scientist, he made several important discoveries in physics and chemistry. Fourcroy was his most famous pupil. In 1776 he assisted Pierre Joseph Macquer in experiments proving that water is formed when inflammable air (hydrogen) burns in air. Based on his lectures, the present work in twelve sections covers the properties of matter, statics, dynamics, hydrostatics, electrostatics, magnetism, fire and heat, light, sound, gases, etc. Many chemical experiments are described. The second name of the author is sometimes given as René. (D.S.B., XII, 428; Duveen, 550 [imperf.]; Gartrell, 490; Poggendorff, II, 927)

SIGAUD DE LA FOND, Joseph-Aignan

Précis Historique et Expérimental des Phénomènes Électriques, depuis l'Origine de cette Découverte jusqu'à ce Jour . . .

Paris: Rue et Hôtel Serpente. 1785.

Second edition. 8vo. xvi, (4 errata), 624 pp., 2 leaves (privilege and approbation). With 10 folding copperplates. Fine copy, in original mottled calf, spine richly gilt, maroon morocco label.

THE FINAL, greatly enlarged edition (first: Paris, 1781) of this comprehensive history of electricity and magnetism, and their development and applications, including use for

curing diseases. Benjamin Franklin and his experiments are fully discussed, as are those of Gilbert, Hauksbee, Ingenhousz, Nollet, and others. Extensive accounts are given of atmospheric electricity and lightning conductors, with some original experiments of the author, who claims to have been the first to use glass plates with electrical machines in 1756. He also describes an improved Leyden jar. "A work of merit" (Wheeler Gift). As with his other works on physics, this contains numerous references to chemical experiments and phenomena. A note in pencil on the flyleaf states that this edition is not in the British Library. (Ekelöf, 497; Gartrell, 492; Mottelay, 280; Wheeler Gift, 505a)

SIGAUD DE LA FOND, Joseph-Aignan

Traité de l'Électricité. Dans lequel on expose, & on démontre par expérience, toutes les découvertes électriques, faites jusqu'à ce jour, pour servir de suite aux Leçons de Physique du même Auteur. . . .

Paris: Chez Des Ventes de la Doué, Libraire, rue Saint Jacques, vis-à-vis le Collège de Louis-le-Grand. 1771.

First edition. 12mo. 1 leaf, xxx, 413, (3) pp. With 12 folding engraved plates (Patour sculp.). Fine copy, in original mottled calf, gilt, maroon morocco label.

A CONTINUATION OF the author's *Leçons de physique expérimentale* (Paris, 1767, 2 vols.), containing a summary of all that was then known on the nature of electricity and the electrical properties of matter. Numerous experiments in electrostatics are described, including the production of electrical discharges in evacuated glass flasks and tubes and the action of static electricity on various liquids, solids, animals, and people. There is a chapter on the relation between electric and magnetic matter. The author invented the glass insulator and utilized the circular glass plate in his electrical machines. His apparatus is well illustrated in the plates. (D.S.B., XII, 428; Ekelöf, 494; Gartrell, 493; Partington, III, 105; Poggendorff, II, 927; Wheeler Gift, 434)

SILBERMAN

Manuel Métallotechnique, Ou recueil de secrets & de curiosités sur les métaux & les minéraux, appliqués aux arts & aux métiers. Ouvrage traduit de l'Allemand de M. Silberman, de l'Académie des Curieux de la Nature & de l'Art.

À Leipsick, chez Arkstée & Merkus; Et se vend à Paris, Chez Charles-Antoine Jombert, père, rue Dauphine, à l'Image Notre-Dame. 1773.

First French edition. 12mo. 2 leaves, vi, 473, (1) pp., 1 leaf. Small woodcut printer's device on title and table on page 47. Very good copy in contemporary mottled calf, spine gilt, maroon morocco gilt-lettered label. Small rubber stamp on

recto of half title: "Mario Olivo Biblioteca No. 14"; and printed bookplate on front pastedown endpaper: "Associazione Italiana di Metallurgia Centro Storia Metallurgia. . . . XXI Congresso Internazionale delle Associazioni Tecniche di Fonderia Firenze, 19-26 Settembre 1954." This was one of the books exhibited at the 1954 congress.

FERGUSON, *Books of Secrets* (I, Part II, p. 41), briefly mentions this "volume of Metallurgical Secrets, translated from the German of Silberman into French, at Paris in 1773," but he gives no other information. No reference to the original German edition, from which this translation was made by an anonymous author, has been found. The book contains numerous descriptions of processes on the preparation, properties, and uses of all the known metals and alloys, and is of considerable chemical interest. The words "Fin de la premiere partie" appear on page 458, and "Tome I" on the first page of most signatures, suggesting a further volume was either published or contemplated. However, the Ferguson Collection catalogue lists only the present volume, and no other bibliographical reference has been found to this very rare book, so it is possible that only this "premiere partie" was published. Not in the usual bibliographies of chemistry (Bolton, Duveen, Edelstein, Ferchl, Ferguson, Hoover, Neu, Partington, Poggendorff, Smith, Waller, Watt, etc.). (Ferguson Coll., 653)

SILLIMAN, Benjamin

Elements of Chemistry, in the Order of the Lectures given in Yale College. By Benjamin Silliman . . .

New Haven: Printed and Published by Hezekiah Howe. 1830, 1831.

First edition, first issue. 2 vols., 8vo. I (1830): xii, 518 pp. II (1831): viii, 696, 48, 12 pp. Numerous woodcut illustrations in text. Fine copy in contemporary patterned half calf, marbled boards, each volume with double dark-green labels.

SILLIMAN (1779-1864) graduated from Yale College in 1796 and established a new professorship of chemistry and natural history at Yale (1802). He became a "leading figure in American science . . . through his teaching and educational statesmanship at Yale, his editorship of the *American Journal of Science*, his public lectures on chemistry and geology, his textbooks, and his role in founding and strengthening scientific organizations" (D.S.B.). Silliman brought out four American editions of William Henry's *Epitome of Chemistry*, with notes and additions, and then published the present textbook, which compared favorably with contemporary English works. Cole states that some of the woodcuts in the text are from Robert Hare's *Compendium of the Course of Chemical Instruction* (Philadelphia, 1828), with abridged explanations in Hare's own words. Many copies of the first issue of the first edition were published

without the three plates of "Hare's Galvanic Deflagrators" (mentioned by Cole), possibly due to the plates not being ready for inclusion in the earlier printed copies of this work. (Bolton, 833; Cole, 1218; D.S.B., XII, 433; Duveen, *Supplement*, 434; Edelstein, 2114; Ferchl, 503; Morgan, 703; Partington, IV, 76; Poggendorff, II, 931; Roller & Goodman, II, 433; Smith, 447)

SILLIMAN, Benjamin

Elements of Chemistry, in the Order of the Lectures given in Yale College. By Benjamin Silliman . . .

New Haven: Printed and Published by Hezekiah Howe. 1830, 1831.

First edition, second issue. 2 vols., 8vo. I (1830): xii, 518 pp. II (1831): viii, 696, 48, 12 pp. With 3 engraved plates (after p. 696) and numerous woodcuts in text. Lightly water stained throughout; otherwise good copy in worn red buckram. Bookplates: The Chemists' Club N.Y., and Franz Sondheimer.

THE SECOND issue of Silliman's *Elements*, containing the three plates of Robert Hare's apparatus. Plate I is "Dr. Hare's Galvanic Deflagrator," plate II is "Dr. Hare's New Galvanic Deflagrators," and plate III is "Single Leaf Electrometer, and Improved Deflagrators by Dr. Hare." (Cole, 1218; Sondheimer, 1446)

SIMON, Johann Christian

Die Kunst Salpeter zu machen und Scheidewasser zu brennen; aus eignen Erfahrungen heraus gegeben von Johann Christian Simon, Oecon. & Chym. Cult. Mit Kupfern.

Dresden: In der Waltherischen Hofbuchhandlung. 1771.

First edition. 8vo. viii pp., 1 leaf (verso blank), ix-xxxvi, 226 pp., 1 leaf (blank). (N.B. In this copy pp. xxxiii-xxxvi are misbound between pp. 262-263.) With 3 folding copperplates (Dietrich sc.). Fine copy in contemporary speckled boards, gilt-lettered paper label on spine. Bound with: Pauli, Johann, *Chymisch-Medicinische Abhandlung von denen barnichten Salzen . . .* (Copenhagen, 1770); and Wiegleb, Johann Christian, *Fortgesetzte kleine chymische Abhandlungen* (Langensalza, 1770). From the Prince Fürstenberg library, Donaueschingen, with old stamp on verso of title and final blank leaf.

A RARE AND very important treatise on the manufacture of saltpeter and nitric acid, which was considered so significant at the time that a French translation was made and included with works by Lavoisier in the *Recueil de Memoires et d'Observations sur la formation & sur la fabrication du Salpêtre* (Paris, 1776), on which see Duveen and Klickstein (*Bibliography of . . . Lavoisier*, London, 1954, No. 203). See also the comments on Simon and the present work under Duveen and Klickstein, no. 206, which is the German translation of the French *Recueil* (1776), published in 1778. Not

in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Waller, Waring, Watt, etc. (Ferchl, 504)

SIMON, Johann Franz

Animal Chemistry with reference to the Physiology and Pathology of Man. By Dr. J. Franz Simon . . . Translated and edited by George E. Day . . .

London: Printed for the Sydenham Society. 1845, 1846.

First English edition. 2 vols., 8vo. I (1845): xx, 359, (1), 40 pp.; 1 engraved plate. II (1846): xii, 560 pp., 2 engraved plates. Fine copy, top edges gilt, others uncut, in original blind-stamped green cloth, spines gilt-lettered, armorial crest in gilt on all covers. Bookplate: G. J. Fisher, Medical and Scientific Library. No. 983.

A CLASSIC WORK on mid-nineteenth-century biochemistry, which first appeared as *Physiologische und pathologische Anthrochemie mit Berücksichtigung der eigentlichen Zoochemie* (Berlin, 1842); here translated by George Edward Day (1815-1872), professor of medicine at St. Andrews. An assistant to Justus von Liebig, Simon (1807-1843) became an apothecary and graduated doctor of philosophy (1838) for his thesis on the chemical properties of mother's milk. His *Chemistry of Man* (in German) culminated his intensive researches on the chemical composition and physiology of human organs and secretions. The plates illustrate crystals isolated from various body fluids. The book is remarkable for the vast amount of information it contains. The final forty pages list officers and members of the Sydenham Society for the year ending 25 March 1845. The former owner of this copy, George Jackson Fisher (1825-1893), a celebrated physician, published a "valuable history of teratology [and] assembled one of the largest of all libraries on teratology" (Garrison-Morton, 534.64). He also published *On the animal substances employed as medicines by the ancients* (1862). Bolton (834) lists another edition (London, 1858). (Blocker, 364; Partington, IV, 314; Smith, 449)

SIMONIN, Louis Laurent

Mines and Miners; or, Underground Life. By L. Simonin. Translated, adapted to the present state of British mining, and edited by H. W. Bristow . . .

London: William Mackenzie, etc. (1868).

First English edition. Royal 8vo. xx, 522, (2) pp. With 12 chromolithographic plates (metal ores, gems, etc), 20 colored maps and geological sections, and 166 woodcuts. An excellent copy with wide margins, top edge gilt, others uncut, in original green quarter roan, brown cloth boards, spine gilt-lettered and with pictorial design in gilt.



Fig. 84.—Saving Life by means of Rouquayrol's Apparatus.

Simonin. Mines and Miners. London, 1868.

THE ENGLISH translation of *La Vie Souterraine ou les Mines et les Mineurs* (Paris: Hachette, 1867), by the French mining authority Simonin (1830–1886). The celebrated geologist and translator of this work, Henry William Bristow (1817–1889), was director of the Geographical Survey for England and Wales (1872–1888) and F.R.S. (1862). Primarily on geology, this comprehensive and graphic treatise includes a history of mining, mineralogy, and metallurgy and is also of chemical interest. The plates of minerals are outstanding examples of chromolithography. Bristow has preserved Simonin's original text in its entirety and has added detailed accounts of British mines and mining techniques. This copy has an important provenance, having been presented by the translator and editor to the English metallurgist Bauerman (1835–1909), who was also geologist to the North American boundary commission (1858–1863) and a publisher of metallurgical works. (Roller & Goodman, II, 434; Sotheran, Cat. 682 [1908], 4393)

SIMPLICIUS

Simplicii Philosophi Gravissimi Commentarius in Enchiridion Epicteti Philosophi Stoici, quo universa hominum vita instituitur, & libertatis recuperandae via monstratur. Angelo Caninio Anglariensi interprete. Nunc denuo in lucem accuratè editus.

Venice: Apud Hieronymum Scotum. 1569.

First edition. Folio. 92 pp. Large woodcut portrait of Aristotle on title page. Many historiated and floral woodcut initials. Fine copy. Bound with: Simplicius, *Philosophi perspicacissimi* (Venice, 1567).

THE COMMENTARY of Simplicius on the *Enchiridion* of Epictetus (b. ca. A.D. 50), a Greek philosopher, interpreted by Angelo Caninio. An earlier and different version (Venice: H. Scot, 1546) also appeared. The doctrines of Epictetus commended him to many contemporary Christian thinkers. He wrote nothing, his teaching being transmitted by a pupil, Arrian (the historian of Alexander the Great). The *Enchiridion* contains a condensed version of his main doctrines. "In his teaching, Epictetus followed the early rather than the late Stoics and reverted to Socrates and to Diogenes as historical models of the sage" (*Encyclopaedia Britannica*). He taught that man must believe that there is a God whose thought directs the physical universe. An extremely rare edition, which is not in the British Library.

SIMPLICIUS

Simplicii Philosophi Perspicacissimi. Commentationes accuratissimae in praedicamenta Aristotelis. Nuper quam emendatissimis exemplaribus, innumeris penè locis integritati restitutae, & ab innumeris erroribus diligentissimè Castigatè. Venice: Apud Hieronymum Scotum. 1567.

First edition. Folio. 183, (1) pp. Large woodcut portrait of Aristotle on title page, woodcut initials and figures in text, woodcut printer's device on last page. Fine copy in gilt-ruled seventeenth-century red morocco, spine richly gilt. Bound with: Simplicius, *Philosophi Gravissimi Commentarius in Enchiridion Epicteti* (Venice, 1569).

A COMMENTARY on the writings of Aristotle by the Greek philosopher Simplicius (fl. 529), containing topics of scientific (including chemical) interest. On page 87 there is a discussion on the transmutation of the elements, and the atomic theory of Democritus is covered on page 93. Simplicius, a pupil of Damascius at Athens and of Ammonius at Alexandria, was influenced by both these schools of Neoplatonism. After he returned from a two-year visit to Persia, Simplicius "wrote commentaries on Aristotle's *De coelo*, *Physica*, *De anima*, and *Categoriae*, which, with a commentary on the *Enchiridion* of Epictetus, have survived. These contain many valuable fragments of the older philosophers as well as of his immediate predecessors" (*Encyclopaedia Britannica*). The present is the first edition printed by Hieronymus Scot. Extremely rare. Not in Durling, Partington, Thorndike, Waller, Watt, Wellcome, or the British Library.

SIMPSON, William

Hydrologia Chymica: or, the Chymical Anatomy of the Scarbrough, and other Spaws in York-Shire. Wherein are interspersed some animadversions upon Dr. Wittie's lately published Treatise of the Scarbrough-Spaw. Also, a short description of the spaws at Malton and Knarsbrough. And a discourse concerning the original of hot-springs and other fountains: with the causes and cures of the stubbornest diseases (either chronicle or acute) incident to the body of man. Also, a vindication of chymical physick; where a probable way is propounded for the improvement of experimental philosophy . . . Likewise a short account of the principles of all concretes, whether vegetable, animal or mineral. Lastly, is subjoyned an appendix of the original of springs; with . . . the epilogue to the whole, of the essence of the Scarbrough-Spaw. London: Printed by W. G. for Richard Chiswel at the Two Angels and Crown in Little-Britain. 1669.

First edition. 8vo. 10 leaves, 374 pp., 1 leaf (blank). With 2 folding copperplates. Fine copy, in original calf, rebacked, maroon morocco label, spine dated. Signature of Thomas Willoughby (F.R.S., 1693) on leaf facing title page.

THE HELMONTIAN physician Simpson (1636–1680) was very well versed in chemistry, and in this important work he comments on the writings of Beguin, Boyle, Croll, Holland, Paracelsus, et al. Details on the chemical analyses of the mineral waters are given. Simpson had a long controversy with Robert Wittie, who responded to this book in *Pyrologia Mimica* (London, 1669). Partington discusses this title and others by Simpson. Although Simpson's works contain much chemistry, he is ignored by most historians, probably because his books are rare. (Duveen, 551; Edelstein, 2119; Ferguson Coll., 654; Krivatsy, 11109; Neu, 3845; Partington, II, 607; Thorndike, VIII, 377; Waring, 800; Watt, II, 857p; Wing, S3833)

SIMPSON, William

Philosophical Dialogues Concerning the Principles of Natural Bodies: wherein the Principles of the Old and New Philosophy are stated, and the New demonstrated, more agreeable to Reason, from Mechanical Experiments and its usefulness to the benefit of Man-kind. . . .

London: Printed by T. Hodgkin, for Dorman Newman at the Kings-Arms in the Poultry. 1777 (i.e., 1677).

First edition. 12mo. 8 leaves, 173, (1) pp., 1 leaf (errata). Very good copy in original calf, rebounded, maroon label. From the library of the famous physicist E. N. da C. Andrade (1887–1971), with his bookplate.

AN IMPORTANT work in which the old and new philosophies are discussed, including the atomic theory. It is written in the form of a dialogue between Hydrophilus, who represents the old Aristotelian (peripatetic) school, and Pyrophilus, who represents the modern school. The theme of the book is reminiscent of the style used by Boyle in *The Sceptical Chymist* (1661). Simpson frequently refers to Boyle and the excellent chemical and physical experiments he has recently published that substantiate the New Philosophy (as presented by Pyrophilus) over that supported by Hydrophilus. In the section "To the Reader," Simpson states that in this work he makes reference to his *Tentamen Physiologicum*, to which the present book was intended to form an introduction. He also refers to "our *Halologia Chymica* being our discourse of Salts, and our *Lithologia Physica* concerning petrification, at present only in Embrio." Simpson died before these works were completed, and they were never published. (Ferguson Coll., 654; Krivatsy, 11111 [imperf.]; Partington, II, 607; Thorndike, VIII, 377; Watt, II, 857p; Wing, S3835)

SIMPSON, William

Zymologia Physica, or, a brief Philosophical Discourse of Fermentation, from a new Hypothesis of Acidum and Sulphur. Whereby the phoenomena of all natural hot-baths, the generation of minerals, the production of many acidulae or Sparw-waters, the grand apparances of heat, fire, and light, throughout the triplicity of Natures dominions, in the productions of bodies, are solv'd from the intestine duellings and inward collisions of the foresaid principles. Whereby also various other subterranean phoenomena, as dampes, earthquakes, eruptions, &c. likewise the apparances of meteors, &c. and divers other no less remarkable then entertaining, are from the same doctrine of fermentation genuinely solv'd. With an additional discourse of the Sulphur-Bath at Knarsbrough. . . .

London: Printed by T. R. & N. T. for W. Cooper at the Pellican in Little Britain. 1675.

First edition. 8vo. 8 leaves, 149, (3) pp. + 1 leaf, 28 pp., 1 leaf (advertisements). Flyleaf facing title covered with seventeenth-century writing (an account of "Dr. Sympson" and his works). Fine copy, in original calf, rebounded, maroon label.

AN INTERESTING balneological work in which Simpson presents his explanation of fermentation, which is described as the result of the "mutual wrestling betwixt Acidum and Sulphur" (p. 4). Experiments supporting his hypothesis are described, and he is convinced that the phenomena listed in the title result from the reaction of sulphur and niter with water. Partington states that some of the ideas on fermentation in Newton's *Opticks* seem to have been taken from this work. He also points out a passage in which Simpson explains the heat of mineral springs on the same grounds as Mayow. (Duveen, 552; Edelstein, 2120; Ferguson Coll., 654; Harvey, 132; Krivatsy, 11112; Neu, 3848; Partington, II, 607; Thorndike, VIII, 377; Watt, II, 857p; Wing, S3840)

SINCLAIR, George

Ars Nova et Magna Gravitatis et Levitatis. Sive Dialogorum Philosophicorum Libri Sex de Aeris vera ac reali Gravitate, &c. Quibus accessere de Instrumentis Hydragogicis Libri duo: de HygroscoPIO, & ChronoscoPIO seu Pendulo liber unus, nec non Palladis Gymnasium, quorum omnium perioche uberius ante initium libri primi; in fine additis indicibus tum dialogorum tum rerum ac materiarum necessariis. . . .

Rotterdam: Ex Officina Arnoldi Leers. 1669.

First edition. 4to. 14 leaves, 625 pp., 10 leaves (including errata leaf). Large folding engraved plate of arms of George, fourth earl of Winton, 2 engraved plates (at pp. 555 and 587),

and numerous woodcuts in text. Fine, wide-margined copy, in paneled calf antique, maroon morocco label.

SINCLAIR USED a diving bell (1655) in an attempt to raise the ship *Florida*, a relic of the Armada wrecked off the Isle of Mull in 1588. This important work on the barometer, hygrometer, and chronometer is presented in six books in conversational form between four people (Alexander, Franciscus, Cornelius, and Dromo Famulus) who represent the older, intermediate, and newer philosophies. Detailed descriptions are given of experiments with barometers filled with water or mercury to establish that air has elasticity, pressure, and weight. Boyle had already covered this subject thoroughly, but Sinclair (who had visited Boyle) nowhere mentions his great contributions. Thorndike (VIII, 216–218) states that the “reviewer of Sinclair’s book in *Philosophical Transactions* was careful to point out that his experiments were not new.” Possibly there was some enmity between Sinclair and the newly formed Royal Society. The fine folding plate of arms (here present) is usually missing. On the title page and page 1 is the signature of the Scottish judge Alexander Murray (1736–1795; see D.N.B.). (Poggendorff, II, 938; Sotheran, Cat. 757 [1915], 14893 [“Rare”]; Watt, II, 858d)

SINCLAIR, George

The Explanation of the Weather-Glass.
Leith: January 9, 1683.

First edition. 4to. 8 pp. With 3 woodcut diagrams depicting a comet. Fine copy, lower edges uncut. Bound with: Sinclair, G., *Natural Philosophy Improven by New Experiments* (Edinburgh, 1683).

DEDICATED ON the first page to Sir James Fleming, lord provost of Edinburgh, this extremely rare tract has no title page, and page 1 is signed “A.” The weatherglass (barometer) is discussed (pp. 2–3), the hygroscope is described (pp. 3–4), and a short account of comets observed between 1652 and 1682 is given (pp. 5–6). A detailed description of “the late great Comet” of 22 November (1680) is presented (pp. 6–8) with three woodcuts showing its passage across the sky. Newton studied this brilliant object mathematically, and it later became known as Halley’s comet. A broadside entitled *A description and explanation of the weather-glass* (Edinburgh, ca. 1680) appeared earlier (Wing, S3853), of which only one copy is known. The present copy is the only one recorded by Wing, S3853A.

SINCLAIR, George

The Hydrostaticks; or, the Weight, Force, and Pressure of Fluid Bodies, made evident by Physical, and Sensible Experiments. Together with some Miscellany Observations, the last whereof is a short History of Coal, and of all the Common, and Proper Accidents thereof; a Subject never treated of before. By G. S.

Edinburgh: Printed by George Swintoun, James Glen, and Thomas Brown. 1672.

First edition. 4to. 10 leaves, 319 (i.e., 317), (1) pp. Engraved title page, letterpress title within ornamental woodcut border, and 7 folding copperplates containing 27 figures. As often, lacks Pp4 (longitudinal title leaf). Numerous woodcut figures in text. Historiated initials, head- and tailpieces. Fine copy, in original unlettered, blind-ruled calf. Armorial bookplate (eighteenth century): George Carre, Advocate. Bookplate: E. N. da C. Andrade, F.R.S.

SINCLAIR, OR Sinclar (d. 1696), professor of philosophy at Glasgow, was forced to resign his chair in 1666 but resumed it in 1688 after the revolution (see D.N.B.). He was professor of mathematics (1691–1696). The present work contains many experiments on the Torricellian vacuum; capillary rise of liquids; measurement of relative densities of materials in air, water, and other liquids; experiments with the air pump and a refutation of Boyle’s observations; diving bells; etc. Of chemical interest are the author’s observations on coal mines in the Lothians, “damps” in mines (i.e., methane), metalliferous ores, salts, etc. There is also an account of a diving bell, which Sinclair used to explore the *Florida*, a ship from the 1588 Armada, wrecked off the Isle of Mull. “On page 313, Newton’s name is mentioned for the first time in a book by another author” (Babson). Sinclair’s books were “not destitute of ingenuity or research” (*Philosophical Transactions* [1809 Abridgement]). (Babson, 391; Ferguson Coll., 655; Hoover, 748; Poggendorff, II, 938; Sondheimer, 1452; Sotheran, Cat. 682 [1908], 4416 [“Very Rare”]; Watt, II, 858e; Wing, S3854)

SINCLAIR, George

Natural Philosophy Improven by New Experiments. Touching the Mercurial Weather-Glass, the Hygroscope, Eclipsis, Conjunctions of Saturn and Jupiter. By new experiments, touching the pressure of fluids, the diving-bell, and all the curiosities thereof. To which is added, some new observations, and experiments, lately made of several kinds. Together, with a true relation of an evil spirit, which troubled a mans family for many days. Lastly, there is a large discourse anent coal, coal-sinks, dipps, risings, and streaks of coal, levels, running of mines, gaes, dykes, damps, and wild-fire. By G. S. . . .

Edinburgh: And are to be sold by Gideon Schaw Book-seller, at the Sign of the Bible, in the Parliament-Closs. 1683.

First edition (of this title). 4to. 7 leaves, 302 pp., 1 leaf (Pp4, blank, lacking). Letterpress title within woodcut border and 7 folding copperplates. Woodcut text figures. Fine copy, in original speckled calf, maroon label. Bookplate: E. N. da C. Andrade, F.R.S. (1887–1971), famous physicist and book collector. Bound with: Sinclair, G., *The Explanation of the Weather-Glass* (Leith., 1683).

ALTHOUGH THE first edition to appear under this title, comparison with the *Hydrostaticks* (1672) reveals that with the exception of the engraved frontispiece, omission of the three-leaf dedication to Robert viscount of Oxfuird [sic], and pages 305–319 (i.e., Qq–Rr4), both editions are identical, being composed of the same sheets and the same plates. The 1683 edition has the title page reset, so that this is really the second issue of the first edition, cunningly re-issued to appear as a completely new work. Sinclair, one of the first in Scotland to use the barometer for measuring altitudes and, more originally, the depth of mines, was employed as a mine surveyor, and his knowledge of both Scottish and English mines is displayed in the section on mining. (Ferguson Coll., 655 [imperf.]; Watt, II, 858e; Wing, S3855)

SINGER, George John

Elements of Electricity and Electro-Chemistry. By George John Singer.

London: Printed for Longman, Hurst, Rees, Orme, and Brown, Pater-noster Row; and R. Triphook, St. James's Street. 1814.

First edition. 8vo. xxvii, (1), 480 pp., 1 leaf (errata). With 4 engraved plates containing 48 figures (Lowry sculp.). Very good copy in original marbled boards, later calf spine, red morocco label, spine dated. From the library of Michael Faraday, with marginal notes and corrections in pencil in his characteristic hand (especially on pp. 104–105), and on the plates.

INVENTOR OF the gold-leaf electrometer, Singer (1786–1817) carried out numerous experiments using the voltaic pile during his short life. “Singer constructed a dry pile of 20,000 zinc and silver pairs separated by paper; it charged Leyden jars but could not decompose salt solutions” (Partington, who does not mention the present book). Historically important, this work is the first history of electro-chemistry, written when there was intense activity in this subject by Humphry Davy and other investigators. In the preface Singer states that he has devoted a considerable portion of his life to the gathering, arranging, and classifying of the “widely scattered materials” on this important

subject. The detailed descriptions of Wollaston's apparatus for decomposing water by electrolysis and Davy's classic experiments on the electrolytic production of sodium, potassium, and alkaline earth metals are of particular interest. Thillaye published a French translation (1815); editions in German (1819) and Italian (1819) also appeared. Sir Francis Ronalds attended Singer's lectures, as did Faraday, whose sometimes critical notes are in this copy. (Duveen, 553; Ekelöf, 774; Ferchl, 505; Mottelay, 430; Poggendorff, II, 939; Ronalds, 476; Wheeler Gift, 725)

SJÖSTÉN, Carl Gustaf

Åminnelse-Tal, Hållit for Kongl. Vetenskaps Academiens öfver dess framledne ledamot Herr Carl Vilhelm Scheele, den 14 Oct. 1799. Af Carl Gustaf Sjösten, Kongl. Vet. Academiens Vice Secreterare.

Stockholm: Tryckt Hos Joh. P. Lindh. 1801.

First edition. 8vo. 1 leaf, 84 pp. Large engraving on title. Fine copy, uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE FIRST full-scale biography of the great Swedish chemist Carl Wilhelm Scheele (1742–1786), based on the 226-page manuscript of Johan Carl Wilcke (1732–1796), famous physicist and secretary of the Swedish Academy of Sciences, whose mother was Anna Scheele, a female connection of the Scheele family. The author, Sjösten (dates unknown), was vice secretary of the Swedish Academy of Sciences and a physicist who knew Scheele well. Although Lorenz von Crell published an obituary of Scheele in the *Chemische Annalen* (1 [1787], 175–192), the present work is much more important as it is the earliest comprehensive biography of Scheele. There are numerous references to Priestley and Lavoisier and the independent discovery of oxygen by Scheele (p. 32 et seq.). Pages 68–69 give a brief bibliography of Scheele's works. Virtually unknown to historians of chemistry, this important and very rare book was “not seen” by Partington. Not in Blake, Bolton, D.S.B., Duveen, Ferchl, Ferguson, Ferguson Coll., Neu, Poggendorff, Smith, Waller, Watt, etc. (Edelstein, 2055; Partington, III, 207)

SKRIMSHIRE, Fenwick

A Series of Popular Chymical Essays: containing a variety of instances of the Application of Chymistry to the Arts and Manufactures; to the Explanation of natural Phaenomena; and other useful Purposes. By Fenwick Skrimshire, M.D. . . . London: Printed by the Philanthropic Society, St. George's Fields; and Sold by John White, Horace's Head, Fleet-Street. 1802.

First edition. 2 vols., 12mo. I: xvi, 192 pp. II: viii, 150 pp. Fine copy in original tan calf, gilt, covers gilt-ruled. Armorial bookplate: Westport House.

DEDICATED TO the governors and subscribers of the Kettering Dispensary, this series of twenty-five essays was published to instruct the general reader on chemistry and natural history. Inspired by Richard Watson's *Chemical Essays*, the author claims to have chosen more interesting subjects, showing how chemistry can have very practical applications in life. Topics have been selected from the works of Bancroft, Chaptal, Fourcroy, Henry, Kirwan, Priestley, Rumford, and others. Curiously, Black and Lavoisier are not mentioned. The work covers chemical elements, heat, light, gases, carbon, phosphorus, acids, alkalies, earths, metals, etc. Applications include bleaching, dyeing, tanning, and currying. Skrimshire (fl. 1800), a physician, practiced in Kettering, near Northampton. An essentially unchanged reprint appeared (London, 1804; Bolton, 835; Cole, 1226; Edelstein, 3529; Watt, II, 859y); also a German translation (Leipzig, 1804; Bolton, *First Supplement*, 386). Rare. (Cole, 1225; Duveen, 553; Roller & Goodman, II, 438; Smith, 450)

SLARE, Frederick

Experiments and Observations upon Oriental and other Bezoar-Stones, which prove them to be of no Use in Physick. Gascoin's Powder, distinctly examin'd in its Seven Ingredients, Censur'd, and found Imperfect. Dedicated to the Royal Society. To which is annex'd, a Vindication of Sugars against the Charge of Dr. Willis, other Physicians, and Common Prejudices. Dedicated to the Ladies. Together with Further Discoveries and Remarks.

London: Printed for Tim. Goodwin, at the Queen's Head against St. Dunstan's Church, in Fleet-Street. 1715.

First edition, 2 parts in 1 vol. 8vo. 2 leaves, vi, xviii, (8), 47, (1) pp.; 5 leaves, 64 pp., 1 leaf (advertisements). Fine copy, in late-eighteenth-century half calf, marbled boards, spine gilt, dark-green label. Bookplate: Junior Carlton Club Library.

THE DISTINGUISHED chemist and physician Slare (1647?–1727) was elected F.R.S. (1680) and graduated M.D. (Oxford, 1680). He became member of the Council of the Royal Society and of the Royal College of Physicians. Some experiments he carried out on the glowing of phosphorus and its luminescence under partial vacuum were published in the *Philosophical Transactions* (see Harvey, *History of Luminescence*; and Partington, II and III). In the present work Slare disproves the supposedly miraculous medicinal virtues of animal calculi, by means of “chemical fires” (i.e., chemical analysis). In the second part he argues cogently for the inclusion of more sugar from various sources in the

diet. Many chemical experiments are described, some of which represent very early attempts to analyze an organic compound. In the dedication to the Royal Society, Slare states that he was recommended for election to fellowship by “Mr. Haak”; i.e., Theodore Haak (1605–1690). It was Haak who suggested the idea of the society circa 1645 and became an original member in 1663 (see D.N.B.). Newton owned a copy of this work. (Blake, 420; Ferchl, 505; Ferguson Coll., 657; Harrison, 1520; Munk, I, 434; Neu, 3851; Waller, 8993; Waring, 667; Watt, II, 860f)

SMEE, Alfred

Batteries and Apparatus for Electro-Metallurgy. Smee's Chemico-Mechanical Batteries. . . .
(London, ca. 1840).

First edition. 8vo. Broadside. 1 leaf, printed on recto only. Bound with: Smee, Alfred, *Elements of Electrometallurgy* (London, 1841); and Palmer, Edward, *Palmer's New Catalogue* (London, 1840).

A VERY RARE broadside advertising Smee's voltaic batteries, with prices ranging from 7 shillings and 6 pence to 6 pounds, 10 shillings. Unrecorded by the usual bibliographers.

SMEE, Alfred

Elements of Electro-Metallurgy, or the Art of Working in Metals by the Galvanic Fluid; containing the laws regulating the reduction of the metals, the states in which the deposit may take place, the apparatus to be employed, and the application of electro-metallurgy to manufactures . . . By Alfred Smee . . .
London: E. Palmer, 103, Newgate Street; and Longman, Rees, Orme, Brown, and Longman, Pater-noster-Row. 1841.

First edition. 8vo. xxviii, 163, (1) pp. Woodcut frontispiece containing 7 figures. Fine copy in original blind-stamped purple cloth, royal arms in gilt on front cover, spine faded, all edges gilt. Bound with: Smee, Alfred, *Batteries and Apparatus for Electro-Metallurgy . . .* (ca. 1841); and Palmer, Edward, *Palmer's New Catalogue . . .* (London, 1840).

DEDICATED TO “His Royal Highness Prince Albert” (1819–1861), consort to Queen Victoria, this is “an important work, dealing with the laws regulating the reduction of metals in different states, as well as a description of the processes for platinating and palladiating, so that reliefs and intaglios in gold can be readily obtained. Smee was also the first to discover the means by which perfect reverses in plaster could be made by rendering the plaster non-absorbent” (D.N.B.). A milestone work in the history of electrochemistry and the theory of chemical batteries. Scarce. Later

editions and translations appeared. (Ekelöf, 997; Mottelay, 363; Partington, IV, 687; Ronalds, 477; Sotheran, Cat. 757 [1915], 14932; Wheeler Gift, 1006)

SMEE, Alfred

On the Galvanic Properties of the Principal Elementary Bodies, with a Description of a New Chemico-Mechanical Battery. By Alfred Smee . . .

London: Printed by Richard and John E. Taylor, Red Lion Court, Fleet-Street. 1840.

First edition. 8vo. 11, (1) pp. Very good copy, in modern brown pebbled cloth, spine gilt-lettered and dated.

SMEE (1818–1877), F.R.S. (1841), metallurgist and surgeon to the Bank of England, carried out many experiments on, and made numerous discoveries in, electrochemistry. The present work, a rare offprint from the *London and Edinburgh Philosophical Magazine and Journal of Science* (April 1840), describes several new batteries that Smee discovered and discusses the chemistry involved. The Smee cell consisted of an amalgamated zinc plate and a silver plate that had been roughened by the electrodeposition of platinum immersed in dilute sulfuric acid. This important contribution to the early history of electrochemistry is not mentioned by Ekelöf, Mottelay, or Wheeler Gift. For his invention of the Smee battery, he received the Isis Medal of the Society of Arts. (Ferchl, 506; Partington, IV, 687; Poggendorff, II, 944; Ronalds, 477)

SMITH, David

The Practical Dyer's Guide; comprising practical instructions in the dyeing of Shot Cobourgs, Silk Striped Orleans, Coloured Orleans from Black Warps, ditto from White Warps, Coloured Cobourgs from White Warps, Merinos, Yarns, Woollen Cloths, &c.; containing nearly 300 receipts, to most of which a dyed pattern is annexed: also, A Treatise on the Art of Padding. By David Smith.

London: Simpkin, Marshall, & Co., etc. 1849.

First edition. 8vo. viii, 124 pp. Title page in red and black, followed by errata slip. With 261 specimens of dyed cloth and yarn of different colors, all of which are in bright condition. Fine copy in original blind-stamped patterned red cloth, front cover and spine gilt-lettered.

A HANDBOOK ON the chemistry and technology of dyeing, written for the practical dyer by Smith, who styles himself “pattern dyer” in his preface. All of the specimens of dyed materials in this volume were produced from naturally occurring dyes, as the first synthetic dyes made by William Perkin were not discovered until 1856. Precise directions

are given for the production of each color. This is one of the earliest books on the chemistry of dyeing to contain actual specimens. Rare. An enlarged edition appeared (Manchester, 1881), which contained five hundred specimens of dyed materials. (Edelstein, 3536; Lawrie, 682; Ron, 986)

SMITH, George

A Compleat Body of Distilling, Explaining the Mysteries of that Science, in a most easy and familiar Manner; Containing an Exact and accurate Method of making all the Compound Cordial-Waters now in Use, with a particular Account of their several Virtues: As also a Directory consisting of all the Instructions necessary for learning the Distillers Art; with a Computation of the original Cost of the several Ingredients, and the Profits arising in Sale. Adapted no less to the Use of private Families, than of Apothecaries and Distillers. In two Parts. By G. Smith, of Kendall in Westmoreland. London: Bernard Lintot. 1725.

First edition. 8vo. 4 leaves, 150 pp., 1 leaf (index). With divisional title page to Part II (sig. G2). Publisher's book list facing title page. Old name blotted out at head of title page; otherwise a very good copy in contemporary paneled calf.

A PRACTICAL WORK ON distillation that passed through several editions in the eighteenth century. Nothing appears to have been recorded of the author, George Smith. As stated in the title, he was a distiller who lived in Kendall, Westmorland. The book is divided into two parts. Part I (pp. 1–89) deals with the theory and practice of distillation of various kinds of fermented products, including whiskey (usquebaugh) on pages 38–41. Part II covers various distilled cordials to be used both as recreational beverages as well as for medicinal purposes. Forbes (*A Short History of the Art of Distillation*, Leiden, 1970) states that during the “period from Boyle to Lavoisier . . . enormous consumption of alcoholic beverages” occurred (p. 187). The larger houses of the nobility and country gentlemen in Britain were equipped with rooms specially for carrying out distillation, and this book was written for that purpose. Forbes, who obviously had not seen a copy of this very rare book, only briefly mentions it. This first edition is missing from the collections of Cushing, Duveen, Ferguson, Morgan, Reynolds, Smith, Waller, Wellcome, etc. (Forbes, 392; Watt, II, 862p)

SMITH, George

A Compleat Body of Distilling, Explaining the Mysteries of that Science, in a most easy and familiar Manner . . . As also a Directory consisting of all the Instructions necessary for learning the Distiller's Art . . . In two Parts. By George Smith . . .

London: Printed for Henry Linton, at the Cross Keys against St. Dunstan's Church in Fleet-Street. 1738.

Third edition. 8vo. 4 leaves, 150 pp., 1 leaf (index). With engraved frontispiece of a laboratory with distillation apparatus (P. Fourdrinier sc.). Fine copy in original gilt-ruled mottled calf (joints tender). Engraved armorial bookplate (eighteenth century): Swynfen Jervis.

AN ESSENTIALLY unchanged reprint of this very popular work (first: London, 1725). A copy of the second edition (London, 1731) is in the Ferguson Collection, University of Glasgow. Duveen (p. 554) lists the fourth edition (London, 1749). All editions are rare. (Blake, 421; Smith, 456; Watt, II, 862p)

SMITH, George

The Nature of Fermentation Explain'd; with the Method of Opening the Body of any Grain or Vegetable Subject, so as to obtain from it a Spirituous Liquor: exemplified by the Process of preparing Rum, as 'tis manag'd in the West-Indies. With many other useful Reflections and Observations. To which is added, a Collection of several Compound Cordial Waters, with the Art of preparing some Artificial Wines, not hitherto publish'd. By Way of Appendix to the Compleat Body of Distilling. By George Smith of Kendal in Westmoreland.

London: Bernard Lintot. 1729.

First edition. 8vo. 4 leaves, 56 pp. Very good copy, bound in modern quarter calf, cloth boards, with gilt-lettered green morocco label. Bound with: Smith, George, *The Practical Distiller* (London, 1734).

AS STATED in the title, this work is an appendix to the author's *Compleat Body of Distilling* (London, 1725), and most of the book consists of further details on preparing various cordials from fermented plant products. The supposed nature of fermentation, being at that time not understood, is glossed over on page 6: "The nature of Fermentation has been so much controverted amongst authors . . . [who] . . . all agree in this, that it is an intestine motion of the particles of mixed bodies, tending either to the perfection or manifest alteration of the subject; tho' they have differed so much concerning the primary cause, or principal agent which raises this commotion." The opinions of several contemporary and earlier chemists (e.g., Boerhaave,

Homberg, Descartes, and Celsus) on the nature of fermentation are discussed, and references to the works on distillation by Arnaldus De Villanova, Rubeus, Libavius, Porta, et al., are made. A very rare book. Not in Bolton, Duveen, Ferchl, Ferguson, Forbes, Morgan, Neu, Partington, Pogendorff, Smith, Waller, etc. (Watt, II, 862p)

SMITH, George

The Practical Distiller: Or, a Brief Treatise of Practical Distillation. In which the Doctrine of Fermentation is Methodically Explain'd in a New Method. With the Description of a New Engine-Still, Engraved on a Copper-Plate; which, for its Dispatch of Business, is preferable to any other. To which is added, by way of Appendix, A Treatise of making Artificial Wines from several Fruits of the British Production, interspers'd with many useful Reflections and Observations.

London: B. Lintot. 1734.

First edition. 8vo. 2 leaves, 57 + (1) pp. With engraved frontispiece (depicting still, condenser, pump, etc.) Very good copy, bound in modern quarter calf, cloth boards, with gilt-lettered green morocco label. Bound with: Smith, George, *The Nature of Fermentation Explain'd* (London, 1729).

IN THIS work, which is entirely different from *A Compleat Body of Distilling* (London, 1725), the author attempts to explain the phenomenon of fermentation in terms of the Paracelsian *tria prima* (salt, sulphur, and mercury) hypothesis. On page 6 Smith states: "Natural Bodies impregnated with a moderate Portion of Spirit, Salt, and Sulphur, continue not long in that State: But those active Principles are perpetually inclin'd to Motion; for when they first unite from a State of Crudity and Confusion, there is a progressive Motion to Perfection." This is the basis of Smith's explanation of the process of fermentation, a changing of the principles of spirit, salt, and sulphur (in the philosophical Paracelsian sense) to a state of so-called perfection. Pages 1–21 cover the theory of fermentation and distillation, and the remainder of the work covers the preparations of various types of wine, punches, cordial waters, etc. Pages 17–18 describe Smith's improved still, his "New-Invented Engine," which is illustrated in the frontispiece. Published anonymously, this is one of Smith's rarest works. It is not mentioned by Halkett and Laing or by Watt and is not cited by any chemical or technological bibliography.

SMITH, Godfrey

The Laboratory, or School of Arts: In which are faithfully Exhibited and fully Explain'd, I. A Variety of . . . Experiments in Refining, Calcining, Melting, Assaying, Casting, Allaying, and Toughening Gold . . . and Silver. II. Choice Secrets for Jewellers . . . III. Several . . . Experiments for Casting in Silver, Copper, Brass, Tin, Steel . . . IV. The Art of making Glass . . . V. A Collection of . . . Secrets for the Use of Cutlers, Pewterers, Brasiers . . . Japanners, Book-binders, Distillers . . . VI. A Dissertation on the Nature and Growth of Saltpeter . . . Translated from the German.

London: Printed for T. Cox, at the Lamb under the Royal Exchange. 1738.

First edition, first issue. 8vo. 4 leaves, 242 pp., 3 leaves (index). With engraved frontispiece (Hulett sculp.) and 5 engraved plates (chemical apparatus, furnaces, etc.). Neat eighteenth-century manuscript recipes in ink on 4 pages at end (signed "J. B."). Very good copy in original calf, covers gilt-ruled, rebacked, red morocco label.

A RARE BOOK of secrets of considerable chemical interest. Even Ferguson (*Books of Secrets*, I, pt. IV, 31) erroneously states that the first edition appeared "at London in 1739." Cole describes the second issue of the first edition, with a reset title page, different publisher, and imprint: "Printed for John James, at Horace's Head, under the Royal-Exchange. 1739. (Price Four Shillings.)" Being a practical book on various chemical processes and other technology for the use of artisans, housewives, and other nonprofessionals, very few copies have survived. This work was translated by Godfrey Smith from the anonymous *Der Curieusen Kunst- und Werk-Schul* (Nuremberg, 1732; Ferchl, 289). At least seven enlarged editions appeared up until 1810 (see Cole). (Cole, 1228; Duveen, 331; Neu, 3854; Philip, S160.1)

SMITH, Godfrey

The Laboratory; or, School of Arts: In which are Faithfully Exhibited, and fully Explain'd, I. A Variety of curious . . . Experiments in Refining, Calcining, Melting, Assaying . . . of Gold . . . and Silver. II. Choice Secrets for Jewellers . . . III. Several uncommon Experiments for Casting in Silver, Copper, Brass, Tin, Steel . . . IV. The Art of making Glass . . . V. A Collection of very valuable Secrets, for the Use of Cutlers . . . VI. A Dissertation on the Nature and Growth of Saltpetre . . . VII. The Art of preparing Rockets, Crackers, Fire-Globes, Stars, . . . for Recreative Fire-Works. VIII. The Art and Management of Dying Silks, Worsteds, Cottons, &c. in various Colours. Compiled from German, and other foreign Authors. . . . By G. Smith. . . .

London: Printed for James Hodges, at the Looking-Glass, facing St. Magnus Church, London-Bridge; and T. Astley. 1750.

Third edition. 8vo. 4 leaves, 352 pp., 4 leaves (index). With engraved frontispiece (Hulett sculp.) and 16 copperplates by Hulett. The plates are numbered erratically. The first set (I–V) are identical to those in the first edition (1738), with references to text pages suitably reworked. Plates I–VIII are followed by plates I–III (I and II are folding, all signed by Hulett). Fine copy in original speckled calf, covers gilt-ruled, rebacked, spine dated, maroon morocco label.

THE THIRD and enlarged edition of this important book of chemical and other practical secrets, the full title of which is given by Duveen. This edition contains sections on the manufacture of fireworks, dyeing, drawing, perspective, etc., not in previous editions. A penciled note (nineteenth century) on the front pastedown endpaper states that the earliest edition mentioned by Lowndes is that of 1799; also that works of the engraver, J. Hulett, are rare. The British Library cites only the 1799 and 1810 editions. (Bolton, 837; Duveen, 554; Neu, 3856; Philip, S160.4)

SMITH, Henry Arthur

The Chemistry of Sulphuric Acid Manufacture. . . .

London: E. & F. N. Spon, 48, Charing Cross . . . 1873.

First edition. 8vo. xvi, 81, (1) pp., 1 leaf (advertisements). With 3 woodcut figures and diagrams in text. Fine copy in original blind-stamped cloth, gilt-lettered spine and front cover. Book-plate: Dr. Charles Singer.

A VALUABLE WORK on the industrial production of sulphuric acid by the lead chamber process. It is dedicated by his nephew, H. A. Smith, to the Manchester chemist and biographer of John Dalton, Robert Angus Smith (1817–1884). In the historical introduction the author states that he has "been for some time connected with this manufacture." He describes in detail the chemical reactions involved in making sulphuric acid, as well as the problems encountered when iron pyrites are the source of sulphur. A German translation appeared (Freiberg, 1874). This copy has a distinguished provenance, having once belonged to the well-known historian of science Charles Joseph Singer (1876–1960). Rare. (Bolton, 838)

SMITH, John, and HANCOCKE, John

Traité des Vertues Medicinales de l'Eau Commune, où l'on fait voir qu'elle prévient & guérit une infinité de maladies, par des Observations appuyées de quarante ans d'expérience: avec quelques regles pour le régime de vivre, par M. Smith. Et le Grand Febrifuge du Docteur Hancock [sic]. Traduit de l'Anglois. On y a ajouté les Theses de Messieurs Hecquet & Geoffroy, avec quelques Réflexions sur le Remede de l'Eau à la glace. . . .

Paris: Chez Guillaume Cavalier fils, ruë S. Jacques, près la Fontaine S. Severin au Lys d'Or. 1626 (i.e., 1726).

To inlay Wood with a Composition that shall look like Silver Threads.

Having prepared your Design, take some Tin, melt it, & add to it a pretty near an equal quantity of Quicksilver, stir it with a Stick, being cold if you find it too stiff, a little more Tin may be added. Grind this Composition with Water on a marble, & keep it in a Shell to fill up Engravings &c when you have left it 2 or 3 hours to dry, polish it, & it will look like Silver.

A black Dye for Wood &c

Take Box, pear-tree &c steep it in ^{alum} water for some time, then boil it in common Oyl with a little Roman vitriol & sulphur.

or

Rub your wood with Ink, in which pieces of rusty Iron have laid for some days.

For staining Red.

Into a kettle of boiling water put a Handful of Alum, then put in your wood (of the whitest sort) & let it boil a little; that done, take out y^e wood & put into the water 2 handfulls of Brasil wood; then return your wood into y^e vessel to boil a quarter of an hour. when Dry, polish it.

To make Alum water, boil 4 oz of Alum in a quart of River water.

Second French edition. 12mo. xciii, (3), 340 pp., 4 leaves (index and advertisements). Early signature on title page and verso of flyleaf; otherwise very good copy in original calf, gilt, black morocco label.

A TREATISE OF chemical interest on the medicinal value of "common water" and mineral waters. It is a translation by Pierre Noguez of Hancocke's *Febrifugium magnum* (London, 1722) and Smith's *Curiosities of Common Water* (London, 1723), with works by Étienne François Geoffroy and Philippe Hecquet. The first edition in French appeared the previous year (Paris, 1725). The present edition is misdated 1626. (Blake, 422; Waring, 757; Wellcome, III, 206)

SMITH, Thomas Peters

A Sketch of the Revolutions in Chemistry. . . .

Philadelphia: Printed by Samuel H. Smith. 1798.

First edition. 8vo. (in 4s). 40 pp. Fine copy, in crimson quarter calf antique, marbled boards, spine gilt-lettered and dated.

"THE EARLIEST known publication of an American chemical society" (Miles). Dedicated to Robert Patterson, professor of mathematics at the University of Pennsylvania, this was the "Annual Oration delivered before the Chemical Society of Philadelphia, April 11, 1798" (half title). Born during the American Revolution, Smith (1777–1802), a pupil of Patterson, was largely self-taught. "In the 1790's he joined the Chemical Society of Philadelphia, . . . where he associated with James Woodhouse, Robert Hare, Joseph Priestley, and other chemists. He served on a committee which analyzed ores and minerals as a free public service to increase knowledge of American mineralogy and geology, and to encourage Americans to develop natural resources" (Miles). Smith died at sea as the result of wounds sustained when a cannon burst during gunnery practice. The present work traces the history of chemistry from ancient times through alchemy, the phlogiston period, and the great researches of Lavoisier et al. Smith ends the book with the accurate and prophetic statement: "The only true basis on which the independence of our country can rest are agriculture and manufactures. To the promotion of these, nothing tends in a higher degree than chemistry" (pp. 34–35). A milestone in the bibliography of American chemistry. Rare. Not in D.S.B., Duveen, Neu, Partington, Sondheimer, Watt, etc. (Blake, 422 [badly imperfect]; Bolton, 158; Edelstein, 2148; Miles, *American Chemists and Chemical Engineers*, 1976, p. 448; Smith, 458)

SMYTH, James Carmichael

An Account of the Experiment made at the Desire of the Lords Commissioners of the Admiralty, on Board the Union Hospital Ship, to determine the Effect of the Nitrous Acid in destroying Contagion, and the Safety with which it may be employed. In a Letter addressed to The Right Hon. Earl Spencer . . . Published with the approbation of the Lords Commissioners of the Admiralty.

London: Printed for J. Johnson, in St. Paul's Church-Yard. 1796.

First edition. 8vo. 75, (1) pp. With large folding engraved frontispiece (plans of floors on hospital ship). Fine copy, with "From the Author" in ink at top of title page (inscription slightly shaved); in modern dark-blue quarter morocco, marbled boards, spine gilt-lettered and dated.

SMYTH (1741–1821), M.D. (Edinburgh, 1764), traveled abroad and was appointed physician to the Middlesex Hospital in 1768. He became interested in the experiments of Guyton de Morveau on fumigation with gaseous hydrochloric acid about 1780 but decided instead to try the effect of nitric acid vapor. "Smyth used nitric acid vapour from 1780 in preventing contagion in ships, hospitals, and prisons, publishing the process in 1795 and 1796 (he was awarded £5000 by Parliament). The publication of 1795 was entitled: 'A Description of the Jail Distemper' . . ." (Partington). The present work is a sequel to that on prison contagion and its cure and removal by fumigation with nitric acid vapor. A fellow of the Royal College of Physicians, Smyth was elected F.R.S. (1779) and was one of the physicians to George III. Not in Blocker, Bolton, Cushing, Duveen, Ferchl, Norman, Osler, Poggendorff, Smith, Waller, etc. (Blake, 422; Munk, II, 384; Neu, 3859; Partington, III, 529–530; Waring, 577; Watt, II, 866r)

SMYTH, James Carmichael

Remarks on the Report of M. Chaptal (Late Minister of the Interior) To the Consuls or former Government of France, with an Examination of the Claim of M. Guiton de Morveau to the Discovery of the Power of the Mineral Acid Gazes, on Contagion. In a Letter addressed to William Wilberforce, Esq., M.P. . . . By James Carmichael Smyth . . .

London: Printed for J. Callow, Medical Bookseller, No. 10, Crown Court, Princes Street, Soho, by W. Smith and Son, King Street, Seven Dials. 1805.

First edition. 8vo. 1 leaf, 50 pp., 1 leaf (advertisements). Neatly inscribed in ink on title page: "Ex Libris Societ. Medic. Regiae Edinens." Fine copy in modern half calf, maroon morocco label. Bound with: Johnstone, John, *Reply to Dr. James Carmichael Smyth, containing remarks on his letter to Mr. Wilberforce* . . . (London, 1805).

AN ANIMATED attack on the work of Guyton de Morveau, particularly his *Traité des Moyens de Désinfecter l'Air, de prévenir la Contagion* (Paris, 1802, second edition). Smyth claims herein that Guyton de Morveau has slighted him by not according him the credit to which he feels he is due regarding the experiments on nitric acid vapor in combating contagion. The impression is given that Smyth represents himself as the unsung hero of nitric acid fumigation, whereas, in fact, several other workers were simultaneously studying this process, which Smyth carefully ignores. Rare. Not in Bolton, Duveen, Partington, Poggendorff, Waller, Waring, etc. (Munk, II, 385; Smith, 458; Watt, II, 866s)

SNOW, Thomas

Arts Improvement: or, Choice Experiments and Observations in Building, Husbandry, Gardening, Mechanicks, Chimistry, Painting, Japaning, Varnishing, Guilding, Inlaying, Embossing, Carving, Preserving several Things in their Natural Shape and Colour. And in other Arts and Sciences Profitable and Pleasant. Extracted from the most Celebrated Authors in several Languages; Manuscripts, Experiments Communicated by several Ingenious Gentlemen, and the Author's own Experience. By T. S.

London: Printed for D. Brown, at the Black-Swan and Bible without Temple-Bar. 1703.

First edition, second issue. 8vo. 24 leaves, 240 pp. (with additional 8 pp. between 96 and 97). Fine copy in original paneled calf, rebacked, maroon morocco label, spine dated.

THIS WORK first appeared under the title *Apopiroscopy: or, a Compleat and Faithful History of Experiments and Observations: not only Chymical and Curious, but Mechanical; and in several Arts, Sciences and Professions. . . .* By T. Snow (London: D. Brown, 1702). Ferguson (*Books of Secrets*, I, pt. IV, 26–27) discusses the contents, saying that the “author was a sensible man, and was fully alive to the practical character of the work.” Fifty-six authorities are listed, including Boyle, Digby, Grew, Lemery, Plat, Salmon, and Wilkins. Of Snow nothing is recorded, the book being mistakenly attributed to Richard Neve by Halkett and Laing. For reasons now unknown, Snow disliked the *Apopiroscopy* title, so had it completely reset with the above wording and his name abbreviated to “T. S.” Otherwise the book is identical to the *Apopiroscopy* and is made up of the same sheets as the 1702 issue, plus the additional eight pages (signature *g). Very rare. Ferguson states that the book is “almost unknown.” (Watt, II, 867m)

SOAP BUSINESS

A Short and True Relation concerning the Soap-busines [sic]. Containing the severall Patents, Proclamations, Orders, whereby the Soape-makers of London, and other His Majesties Subjects, were damnified, by the Gentlemen that were the Patentees for Soape at Westminster, with the particular Proceedings concerning the same.

London: Printed for Nicholas Bourne at the South entrance of the Royal Exchange. 1641.

First edition. 4to. 1 leaf, 29, (1) pp., 1 leaf (blank). Pages 17–29 not paginated, but text continuous. Fine copy, in quarter calf antique, marbled boards, spine gilt-lettered and dated.

AN IMPORTANT work in the history of the soap trade in London, in which several people were granted patents for making and selling soap and who then proceeded to put out of business the established soap makers. Regulations decreed by the Star Chamber required all soap to be assayed and marked by the assay-master. Also “no soape should bee sold for above three pence the pound, and hee that sels for above shall bee punished.” The “Soape-Makers Corporation of Westminster,” who thus had an absolute monopoly on the manufacture and selling of soap, with the help of the Star Chamber, ruthlessly crushed the trade of any soap maker who was not affiliated with their corporation. Those who opposed the corporation were driven out of business, fined, often imprisoned, their soap-making equipment destroyed, and their fortunes ruined. A harsh commentary on seventeenth-century business practices in England. Rare. Not in the usual chemical bibliographies. (Goldsmith, 724; Kress, 603; Wing, S3555)

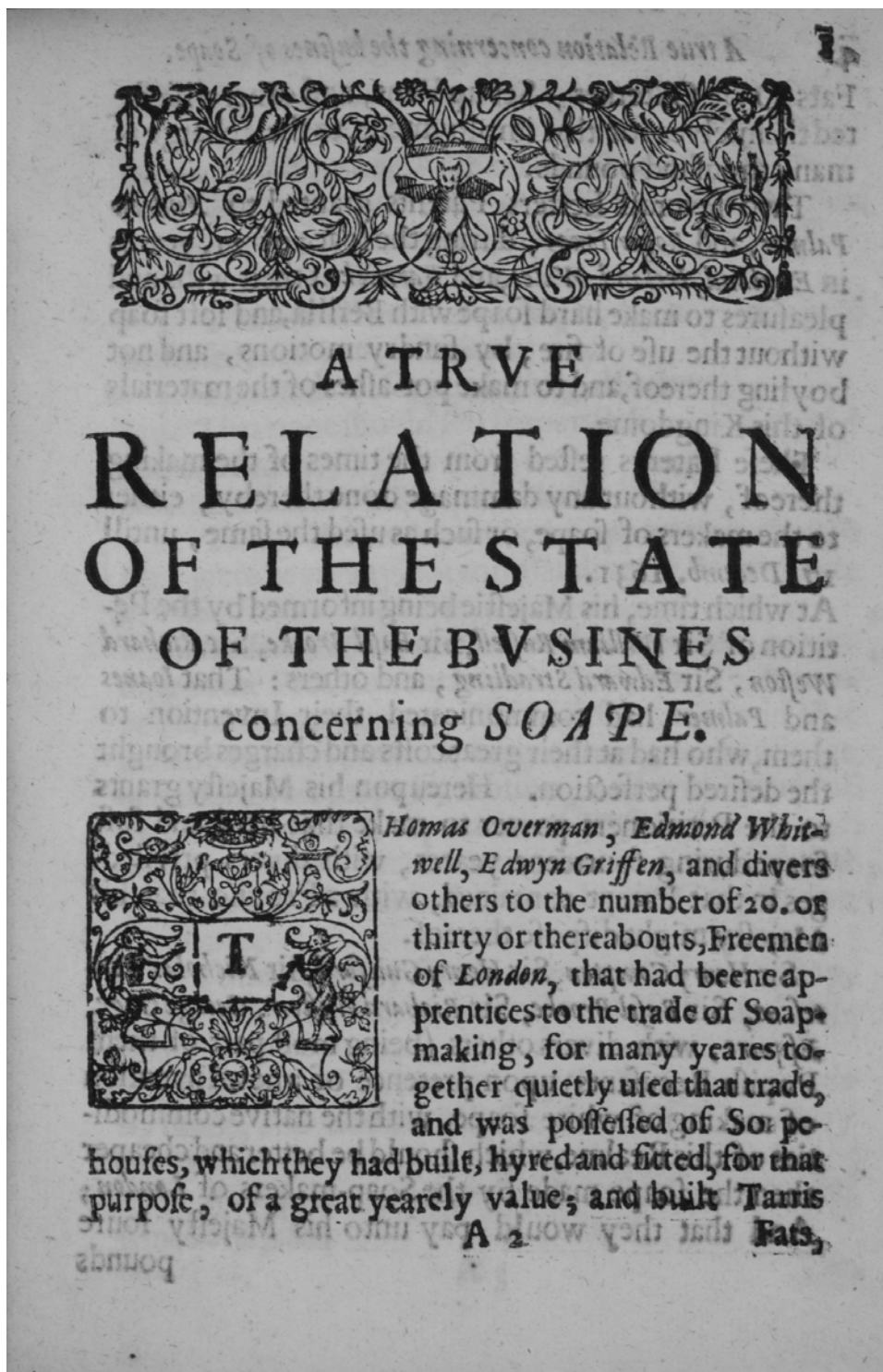
SOCIÉTÉ CHIMIQUE DE PARIS

Conférences Faites à la Société chimique de Paris en 1883–1884–1885–1886 par MM. Wurtz, Pasteur, Friedel, Scheurer-Kestner, Grimaux, Duclaux, Moissan, Raoult, Schutzenberger.

Paris: Bureau des Deux Revues. 1886.

First edition. 8vo. 191, (1) pp. Fine copy, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A SERIES OF nine historically important lectures presented from 1883 to 1886 to the Chemical Society of Paris. I (1883): Wurtz, “Histoire chimique de l’aldol”; II (1883): Pasteur, “La dissymétrie moléculaire”; III (1884): Friedel, “Une méthode générale de synthèse des combinaisons aromatiques”; IV (1885): Scheurer-Kestner, “Nicolas Leblanc et la soude artificielle”; V (1885): Grimaux, “Les substances colloïdales et la coagulation”; VI (1885): Duclaux, “Le lait



Soap Business. Short and True Relation. London, 1641.

et sa composition chimique"; VII (1886): Moissan, "Les fluorures de phosphore"; VIII (1886): Raoult, "Les températures de congélation des dissolutions"; IX (1886): Schutzenberger, "Constitution des matières protéiques." (Bolton, 840)

SOCIÉTÉ CHIMIQUE DE PARIS

Leçons de Chimie professées en 1860–(1869). Par MM. Pasteur, Cabours, Wurtz, Berthelot, Sainte-Claire Deville, Barral et Dumas [and others]. . . .
Paris: Librairie de L. Hachette et Cie, etc. 1861–1870.

First edition. 7 vols., 8vo. I (1861): 2 leaves, viii, 308 pp. II (1862): 2 leaves, vi, 256 pp. III (1863): 2 leaves, 332 pp. IV (1864): 2 leaves, 316 pp. V (1866): 2 leaves, 458 pp., 1 folding plate. VI (1869): 2 leaves, 192 pp. VII (1870): 2 leaves, 240 pp. Fine set, uncut, in modern blue buckram. Old stamps of Patent Office, London, and bookplates of Prof. Franz Sondheimer.

A COMPLETE SET of the papers presented to the Chemical Society of Paris (1860–1869) by the most prominent French chemists of the period. Volume I contains the first appearance of Pasteur's "Recherches sur la dissymétrie moléculaire," and volume II has "Sur les corpuscules organisés qui existent dans l'atmosphère." The latter paper "marks the downfall of the theory of spontaneous generation" (Garrison-Morton, 2475). Other important papers include E. Becquerel on luminescence and phosphorescence (vol. II); Verdet on thermodynamics and Berthelot on glycols and sugars (vol. III); Wurtz on atomic and molecular weights (vol. IV); Berthelot on isomerism (vol. V); Sainte-Claire Deville on affinity (vol. VI); Friedel on organosilicon compounds and Tollens on aromatic hydrocarbons, in which he discusses the tetrahedral bonds of carbon, Kekulé's hexagonal structure of benzene, ortho-, meta-, and para-substitution, etc (vol. VII). Partington, Roller & Goodman, Smith, and Waller list only individual volumes. Bolton lists the contents of this important work, complete sets of which are rare. (Bolton, 839–840; D.S.B., XIV, 531; Partington, IV, 478; Roller & Goodman, II, 447; Smith, 459; Sondheimer, 1464; Waller, 11180)

SOCIÉTÉ D'ÉMULATION DE ROUEN

Extract from the Report made to the Society of Emulation at Rouen upon the Fosses Mobiles Inodores, or Moveable, Inodorous Conveniences, at a Sitting of the 1st. of February, 1819.

(N.p.) (Dated at end June 1819).

First edition in English. 8vo. 19, (1) pp. Caption title. Fine copy. Bound with: Héricart de Thury, *Des fosses d'aisances mobiles . . .* (Paris, 1818), and 7 other works on the same subject (q.v.).

"THE ABOVE apparatus having been examined by the Royal Agricultural Society of France, . . . the results of repeated experiments were most satisfactory." On pages 9–19 there is a favorable "Report on the . . . conveniences of Messrs. Donat & Co., made to the Medical Society of Paris, . . . 6th of May 1819." The report is of chemical interest. Not mentioned by the usual bibliographies.

SOCIÉTÉ DE PHARMACIE DE LYON

Examen Chimique des Eaux sortant des Fontaines Publiques de la Ville de Lyon et de ses Faubourgs; fait en Septembre 1807, par la Société de Pharmacie de la même Ville.
Lyon: De l'Imprimerie de Ballanche père et fils, aux halles de la Grenette. 1807.

First edition. Large 4to. 10 pp. + 28 double-page tables (statistics relating to 180 locations) + 1 leaf + large folding table (*Tableau de Comparaison*). Fine copy, printed on thick bluish paper, in contemporary quarter sheep, maroon marbled boards, spine gilt-lettered.

THE OFFICIAL report of the Société de Pharmacie of Lyons on the chemical analysis of the waters in the public fountains of Lyons and its suburbs. Signed by Tissier, Barre, Pelletier, and fourteen other members, the investigation was carried out to determine the chemical composition, and possible medical hazards, of the waters. The report is historically important because it represents an early attempt by the scientists of Lyons to show concern for the public health of the inhabitants. The large folding table at the end compares six "synthetic" mineral waters with four naturally occurring waters and their behavior when treated with various chemical reagents. No bibliographical reference to this very rare work has been located.

SOCQUET, Joseph-Marie

Essai sur le calorique, ou recherches sur les causes physiques et chimiques des phénomènes que présentent les corps soumis à l'action du fluide igné. Avec des applications nouvelles, relatives à la théorie de la respiration, de la chaleur animale, de l'origine des feux volcaniques, &c. Suivi d'un essai particulier sur les anomalies d'affinités chimiques; d'expériences et d'observations sur le métal des cloches; enfin d'une description de la fameuse aluminière de Souvignaco en Istrie, et des procédés employée pour l'extraction et la purification de l'alum naturel. . . .

Paris: Chez Desray. An IX–1801.

First edition. 8vo. xvi, 473, (1) pp. With folding copperplate of an alum works at Istria (facing p. 405). Fine, uncut copy, in quarter calf antique, marbled boards, maroon morocco label gilt, spine dated, original pink wrappers bound in.

BORN AT Mégève (Haute-Savoie), Socquet (1769–?) taught chemistry in Venice, Clermont-Ferrand, Chambéry, and finally in Lyons. This, his first book, deals with heat, gasification, volcanic fires, chemical affinities, the production of alum, and the extraction of copper from the metal of bells. There is an important discussion of respiration with an account of Lavoisier's discoveries on the subject (pp. 178–224). The interesting contemporary theories of chemical affinities are covered (pp. 279–376), with references to the researches of Berthollet, Fourcroy, Hassenfratz, Vauquelin, et al. Almost unknown to chemical historians, the entire work is on theoretical and practical chemistry and is very rare. A German translation by Trommsdorff appeared in 1802. Duveen (p. 555) lists another work by Socquet, published in 1810. Not in Bolton, Duveen, Edelstein, Ferguson, Ferguson Coll., Partington, Smith, Waller, etc. (Ferchl, 508; Poggendorff, II, 952; Watt, II, 867n)

SOEDERVALL, Johannes

Dissertationis Academicæ de Visu partem priorem, . . . præside, Mag. Samuele Duræo, . . . ad diem XXIV. Maji, Anni MDCCLXV. . . . subjicit . . . Johannes Sodervall Larsson, Helsingus.
Uppsala. (1765).

First edition. 4to. 2 leaves, 15, (1) pp. With engraved plate (E. Österberg sc.) depicting 3 figures. Large woodcut capital and headpiece. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

ON THE physical optics of the human eye, with a mathematical treatment of the means by which light is focused onto the retina. The author discusses the structure and physiological function of each part of the eye, with reference to works by Hauksbee, Jurin, Kepler, Lambert, Marriotte, Musschenbroek, Robertson, et al. He states that the aqueous humor is not "pure aqua" but a solution containing sulphurous and saline matter, which accounts for its refractive properties. No reference to Soedervall or this work has been found.

SÖLDNER, Johann Anton

Keren Happuch, Posaunen Eliae des Künstlers, oder Teutsches Fegfeuer der Scheide-Kunst, worinnen nebst den Neugierigsten und grössesten Geheimnissen für Augen gestellt die wahren Besitzer der Kunst; Wie auch die Ketzer, Betrieger, Pfuscher, Stümpler, Bönhasen und Herren Gern-Grosse. Mit gar vielen Oertern aus der Schrifft und andern Urkunden eröffnet von Einem Feinde des Vitzliputzli, der ehrlicher Leute Ehre und der aufgeblasenen Schande entdecken will.
Hamburg: bey Gottfried Libernickel im Dohm. 1702.

First edition. 8vo. 14 leaves, 128 pp. With very fine engraved frontispiece (Mentzel sc.) and 2 large woodcuts (on pp. 112 and 115). Some neat alchemical annotations in ink in an early-eighteenth-century German hand; otherwise a very good copy in late-nineteenth-century half morocco, pebbled cloth, spine gilt-lettered. Bound with: *Hermetische Philosophus* (Frankfurt and Leipzig, 1709), and another work.

THE GREATLY enlarged and first complete edition of the *Fegfeuer der Chymisten* (Amsterdam, 1702), at least three issues of which appeared earlier the same year. Although most bibliographers attribute the book to Söldner, its authorship is not established beyond doubt. "Whoever may have been the author, the book is of some importance as it is the sole source of the poetical extracts referring to Edward Kelley, Grassenhauer or Gustenhofer, Zachaire, and of a number of historical facts" (Ferguson). Kopp discusses the work. In the preface the author says that he began writing the book on 6 July 1701 at Amsterdam and finished it on 7 September the same year at Berlin. A very rare alchemical book that is not in Blake, Bolton, Caillet, Edelstein, Mellon, Smith, Waite, Waller, Watt, etc. (Duveen, 556; Ferchl, 508; Ferguson, II, 387; Ferguson Coll., 661; Kopp, *Die Alchemie*, II, 395; Neu, 3863; Rosenthal, 797; Schmieder, 513; Wellcome, III, 387)

SOLIMANI, L.

Sommaire des Leçons de Physique Expérimentale et de Chimie. Par le Citoyen Solimani, Professeur à l'École Centrale du Département du Gard.
S.1., n.d. (Paris, ca. 1800?).

First edition. 8vo. 22 pp., 1 leaf (blank). Caption title. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A SYLLABUS of a course of experimental chemistry, with a little physics, taught by Professor Solimani, on whom no biographical information has been found. Divided into eighteen parts, this course covers chemical processes followed by discussions on oxygen, nitrogen, hydrogen, sulphur, phosphorus, carbon, metals, earths, acids, alkalies, salts, minerals, and plant and animal products. The syllabus is interesting because it shows the scope and content of an introductory course of chemistry in France at the end of the eighteenth century. There is no mention of phlogiston, and the course strictly follows the new chemistry of Lavoisier, although he is nowhere named. Very rare. Unknown to the usual bibliographers.

SOLLY, Edward

Rural Chemistry: an Elementary Introduction to the Study of the Science in its Relation to Agriculture.

London: Office of the "Gardeners' Chronicle." 1846.

Second edition. 8vo. xxviii + 256 pp. + 4 leaves (advertisements). Fine copy, uncut, in the original blind-stamped green cloth, spine gilt-lettered.

SOLLY (1819–1886), chemist and antiquary, studied chemistry in Berlin, lectured at the Royal Institution in 1841, and was professor of chemistry at Addiscombe, 1845–49. He gathered a large antiquarian library, wrote much in "Notes and Queries," and edited "Titles of Honour" (1879) for the Index Society. The first edition of *Rural Chemistry* (London, 1843) contained errors that are corrected in this second edition, which has been enlarged. The third edition (London, 1851) was the basis of the only American edition (Philadelphia, 1852). The first edition was translated into German as *Agriculturchemie* (Berlin, 1844). The introduction contains an interesting historical account of the progress of agricultural chemistry from Van Helmont to Liebig. A remarkably comprehensive book containing a great amount of information. Scarce. Neither the author nor this work are mentioned by C. A. Browne, Duveen, Edelstein, Morgan, Partington, Poggendorff, Smith, Waller, etc. (Bolton, 841)

SOMERVILLE, Mary Fairfax Greig

On the Connexion of the Physical Sciences. By Mrs. Somerville.

London: John Murray. 1834.

First edition. 8vo. 4 leaves, 458 pp. With 14 small figures in text. Very fine, crisp copy, in contemporary polished tan calf, gilt fillets on covers, green morocco label gilt, spine gilt. Engraved armorial bookplate: Somerhill Library.

MARY SOMERVILLE (1780–1872), scientific writer, moved in a brilliant intellectual circle. At age fifty-one she "embarked on a professional career as a scientific expositor. . . . Her second book, *On the Connexion of the Physical Sciences*, a synthetical consideration of the mutual dependence of the physical sciences, came out in 1834 to even greater acclaim. . . . In the ten editions of this work Mrs. Somerville put forward the newest, most penetrating, and authoritative ideas and practices. . . . Clerk Maxwell . . . classed [it] as one important in advancing scientific thought . . . on viewing physical science as a whole" (D.S.B.). "Her best work . . . which illustrates . . . the width of her scientific acquirements" (D.N.B.). "While many Victorian scientists . . . wrote popular works . . . the most distinguished . . . was Mary Somerville. . . . Her books provide . . . a very good introduction to the state of the sciences in the first half of

the nineteenth century" (Knight). The author's friends included Sir Humphry and Lady Davy, Alexander and Jane Marcet, and William Hyde Wollaston. The tenth (final) edition appeared in 1877. The first edition is very scarce. (D.S.B., XII, 524–525; Knight, 202, 209; Poggendorff, II, 957; Wheeler Gift, 890)

SOMMER, Fabian

De Inventione, Descriptione, Temperie, Viribus, et in Primis Usu, Thermarum D. Caroli IIII. Imperatoris. Libellus brevis et utilis scriptis a Fabiano Sommero Philosophiae et Artis medicae Doctore, ex Thermis Carolinis oriundo.

(Colophon: Leipzig: Imprimebat Johannes Steinman. Typis Voegelianis. 1571).

First edition. 8vo. 8 leaves, 103, (1) pp. Engraved woodcut printer's device on title page. Dedication (signed by Joannes Sommer) and page 103 printed in roman type, remainder of book in italics. Fine, fresh copy, in modern unlettered marbled boards. Bookplate: Starckenstein Library.

SOMMER (fl. 1571–1589) was a Bohemian physician born in Carlsbad, where he practiced medicine during the last quarter of the sixteenth century. His major achievement is the present work, a treatise on the salubrious hot springs of Carlsbad, Czech Republic. Of chemical interest are the author's descriptions of the contents of the nineteen springs (seventeen hot, two cold), which are now known to contain sodium bicarbonate, chloride and sulphate, potassium sulphate, and the bicarbonates of lithium and magnesium (see *Encyclopaedia Britannica*). Latin editions appeared in 1589 and 1609, and the Latin text of the present edition was translated into German by the author's brother, Matthias Sommer, in 1573. Further editions in German appeared in 1580, 1592, and 1667. Of legendary rarity, the first edition is not in the British Library, Durling, or Wellcome, and only one copy is located in N.U.C. (Ferchl, 508)

SONNET, Thomas

Satyre contre les Charlatans, et Pseudomedecins Empyriques. En laquelle sont amplement decouvertes les ruses & tromperies de tous Theriacleurs, Alchimistes, Chimistes, Paracelsistes, Distillateurs, Extracteurs de Quintessences, Fondateurs d'Or Potable, Maistres de l'Elixir, & telle pernicieuse engeance d'imposteurs. En laquelle d'ailleurs sont refutees les erreurs, abus, & impietez des Iatromages, ou Medecins Magiciens, qui usent de charmes, billets, parolles, caracteres, invocations de Demons, & autres detestables & diaboliques remedes, en la cure des maladies. . . .

Paris: Chez Jean Milot, devant S. Barthelemy au trois Coronnes: et en sa boutique sur les degrez de la grand salle du Palais. 1610.



Sonnet. Satyre contre les Charlatans. Paris, 1610.

First edition. 8vo. 16 leaves, 335, (1) pp. Fine engraved portrait of Sonnet (L. Gaultier sculp.) and engraved portrait of the dedicatee, Nicolas de Pelvé. Very fine copy in maroon morocco, gilt, covers with triple gilt fillets and inner gilt dentelles, all edges gilt, by Trautz-Bauzonnet. From the library of Dr. Felix Durosier, with engraved bookplate dated 1890 on front marbled endpaper.

AN IMPORTANT contemporary satire attacking alchemists, pseudochemists, Paracelsians, and other quacks, referring to numerous works of the sixteenth and early seventeenth centuries. Born in Virois, Sonnet, Sieur de Courval (1577–ca. 1635), M.D., spent his adolescence in Caen and practiced in Paris. The privilege is dated 11 February 1609, and the book is a beautiful example of fine French printing. A second edition (or issue?) by the same publisher, Jean Milot, appeared in 1618 (see Caillet, 10266; Guaita, 2123). Both printings contain the excellent portraits engraved by Leonard Gaultier. “A rare work, not listed by Ferguson” (Duveen). (Brunet, V, 444; Caillet, 10266; Duveen, 557; Edelstein, 2173; Ferchl, 509; Ferguson Coll., 663; Goldsmith, S800; Krivatsy, 11210; Neu, 3872; Rothschild, 201; Waller, 9082; Wellcome, I, 6019)

SORBIÈRE, Samuel

Sorberiana, ou Bons Mots, rencontres agreables, pensées judicieuses, et observations curieuses, de M. Sorbière.
Paris: Chez la Veuve Mabre-Cramoisy. 1694.

First edition. 12mo. 24 leaves, 246 pp., 1 leaf (blank). Title page in red and black, with woodcut ornament. Inscription dated 1694 at top of title; otherwise fine copy in gilt-ruled quarter calf antique, marbled boards, maroon and black morocco labels.

EDITED BY G. L. Colomyez, this posthumously published collection of the writings of Sorbière is on a variety of scientific and medical subjects (some of chemical interest), arranged in alphabetical order. Sorbière studied medicine in Paris and Holland and was a strong supporter of William Harvey's theory on the circulation of the blood (pp. 112–115). The scientists and other notable men discussed herein include Agrippa, Avicenna, Francis Bacon, Campanella, Carden, Descartes, Fermat, Fernel, Fludd, Galileo, Gassendi, Hippocrates, Hobbes, Porta, and Scaliger. Sorbière had earlier published *Lettres et discours sur diverses matières curieuses* (Paris, 1660), which describes meetings at the house of M. de Montinor that eventually led to the formation of the Académie Royale des Sciences in Paris, 1666. The present work describes an early academy at Avignon (pp. 3–5), which mentions the *Nova experimenta Physico-Mechanica de vi aëris elastica* and the *Tentamina quaedam Physiologica*, by Robert Boyle. The main text is

preceded by a useful biography of Sorbière by Graverol, dated 5 January 1687. Very scarce. (Goldsmith, 817; Krivatsy, 11227; Watt, II, 869i)

SORBIÈRE, Samuel

A Voyage to England, Containing many Things relating to the State of Learning, Religion, and other Curiosities of that Kingdom. By Mons. Sorbière. As also Observations on the same Voyage, by Dr. Thomas Sprat, Fellow of the Royal Society, and now Lord Bishop of Rochester. With a Letter of Monsieur Sorbière's, concerning the War between England and Holland in 1652: to all which is prefix'd his Life, writ by M. Graverol. Done into English from the French Original.
London: Printed, and Sold by J. Woodward, in St. Christopher's-Alley in Threadneedle-Street. 1709.

First English edition. 8vo. 2 leaves (title and preface), xix pp. (life of Sorbière), 4 leaves (dedications to the king and the reader), 190 pp. Full-page folding engraving facing page 39 and divisional title page (*Observations*, by Sprat, dated 1708) on page 99. Fine copy in contemporary paneled calf, re-backed, with maroon morocco label, and gilt *P* (surmounted by a crown) on both covers, indicating that this volume came from the celebrated library of William Arthur, sixth duke of Portland.

SORBIÈRE (1615–1670) spent three months of 1663 in England visiting friends, notably Hobbes, whose work he had translated. During his visit Sorbière became acquainted with many intellectuals and the current state of the sciences and literature. His *Relation d'un Voyage en Angleterre* (Paris: Thomas Jolly, 1664) appeared on his return to France and was addressed to Louis XIV. Its primary aim was to influence the king to support a French academy of science, but Sorbière's account, sometimes critical but more often favorable, is still a perceptive and eminently readable picture of England and its contemporary intellectual life. Thomas Sprat, the Royal Society's historian, was overly sensitive to Sorbière's criticism and wrote a vehement attack on the work. Sprat's *Observations* are on pages 99–180 of this book. During his visit to England, Sorbière met many well-known scientists and physicians, but, as he says on page 47, “My frequent Attendance in the Royal Society did not give me an Opportunity to see Mr. Boyle, who, to my Misfortune, was not in London all the time I staid there.” Not in Cushing, Osler, Waller, etc. (D.S.B., XII, 586; Knight, 46; Watt, II, 869i)

SÖTZER, Franz Xaver

Dissertatio Inauguralis Medica de Kermes Minerali, . . . Publicae disquisitioni committit Franciscus Xaverius Sötzer Austriacus Viennensis, . . . pro suprema doctoratus medici laurea candidatus. . . Die (blank) Mensis Martii M.DCC.LVII.

Vienna: Leopoldi Joannis Kaliwodra. (1757).

First edition. 4to. 8 leaves (unpaginated). Very good copy, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of the Austrian physician Sötzer (dates unknown), presented at the University of Vienna. In three chapters the preparation, physical and medicinal properties, and methods of prescribing Kermes mineral are described. Kermes mineral was made by dissolving stibnite (antimony trisulphide, Sb_2S_3) in hot concentrated alkali, then diluting with water to precipitate a red mixture of antimony oxide (Sb_2O_3) and antimony sulphide (so-called Kermes mineral). The works of Geoffroy, Glauber, Lemery, Quincy, et al., are cited. Very rare. Not in the usual chemical and medical bibliographies. (Ferchl, 508)

SOULIGOUX, Léonce

Étude sur les Alcalins de leur action physiologique sur les Phénomènes de Nutrition et de leur Application Therapeutique. . . .

Paris: V. Adrien Delahaye et Cie, Libraires-Éditeurs, Place de l'École-de-Médecine. 1878.

First edition. 8vo. 4 leaves, 399, (1) pp. Superb copy in pristine condition, sumptuously bound in dark-blue levant morocco, inside gilt dentelles, all edges gilt, marbled endpapers. With crowned arms of an Orléans prince in gilt on both covers, spine gilt-lettered and dated. This magnificent binding is by Lortic, with his engraved ticket on verso of first free endpaper. Presentation copy, inscribed in ink on flyleaf: "A Son Altesse Royale Monseigneur le Due de Montpensier. Hommage respectueux de l'auteur Leonce Souligoux."

A TREATISE OF biochemical and medical interest on the effects of very mild alkalis on nutrition. Divided into two parts, the first discusses the effects produced in the human body by ingesting bicarbonates, Vichy mineral waters, etc. This is followed by analyses of bodily fluids in health and disease. The second part describes therapeutic applications, especially bicarbonates and Vichy waters, in the treatment of various conditions (e.g., anemia, diabetes). Souligoux (fl. ca. 1850–ca. 1880), a consulting physician at Vichy, was evidently a man of considerable distinction: he is described on the title page as "Chevalier de la Légion d'honneur." He is not mentioned in the usual chemical and medical bibliographies. Very rare.

SOURANDER, Johann

Dissertatio Halurgico Chemica de Sale Calcis Murario, quam . . . praeside . . . Petro Adriano Gadd . . . Publico Eruditorum examini submittit Johannes Sourander, Satagundensis. . . . Die I Junii Anni MDCCLXXI.

Åbo: Typis Johannis Christophori Frenckell. (1771).

First edition. 4to. 20 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadd. Nine Dissertations. 1759–1778.

A DISSERTATION ON the different types of salts that are formed by efflorescence on walls made of mud, clay, plaster, stone, etc. The salts are identified by chemical analysis as impure ammonium chloride, calcium nitrate, potassium nitrate, sodium carbonate, and other compounds. The works of Cartheuser, Cronstedt, Hoffmann, Linnaeus, Macquer, Wallerius, et al., are cited. Sourander was a student who worked under the direction of Pehr Adrian Gadd at Åbo. (Ferchl, 168; Partington, III, 179; Poggendorff, I, 826)

SOUSA PINTO, Antonio José de

Elementos de pharmacia chymica, e botanica, para uso dos participantes, dedicados ao muito alto e soberano principe regente D. Joao nosso Senhor por Antonio José de Sousa Pinto, Boticario nesta Corte.

Lisbon: Impressão Regia. 1805.

First edition. 8vo. 3 leaves, 350 pp., 1 leaf (errata). Very good copy in contemporary full tree calf, spine richly gilt.

SOUSA PINTO was apothecary to the royal court at Lisbon, and this extensive textbook of pharmacy, chemistry, and botany contains a detailed Portuguese chemical nomenclature, giving both the old and new designations (pp. 271–287). Pages 257–269 comprise a dictionary of chemical and pharmaceutical terms, and pages 315–336 give the chemical analyses of twenty-one natural products. The chemical portion of this work gives excellent descriptions of laboratory operations and discusses the importance of oxygen in the combustion processes and the formation of acids, the chemical action of light and heat, etc. Although Lavoisier's antiphlogistic doctrine is not mentioned by name, it is obvious that Sousa Pinto was a convert to the new chemistry of the French school. Bolton lists two other publications by the author (of 1818 and 1819) but not this title, to which no bibliographical record could be found. An extremely rare work.

SOUSSELIER DE LA TOUR

Expériences et Observations sur les Emanations métalliques et sur les Elémens, comme moyens de guérir les maladies par la Medecine naturelle. Par Mr. Sousselier.

Chalon S.S.: De l'Imprimerie de J. B. Pillot. An XII (1804).

First edition. 8vo. 52 pp. Woodcut ornament on title and pictorial woodcut headpiece on page 5. Mint copy in modern cloth-backed boards.

COUNT SOUSSELIER DE LA TOUR (fl. 1770) believed that all illness of the human body was caused by an imbalance of the so-called life fluids. He was an eccentric character, often at odds with contemporary physicians. Like Mesmer, he postulated that all living beings possess "animal magnetism." In his *L'Ami de la nature, ou manière de traiter les maladies par le prétendu magnétisme animal* (Dijon, 1784) he proposed a new method for curing diseases by electricity and magnetism. In the present work Sousselier postulates that metals and other elements give off emanations that can cure diseases. On pages 5–38 he describes the treatment of patients by the application of the emanations of gold, silver, and other metals, and on pages 39–52 there is a supplement on "natural medicine." A very rare book, of chemical, metallurgical, and medical interest. Not traced in the usual bibliographies.

SPALDING, Lyman

An Inaugural Dissertation on the Production of Animal Heat: Read and Defended at a Public Examination, held by the Medical Professors, before the Rev. Joseph Willard, S.T.D. L.L.D. President, and the Governors of Harvard College, for the Degree of Bachelor in Medicine, July 10, 1797. By Lyman Spalding.

Printed at Walpole, New Hampshire, by David Carlisle, Jun. 1797.

First edition. 4to. 30 pp., 3 blank leaves. Inscribed in ink on verso of dedication leaf: "Dr. Dench, from the Author." Signature in ink on title page: "J. L. Smith." Very good copy, uncut, with wide margins, in quarter morocco antique, marbled boards, crimson label gilt-lettered and dated.

SPALDING (1775–1821) dedicated this chemical and medical thesis to his teacher Dr. Nathan Smith, with whom he collaborated in founding Dartmouth Medical School. Spalding became the first lecturer in chemistry there. This copy came from the library of Dr. John Lawrence Smith (1818–1883), a distinguished American chemist and probably a relative of Dr. Nathan Smith (see J. L. Smith's biography in W. D. Miles, *American Chemists and Chemical Engineers*, Washington, D.C., 1956, pp. 447–448). Spalding was one of the first to suggest a U.S. pharmacopoeia, and

he was also an early American convert to the new nomenclature of Lavoisier, which he discusses in the present work (p. 9). Two years later he published an adaptation of the new nomenclature. Very rare. Not in Blake, Bolton, D.S.B., Duveen, Ferchl, Ferguson, Morgan, Neu, Osler, Partington, Poggendorff, Smith, Waller, Watt, etc. (Cushing, S341; Duveen & Klickstein, *Bibliography of Lavoisier*, p. 143; Edelstein, 2175)

SPALDING, Lyman

A New Nomenclature of Chemistry, proposed by Messrs. De Morveau, Lavoisier, Berthollet and Fourcroy; with Additions and Improvements, by Lyman Spalding, M.B. Lecturer on Chemistry in Dartmouth University.

Hanover (N.H.): printed by Moses Davis. 1799.

First edition. Oblong folio. 6 leaves (unpaginated). Edges of some leaves expertly repaired; otherwise a fine copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated. Contained in a fleece-lined case of maroon half morocco antique, cloth sides, spine gilt-lettered and dated.

THE SECOND American adaptation of Lavoisier's new nomenclature by an American author, the first being the *Nomenclature of the New Chemistry* (New York, 1794), by Samuel Latham Mitchill (Duveen & Klickstein, no. 140). Dedicated "to the students of chemistry at Dartmouth College," this is a tabular presentation based on the French original. As the title indicates, Spalding made additions and improvements. The new nomenclature was used by him as early as 1797 in his *Dissertation on . . . Animal Heat*. A facsimile reprint of this important work was published by the American Pharmaceutical Association (Duveen & Klickstein, no. 142). A very rare book. Not in Bolton, Cushing, D.S.B., Duveen, Ferchl, Ferguson, Morgan, Neu, Osler, Partington, Poggendorff, Waller, Watt, etc. (Blake, 426; Duveen & Klickstein, No. 141; Edelstein, 2176; Smith, 461; J. A. Spalding, *Dr. Lyman Spalding* (Boston, 1916), pp. 12–13)

SPALLANZANI, Lazzaro

Chimico Esame degli Esperimenti del Sig. Gottling Professore a Jena sopra la luce del fosforo di Kunkel osservata nell'aria comune, ed in diversi fluidi aeriformi permanenti, nella qual occasione si esaminano altri fosfori posti dentro ai medesimi fluidi, e si cerca se la luce solare guasti il gaz ossigeno, siccome pretende questo Chimico . . .

Modena: Presso la Società Tipografica. 1796.

First edition. 8vo. 2 leaves, 171, (1) pp. With 1 folding copperplate. Fine copy, in original quarter calf, patterned boards, tan leather label.

IN ADDITION to his researches in biology, Spallanzani carried out numerous experiments on the luminescence of Kunckel's yellow phosphorus, decaying flesh and wood, fireflies, and glowworms. These experiments are described in the present work: "The only purely chemical book published by the great physiologist" (Duveen). In his *Beytrag zur Berichtigung der antiphlogistischen Chemie* (Weimar, 1794, vol. I), F. J. A. Götting, professor of chemistry at Jena, had described a series of experiments with phosphorus in which it glowed in nitrogen but not in oxygen. Spallanzani criticizes these observations and demonstrates that the luminescence becomes weaker in nitrogen, methane, and carbon dioxide but returns to its original brightness in air and, especially, in oxygen. He correctly concludes that the luminescence of phosphorus (and other phosphors) is due to a slow oxidation by atmospheric oxygen (i.e., a slow combustion), with simultaneous emission of visible light. Harvey (*History of Luminescence*, pp. 438 and 488–489) fully discusses this important work. (Blake, 426; Bolton, 842; Cole, 1236; D.S.B., XII, 565; Duveen, 557; Edelstein, 2177; Ferchl, 510; Ferguson, II, 390; Poggendorff, II, 968; Sondheimer, 1481)

SPALLANZANI, Lazzaro

Dissertations relative to the Natural History of Animals and Vegetables. Translated from the Italian of the Abbé Spallanzani . . . To which are added Two Letters from Mr. Bonnet to the Author. And (to each Volume of this Translation) an Appendix, the first containing a Paper written by Mr. Hunter, F.R.S. and the Experiments of Dr. Stevens on Digestion; the second a Translation of a Memoir of Mr. Demours, and Mr. Debraw's Paper on the Fecundation of Bees.

London: Printed for J. Murray, No. 33, Fleet-Street. 1784.

First English edition. 2 vols., 8vo. I: 39, (3), (7)–328 pp., 8 leaves (pagination erratic, signatures correct). II: 1 leaf, 385, (1) pp., 10 leaves. With 3 folding plates (Page sc.), dated 1 January 1784. Very fine set, in original mottled calf, gilt, maroon and green leather labels.

THE ENGLISH translation by Thomas Beddoes of *Dissertazioni di fisica animale e vegetabile* (Modena, 1780, 2 vols.; Garrison-Morton, 981), an important treatise by Spallanzani describing his experiments on the mechanism of digestion in various animal species, as well as the reproduction of plants and animals. It contains the first English translation of Edward Stevens' Latin inaugural dissertation (first: Edinburgh, 1777), in which the isolation of human gastric juice was described. "Stevens was . . . the first successfully to perform an in vitro digestion, proving the presence in the gastric juice of the active principle necessary for the assimilation of food" (Garrison-Morton, 980). Spallanzani

analyzed gastric material in collaboration with the chemist Giovanni Antonio Scopoli and found it to contain water, saponaceous and gelatinous substances, and salts (mainly chlorides). He also discovered the action of saliva in digestion. John Hunter's paper "On the digestion of the stomach after death" is reprinted. A milestone work in the history of biochemistry. A second edition appeared (London, 1789, 2 vols.; *Heirs of Hippocrates*, 988), with a reprint in 1796. (Blake, 427; Blocker, 372; Cushing, S343; D.S.B., XII, 564; Partington, III, 62)

SPALLANZANI, Lazzaro

Mémoires sur la Respiration, par Lazare Spallanzani; traduits en Français, d'après son manuscrit inédit, par Jean Senebier, membre de diverses Académies et Sociétés savantes, associé correspondant de l'Institut national et bibliothécaire à Genève.

Geneva: Chez J. J. Paschoud, libraire. An XI. (1803).

First edition. 8vo. 2 leaves, viii + 373 + (1) pp., 1 leaf (errata). Very fine copy, in pristine condition, in the original patterned pasteboards. Old stamp on title (not affecting text): "Bibliothec. S. Bernardini Salutiarum."

A WORK OF fundamental importance in the history of biochemistry and respiratory physiology. "Lavoisier's suggestion that respiration was a form of slow combustion, with direct oxidation of carbon and hydrogen occurring in the lungs, was disputed by the French mathematician Lagrange. Spallanzani's experimental data resolved this controversy and laid the groundwork for modern conceptions of respiratory physiology. Snails kept in an atmosphere of nitrogen or hydrogen exhaled almost as much carbon dioxide as when breathing air. Even after lung removal, snails absorbed oxygen and gave up carbon dioxide. Excised individual organs, including the stomach, liver, and heart, respired similarly. In concluding that the blood transported carbon dioxide as a product of tissue oxidation, Spallanzani discovered parenchymatous respiration—usually accredited to the biochemist Liebig half a century later" (D.S.B.). The manuscript of these memoirs was posthumously translated and published by Senebier, who added a fifty-eight-page essay on the life and works of Spallanzani. This translation preceded by several months the Italian edition (Milan, 1803). An anonymous English translation appeared in London, 1804 (q.v.). Scarce. Not in Cushing, Duveen, Ferchl, Ferguson, Poggendorff, Smith, Watt, etc. (Cole, I, 1866; D.S.B., XII, 563; Foster, *History of Physiology*, 251; Gottlieb, *History of Respiration*, 54 & 93; Keilin, *History of Cell-Respiration* [1966], 34–37; Osler, 1220; Partington, III, 476; Prandi, *Spallanzani*, 86–87 ["abbastanza rara"]; Thornton, 138; Thornton & Tully, 187; Waller, 9101)

SPALLANZANI, Lazzaro

Memoirs on Respiration. By Lazarus Spallanzani. Edited, from the unpublished Manuscripts of the Author, by John Senebier, Member of several literary societies and academies, correspondent member of the National Institute, and librarian at Geneva.

London: Printed for G. and J. Robinson, Pater-noster-Row. 1804.

First English edition. 8vo. 2 leaves, xii + 374 pp., 1 leaf (recto blank, verso: "Printed by T. Davison, White-Friars"). Fine copy in contemporary marbled boards, rebaced and recornered in calf antique, maroon gilt-lettered morocco label, spine dated in gilt.

THE ENGLISH translation of *Mémoires sur la Respiration* (Geneva, 1803). Pages 1–64: Life and writings of Spallanzani; pages 65–96: letter from Spallanzani to Senebier on respiration; pages 97–258: memoirs on respiration (including respiration of snails and other land mollusks); pages 259–315: memoirs on respiration of aquatic testacea (viviparous snails, mussels, etc.); pages 317–374: memoirs on respiration of crustacea. The name of the translator of this English edition is not known, and the book is very much rarer than the French original of 1803. Not in Cole, Cushing, Duveen, Ferchl, Ferguson, Morgan, Osler, Partington, Poggendorff, Smith, Waller, etc. (D.S.B., XII, 564; Thornton, 138 [wrong date: 1805]; Thornton & Tully, 187 [wrong date: 1805]; Watt, II, 870n)

SPALLANZANI, Lazzaro

Opuscules de Physique, Animale et Végétale, par Mr. l'Abbé Spallanzani . . . Traduits de l'Italien, et augmentés d'une Introduction dans laquelle on fait connoître les découvertes microscopiques dans les trois Règnes de la Nature, & leur influence sur la perfection de l'Esprit humain. Par Jean Senebier . . . On y a joint plusieurs Lettres relatives à ces Opuscules écrites à Mr. l'Abbé Spallanzani par Mr. Charles Bonnet & par d'autres Naturalistes célèbres.
Geneva: Chez Barthelemi Chirol. 1777.

First French edition. 2 vols., 8vo. I: 4 leaves, cxxiv, 255, (1) pp. II: 2 leaves, 405, (3) pp. With 6 folding plates (Dom. Cagnoni sc.). Very fine set in original half calf, gilt, patterned boards, red and green leather labels.

TRANSLATED BY the Swiss physiologist Jean Senebier (1742–1809), who has added an important 124-page commentary, this is the French edition of the *Opuscoli di fisica, animale e vegetabile* (Modena, 1776, 2 vols., Garrison-Morton, 102), a major work by the great Italian biologist Spallanzani (1729–1799). One of the most notable experimenters of the eighteenth century, Spallanzani carried out

much of his most significant research at Modena. In the present treatise of chemical interest he demonstrated that the duration of heat necessary to render an organic infusion sterile varied with the type of microorganism. He hermetically sealed his flasks and proved that if both the infusion and contained air had been sterilized, no living cells developed. The views of Buffon and J. T. Needham on spontaneous generation were thus overturned, paving the way for the research of Pasteur almost a century later. Spallanzani's important work on gastric juice is also described. He is regarded as "the founder of modern experimental biology" (Bodenheimer, *History of Biology*, pp. 314–322). A second French edition appeared (Pavia & Paris, 1787, 3 vols.). (Blake, 427; Cushing, S349; D.S.B., XII, 564; Waller, 11009; Watt, II, 870n)

SPALLANZANI, Lazzaro

Travels in the Two Sicilies, and Some Parts of the Apennines. Translated from the Original Italian of the Abbé Lazzaro Spallanzani, . . .

London: Printed for G. G. and J. Robinson, Pater-noster-Row. 1798.

First English edition. 4 vols., 8vo. I: 4 leaves, pp. v–1, (2), 315, (1). II: 2 leaves, 389, (1) pp. III: iv, 402 pp. IV: 2 leaves, 394 pp. With 11 folding engraved plates. Fine set, in half calf antique, spines gilt, marbled boards, blue morocco labels.

SPALLANZANI MADE significant contributions to chemistry, physics, geology, and vulcanology, in addition to his epic researches in biology and physiology. At age fifty-nine he spent his summer and autumn vacations in the two Sicilies and the Apennines gathering volcanic specimens for the Public Imperial Museum of Natural History, at the University of Pavia, where he was professor of natural history. His experiences were published as *Viaggi alle due Sicilie a in alcune parti dell'Appennino* (Pavia, 1792–97, 6 vols., 8vo.), a work that contains a mass of careful observations and chemical analyses of the lavas, obsidian, and other minerals produced by various volcanoes, including Etna, Stromboli, Vesuvius, and Vulcano. "He was the first who applied experimental methods to the elucidation of volcanic rock-structure. . . . His descriptions and observations of volcanic regions surpass in scientific accuracy and completeness all previous contributions of the kind" (Zittel). Full descriptions are given of wet and dry chemical analyses, as well as his correspondence with notable chemists (e.g., Lavoisier and Priestley), with whose observations and conclusions he sometimes disagrees. The bioluminescence of various species of marine life is also discussed. (Blake, 427; D.S.B., XII, 564; Eales, 1862; Geikie, *Founders of Geology*, 256; Harvey, 567; Knight, 171; Ward & Carozzi, 2098; Zittel, 99)

SPALLANZANI, Lazzaro

Voyages dans les Deux Siciles et dans Quelques Parties des Apennins, par Spallanzani . . . Traduits de l'Italian par G. Toscan, Bibliothécaire du Museum National d'Histoire Naturelle de Paris, avec des Notes du cit. Faujas-de-St.-Fond. Hamburg: Chez les Principaux Libraires. 1799.

First complete French edition. 6 vols., 8vo., in 3. I: viii, (2), 311, (1) pp. II: 2 leaves, 280 pp. III: 2 leaves, 291, (1) pp. IV: 2 leaves, 272 pp. V: 2 leaves, 309, (1) pp. VI: 2 leaves, 215, (1) pp. With 7 folding copperplates. Very fine set with wide margins, in original gilt-ruled quarter calf, marbled boards.

THE FIRST French translation of the *Viaggi alle due Sicilie*, by Jean Senebier, appeared at Berne in four volumes published in 1795–96 by E. Haller. That translation did not include the final part of the Italian work, which was not published until 1797. The present second translation by G. Toscan (and Amaury Duval: see *avertissement*) is the first and greatly superior French edition of the complete six-volume *Viaggi*. It first contains the important and numerous notes contributed by Faujas de Saint-Fond (1741–1819) on the activity of volcanoes and the chemical composition of their products. This set has a variant (possibly false) imprint, different from the usual Paris edition published by Maradan (An VIII, 1799–1800), with otherwise identical pagination. It does not appear to be a pirated edition, as it is beautifully printed on fine quality paper and is in virtually mint condition. Pirated reprints are usually published on paper of inferior quality. (Blake, 427; Watt, II, 870n)

SPENCER, Thomas

Instructions for the Multiplication of Works of Art in Metal, by Voltaic Electricity. With an introductory chapter on electro-chemical decompositions by feeble currents. By Thomas Spencer.

Glasgow: Published by Richard Griffin and Company, and Thomas Tegg, London. 1840.

First edition. 4to. viii, 62 pp. With 27 woodcut figures in text. Fine copy, in half calf antique, marbled boards, spine gilt-lettered.

A MILESTONE WORK in electrochemistry and the electrolytic deposition of metals. In the preface Spencer (?–1857) says: “A very few years since, I obtained a casual perusal of Sir H. Davy’s Bakerian Lectures for 1806 and 1826. From that hour I became strongly impressed with the opinions of that celebrated philosopher, respecting the identity of chemical and electrical forces.” “The deposition of copper on the copper electrode of the Daniell cell suggested the process of ‘electrotype,’ which was simultaneously and in-

dependently described by Thomas Spencer in Liverpool, and by Moritz Hermann von Jacobi in Leningrad” (Partington). “One of the earliest treatises on galvanoplastics, published only 4 years after its invention” (Zeitlinger). Spencer concluded that “the forces termed chemical affinity and electricity are one and the same” (p. 2). Rare. Not in Bolton, D.S.B., Duveen, Edelstein, Ekelöf, Ferchl, Ferguson Coll., Morgan, Mottelay, Poggendorff, Smith, Sondheimer, Waller, etc. (Gartrell, 978; Partington, IV, 686; Sotheran, Cat. 757 [1915], no. 14994 [“Scarce”]; Wheeler Gift, 990)

SPENER, Johann Jacob

Matheseos, Physices et Chymiae Cultoribus Scholas curiosas intimat M. Johannes Jacobus Spener.

(Colophon:) Leipzig: imprimebat Christophorus Fleischer. 1690.

First edition. 4to. 4 leaves (unpaginated). Ornamental woodcut capital, head- and tailpieces. Very good copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated, original yellow wrappers bound in.

SPENER (fl. 1687–1690) was a friend of Adam Rechenberg (1642–1721), and the colophon states that he wrote this tract at the latter’s house in June 1690. Although no biographical information has been found on Spener, he was obviously well versed in the mathematical, physical, and chemical literature of the period. He enthusiastically encourages laboratory experiments in chemistry and physics, particularly if they can be based on mathematical reasoning, and speaks approvingly of the researches of Guericke, Boyle, Rohault, Papin, Senguerd, et al. The investigations of Newton on the properties of light and astronomy are praised. It is unusual to find the cultural values of the pursuit of scientific research extolled at this early period. Extremely rare. (Rosenthal, 799)

SPERLING, Johann

Five dissertations:

I: Disputatio Physica de Anima . . . 18 Julii . . . Michael Mej . . .

Wittenberg: Johannis Haken. 1649.

II: Exercitatio Physica de Anima . . . disquisitioni exhibet Ernestus Wilhelmus Prange . . . 8 Augusti . . .

(Wittenberg:) Johannis Röhneri. 1649.

III: De Anima Rationali . . . disputabit ex physicis Samuel Pomarius . . . 16 Januarii . . .

(Wittenberg:) Michael Wendt. 1647.

IV: Disputatio Physica de Anima Rationali . . . disquisitioni sistit Casparus Wegnerus . . .

Wittenberg: Johannis Röhneri. 1649.

V: De Anima Rationali, secundum quod naturali Philosopho in statu unionis consideranda venit . . . ab Andrea Friderici . . . 15 Martii . . .

Wittenberg: Michaelis Wendt. 1645.

All first editions. 4to. I: 10 leaves. II: 14 leaves. III: 12 leaves. IV: 10 leaves. V: 6 leaves. Fine copies in modern marbled boards.

A COLLECTION OF five rare dissertations, with Sperling as praeses, on the physical nature of living things, their respiration, feelings, intelligence, soul, death, etc. Of interest for the light they shed on the physical, chemical, and biological hypotheses of the mid-seventeenth century. The third dissertation is notable as it was presented by Pomarius (i.e., Samuel Baumgarten), on whom see Thorndike (VII, 346). Not in the usual bibliographies.

SPERLING, Johann

Nine dissertations:

I: Disputatio de Natura Physicae . . . exhibet Jacobus Nadoll 15 Maii . . .

Wittenberg: Michaelis Wendt. 1650.

II: Positiones Physicas, et e generali, et e speciali physicae parte desumtas . . . Johannes Daniel Menius . . . 17 Martii . . .

Ibid. Johannis Röhneri. 1649.

III: Disputatio Physica de Generatione . . . exhibet Paulus Weierus . . . 8 Martii . . .

Ibid. Michaelis Wendt. 1649.

IV: Disputatio Physica de Intellectu . . . submittit Gabriel Elvering . . .

Ibid. Johannis Röhneri. 1649.

V: Disputatio Physica de Voluntate . . . Georgius Balthasarus Spudaeus . . . 1 Sept. . .

Ibid. Michaelis Wendt. 1649.

VI: Disputatio Physica de Minimis Naturae . . . subjicit Fridericus Zülichius . . . 29 Octobris . . .

Ibid. Idem. 1645.

VII: Disputatio Physica de Affectibus in Genere . . . exponit Johannes Sebastianus Fürgang . . . 15 August. . .

Ibid. Johannis Röhneri. 1649.

VIII: Disputatio Physica de Mundo . . . submittit Adamus Ebertus . . . (blank) Novembris . . .

Ibid. Johannis Haken. 1648.

IX: Disputatio de Mundo . . . proponit Johannes Deutschman . . . 7 April. . .

Ibid. Johannis Röhneri. 1649.

All first editions. 4to. I: 8 leaves. II: 14 leaves. III: 14 leaves. IV: 12 leaves. V: 8 leaves. VI: 8 leaves. VII: 12 leaves. VIII: 10 leaves. IX: 6 leaves. Fine copies in modern marbled boards.

NINE RARE dissertations on physics, chemistry, biology, etc., presented under Sperling. Dissertation VI, *De Minimis Naturae*, is especially important as it discusses the atomic theory, the four Aristotelian elements, metals, nonmetals, chemical reactions, etc., with reference to the works of Aldrovandi, Sennert, Scaliger, Weinrich, et al. Not in the usual bibliographies.

SPERLING, Johann

Fifteen dissertations:

I. Disputatio e Jul. Caes. Scaligeri Exercit. Exot. . . . De Subtilitate . . . propit Ernestus Meier . . . 26 Februar. . .

Wittenberg: Michaelis Wendt. 1645.

II. idem . . . Joachimus Kabn . . . 29 Martii . . .

Ibid. Johannis Röhneri. 1645.

III. De Ordine, Veritate, & Efficiente Mundi . . . Christophorus Bremerus . . . 15 Octobr.

Ibid. Michaelis Wendt. 1645.

IV. De Raritate et Densitate . . . Gottfridus Kronbigell . . . 22 Octobr.

Ibid. idem. 1645.

V. De Materia & Vacuo . . . Johannes Janus . . . 29 Novembris . . .

Ibid. Praelo Michaelis Wendt. 1645.

VI. Christianus Peck . . . 20 Decemb. . .

Ibid. Michaelis Wendt. 1645.

VII. De Elementorum Loco &c. . . Christianus Hoffmannus . . . 18 Februar. . .

Ibid. Johannis Haken. 1646.

VIII. De Anima Mundi . . . Christianus Stoltz . . . 21 Martii . . .

Ibid. Johannis Röhneri. 1646.

IX. De Anima Mundi di Platonica . . . Georgius Lange . . . 17 Junii . . .

Ibid. Johannis Haken. 1646.

X. De Deo et Ideis Platonicis . . . Georgius Newenfeldt . . . 29 Julii . . .

Ibid. Johannis Röhneri. 1646.

XI. De Generatione . . . Abrahamus ab Aspern . . . 24 Septemb. 1646.

XII. De Hominis Generatione . . . Wilhelmus Prehn . . . 20 Jan.

Ibid. 1647.

XIII. De Formatione Corporum . . . Gottfridus Grassi . . . 27 Martii . . .

Ibid. Michael Wendt. 1647.

XIV. De Generatione . . . Erasmus Ailberus . . . 10 April. . .

Ibid. Idem. 1647.

XV. De Partibus, Creatione et Generatione . . . Johannes Conradi . . .

28 Sept. 1649.

All first editions. 4to. I: 10 leaves. II: 10 leaves. III: 10 leaves. IV: 8 leaves. V: 14 leaves. VI: 10 leaves. VII: 12 leaves. VIII: 8 leaves. IX: 14 leaves. X: 10 leaves. XI: 8 leaves. XII: 8 leaves. XIII: 8 leaves. XIV: 8 leaves. XV: 8 leaves. Fine copies in modern marbled boards.

A SERIES OF dissertations on topics covered in the *Exotericarum Exercitationum . . . de Subtilitate* (Paris, 1557) of Julius Caesar Scaliger. Sperleng (1603–1658), professor of physics and medicine at Wittenberg, opposed Scaliger's objections to Cardan's *De Subtilitate* (1550), and, in these dissertations of his students, he put forward his own views on the nature of the elements, atomic theory, chemistry, physics, biology, physiology, etc. On Sperleng, see Thorndike. These very rare titles are not in the usual bibliographies.

SPERLING, Johann

Institutiones Physicae. . .

Wittenberg: Apud Johannem Bergerum Bibl. Typis Jobi Wilhelmi Fincelii. 1639.

First edition. 8vo. 8 leaves, 1309, (1) pp., 1 leaf (blank). Paper very slightly embrowned (characteristic of the period); otherwise a very good copy in contemporary vellum, with a few early manuscript notes. From the library of Friedrich Augustus I (1670–1733), elector of Saxony who became Augustus II, king of Poland, 1697; with arms of the elector in gilt on lower cover, and letter *F* surmounted by a crown in gilt on front cover.

THE FIRST edition of the author's first work, dedicated to Johann Georg, duke of Saxony. The dedication is dated 15 December 1638. Sperleng (1603–1658), professor of physics and medicine at Wittenberg, summarizes his lectures herein, covering all aspects of science and medicine in ten sections. Subjects of chemical importance include sections IV, V, and VI on the Aristotelian elements and their properties, atomic theory, chemical principles, minerals, metals, salts, etc. (pp. 582–1085). The author gives a long quotation in German from the *Triumph Wagen Antimonii* of Basil Valentine (i.e., Johann Thölde, pp. 1023–1027). There are also extensive sections on physics, astronomy, plants, animals, and man. This work gives an excellent survey of the courses of science and medicine as they were taught in Germany during the first half of the seventeenth century. The earliest edition mentioned by Partington and Watt is that of Lübeck, 1647, and Poggendorff gives no date of publication. Thorndike discusses other works by Sperleng. No reference to the present extremely rare first edition has been located in available bibliographies.

SPIELMANN, Jacob Reinbold

Dissertationem Inauguralem de Principio Salino gratiosissimi medicorum ordinis jussu pro summos in arte honores capessendi licentia solenni eruditorum examini subjicit d. 22 Aprilis MDCCXLVIII. Jacobus Reinboldus Spielmann, Argentinensis.

Argentorati: Typis Johannis Henrici Heitzii, Univ. Typogr. (1748).

First edition. 4to. 52 pp., 1 leaf (errata). Very good copy in contemporary blue wrapper.

THE DOCTORAL dissertation of the famous chemist Jacob Reinbold Spielmann (1722–1783). This is his first publication and deals with the chemical and physical properties of salts. There are many references to the works of earlier as well as contemporary chemists (e.g., Ruland, Paracelsus, Homborg, Kunckel, Becher, Stahl, Boerhaave, Geoffroy, Hoffmann, and Pott). Partington points out that Spielmann "was a pupil of Pott, Marggraf, Henckel, and Geoffroy, and the chemical teacher of Goethe." Spielmann became professor of chemistry at Strasbourg in 1749. Rare. Not in Duveen, Morgan, Neu, Smith, Waller, Waring, Watt, etc. (Bolton, 844; Ferchl, 511; Ferguson, II, 394 [not in Young Coll.]; Partington, II, 690; Poggendorff, II, 971)

SPIELMANN, Jacob Reinbold

Institutione Chemiae praelectionibus academicis adcommodatae.

Argentorati: Apud Johannem Godofredum Bauerum. 1763.

First edition. 8vo. 7 leaves, 309 pp., 29 leaves. With 1 folding engraved plate of chemical symbols. A superb copy, in pristine condition, in the original mottled tan calf, richly gilt spine, crimson morocco gilt-lettered label.

AN IMPORTANT chemical textbook that was highly valued in its time. Spielmann was one of the last French chemists of note who supported the phlogiston theory. Together with Baumé, he adhered to the theory that fixed alkalies are formed only by the action of fire. Goethe was one of his students. A valuable feature of the book is the "Syllabus Auctorum" at the end, which is a bibliography of chemistry listing over two hundred authors and the different editions of their works. The second edition appeared in 1766. Scarce. Not in D.S.B., Duveen, Edelstein, Ferguson Coll., Morgan, Neu, Smith, Sondheimer, Waller, Watt, etc. (Blake, 428; Bolton, 844; Ferchl, 511; Ferguson, II, 393 [does not list plate]; Harvey, 657; Partington, II, 689; Poggendorff, II, 971)

SPIELMANN, Jacob Reinbold

*Institutiones Chemiae praelectionibus academicis adcommo-
datae. Editio altera, revisa, aucta, polita.*
Argentorati: Apud Johannem Godofredum Bauerum. 1766.

Second edition. 8vo. 6 leaves, 350 pp., 35 leaves. With 1 folding engraved plate of chemical symbols. Very good copy in contemporary half calf, mottled boards, spine gilt in compartments, maroon gilt-lettered label. From the library of Professor Franz Sondheimer, with his bookplate on front pastedown endpaper.

THE FINAL, revised, and enlarged edition of this important work, which Partington describes as “an excellent concise text-book, giving copious references to the literature.” “Sehr geschätzt waren zur Zeit ihrer Veröffentlichung seine *Institutiones Chemiae*” (H. Kopp, *Geschichte der Chemie* [1845], III, 48). This edition was translated into French by Cadet le jeune (Paris, 1770) and into German by J. H. Pflingsten (Dresden, 1783). Not in D.S.B., Edelstein, Ferguson, Ferguson Coll., Morgan, Smith, Waller, Watt, etc. (Blake, 428; Bolton, 844; Duveen, 558; Ferchl, 511; Neu, 3883; Partington, II, 689; Poggendorff, II, 971; Sondheimer, 1486)

SPIELMANN, Jacob Reinbold

*Instituts de Chymie . . . Traduits du latin, sur la seconde
Edition, par M. Cadet le jeune . . .*
Paris: Chez Vincent, Imprimeur-Libraire, rue S. Severin.
1770.

First French edition. 2 vols. 12mo. I: xxiv, 528 pp. II: 1 leaf, 500 pp. With folding engraved plate (table of affinities) in volume I. Headbands and corners worn; otherwise very good copy in original mottled calf, spines richly gilt, maroon and green morocco labels. From the celebrated library of Denis I. Duveen, with his characteristic red bookplate in each volume.

TRANSLATED FROM the second Latin edition (Strassburg, 1766), the valuable bibliography (vol. II, pp. 293–442) has been augmented by De Villers. In volume II of this copy, page 419 is not canceled (see Cole). (Blake, 428; Bolton, 844; Cole, 1241; Duveen, 558; Ferchl, 511; Neu, 3884; Partington, II, 689; Poggendorff, II, 971; Smith, 462)

SPINDLER, Pál

*Observationum Medicinalium Centuria, A. D. Paulo
Spindlero hic Posonii quondam consignata, nunc collecta,
in ordinem redacta, Scholiis propriisque observationibus
aucta. Accessit D. Martini Rulandi Sen. Thesaurus Medicus.
Continens aurea Medicamenta pro omni aetate & Sexu
contra omnes morbos, longo tempore collectus & conscriptus
pro filiis omnibus cum notis hinc inde interspersis. Studio
& Opera Caroli Raygeri M.D.*
Frankfurt: Typis & Sumpt. Philippi Fieveti, Bibl. 1691.

First edition. 4to. 7 leaves, 180; 150 pp. (wrongly numbered 152: pp. 77–78 omitted, but text complete). Title in red and black, with large woodcut in red. Divisional title page to *Thesaurus Medicus*. Fine copy in calf antique, spine gilt-lettered and dated.

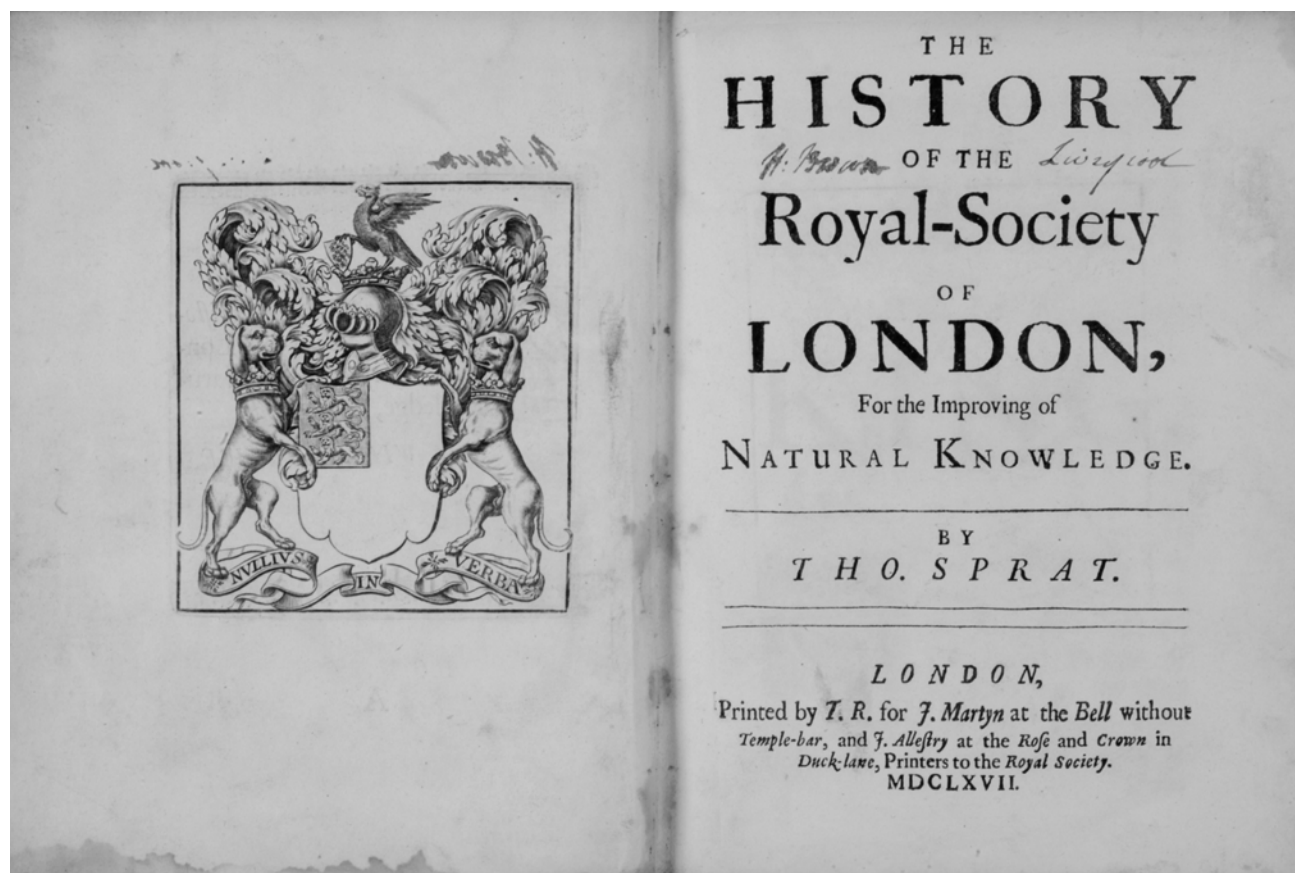
ORIGINALLY COMPILED by the Hungarian Spindler (fl. 1629–1664) during twenty-seven years practice in Austria and Hungary, this century of medical observations was left in manuscript. In his preface of December 1689, Károly Rayger (1641–1707), also Hungarian, describes how he edited and updated Spindler’s text, which resulted in the present work. The one hundred chapters are mainly on medical and pharmaceutical subjects. The final 150 pages are of iatrochemical interest, as they reprint the *Thesaurus Rulandinus* (first: 1591; Ferchl, 460) of Martin Ruland (the Elder, 1532–1602). Other editions of the *Thesaurus* appeared in 1601, 1628, 1679, and 1680. The present 1691 edition, renamed *Thesaurus Medicus* by Rayger, was copied from the 1601 edition, according to the divisional title. Rare. (Ferchl, 433; Krivatsy, 11312; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 42)

SPIZELIUS, Theophilus

*De Re Literaria Sinensium Commentarius, in quo scripturae
paritur ac philosophiae Sinicae specimina exhibentur, et cum
aliarum gentium, praesertim Aegyptiorum, Graecorum, et
Indorum reliquorum literis atque placitis conferuntur.*
Leyden: Ex Officina Petri Hackii. 1660.

First edition. 12mo. 12 leaves, 306 pp., 10 leaves (including errata). With beautiful engraved title page (dated 1661), 2 full-page copperplate illustrations (pp. 119, 191), folding woodcut of abacus, and many small woodcuts in text. Title-vignette. Very fine, crisp copy, in contemporary vellum, old ink titling on spine. Bound with: Contarini, Gasparo, *De Elementis eorumque Mixtionibus* (Leyden, 1633).

SPIZELIUS (1639–1691), a learned Lutheran minister of Augsburg, graduated in theology at the University of Leipzig, where he distinguished himself by his proficiency in Oriental learning. He wrote at least twenty books, including treatises on the origin of the natives of America



Sprat. History of the Royal-Society of London. London, 1667.

and on the dangers of dabbling in witchcraft and conversing with spirits. In this (his first) book, he presents a very early European study of Chinese literature, complete with discussions of alchemy, minerals, metals, salts, etc. In addition, the state of the arts and sciences in China, Japan, India, and other Eastern countries is described, with references to contemporary authors, a long list of whom precedes the text. (Watt, II, 872u)

SPRAT, Thomas

The History of the Royal-Society of London, for the Improving of Natural Knowledge. . . .

London: Printed by T. R. for J. Martyn at the Bell without Temple-Bar, and J. Allestry at the Rose and Crown in Duck-Lane, Printers to the Royal Society. 1667.

First edition. 4to. 8 leaves, 438 pp., 1 leaf (errata). Imprimatur with engraved arms of the Royal Society and 2 folding engraved plates. Fine copy on thick paper, in original calf, rebacked, maroon morocco label.

BISHOP OF ROCHESTER and dean of Westminster, Sprat (1635–1713) was one of the group of scientists and phi-

losophers from which sprang the early Royal Society. This work relates how the society started about 1642 from weekly meetings in friends' homes and in coffeehouses, to its formal establishment upon the restoration of Charles II in 1660, to its recognition by a royal charter in 1662. In danger of being disbanded by the Great Plague (1665) and the Fire of London (1666), as well as by lack of funds, the society managed to survive. Its members have included many of the world's greatest scientists: e.g., Boyle, Hooke, Halley, Newton, Wren, Priestley, Cavendish, Davy, Faraday, Maxwell, Rutherford, Curie, Aston, and Einstein. This work was hailed by Sprat's contemporaries as "invaluable," with Abraham Cowley and (later) Dr. Samuel Johnson leading the vanguard. Included are six pages of laudatory verse by Cowley and original papers by Hooke on meteorology, Brouncker on the increase in weight of metals on calcination, Petty on dyeing, etc. This copy is without the rare frontispiece by Hollar, which was inserted into a few copies on large paper. Second (1702), third (1722), and fourth (1734) editions appeared, as well as a French translation (1669). (D.S.B., XII, 581; Duveen, 558; Keynes, *Hooke*, No. 28; Krivatsy, 11326; Partington, II, 529; Wing, S5032)

SPRAT, Thomas

The History of the Royal-Society of London, for the Improving of Natural Knowledge. . . . The Second Edition Corrected. London: Printed for Rob. Scot, Ric. Chiswell, Tho. Chapman, and Geo. Sawbridge. And are to be Sold by Them, and by Tho. Bennet. 1702.

Second edition. 4to. 8 leaves, 438 pp., 1 leaf (blank). Imprimatur leaf with engraved arms of the Royal Society, and 2 folding engraved plates. Fine copy on thick paper, in contemporary paneled calf, rebacked, original maroon morocco label, spine dated.

THE CORRECTED second edition of the first history of the Royal Society, and the last to be published before the author died in 1713. The plates are identical to those of the first edition of 1667, but the coat of arms on the verso of the imprimatur leaf has been re-engraved. (Blake, 428; Blocker, 373; D.S.B., XII, 586; Neu, 3890; Watt, II, 873d)

SPRAT, Thomas

L'Histoire de la Société Royale de Londres, Etablie pour l'Enrichissement de la Science Naturelle Escrite en Anglois par Thomas Sprat, et traduite en François.

Geneva: Pour Iean Herman Widerhold. 1669.

First French edition. 8vo. 8 leaves, 542, (2) pp. (last leaf blank). Engraved frontispiece (arms of Royal Society). Woodcut vignette on title page. Woodcut initials, head- and tailpieces. Folded printed table (facing p. 222) and 2 engraved plates (facing pp. 253 and 285). Fine copy in original calf, blind-stamped spine, red morocco label.

THE FIRST translation into French of *The History of the Royal Society* (London, 1667) by Thomas Sprat. Essentially a verbatim translation, it omits the six-page laudatory poem by Abraham Cowley in the English edition. The anonymous translator has added a valuable index to the three parts of the work. There was no index in the first English edition. Scarce. (Cole, 1242 [not in Coll.]; Krivatsy, 11327; Roller & Goodman, II, 455; Watt, II, 873d)

SPRAT, Thomas

Observations on Monsieur de Sorbier's Voyage into England. Written to Dr. Wren, Professor of Astronomy in Oxford. By Thomas Sprat, Fellow of the Royal Society.

London: Printed for John Martyn, and James Allestry, Printers to the Royal Society. 1665.

First edition. Sm. 8vo. 1 leaf, 298 pp. Old repairs to fore-margins of first 2 leaves; otherwise a very good copy in contemporary unlettered sheep. From the library of Lytton Strachey (1880–1932), famous biographer and critic, with his small bookplate inside the front cover.

AN INTERESTING commentary on the *Relation d'un Voyage en Angleterre, où sont touchées plusieurs choses, qui regardent l'estat, des Sciences, & de la Religion, et autres matières curieuses* (Paris: T. Jolly, 1664), of Samuel de Sorbière (1615–1670). Sprat (1635–1713), bishop of Rochester and dean of Westminster, was one of the scientific circle from which sprang the Royal Society, of which he was a fellow (1663). He published the earliest *History of the Royal Society* (London, 1667). His *Observations on . . . Sorbier's Voyage into England* is, according to the D.N.B., “a stinging reply to Sorbier.” On page 2 Sprat states that Sorbier's book is “an insolent Libel on our Nation . . . [containing] . . . many errors, and falshoods.” Sorbier's book contains an account of scientific events in England during the early days of the Royal Society, and Sprat comments on it. Sorbier had known Hobbes in Paris and was taken about and introduced to famous scientists by the French traveler-scientist Monconys. Other editions of this commentary by Sprat appeared in 1668, 1672, and 1677. This copy has a distinguished provenance, having once belonged to Lytton Strachey, who (according to the D.N.B.) “inaugurated a new type of biography fusing fact and reflection in a brief, brilliant creative work of art.” For a further discussion of this work, see D.S.B., XII, pp. 584–585. Scarce. (D.S.B., XII, 586; Waller, 20282; Watt, II, 873d; Wing S5035)

SPURSTOW, William

The Spiritual Chymist: or, Six Decads of Divine Meditations on several Subjects. . . .

London: Printed for Philip Chetwind.

First edition. 8vo. 12 leaves, 182 pp.; 2 leaves (blank, and divisional title page: “The Wiles of Satan”), 110 pp. Continuous collation. Fore-edge of title leaf and several other leaves slightly frayed, the word “The” of title shaved, many headlines and page numerals shaved or cropped (text unaffected); otherwise good copy, in early-nineteenth-century half calf, cloth boards, black gilt-lettered label.

SPURSTOW (1605?–1666), puritan divine, who obtained his M.A. from St. Catherine's College, Cambridge, objected to the execution of King Charles I but lost his mastership of Catherine Hall upon the restoration of King Charles II. Obviously patterned after Boyle's *Occasional Reflections* (London, 1665), with a “theological echo of Boyle's *Sceptical Chymist*” (Duveen), this work contains several purely scientific chapters: e.g., “Upon the Galaxia or milky way,” “On building after fires” (appropriate in 1666), “On the Philosophers' Stone,” “On the Circulation of the blood,” “On a multiplying Glass,” “On Gravity and Levity,” “Upon Mixtures,” “On the natural heat,” and “The radical moysture.” These “Divine Meditations” (pp. 1–182) are followed

by "The Wiles of Satan" (pp. 1–110). Despite its connection with and inspiration by Boyle's *Reflections*, Fulton does not mention it. Wing records two variants of the title imprint: S5097 ("Printed 1666") and S5098 ("Printed for Philip Chetwind"), as in this copy. In both issues "The Wiles" has the imprint: "Printed in the Year, 1666." Unknown to Watt (II, 873n), who lists five sermons (1643–1656) by Spurstow. Very scarce. (Duveen, 559; Krivatsy, 11329; Neu, 3895)

STAALHOOS, Magnus J.

Disputatio Physica, de Metallorum quamvis infimo, omnium tamen fere utilissimo, Ferro et Chalybe, . . . Sub praesidio . . . Petri Hahn, . . . publici speciminis loco modeste submittit Magnus J. Staalhoos, Wex: Smol. In Acroaterio Max. d. 29 Nov. An. 1688.

Åbo: Impr. apud Joh. Wallium, A.T. (1688).

First edition. 8vo. 4 leaves, 32 pp., 2 leaves. Fine copy, in quarter brown morocco antique, marbled boards, spine gilt-lettered and dated.

A CHEMICAL AND metallurgical dissertation on iron and steel by Staalhoos, presented under the direction of Dr. Peter Hahn, professor of natural sciences at the University of Åbo (now Turku), Finland. The history and manufacture of iron and steel are described, as are the magnetic properties of iron and the medicinal uses of iron salts. At the end are laudatory verses by Sven Arelius, Jonas Heilmerus, and H. Montelius. Extremely rare, not traced in the usual bibliographies.

STACK, Richard

An Introduction to the Study of Chemistry, explaining its Principles, and their Application to Arts, Manufactures, &c. &c. in a clear and familiar manner. With an Appendix, containing the modern theory. . . .

Dublin: Printed by Graisberry and Campbell, and sold by William Jones, No. 26, College-Green, opposite the College. 1802.

First edition. 8vo. iv + xi, (7), 322 pp. With large folding printed table (combinations of principles, elements, and compounds). Faint stamp on title page and page 322 ("Steeven's Hospital Med. & Surgical Library 1813"); otherwise fine copy in original half calf, marbled boards, spine gilt-ruled, maroon morocco label.

STACK (d. 1812), author and lecturer, attended Trinity College, Dublin (M.A., 1779; D.D., 1786), became vice president of the Royal Irish Academy, and contributed to its *Transactions*. This excellent elementary work is dedicated to Robert Perceval, M.D. (1756–1839), the first professor

of chemistry at the University of Dublin, who published little on the subject (see D.N.B.). The book is divided into five parts, each comprising several chapters: chemistry in general, salts, metals and minerals, vegetable and animal substances. There is much on the application of chemistry to various industries (e.g., dyeing, glassmaking, gunpowder, soap making). The appendix (pp. 289–322) mentions the researches of Lavoisier, Fourcroy, Cavendish, Watt, and others. The table lists compounds formed from various elements, with the old and new nomenclature. Bolton (*First Supplement*, 392) cites another edition (London, 1802) but not this Dublin imprint. Rare. Not in Duveen, Ferchl, Partington, etc. (Cole, 1243; Smith, 462; Sondheimer, 1488; Watt, II, 873y)

STÄHL, Anders Johan

Dissertatio Chemico-Medica de Sale Ammoniaco, . . . praeside . . . Doct. Christiano Wollin . . . Pro gradu doctoris . . . auctor Andreas Johannes Ståhl. Scanus. In Auditor. Acad. Carol. Major. die (blank) Junii MDCCXCI. . . .
Lund: Typis Berlingianis. (1791).

First edition. 4to. 26 pp. Interleaved with an additional 11 leaves of contemporary paper, some of which are heavily annotated by the author, as are the margins of several pages of the text. Very good copy in original blue wrappers, bound in maroon quarter cloth antique, marbled boards, spine labeled: Wollin. 3 Dissertations. 1783–1797.

A DISSERTATION ON the history, preparation, reactions, and chemical and medicinal properties of sal ammoniac (ammonium chloride). Presented by Ståhl under the direction of Christian Wollin (1730–1798), professor of chemistry and pharmacy at Lund, the author refers to the works of many earlier and contemporary chemists. Not in the usual chemical bibliographies. (Ferchl, 588; Poggendorff, II, 1364; Waring, 226)

STAHL, Georg Ernst

Anweisung zur Metallurgie, oder der metallischen Schmelz- und Prober-Kunst. Nebst dessen Einleitung zur Grund-Mixtion derer unterirdischen mineralischen und metallischen Körper. Alles mit gründlichen Rationibus, Demonstrationibus und Experimentis nach denen Becherischen Principiis ausgeführt.

Leipzig: Bey Caspar Jacob Eysseln. 1720.

First edition in German. Two parts in 1 vol., 8vo. I: 8 leaves, 144 pp., 4 leaves. II: 407, (17) pp. Decorative woodcut head- and tailpieces. First title page laid down; otherwise very good copy, in original unlettered half calf over thin wooden boards covered by marbled paper (worn).

THE FIRST part is the German translation of *Metallurgiae pyrotechnicae et docimasiae metallicae fundamenta* (Halle, 1700). Stahl possessed “an excellent knowledge of German metallurgical processes” (Partington), and in this work he discusses methods used to extract metals from their ores, their purification by smelting, and the use of chemical techniques for refining them. Assaying processes are described, as are the chemical properties and reactions of gold, silver, copper, lead, zinc, iron, mercury, and antimony. A short section (pp. 133–144) discusses the generation of metals in ores. The second part is the German translation of *Specimen Becherianum* appended to Stahl’s edition of J. J. Becher’s *Physica subterranea* (Leipzig, 1703), which covers the formation of subterranean mineral and metal deposits. A long section on Stahl’s modification of Becher’s theories, with a detailed account of Stahl’s theory of phlogiston (pp. 1–306), is followed by descriptions of several hundred chemical experiments in support of Stahl’s theories. Very rare. Not in Bolton, D.S.B., Edelstein, Ferguson Coll., etc. (Duveen, 560; Ferchl, 514; Ferguson, II, 398 [part II only]; Neu, 3897; Partington, II, 660)

STAHL, Georg Ernst

Ars Tinctoria Experimentalis oder Curieuse Vollkommene Entdeckung der Färbe-Kunst, auff Seyde, Wolle und Leinengewand. Worinnen aller annehmlichen und dauerhafften, gewöhnlichen und fremdem, Frantzösisch- Englisch- und Spanischer Farben, vollkommliche und beste Zubereitung, aus meisterlichen vollständigen Unterricht, Beschreib- und Eröffnungen nach allen Umständen gezeiget und ausführlich gelehret wird. Sammt vollständigem Bericht von der Pott- und Weydasche . . .

Frankfurt & Leipzig: In Verlegung Johann Bielckens, Buchh. Anno 1685.

First edition, first issue. 8vo. 6 leaves, 100 pp. Title page in red and black. Paper lightly toned (as usual); otherwise very good copy in contemporary overlapping vellum. Bound with: Schultz, Gottfried, *Schatzkammer rarer und neuer Curiositäten* (Hamburg, 1686); and Stahl, Georg Ernst, *Ars Tinctoria Fundamentalis* (Frankfurt & Leipzig, 1683).

A COLLECTION OF recipes for dyeing silk, wool, and linen; gathered by Stahl from various works originally published in English, French, German, and Spanish. Stahl had written a preface to his *Ars tinctoria fundamentalis* (1683), which the publisher Bielcke had brought out two years earlier. While that book was a German translation of the *Instruction générale pour la teinture des laines* (Paris, 1671), the present compilation is a completely independent and original work. Despite the statement on the title page, the section on potash was not included in the first issue. The layout

of the type on page 100 clearly indicates that it is the final leaf of the book. The section on potash (28 pp.) was published separately with its own pagination and was added only to later (second?) issues (see Ron). The Edelstein copy also does not have the section on potash. The Wellcome copy has the section. A later edition (Jena, 1703) is listed by Edelstein (no. 2763) and Lawrie (no. 12). Very rare. (Ron, 44; Wellcome, II, 60–61)

STAHL, Georg Ernst

Ars Tinctoria Fundamentalis, oder Gründliche Anweisung zur Färbekunst. Worinnen nicht nur aller erdencklicher Farben Ursprung aus den Hauptfarben, und deren Vermischungs-Unterscheid, auch der Vermischungen Ingredienten, wie die am besten zu machen, benennet; Sondern auch, zu Bereitung einer guten und dauerhafften Hauptfarb von allen Gattungen, der rechte Grund gezeiget werden solle. Erstlich auss dem Frantzösischen ins Teutsch übersetzt, und so dann mit höchstnützlichen Anmerkungen, zu oben verheissener Vollkommenheit gebracht.
Frankfurt & Leipzig: Bey Johann Bielcken, Buchhändl. Anno 1683.

First edition. 8vo. 10 leaves, 286 pp., 23 leaves. Engraved title page (dated Jena, 1682) and letterpress title in red and black. Paper lightly toned (as usual); otherwise very good copy in contemporary overlapping vellum. Bound with: Schultz, Gottfried, *Schatzkammer rarer und neuer Curiositäten* (Hamburg, 1686); and Stahl, Georg Ernst, *Ars Tinctoria Experimentalis* (Frankfurt & Leipzig, 1685).

ONE OF the earliest books published by the great chemist Stahl (21 October 1660–14 May 1734). The preface by Johann Bielcke is dated Jena, 7 September 1682. Stahl, then only twenty-two years old, was studying at Jena for his M.D. (received in 1683) under G. W. Wedel. This work is the first German translation by Stahl of *Instruction générale pour la teinture des laines* (Paris, 1671), the first systematic technical treatise for the French dyeing industry and a very important book. Stahl has translated the 317 recipes and instructions of the original French edition and has added a supplement on the history and preparation of indigo, cochineal, potash, and verdigris. Even at an early age Stahl realized the importance of the *Instruction*, and this translation made it available to dyers in Germany. An unchanged second edition appeared (Jena, 1703; Partington, II, 660). Very rare. Not in D.S.B., Duveen, Wellcome, etc. (Edelstein, *Historical Notes on the Wet Processing Industry* [1972], 82; Edelstein, 2764; Honeyman, 3172 [imperf.]; Lawrie, 13; Ron, 46)

STAHL, Georg Ernst

Ausführliche Betrachtung und zulänglicher Beweiss von den Saltzen, dass dieselbe aus einer Zarten Erde, mit Wasser innig verbunden, bestehen.

Halle: In Verlegung des Wäysenhauses. 1723.

First edition. 8vo. 8 leaves, 432 pp. Title page in red and black, with woodcut vignette. Very fine copy. Bound with: Stahl, G. E., *Chymia rationalis et experimentalis* (Leipzig, 1729), and 3 other works by Stahl.

THE FIRST appearance of Stahl's important treatise on all types of salts. Numerous experiments are described, and he concludes that salts are the result of certain "earths" combined with water. Acids and alkalies were classified by Stahl as salts. These "salts" produced salts (in the modern sense) when combined with "earths" (i.e., bases) under the correct conditions. Stahl describes experiments when mixtures of different salts are heated together and the precipitates produced when various solutions of salts are combined. Stahl's theory of the formation and composition of salts is one of his most significant contributions to chemistry at the time. The book was translated into French by Baron d'Holbach (Paris, 1771). Rare. Not in Bolton, Cole, D.S.B., Duveen, Edelstein, Neu, Pogendorff, etc. (Blake, 429; Ferchl, 514; Ferguson, II, 397; Partington, II, 662; Smith, 463)

STAHL, Georg Ernst

Traité des Sels, dans lequel on démontre qu'ils sont composés d'une terre subtile, intimement combinée avec de l'eau; par George-Ernest Stahl: traduit de l'Allemand.

Paris: Chez Vincent, Imprimeur-Libraire, rue S. Severin. 1771.

First French edition. 12mo. xxiv, 480 pp. Fine copy, in original mottled calf, spine richly gilt, maroon morocco label.

THE FRENCH translation by Baron d'Holbach of Stahl's important work on the composition of salts, which originally appeared as *Ausführliche Betrachtung und zulänglicher Beweiss von den Saltzen* (Halle, 1723; reprinted 1738, with a second German edition [Halle, 1765] edited by J. J. Langen). According to the "Avertissement du traducteur" in the *Traité du Soufre* (1766), this translation was made in 1766. The translator has added a preface and extensive subject index. A second French edition appeared (Paris, 1783). "The empirical knowledge of salts had made little progress since Stahl's time, and his work was worth translating after the lapse of half a century. . . . The work is comprehensible only when it is remembered that the acids (vitriolic acid, spirit of salt, and nitric acid) and alkalis (potash, soda, and ammonia) are still classed as 'salts.' There is an interesting

section on the varying strengths of acids as demonstrated by their varying power of dissolving metals, which however, depends on dilution and temperature. . . . There is a long section, describing many experiments on the precipitation of a metal in solution by another metal, i.e., an affinity series" (Partington, II, 678). Metzger (*Newton, Stahl, Boerhaave et la Doctrine Chimique*, Paris, 1930, pp. 148–159) states that Stahl's conception of the composition of salts is one of the two most important theories established by him, the other being his phlogiston theory of combustion. (Caillet, 10341; Cole, 1247; Duveen, 561; Ferchl, 514; Ferguson, II, 397 [not in Young Coll.]; Ferguson Coll., 669; Neu, 3906; Partington, II, 662; Smith, 464)

STAHL, Georg Ernst

Billig Bedencken, Erinnerung und Erläuterung uber D. J. Bechers Natur-Kündigung der Metallen.

Frankfurt und Leipzig: Verlegts Wolffgang Christoph Multz. 1723.

First edition. 8vo. 2 leaves (title printed across 2 pages), 443, (1) pp. Fine copy, in original unlettered, blind-ruled half calf, speckled boards. From the Fürstliche Hofbibliothek, Donaueschingen, with old stamp on verso of title page.

A DETAILED AND often severe criticism of Becher's *Natur-Kündigung der Metallen* (Frankfurt, 1661), on the origin and supposed chemical composition of metals, their alchemical transmutation, ores, etc. Becher's work, published long before he had formulated his terra pinguis theory, which appeared in its earliest form in the *Physicae Subterraneae* (Frankfurt, 1669), is carefully evaluated by Stahl in the light of his own laboratory investigations. It has not been recognized by historians of chemistry that this, "the most specifically metallurgical work by Stahl" (Partington), contains Stahl's further refinements and modifications of Becher's hypothesis and is therefore a key book in the history of the development of the phlogiston theory. An important and very rare work. (Bolton, 846; Ferguson, II, 397; Partington, II, 661)

STAHL, Georg Ernst

Chymia Rationalis et Experimentalis; oder Gründliche der Natur und Vernunft gemässe und mit Experimenten erwiesene Einleitung zur Chymie; darinnen hauptsächlich die Mixtion derer Sublunarischen Körper, nebst deren zerlegung und Relation gegen einander untersucht, und mit vielen Experimenten gezeigt wird. Nebst einem Anhang von denen Mercuriis Metallorum, Mercurio animato, und lapide Philosophorum.

Leipzig: bey Caspar Jacob Eysseln. 1720.

First edition. 8vo. 8 leaves, 520 pp., 16 leaves. Fine, crisp copy, in contemporary vellum. From the Fürstliche Hofbibliothek, Donaueschingen, auctioned in 1982, with small stamp on verso of title leaf and final leaf.

AN IMPORTANT introductory textbook in which Stahl expounds a rational system of chemistry based on experiments performed on minerals and metals. Contemporary chemical symbols are freely used throughout the text, and there is a section on the “mercurification” of metals (pp. 459–479). The book ends with an experimental inquiry into the philosopher’s stone (pp. 479–520), with historical references to Basil Valentine, Isaac Holland, Paracelsus, et al. Unchanged second and third editions appeared in 1729 and 1746, respectively. Duveen and Neu list the second edition only. The first edition, as here, is very rare. Not in Blake, D.S.B., Duveen, Edelstein, Ferchl, Ferguson Coll., Osler, Smith, Sondheimer, Waller, Watt, etc. (Bolton, 846; Ferguson, II, 397–398; Partington, II, 661; Poggendorff, II, 980)

STAHL, Georg Ernst

Chymia Rationalis et Experimentalis; oder: Gründliche der Natur Vernunft gemasse und mit Experimenten erwiesene Einleitung zur Chymie . . . Nebst einer Zugabe von denen Mercurii Metallorum, Mercurio animato, und Lapide Philosophorum. Zweyte Auflage . . . und mit Isaac Hollands Tractat von den Saltzen und Oehlen der Metallen vermehret worden.

Leipzig: Verlegts Caspar Jacob Eyssel. 1729.

Second edition. 8vo. 8 leaves, 560 pp., 16 leaves (index). Title page in red and black. Fine copy in contemporary vellum, spine labeled in ink “G.E. Stahls Chymische Schrifften.” Bound with: Stahl, G. E., *Zymotechnia fundamentalis* (Leipzig, 1748), and 3 other works by Stahl.

THE SECOND edition, essentially a reprint of the first (Leipzig, 1720). It is the first of this title to include *Von den Saltzen und Oehlen der Metallen* by Isaac Holland (pp. 521–560), with separate divisional title page. According to Schmieder (1832, p. 214), the tract by Holland first “appeared in Latin in 1604, without place of publication, and a German translation in 1677” (Partington [II, 206], who did not know the present edition). Also included is a historical and experimental inquiry into the philosopher’s stone (pp. 479–515). A third edition appeared (Leipzig, 1746). Rare. Not in Blake, D.S.B., Roller & Goodman, Watt, etc. (Bolton, 846; Duveen, 560–561; Neu, 3901; Partington, II, 661)

STAHL, Georg Ernst

Experimenta, Observationes, Animadversiones, CCC Numero, Chymicae et Physicae, qualium alibi vel nulla, vel rara, nusquam autem satis ampla, ad debitos nexus, & veros usus, deducta mentio, commemoratio, aut explicatio, invenitur. Qualium partim, in aliis Autoris scriptis, varia mentio facta habetur; partim autem nova commemoratio hoc tractatu exhibetur: utrimque vero, universa res uberius explicatur atque confirmatur.

Berlin: Apud Ambrosium Haude. 1731.

First edition. 8vo. 14 leaves, 420 pp., 8 leaves (index). Fine copy, bound in full vellum (from a sixteenth-century musical manuscript).

AN IMPORTANT work in 301 sections in which Stahl comments critically on a wide variety of chemical and physical phenomena and experiments. There is a long discussion on phlogiston and its supposed properties (section 38, pp. 55–64). Partington says that “Stahl always ignores the work of Boyle (except his theory of ponderable fire), Hooke, and Mayow (who is occasionally mentioned on minor matters), and quotes mostly German authors.” Boyle and Krafft are mentioned on page 402 in connection with the preparation of elementary phosphorus. Boyle, Becher, Kunckel, Hoffmann, et al., are mentioned several times in the text. This work, published just three years before he died, is interesting because it summarizes Stahl’s theories toward the end of his life. Scarce. Not in Blake, Caillet, D.S.B., Edelstein, Ferguson, Sondheimer, Waller, Watt, etc. (Bolton, 846; Duveen, 561; Ferchl, 514; Ferguson Coll., 668; Morgan, 734; Neu, 3899; Partington, II, 662; Poggendorff, II, 980; Smith, 463)

STAHL, Georg Ernst

Fundamenta Chymiae Dogmaticae & experimentalis, & quidem tum communioris physicae mechanicae pharmaceuticae ac medicae tum sublimioris sic dictae hermeticae atque alchymicae. Olim in privatos Auditorium usus posita, iam vero Indultu Autoris publicae luci exposita. Annexus est ad Coronidis confirmationem Tractatus Isaaci Hollandi de Salibus & Oleis Metallorum.

Nuremberg: Sumptibus Wolfgangi Mauritii Endteri Haered. Typis Johannis Ernesti Adelbulneri. 1723.

First edition. 4to. 4 leaves, 255, (1) pp., 12 leaves. Title page in red and black. Errata leaf at the end. Fine copy, in original boards, gilt-lettered orange label on spine.

ONE OF the most important works by Stahl, containing a rational system of chemistry based on his theory of phlogiston and the experimental observations of the analysis and synthesis of matter. “The work was prepared for the

press by Johann Samuel Carl (J.S.C. in the pref., dated 1720) (1675/6–1757), of Oehringen in Württemberg, regarded by Stahl as his best pupil, from Stahl's lecture notes, and was published with Stahl's approval. . . . It is important as giving Stahl's early views (e.g., on the composition of metals, p. 9), since the lectures go back to 1684 in Jena. . . . The book is full of chemical symbols with Latin case-endings and is very difficult to read" (Partington). A corrected second edition appeared in 1746. Schmieder (1832, p. 214) states that the tract by Isaac Holland (pp. 237–255), with divisional title page, first appeared in 1604 without place of publication (Partington, II, 206). An English translation of Stahl's work was published by Peter Shaw as *Philosophical Principles of Universal Chemistry* (London, 1730), in which the alchemical section and Holland tract were omitted and references to Boyle and others (not in the original) were added. A milestone work, which "exerted a great influence upon the future of chemistry" (Browne). (Bolton, 846; Browne, 100; Cole, 1244; D.S.B., XII, 606; Duveen, 560; Ferchl, 513; Neu, 3900; Partington, II, 661; Poggendorff, II, 980)

STAHL, Georg Ernst

Fundamenta Chymiae Dogmaticae et Experimentalis, et quidem tum communioris physicae mechanicae pharmaceuticae ac medicae tum sublimioris sic dictae hermeticae atque alchymicae. . . . Annexus est . . . Tractatus Isaaci Hollandi de salibus et oleis metallorum. [with:] Fundamenta Chymiae . . . experimentalis, . . . theoriam & praxin artis . . . pars II (III) . . .

Nuremberg: Impensis B. Guolfg. Maur. Endteri, Consortii et Vid. B. Iul. Arnold. Engelbrechti. 1746, 1746, 1747.

Second edition. 3 vols., 4to. I: 5 leaves, 255, (5) pp., 10 leaves (last blank). II: 4 leaves, 199, (1) pp., 16 leaves; 76 pp. III: 4 leaves, 134, "145–136", 147–186, 185–211, "112–114," 215–508 pp., 9 leaves (pagination erratic, text in correct order). Title of volume I in red and black, titles of volumes II and III in black (with different wording). With the rare half title in volume I, not required in II and III. Occasional minor browning; otherwise fine copy in original mottled calf, spines richly gilt, brown morocco labels.

THE GREATLY enlarged definitive second edition. Volume I is a reprint of the first edition (Nuremberg, 1723), with misprints corrected and some symbols replaced by words. Volumes II and III first appeared with the same publishers at Nuremberg in 1732. They were apparently published from a manuscript compiled by Johann Christoph Goetz (1688–1733), according to the preface. Volume II describes numerous chemical processes, with quotations from Johann Joachim Becher. Volume III "is . . . based on Stahl's chemi-

cal lectures [beginning] with a list of authors quoted (including John Mayow) and after an introduction deals with fermentation [and] the production and properties of salts. . . . The last part deals with the phlogiston theory" (Partington). Rare. Not in Bolton, Cole, Duveen, Neu, etc. (Blake, 430; D.S.B., XII, 606; Ferchl, 514; Ferguson, II, 398; Ferguson Coll., 669; Partington, II, 662; Smith, 463)

STAHL, Georg Ernst

Philosophical Principles of Universal Chemistry: or, The Foundation of a scientific Manner of Inquiring into and Preparing the Natural and Artificial Bodies for the Uses of Life: Both in the smaller Way of Experiment, and the larger Way of Business. Design'd as a General Introduction to the Knowledge and Practice of Artificial Philosophy: or, Genuine Chemistry in all its Branches. Drawn from the Collegium Jenense of Dr. George Ernest Stahl. By Peter Shaw, M.D. London: Printed for John Osborn and Thomas Longman, at the Ship in Pater-noster-Row. 1730.

First edition. 8vo. xxviii, 424 pp., 12 leaves (index) + 2 leaves (advertisements). Fine copy in original gilt-ruled calf, rebacked, olive-green morocco label. Bound with: Shaw, Peter, and Francis Hauksbee, *An Essay for Introducing a Portable Laboratory* (London, 1730).

THE ENGLISH translation by Peter Shaw of Stahl's *Fundamenta Chymiae Dogmaticae & experimentalis* (Nuremberg, 1723). In his preface Shaw states that he intended this book to be in the manner of a preparation for a set of essays (by him) "design'd for the farther application and advancement of Genuine Chemistry in England; with regard to Science, Arts, Trades and Commerce." Shaw's purpose was to "extend the Business of Chemistry, and render it applicable to the improvement of Philosophy and Arts. With this in view it is concise in the Theory, but copious in the Practice." Shaw added references to Boyle and other chemists, not in the original, and changed the order of presentation in places. There is a critical discussion of the philosopher's stone (pp. 393–424), in which Shaw doubts its existence. Shortly after this book appeared, Shaw published several practical works on chemistry, some in collaboration with Francis Hauksbee the Younger. An important work that introduced Stahl to English readers. (Blake, 430; Bolton, 846; Cole, 1245; Duveen, 547; Ferchl, 501; Ferguson, II, 381 [not in Young Coll.]; Harvey, 186; Neu, 3818; Partington, II, 661–662; Poggendorff, II, 919; Smith, 464; Watt, II, 850c)

ST AHL, Georg Ernst

Fundamenta Chymico-Pharmaceutica Generalia. Accessit manufactio ad enchirises artis pharmaceuticae specialis. Cura Benjamin Roth-Scholtzii . . .

Venice: Apud Jo: Gabrielem Hertz. 1741.

First Venice edition? 8vo. 48 pp. Fine, crisp copy, in modern blue boards. Bound with: Juncker, J., *Conspectus formularum medicarum* (Venice, 1741).

ONE OF Stahl's lesser-known works on pharmaceutical chemistry, which first appeared at Herrnstad in 1721 with a more complete version in 1725. The book consists primarily of headings and brief notes, which were reputedly written by one of Stahl's pupils. Definitions of twenty-seven chemical terms and processes are given (pp. 9–11), and there are short chapters on melting, dissolving and extracting chemicals, volatility, evaporation, sublimation, distillation, etc. The Herrnstad (1721) edition is listed by Bolton (pp. 846–847), Ferchl (p. 513), Partington (II, 661), and Poggenдорff (II, 980). Neu (no. 296) lists an edition (Venice: N. Pezzana, 1776) appended together with the above title by Juncker to the *Pharmacopoeia Bateana* of George Bate. No reference to the present Venice edition has been located, and it appears to be very rare.

ST AHL, Georg Ernst

Gründliche und Nützliche Schrifften, von der Natur, Erzeugung, Bereitung und Nutzbarkeit des Salpeters, mit denen hieher gehörigen Kupfern, und vielen diensamen Anmerkungen vermehret, und wegen ihres unbeschreiblichen Nutzens aus dem Lateinischen ins Teutsche übersetzt.

Stettin and Leipzig: Verlegts die Kunckelsche Handlung. 1748.

Second edition. 8vo. 6 leaves, 206 pp. Engraved frontispiece of furnace and 4 folding copperplates (components of furnace). Fine copy, in quarter calf antique, marbled boards, maroon morocco label, spine dated.

A TRANSLATION OF two long essays in Latin that appeared in the February and March issues of *Observationes chymico-physico-medicae curiosae* (Halle, 1698). These are definitive treatises on the history, chemical, physical, and medical properties of saltpeter (potassium nitrate). The anonymous translator has added an introduction and extensive notes. The first edition (Frankfurt and Leipzig, 1734; Cole, 1246; Hoover, 762) and the third (Berlin, 1764) have identical pagination and plates. All editions are rare. (Bolton, 847; Ferchl, 513; Ferguson Coll., 669; Partington, II, 662; Smith, 463)

ST AHL, Georg Ernst

Gründlicher Physicalischer und Medicinalischer Discurs eines berühmten Medici in Berlin von den Warmen Bädern und Sauer-Brunnen, darinnen sowohl derselben Natur-gemässe Beschaffenheit überhaupt nach ihren Principiis, Ursprung, Zu- und Ausfluss, als auch nach dem Schaden und Nutzen . . . Zu gemeinen Nutzen aus dem Lateinischen übersetzt.

Leipzig: Bey Caspar Jacob Eyssehn. 1734.

First edition in German. 8vo. 30 pp. Very fine copy. Bound with: Stahl, G. E., *Chymia rationalis et experimentalis* (Leipzig, 1729), and 3 other works by Stahl.

A TRACT ON the chemical and medicinal properties of warm baths and acidic mineral waters. Published anonymously in the year of Stahl's death, it appears from the title that this German translation was made from an earlier Latin text (manuscript or printed version?). Very rare. Unknown to the usual bibliographers.

ST AHL, Georg Ernst

Herrn Georg Ernst Stahln, Königl. Preussischen Hof-Raths, und ältesten Leib-Medici, Billig Bedencken, Erinnerung Und Erläuterung Uber D.J. Bechers Natur-Kündigung der Metallen.

Frankfurth und Leipzig: Verlegts Wolfgang Christoph Multz. 1723.

First edition. 8vo. 2 leaves (title printed across 2 pages), 443, (1) pp. Fine, crisp copy, in contemporary unlettered, blind-ruled half calf, speckled boards. From the Fürstliche Hofbibliothek, Donaueschingen, with its old stamp on verso of title page.

A DETAILED, AND often severe, criticism of Becher's *Natur-Kündigung der Metallen* (Frankfurt, 1661), on the origin and supposed chemical composition of metals, their transmutation by alchemical means, their ores, etc. Becher's work, published long before he had formulated his *terra pinguis* theory, which was published in its earliest form in his *Physicae Subterraneae* (Frankfurt, 1669), is carefully evaluated by Stahl in the light of his own laboratory investigations. It has not been recognized by chemical historians that this, "the most specifically metallurgical work by Stahl" (Partington), contains Stahl's further refinements and modifications of Becher's hypothesis and is therefore a key book in the history of the development of the theory of phlogiston. A very rare and important work, which is not mentioned by Duveen, Edelstein, Ferchl, Hoover, Neu, Poggenдорff, Smith, Waller, Watt, etc. (Bolton, 846; Ferguson, II, 397; Partington, II, 661)



*Georg Ernestus Stahl, Onoldo Francus,
Med. Doct. h. t. Prof. Publ. Ord. Hall. —*

Stahl. Opusculum Chymico-Physico-Medicum. Halle, 1715.

STAHL, Georg Ernst

Materia Medica. D. i. Zubereitung, Krafft und Würckung, derer sonderlich durch Chymische Kunst erfundenen Artzneyen. Darinnen sowohl die fürnehmsten Gold, Silber, Stahl, Kupffer, Bley, Zinn, Mercurial-Artzneyen angeführet, als auch andere aus Mineralien, genommene Mittel beygebracht wie nicht weniger die besten Medicamente aus den Vegetabilien und Thieren communiciret werden, seiner Würdigkeit wegen, aus dem Lateinischen ins Teutsche übersetzt, und zum allgemeinen Besten aufgelegt.

Dresden: Bey Johann Christoph Zimmermann, und Joh. Nicol. Gerlachen. 1728.

First edition. 8vo. 2 leaves, 411, (1) pp. Pp. 177, 179, 180, and 237 misnumbered 277, 279, 280, and 337, respectively. Characteristic minor embrowning of some leaves; otherwise fine copy, in original blind-ruled, unlettered sheep. From the library of the eminent pharmacologist Emil Starckenstein (1884–1942?), with his bookplate.

THE ONLY work by Stahl entirely devoted to the materia medica, printed here for the first time from one of his manuscripts. Numerous chemicals made or extracted from animal, plant, or mineral sources are described together with their medicinal qualities. The foreword claims that a considerable number of the preparations are new. Second and third editions appeared (Dresden, 1731 and 1744). The first edition is very rare. (Blake, 430; Ferchl, 513; Partington, II, 662)

STAHL, Georg Ernst

Neu-verbesserte Lehre von den Temperamenten. Welche bey dieser neuen Auflage mit dem Zweyten Theil, der von Veränderung der Temperamenten handelt, vermehret worden. . . . Leipzig: Bey Caspar Jacob Eysseln. 1734.

Third edition? Two parts in 1 vol. 8vo. I: 4 leaves, 104 pp. II: 48 pp. With title page to each part. Fine copy. Bound with: Stahl, G. E., *Chymia rationalis et experimentalis* (Leipzig, 1729), and 3 other works by Stahl.

A WORK PRIMARILY of medical interest on human temperament. It is also of chemical interest, with references to mineral waters, their composition, curative properties, etc. There was an earlier German edition of 1723 (Blake, 430). Rare. Not in the usual bibliographies.

STAHL, Georg Ernst

Opusculum Chymico-Physico-Medicum, seu schediasmatum a pluribus annis variis occasionibus in publicum emissorum nunc quadantenus etiam auctorum et deficientibus passim exemplaribus in unum volumen iam collectorum . . . Halle: Typis & Impensis Orphanotrophei. 1715.

First edition. 4to. 4 leaves, 856 pp., 20 leaves (index, last leaf blank). Engraved portrait frontispiece of Stahl. Title page in red and black, with small copperplate vignette. Very fine copy, in original blind-ruled speckled calf, title gilt-lettered on spine.

STAHL (1660–1734), who studied medicine at Jena under the well-known iatrochemist Georg Wolfgang Wedel, is fully discussed by Partington (II, 653–686). The present collection of almost all of Stahl's early works published between 1683 and 1712 includes his writings on assaying and the *Zymotechnia fundamentalis* (1697), in which is found the first statement of the phlogiston theory and his theory of fermentation. Partington describes Stahl as "one of the outstanding chemists of the eighteenth century." "Stahl was an epoch-making man both in medicine and in chemistry" (Ferguson [II, 399], who cites only the second edition [Halle, 1740] of the present work). Lester King (D.S.B., XII, 599–606) gives a good account of Stahl's considerable influence on the progress of medicine and chemistry in the eighteenth century. (Blake, 430; Bolton, 847; Duveen, 559–560; Ferchl, 513; Neu, 3904; Partington, II, 661; Poggendorff, II, 980; Smith, 463)

STAHL, Georg Ernst

Stablii Propemptica Inauguralia.
ca. 1684–ca. 1716.

First editions. 73 items, 4to., published at various places. Very fine copy in contemporary vellum.

A VOLUME OF medical, iatrochemical, and balneological interest, containing very rare speeches and doctoral dissertations by pupils of Stahl. Some of his students became distinguished physicians and pharmaceutical chemists. Included are works by J. H. Volhart, G. Sachsen, J. Cober, G. G. Koehler, J. A. Hammerer, G. Meyer, J. T. Schwartz, C. F. Richter, D. G. Pauli, H. D. Oheimb, E. G. Struve, J. S. Holl, J. J. Ehwald, P. C. Richter, J. Richter, B. Wichers, C. P. Schmidt, J. C. Daumius, M. A. Sultze, J. D. Gohl, J. Emricus, J. W. Loges, J. Burchart, C. Meisner, G. S. Raesch, G. Glockengiesser, J. P. Gaetke, J. Tottinus, J. F. Koenig, J. D. Loth, E. Brunner, H. P. Juch, G. W. Beyer, G. F. Faeschke, L. F. Gualther, M. Alberti, J. S. Carl, A. Hoffman, J. G. Brebiss, J. P. Reineccius, J. C. Kundtmann, A. Koelichen, J. J. Reich, J. P. Pauli, G. D. Coschwitio, J. C. Tieffenbach, L. A. Labach, E. C. Lange, C. A. Richter, A. H. Faschi, M. Alberti, G. S. Liebzeit, C. Berghauer, J. G. Titius, J. M. Trost, J. C. Stempel, G. H. Ayn, G. Clacius, G. S. Liebezeit, C. F. Hunold, J. S. Hecht, N. F. Englert, J. F. Donzelina, C. F. Eckstein, B. Viebeg, C. A. Winckler, G. F. Steiner, J. A. Wendt, H. Gerngross, E. A. Uderstadt, B. F. Jacobi, P. H. Baertner, and J. Strehz. Some of these

works are listed in Manget (*Bibliotheca Scriptorum Medicorum*, 1731, 2 vols.), and several are in the Wellcome Library.

STAHL, Georg Ernst

Traité du Soufre, ou Remarques sur la Dispute qui s'est élevée entre les Chymistes, au sujet du Soufre, tant commun, combustible ou volatil, que fixe, &c. Traduit de l'Allemand de Stahl.

Paris: Chez Pierre-François Didot le jeune, Quai des Augustins, à Saint-Augustin. 1766.

First French edition. 12mo. 4 leaves, 392 pp. Fine copy, in original mottled calf, spine richly gilt, maroon morocco label.

THE FRENCH translation by Baron Paul Thury d'Holbach of Stahl's important treatise on sulphur, which appeared earlier under the title *Zufällige Gedancken und nützliche, Bedencken über den Streit von dem sogenannten Sulphure* (Halle, 1718; 2nd edition, Halle, 1747). The present French edition contains the "best and most readable exposition" (Guerlac) of Stahl's phlogiston theory. The translator has added an interesting preface and a comprehensive index. The German editions have no index. For a detailed discussion of this work, see H. Metzger, *Newton, Stahl, Boerhaave et la Doctrine Chimique* (Paris, 1930, pp. 163–179), and H. Guerlac, "Some French Antecedents of the Chemical Revolution" in *Chymia*, 5 (1959), pp. 104–108. The theory of phlogiston and this work are also discussed by Partington (II, 665 et seq.). (Caillet, 10342; Cole, 1248; D.S.B., XII, 606; Ferchl, 514; Ferguson, II, 399 [wrong date: 1776; not in Young Coll.]; Ferguson Coll., 669; Partington, II, 661; Smith, 464)

STAHL, Georg Ernst

Zymotechnia Fundamentalis oder Allgemeine Grund-Erkänntniss der Gährungs-Kunst . . . und mit einem neuen Chymischen Experiment, wie ein wahrer Schwefel durch Kunst zum Vorschein zu bringen; wie auch mit andern nützlichen Erfahrungs-Proben und Anmerckungen dem Publico mitgetheilet werden. . . . Aus dem Lateinischen ins Teutsche übersetzt.

Stettin & Leipzig: Verlegts die Kunckelsche Handlung. 1746.

Second edition in German. 8vo. 11 leaves, 304 pp. With folding printed title page (date slightly shaved). Fine copy. Bound with: Stahl, G. E., *Chymia rationalis et experimentalis* (Leipzig, 1729), and 3 other works by Stahl.

ONE OF the earliest of Stahl's works to discuss phlogiston, the substance supposedly contained in matter that makes it burn. Primarily on chemical and biological fermentation

processes, the book first appeared in Latin (Halle, 1697) and later was translated into German (Frankfurt & Leipzig, 1734). Some of Stahl's earliest experiments relating to phlogiston appear in this work (p. 176 ff.), and he refers to the experiments of Robert Boyle: e.g., the violent reaction of oil of vitriol with turpentine. The formulation of the phlogiston theory, first conceived by Johann Becher, was due to his pupil, Stahl, who believed "that combustible substances contain an ignitable matter, the terra pinguis of Becher. To this Stahl gave the name phlogiston" (Leicester & Klickstein, *Source Book in Chemistry, 1400–1900*, 1952, p. 58). Although erroneous, the phlogiston theory was the first unifying chemical hypothesis and dominated chemistry until overthrown by the quantitative experiments of Lavoisier later in the eighteenth century. An important milestone work. Bolton, Cole, and Edelstein cite only the first German edition. (Ferchl, 513; Ferguson Coll., 669; Partington, II, 659)

STANLEY, Thomas

The History of Philosophy: containing the Lives, Opinions, Actions and Discourses of the Philosophers of every Sect. Illustrated with the Effigies of divers of them. . . .

London: Printed for Thomas Bassett, at the George in Fleet-Street, Dorman Newman, at the Kings Arms, and Thomas Cockerill, at the Three Legs in the Poultry. 1687.

Second (first complete) edition. Folio. 13 leaves, 1–228; 351–587, (1), 737–960 pp.; 8 leaves, 1029–1091, (1) pp. (pagination erratic, but complete). Title page in red and black. With 26 beautifully engraved portraits (nearly full page) and 3 quarter-page vignettes. Frontispiece of Stanley lacking; otherwise very fine copy, in original paneled calf, brown morocco label.

STANLEY (1625–1678), a classical scholar, graduated M.A. from Pembroke Hall, Cambridge, in 1641 (see D.N.B.). Long a standard reference source, this work originally appeared in four volumes over a period of five years (1655–1660). In addition to containing much valuable biographical information, the principal features of the philosophies of the almost one hundred personages are discussed. Each of the nineteen main sections covers a distinct school of philosophy. Of scientific interest are the doctrines of Anaxagoras, Aristotle, Democritus, Diogenes, Epicurus, Euclid, Plato, Pythagoras, Theophrastus, Zoroaster, et al. Numerous topics of chemical importance are discussed: e.g., atomic theory, elements (air, earth, fire, water), metals, minerals, and stones. This volume also contains the second printing of *The history of the Chaldaick philosophy* (first edition, 1662), with separate divisional title page. Third (1701) and fourth (1743) editions of the present work appeared, the latter in two quarto volumes. (Watt, II, 875p; Wing, S5239)

STAPHORST, Nicolaus

Officina Chymica Londinensis sive Exacta notitia Medicamentorum Spagyricorum, quae apud Aulam Societatis Pharmaceuticae Londin. praeparantur, & Venalia prostant. Consilio Pharmacopaeorum & Approbatione Colegii Medicorum Londinensium exhibitum. Opera & Studio Nicolai Staphorst, Oper. Chym. dict. Societatis.

(London:) Prostant venales spud Guiliel. Miller, ad Insigne Glandis Aureae in Coemeterio D. Pauli. 1685.

First edition. 12mo. 5 leaves, 145, (1) pp., 15 leaves. Divisional title page following signature N6: *Catalogus medicamentorum*. Fine, crisp copy, in contemporary unlettered calf, rebacked.

A RARE PHARMACEUTICAL chemical work, arranged alphabetically, in which the preparations of medicinal chemicals (many of them recognizable compounds) are described. At the end, with separate title page, is a twenty-eight-page list of the inorganic and organic preparations to be found in the laboratory of the Royal College of Physicians, in London. This list is historically important as it includes a number of chemicals that are still in use in modern pharmacology. Staphorst (fl. seventeenth century), of Hamburg, was director of the laboratory of the College of Physicians (ca. 1685–1699). “He was enthusiastically interested in his practical work, of the results of which this book may be regarded as a summary” (Ferguson). A reprint, omitting the dedication, preface, and license, was published with the same title (Hamburg, 1686; see Ferchl, Ferguson, Neu, Watt). The Wellcome Library has a later reprint (London, 1697; Wing, S5254A). (Cushing, S386; Duveen, *Supplement*, 365; Ferguson, II, 401 [not in Young Coll.]; Ferguson Coll., 670; Watt, II, 875s; Wing, S5254)

STARKEY, George

George Starkey's Pill Vindicated from the unlearned Alchymist and all other pretenders. With a brief account of other excellent Specifick Remedies of extraordinary Virtue, for the honour and vindication of Pyrotechny.

N.p., n.d.

First edition. 8vo. 16 pp. This tract has no title page (which is correct) and bears the signature “C” at the bottom of page 1. Pristine copy, in contemporary calf. Bound with: *Collectanea Chymica: A Collection of Ten Several Treatises in Chymistry* (London, 1684).

DUVEEN DESCRIBES this as “an excessively rare little tract which bears no date or printer’s or publisher’s name.” It is dated by Duveen as “London? 1660?” However, that is incorrect, as *The Unlearned Alchymist His Antidote* (London, 1660), by Richard Mathews, is mentioned, as is George

Kendall’s *An Appendix to the Unlearned Alchymist* (London, 1663?). This tract was probably printed in 1663, being an immediate response by Starkey to Kendall’s book, in which he also stated that he “knew the composition of Mathews pill in the year 1651.” (Duveen, 140, 563; Wilkinson, *Ambix*, XI [1963], 141; Wing, S5283)

STARKEY, George

Natures Explication and Helmont's Vindication. Or a short and sure way to a long and sound Life: being a necessary and full Apology for Chymical Medicaments, and a Vindication of their Excellency against those unworthy reproaches cast on the Art and its Professors (such as were Paracelsus and Helmont) by Galenists, usually called Methodists. Whose Method so adored, is examined, and their Art weighed in the ballance of sound Reason and true Philosophy, and are found too light in reference to their promises, and their Patients expectation. The Remedy of which defects is taught, and effectual Medicaments discovered for the effectual cure of all both Acute and Chronical Diseases. . . .

London: Printed by E. Cotes for Thomas Alsop at the two Sugar-loaves over against St. Antholins Church at the lower end of Watling-Street. 1657.

First edition. 8vo. 32 leaves, 336 pp. Fine copy, in original paneled calf, rebacked, spine gilt-lettered and dated.

ONE OF the most interesting of the English-speaking alchemists, Starkey (Storkey or Stirke, 1627–1665) was born in Bermuda of Scottish parents and graduated at Harvard (M.A., 1646). While in America he met a man pseudonymously known as Eirenaeus Philaletha, with whom he is sometimes confused, although he only edited his works. In 1650 Starkey emigrated to England, set up a medical practice in London, sold medicines, and wrote several medical books with a pronounced alchemical bias. “With the publication of *Natures Explication and Helmont's Vindication* (1657), Starkey entered the dispute between those physicians who adhered to the ‘Paracelsian compromise’ and those who advocated more frequent use of chemical remedies. Starkey’s book, an outspoken defense of Helmontian doctrines, was followed by *Pyrotechny Asserted and Illustrated* (1658)” (D.S.B.). In this iatrochemical work, Starkey praises chemical preparations and ridicules physicians who employ only galenic medicines. Not in Duveen, Neu, Partington, etc. (Cushing, S390; D.S.B., XII, 616; Ferchl, 515; Ferguson, II, 403 [not in Young Coll.]; Ferguson Coll., 672; Krivatsy, 11395; Wing, S5280)

[1]

George Starkey's P I L L
VINDICATED

*From the unlearned Alchymist and all
other pretenders.*

WITH

*A brief account of other excellent Specifick
Remedies of extraordinary Virtue, for
the honour and vindication of Pyrotechny.*

THat the Pill of Mr. *Richard Mathews*,
was in truth mine, and that he had
the receipt from me, as it is really
so, and known to very many, so
it is acknowledged by Mr. *Andrews*, Mr. *Ken-
nall*, and others, as in the *Appendix to the
unlearned Alchymist* may be seen, to which
also added an Epistle, owning, and avowing
the same.

The universality of it, was but a mistake
in the unlearned Alchymist, rather a shift he
was driven to, for the secret being rather a
mystery of preparation, than a bare receipt,
C was

STARKEY, George

Pyrotechny Asserted and Illustrated, to be the surest and safest means for Arts Triumph over Natures Infirmities. Being a full and free Discovery of the Medicinal Mysteries studiously concealed by all Artists, and onely discoverable by Fire. With an Appendix concerning the Nature, Preparation and Virtue of several specifick Medicaments, which are noble and succedaneous to the great Arcana. . . .

London: Printed by R. Daniel, for Samuel Thomson at the Whitehorse in S. Pauls Church-Yard. 1658.

First edition, first issue. 8vo. 9 leaves, 172 pp., 1 leaf (blank, lacking). Very good copy, in contemporary sheep, rebacked, maroon morocco label.

A SEQUEL TO Starkey's *Natures Explication* (London, 1657), the present work is an introduction to practical chemistry, as it applies to the preparation of medicinal chemicals. Starkey was a friend of Robert Boyle, to whom there is a four-page dedication: "To the Honourable, Virtuous, and most accomplished Gentleman, Robert Boyl Esq; my very good Friend." On page 76 he says: "In . . . 1644 I first began the studie of Chemical Philosophie . . . [and] . . . never repented my time bestowed." Newton owned a copy of this work, but its present location is unknown (see Harrison, no. 1553). A second issue appeared in 1658, which was re-issued in 1696. (Bolton, 1047; Cushing, S392; D.S.B., XII, 616; Duveen, 563; Edelstein, 2202; Ferchl, 514; Ferguson, II, 401; Ferguson Coll., 672; Fulton, 254; Krivatsy, 11396; Neu, 3916; Smith, 465; Thorndike, VII, 233; Watt, II, 876a; Wing, S5284)

STARKEY, George

A True Light of Alchymy. Containing, I. A Correct Edition of the Marrow of Alchymy, being a Celebrated Experimental Treatise, discovering the Secrets and most Hidden Mystery of the Philosophers Elixir, both in Theory and Practice. II. The Errors of a late Tract called, A short Discourse of the Quintessence of Philosophers, wherein is pretended to be set forth, how one Select Person might be made partaker of it by the Authors means, and others rightly Directed in prosecuting that Study. III. The Method and Materials pointed at, composing the Sophick Mercury, and Transmuting Elixir, in plain Terms, free from all Enigma's. The like never before Emitted to the World. . . .

London: Printed by I. Dawks for the Author. 1709.

First edition of this title. 12mo. 3 leaves, 97, (1) pp. Title page and divisional title (by Eirenaeus Philoponos Philalethes, p. 45) within double-rule border. Paper lightly embrowned; otherwise very good copy, in late-eighteenth-century half calf, boards, spine gilt-lettered and dated.

THE SOLE printing of this work, containing the second edition of *The Marrow of Alchymy* (pp. 1–88), the extremely rare first edition of which appeared in two parts (London, 1654–55). The "Detection of the Errors of a late Tract . . . of the quintessence . . . of Philosophers" (pp. 89–92) is followed by "The Method . . . Composing the Sophick Mercury, and Transmuting Elixir" (pp. 93–97). This edition, "printed for the author," may have been edited by one "W. Langham, Licensed Physician, . . . who by this sedulous Industry, careful Toil, and Study for many Years in the Chymical Art, hath attain'd the Knowledge of some rare and admirable Secrets" (advertisement, final page). Of Langham there is no mention in the bibliographies. Writing before 1906 Ferguson states that he had "never met with but one copy of the original edition of *The Marrow*, and only two or three of the present reprint." (Bolton, 1062; Duveen, 564; Edelstein, 2205; Ferchl, 545; Ferguson, II, 474; Ferguson Coll., 672; Neu, 3919; Wilkinson, *Ambix*, XI [1963], 151)

STAS, Jean-Servais

Nouvelles Recherches sur les Loix des Proportions Chimiques, sur les Poids Atomiques et leurs Rapports Mutuels.

Brussels: M. Hayez, Imprimeur de l'Académie Royale de Belgique. 1865.

First edition (Author's Separate). 4to. 311, (1) pp. Large folding engraved plate (apparatus for analyzing silver iodate) at end and 23 large figures in text. Fine, wide-margined, uncut copy, in original printed boards.

THE SECOND of the two great milestone works of Stas, in which he describes further experiments on the very accurate determination of atomic weights of the elements by chemical methods. A sequel to the *Recherches* (Brussels, 1860), it was presented to the Belgian Académie Royale on 14 January 1865. "The appearance of this monumental work, which will remain one of the classics of chemistry, created a great impression. Its effect persists to this day. It constituted a model and furnished a standard which each successive worker has striven to emulate, with the result that atomic weights today are among the best ascertained of physical constants" (Thorpe, *History of Chemistry*, II, 75–77). "His unique services in the determination of the atomic weights of the elements are universally recognised" (Meyer, *History of Chemistry*, 1906, p. 385). Very scarce. Not in Duveen, Edelstein, Thornton & Tully, Waller, etc. (Bolton, 849; D.S.B., XII, 620; Ferchl, 515; Morgan, 737; Partington, IV, 876–877; Smith, 465; Sondheimer, 1498; Sotheran, Cat. 773 [1919], 2626 ["Scarce"])

STAS, Jean-Servais

Untersuchungen über die Gesetze der Chemischen Proportionen über die Atomgewichte und ihre Gegenseitigen Verhältnisse. . . . Übersetzt von Dr. L. Aronstein.
Leipzig: Verlag von Quandt & Händel. 1867.

First edition in German. 8vo. xii, 347, (1) pp. Large folding engraved plate at end and 23 figures in text. Fine copy in original half cloth, pebbled boards, spine gilt-lettered. From the library of the famous nineteenth-century German chemist Dr. A. F. Holleman, with his name stamped on the front free endpaper.

THE RARE German translation of the monumental *Nouvelles Recherches* (1865), on Stas's painstaking determinations of the atomic weights of the elements. It incorporates part of the earlier *Recherches* (1860). Not in D.S.B., Duveen, Edelstein, Morgan, Partington, Thornton & Tully, Waller, etc. (Bolton, 850; Ferchl, 515; Smith, 465; Sondheimer, 1501)

STAS, Jean-Servais

Oeuvres Complètes.
Brussels: Librairie Européenne C. Muquardt. 1894.

First collected edition. 3 vols., roy. 4to. I: lv, (1), 855, (1) pp. II: vi, 854 pp. III: 3 leaves, 556 pp. Photographic frontispiece portrait of Stas in each volume. Fine, crisp copy in contemporary half morocco gilt, marbled boards.

THE FIRST collected edition of the complete works of one of the greatest nineteenth-century Belgian chemists, Stas, who died in 1891. Volumes I and III were edited by W. Spring, and volume II by Depaire. The frontispiece portraits show Stas at different ages. A fitting tribute and memorial, these volumes contain his invaluable contributions to the very accurate determination of the atomic weights of many elements by chemical means, his researches on organic and inorganic chemistry, various works on toxicology, etc. Volume I (pp. vii–lv) contains a detailed biography of Stas by W. Spring, and in volume III (pp. 543–556) there is a long list of subscribers, including many eminent chemists and other scientists, public figures, and celebrities of the period. A very important work, now scarce. Not in Edelstein, Ferchl, Morgan, Waller, etc. (Bolton, *First Supplement*, 394; D.S.B., XII, 620; Duveen, 564; Partington, IV, 877; Smith, 465; Sondheimer, 1500; Thornton & Tully, 220)

STAS, Jean-Servais

Recherches sur les Rapports Réciproques des Poids Atomiques.
Brussels: M. Hayez, Imprimeur de l'Académie Royale de Belgique. 1860.

First edition (Author's Separate). 8vo. 134 pp. Fine copy, uncut, in modern red quarter cloth, marbled boards, with original printed blue paper wrappers bound in. Presentation inscription in ink on half title: "A Monsieur Jacquemyns, membre de la chambre des représentants, témoignage affectueux de son dévoué J. S. Stas." Also bound in is a 3-page letter, dated 1 March 1861, to Jacquemyns from Stas, in which Stas says that this is an example of his latest work and that he looks forward to explaining to M. Jacquemyns at some future date the work and future projects that he is currently involved in.

A MILESTONE WORK in the history of chemistry, in which the first very accurate determinations of the atomic weights of various elements are described. Stas (1813–1891), professor in Brussels, first worked with Dumas on organic chemistry (phloridzin, acids, aldehydes, esters) and on the atomic weights of carbon, hydrogen, and oxygen (1840). He then developed very accurate methods for the determination of atomic weights (1860–65), and for many years Stas's values were by far the best. "Like Dumas, Stas had been inclined to accept Prout's hypothesis that atomic weights are whole-number multiples of the atomic weight of hydrogen. In 1860 he published his main work, *Recherches sur les rapports, . . . des poids atomiques*, a study devoted to a number of elements (N, Cl, S, K, Na, Pb, Ag) that were considered by Dumas to support Prout's hypothesis. . . . Stas demonstrated that . . . the atomic weights were neither multiples of unity, nor of one half . . . nor of one quarter." He therefore rejected Prout's hypothesis as untenable. "These accurate analyses provided a firm starting-point for the eventual discovery of the Periodic System" (T. I. Williams, *Biographical Dictionary of Scientists*, p. 491). Not in Bolton, Duveen, Edelstein, Morgan, Thornton & Tully, etc. (D.S.B., XII, 619; Ferchl, 515; Partington, IV, 876; Smith, 465; Sondheimer, 1496; Sotheman, Cat. 757 [1915], 15021 ["Scarce"])

STEELE, Peter

Disputatio Medica Inauguralis de Tartaro Emetico: . . . Ex Auctoritate . . . Gulielmi Robertson, . . . Pro gradu doctoris, . . . Petrus Steele, Britannus. Ad diem 12 Junii, . . .
Edinburgh: Apud Balfour, Auld, et Smellie. 1770.

First edition. 8vo. 2 leaves, 40 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of the British physician Steele (dates unknown), presented under the direction of William Robertson (1721–1793), principal of Edinburgh University. The history, preparation, properties, and medicinal uses of tartar emetic (potassium antimonyl tartrate) are described, with references to the works of Cullen, De Haen, Huxham, Macquer, Pringle, et al. Rare. Not in the usual bibliographies. (Waring, 240)

STEINBACH, Johann Christoph

Dissertatio Inauguralis Medica de Anglorum Sale Epsoniense vulgo dicto. Quam consensu et auctoritate gratiosi medicorum ordinis . . . praeside Dn. D. Herm. Paulo Iuchio . . . Pro licentia summos in arte medica honores et privilegia doctoralia . . . auctor et respondens Ioh. Christoph. Steinbach Franckohusano. In auditorio . . . die I. Julii MDCCXXXVI.

Erfurt: Typis Ioh. Christoph. Heringii Acad. Typogr. (1746).

First edition. 4to. 24 pp. Very good copy in brown half morocco antique, marbled boards, spine gilt-lettered and dated.

A COMPREHENSIVE DOCTORAL dissertation on Epsom salt (magnesium sulphate) and its occurrence, chemical reactions, and medicinal uses, with references to earlier and contemporary chemists (e.g., Hanckewitz, Hoffmann, Neumann, and Stahl). On page 19 the author (dates unknown) describes the discovery of the salt in a spring at Epsom by Nehemiah Grew in 1675 and his chemical experiments on it. The praeses was Hermann Paul Juch (1676–1756), professor of medicine and chemistry at the University of Erfurt, on whom see Ferchl (p. 261) and Poggendorff (I, 1205). Very rare. Unknown to Waring and not in the usual early chemical bibliographies.

STENDER, Raphael Hermann

Analecta de Antimonii Crudi et Antimonialium Praecipuorum Usu Medico. Dissertatio inauguralis . . . in Academia Georgia Augusta . . . XXIV Maii . . . Publicae censurae submittet Raphael Hermannus Stender Curonus.
Göttingen: Typis Joann. Christ. Dieterich. 1785.

First edition. 4to. 31, (1) pp., 1 leaf. Fine, crisp copy, with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DOCTORAL DISSERTATION on the preparation, chemical properties, and medicinal applications of compounds of antimony (e.g., oxide, sulphide, and antimony tartrate). The author traces the history of antimony compounds used in medicine, with references to the works of earlier and contemporary chemists (e.g., Ebell, Huxham, Kunckel, and Neumann). No biographical information on Stender has been located, and the praeses is not named. Not in the usual bibliographies. (Ferchl, 517; Waring, 238)

STEPHENSON, George

A Description of the Safety Lamp, invented by George Stephenson, and now in use in Killingworth Colliery. To which is added, an Account of the Lamp constructed by Sir Humphrey Davy. With engravings.

London: Printed for Baldwin, Cradock and Joy; Archibald Constable and Co. Edinburgh; and E. Charnley, Newcastle. 1817.

First edition. 8vo. 16 pp. With 4 engraved plates. Fine copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with contemporary blue wrappers bound in.

THE SON of Robert Stephenson, a colliery fireman, George Stephenson (1781–1848) followed his father's occupation. He became an engineer and later gained fame as a pioneer of steam railways by constructing the first successful locomotive in 1825. His engine, "Locomotion," hauled the first train on the Stockton-Darlington railway and added greatly to his reputation. The present work first describes Stephenson's safety lamp, which was designed to eliminate the explosions of methane and other gases at Killingworth Colliery. On 15 October 1815 his first lamp was tried, and on 4 November and 30 November improved second and third versions were tested. Unknown to Stephenson, Humphry Davy had been working on the same subject, and, practically at the same time that Stephenson's long experiments proved successful, Davy brought out his well-known gauze safety lamp. Plate 4 shows the Davy lamp, and Stephenson defends the priority of his invention (pp. 12–16). It is now clear that the two inventions were made completely independently and were each valid in their own right. For his invention of the safety lamp Stephenson was awarded 1,000 pounds, raised by public subscription. Davy's lamp "became known as the 'Davy,' and Stephenson's as the 'Geordie'" (Zeitlinger). (Partington, IV, 65; Poggendorff, II, 1003; Singer, *History of Technology* [1958], IV, 96; Sotheran, Cat. 757 [1915], 15036 ["Very Scarce"]; Williams, *Biographical Dictionary of Scientists* [1969], 494)

STISSER, Johann Andreas

Actorum Laboratorii Chemici auctoritate atque auspicio . . . Ducum Brunsv. et Lyneburg. In Academia Julia editorum Specimen Primum (-Tertium). Medico-Chemica observata quaedam rariora exhibens.

Helmstädt: Typis & Sumptibus Georgii Wolfgangi Hammi, Acad. Typogr. 1690, 1693, 1698.

First edition throughout. Three parts in 1 vol. 4to. I: 3 leaves + 28 leaves. II: 28 leaves. III: 31 leaves (last blank lacking). With beautiful copperplate frontispiece, dated 1690, depicting chemical apparatus. All parts unpaginated. Woodcut of lizard (part II, sign. D2). Fine copy, in contemporary white boards.

STISSER (1657–1700) was professor of chemistry and medicine at Helmstädt, where he published these three parts of the *Acta* of the chemical laboratory. In the first part he deals with the transmutation of metals, alchemical theory, and potable gold. The second and third parts are primarily on physical phenomena and iatrochemistry, with references to

Bohn, Borrichius, Boyle, Charas, Le Mort, Libavius, Tachenius, Zwelfer, et al. These three parts were reissued with a general title page dated 1701 (see Bolton, 852; Waite, 303). Rare. Not in Duveen, Edelstein, Ferguson, Neu, Smith, etc. (Baumer, *Bibl. Chemica*, 25; Ferchl, 518; Kopp, *Geschichte der Chemie*, IV, 171; Krivatsy, 11451; Partington, II, 378; Poggendorff, II, 1013; Thorndike, VIII, 400–401)

STOCK, Johann Christian

Exercitationes Physicae distributae in capita, quibus Philosophiae Naturalis Principia concise pertractantur.
Jena: Sumptibus Christiani Henrici Cuno, Bibliop. 1735.

First edition. 4to. 4 leaves, 155, (1) pp. Woodcut on title, woodcut capitals, and ornamental headpieces. Very good copy in original boards (worn), old manuscript title in ink on spine.

AN IMPORTANT introductory work encompassing physics, chemistry, meteorology, astronomy, and some aspects of medicine. The 542 sections cover properties of matter, motion, hydrodynamics, physical mixing and chemical combination, calcination, fire, heat, cold, properties of gases, light and colors, magnetism, sound, etc. Numerous references to contemporary authors are cited: e.g., Balduin (on phosphorescence), Boyle, Descartes, Hauksbee, Homberg, Newton, Stahl, and Teichmeyer. Stock (1707–1759), M.D. (Jena, 1729), taught physics and medicine at the University of Jena. The book is dedicated to Hermann Friedrich Teichmeyer (1685–1744), the famous professor of physics at Jena. Rare. Not in the usual bibliographies. (Poggendorff, II, 1013)

STÖCKHARDT, Julius Adolph

Chemical field lectures for agriculturists. By Dr. Julius Adolphus Stöckhardt, Professor in the Royal Academy of Agriculture at Tharand. Translated from the German. Edited, with notes, by James E. Teschemacher.
Cambridge (Massachusetts): John Bartlett. 1853.

First English translation by Teschemacher. 8vo. 8 leaves, 242 pp. Fine copy in contemporary blind-stamped cloth, spine gilt-lettered.

STÖCKHARDT (1809–1886), professor of chemistry at Tharandt, published several books on agricultural chemistry, on which see Ferchl (518). His most important work, *Die Schule der Chemie* (first ed.: Braunschweig, 1846) passed through many editions in German (Bolton cites twenty editions up to 1900). It was translated into French, Dutch, Bohemian, Czechoslovakian, Swedish, Polish, Russian, and English. Bolton (855) cites an American edition translated from the German by C. H. Pierce (Cambridge, Mass., 1850) and an English edition (by an anonymous translator), which

appeared in London, 1851. This American edition of 1853, by Teschemacher, appears to be unrecorded. The book is an excellent survey of agricultural chemistry, yet is unnoticed by C. A. Browne in his *Source Book of Agricultural Chemistry* (Waltham, Mass., 1944). No edition in any language of Stöckhardt's important work is cited by Cushing, Duveen, Morgan, Osler, Partington, Waller, et al.

STÖCKHARDT, Julius Adolph

The Principles of Chemistry, illustrated by Simple Experiments. By Dr. Julius Adolph Stöckhardt, . . . Translated from the fifth German edition. By C. H. Peirce, M.D. New edition, carefully revised.

London: Henry G. Bohn. 1852.

8vo. 520 pp. With 217 woodcut figures in text. Very good copy in original half calf, gilt, marbled boards, green morocco label, gilt.

THE ENGLISH translation of *Die Schule der Chemie*, taken from the fifth German edition (Braunschweig, 1850). In his preface the translator, Pierce, states that the book was rendered into English "at the recommendation of Professor Horsford, as a good introduction to the study of chemistry." The original English translation appeared at Cambridge, Massachusetts, in 1850. Bolton (p. 855) lists only a London, 1851, edition, so the present is probably the second London edition. Scarce. Not in Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson Coll., Morgan, Partington, Sondheimer, Waller, etc. (Smith, 467)

STORER, Francis Humphreys

First Outlines of a Dictionary of Solubilities of Chemical Substances. By Frank H. Storer.
Cambridge (Mass.): Sever and Francis. 1864.

First edition. 8vo. xi, (1), 713, (1) pp., 1 leaf (errata), 8 pp. (appendix). Printed in double columns throughout. Good copy in original pebbled black cloth, spine gilt-lettered.

THE EARLIEST comprehensive encyclopedia on the solubilities of inorganic and organic compounds, fully documented with references to the original literature. A milestone in the history of chemical reference works. Storer (1832–1914) was a noted American chemist who studied in Europe under Bunsen, Richter, Stöckhardt, and Kopp. His biography is in W. D. Miles, *American Chemists and Chemical Engineers*, 1976, pp. 461–462). Scarce. Not in D.S.B., Duveen, Edelstein, Morgan, Partington, Waller, etc. (Bolton, 77; Miles, 461; Smith, 468)

STRABO

Geographicorum Commentarios, olim, ut putatur, à Guarino Veronense, & Gregorio Trifernate latinitate donatos, iam vero denuo à Conrado Heresbachio ad fidem Graeci explaris, autorumq(ue), qui huc facere videbantur, no(n) aestimandis laborious recognitos. . . .

(Colophon:) Basel: In aedibus Valentini Curionis, Mense Martio. 1523.

First Heresbach edition. Folio. 18 leaves, 566 pp., 1 leaf. Title within wide woodcut border (containing portraits of Aristotle, Plato, Socrates, Pythagoras, Pliny, Plutarch, et al.). Numerous large historiated woodcut capitals, head- and tailpieces. Roman letter. Early signature of March. Francisci Sherardin with small armorial wax seal on title page; otherwise fine, crisp copy, in original blind-stamped vellum over oak boards, with 2 brass clasps and catches.

ALTHOUGH REMEMBERED chiefly as a geographer, Strabo of Amasia (B.C. 63–A.D. 25) was also a historian. His celebrated *Geographia* contains much of interest and importance to the historian of science and contributes to our knowledge of ancient biology, botany, geology, mathematics, and other subjects. Manuscripts of this work circulated for many centuries, and Partington (vol. I) discusses Strabo's references to topics of chemical interest (e.g., minerals, metals, salts, and dyes). The first printed edition (Rome: Conrad Sweynheim and Arnold Pannartz, ca. 1469) was followed by several incunable reprints, and the text was translated into Greek and appeared early in the sixteenth century (Venice: Aldus, 1516). The present edition is based on the Aldine printing and is the first to contain notes by the humanist Conrad Heresbach (1496–1576), who collaborated with Erasmus. The beautiful woodcuts are excellent examples of the genre by Hans Holbein, executed during his period in Basel when he provided brilliant decorations and capitals for a group of distinguished printers there, including Bebel, Cratander, Episcopius, Oporinus, and Petri. Very rare. (British Library, *S.T.C. German Books, 1455–1600*, p. 835)

STRAUSS, Lorenz

Cursus Medicus, per Universum Artis Medicae Campum Institutus, & disputationibus absolutus. Praeside Laurentio Straussio, . . . Annexa est ejusdem oratio inauguralis de Rosa. Giessen: Typis Josephi Dieterici Hampelii, Acad. Typogr. Ordin. 1663.

First edition. 4to. 58 pp. Fine copy, in contemporary unlettered vellum. Bound with: Rolfinck, W., *Chimia in artis formam redacta* (Jena, 1661), and works by J. C. Friederic and G. W. Wedel.

THE SYLLABUS of medical training at the University of Giessen, with commentary on the chemical and pharmaceutical content of the course. Strauss (1603–1687) studied at Jena (1652), then at Montpellier (1656), and finally at Heidelberg (1658). As professor of medicine at Giessen (1660), he trained several famous physicians (e.g., Georg Horst, Johann Wilhelm Mogio, and Johann Peter Welcker). Abstracts of their disputations are included in this work. Strauss contributed to the *Theatrum Sympatheticum* (1660 and 1662) and, in addition to medical works, translated from Italian into Latin a book by Fabio Glissentini on the philosopher's stone: *Brevis tractatus in quo de lapide philosophorum moraliter disseritur* (Giessen, 1671). Extremely rare. Unrecorded by the usual authorities.

STREHZ, Johann

Dissertatio Inauguralis Medico-Chymica, de Vitrioli Elogiis Chymico-Medicis Aestimandis . . . praeside . . . Georgio Ernesto Stablio. . . Pro doctoris gradu . . . d. (blank) MDCCXVI. . . Johannes Strehz, Freyenw. Pom. Pract. Hamb.

Halle: Typis Christ. Henckelii, Acad. Typ. (1716).

First edition. 4to. 1 leaf, 62 pp. Fine copy. Bound with: Stahl, G. E., *Propemptica Inauguralis* (ca. 1684–ca. 1716).

THE DOCTORAL dissertation of Strehz, presented under the direction of G. E. Stahl, on the chemical and medicinal properties of vitriols. Specifically described are sulphuric acid and the sulphates of copper, iron, mercury, zinc, and alum. The works of numerous authors are cited (e.g., Basil Valentine, Becher, Glauber, Helmont, Monte-Snyder, Paracelsus, Rochas, and Zwelfer). There are references to the philosopher's stone and transmutation. Hydrochloric acid and nitric acid and their salts are also discussed. A long list of dissertations by students of Stahl is given by Manget (*Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 304) but not this title. No reference to this work or the author has been located.

STROTHER, Edward

Dr. Radcliffe's Practical Dispensatory. Containing a Complete Body of Prescriptions, fitted for all Diseases Internal and External, digested under proper heads; selected I. From various authors. II. From the best prescriptions chiefly used by Dr. Radcliffe, regularly placed under each corollary. III. An exact catalogue of all the prescriptions, recited in the London, Bates's, and Fuller's Dispensatories; with remarks and observations explaining the virtues and right application of each recipe: and a large index to the whole. . . .

London: Printed for C. Rivington, at the Bible and Crown in St. Paul's Church-Yard. 1721.

Fourth edition. 8vo. 4 leaves, 464 pp., 6 leaves (last blank). Engraved frontispiece of John Radcliffe, M.D., at age 64 (M. van der Gucht sculp.). Good copy, in original paneled calf, rebounded, green morocco label, spine dated.

A NORTHUMBRIAN, STROTHER (1675–1737), M.D. (Utrecht, 1720), was admitted a licentiate of the Royal College of Physicians (1721). He published several medical books (see Munk, II, 77), including the present work, which is based on the *Pharmacopoeia Radcliffeana; or, Dr. Radcliffe's Prescriptions* (London, 1716). The celebrated physician to Queen Anne and many of the nobility, John Radcliffe (1650–1714) effected a number of remarkable cures with his medicines, some of which contained unusual components derived from animals, plants, and minerals. He became very wealthy and bequeathed money for the building of the Radcliffe Observatory and Infirmary in Oxford, as well as for the enlargement of St. Bartholomew's Hospital in London. An important pharmaceutical chemical work, containing a section on the analysis of mineral waters. (Blake, 437; Neu, 3946; Smith, 402; Watt, II, 787t)

STRUMPPFF, Christoph Carl

Dissertationem Inauguralem Chémico-Medicam Nonnulla de Sublimationis Apparatu Exhibentem pro Doctoris Gradu ad diem XXI. April. MDCCXXXV. Publice defendet auctor Christophorus Carolus Strumpff Ulmensis.

Halle: Typis Jo. Christiani Hendelii, Acad. Typ. (1745).

First edition. 4to. 4 leaves, 30 pp. With large folding copperplate (8 figures of furnaces, retorts, etc.). Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DOCTORAL DISSERTATION describing improved apparatus for purifying chemicals by sublimation, with references to many contemporary chemists (e.g., Boerhaave, Bohn, Becher, Stahl, and Teichmeyer). Strumpff (dates unknown), of Ulm, worked on the apparatus for seven years under Professor Johann Heinrich Schulze (1687–1744), whom he mentions in the text. Strumpff traces the history of sublimation as a technique for purifying chemicals from early times (e.g., Dioscorides and Pliny), through the Arabic period (e.g., Avicenna and Geber), to the mid-eighteenth century. A rare work on an important chemical topic. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Watt, etc. (Ferchl, 521; Waller, 9327)

STRUTZ, Johann

Dissertatio Physico Oeconomica de Sale Communi, . . . Sub Praesidio . . . Gustavi Harmens, . . . pro summis in Phil. Honoribus publicae ventilationi qua par est modestia submittit . . . Johannes Strutz Scanus. Die XVI Junii Anno MDCCXLVIII.

Lund: Typis Caroli Gustavi Berling, Directoris Officinae Typographicae Londini Gothorum. (1748).

First edition. 4to. 2 leaves, 16 pp. Fine copy, in maroon quarter cloth antique, marbled boards, spine lettered in gilt: Harmens. Dissertations. 1748–1760.

A DISSERTATION on the history, importance, physical and chemical properties of common salt (sodium chloride), presented under the direction of Gustav Harmens (1699–1774), professor of medicine and chemistry at the University of Lund. The works of Boerhaave, Lemery, Thurneisser, and especially Hoffmann are cited. The occurrence of salt in mineral springs and deposits, seawater, and other locations is described. Not in Blake, Waring, Wellcome, etc. (Bolton, 515; Ferchl, 214; Poggendorff, I, 1019; Watt, I, 467j)

STRUVE, Otto Wilhelm

Essais or Réflexions Intéressantes Relatives à la Chymie, la Médecine, l'Économie et le Commerce, avec une Dissertation sur la Question: Si les causes des maladies de l'ame & des nerfs ont toujours leur siege dans le cerveau? Par Mr. Oth. Guil. Struve, Médecin praticien, Membre ordinaire de la Société Économique de Lausanne, & Membre honoraire de la Société Économique de Berne.

Lausanne: Chez Franç. Grasset, & Comp. 1772.

First edition. 8vo. 4 leaves, 223 pp. Very fine copy, in almost mint condition, entirely uncut, in the original boards.

THE AUTHOR was a member of the scientific dynasty of the Struves. There is some confusion about his forenames: on the title page of this work he is given as Otto Wilhelm, but the dedication is signed W. Otto. Caillet gives his names as O. W., while Ferchl reverses the order. Divided into six sections, the book discusses the type of alcohol produced from the skins of grapes after the last pressing, different economic and patriotic opinions, a projected series of lectures on chemistry oriented toward economics and applied science and technology, a description of two newly discovered medicines reputed to cure epilepsy and scrofula, a plan for a novel treatment of nervous disorders, and a discussion on the origin of headaches and other bodily pains. By far the longest section is on chemistry (pp. 40–111) and chemical technology, and the means by which industrial processes may be improved and made more profitable. Dyeing,

bleaching, metallurgy, distillation, the manufacture of salts, etc., are discussed, with references to the works of contemporary chemists (e.g., Hoffmann, Marggraff, Réaumur, Spielmann, Stahl, and Wallerius). The section on alcohol (pp. 1–25) is also of chemical interest. A very scarce book, which is not mentioned by Bolton, Cushing, Duveen, Edelstein, Ferguson, Guaita, Morgan, Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Caillet, 10414; Ferchl, 522)

STUBBE, Henry

The Plus Ultra reduced to a Non Plus: or, a Specimen of some Animadversions upon the Plus Ultra of Mr. Glanvill, wherein sundry Errors of some Virtuosi are discovered, the Credit of the Aristotelians in part Re-advanced, and Enquiries made about the Advantages of the Ancient Education in England above the Novel and Mechanical. The old Peripatetick notion of the Gravity of the Air, and the Pressure of the aerial Columne or Cylinder. The Deceitfulness of Telescopes. The World in the Moon, and a Voyage thither. The Original and Progress of Chymistry. The Use of chymical Medicaments. The Usefulness of the Peripatetick Philosophy in reference to the Practice of Physick. The Original and Progress of Anatomy. The First Inventor of the Circulation of the Blood. The Transfusion of Blood, the first Proposers and Inventers thereof; and its Usefulness. The different Nature of the Blood, and the variety of Phaenomena appearing upon the burning thereof, and the mixing of it with several liquors. Some Trials in order to a discovery of the Nature of the English Baths. By Henry Stubbe, Physician at Warwick . . .

London: Printed for the Author. 1670.

First edition. 4to. 8 leaves, 1 leaf (variant title page), 179, (1) pp. Fine, crisp copy, in contemporary blind-ruled unlettered calf. From the library of Andrew Simson (1638–1712), with inscription in ink on recto of first free endpaper by one of Simson's contemporaries: "This book I borrowed of Mr. And. Symson now dead 1712, & if it pleased me it was to have cost 9 or 10 pence."

JOSEPH GLANVILL'S *Plus Ultra: or, the progress and advancement of knowledge since the days of Aristotle* (London, 1668) praised the discoveries of the recently formed Royal Society. Stubbe (1632–1676) was less enthusiastic, however, and, although an admirer of the Royal Society's accomplishments, in the present book he attacked Glanvill and the society. As the title indicates, some topics of chemical interest are covered. On Andrew Simson, former owner of this copy, see the D.N.B. The variant title page (*A Specimen of Some Animadversions . . .* London, 1670) is erroneously listed as a separate title by Wing, S6067. (Wing, S6063)

STUKELEY, William

The Philosophy of Earthquakes, Natural and Religious. Or an Inquiry into their Cause, and their Purpose. . . . The Third Edition. To which is added, Part III. on the same Subject.

London: Printed for A. and C. Corbett, at their Correct State Lottery-Office over-against St. Dunstan's Church, Fleet-Street. 1756.

First book editions of parts II & III, third edition of part I. 3 parts in 1 volume, 8vo., each part with title page. I: 63, (1) pp. II: 3,4 pp. III: 42 pp. Fine copy in quarter calf antique, marbled boards, maroon morocco label, spine dated.

THE ANTIQUARY Stukeley (1687–1765), M.D. (1719), F.R.C.P. (1720), F.R.S. (1717), originally presented the substance of these papers on earthquakes to the Royal Society in March and November 1750 and in December 1756. This volume contains the papers in book form. Part I comprises a history and discussion of earthquakes, ascribing their origin to various chemical and physical causes: e.g., fermentation of pyrites, subterranean fires, sulphurous explosions underground by reaction with niter, and electrostatic shocks. After considering all likely possibilities, Stukeley attributes "earthquakes to electrical disturbances" (Zittel). Part II continues in a scientific and religious theme. Part III deals with meteorological effects of earthquakes. There are many references to Franklin, Hales, Newton, and other investigators. (Adams, 411; Geikie, 272; Poggenдорff, II, 1041; Roller & Goodman, II, 473; Ward & Carozzi, 2135; Watt, II, 887; Woodward, 17; Zittel, 46)

STUKELEY, William

The Philosophy of Earthquakes, Natural and Religious, or an Inquiry into their Cause, and their Purpose. . . .

London: Printed for A. and C. Corbett, at their Correct State Lottery-Office over-against St. Dunstan's Church, Fleet-Street. 1756.

First edition of part III, third editions of parts I and II. 3 parts in 1 volume. 8vo. I: 63, (1) pp. II: 34 pp. III: 42 pp. Fine copy, in quarter calf antique, marbled boards, maroon morocco label, spine dated.

STUKELEY (1687–1765), physician, antiquary, and later ordained minister, was a friend of Newton and F.R.S. A prolific author of medical and antiquarian books, he shared in the founding of the Society of Antiquaries and was its secretary. Delivered before the Royal Society, the present work discusses theories of the physical and chemical causes of earthquakes, with references to earlier and contemporary authors (Bartholin, Desaguliers, Hales, Newton, et al.). Earthquakes that have occurred in Great Britain and Europe are particularly noticed, as are those in other regions.

Stukeley believed that electrical disturbances in the atmosphere caused earthquakes, and his theory gained some support in Europe. For a discussion, see Geikie (*Founders of Geology*, 1905, pp. 272–273) and Zittel (*History of Geology and Palaeontology*, 1901, p. 46). The first edition of 1750 (Poggendorff, II, 1041) was quickly followed by the second later the same year (Wheeler Gift, 361). The present is the final and most complete edition. (Ward & Carozzi, 2135)

STURGEON, William

Scientific Researches, Experimental and Theoretical, in Electricity, Magnetism, Galvanism, Electro-magnetism, and Electro-chemistry. With copper-plates. By William Sturgeon . . . Published by subscription.

Dury: Thomas Crompton, Bookseller, Fleet-Street. 1651.

First edition. 4to. viii, (6), 563, (3) pp. With 19 full-page engraved plates (mainly electrical apparatus). Fine copy with wide margins, in original blind-stamped green ribbed cloth, spine gilt-lettered.

PRIMARILY A PHYSICIST, Sturgeon (1783–1850) carried out important work in magnetism, electricity, and electrochemistry. He published this collection of his papers in various scientific journals only a few weeks before his death. “This quarto volume contains the author’s description of his discoveries of the soft-iron electro-magnet (bar and horse-shoe), his electro-magnetic engine, commutator amalgamated zinc plates, study of atmospheric electricity by means of kites, fracture of Leyden jars, etc., the whole preceded by a history of electro-magnetism carried down to 1823” (Wheeler Gift). The subscribers include Michael Faraday, James Prescott Joule, John Newlands, and other important scientists. (D.S.B., XIII, 126; Ekelöf, 981; Gartrell, 989; Mottelay, 498; Partington, IV, 685; Roller & Goodman, II, 473; Ronalds, 489; Sotheran, Cat. 692 [1909], 4666 [“Scarce”]; Wheeler Gift, 1190)

STURM, Johann Christoph

Collegium Experimentale, sive Curiosum, in quo primaria hujus seculi inventa & experimenta physico-mathematica, speciatim campanae urinatoriae, camera obscura, tubi Torricelliani, seu baroscopii, anthiae pneumaticae, thermometrorum, hygroscoptiorum, telescopiorum, microscopiorum &c. . . .

Nuremberg: Sumtibus Wolfgangi Mauriti Endteri, Johannis Andreae Endteri Haeredum. 1676–1685.

First edition of both parts, plus all the supplements. 4 vols., 4to., in 1 vol. 12 leaves, 168 pp.; 10 leaves, 256 pp.; 116 pp., 4 leaves; 122 pp., 7 leaves. With 3 large folding copperplates and more than 200 engravings of instruments and machinery

in text. Fine copy, in contemporary vellum. Bookplate: Symons Bequest, Royal Meteorological Society, 1900.

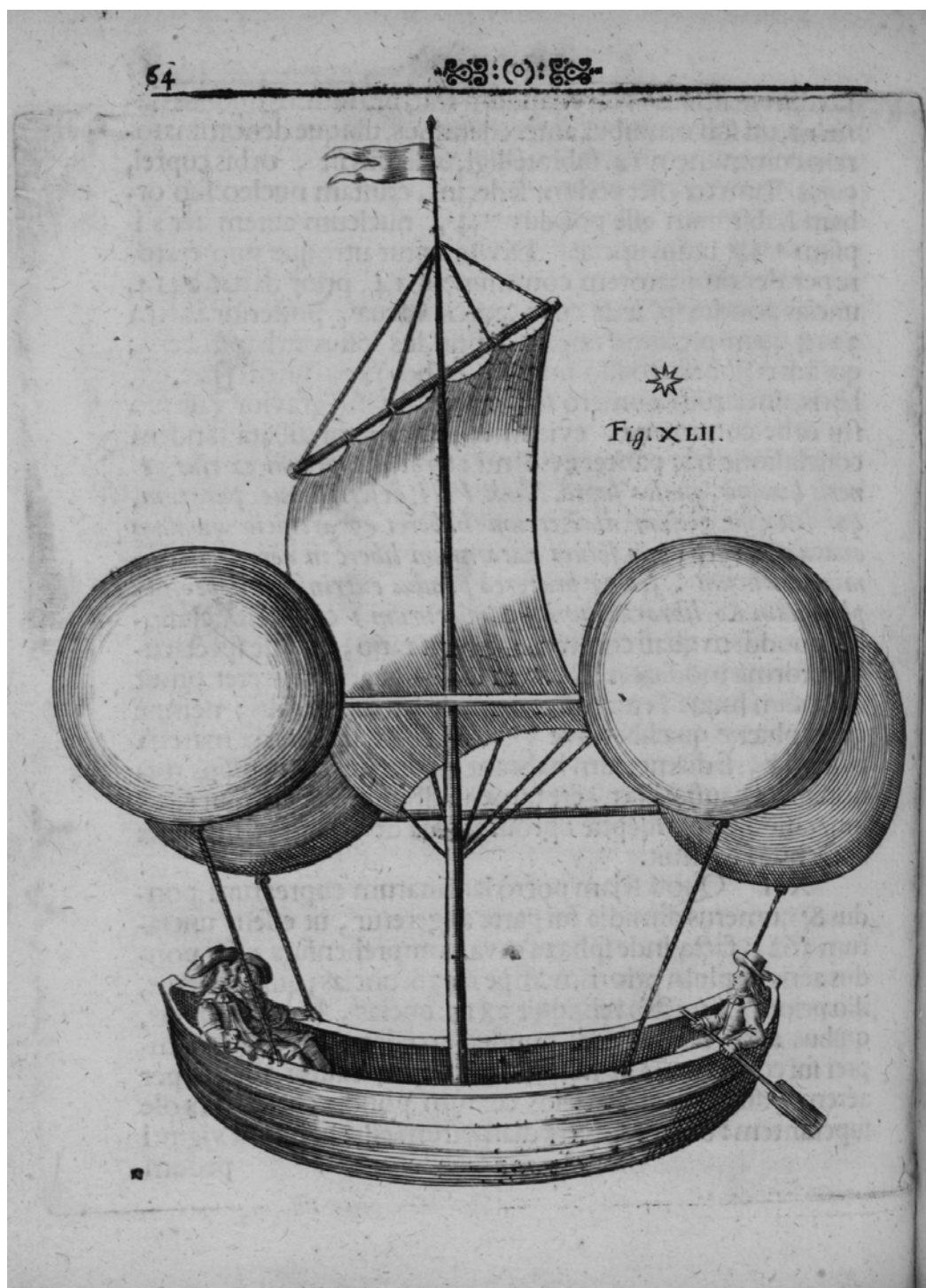
AN IMPORTANT work containing accounts of the principal experiments and discoveries of the period in physics, chemistry, mathematics, technology, and related subjects. These volumes are richly illustrated with detailed engravings. The two folding plates that occur in some copies at pages 141–144 are printed on one very large folding plate facing page 140 in this copy. The plate shows Hooke’s microscope as well as its components in cross section. Sturm (1635–1703), professor of mathematics and physics at Altdorf, was a founder of one of the first scientific societies in Germany. It was established on the plan of the Italian Accademia del Cimento and first held for twenty auditors in 1672. This rich sourcebook on seventeenth-century scientific apparatus describes and repeats experiments by Guericke, Boyle, Hooke, et al. Sturm improved the first air pump with valves and a double cylinder, invented the differential thermometer and hygrometer, and made other notable discoveries. (Clay & Court, 23–26; Krivatsy, 11539 [imperf.]; Mottelay, 130; Partington, II, 519; Poggendorff, II, 1043; Thorndike, VIII, 223; Wheeler Gift, 182, 199)

STURM, Johann Christoph

Physicae Conciliatricis per Generalem pariter ac Specialem Partem Conamina Succinctis Aphorismis adumbrata & publice ventilata à Joh. Christophoro Sturmio . . .
Nuremberg: Sumptibus Wolfgangi Mauriti Endteri. 1687.

Second (first Nuremberg) edition, second issue. 12mo. 12 leaves, 288 pp. Very good copy in modern marbled boards antique.

A TREATISE IN six sections in which Sturm attempts to define the general areas of scientific study. Although mainly on what would now be classified as physics, he discusses much of purely chemical interest. Topics include atomism, Aristotelian elements, Paracelsian three principles, chemical operations (calcination, distillation, precipitation, etc.), metals and nonmetals, and salts. There is a section on magnetism and electrostatics, and the entire work is well documented with references to earlier and contemporary authors. Watt (II, 887k) lists the first edition (Altdorf, 1684, 8vo.), which accords with the date (24 April 1684) at the end of the dedication of the present edition. The first Nuremberg issue of 1685 is listed by Poggendorff (II, 1043), but no reference to this issue of 1687 has been located.



Sturm. Collegium Experimentale. Nuremberg, 1676-1685.

STURTEVANT, Simon

Metallica. Or the Treatise of Metallica. Briefly comprehending the Doctorine of diverse new Metallicall Inventions, but especially, how to neale, melt, and worke all kinds of mettles-oares. Irons and Steeles with Sea-coale, Pit-coale, Earth-coale and Brush-fewell. Also a Transcript of his Maiesties Letters Pattents of Priviledge, granted unto Simon Sturtevant for the said Metallicall businesses, for one and thirty yeares. Published in Print before the last day of this present Easter Terme; as the said Simon Sturtevant was by his Highnessee iniointed.

Imprinted at London by George Eld. Cum privilegio Anno. 1612. May 22.

First edition. 4to. 8 leaves (last blank), 112 pp. (pagination irregular). Woodcut royal arms of James I on page 4. Small piece missing from blank margin of signature N and insignificant ink mark on title page; otherwise fine copy in calf antique, spine gilt-lettered and dated. Bookplate: Harrison D. Horblit.

A TREATISE ON the use of coal in the manufacture of iron, the first to propose pit coal in smelting rather than charcoal, as the forests of Great Britain were being decimated. In 1611 James I granted Sturtevant a patent of invention, a monopoly, for a new type of furnace on condition that he publish information about it. However, the description given here is quite vague, and apparently the furnace was never constructed. The following year the monopoly was taken away from Sturtevant and given to his assistant, John Rovenson, who published *A Treatise of Metallica* (London, 1613), in which he described the successful smelting of iron with coal (first converted to coke). The treatise by Sturtevant has the distinction of being the very first to suggest the smelting of ores of copper, iron, lead, tin, and other metals with common pit coal. An extremely rare book; only two copies in the United States are recorded in S.T.C., including this copy. (Edelstein, 2218; Ferguson Coll., 679; Partington, II, 61; S.T.C., 23411; Singer, *History of Technology*, III, 79; Watt, II, 887n)

SUCHTEN, Alexander von

Chymische Schrifften Alle, so vie deren vorhanden, zum ersten mahl zusammen gedruckt, mit sonderbahrem Fleiss von vielen Druckfehlern gesäubert, vermehret, und in zwey Theile, als die Teutschen und Lateinischen, verfasst. Frankfurt am Mayn: In Verlegung Georg Wolffs, Buchh. in Hamburg, Druckts Johann Görlin. 1680.

First collected edition. 8vo. 8 leaves, 486 pp., 5 leaves. Engraved emblematic frontispiece containing alchemical symbols, alchemical woodcut vignette on title page, and 4 woodcuts in text. Occasional minor browning of some leaves; otherwise fine copy in original overlapping vellum.

THE FIRST collected edition of the alchemical works of Suchten (fl. 1535–1576), an eminent physician and chemist who advocated Paracelsian medicines. Edited by Ulrich C. von Dagitz of Cologne, the nine works included are *Concordantia Chymica*, *Colloquia Chymica*, *De Antimonio*, *De Antimonio vulgari*, *Dialogus*, *De tribus Facultatibus*, *Explicatio Tincturae Theophrasti Paracelsi*, *De vera Medicina*, and *Elogia*. Suchten was a canon at Frauenberg (1539), where one may conjecture that he knew Copernicus. He was librarian to the elector Otto Heinrich and later physician to King Sigismund Augustus. After several years in Danzig he returned to Germany (1563). His famous work on antimony, originally published in 1570, was reissued by Tholde the same year (1604) that Thülde printed the work of Basil Valentine on the subject. Suchten also published *Dialogus de Hydrope* and *Clavis Alchymiae*. (Bolton, 1048; Caillet, 10422; Ferchl, 523; Ferguson, II, 416; Ferguson Coll., 679; Krivatsy, 11563; Partington, II, 156; Rosenthal, 817; Smith, 470)

SUCHTEN, Alexander von

De Secretis Antimonii Liber unus . . . Editus Germanice quidem anno 1570: nunc autem in Latinum translatus sermonem per M. Georgium Forbergium Mysium. Cui additus est Geor. Phaedronis . . . Aquila Coelestis, sive correcta Hydrargyri praecipitatio. Basel: Per Petrum Pernam. 1575.

First Latin edition (3 works in 1 vol.). 8vo. 112 pp. Few minor damp stains and 1 tiny wormhole; otherwise fine copy in dark-brown quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE FIRST edition in Latin and the first appearance of two additional medico-pharmaceutical texts by Georg Phaetro (fl. 1566) and Paracelsus. The main work, on the chemical and pharmaceutical uses of antimony and its compounds, is by Suchten, the “distinguished Paracelsian, who dedicated himself to attacking deceit and charlatanism in medicine. He also wrote on the history of chemistry, perhaps the first scholar to do so, and demonstrated with the aid of scales, that the transmutation of metals into gold is impossible, so that all claims for ‘successful’ transmutation must be fraudulent” (D.S.B.). Two additional works are included in this Latin translation by Georg Forberger (fl. 1573): *Aquila coelestis* (pp. 50–82) by Phaetro and *Liber de narcoticis* (pp. 83–112) by Paracelsus. The original edition in German (Strassburg, 1570) was edited by Michael Toxites. Rare. (D.S.B., XIII, 141; Durling, 4284; Duveen, *Supplement*, 396; Ferchl, 523; Ferguson Coll., 680; Partington, II, 156; Sudhoff, *Paracelsus*, 164; Wellcome, I, 6136)



Suchten. Chymische Schriften Alle. Frankfurt am Mayn, 1680.

SUCKOW, Georg Adolph

Anfangsgründe der ökonomischen und technischen Chymie. . . . Zweite vermehrte Auflage.

Leipzig: in der Weidmannschen Buchhändlung. 1789.

Second edition. 8vo. xvi, 717, (1) pp. Engraved vignette on title page of 2 cherubs in a laboratory (drawn by Mechau, Heinrich Müller sc.). Folding chemical tables (pp. 663–676). Fine copy in original blue boards, red paper label on spine.

A MEMBER OF a famous family of scientists, Suckow (1751–1813) was professor of physics, chemistry, and natural history at the University of Heidelberg. He was the author of numerous books and papers on chemistry, botany, and mineralogy. The first edition (Leipzig, 1784; Cole, 1254; Duveen, 568) has been enlarged and updated in this second (and best) edition. It is an “extensive work on industrial and technical chemistry in two parts. The first part covers theory . . . and the second treats applied or practical chemistry. . . . The second section is . . . on vegetable, animal and mineral substances” (Cole). The first edition contains a six-page bibliography, which in this edition has been enlarged to nine pages. A supplementary volume appeared (Leipzig, 1798). Rare. Not in N.U.C. (Bolton, 859; Ferchl, 523; Ferguson, II, 417 [imperf.]; Poggendorff, II, 1046; Smith, 471)

SUCKOW, Georg Adolph

Mineralogische Beschreibung des Natürlichen Turpeths nebst einer chymischen Untersuchung dieses Queksilber-Erzes. Von D. G. A. Suckow, Ordentl. Professor auf der Kurfürstl. Pfälzischen Kameral Hohen Schule. Nebst einer Kupfertafel. Mannheim: im Verlage der neuen Hof- und Akademie-Buchhändlung. 1782.

First edition. 8vo. 28 pp. With large folding copperplate (Verhelst sc.). Very good copy in the original blue boards. Bound with: Bergman, T. O., *Sciagraphia Regni Mineralis* (Leipzig & Dresden, 1783); and Wenzel, C. F., *Chymische Untersuchung des Fluszspaths* (Dresden, 1783).

A MINERALOGICAL DESCRIPTION of naturally occurring Turpeth mineral (basic mercuric sulfate). Suckow (1751–1813) was professor of physics, chemistry, natural history, and economics at Heidelberg from 1774 and published several books and papers on chemistry. In the present work, which is a sequel to the investigations on turpeth mineral carried out by Woulfe, which Suckow discusses, nine experiments are described in which the mineral is subjected to various chemical treatments. The plate depicts three specimens of the naturally occurring mercury ore. Rare. Not mentioned by Bolton, Duveen, Edelstein, Ferguson, Mor-

gan, Neu, Partington, Smith, Sondheimer, Waller, Watt, etc. (Ferchl, 523; Poggendorff, II, 1046)

SUCKOW, Gustav

Die Chemischen Wirkungen des Lichtes. Dargestellt und erläutert von Dr. Gustav Suckow . . .

Darmstadt: Druck und Verlag von Carl Wilhelm Leske. 1832.

First edition. 8vo. x, 126 pp. Some minor water stains and marginal browning; otherwise good copy in modern gilt-lettered cloth-backed marbled boards, with original printed wrappers bound in. Presentation copy inscribed in ink by the author on first flyleaf, and with signature of B. Hoppe, dated 17 Sept. 1841.

A SIGNIFICANT WORK on the action of light on various chemicals and a precursor of the studies on photography made by Daguerre published in 1839. Suckow (b. 1803) was professor of chemistry at the University of Jena. He describes in detail his research on the effects produced by light on salts of silver, gold, mercury, platinum, and other metals, including chlorides, bromides, iodides, cyanides, oxalates, sulfates, phosphates, borates, and nitrates. Also discussed is the action of light on plants and chemicals derived from plants. Suckow seems to have had some lingering belief in phlogiston, as he speaks of “den durchs Licht bewirkten Phlogistationsprocessen, welche unmittelbar nur in Ausscheidungen der Stoffe bestehen.” Suckow also published an earlier work in Latin on the action of light on organic compounds: *De lucis effectibus in corpora organica et organis destituta* (Jena, 1828; Bolton, 859), of which the present work is the updated and revised translation into German. Rare. Not in Cole, Duveen, Hofer, Kopp, Partington, Smith, Waller, etc. (Bolton, 859; Ferchl, 523; Poggendorff, II, 1047)

SVEDBERG, Johan Jacob

En Academisk Afhandling i Svenska Bergs-Lagfarenbeten om Bergs-Förlag, . . . Juris och Oeconomia Adjuncten Doctor Pebr Niclas Christiernin, . . . studiosus . . . Johan Jacob Svedberg, . . . 16 Maji 1766. . . .

Tryckt i Upsala. (1766).

First edition. 4to. 1 leaf, 32 pp. Lower outer edges of several leaves slightly gnawed; otherwise fine copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION MAINLY CONCERNING Swedish mining laws and the economics of mining, principally copper and iron ores. The work is of some metallurgical chemical interest. Very rare. Unknown to the usual bibliographers.

SVEDBERG, Johan Jacob

Om Bergs-Förlag . . . juris och oeconomiae adjuncten Doctor Pebr Niclas Christiernin . . . studiosus . . . Johan Jacob Svedberg . . . 16 Maji 1766. . .

Uppsala. (1766).

First edition. 4to. 1 leaf, 32 pp. Outside lower blank margins of leaves gnawed (nowhere near text); otherwise fine copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A RARE DISSERTATION on Swedish laws relating to the ownership and copyright of mines and minerals, with historical citations. Laws pertaining to the mining of copper, iron, and other metals are discussed. No bibliographical references to Christiernin or Svedberg have been located.

SVEDBOM, Eric J.

Dissertatio Gradualis, qua Experientiam Artificialem, Leviter Adumbratam, . . . praeside, Mag. Samuele Duræo, . . . defert Ericus J. Svedbom, Angermannus, . . . XXVII. Martii, Anni MDCCLXI. . .

Uppsala. (1761).

First edition. 4to. 18 pp. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A SURVEY OF scientific methodology and the design of experiments, with references to Newton, Boyle, Francis Bacon, Fludd, Drebbel, Torricelli, Guericke, Huygens, Hauksbee, Hales, et al. Svedbom discusses the work of the Accademia del Cimento, the Royal Society of London, and other early scientific societies. On pages 9–10 he mentions freezing mixtures. No reference to Svedbom or this work has been found.

SVEDENSTIERNA, Eric Thomas

Några Underrättelser om Engelska Jernhandteringen, af Eric Th. Svedenstierna.

Stockholm: Tryckte hos Carl Delén. 1815.

First edition. 8vo. 6 leaves, 397, (3) pp. With 2 large folding engraved plates of furnaces, etc. Very fine copy in original half calf, marbled boards, spine blind-stamped and gilt-ruled.

SVEDENSTIERNA (or Swedenstjerna, 1765–1825) was director of the cast-iron manufacturing works of Sweden and a member of the Academy of Sciences of Stockholm. This comprehensive treatise on iron and steel manufacture in Great Britain was written as the result of his travels in England and Scotland during 1802–1803. A substantial

amount of information is presented on metallurgical techniques, blast furnaces, the use of coke, and smelting. Chemical details are included, as well as numerous statistics on the iron-making capabilities of various factories (e.g., Coalbrookdale and Rotherham). The author published several books on metallurgy, but this title is not listed by Poggendorff (II, 1057). It is not in the British Library, the Bibliothèque Nationale, or the Library of Congress. Thomas Thomson speaks highly of Svedenstierna and his large mineral collection, which was “particularly rich in iron ores” (see *Travels in Sweden, during the Autumn of 1812*, London, 1813, p. 106). Very rare. Unknown to the usual chemical and metallurgical bibliographies.

SVENSKE, Arvid Theodor

Dissertatio Inauguralis Medica de Rite Determinanda Aeris Fixi in Corporis Humanum Salutari Efficacia. . . . Pro . . . medicinae et chirurgiae doctoris . . . VII Jun. A. MDCCLXXXIII, publico . . . offert Arvid Theodorus Svenske Livonus.

Goettingen: Litteris Joh. Christ. Dieterich. Acad. Typogr. (1783).

First edition. 4to. 2 leaves, 38, (2) pp. Fine, crisp copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A BIOCHEMICAL DISSERTATION on the formation and concentration of carbon dioxide in the human body, with numerous references to the works of earlier and contemporary chemists (e.g., Bergman, Dobson, Falconer, Henry, Lavoisier, Macbride, and Priestley). The Livonian physician Svenske (dates unknown) discusses the sources of the formation of carbon dioxide in the body, the measurement of its concentration in sickness and health, its chemical composition and reactions, etc. The benefits derived from drinking Priestley’s newly discovered carbonated water are described. No information on Svenske has been located, and the praeses is not named. Unknown to the usual authorities. (Waring, 315)

SWAB, Anton von

Tal om Controll-inrättningen för Guld-Silfver-och Tenn-Arbeten iriket; hållet för Kongl. Vetensk. Akademien, vid praesidii Nedläggande, denii Februarii 1761. Af Anton von Swab. . . .

Stockholm: Tryckt hos Direct. Lars Salvius. 1761.

First edition. 8vo. 42 pp. Good copy, uncut, in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt.

A PAPER ON controlling the composition of gold, silver, and tin used in coinage and other applications. Of chemical interest for the discussion of the ores of these metals and the purity of the gold, silver, and tin obtained from them. Swab (1703–1768) was assessor to the Mining Academy of Stockholm and ennobled as von Swab in 1751. He discovered native antimony (alloyed with arsenic) and examined it on charcoal using a blowpipe, the use of which he pioneered. Partington (III, 173) describes the chemical and metallurgical work of Swab. This title is not listed by the usual early chemical bibliographies. (Poggendorff, II, 1055)

SWALVE, Bernhard

Alcali et Acidum, Sive Naturae et Artis Instrumenta Pugilica, per Neochmum & Palaephatum hinc inde ventitata, et Praxi Medicae superstructae praemissa . . . Bernhar-do Swalve . . .

Amsterdam: Apud Johannem Janssonium a Waesberge, & Haeredes Elizei Weyerstraet. 1670.

First edition. 12mo. 12 leaves (including engraved title and blank leaf), 275, (1) pp. Fine copy in original calf, spine richly gilt, dark-maroon morocco label.

SWALVE (ca. 1625–1680), who learned William Harvey's views and graduated in medicine (Leyden, 1648), became town physician at Harlingen and physician to the Admiralty College. The present is his main work. "It contains a thorough discussion of the old doctrine and the new light, the chemical ideas then becoming prevalent, and especially the hypothesis of 'effervescentia' and the arguments for and against it. He opposed the views of De le Boe Sylvius and was one of the first to raise objections to them, and he was a supporter of the 'Pathologia salsa' of Tachenius" (Ferguson). Describing another edition (Frankfurt, 1677), Cole (no. 1255) states: "The work is a thorough discussion of the old and new ideas relating to acids and alkalies." The engraved title depicts a chemist in his laboratory conducting an experiment in which he is pouring a liquid into a vessel, while clouds of fumes are produced. Manget and Ferguson mention an edition of 1667, but that must be a ghost, as the *Ad Lectorem* of the present edition is dated 9 December 1669. Partington (II, 290) states that Swalve was one of the few in Holland who opposed iatrochemistry but does not cite any of his works. Several later editions appeared. (Bolton, 860; Duveen, *Supplement*, 372; Ferguson, II, 419 [not in Young Coll.]; Ferguson Coll., 681; Gmelin, I, 729, II, 235; Krivatsy, 11588; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II [pt. 2], 332; Smith, 472; Verginelli, 315)

SWAN, John

Explanation of an improved mode of tanning; laid down from practical results; intended to accompany the new invented barktrometer, which will be found an unerring guide to the true art of tanning.

London: Printed for the author, and to be had only of him. 1821.

First edition. Sm. 4to. Pp. iv, 144. With finely engraved frontispiece, entitled: "Apparatus for ascertaining the real value of bark by John Swan." Very fine copy, crisp and spotless, in the original tree calf, tastefully rebaced in calf with gilt-lettered maroon morocco label.

ACCORDING TO the title page, Swan was a mathematical instrument maker whose places of business are given as Leicester and London. The present book was published along with the so-called barktrometer that Swan manufactured. The barktrometer was, in fact, a specially designed hydrometer for determining the density of chemically treated bark solutions used in tanning different types of leather. The beautiful frontispiece shows the barktrometer in use, together with a portable chest of chemicals labeled "Accum's Tests" (i.e., one of the portable laboratory chests manufactured by Frederick Accum), a small piece of distillation equipment, a thermometer, a mortar and pestle, and various pieces of chemical apparatus. The author gives a brief review of the practical aspects of tanning leather hides, with reference to Humphry Davy's experiments on tanning, with Frederick Accum's observations. Pages 81–91 comprise a list of patents on tanning, issued between 1790 and 1820, with a detailed discussion on the chemistry of tanning. Pages 92–113 comprise copies of acts passed in the reign of George III on tanning for the period 1800–1816. Pages 116–118 comprise a list of scientific equipment sold by John Swan, including hydrometers, saccarometers, mashing machines, thermometers, stills, etc., for brewers. The firm of J. Swan & Co., mentioned on page 118, is still brewing beer in London. Pages 119–143 comprise tables of the strengths of tanning solutions versus temperature, for use with Swan's barktrometer. As stated in the title, this book was printed for and sold only by Swan. It is now of great rarity, and no reference could be found to Swan or this work in any available bibliography.

SWAN, John

Speculum Mundi. Or, a Glasse Representing the Face of the World: Shewing both that it did begin, and must also end: the manner how, and time when, being largely examined. The whole of which may be fitly called an hexameron. Or, discourse of the clauses, continuance, and qualities of things in nature, occasioned as matter pertinent to the work done in the six dayes of the worlds creation. The third edition, much beautified and enlarged. . . .

London: Printed by R. Davenport, for John Williams, at the Crown and Globe in St. Paul's Church-Yard. 1665.

Third edition. 4to. 5 leaves, 485, (1) pp. Engraved title page (by W. Marshall), stating that the book was printed at Cambridge, although the letterpress title gives London. Title within woodcut border and woodcut diagram on page 278 (Earth as center of solar system with encircling Sun and planets). Fine copy, in original paneled calf, rebounded, blue morocco label, spine dated. Signature on first flyleaf: Elizabeth Curtis Her Book November the 11: 1720. The first and last flyleaves bear neat manuscript notes on "How to make ye perfect draught of any printed or paynted picture."

DIVIDED INTO six parts representing the days of creation, this, the author's principal work, is an encyclopedia of natural, astrological, and mythical history with many references to topics of chemical interest. Citing the first edition of Cambridge (1635), Newton Harvey discusses the contents as they relate to various luminescences (e.g., aurora borealis, ignis lambens, fireflies, and electrostatic sparks). The work is strictly Aristotelian, and a chapter on earthquakes mentions America and "how it came to be unknown." Other editions: Cambridge, 1643; London, 1670. The engraved title states that Swan (fl. 1600–1671) graduated M.A., Trinity College, Cambridge. No other information on him has been located. (Harvey, 254; Watt, II, 889w; Wing, S6239)

SWEBACH DES FONTAINES

Manuel Cristallographe, ou Abrégé de la Cristallographie de M. Rome de L'Isle, avec une méthode facile pour connoître les différentes cristallisations des mixtes qui composent un cabinet de minéralogie, aidé par une collection de Poliédres dont cet ouvrage est aussi une explication. Par M. Swebach des Fontaines, Agrégé à l'Académie des Sciences de Metz. Paris: Chez Bossange et Compagnie, Libraires, rue des Noyers. 1792.

First edition. Sm. 4to. viii, 74 pp. Folding copperplate depicting 26 figures of crystals. Small floral woodcut on title and woodcut headpiece on page 1. Very good copy in early-nineteenth-century tree calf-patterned boards. Bound with: Rose, Gustav, *Éléments de Cristallographie* (Paris, 1834).

AN ABRIDGEMENT of portions of the *Cristallographie, ou description des formes propres a tous les corps du regne minéral* (Paris: l'Imprimerie de Monsieur, 1783, 4 vols., 8vo.) of Rome de l'Isle. Topics covered include the crystallography of many minerals (e.g., gypsum, calcite, and rock crystal), precious stones (e.g., ruby, diamond, emerald, topaz, and amethyst), metals and their ores (e.g., arsenic, realgar, zinc blende, and calamine), and salts (e.g., alum, saltpeter, sal ammoniac, and borax). In addition to its crystallographic importance, the book is of chemical interest. Poggendorff mistakenly ascribes this work to René Louiche Desfontaines (1750–1833), professor of botany at the Jardin des Plantes, Paris. Rare. Not in Blake, D.S.B., Hoover, Ward & Carozzi, Watt, or the usual chemical bibliographies. (Poggendorff, I, 559)

SWEDENBORG, Emanuel

Some Specimens of a Work on the Principles of Chemistry, with other Treatises. . . . Translated from the Latin by Charles Edward Strutt . . .

London: William Newbery, 6, King Street, Holborn; Otis Clapp, School Street, Boston, U.S. 1847.

First edition. 8vo. xlii, (2), 253, (3) pp. + 8 pp. (notices of Swedenborg's philosophical and scientific works). With 21 lithographed plates. Fine copy, uncut, in original ornamental blind-stamped ribbed cloth, spine gilt-lettered.

DEDICATED TO the great Swedish chemist Berzelius, this is a publication of the Swedenborg Association. It is a "translation of *Prodromus Principiorum Rerum Naturalium* (1721) and of two other treatises published in 1721 and 1727. It contains many curious remarks, particularly on the laws observed by fire in penetrating hard substances" (introduction). "Swedenborg attempts to explain the phenomena of chemistry and physics on geometrical principles, anticipating modern stereochemistry" (Bolton). Swedenborg (1688–1772) came from a family of miners of Stora Kopparberg, a famous copper mine near Fahlun. He studied science, mathematics, and ancient languages at Uppsala and for four years in England, France, and Holland, and in 1716 became assessor-extraordinary of the Council of Mines in Sweden and director of the Iron Bureau in Stockholm. The chemical and metallurgical content of this work is discussed by Partington. Swedenborg later abandoned science to pursue religious studies, for which he is now principally remembered. "Very scarce" (Zeitlinger). (Bolton, 861; Cole, 1256; Edelstein, 2225; Ferchl, 525; Partington, III, 165; Poggendorff, II, 1056; Sotheran, Cat. 832 [1932], 5751)

SYLVEN, Michael

Dissertatio Academica de Speciebus Solutionis Chemicæ . . . Praeside Mag. Johanne Gadolin . . . pro gradu philosophico publico examini subjicit Michael Sylven Stipend. Reg. Satacundensis. In Auditorio Minori Die 21 Decemb. 1797. . . Åbo: Typis Frenckellianis. (1797).

First edition. 4to. 2 leaves, 10 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labelled: Gadolin. 5 Dissertations. 1797–1805.

A DISSERTATION ON the different types of chemical solution, presented by Sylven under the direction of Gadolin, professor of chemistry, at Åbo. Chemical solution in the broadest sense is described, including thermal fusion, vitrification, solution in water, acids and alkalies, deliquescence, amalgamation, and the formation of metal alloys, extraction, distillation, and other operations. Works cited include those of Lavoisier, Macquer, and Richter. (Partington, III, 235)

SYLVESTER, Charles

An Elementary Treatise on Chemistry, comprising The Most Important Facts of the Science, with Tables of Decomposition, on a New Plan; to which is added, An Appendix, giving an account of the latest discoveries. By Charles Sylvester.

Liverpool: Printed by E. and W. Smith: For Longman, Hurst, Rees and Orme, London. 1809.

First edition. 8vo. (in 4s). viii, (2), 1–120, 119–164 pp.; 1 leaf (blank), 16 leaves (tables of data). Fine, crisp copy, in contemporary marbled boards, rebacked in gilt-ruled calf, original maroon label laid on.

THE SOLE edition of a historically important textbook, which was written as a supplementary work to those of Henry, Murray, and Thomson. It is significant because it contains a system of chemical symbolism that appears to be based upon that of Hassenfratz and Adet but is different in a number of details. Symbols and nomenclature for the elements then known, as well as well over four hundred compounds, are given. These are completely independent of those used by Dalton, who is nowhere mentioned. At the end are tables of chemical decompositions. The appendix (pp. 119–120) is in two distinct states. In the first state the author writes: “Some important galvanic experiments, . . . by Mr. Davy at the Royal Institution, will, in all prob-

ability, lead to a considerable change in the theory of chemical science.” In the second state the appendix has been greatly expanded from one leaf (pp. 119–120) to nine leaves (pp. 119–135), in which are described (among other topics) Davy’s isolation of sodium from soda and potassium from potash. Rare. (Bolton, 862; Cole, 1258; Duveen, 654; Partington, IV, 47; Sotheran, Cat. 832 [1932], 5752; Watt, II, 891t)

SYLVIUS DE LE BOË, Franciscus

Opera Medica, tam hactenus inedita, quàm variis locis & formis edita; nunc verò certo ordine disposita, & in unum Volumen redacta, cum duplici Indice, uno Librorum & Capitum, operi praemisso, altero Rerum, ad calcem adjecto. Amsterdam: Apud Danielem Elsevirium, et Abrahamum Wolfgang. 1679.

First edition. Large 4to. 4 leaves, 934 pp., 13 leaves. Title in red and black, with woodcut. With beautiful folding portrait of Sylvius at age 45 (engraved by C. van Dalen, Jr.). Fine, crisp copy, in contemporary unlettered vellum.

THE POSTHUMOUS first edition of this important collection of medical and chemical writings, edited by Justus Schrader, M.D. Francois Dubois, Franciscus de le Boë (or Deleboe), latinized as Sylvius (1614–1672), educated at Sedan, Leyden, and Basel (M.D., 1637), practiced medicine successfully at Hanau, Leyden, and (from 1641) Amsterdam. “In 1658 he became professor of medicine at Leyden, . . . His lectures were famous and he had great numbers of students, including French, German, Italian, Russian and English. He taught Harvey’s theory of the circulation of the blood in spite of opposition [and] was essentially a teacher as distinguished from an original investigator, and he took many of his ideas from Paracelsus, Descartes, and Van Helmont. . . . He represents the culmination of Iatrochemistry” (Partington). “He was convinced that all physiological and pathological processes could be conceived perfectly in analogy to the processes and experiments in the chemical laboratory and could be explained by fermentation, effervescence, and putrefaction. Acid and alkali were considered as fundamental principles in the animal body” (D.S.B.). Not in Cushing, Eales, Thorndike, Waller, Watt, or the usual chemical bibliographies. (Blocker, 233; D.S.B., XIII, 223; Ferchl, 525; Garrison-Morton, 2321; Neu, 2258; Osler, 4063; Partington, II, 283; Willems, 1592)

TABERNAEMONTANUS, Jacobus Theodorus

New Wasserschatz, das ist: von allen heylsamen metallischen minerischen Bädern unnd Wassern, sonderlich aber von den newen erfundenen Sawerbrunnen zu Langen Schwalbach in der Nidergraffschafft Karzenelnbogen, und im Schwartzwald in dem löblichen Stifft Strassburg in S. Petersthal unnd der Greiszbach, bey dem Weiler Greiszbach gelegen, auch aller anderer Sawerbrunnen eygentliche Beschreibung, sampt derselben Gehalt, Krafft unnd Wirkung. Auch wie man dieselbigen unnd alle metallische Wasser zu mancherley Kranckheiten und Leibs Gebrechen, wider den alten bösen Gebrauch nützlich und recht, zu wolffahrt dess Leibs, gebrauchen soll. Dessgleichen wie man allen zufällen mit heylsamen Rath begegnen unnd zu hülff kommen soll. Alles auss langwiriger Observation und Erfahrung, auffss fleissigst widerumb ubersehen, verbessert, gemehret, beschrieben und an Tag geben, durch Jacobum Theodorum Tabernaemontanus, der Artzney Doctorem.

Frankfurt am Mayn: (Nicolaum Bassaeum). 1593.

Second edition. 8vo. 8 leaves, 649 pp., 34 leaves (index). Title in red and black. Fine, crisp copy in contemporary overlapping vellum. With bookplate of the Surgeon General's Office Library (stamped "Withdrawn for Exchange") on front paste-down endpaper.

TABERNAEMONTANUS (ca. 1525–1590), famous physician and botanist, born in Alsace, took the M.D. degree in France and became first physician to the elector palatine. He resided several years in Worms, then at Heidelberg, where he died. He was a great believer in the medicinal virtues of herbs and in mineral waters. His two principal works were an herbal (3 vols., 1558, 1590, 1592) and the present book on mineral waters (first edition, Frankfurt, 1581; 3rd ed., 1605). In addition to its medical and pharmaceutical interest, this work is important to the chemical historian, as it contains numerous references to chemicals in the waters, salts, acids, alkalies, metals, minerals, and analytical methods for detecting them. Extremely rare. Unknown to the usual early chemical bibliographers. (Watt, II, 901; Wellcome, I, 6198 [1st ed.])

TACHENIUS, Otto

Otto Tachenius his Hippocrates Chymicus discovering the Ancient foundation of the late Viperine Salt with his Clavis thereunto annexed. Translated by J. W.

London: Printed & are to be sold by Nath: Crouch at the George at the lower end of Cornhill over against ye Stocks Market. 1677.

First English edition, first issue. 4to. 11 leaves, 122 pp., 5 leaves; 7 leaves, 120 (i.e., 124, pp. 15–18 repeated), 7 leaves (including errata). Engraved title page (by Johannis Drapen-

tier) and separate title page to Clavis (mounted). Good copy with wide margins, in original calf, rebacked, maroon label, spine gilt-ruled and dated. Signature on title page of Eleazar Albin (fl. 1713–1759), celebrated naturalist and author (see D.N.B.).

FIRST APPEARING as *Hippocrates chemicus* (Venice, 1666), this work was largely a reply to Zwelfer, who had attacked the German iatrochemist Tachenius (fl. 1640–1699) in his *Pharmacopoeia Augustana* (1657). Tachenius contended that the salt he obtained by destructively distilling snakes was his own discovery. His role in chemical theory is important for his hypothesis of acids and alkalies (see Partington). Correctly demonstrating that salts result from the reaction of acids with alkalies, he also showed that weak acids and alkalies can be displaced from salts by stronger ones. He prepared concentrated acetic acid from verdigris by distillation and proved by quantitative experiments that this acid occurs in vinegar. Tachenius knew that the stomach contains acid, which he believed forms a salt with alkalies in food during digestion. The chemical researches of Tachenius are discussed by Partington. Duveen states that the engraved title is similar to that of the *Musaeum Hermeticum* (1678). This copy, like most, lacks the very rare letterpress title: only the stub remains (see Cole and Ferguson). A second issue of 1690 has new title pages and preliminaries. (Bolton, 1049; Cole, 1259; D.S.B., XIII, 235; Duveen, 570; Ferguson, II, 597; Krivatsy, 11658; Partington, II, 292; Wing, T98)

TACHENIUS, Otto

Hippocrates Chemicus, per ignem & aquam methodo inaudita novissimi salis viperini antiquissima fundamenta ostendens. Editio secunda auctior & emendatior. Accessit ejusdem authoris De Morborum Principe Tractatus. . .
Venice: Typis Combi & La Novii. 1678.

Second Venice edition. 12mo. 18 leaves, 473, (1) pp., 3 leaves (last blank). Engraved title page, letterpress title with large woodcut. Few leaves with minor damp stains at the end; otherwise very good copy, in original limp vellum (worn).

THE GREATLY enlarged and updated second Venice edition (first: Venice, 1666). This edition contains a laudatory verse on the "merits of Tachenius" by Joseph Monticelli, M.D. (p. 474), and a new dedication by Tachenius, dated from Venice, 1678. The English translation (London, 1677) was made from an earlier edition containing less information. The present edition also contains the author's *Tractatus de morborum principe* (pp. 273–473), which is lacking in the copy in the British Library. A further edition appeared from Venice in 1697. (British Library, *17th Century Italian*, II, 886; D.S.B., XIII, 235; Duveen, 570; Krivatsy, 11657; Partington, II, 292; Waller, 9441)

TANCKE, Joachim

De Lapide Philosophico Tractatus Gemini, Prior, Anonymi, Posterior, Pauli Eck de Sultzbach, scripti ad viros magnificos, nobilissimos, ac clarissimos, Dn Bernhardum G. Penotum . . . & Dn Nicolaum Bernaudum . . . a Joachimo Tanckio . . .
Frankfurt: Typis Matthiae Beckeri. 1604.

First edition. 8vo. 39, (1) pp. Woodcut capitals, head- and tailpieces. Page 21 is a divisional title page to the second tract. Very good copy, in quarter calf antique, marbled boards, spine gilt-lettered and dated.

TWO TRACTS on the preparation of the philosopher's stone and the transmutation of metals. The first is by an anonymous author, and the second, described by Ferguson as "interesting," is by Eck von Sultzbach, who supposedly published this work in 1489. The first tract is dedicated to Bernard Georges Penot, and the second to Nicolas Barnaud, an alchemist and physician. The editor, Tancke (1557–1609), professor of anatomy, surgery, and poetry at Leipzig, published several medical books. He also translated and edited a number of alchemical works (see Ferguson). In the *Lectori facili* to the first tract, he mentions Johann Thölde as the publisher of Basil Valentine's writings. Extremely rare. (Ferchl, 528; Ferguson, I, 232 [not in Young Coll.]; Watt, II, 894c)

TANCKE, Joachim

Succincta & brevis Artis Chemiae Instructio. Das ist: Volkommer gründlicher Bericht der rechten und waren Alchimey, aus warhafftigem Fundament und Schrifften der Philosophen beydes Particulariter und Universaliter Philosophischer weise erkleret und zusammen getragen, hiebevorn von einem wolerfahrenen Philosopho hinderlassen. Nunmehr männiglichem und insonderheit der Chimischen Künste Liebhabern in Druck verfertiget. . . .
Leipzig: Bey Johan Rosen. 1605.

First edition. 8vo. 8 leaves, 106 pp., 3 leaves (index). Title in red and black. Title leaf laid down, and few stains in text. A much-used copy interleaved with contemporary paper (some leaves with early-seventeenth-century manuscript annotations), in old vellum. From the library of the celebrated hermeticists A. T. and M. Atwood, with signature dated 1859. Bound with: Khunrath, Conrad, *Medulla Destillatoria* (Leipzig, 1594).

AN INTERESTING alchemical and iatrochemical work, with references to the writings of Petrus Coudenberg, Andreas Libavius, Matthias Schiller, et al. "In 1605 appeared the Succinct and Brief Instruction in the Chemical Art of Joachim Tanckius. . . . The text was in German but with Latin quotations, titles and marginal headings. The book

is still primarily devoted to the quest for the philosophers' stone. Tanckius distinguishes between the *via universalis*, which is easy and rare and drawn from true and natural principles, and the *via particularis*, which is difficult and laborious, and which errs because of the ignorance of authors, unfitness of materials, insolence of chemists, failure to grasp fundamentals, and use of materials which have not been properly prepared. He then proceeds to consider sulphur (not the common variety but that of the philosophers), antimony, mercury, *croci* of metals and their salts, glasses of metals and their essences, mercuries of metals and their oils, and particulars in general" (Thorndike). Rare. (Ferchl, 528; Ferguson, II, 428; Ferguson Coll., 686; Partington, II, 189; Poggendorff, II, 1067; Thorndike, VIII, 105; Wellcome, I, 6217)

TARDIN, Jean

Histoire Naturelle de la fontaine qui brusle pres de Grenoble. Avec la recherche de ses causes, & principes, & ample traité des feux souterrains. . . .

Tournon: Pour Guillaume Linociere Libraire Juré de l'Université. 1618.

First edition. 12mo. 12 leaves, 380 pp., 2 leaves (last blank). Engraved vignette on title. Very fine copy, in early-eighteenth-century marbled calf, gilt, covers gilt-ruled, maroon morocco label.

A VERY RARE and interesting work on the petroleum well near Grenoble. Tardin (fl. 1609), a physician of Tournon, explains in detail the effect of inflammable mineral substances and is probably the first to discuss the combustibility of coal gas. The volume contains much on subterranean fires, subterranean rivers and caves, volcanoes, coal mines and ores of minerals, naturally occurring bituminous materials, etc. In addition there are extensive discussions of the nature of fire, the necessary presence of air in combustion, chemical effects of fire on metals, calcination, use of natural gas to cook meat, sulphurous exhalations, the composition of saltpeter, alkaline salts, the Paracelsian three principles, etc. Tardin's investigations on the combustibility of coal gas foreshadowed the development of the coal-gas industry in the early nineteenth century by two hundred years. Brunet (*Supplement*, II, 728) describes Tardin as "le premier savant qui ait essayé d'obtenir l'éclairage au gaz; à ce titre, ce volume est extrêmement curieux." A milestone work in the history of chemical technology. (Caillet, 10534; Goldsmith, T79)

TARELLO, Camillo

Ricordo d'Agricoltura, di M. Camillo Tarello da Lonato. Al Serenissimo Principe di Venetia, & alla Illustrissima Repubblica Venetiana. Di nuovo corretto, et ristampato.
Treviso: Appresso Fabritio Zanetti. 1601.

First Treviso edition. 8vo. 141, (1) pp., 1 leaf (blank). Woodcut device on title page, woodcut initials, head- and tailpieces. Main text in italic. Very good copy in contemporary orange and blue patterned pasteboards.

AN EARLY Italian work on agriculture, including the growing of fruit and winemaking. Of interest for the light it sheds on the agricultural methods and the use of chemical fertilizers in the sixteenth century. Tarello (fl. 1560) was a progressive and well-known landowner. His book (first edition, Venice: F. Rampazetto, 1567, 8vo.) passed through several printings. Wellcome (I, 6223) lists an edition (Mantua: G. Ruffinello, 1577, 8vo.). Very rare. (British Library, *Seventeenth Century Italian Books*, 1986, vol. II, p. 890)

TASSIN, L. F.

Du Brai-gras et du Goudron des Landes, suivi de deux notices: l'une sur la situation du Golfe de Gascogne, dans le Département des Landes, sous le rapport de la marine de l'état; l'autre sur les ressources que les Départemens de la Gironde, des Landes et des Basses-Pyrénées peuvent procurer a la marine. . . .

Paris: Imprimerie de C. L. F. Panckoucke. 1815.

First edition. 8vo. 36 pp. Minor stain on title page; otherwise good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN INTERESTING work on botanical chemistry and technology, in which the author shows that the resins and tars extracted from pine trees grown in the Landes and Gascogne regions of France are of the same quality and usefulness in maritime applications as are the products obtained at greater cost from Norway and Sweden. Not mentioned in the usual bibliographies.

TAULE, Ferdinand

Notions sur la Nature et les Propriétés de la Matière Organisée. . . .

Paris: Imprimerie de E. Martinet. 1866.

First edition. 4to. 2 leaves, 166, (2) pp. Very fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE THESIS presented to the medical faculty at Paris for the M.D. degree, by Taule, of whose life and activities noth-

ing appears to have been recorded. Of interest in the history of chemistry, biology, and medicine, this work attempts to explain the structure of living matter in chemical terms. The composition of animals is covered in depth, with detailed discussions of blood and its clotting mechanism; bones, flesh, internal organs and their chemical products; milk; etc. There are numerous references to contemporary chemists, biologists, and physicians (e.g., Bernard, Berthelot, Bichat, Chevreul, Darwin, Dumas, Ducrotay, Moleschott, Robin, Tyndall, Verdeil, and Virchow). Remarkably comprehensive, being in effect a review of animal and human biochemistry as they were known at the time, this important work deserves further study. Rare. Unknown to the bibliographers of chemistry and medicine.

TAUVRY, Daniel

A Treatise of Medicines Containing An Account of their Chymical principles, the experiments made upon 'em, their Various preparations, their Vertues, and the modern way of using them. Together with a short View of the Nature and Periods of the Diseases, in which they are proper, and some Cautions relating to the Disorders they sometimes occasion. The Medicines are rang'd in their proper Classes according to their Vertues, and drawn up in Tables for the Readers conveniency, with their just Doses annex'd. Written Originally in French, by M. Tauvry, M.D. A Member of the Colledg of Physicians, and Fellow of the Royal Society at Paris. Translated from the last Edition.

London: Printed for Richard Wellington, at the Dolphin and Crown the West End of St. Paul's Church-Yard, Arthur Bettesworth, at the Red Lyon on London Bridge, and Bernard Lintott, at the Cross Keys in St. Martins Lane near Long Acre. 1700.

First English edition. 8vo. 8 leaves, 287, (1), 291, (1) pp., 2 leaves (advertisement, books sold by R. Wellington). (N.B. The flyleaf (signature A), recto and verso, is an advertisement of books sold by R. Wellington.) Very good copy in contemporary paneled calf, rebound, gilt-lettered maroon morocco label, spine dated at foot.

THE FIRST translation into English of the *Traité des Médecamens et de la manière de s'en servir pour la guérison des maladies* of Tauvry, a famous seventeenth-century physician. The first edition appeared in Paris in 1691, with other editions in 1695 and 1699. It is most probably from the 1699 edition that this English translation was made. Divided into four parts: medicines in general (pp. 1–113), treatise on medicines (pp. 115–287), a second treatise on medicines (pp. 1–223), and external medicines (pp. 224–291). Of pharmaceutical and chemical interest, with descriptions of acids, alkalies, salts, oils, etc., which went into the medicines

prescribed. A rare book, only the Mitchell copy (this copy, with small book ticket, "GOM," on front pastedown) appearing in auction records over the last thirty years. Not in Duveen, etc. (Neu, 3996; Watt, II, 895u; Wing, T247)

TEICHMEYER, Hermann Friedrich

Elementa Philosophiae Naturalis Experimentalis, in quibus omnium rerum naturalium affectiones recensentur, earundemque causae, quantum fieri potest, deteguntur, et per experimenta, tum ex mathesi, tum ex chymia inprimis desumta, declarantur, in usum auditorii sui. . . .

Jena: Sumptibus Joann. Felicis Bielckii. 1733.

Third edition. 4to. 4 leaves, 259, (1) pp., 12 leaves. With 5 folding copperplates. Title page in red and black. Good, wide-margined copy, in contemporary mottled calf, gilt, tan morocco label.

TEICHMEYER (1685–1744) was a pupil of G. W. Wedel (under whom he received the M.D. degree in 1705), then was professor of experimental physics (1717), lecturer in chemistry (1720–1743), and professor of botany, anatomy, and surgery (1727) in Jena. Trained in several disciplines, his fame spread throughout Europe. Albert von Haller married his daughter, and Haller says that Teichmeyer specialized in chemistry and alchemical pharmacy, publishing several books on these subjects as well as works on medicine and materia medica. The first edition of this excellent work on chemistry and physics (Jena, 1717) and the second edition (Jena, 1724) were brought up-to-date in the present third, final, and best edition. Chemical topics covered include metals, acids, alkalies, salts, and the philosopher's stone. Teichmeyer also studied various luminescences, on which see E. Newton Harvey, who discusses this edition. Duveen, Ferchl, Ferguson, Neu, Partington, Poggenдорff, Watt, et al., mention the first edition but not the third edition, which is rare. Not in Bolton, Edelstein, Morgan, Smith, Sondheimer, etc. (Blake, 446; Newton Harvey, 171, 659)

TEICHMEYER, Hermann Friedrich

Institutiones Chemiae Dogmaticae et Experimentalis in quibus chemicorum principia, instrumenta operationes et producta simulque analyses trium regnorum succincta methodo traduntur in usum auditorii sui. . . .

Jena: Sumtibus Joh. Henrici Schulzii. 1752.

Second edition. 4to. 4 leaves, 280 pp., 10 leaves. With 4 folding copperplates of chemical apparatus. Title page in red and black, with engraved vignette. Woodcut head- and tailpieces. Very good copy in contemporary speckled boards, rebounded in calf antique gilt, red morocco label gilt. From the library of Prince

Fürstemberg, Donauschingen, with small old stamp on verso of title. Bound with: Teichmeyer, H. F., *Institutiones Materiae Medicae* (Jena, 1737).

THE POSTHUMOUS second, final, and best edition of this excellent textbook on theoretical and practical chemistry. Teichmeyer used the first edition (Jena, 1729) in his well-attended lectures. The present edition was corrected before the author died in 1744 and contains more recent information than the first. Bolton, Ferguson, Ferguson Coll., Poggenдорff, Watt, et al., mention only the first edition. Not in Duveen, Edelstein, Morgan, Neu, Rosenthal, Smith, Waller, etc. (Blake, 446; Ferchl, 529; Partington, II, 317)

TEICHMEYER, Hermann Friedrich

Institutiones Materiae Medicae sive introitus apertus ad materiam medicam et methodum medendi in usum auditorum conscriptae. Accedit Pauli Hermanni . . . lapis materiae medicae lydius a D. Christ. Ludov. Welschio antea editus. . . .

Jena: Sumtibus Joh. Adam. Melchior. 1737.

First edition. 4to. 4 leaves, 234 pp., 7 leaves, 20 pp. Title page in red and black. Fine copy. Bound with: Teichmeyer, H. F., *Institutiones Chemiae* (Jena, 1752).

AN IMPORTANT book on the materia medica, of chemical interest. The dedication and preface are both dated 19 April 1737. Ferguson erroneously mentions an edition of 1731, which is a ghost. Very scarce. Not in Bolton, Duveen, Edelstein, Ferguson Coll., Morgan, Partington, Poggenдорff, Smith, Waller, etc. (Blake, 446; Ferchl, 529; Ferguson, II, 430 [not in Young Coll.]; Watt, II, 898)

TEMPELMAN, Olaus Samuel

Dissertatio Physico-Mechanica de Frictione Corporum super Plano Horizontali Motorum, . . . sub praesidio . . . Mag. Samuelis Duraei, . . . pro gradu philosophico . . . Olaus Sam. Tempelman, Ost-Goth. . . . II. Junii, A. MDCCLXX. . . .

Uppsala: Typis Edmannianis. (1770).

First edition. 4to. 14 pp., 1 leaf. With engraved plate (O.S.T. sc.) depicting 6 figures. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

A DETAILED STUDY on the friction produced by solids of different geometrical shapes when they are moved across a horizontal plane surface. Tempelman (dates unknown) discusses the physics and mathematics of the subject, with references to the works of Bernoulli, Euler, Musschenbroek, Nollet, et al. No reference has been found to the author or this work.

TENTZEL, Andreas

Exegesis Chymiatrica. Andreae Tentzelii . . . Qua in Quaecunq̄ue in prioribus Angeli Salae libris tacta quidem, attamen detecta non sunt, multa(ue); alia . . . interpolata. Descriptionibus verè ⚗, sincerè enucleatis. Apèttè vel mediocriter etiam in arte Chymica exercitatis ob oculos exhibentur.

Erfurt: Impensis Johannis Birckneri Bibliopolae Typis Heredum Mechlerianorum. (N.d. 1618).

First edition. 8vo. 3 leaves, 122 pp. With 7 woodcuts in text (2 full page). Fine copy. Bound with: Sala, Angelo, *Anatomia antimonii* (Leyden, 1617), and 5 other works.

AN IATROCHEMICAL treatise by Tentzel (fl. 1614–1625), a German physician at Nordhausen, who published alchemical and medical books. Divided into three parts, the first describes the preparation of various liquids (e.g., hydrochloric, nitric and sulphuric acids, alcohol, and extracts of plants and animals). The second part discusses oils, balsams, tinctures, potable gold, elixirs, extracts (from plants, mummy, etc.). The third part covers crystalline compounds, including inorganic salts (e.g., those of antimony, gold, iron, and silver), sulphur and sulphides, etc. The illustrations are of chemical apparatus, mechanical devices, and beds for patients. The introduction is dated August 1617. Although separately published, this work is usually found bound (as here) with the *Ternarius bezoardicorum* (Erfurt, 1618) of Angelo Sala. Two other editions appeared: Erfurt, 1630 (Wellcome, I, 5712), and Leipzig, 1725 (Ferguson, II, 432). Rare. (Duveen, 525; Ferchl, 530; Ferguson Coll., 620; Krivatsy, 10144; Partington, II, 277; Thorndike, VII, 168)

TERREIL, Auguste

Atlas de Chimie Analytique Minérale renfermant les premières notions indispensables aux personnes qui commencent la chimie et dix-sept tableaux parfaitement imprimés en couleur des précipités donnés par les réactifs et des colorations obtenues au chalumeau. Par A. Terreil . . .

Paris: Dunod, Éditeur Libraire des Corps Impériaux des Ponts et Chaussées et des Mines. 1861.

First edition. 8vo. (in 4s). 2 leaves, 84 pp. With 17 double-page chromolithographed tables (with tissue guards) and woodcuts of chemical apparatus in text. Very good copy in contemporary red half morocco, marbled boards, spine gilt-ruled, original printed wrappers bound in.

NOTHING APPEARS to be recorded of Terreil (1828–ca. 1885), who is described on the title page as “Aide de Chimie au Muséum Impérial d’Histoire Naturelle.” Intended as an introductory textbook on qualitative inorganic

analysis, the book is divided into two series of tables: the first covers the distinctive characters of soluble metallic salts (i.e., cations), and the other covers the distinctive characters of the acids of soluble salts (i.e., anions). The colored tables systematically illustrate the precipitates and flame-test colors. Tables 16 and 17 show, respectively, the colors produced by various metals in the borax bead and phosphate bead tests. Terreil also published a work on the analysis of minerals: *Traité pratique des essais au chalumeau* (Paris, 1875). He also coauthored a large book with Edmonde Frémy: *Le guide du chimiste* (Paris, 1885). Very rare. Unknown to the usual historians and bibliographers of chemistry. (Bolton, 865)

TESSARI, Ludovico

Chymiae Elementa in Aphorismos Digesta . . . Accedit ejusdem Prodromus de Phlogisto in coloranda corporum superficiei.

Venice: Apud Franciscum ex Nicolao Pezzana. 1772.

First edition. 8vo. xvi, 143, (1) pp. With 1 folding engraved plate (chemical symbols) and 2 very large folding printed tables (“Tabula Metallica” and “Tabula Semimetallica”). Very fine copy, unpressed and uncut, superbly bound by Bayntun (Bath, England) in speckled half calf antique, marbled boards, maroon morocco label, spine dated in gilt.

TESSARI (dates unknown) was a physician in Venice and a member of the Academy of Florence. His book, which is little known, consists of a classification of chemical elements and their compounds, more or less in the form of a dictionary. The *Prodromus Phlogiston ad coloranda corpora plurimum facit* (pp. 125–135) is of particular interest, as Tessari applies Newton’s corpuscular theory of light to phlogiston. This work remained unknown to Mlle. Metzger, who dealt with this subject in her book *Newton, Stahl, Boerhaave et la Doctrine Chimique* (Paris, 1930). The Duveen copy is imperfect, as neither Duveen nor Neu mention the engraved plate or printed tables. The Edgar Fahs Smith copy (University of Pennsylvania) is likewise imperfect. Rare. Not in Bolton, Caillet, Ferguson, Partington, Poggendorff, Waller, etc. (Cole, 1261; Duveen, 573; Edelstein, 2238; Ferchl, 530; Neu, 4009; Smith, 477; Sondheimer, 1517)

TETZEN, Johann von, ABBATIA, Antonius de, and KELLEY, Edward

Johannis Ticinensis, eines Böhmisches Priesters, Anthonii de Abbatia, eines in der Kunst erfahrenen Mönchs, und Edoardi Kellaei eines Welt-berühmten Engländer vortreffliche und ausführliche Chymische Bücher. Allen der Geheimen und Hohen Kunst-Liebhabern zu Nutz und merklichem Unterricht in Teutscher Sprach übersetzt, und heraus gegeben durch Einen, der niemahls gnug gepriesenen Wissenschaft, sonderbahren Beförderer. Mit einer Warnungs-Vorrede wider die Sophisten und Betrieger.

Hamburg: In Verlegung Gottfried Liebezeits. 1691.

Second edition. 8vo. 160 pp. Divisional titles to second and third sections. Contemporary marginal annotations in pencil and ink, occasional underlining in crayon, and light browning of the paper; otherwise very good copy, in original unlettered green paper-covered wooden boards.

A COLLECTION OF three alchemical tracts (first: Hamburg, 1670; Kopp, *Die Alchemie*, II, 336; Krivatsy, 3398), comprising I) *Johannis de Tetzen, Processus de Lapide Philosophorum*, a poem and text in Latin with German translation on opposite pages (pp. 42–84); II) *Antonii de Abbatia, Ein Send-Brieff . . . von Verwandelung der Metallen* (pp. 85–112); and III) *Edward Kelley, Ein schöner Tractat an der Röm: Kayser Rudolphum, im Jahr Christi 1596* (pp. 113–160). In the historical introduction (pp. 3–41) the anonymous editor describes Johann von Tetzen as a skillful alchemist who lived in the fourteenth century, but other writers doubt the antiquity of that author (see Ferguson). Antonius de Abbatia lived at the beginning of the sixteenth century. Edward Kelley (1555–1596?), the English apothecary and alchemist, conducted experiments with John Dee (1527–1607) on transmutation (see Ferguson, I, 454). Rare. (Baumer, 77; Ferchl, 259; Ferguson, I, 437; Ferguson Coll., 354; Neu, 2072 [imperf.]; Smith, 254–255; Wellcome, III, 357)

THALIN, Petre

Dissertation Physica Ferrum exhibens . . . Praeside . . . Andrea Spole, . . . Publico bonorum examini modeste submittit . . . Petrus Thalin Smolandus. In Aud. Gust. Maj. Die 17 Decembr. Anno MDCXCVIII.

Uppsala: excudit Henricus Keyser jun. Reg. Academiae Typographus. (1698).

First edition. 12mo. (in 4s). 2 leaves, 59, (3) pp. Title page dusty with 2 small holes in margin (not touching text); otherwise very good copy, in brown quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the metallurgy and physical and chemical properties of iron and steel, by Thalin, presented under the direction of Andreas Spole (1630–1699), professor of mathematics at Uppsala. The magnetic properties of iron are discussed (pp. 42–46), as are several chemical compounds of iron; with references to the works of Agricola, Boyle, Kircher, Rohault, Sturm, et al. Poggendorff (II, 975) briefly mentions Spole but not this title. Very rare. Not located in the usual bibliographies.

THEATRUM CHEMICUM

Theatrum Chemicum, praecipuos selectorum auctorum tractatus de chemiae et lapidis philosophici antiquitate, veritate, jure, praestantia, & operationibus, continens: in gratiam verae chemiae, et medicinae Chemicae studiosorum (ut qui uberrimam inde optimorum remediorum messem facere poterunt) congestum, & in quatuor partes seu volumina digestum; singulis voluminibus, suo auctorum et librorum catalogo primis pageilis: rerum vero & verborum Indice postremis annexo. . . .

Strassburg: Sumptibus Lazari Zetzneri. 1613, 1622.

First Strassburg edition. 4 vols., 8vo., dated 1613; 1 vol., 8vo., dated 1622. I: 4 leaves, 869, (1) pp., 16 leaves (last blank). II: 2 leaves, 598 pp., 3 leaves. III: 2 leaves, 911, (1) pp., 6 leaves, 28 pp. IV: 4 leaves, 1146 pp., 17 leaves. V: 4 leaves, 219, (3), “219”–1009, (1) pp., 15 leaves. With 6 folding tables and many woodcuts in text (some full page). Characteristic minor browning of paper; otherwise a splendid copy in original vellum, the fifth volume in calf antique, maroon morocco label, spine dated.

COLLECTIONS OF alchemical tracts were made at a comparatively early period, and the *Theatrum Chemicum* (first: Ursel, 1602) appeared exactly a hundred years before Manget’s *Bibliotheca Chemica Curiosa*. The 1602 edition is so rare as to be virtually unobtainable, and the present edition is also extremely rare. As the title states, the work is complete in four volumes, but Zetzner published a fifth volume in 1622 (here present). The collection contains well over one hundred alchemical tracts, including reprints of contemporary authors and printed versions of unpublished medieval manuscripts, some of which are now lost. “This and Manget’s collection are our chief sources of texts, many of which only exist in these collections” (Heym, *Ambix*, I [1937], 52). Zetzner’s heirs published a third edition (Strassburg, 1659–61, 6 vols., 8vo.). (Bolton, 1050; Caillet, 10598; Duveen, 574; Ferchl, 531; Ferguson, II, 439 [not in Young Coll.]; Ferguson Coll., 783; Goldsmith, Z18; Neu, 4010; Thorndike, VII, 154; Waller, 11250; Wellcome, I, 6251)

THEATRUM CHEMICUM

Theatrum Chemicum, praecipuos selectorum auctorum tractatus de chemiae et lapidis philosophici antiquitate, veritate, jure, praestantia, & operationibus continens . . .
Strassburg: Sumptibus Heredum Eberh. Zetzneri. 1659.

Third (second Strassburg) edition. Volume 2 only (of 6). 8vo. 549, (1) pp., 3 leaves. Folding alchemical table (facing p. 109) and text woodcuts. Title page backed; otherwise very good copy, in contemporary mottled calf, rebacked, red morocco label.

THE SECOND volume of the celebrated *Theatrum Chemicum*, complete in itself, containing about twenty works by such important alchemists as Gaston Duclou, George Ripley, Albertus Magnus, Isaac Holland, John Dee, and Roger Bacon. Rare. (Bolton, 1052; Caillet, 10598; Duveen, 574; Edelstein, 2239; Ferchl, 531; Ferguson, II, 436; Ferguson Coll., 784; Goldsmith, Z19; Guaita, 2154; Mellon, 385; Neu, 4011; Partington, II, xviii; Smith, 477; Watt, II, 992u)

THEATRUM CHEMICUM

Theatri Chemicum Volumen Sextum, theologis, medicis, et tam vulgaribus quam hermeticis, chemiae studiosis utilissimum, praecipuos selectorum auctorum huius seculi tractatus de chemia & lapidis philosophici antiquitate, veritate jure praestantia & operationibus continens, ex Germanica & Gallica lingua Latinam translatum per Johannem Jacobum Heilmannum . . .

Strassburg: Sumptib. Haeredum Eberhardi Zetzneri. 1661.

First edition. 8vo. 9 leaves, 772 pp., 14 leaves (last blank). With 14 woodcut illustrations (between pp. 343–428) and 6 small woodcut figures (pp. 321–322). Very good copy, in original blind-ruled calf, maroon morocco label.

THE ONLY edition of the important sixth and final volume of the *Theatrum Chemicum*, containing twelve works that were not in the five previous volumes (Strassburg, 1659–60) and that themselves were reprints of the earlier edition (Strassburg, 1613–22). Alchemical authors whose works are included are those by Blaise de Vigenere, Jean Colleson, and Henry de Rochas. The complete list is given by Bolton, Caillet, Ferguson, and Mellon. “Ouvrage excessivement rare” (Guaita). Sotheran (Cat. 800 [1926], 12098) advertised the six-volume set (1659–61) owned and intensively studied by Newton, but its present location is no longer known (see Harrison, 1608). (Bolton, 1057; Caillet, 10598; Duveen, 574; Ferchl, 531; Ferguson, II, 438; Ferguson Coll., 783; Goldsmith, Z19; Guaita, 2154; Mellon, 385; Neu, 4011; Partington, II, xviii; Smith, 477; Thorndike, VII, 154)

THEATRUM SYMPATHETICUM

Theatrum Sympatheticum, in quo Sympathiae Actiones variae, singulares & admirandae tam Macro-quam Microcosmicae exhibentur, & Mechanice, Physice, Mathematicae, Chimice & Medice, occasione Pulveris Sympathetici, ita quidem elucidantur, ut illarum agendi vis & modus, sine qualitatum occultarum, animaeve Mundi, aut spiritus astralis Magnive Magnalis, vel aliorum Commentariorum subsidio ad oculum pateat. Opusculum lectu jucundum & utilissimum; Digbaei, Papinii, Helmontii, aliorumque recentiorum scriptorum prolata exhibens & trutinans, atque ipsius Pulveris Sympathetici germanam & optimam descriptionem simul exponens.

Nuremberg: Impensis Joh. And. & Wolffg. Jun. Enderorum haered. 1660.

First edition. 12mo. Double-page engraved frontispiece, 10 leaves, 377 + 3 pp. (errata), 1 leaf (further errata, verso blank). The frontispiece depicts 6 emblems arranged about the sun, illustrating the preparation and use of the powder. Fine copy in contemporary overlapping vellum. Bound with: La Peyrere, Isaac de, *Pre-Adamitae. Sive Exercitatio super Versibus duodecimo . . .* (1655, 2 parts). Bookplate: Franz Sondheimer.

THE RARE first edition of one of the best collections of contemporary writings on the powder of sympathy and the weapon salve. Included are 1) Digby, Kenelm, *Oratio de Pulvere sympathetico* (pp. 1–192); 2) Strauss, Laurentius, *Epistola ad Comitem Dygbaeum* (pp. 193–252); 3) Papin, Nicolas, *Dissertatio de Pulvere Sympathico* (pp. 253–335); and 4) Mohyus, Erycius, *Pulvis Sympatheticus* (pp. 336–377). Another edition, in 4to., appeared at Nuremberg, 1662 (Duveen, 574–5; Partington, II, 424), and one from Amsterdam, in 12mo., 1661 (Ferguson, II, 440). Caillet, 10601, cites Amsterdam editions in Dutch of 1681 and 1709. Ferguson (*Books of Secrets*, II, 3rd Suppl., pp. 51–52) describes further editions in Dutch (Amsterdam, 1697 and 1727). Belief in the powder of sympathy and weapon salve persisted for a long time, especially among scientifically ignorant people. Not in Bolton, Caillet, Cushing, Duveen, Ferguson Coll., Guaita, Neu, Partington, Smith, Waller, Watt, etc. (Ferchl, 531; Ferguson, II, 440; Osler, 4092 [imperf.]; Rosenthal; 3263)



Theatrum Chemicum. Theatri Chemicus. Strassburg, 1661.

THEATRUM SYMPATHETICUM AUCTIONUM

Theatrum Sympatheticum Auctionum, exhibens Varios Authores. De Pulvere Sympathetico quidem: Digbaeum, Straussium, Papinium, et Mohyum. De Unguento vero Armario: Goclenium, Robertum, Helmontium, Robertum Fluddum, Beckerum, Borellum, Bartholinum, Servium, Kircherum, Matthaeum, Sennertum, Wechtlerum, Nardium, Freitagium, Conringium, Burlinum, Fracastorium, et Weckerum. Praemittitur his Sylvestri Rattray, Aditus ad Sympathiam et Anti-Pathiam. Editio novissima, correctior, auctior, . . . Nuremberg: Apud Johan. Andream Endterum, & Wolfgangi Junioris Haeredes. 1662.

Third (first greatly enlarged) edition. 4to. 4 leaves, 722 pp., 21 leaves (index). Title page in red and black. With engraved frontispiece of the 1660 edition on page 125. Minor embrowning of some leaves; otherwise fine copy in original vellum.

THE MOST comprehensive collection of texts on the powder of sympathy and the weapon salve ever to appear, containing twenty-six works as opposed to only four in the duodecimo edition of 1660. An encyclopedia of the remarkable theories and practices deriving from the doctrine of sympathetic or magnetic cures, revealing the great extent to which they were accepted and the gravity with which they were discussed among medical men. A full list of the works in this volume is given by Ferguson. "One of the best collections" (Duveen). "An excellent collection" (Osler). A very important sourcebook on the subject. (Caillet, 10599; Duveen, 574; Edelstein, 2241; Ferchl, 531; Ferguson, II, 440; Ferguson Coll., 691; Krivatsy, 11771; Neu, 4013; Osler, 4094; Partington, II, 424; Rubin, *Digby*, 68; Thorndike, VII, 505; Waller, 11251; Wheeler Gift, 152)

THENARD, Louis Jacques

An Essay on Chemical Analysis: Chiefly Translated from the Fourth Volume of the last Edition of the Traité de Chimie Élémentaire, of L. J. Thenard, with Additions, comprehending the latest discoveries and improvements in this branch of the science. . . . By John George Children . . .

London: Printed and sold by W. Phillips, George Yard, Lombard Street. 1819.

First edition. 8vo. xvii, (1), 494 pp., 1 leaf (errata). With 2 engraved plates and 4 folding printed tables. Fine copy in original green half morocco, marbled boards, spine with ornamental gilt rules. Inscribed in ink on title page: "The Revd. Thomas Hall from Mary F. Law Augt. 6th 1819."

DEDICATED to the chemist Charles Hatchett (ca. 1765–1847), F.R.S., this translation by J. G. Children (1777–1852) was made from the fourth volume of the improved second

edition of Thenard's *Traité* (Paris, 1818). Considerable additions have been made by the translator. These include "the new metal Cadmium, discovered by M. Stromeyer, the additional researches on Selenium, by M. Berzelius, and those on oxygenated water, by M. Thenard. . . . In some cases, as in the analysis of mineral waters, and of vegetable and animal substances, I have considerably enlarged on the original matter . . ." (preface). The "oxygenated water" mentioned above was hydrogen peroxide, which Thenard discovered (1818), formed by the action of dilute mineral acids on barium peroxide. Not in Edelstein, Roller & Goodman, Watt, etc. (Bolton, 868; Cole, 1262; Duveen, 575; Ferchl, 95; Smith, 477; Thornton & Tully, 215)

THENARD, Louis Jacques

Traité de Chimie Élémentaire, Théorique et Pratique . . . Paris: Chez Crochard . . . de l'Imprimerie de Lebégue. 1813–1816.

First edition. 4 vols., 8vo. I (1813): 3 leaves, x, 606 pp. With 3 folding tables (facing pp. 118, 182, 400). II (1814): 3 leaves, 762 pp. With folding table (facing p. 33). III (1815): 3 leaves, 658 pp. IV (1816): 2 leaves, 333, (3) pp. With folding table (facing p. 173) and 32 plates of apparatus. Fine set in original tree calf, spines gilt-ruled, red and green morocco labels.

THE SON of a peasant, Thenard (1777–1857) at age seventeen went to Paris to become a laboratory assistant to Vauquelin. With the help of Vauquelin and Fourcroy, in 1804 Thenard became professor at the École Polytechnique, a position he held until 1837. He succeeded Vauquelin and also held posts as professor in the Collège de France and (until 1840) in the Faculty of Science of the University of Paris. Made a baron (1824) and a peer of France (1833–48), he became chancellor of the University of Paris in 1857 (just before he died). Thenard carried out a great deal of important chemistry, on which see Partington (IV, 90–96), who states: "Thenard wrote an excellent text-book which was kept up to date by appendices in all the editions." The fourth volume is on chemical analysis. Dedicated to his friend and colleague Gay-Lussac, this classic work went through six editions in French and was translated into German, Italian, and Spanish. With the exception of the fourth volume on analysis, no English edition appeared. The Morgan and Smith collections each have the sixth edition (1834–35), but no edition of this important work is listed by Duveen, Ferguson, or Waller. (Bolton, 867; Cole, 1263; Edelstein, 2242; Ferchl, 532; Partington, IV, 94; Sondheimer, 1518; Thornton & Tully, 215; Watt, II, 901b)

THENARD, Louis Jacques

A Treatise on the General Principles of Chemical Analysis. Translated from the French of L. J. Thenard . . . By Arnold Merrick.

London: Printed for Longman, Hurst, Rees, Orme, and Co. 1818.

First edition. 8vo. xii, 323, (1) pp., 5 leaves (index). With folding printed table (analyses of mineral waters) and 3 engraved plates (chemical apparatus). Fine copy in original half calf, marbled boards, spine gilt-ruled, dark-red morocco label.

A TRANSLATION BY Arnold Merrick of the fourth volume of Thenard's *Traité de Chimie Élémentaire* (Paris, 1816). "A few slight alterations, and numerous additions, consisting principally of extracts from the other volumes, have been made by the translator, with a view to render it less incomplete as a separate treatise. . . . We have no separate and convenient work in English on chemical analysis [so] it has been judged that a translation of Thenard's treatise . . . would be a valuable acquisition to the practical chemist" (preface, dated 5 April 1818). The book was considered "scarce" by Zeitlinger in 1915. Not in Bolton, Cole, Edelstein, Ferchl, Partington, Smith, Watt, etc. (Duveen, 575; Morgan, 753; Roller & Goodman, II, 491; Sotheran, Cat. 757 [1915], 15228; Thornton & Tully, 215)

THENARD, Louis Jacques

Tratado de Quimica Elemental Teórico y Práctico, seguido de un Ensayo sobre la Filosofía Quimica, y de un Resumen sobre la Analisis . . .

Cadiz & Valencia: Bosch, Gimeno, etc. 1839–1840.

First Cadiz and Valencia edition. 6 vols. in 7, 8vo. (in 4s). I (Cadiz, 1839): 4 leaves, 470 pp., 3 leaves. II (Valencia, 1840): 2 leaves, 440 pp. III (Valencia, 1840): 2 leaves, 523, (1) p. IV (Cadiz, 1840): 384 pp. V (Cadiz, 1840): 458 pp., 4 leaves. VI (Valencia, 1840): 2 leaves, 397 (3) pp. VII (Cadiz, 1840): pp. 59–108 pp. (complete); 57, (1) pp. With 5 large folding engraved plates, divided into 20 sections depicting hundreds of pieces of chemical apparatus (the "Atlas," all in vol. VII). Fine set in original dark-blue quarter calf, marbled boards, spines gilt.

A SPANISH TRANSLATION of the *Traité de Chimie Élémentaire* by "una sociedad de profesores de quimica, medicina, farmacia e idiomas." On the title of volume I it is stated that this translation was made from the "séptima edicion"; however, as only six French editions appeared, this "seventh" edition must refer to the sixth (and best) French edition or possibly to the edition published at Brussels in 1846. Volume VI, in two volumes, contains an index to the complete work, plus an "Atlas." Evidently the publishing of this

large treatise was divided between two printers, in Cadiz and Valencia. Quoting Bolton, Cole refers to another edition in Spanish (Nantes, 1830) and briefly mentions the present edition with no details. Very rare. (Bolton, 868)

THENARD, Louis Jacques, and BIOT, Jean Baptiste

Nota dei Signori Thenard e Biot partecipata all' Instituto Nazionale di Parigi sulla Decomposizione dell'acqua per mezzo della Colonna elettrica in occasione delle Esperienze del Prof. Pacchiani e inserita nel Giornale Ufficiale No. 40 an. 1805.

First separate edition. 8vo. 16 pp. Very fine copy on pale-blue paper, uncut, in maroon quarter cloth, marbled boards, spine gilt-lettered and dated. Bound with: 3 tracts by Pacchiani, 2 by Cioni and Petrini, and 1 each by Mascagni and Sangiorgio, all of 1805.

AN IMPORTANT paper, in French and Italian on facing pages, in which the famous French scientists Thenard (1777–1857) and Biot (1774–1862) very carefully repeated the experiments of Pacchiani on the electrolysis of water. Pacchiani had claimed that when distilled water is electrolyzed, hydrochloric acid in trace amounts is always produced. After numerous experiments, in which rigorous precautions were taken to exclude salts, Thenard and Biot proved beyond doubt that hydrochloric acid is never formed during the electrolysis of water. They demonstrated that in the experiments of Pacchiani the acid was produced by the trace of sodium chloride present in the animal membrane used to separate the positive and negative electrodes. The presence of hydrochloric acid in trace amounts was proved by precipitating silver chloride, on adding silver nitrate to the electrolyzed water. Very rare. Not located in available bibliographies.

THEOPHRASTUS

De Igne Lib. Adr. Turnebo interprete. Eiusdem in eundem Adnotatiunculæ.

Paris: Apud Adr. Turnebum typographum regium. 1553 (31 Dec., 1552).

First edition in Latin. 4to. 2 leaves, 25, (3) pp. Woodcut head-piece and decorative initial. Roman type. Fine, large copy, in marbled boards antique.

THE FIRST edition of Turnèbe's Latin translation and annotations of the treatise on fire by Theophrastus (ca. 372–ca. 288 B.C.), friend and successor of Aristotle at the Lyceum and founder of botanical science. The work had appeared first in the monumental Aldus edition, in Greek,

of Aristotle's *Opera* (Venice, 1495, 4 vols.) and was again printed in Greek (Paris, 1552, 4to., 24 pp.) by the scholar-printer Adrian Turnèbe, director of the Royal Press (1552–56) and specialist in Greek textual criticism. Turnèbe's books are very fine examples of French Renaissance printing. In the *De Igne* Theophrastus "concerns himself with terrestrial phenomena of fire. His topics include not only such central matters as the generation, preservation, and extinction of fire but also such . . . examples as the quenching of fire by salamanders, the melting of coins in the belly, and the jumping of grain on Babylonian threshing floors. In short, he excludes nothing that seems, or is said, to be connected with fire and heat" (D.S.B., XIII, 330). The Cambridge University copy lacks the second leaf (here present), Turnèbe's dedication letter, which has the number 17 printed in the top margin. Rare. Not in Durling, Wellcome, or the usual chemical bibliographies. (Adams, T581; British Library, *S.T.C. French Books, 1470–1600*, p. 419; Brunet, V, 799; Graesse, VI, 127; Partington, I, 127; Watt, II, 902)

THEOPHRASTUS

Theophrasti Eresii Graece & Latine opera omnia. Daniel Heinsius Textum Graecum locis infinitis partim ex ingenio partim e libris emendavit: hiulca supplevit, male concepta recensuit: interpretationem passim interpolavit. Cum Indice locupletissimo.

Leyden: Ex Typographio Henrici ab Haestens. Impensis Johannis Orlers, And. Cloucq, & Joh. Maire. 1613.

First edition. Folio. 8 leaves, 508 pp. Title in red and black, with large woodcut. Historiated woodcut capitals, head- and tailpieces. Text in Greek and Latin in double columns. Good copy in contemporary speckled calf, gilt, maroon label.

THE FIRST edition of Theophrastus edited by Daniel Heinsius (1580–1655), celebrated professor of history and librarian at the University of Leyden. Theophrastus, an Athenian pupil, first of Plato and later of Aristotle, was a successful teacher who cultivated all branches of knowledge. Most of the information about him comes from Diogenes Laertius, whose life of Theophrastus is included in this edition. He was much more original than Aristotle. Translated into Latin by T. Gaza, D. Furlanus, and A. Turnebus, the present edition is printed with the Greek text and Latin translation in double columns. All of the important writings are included: e.g., *Enquiry into Plants* (nine books), *Causes of Plants* (six books), *On Odors*, *On Colors*, *On Fire*, *On Waters*, *On Stones*, *Minor Works* (various medical and scientific subjects). An extensive index makes it much easier to locate important topics than in the earlier edition of 1541. Partington (I, 123–135) analyzes the work

of Theophrastus, pointing out its historical significance in medicine, pharmacy, botany, geology, mineralogy, physics, and chemistry. "This edition is generally esteemed. The Greek text is frequently corrected, and the Latin version of Gaza is occasionally amended" (Watt). Rare. Not in the usual chemical and medical bibliographies. (Pritzel, 9196; Watt, II, 902j; Wellcome, I, 6269)

THEORIA

Theoria & Practica Arboris Aureae & Argentae.
(No place, no printer). Anno 1624.

First edition. 8vo. 1 leaf, 77 (misprinted 78), (1) pp. Black letter. Woodcut printer's ornament on title page and small woodcut of distilling vessel with alchemical symbol on page 73. Fine, crisp copy, in contemporary blind-stamped German vellum over oak boards, with original brass clasps (one lacking) on vellum thongs. Bound with: Mizauld, Antoine, *Neunhundert Gedächtnuszwürdige Gebeimnus und Wunderwerck* (Basel, 1615), and 2 other works.

AN ALCHEMICAL work of great rarity, on the preparation of the philosopher's stone and the transmutation of metals into gold and silver. The anonymous author, who lived in the sixteenth century, describes the preparation of a number of recognizable compounds (e.g., saltpeter, nitric and sulphuric acids, copper sulphate, and microcosmic salt). He refers to the writings of Bernhardus Trevisanus, Paracelsus, and other authors. The book was reprinted as *Die Theorie und Praktik des Gold- und Silber-Baums von einem ungenannten Philosophen* (Frankfurt and Leipzig, 1787), and in the preface to that edition the editor says that the 1624 edition was very rare and that he had searched "long before he could procure a copy of it" (Ferguson). This edition was unknown to Borel, Lenglet Dufresnoy, Fictuld, and other early bibliographers. Not in Duveen, Edelstein, Ferchl, Ferguson Coll., Guaita, Hall, Watt, Wellcome, etc. (Caillet, 10617 [wrong date: 1642]; Ferguson, II, 443–444; Neu, 4025)

THIBAUT, Pierre

Cours de Chymie, de P. Thibaut, dit le Lorrain. Reveu, enrichi de plusieurs Figures de Fourneaux, & augmenté de la Composition du Baume vert Vulnèraire, avec son Emplastre Stiptique; du Febrifuge de F. Delboe Sylvius; d'un excellent Emetique; d'une eau Ophthalmique, & du merveilleux Onguent Manus Dei, nouvellement communi-quez par de tres-celebres Medecins & Chirurgiens.
Paris: Chez Jean d'Houry, à l'Image S. Jean, au bout du Pont-neuf, sur le Quay des Augustins. 1674.

Second Paris edition. 8vo. 8 leaves, 285 (recte 287), (1) + 16 pp., 8 leaves, 7, (1) pp. With folding engraved plate of chemical symbols and 5 folding copperplates of apparatus. Small repair



Thibaut. Cours de Chymie. Paris, 1674.

to title page (not affecting text); otherwise fine, crisp copy, in original calf, spine richly gilt.

DEDICATED TO Antoine Vallot, first physician to the king of France, this augmented printing comprises the sheets of the first edition (Paris, 1667), plus additional leaves (*Aux personnes charitable* and *Secrets nouveaux*) at the end. The final, most complete, and best edition, to which the plates of symbols and chemical equipment are added for the first time. A reprint of the shorter Paris (1667) first edition appeared at Leyden (1672; Duveen, 576). Thibaut's book was well received, but all editions are now rare. Thorndike gives the wrong date (1679) for this edition. Not in British Library, Bolton, Ferguson, Smith, Watt, etc. (Caillet, 10633; Duveen, 576; Edelstein, 2250; Ferchl, 532; Ferguson Coll., 692; Krivatsy, 11786; Neu, 4031; Partington, III, 26; Thorndike, VIII, 141)

THIBAUT, Pierre

The Art of Chymistry: as it is now Practised. Written in French by P. Thibaut, Chymist to the French King. And now Translated into English, by a Fellow of the Royal Society. London: Printed for John Starkey, at the Miter near Temple-Bar in Fleetstreet. 1668.

First English edition. 8vo. 16 leaves, 279, (1) pp., 4 leaves (advertisements, last blank). Fine copy, complete with license leaf and 6-page publisher's catalogue; in mottled calf antique, spine gilt-lettered and dated.

THE FIRST English translation, by William Aglionby, M.D., of the *Cours de Chymie* (Paris: Thomas Jolly, 1667) by Thibaut (fl. seventeenth century). A typical chemical laboratory, its furnaces, and its apparatus are described, followed by detailed preparations of acids, alkalies, metals, salts, and products made from animals and plants. The book is essentially a practical course of chemistry, containing clear instructions and notes on the operations and processes. At the end (pp. 249–279) is *A Little Treatise of Chymistry: or, an Abridgement of the precedent Treatise*, summarizing some of the important details of the course. The sheets of this edition were reissued with a reset title page (London: John Starkey, 1675) but omitting the advertisement leaves. "The author is unrecorded by all the usual bibliographers, although the book contains much of interest to the chemical and alchemical historian" (Duveen). Only the 1675 reissue is listed in Bolton and Krivatsy. Rare. (Duveen, 576; Edelstein, 2247; Ferchl, 532–533; Ferguson Coll., 692; Neu, 4032; Partington, III, 26; Smith, 479 [imperf.]; Thorndike, VIII, 141; Watt, II, 902p; Wing, T891)

THIROUX D'ARCONVILLE, Marie Geneviève Charlotte

Essai pour servir a l'Histoire de la Putréfaction. Par le Traducteur des Leçons de Chymie de M. Shaw, premier Médecin du Roi d'Angleterre.

Paris: Chez P. Fr. Didot le Jeune. 1766.

First edition. 8vo. 3 leaves, xlvi, 578 pp., 3 leaves. With 10 folding printed tables. (N.B. In this copy signatures ciii–cviii [i.e., pp. xxxvii–xlvi] are misbound following title leaf.) Very good copy in contemporary mottled calf, maroon morocco label, spine gilt in compartments.

AN INTERESTING work, of chemical importance, describing a series of experiments on putrefaction and fermentation. It is divided into thirty-two classes of substances—animal, vegetable, and mineral—with details on the experiments, results, and observations. The author, Mme. D'Arconville (1720–1805), wife of a member of the Paris Parliament and president of one of the chambers, was a remarkable woman in her pursuit of knowledge in the sciences. She studied physics, chemistry, and natural history and attended lectures at the Jardin du Roi. Her home was open to frequent visits by leading French scientists: Macquer, Jussieu, Fourcroy, Sage, et al. She produced a large literary output, including a translation of Peter Shaw's *Lectures on Chemistry*, and the present work, which is based on her own research. Very rare. Not in the British Library and not mentioned by Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Waller, Watt, etc. (Blake, 449; Smith, 479)

THOELDE, Johann

Haligraphia, Das ist, Gründliche und eigendliche Beschreibung aller Saltz Mineralien. Darin von dess Saltzes erster Materia, Ursprung, Geschlecht, Unterscheid, Eigenschafft, Wie man auch die Saltzwasser probiren, die Saltz sol durch vielerley Art künstlich zu gute sieden, durchs Feuer und ohne Feuer, erreichen, und verbessern möge, klerlich gehandelt wird. Beneben einer Historischen Beschreibung aller Saltzwercke ihrer Umbstende und Gelegenheit. Auch wie man aus allen Metallen und vornembsten Mineralien, deszgleichen aus Thieren, Kreutern und Gewürtzen ihre Saltz aussziehen, und zu Menschlicher Gesundheit brauchen sol. Menniglich, sonderlich aber denen, so mit Saltzwerck umgehen, am Tag geben, durch Johan Thölden, Hessem.

(Colophon: Eissleben: Jacobum Gaubisch. In Vorlegung Jacob Apels. 1603.)

First edition. 8vo. 24 leaves, 316, (1, 3 blank) pp., 10 leaves (last 2 blank). Title in red and black, gothic letter, 2 small text woodcuts. Five leaves of index shaved; otherwise exceptionally

fine copy, in contemporary calf, maroon morocco label. Armorial bookplate: Nathan of Churt.

THE FIRST chemical work by Thoelde (fl. 1600) to appear under his own name. The author, a chemist, councillor, and owner of a saltworks at Frankenhausen (Thuringia), divides his book into four parts: salts in general; their extraction; salt springs; and salts obtainable from metals, minerals, animals, and plants. It is now generally agreed that Thoelde wrote and published other books under the pseudonym Basil Valentine, whose manuscripts were supposed to have lain buried for two hundred years, until they were rediscovered when the church at Erfurt was damaged by lightning. Thoelde's name is connected with Basil Valentine in two laudatory verses, at the beginning. "The *Haligraphia* . . . closely resembles the *Letztes Testament* (1626), one of the principal works of Basil Valentine" (D.S.B.). Extremely rare. A second edition appeared in 1612. Not in Duveen, Wellcome, etc. (Caillet, 10645; D.S.B., XIII, 559; Ferguson, II, 445 [not in Young Coll.]; Ferguson Coll., 693; Partington, II, 187)

THOMAS AQUINAS

Thome de generatione et corruptione, in libros Aristotelis castigatissima explanatio una cum ipsius . . . textus subtilissima declaratione . . . precipuis annotamentis insigniata, omnique mendo repurgata . . .

(Colophon:) Lyons: Jacques Myt for J. de Giunta. February, 1520.

First Lyons edition. 8vo. 84 numbered folios, 2 leaves.

Very fine woodcut title in red and black, in the top part St. Thomas Aquinas and in the lower part allegorical figures, the whole surrounded by an architectural woodcut border. Floriated woodcut capitals and Gothic type in double columns throughout. Very fine, crisp copy, in late-sixteenth- or early-seventeenth-century overlapping vellum, spine lettered in ink.

A PARTICULARLY BEAUTIFUL edition of the commentary by Saint Thomas Aquinas (1225–1274) on the *De generatione et corruptione* of Aristotle (384–322 B.C.), which was first published at Paris, 1488 (Klebs 965.1). "He became the greatest Christian expositor of Aristotle's doctrine in the later Middle Ages. . . . The aim of his life was to reconcile Aristotelian and Muslim knowledge with Christian theology" (Sarton [II, 2, 914]). The "generation and corruption" is "most important from the chemical standpoint" (Partington [I, pt. 1, p. 73]). Thomas "ceased commenting on *De generatione et corruptione* . . . only shortly before his death" (D.S.B. [I, 197]). Very rare. Not in the British Library, Ferguson Coll., Partington, Stillwell, Thorndike, Watt, etc. (Durling, 4348; Wellcome, I, 439)

THOMPSON, Benjamin (Count Rumford)

Mémoires sur la Chaleur. . .

Paris: Chez Firmin Didot. 1804.

First edition. 8vo. lxxviii, 166 pp. Several woodcut text figures. Very good copy, uncut, in quarter morocco antique, marbled boards, spine gilt-lettered and dated, with original wrappers bound in.

IN 1798 COUNT RUMFORD (1753–1814) reported to the Royal Society his findings concerning the relationship between work done and the heat generated in his classic paper *Experimental inquiry concerning the source of heat excited by friction* (see *Heralds of Science*, no. 151). With that communication Rumford proved that heat was not material (i.e., owing to the amount of “heat particles,” or caloric, that a substance contained) but was a form of motion (i.e., energy). He thus demolished the old theory of caloric, and the concept of heat entered the realm of physical science. In addition to its fundamental importance in the history of physics, the present work also discusses the researches on heat carried out by earlier and contemporary chemists (e.g., Boerhaave, Lavoisier, Murray, and Thomson). “His memoirs on the modes of communication of heat preceded Leslie’s on radiant heat” (Partington). In this uncommon work Rumford gives an extended historical account of his researches on heat, together with three memoirs containing new information on the subject. (Cushing, R315; Edelstein, 2253; Partington, IV, 31; Roller, 489; Sotheran, Cat. 682 [1908], 4136)

THOMSON, George

Epilogismi Chymici Observationes nec non Remedia Hermetica Longa in Arte Hiatrix exercitatione constabita. Item Essentiae nostrae Stomachicae vires insignes medicae explicantur, ejusque materia, modus ac methodus praeparationis ad Galeno-Chymicorum Elenchum fideliter describuntur. . .

Leyden: Apud A. Doude & A. Severinus. 1673.

First Continental edition. 12mo. 4 leaves, 87, (1) pp. Very good copy, in original mottled calf, gilt.

A RARE PHARMACEUTICAL chemical work divided into 138 sections (first edition: London, 1673; Wing, T1022). Thomson (ca. 1625–1679), M.D. (Leyden, 1648), published *Loimologia* (London, 1665) on the plague, *Galeno-pale: or a chemical trial of the Galenists* (London, 1665) criticizing the methods used by the physicians of the time, and several other books that provoked arguments with fellow practitioners. He strongly supported the medical views of Van Helmont. Ferguson gives biographical details on Thomson and his works. For a further account of Thomson, see E. A.

Underwood, *Science, Medicine and History* (Oxford, 1953, vol. 2, pp. 63–71). Partington (II, 303, 311) briefly mentions Thomson but not this title. Not in Duveen, Neu, Osler, Waller, etc. (Ferchl, 534; Ferguson, II, 448; Ferguson Coll., 694 [imperf.]; Krivatsy, 11828; Manget, *Bibliotheca Scriptorum Medicorum*, II, pt. 2, p. 376)

THOMSON, George

Ortho-methodos iatro-chymica: or the Direct Method of Curing Chymically. Wherein is contained the Original Matter, and Principal Agent of all Natural Bodies. Also the Efficient and Material Cause of Diseases in General. Their Therapeutick Way and Means. I Diaetetical . . . II. Pharmaceutick . . . To which is added, the Art of Midwifery, Chymically Asserted. The Character of an Ortho-Chymist, and Pseudo Chymist. A Description of the Sanative Virtues of our Stomach-Essence. Also . . . a Just Complaint of the Method of the Galenists. By George Thomson, M.D. . . . London: Printed for B. Billingsley at the Printing-press in Corn-hill, & S. Crouch at the upper end of Popes-Head-Alley. 1675.

First edition. 8vo. 8 leaves, 200 pp. (pp. 193–200 misnumbered 33–40). Signature A1 lacking (portrait). Edges of title, first and last leaves slightly browned; otherwise good copy in early-eighteenth-century marbled boards, rebaced in gilt-ruled calf antique, maroon morocco label.

A TREATISE DEDICATED to Prince Rupert in which Thomson attacks the Galenists and pseudochemists of his time. “The Pseudochymist is an Upstart Mushroom [with] gross Ignorance in handling Materia Medica” (p. 169). “The Legitimate Philosophical Chymist hath laid his Foundation in Learning . . . in Natural Philosophy delivered to him, he doth not take up meer trust, without a severe scrutinie into the Truth . . . by the Test of Experience. His Theory, and his Practice . . . go hand in hand” (p. 165). Some copies have a portrait of Thomson, but most do not; it could well have not been issued in all copies. (Ferchl, 534; Ferguson, II, 449 [not in Young Coll.]; Ferguson Coll., 695; Krivatsy, 11831; Parkinson & Lumb, 2408; Partington, II, 311; Watt, II, 905a; Wing, T1029)

THOMSON, George

Chymiatrorum Acus Magnetica sive Recta Chymice Curandi Methodus a Geo. Thomsono, M.D. quondam Anglico, nunc Latino sermone commonstrata a Gottf. Hennicken, Naumb. Misn.

Frankfurt: Sumpt. Georgii Erhardi Martii, Marburgi Catorum, Typis Joh. Henrici Stockenii. 1686.

First Latin and first Continental edition. 12mo. 6 leaves, 261, (1) pp., 1 leaf (blank). Title in red and black. Fine copy, in

contemporary vellum. Bound with: Sennert, Daniel, *Methodus discendi medicinam* . . . (Marburg, 1672).

THE LATIN translation by Gottfried Hennicke (or Hennig) of Thomson's *Direct method of curing chymically* (London, 1675; Wing, T1029), an iatrochemical treatise. Thomson has added a preface in Latin, dated 4 November 1684, to the present edition. There are numerous chemical symbols in the text. Soon after the appearance of this work, the physician Hennicke (fl. 1686–ca. 1743) published a brief work along similar lines, viz. *De panaceis tractatio medico-chymica* (Frankfurt, 1689). (Ferchl, 534; Ferguson, II, 448–449; Krivatsy, 11827; Partington, II, 311; Watt, II, 905a)

THOMSON, Robert Dundas

Dictionary of Chemistry, with its Applications to Mineralogy, Physiology & the Arts . . .

London: Charles Griffin and Company. N.d. (1856).

First edition, second issue. 8vo. viii, 540 pp. Numerous woodcut text figures. Half title dusty; otherwise good copy in original gilt-lettered maroon cloth. Publisher's file copy, inscribed on title page: "Charles Griffin & Co., Greter Street, Strand."

A USEFUL DICTIONARY that covers every aspect of chemistry, chemical technology, and allied sciences. The first issue is entitled *Cyclopaedia of chemistry* (London and Glasgow, 1854; viii, 540 pp.). Although described on the title page as a "new edition," the present issue is identical to the first, except for the reset title. The half title still reads *Thomson's cyclopaedia of chemistry*, as in the first issue. The supplement (pp. 537–540) lists a number of recently discovered compounds, including anilides, azophenylamine, quaternary ammonium derivatives, secondary aromatic amines, and homologous fatty acids. Thomson (1810–1864), M.D. (Glasgow, 1831), medical officer and author, studied under Liebig at Giessen. He assisted his uncle, Thomas Thomson (1773–1852), at Glasgow and was chemical lecturer at St. Thomas's Hospital, London, in 1852. He became F.R.S., 1854, and F.R.C.P., 1864 (see D.N.B.). Very scarce. (Bolton, 78)

THOMSON, Thomas

An Attempt to Establish the First Principles of Chemistry by Experiment. By Thomas Thomson . . .

London: Printed for Baldwin, Cradock, and Joy. 1825.

First edition. 2 vols., 8vo. I: xxiii, (1), 478 pp. II: vii, (1), 532 pp. Very fine copy, unpressed and uncut with wide margins, in original boards, rebaked to match, with original printed paper labels preserved.

DEDICATED TO Dalton, Gay-Lussac, Davy, Berzelius, Wollaston, and William Prout. In this milestone work Thomson attempted to prove the validity of Prout's hypothesis. Earlier, Prout had anonymously published two papers in Thomson's *Annals of Philosophy* (1815–16) and had shown experimentally that the atomic weights of many elements are multiples of the atomic weight of hydrogen. Thomson spent ten years carrying out "many thousands" of experiments to satisfy himself that Prout was correct. In this book the "very numerous investigations which will be exhibited . . . will . . . fully establish the truth of Dr. Prout's sagacious conjecture." Berzelius strongly objected to Thomson's book and some of the inaccurate analyses it contains, but, as Partington correctly indicates, Thomson's atomic weights (with the exception of chlorine) are better than those of Berzelius. Berzelius and later Turner "utterly undermined the book; but Prout's hypothesis survived, because many atomic weights are close to whole numbers, to trouble chemists through the nineteenth century" (Knight). It was a century later that chlorine (atomic weight 35.5) was shown to be made up of two isotopes of atomic weight 35 and 37. (Bolton, 871; Cole, 1274; D.S.B., XIII, 373; Duveen, 577; Edelstein, 2274; Ferchl, 534; Knight, 132; Partington, IV, 225; Poggendorff, II, 1098; Roller & Goodman, II, 499; Smith, 481)

THOMSON, Thomas

Principes de la Chimie, établis par les Expériences; ou Essai sur les Proportions définies dans la Composition des Corps. Par Th. Thomson . . . Traduction de l'Anglais, publiée avec l'assentiment de l'auteur. . . .

Paris: Crevot, Libraire-Éditeur, Rue de l'École de Médecine, No. 3, près celle de la Harpe. 1825.

First French edition. 2 vols., 8vo. I: xi, (1), 451, (1) pp. II: (4), 502 pp., 1 leaf (errata). Inoffensive old stamp on each title page; otherwise fine copy in contemporary gilt-ruled quarter sheep, marbled boards, with "Société de Lecteur" in gilt on spines.

THE FRENCH edition, by an anonymous translator, of Thomson's *An Attempt to Establish the First Principles of Chemistry by Experiment* (London, 1825; 2 vols.). This very scarce work is mentioned by Cole but was not in his library. An Italian translation also appeared (Naples, 1827). Not in the usual bibliographies. (Bolton, 871)

THOMSON, Thomas

Chemistry of Animal Bodies. By Thomas Thomson . . .

Edinburgh: Adam and Charles Black: Longman, Brown, Green, & Longmans, London. 1843.

First edition. 8vo. ix, (1), 702 pp. + 13, (3) pp. (advertisements). Very good copy, uncut, in original publisher's blind-stamped brown cloth, gilt-lettered spine. Bookplate: Huddersfield Medical Library, and small old stamp on title page.

AN EARLY treatise on organic and biochemistry, which describes chemicals that can be isolated and characterized from animals and human beings. Thomson divided the subject into three areas: I. Of animal principles (chemical constituents); II. Of the parts of animals; III. Of the functions of animals. "By laying the present state of knowledge before the reader, it is to be hoped that British chemists, when aware of the vast quantity of investigations yet requisite to place Animal on the same footing as Vegetable Chemistry, and when medical men become sensible that the farther improvement and final perfection of physiology will depend upon an accurate knowledge of the constituents and properties of animal substances, the subject will speedily draw general attention, which alone is wanting to insure a rapid advance" (preface). This treatise comprises an amazing compendium of information, gathered into one volume, with many references to the original literature. A rare book, which forms a sequel to Thomson's *Chemistry of Organic Bodies: Vegetables* (London, 1838). Not in Cole, Duveen, Edelstein, Ferchl, Roller & Goodman, Smith, etc. (Bolton, 871; Partington, III, 719)

THOMSON, Thomas

Chemistry of Organic Bodies. Vegetables. By Thomas Thomson . . .

London: J. B. Baillière, Foreign Bookseller & Publisher, 219, Regent Street, etc. 1838.

First edition. 8vo. xvi, 1076 pp. + 4 pp. + 4 pp. (adverts). Very good copy in contemporary blind-stamped dark-green cloth, gilt-lettered spine. Bookplate: Franz Sondheimer.

THE SECTION on organic chemicals derived from plants, originally part of *A System of Chemistry*, is here greatly enlarged and separately published. "The object of the present volume is, to lay before the British chemical public, a pretty full view of the present state of the chemistry of Vegetable Bodies" (preface). Thomson acknowledges the recent advances in organic chemistry made "chiefly in Germany and France. British chemists have scarcely entered upon the investigations." He praises the researches of Liebig in Giessen and those of Dumas in France, and also cites the work of Mitscherlich, Pelouse, Rose, and others. This treatise describes many classes of recognizable compounds: e.g., alcohols, aldehydes, esters, acids, ketones, ethers, benzene and other aromatics, carbohydrates and sugars, and alkaloids. The beginnings of serious research into the thousands of organic compounds obtainable from plants are seen in this

milestone work. Scarce. Not in D.S.B., Duveen, Edelstein, Roller & Goodman, Smith, etc. (Bolton, 871; Ferchl, 534; Partington, III, 719; Poggendorff, II, 1098; Sondheimer, 1544)

THOMSON, Thomas

The Elements of Chemistry. By Thomas Thomson, M.D. F.R.S.E.

Edinburgh: W. Blackwood, and Longman, Hurst, Rees, and Orme, London. 1810.

First edition. 8vo. xii + 496 pp. Very good copy in half calf antique, original marbled boards, crimson gilt-lettered label.

AN INTRODUCTORY work designed "to furnish an accurate Outline of the present state of Chemistry, to those persons who are commencing the study of the Science, or who may be unable or unwilling to peruse my larger and more complete work on the subject." The more complete work was Thomson's *A System of Chemistry* (London, 1810, 5 vols.). The author's "sole object was to include the greatest possible number of facts within the smallest possible space, and to arrange them in a clear and perspicuous manner" (advertisement, p. iii). The book covers elements, inorganic and organic compounds, and simple physical properties. Partington states that there is no reference to Dalton's atomic theory, the composition of compounds being given only in percentages. A very scarce book, which is not in Cushing, D.S.B., Duveen, Ferguson, Morgan, Smith, Sondheimer, Waller, etc. (Bolton, 871; Ferchl, 534; Partington, III, 719; Poggendorff, II, 1098; Watt, II, 905n)

THOMSON, Thomas

Elements of Chemistry. By Thomas Thomson . . .

Philadelphia: Published and Sold by J. & A. Y. Humphreys, 'Change-Walk, Corner of Second and Walnut-streets. 1810.

First American edition. 12mo. xii, 13-351, (1) pp. Some light embrowning, characteristic of American paper of the period; otherwise very good copy in contemporary sheep, rebacked, with original red morocco label preserved.

A REPRINT OF the first edition (Edinburgh, 1810), which had appeared earlier the same year. The text is identical to that of the Edinburgh edition. Rare. Not in Bolton, Cole, D.S.B., Duveen, Ferchl, Partington, Roller & Goodman, etc. (Edelstein, 2275; Smith, 481)

THOMSON, Thomas

The History of Chemistry. By Thomas Thomson . . .

London: Henry Colburn, and Richard Bentley, New Burlington Street. 1830. 1831.

First edition. 2 vols., 8vo. I (1830): 2 leaves, vii, (3), 349, (3) pp. (last leaf blank). II (1831): 4 leaves, 325, (3) pp. (last leaf blank). With engraved frontispiece portrait of Joseph Black (by Dean after Raeburn) in volume I. Fine copy in contemporary tan calf, covers gilt-ruled, rebounded to match, spines gilt-lettered and dated.

“THOMSON’S *History of Chemistry*, written in a very interesting style, gives a large amount of valuable information, is largely based on original sources and is still of value” (Partington). “This entertaining work was long the only History of Chemistry in the English language. . . . the progress of analytical chemistry is reviewed with critical skill” (Bolton). “His *History of Chemistry* . . . unique and authoritative from 1760 onward, was professional propaganda that *inter alia* legitimated chemistry for the educated layman as a noble, rational, and autonomous science” (D.S.B.). In volume II (chapter VI, pp. 277–308) there is a detailed account of the origins and principal events in the development of the chemical atomic theory. Not in Cole, who lists only the 1835 edition. (Bolton, 161–162; D.S.B., XIII, 373; Duveen, 577; Ferchl, 534; Knight, 132; Morgan, 756; Partington, III, 720; Poggendorff, II, 1098; Smith, 481; Sondheimer, 1543; Sotheran, Cat. 757 [1915], 15274 [“Scarce”]; Thornton & Tully, 214)

THOMSON, Thomas

History of the Royal Society, from its Institution to the End of the Eighteenth Century. By Thomas Thomson . . .

London: Printed for Robert Baldwin, 47, Paternoster-Row. 1812.

First edition. 4to. viii, 552, xci, (1) pp. Minor foxing of a few leaves; otherwise fine copy, unpressed and uncut with wide margins, in speckled half calf antique, marbled boards, maroon morocco label, spine dated.

THOMSON WAS elected a fellow of the Royal Society in 1811 and in 1812 published this excellent history of the society, which is extensively documented with references to original sources, particularly the *Philosophical Transactions of the Royal Society*. The work is divided into sections: Historical Introduction, Natural History, Mathematics, Mechanical Philosophy, Chemistry, Miscellaneous Articles, and Appendix. The section on chemistry (pp. 465–521), in three chapters, covers “Chemistry Proper,” “Meteorology,” and “Chemical Arts and Manufactures.” Appendix IV contains valuable information on the dates of birth and death of fellows, with the dates of their election and admission to the society. Appendix III contains useful information taken from the “Minutes of the Royal Society respecting Sir Isaac Newton.” The preface states that this work was written as a sequel to the *Abridgement of the Philosophical Transactions* (1665–1800), published in eighteen volumes, large quarto,

in 1809. The abridgement, by Charles Hutton, George Shaw, and Richard Pearson, is advertised on the verso of the final leaf of this work. (Bolton, 161; Cole, 1276; D.S.B., XIII, 372; Ferchl, 534; Morgan, 757; Osler, 6119; Partington, III, 720; Poggendorff, II, 1098; Smith, 481; Thornton & Tully, 214; Waller, 12419; Wheeler Gift, 5947)

THOMSON, Thomas

An Outline of the Sciences of Heat and Electricity. By Thomas Thomson . . .

London: Baldwin & Cradock; and Edinburgh: William Blackwood. 1830.

First edition. 8vo. xii, 583, (1) pp. With engraved frontispiece and numerous woodcut illustrations in text (some full page). Very fine copy, uncut, in half calf antique, marbled boards, spine gilt-ruled and dated, green morocco label.

BY THE time the sixth edition of *A System of Chemistry* was published (London, 1820), the work had grown so large that Thomson decided to split it into separate books. The contents of this work on heat and electricity—originally in the *System*—are here greatly enlarged, with much new information added to bring the subjects up-to-date since the 1820 edition. Heat and electricity are covered in their broadest form, including much on chemistry: e.g., gases, ignition, combustion, galvanism, electrochemistry, and piezo-electricity. Historical material is included. At the time of its publication, this was one of the best books available on the subjects of heat and electricity. Scarce. A second edition appeared (London, 1840; Wheeler Gift, 991). (Ekelöf, 930; Gartrell, 991; Morgan, 758; Partington, III, 719; Poggendorff, II, 1098; Roller & Goodman, 499; Sotheran, Cat. 692 [1909], 4839)

THOMSON, Thomas

Outlines of Mineralogy, Geology, and Mineral Analysis. By Thomas Thomson . . . In Two Volumes . . .

London: Baldwin & Cradock. 1836.

First edition. 2 vols., 8vo. I: viii, 726 pp., 1 leaf (errata). II: vii, (1), 566 pp. ith numerous small line diagrams in text. Very good copy in original maroon pebbled cloth, green morocco labels (1 missing).

ONE OF the works originally contained in shortened form in *A System of Chemistry*, now greatly enlarged as a separate book. This work “is the result of a laborious investigation which has occupied almost the whole of my spare time during a period of about ten years” (preface). A monumental treatise that presents Thomson’s final thoughts on the subjects of mineralogy, geology, mineral analysis, and crystallography. Scarce. Not in Bolton, Cole, Duveen, Edelstein,

Morgan, Sinkankas, Smith, etc. (D.S.B., XIII, 373; Ferchl, 534; Partington, III, 719; Poggendorff, II, 1098; Roller & Goodman, II, 500)

THOMSON, Thomas

A System of Chemistry. In four volumes. By Thomas Thomson, M.D. . . .

Edinburgh: Printed for Bell & Bradfute, and E. Balfour; G. & J. Robinson; and Gilbert & Hodges, Dublin. 1802.

First edition. 4 vols., 8vo. I: xvi, 503, (1) pp. II: vii, (1), 514 pp. III: vii, (1), 528 pp. IV: viii, 570 pp., 1 leaf (errata). With 4 engraved plates (1 in each volume at end). Near fine set in contemporary half calf, marbled boards, rebacked with original gilt-ruled spines laid on.

THOMSON (1773–1852) studied chemistry under Joseph Black, who recommended that he later be appointed lecturer in chemistry at Glasgow University. Thomson became first Regius Professor there in 1818. Published when he was only twenty-eight, this work was written during the time when he was a private lecturer at Edinburgh University. It became his best known and most popular book. “As the first systematic treatise of a non-elementary kind to break the French monopoly of such works, Thomson’s *System* tried patriotically to do justice to the contributions made by British chemists to the new chemistry” (D.S.B.). The only previously comparable work was Fourcroy’s *Système des Connaissances Chimiques* (Paris, 1801–1802). The *System* of Thomson went through six editions, each revised, updated, and enlarged; and it remained a standard work for many years. A milestone treatise, which Partington describes as a “famous textbook.” The first edition is scarce. Not in Duveen, Edelstein, Roller & Goodman, etc. (Bolton, 871; Cole, 1279; D.S.B., XIII, 372; Ferchl, 534; Knight, 143; Partington, III, 719; Poggendorff, II, 1097; Smith, 481; Thornton & Tully, 214; Watt, II, 905n)

THOMSON, Thomas

A System of Chemistry. In Five Volumes. By Thomas Thomson . . .

Edinburgh: Printed for Bell & Bradfute, and E. Balfour; John Murray, London; and Gilbert & Hodges, Dublin. 1807.

Third edition. 5 vols., 8vo. I: xiii, (1), 641, (1) pp. II: viii, 632 pp. III: viii, 628 pp. IV: viii, 655, (1) pp. V: viii, 798 pp., 1 leaf (errata). With 4 engraved plates (1 each in vols. I–IV, at end). Volumes I and IV recased. Fine set in contemporary half calf, marbled boards, spines richly gilt, maroon and dark-green morocco labels, rebacked with original spines laid on. Signature in ink on title page of volume I: “G. Young.” Possibly George Young (1777–1848), geologist.

THE HISTORICALLY important third edition, containing the first printed statement of Dalton’s atomic theory; the first really important theoretical concept of modern chemistry. Dalton did not publish the first volume of his *New System of Chemical Philosophy* until 1808. In volume III Thomson writes: “Though the author has not yet thought fit to publish his hypothesis, yet as the notions of which it consists are original and extremely interesting . . . I have ventured, with Mr. Dalton’s permission, to enrich this Work with a short sketch of it.” Thomson’s summary of Dalton’s theory is in volume III, pages 424–431 and 451–452. After the publication of the second part of the first volume of Dalton’s book in 1810, Thomson issued a long series of papers (*Annals of Philosophy*, 1813–14) in which the atomic theory was applied to determine the composition of a very large number of compounds. These contributed to making the theory known, especially on the Continent. Not in Duveen, Morgan, Smith, etc. (Bolton, 871; Cole, 1280; D.S.B., XIII, 373; Edelstein, 2280; Partington, III, 719, 796; Smyth, 613; Watt, II, 905n)

THOMSON, Thomas

A System of Chemistry. In Five Volumes. By Thomas Thomson . . .

Edinburgh: Printed for Bell & Bradfute. Sold by John Murray, London; and Gilbert & Hodges, Dublin. 1810.

Fourth edition. 5 vols., 8vo. I: xv, (1), 669, (1) pp. II: viii, 687, (1) pp. III: viii, 686 pp. IV: viii, 710, (2) pp. V: viii, 848 pp. With 4 engraved plates (1 each in vols. I–IV, at end). Occasional very minor foxing of a few leaves; otherwise fine set in contemporary calf, rebacked, original red and green morocco labels.

THE PRESENT edition has been carefully updated and enlarged to include the “new and important discoveries . . . No pains have been spared by the Author to collect these improvements as they made their appearance, and to render this Edition as complete a register as possible of the present state of the science. Much curious additional matter has been inserted . . . which was unknown at the publication of the last Edition. . . . As vol. V was of great length [with] the Appendix . . . it was thought expedient . . . to place the Index at the end of the first . . . volume” (preface). The appendix (V, pp. 767–848) contains numerous recent discoveries (e.g., composition of ammonia, and isolation of metallic sodium and potassium by Davy). The plates are identical to those of the third (1807) edition. Not in Duveen, Edelstein, Watt, etc. (Bolton, 871; Cole, 1281; D.S.B., XIII, 373; Partington, III, 719; Smith, 481)

THOR, George

Cheiragogia Heliana. A Manuduction to the Philosopher's Magical Gold: out of which Profound, and Subtile Discourse; Two of the particular Tinctures, that of Saturn and Jupiter Conflate; and of Jupiter Single, are recommended as short and profitable Works, by the Restorer of It to the Light. To which is added . . . Zoroaster's Cave: or, an Intellectuall Echo, &c. Together with the Famous Catholic Epistle of John Pontanus upon the Minerall Fire. By Geo. Thor. Astromagus.
London: Printed for Humphrey Moseley at the Prince's Armes in St. Paul's Church-yard. 1659.

First edition. 8vo. 7 leaves, 96 pp., 8 leaves (advertisements). Fine copy, in contemporary blind-ruled sheep, rebacked, spine gilt and dated.

A VERY RARE book on the philosopher's stone and the transmutation of base metals into gold. The chemical properties of gold are also discussed. The second edition, a reprint of the first, appeared as *An easie introduction to the philosophers magical gold* (London: M. Smelt, 1667; Wing, T1038). Describing that edition, Hall states: "This treatise is typical of its kind—curious, enthusiastic, . . . made of flights of religious zeal, technical directions, . . . and an easy, excited moral posing. Alchemically . . . [it] . . . is an elaboration of and a commentary on the method of Basil Valentine, with many references to Paracelsus and some to Theophrastus, Sendivogius, Geber, and Bernard of Treves." Nothing is recorded of the author's life. Ferguson (I, 364–365) describes a Latin work of similar title (*Cheiragogia Heliana de Auro Philosophico*, Marburg, 1612), by Nicolaus Niger Hapelius, which is an anagram for Raphael Eglinus Iconius (1559–1622). Wellcome (I, 1987) also lists this title. Whether the present book is an English translation of the Latin edition of 1612 or is based on it has not been determined. Not in the usual bibliographies. (Ferguson Coll., 695; Hall, 155; Neu, 4036; Waite, 304; Wing, T1037)

THOUVENEL, Pierre

Mémoire Chymique et Médicinal sur les principes et les vertus des eaux minérales de Contrexeville en Lorraine. Par M. Thouvenel, Docteur en Médecine de la Faculté de Montpellier.

Nancy: Chez Babin, . . . ; Paris: Chez Valade, Libraire, rue Saint-Jacques. 1774.

First edition. 12mo. 128 pp. Fine copy, uncut and with wide margins, in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt, with the original wrappers bound in.

THE DEFINITIVE work on the mineral waters of Contrexeville, important because most of the book describes their chemical analysis, with details of the methods used. Thouvenel (1747–1815) correctly explains the precipitation of soap by hard water as due to the formation of a less soluble lime soap by double decomposition. Not in Blake, Bolton, Edelstein, Ferguson, Ferguson Coll., Smith, Waller, etc. (Duveen, 578; Ferchl, 535; Neu, 4038; Partington, III, 513; Poggendorff, II, 1102)

THOUVENEL, Pierre

Précis Chimique sur les Principes de la Formation de l'Acide Nitreux ouvrage qui a reporté le prix proposé par la Société Royale des Sciences de Copenhague en MDCCLXXVI. Par Thouvenel, Docteur de la Faculté de Médecine de Montpellier, Agrégé correspondant du Collège des medecins de Nancy, Médecin Inspecteur des eaux minérales de Lorraine & Intendant de celles de Coutrexeville dans la même province.

A Copenhague de l'Imprimerie de Paul Hermann Höecke. 1784.

First edition. Large 4to. 32 pp. Fine, crisp copy, entirely uncut, in antique style maroon half morocco, marbled boards, spine gilt-lettered and dated.

THOUVENEL (1747–1815) was general inspector of mineral waters in France, but fled to Italy during the revolution, becoming physician to Louis XVIII on the Restoration. He published works on animal nutrition, mucous materials, medical chemistry, and other subjects and was the first French author to write on galvanism. With his brother he wrote a long essay on saltpeter, which obtained the prize offered by the French Academy of Sciences and was published in the *Recueil de Mémoires et de Pièces sur la Formation et la Fabrication du Salpêtre* (1786), edited by Lavoisier. The present memoir of 1784, on the formation of nitric acid and the preparation of saltpeter, was awarded a prize by the Royal Society of Sciences of Copenhagen in 1776. Pages 19–32 comprise a supplement containing additional information on the subject. A significant and definitive work, which is not mentioned by Ferchl or Poggendorff. (Bolton, 872; Duveen, 654; Neu, 4039; Partington, III, 513)

THRASHER, William

The Marrow of Chymical Physick; or, The Practice of Making Chymical Medecines. Divided in Three Books: viz. Shewing the true and perfect Order to Distil, or Draw forth from Vegetables, Minerals, and Metals, their Spirits, Oyls, Vinegers, Salts, Extracts, or Tinctures, Essences and Magisteries, Flowers, and Salts, &c. Whereunto is added at the end of every such Preparation, its most excellent Vertue and Medicinal Use, for the Preservation of Health, and Restoring the Diseased to Sanity. A rare Way of Making Metaline Glass of any colour whatsoever. Very useful for the making of Artificial Rubies, Saphirs, Jacinths, &c. Likewise for the Enamiling of Rings, or for Jewels; being very excellent and easie. By W. T. Philo-Astro-Medicus, and Student in Chymistry.

London: Printed by T. J. for Peter Parker at the White Lion in Billiter-Lane. 1669.

First edition. 12mo. 2 leaves, 188 pp. With 6 woodcuts of chemical apparatus. Edges and corners of few leaves worn; otherwise good copy in calf antique, maroon morocco label.

THRASHER (or Thraster, fl. seventeenth century) states in the preface that in his youth he “delighted in the Art of Chymistry” and with the help of Dr. Edward Bolnest “received some Methodical Instructions.” Summarizing his knowledge of practical chemistry “drawn from the best Authors, and most of my own experience,” he claims that “by the help of this Book onely, may be truly prepared all Vegetables, Animals, Minerals, and Mettals, into excellent and efficacious Medicines.” He describes chemical processes clearly, and the last three pages cover the preparation of colored glass and gems. Thrasher evidently maintained a laboratory in London “At the Sign of the Razor by the May-pole in East-Smithfield.” A second edition appeared (London, 1679; Wing T1081). Very rare, not in the usual chemical bibliographies. (Cooper, 383; Ferguson Coll., 696; Krivatsy, 11839; Wing, 1080)

THRUSTON, Malachi

De Respirationis Usu primario, Diatriba. . . . Accedunt Animadversiones à Cl. Viro in eandem conscriptae, unà cum Responsionibus Auctoris.

London: Apud Johannem Martyn, Regalis Societatis Typographum ad Insigne Campanae. 1670.

First edition. 8vo. (32), 206, (2) pp. Title within double ruled border, woodcut initials, and typographic headpieces. Fine copy in original speckled sheep, gilt-paneled and gilt-lettered spine.

A CLASSIC WORK on pulmonary and cardiac research and a milestone book in the chemistry of respiration. “Some state-

ments about the effects of air on the blood in respiration . . . were made by Malachi Thruston in a Cambridge M.D. thesis presented in 1664 but not published till 1670” (Partington [II, 571–573], who fully discusses the work). Thruston (ca. 1628–1701) carefully examines Mayow’s *Tractatus duo . . . de respiratione* (Oxford, 1668/69) and expounds his own theory of respiration, with reference to the works of Boyle, Harvey, Henshaw, Hooke, Lower, Mayow, and others. This edition was reviewed in the Royal Society’s *Philosophical Transactions* (1670), IV, 1142, and an abstract of the pioneering researches of Thruston and Mayow on respiration appeared in Manget’s *Bibliotheca Anatomica* (Geneva, 1685). Thruston’s investigations are mentioned by Mayow in this *Tractatus quinque* (Oxford, 1674, pt. 4, p. 43). The present book is Thruston’s Cambridge thesis, expanded by further researches on the role “nitrous particles” (i.e., oxygen) play in respiration. He practiced medicine in Exeter, was elected F.R.S. (1665), and had many scholarly contacts in London and Oxford. (D.S.B., IX, 243–244; Eales, 771; Krivatsy, 11840; Manget, *Bibliotheca Scriptorum Medicorum*, II, pt. 2, p. 377; Partington, II, 571; Thorndike, VIII, 227; Watt, II, 907f; Wing, T1132)

THRUSTON, Malachi

De Respirationis Usu primario, Diatriba. . . . Accedunt Animadversiones à Cl. Viro in eandem conscriptae, unà cum Responsionibus Auctoris.

Leyden: Apud Felicem Lopez de Haro, Cornelium Drie-huysen. 1671.

Second (first Leyden) edition. 8vo. 5 leaves, 165, (9) pp. Woodcut on title page. Fine copy in contemporary mottled calf, spine richly gilt. Inscribed in ink on title: “Revolat.” Bound with: Mayow, John, *Tractatus Duo* (Leyden, 1671).

THE FIRST continental edition of this important book, bound, as usual, with the first Leyden edition of Mayow’s work. A note on the verso of the title of each work states that the book has been printed so that it may be bound with the other if desired and with Swammerdam’s tract on respiration. Fulton records no copy of the Mayow work so bound. This copy has an impressive provenance, having come from the libraries of the physician Étienne Benoit Revolat (1768–1848), the distinguished scientist and bibliophile E. N. da C. Andrade (1887–1971), and the founder of the first chair of nutrition at the University of London, John Yudkin (1910–1995). Bookplates of Andrade and Yudkin are on the first pastedown endpaper and first free endpaper, respectively. (Krivatsy, 11841; Partington, II, 571; Waller, 9571; Watt, II, 907f)

THRUSTON, Malachi

De Respirationis Usu primario, Diatriba. Accedunt Animadversiones à Cl. Viro in eandem conscriptae, unà cum Responsionibus Auctoris. Ut et Johannis Mayow, . . . Tractatus Duo, quorum prior agit De Respiratione: Alter de Rachitide.

Lugd. Batavor.: Apud Theodorum Haak. 1708.

Third (second Leyden) edition. 8vo. 5 leaves, 2 leaves, 165, (1) pp., 5 leaves, 57, (1) pp. With 2 engraved plates. (N.B. In this copy signatures A2 and A3 of the first part are duplicated. The duplicate sig. A2 [dedication to Gulielmo Morice] has different wording. The duplicates of sig. A3 [Lectori S.] are identical). Very fine, crisp copy, bound in an early-sixteenth-century musical manuscript over boards.

AN IMPORTANT milestone book in the chemistry of respiration. "Some statements about the effects of air on the blood in respiration . . . were made by Malachi Thruston in a Cambridge M.D. thesis presented in 1664 but not published till 1670" (Partington [II, 571–573], who fully discusses the work). The London (1670) edition was reprinted at Leyden (F. Lopez de Haro & C. Driehuisen, 1671) and again in 1708 (this edition). Thruston (ca. 1628–1701) discusses Mayow's *Tractatus Duo . . . de Respirationis* (Oxford, 1668) and enunciates his own theory of respiration, with references to the works of Caesalpinus, Harvey, Boyle, Hooke, Henshaw, Lower, Mayow, et al. Apart from the pioneering work of Thruston and Mayow on respiration, this book contains Mayow's monograph on rickets. An abstract of *De Respirationis* appeared in Manget's *Bibliotheca Anatomica* (Geneva, 1685), and the London (1670) edition was reviewed in the *Philosophical Transactions of the Royal Society* (IV, 1142). Eales, Thorndike, and Watt list only the London (1670) edition and Waller lists the Leyden (1671) edition. Not in Bolton, Duveen, Edelstein, Ferchl, Ferguson, Osler, Poggendorff, Smith, Watt, etc. (Blake, 450; D.S.B., IX, 243–244; Neu, 4040; Partington, II, 571)

THURNEISSER, Leonhart

Historia unnd Beschreibung Influentischer, Elementischer und Natürlicher Wirckungen, aller fremden unnd heimischen Erdgewechssen, auch irer Subtiliteten, sampt warhafftiger und künstlicher Conterfeitung derselbigen, auch aller teiler, innerlicher und eüsserlicher glieder am Menschlichen Körper, nebend fürbildung aller zü der Extraction dienstlichen Instrumenten, auch deren gebrauch, und allen zü erhaltung der gesundbeit notwendigen Processen gemeinen nutz zü güf. . . .

(Colophon:) Berlin: Gedruckt bey Michael Hentzken. 1578.

First edition. Folio. 6 leaves, 156 (i.e., 158) pp., 12 leaves.

Title page in red and black, within elaborate woodcut border. Woodcut portrait of Thurneisser on page 3 of preliminary leaf (lacking), plus numerous botanical and chemical woodcuts in text. Black letter. Fine, crisp copy, in eighteenth-century boards, gilt, red label. Bound with: Thurneisser, L., *Megale Chymia, vel Magna Alchymia* (1583).

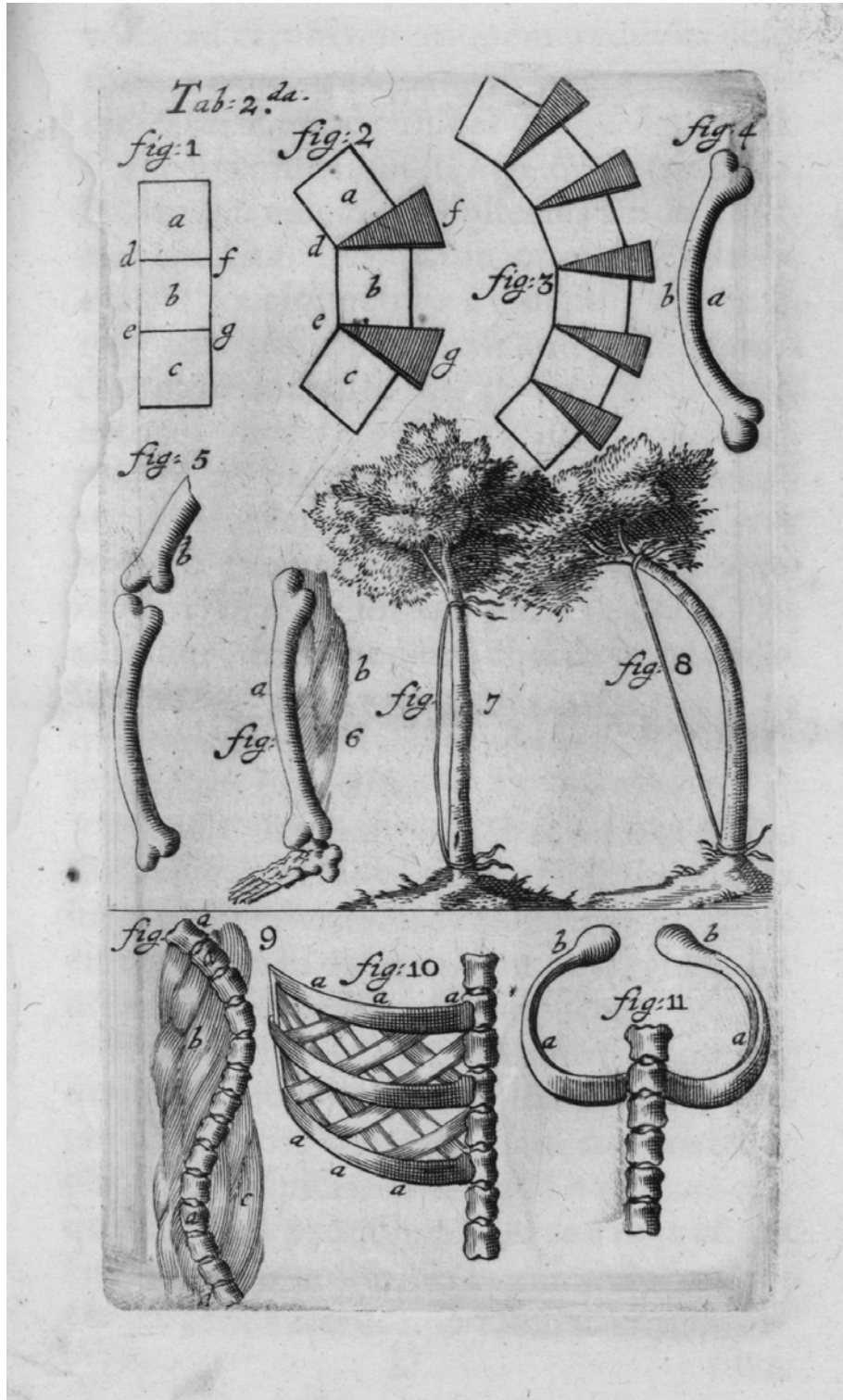
THE ONLY volume published of a projected ten volumes on botany. "It deals only with the umbellifers, which were regarded as under the dominion of the Sun and Mars. . . . Each plant is drawn in an ellipse, surrounded by an ornamental border, which contains mysterious inscriptions relating to its virtues. In some cases diagrams are added . . . giving indications as to the course of an illness, and as to the appropriate herbal treatment" (Arber). A Latin version appeared later in the same year, with the title *Historia sive descriptio plantarum*. "As a piece of printing this is a remarkable book. The woodcuts of the plants are enclosed in a border—the Hebrew (sometimes Syriac) name above and the Greek below, and in the four corners are the constellation of the plant, its composition in terms of sulphur, salt, and mercury, its educts, and its virtues" (Ferguson). Directions are given for preparing various chemicals from the plants described. Rare. (Arber, 259; British Library, *S.T.C. German Books, 1455–1600*, p. 862; Durling, 4353; Duveen, 579; Ferchl, 536; Ferguson, II, 451; Ferguson Coll., 697; Neu, 4041; Partington, II, 154; Wellcome, I, 6300)

THURNEISSER, Leonhart

Megale Chymia (graece), vel Magna Alchymia. Das ist ein Lehr und unterweisung von den offenbaren und verborgenen Naturen, Arten und Eigenschafften, allerhandt wunderlicher Erdgewechssen, als Ertzen, Metallen, Mineren, Erdsäfften, Schwefeln, Mercurien, Saltzen und Gesteinen. Und was der dingen zum theil hoch in den Lüfften, zum theil in der Tieffe der Erden, und zum theil in den Wassern, welche aus dem Chaos oder der Confusion und vermischung Elementischer Substantzen, als Geistlicher, und doch subtiler, noch unbestendiger weis verursacht, empfangen und radicirt . . . Berlin: Gedruckt . . . durch Nicolaum Voltzen. 1583.

First edition. Folio. 6 leaves, 144 pp., 6 leaves. Title page in red and black, within elaborate woodcut border. Woodcut portrait of Thurneisser on verso of title leaf, with the rare printed slip in Latin and Greek (usually lacking). Black letter. Woodcut figures of chemical apparatus in text. Fine, crisp, wide-margined copy, in eighteenth-century boards, gilt, red label. Bound with: Thurneisser, L., *Historia und Beschreibung . . . aller Erdgewechssen* (1578). Bookplate: Joannis Christiani Gerning.

THE RARE first edition of Thurneisser's great alchemy; one of his two chief alchemical works, the other being the *Melisath*, a kind of Paracelsian dictionary published in the



Thruston. De Respirationis. Lugd. Batavor., 1708.

same year. These books “were impressive examples of the printer’s art, . . . incorporating Greek, Arabic, Syrian, Hebrew and Chaldean typefaces” (D.S.B.). “The *Magna Alchymia* is of a more practical character than [his] other works and contains descriptions of preparations of sulphur, salts including sal urinae, mercury and its compounds, and metals . . .” (Partington). “From 1570 to 1584 he was physician to John Georg . . . of Brandenburg, and had a laboratory and printing press . . . By various means he amassed a large fortune, and . . . employed between two and three hundred people. He . . . encouraged the fine and practical arts” (Ferguson). (Bolton, 873; D.S.B., XIII, 397; Duveen, 579; Ferchl, 536; Ferguson, II, 452; Ferguson Coll., 697; Neu, 4042; Partington, II, 154; Poggendorff, II, 1104; Wellcome, I, 6302)

THURNEISSER, Leonhart

Pison. Das erst Theil. Von Kalten, Warmen Minerischen und Metallischen Wassern, sampt der vergleichunge der Plantarum und Erdgeweachsen 10. Bücher: Durch Leonhart Thurneisser zum Thurn, mit grosser mühe und arbeit, gemeinem nutz zu gut an tag geben. Mit Röm. Kay. May. freyheit auff 10. Jar. 1572.

Frankfurt an der Oder: durch Johan Eichorn. 1572.

First edition. Folio (in 6s). 10 leaves, 420 pp., 28 leaves (last blank). Title in red and black, with elaborate woodcut border. On the leaf (recto) preceding page 1 this border is repeated and encloses a woodcut half-length portrait of the author. Small woodcuts of apparatus in the text. A fine copy in eighteenth-century calf, brown morocco gilt-lettered label, spine richly gilt. From the library of Robert B. Honeyman, Sotheby auction, 19 May 1981, lot 2980.

THURNEISSER (1531–1596), born in Basel, Switzerland, was the son of a goldsmith. He adopted his father’s profession and also studied under Dr. Huber, an alchemist and physician of Basel. After traveling around Europe, he worked as a miner, smelter, and goldsmith in Nuremberg, after which he was in the service of Archduke Ferdinand (1560–70). In 1571 Thurneisser moved to Frankfurt, where he wrote *Pison*, a textbook on the analysis of mineral waters of considerable chemical interest and importance, another edition of which appeared at Strassburg (L. Zetzner, 1612). Although styled the “first part,” the second part never appeared. The extensive index lists the locations of numerous mineral spas. Ferguson (II, 453) states that Moehsen (*Beiträge zur Geschichte der Wissenschaften in der Mark Brandenburg*, 1783) has commented on this work, and A. W. Hofmann (*Berliner Alchemisten und Chemiker*, 1882) has remarked on Thurneisser’s water analyses. Kopp (*Die Alchemie*, 1886) evaluated his analytical methods. For an account of the author’s colorful life, see the D.S.B., Ferguson, and Par-

tington. Very rare. Not in Bolton, Cushing, Duveen, Edelstein, Ferguson Coll., Neu, Rosenthal, Smith, Waller, Watt, etc. (D.S.B., XIII, 397; Durling, 4356; Ferchl, 536; Ferguson, II, 452; Partington, II, 154; Poggendorff, II, 1104; Wellcome, I, 6293)

TIEDEMANN, Friedrich, and GMELIN, Leopold

Recherches Expérimentales, Physiologiques et Chimiques, sur la Digestion, considérée dans les quatre classes d’animaux vertébrés . . . Traduites de l’Allemand par A. J. L. Jourdan . . . Paris: Chez J. B. Baillièrre . . . 1827.

First French edition. 2 vols., 8vo. I: xxiv, 417, (1) pp. II: 2 leaves, 326 pp., 1 leaf (errata) + 48 pp. (Baillièrre catalogue, Paris, 1863). Fine copy in gilt-ruled nineteenth-century quarter morocco, marbled boards.

A MILESTONE MONOGRAPH in the history of the biochemistry of digestion, which first appeared as *Die Verdauung nach Versuchen* (Heidelberg, 1826, 2 vols.). Tiedemann (1781–1861), professor of anatomy and physiology at Heidelberg, and Gmelin, professor of chemistry and medicine at Heidelberg, published this classic book as the result of numerous experiments on animals and humans. The work of Prout (1785–1850) was confirmed, namely, that the acid of gastric juice is free hydrochloric acid (i.e., “On the nature of acid and saline matters usually existing in the stomachs of animals” (*Philosophical Transactions*, 114 [1824], 45–49). The present work also includes accounts of the authors’ discoveries of bile cholesterol (“choline,” I, 46), picromel (I, 50), taurine (I, 50, 59, 61), sugary matter (I, 62), etc. Berzelius praised the book. In some copies volume I is dated 1826 (possibly an early issue), but most copies have both volumes dated 1827, as here. The German (1826) edition is listed by Ferchl, 190, and Garrison-Morton, 988. Only Partington mentions this rare French translation. Not in the usual bibliographies. (Partington, IV, 182)

TIETZ, Johann Daniel

Documenta Solemnium Promotionis Philosophicae D. 17 Octobr. 1765. Elogia creatorum doctorum philosophiae et sermo de thermotro aereo habitus a decano Joanne Daniele Titio Phys. Prof. Ord.

Wittenberg: Literis Caroli Christiani Dürrii. 1765.

First edition. 4to. 12 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt.

AN IMPORTANT doctoral dissertation on different types of thermometers, comparing them with the earlier air thermometers. The author traces the development of thermometers, referring to those used by Boyle, Guericke, Newton,

Réaumur, Desaguliers, Fahrenheit, Celsius, Nollet, et al. Thermometers containing various liquids (e.g., oil, alcohol, and mercury) are compared for accuracy versus air thermometers, and the fixed points employed by different workers are discussed. On page 11 the “ingenious” and “celebrated” Lomonosov, professor of physics at St. Petersburg, is mentioned. W. E. Knowles Middleton (*A History of the Thermometer*, Baltimore, 1966, p. 167) refers to a work on metallic thermometers by Tietz, saying that it “seems to be rare,” but he does not mention the present work. Poggen-dorff (II, 1111) gives a long list of publications by Tietz but also omits this title. A very rare work to which no bibliographical reference has been found. Menso Folkerts (D.S.B., XIII, 424–426) gives an excellent biography of Tietz.

TILEMANN, Johann

Experimenta, circa Veras & irreducibiles Auri solutiones, ante triennium in Italia edita, & nunc in gratiam Philo-Chymicorum denuo recusa. Cum praefatione D. Joelis Langelotti, qua miranda vis tritus porro explicatur methodusque panditur, non solum verum Aurum potabile, sed & ex Arcanis Chymicis praecipua quaedam consequendi. Lege & Judica.

Hamburg: Ex Officina Gothofredi Schultzen . . . & Amsterodami, apud Joannem Janssonium à Waesberge. 1673.

Second (first Hamburg) edition. 8vo. 9 leaves, 34 pp. Very good copy. Bound with: Bracesco, Giovanni, *De alchemia dialogi duo* (Hamburg, 1673), and 2 other alchemical works.

FERGUSON STATES that “Tilemann was a professor of medicine at Marburg in the middle of the seventeenth century, was a chemist and astrologer, and made known an amulet of his invention to which he ascribed great virtue.” Tilemann composed and edited several books, of which the present is the most on a chemical subject. For an interesting note on the character of the author, see Duveen. The book describes seventeen experiments on solutions of gold and other metals and is dedicated to Johann Bohn, with a preface by Joel Langelott. The first edition appeared four years earlier (Amsterdam, 1669; Krivatsy, 11862), and the leaf entitled *Lectori* in the present edition is dated 1669. (Duveen, 581; Ferchl, 537; Ferguson, II, 456 [not in Young Coll.]; Ferguson Coll., 699; Neu, 4047; Rosenthal, 8875)

TILEMANN, Johannes

Johannis Tilemanni Quatuor Opuscula Chymiatro-Mathematica Ultima. I. Epistola omnes Medicos Europaeos. II. Collegium Privatum de Summa sapientiâ totius Mundi. III. Laboratorium soli Philosophorum Lapidi sacrum. IV. Trium Amicorum Judicium p. t. sufficientissimum. . . . S.1.: Anno 1660.

First edition. 4to. 24 pp. Fine copy in marbled boards antique, maroon morocco gilt-lettered label. From the Prince Fürstenberg library, Donaueschingen, with old stamp on verso of title page.

A COMPENDIUM OF four short discourses of chemical interest, as listed in the title. This book must have been very rare as long ago as 1731, as Manget (*Bibliotheca Scriptorum Medicorum*, Geneva, 1731, vol. II, part II, p. 380) does not mention it in his list of works by Tilemann. Ferguson gives the titles of several of Tilemann’s publications but omits the present work. Ferchl mentions this title but gives the wrong date of publication (1664). Not in the usual early chemical bibliographies. (Ferchl, 537)

TILING, Matthias

Cinnabaris Mineralis, seu Minii Naturalis Scrutinium Physico-Medico-Chymicum, ad normam & formam Sacri Romani Imperii Academiae Naturae Curiosorum directum. Frankfurt: Sumptib. Balth. Christ. Wustii. 1681.

First edition. 8vo. 4 leaves, 250 pp. Title page in red and black. Very good copy in modern gilt-ruled calf, spine gilt-lettered and dated.

A COMPREHENSIVE TREATISE on mineral cinnabar or natural minium (mercuric sulphide, HgS). Tiling (or Tilling, 1634–1686), an iatrochemist and professor of medicine at the University of Rinteln, in forty chapters describes the locations where cinnabar is mined, its history, its physical and chemical properties, and its uses in pharmacy. He documents the work with references to Agricola, Aldrovandi, Dioscorides, Matthiolus, Pliny, Theophrastos, et al. Tiling states that cinnabar is composed of mercury and sulphur (p. 48) and discourses on its use in the preparation of medicines when mixed with “sanguis draconis” (dragon’s blood), which is the gum resin secreted by fruits of East Indian palms. Cinnabar was used as a treatment for syphilis until the nineteenth century but is no longer employed owing to its significant toxicity. (Ferchl, 537; Krivatsy, 11871; Partington, II, 319; Poggen-dorff, II, 1109; Thorndike, VIII, 373; Waring, 497)

TILLAEUS, Petrus J.

Dissertatio Philosophica, de Usu ac Praestantia Physices, cujus partem secundam, . . . praeside . . . Mag. Samuele Duraeo, . . . IV Junii, Anno MDCCLXIV. Pro gradu, . . . Petrus J. Tillaeus, Vestmannus.
Uppsala. (1764).

First edition. 4to. 12 pp. Small piece cut from bottom of title page, partly removing a signature in ink; otherwise a fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

A SEQUEL TO the dissertation of the same title by Andreas J. Lundborg, presented on 12 March 1763, on the use and merit of physical measurements in scientific investigation. Tillaeus (dates unknown) discusses the ancients (e.g., Democritus, Plato, and Pythagoras), contrasting their discoveries with those of Boyle, Halley, Huygens, Newton, Pascal, et al. No reference to the author or this work has been found.

TILLET, Mathieu

Recherches sur les Methodes qu'employent les Essayeurs pour fixer le titre des Matieres d'Or, en determinant en meme temps la quantite d'Argent qu'elles peuvent contenir; & sur les moyens de perfectionner cette double operation.
(Paris, 1776).

4to. pp. 377–430; 3 folding copperplates. Extracted from *Mémoires de l'Académie Royale des Sciences*, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

BORN IN Bordeaux, Tillet (1714–1791), director of the mint at Troyes, Champagne, lived mostly in Paris and became a member of the academy in 1758 as a botanist. He “published several memoirs on assaying in one of which (1763) he remarked that lead increases by one-sixth of its weight on calcination” (Partington, III, 610). No explanation to account for the increase could be given at the time, and it remained a mystery. The present paper describing cupellation and other methods employed to analyze gold alloyed with silver is illustrated with three plates of apparatus and furnaces in an assaying laboratory. Tillet “contributed . . . to the creation of accurate chemical standards, to which the French government scientists directed so much effort in the eighteenth and nineteenth centuries” (D.S.B., XIII, 411). (Poggendorff, II, 1108)

TIMBS, John

Popular Chemistry, Mechanics, Arts and Manufactures.
Boston: Lilly & Wait, etc. 1832.

First American edition. 12mo. 2 leaves, 140, 72, 72 pp. With 7 full-page woodcut plates. Good copy in contemporary green cloth.

WRITTEN ALONG the lines of Jane Marcet's *Conversations on Chemistry* and Parkes' *Chemical Catechism*, this work discusses the important researches of earlier and contemporary chemists (e.g., Black, Brande, Davy, Fourcroy, Thomson, and Wollaston). Although complete in itself, this volume is one in the series *Knowledge for the People*. Timbs (1801–1875), who worked for a printer and druggist when he was young, became a noted popularizer of science and medicine. He edited several periodicals and was sub-editor of the *Illustrated London News*, 1842–58. His *Doctors and Patients* (London, 1873) was well received (see Osler, 5519; Waller, 15128). For biographical details on Timbs, see the D.N.B. Scarce. Not in the usual early chemical bibliographies.

TINGRY, Pierre François

The Painter's and Colourman's Complete Guide; being a Practical and Theoretical Treatise on the Preparation of Colours, and their Application to the Different Kinds of Painting: in which is particularly described the whole art of House Painting. By P. F. Tingry. . . First American, from the third London edition.

Philadelphia: E. L. Carey & A. Hart, Chestnut Street . . . 1831.

First American edition. 12mo. (in 6s). viii, 9–326 pp. + 4 pp. (publisher's catalogue). With folding printed table (at p. 98). Very good copy in original speckled sheep, rebaked, gilt-lettered dark-blue morocco label preserved. This copy contains a number of manuscript notes on small pieces of paper attached to pages of the publisher's catalogue; also several small newspaper clippings (early to mid-nineteenth century) on chemical, medical, and agricultural topics.

THE ENGLISH translation of *The Painter & Varnisher's Guide* (London, 1804) was followed by several augmented editions during the next thirty years. The anonymous editor of this American edition styles himself a “Practical Chemist” on the title page and cryptically signs the preface “J. J.” He has divided the English version into two distinct and separate books. In this volume, complete in itself, only paints and dyes are discussed. In a companion work varnishes are covered. The volumes are entirely separate and do not form a set. Although this is primarily a practical work, the early history of painting, Newton's theory of colors, and the

chemical properties of pigments and dyes are treated in some detail. Very rare. Not found in the usual bibliographies.

TINGRY, Pierre François

Traité Théorique et Pratique sur l'Art de faire et d'appliquer les Vernis; sur les différens genres de peinture par impression et en décoration, ainsi que sur les couleurs simples et composées: accompagné de nouvelles observations sur le Copal . . . Dedié à la Société établie à Genève pour l'encouragement des Arts, de l'Agriculture et du Commerce. Par P. F. Tingry . . .
Geneva: Chez G. J. Manget, Libraire. An XI. (1803).

First edition. 2 vols., 8vo. I: 2 leaves, xlvi, 326 pp., 1 leaf (errata). II: 1 leaf, 351, (1) pp. With 5 engraved plates (3 folding) and folding printed table facing page 78 of volume II. The publisher, Manget, has authenticated this edition with his signature, in ink, on the verso of the title page of volume 1. Very fine copy in original dark-blue quarter sheep, marbled boards, spine gilt-ruled.

TINGRY (1743–1821), professor of chemistry and mineralogy at the academy in Geneva, published several papers on chemical technology and mineralogy, as well as three books. This comprehensive treatise on the preparation and uses of many types of varnishes, pigments, and paints is the book by which he is chiefly remembered. It passed through several French editions and was translated into English (London, 1804; Cole, 1287) and German (Leipzig, 1804). Most copies of this excellent practical book were literally read to pieces. Copies in as fine condition as the present one are very rare. It is of interest to note that Tingry taught chemistry to Jean Senebier (1742–1809), a pioneer in studies of plant photosynthesis. Not in Bolton, Cole, Duveen, Partington, Smith, etc. (Edelstein, 3587a; Ferchl, 538; Poggendorff, II, 1110; Ron, 1041)

TISELIUS, Gustav Z.

Specimen Mechanicum Novam Machinam Segetibus Triturandis Idoneam sistens. . . praeside, . . . Mag. Samuele Duraeo, . . . submittit Gustavus Z. Tiselius. . . IV Junji Anno MDCCLXXIII.
Uppsala: Typis Edmannianis. (1773).

First edition. 4to. 16 pp. With 2 large folding copperplates (A. Åkerman del. & sc.). Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

ON THE design and construction of a new type of wind-driven grinding mill for industrial use. No reference to Tiselius or this work has been found.

TISSIER

Analyse des Eaux de la Boisse près de Chambéry, faite à l'invitation de M. Fleury, Docteur de Montpellier & de Turin, représentant le Magistrat du Proto-Médecin dans la Ville de Chambéry & Province de Savoie, Médecin consultant honoraire de S.A.R. Monseigneur le Duc de Parme, &c. Par M. Tissier, Me. en Pharmacie de la Ville de Lyon; tant à la source que sur les eaux transportées.
Chambéry: De l'Imprimerie de M. F. Gorrin, Imprimeur du Roi. 1779.

First edition. 8vo. 30 pp. Fine copy in contemporary half calf, boards, gilt-lettered crimson label, spine gilt-ruled. Bound with: Gohier, J. B., *Observations et expériences . . .* (Lyon, 1807), and 3 other works.

A DETAILED DESCRIPTION of the analysis by Tissier of the ferruginous waters of Boisse, made at the request of Fleury, who had published a tract on their medicinal uses entitled *Lettre sur les vertus des Eaux ferrugineuses de la Boisse près de Chambéry, écrite à M. Potot, Professeur du Collège de Médecine de Lyon* (Chambéry: Chez J. Lullin, 1778). "Entirely devoted to analytical results and the procedure by which they have been obtained" (Duveen). Rare. Not in Blake, Bolton, Edelstein, Ferchl, Ferguson, Ferguson Coll., Neu, Partington, Poggendorff, Smith, Waller, Watt, etc. (Duveen, 582)

TITELMANN, Franciscus

Compendium Naturalis Philosophiae. Libri duodecim de consideratione rerum naturalium, earumque ad suum Creatorem reductione. Per fratrem Franciscum Titelmanum Hassellensem, ordinis fratrum Minorum, sanctarum scripturarum apud Lovanienses praelectorem. In secunda hac editione, praetor vigilantiorem castigationem, & alphabeticum indicem totius operis, . . .

Paris: Apud Joannem Roigny, via ad D. Jacobum, sub Basilisco & quatuor Elementis. 1540.

First edition printed in France. 8vo. 16 leaves, 228 numbered leaves (last blank). Roman type throughout, with guide letters. Small hole in outer margin of title leaf (not affecting text); otherwise near-fine copy in contemporary unlettered vellum.

TITELMANN (ca. 1497–1537), a Franciscan monk of Hasselt, lectured on the Holy Scripture at Louvain. His *Compendium of Natural Philosophy*, here in its first posthumous edition, is "a significant book in several ways" (Thorndike [V, 148–152], who discusses the contents at length). Written for the "simple brothers" of his order, it covers the entire range of human knowledge in sufficient depth to be informative, without going into polemical arguments. Topics of chemical interest include the nature of minerals and metals, silver and gold, fire and combustion, and the four

Aristotelian elements (air, earth, fire, water) and their properties. The book is written in a religious tone. The “secunda . . . editio” on the title page refers to the earlier (first) edition (Antwerp, 1530). Partington (II, 272) gives the wrong date for the death of Titelmann and states that Sennert quotes him. Not in the British Library, which possesses the following editions: Antwerp, 1530 and 1570; Paris, 1543, and 1545. Other editions: Lyons, 1551 (Wellcome, I, 6309); Lyons, 1564 (Durling, 4363); Venice, 1571 (Wheeler Gift, 56). A very rare edition, not located in available bibliographies.

TITIUS, Salomon Constantin

Commentatio de Analyysi Calculorum et Humanorum et Animalium. Specimen I.

Leipzig: In Bibliopolio Herteliano. 1789.

First edition. 4to. 42 pp. Fine large copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A TRACT ON the formation of stones in humans and animals. Titius, or Tietz (1766–1801), professor of medicine at the University of Wittenberg, was the son of the famous professor of mathematics and physics at Wittenberg, Johann Daniel Titius (1729–1796). The history of calculi is traced from the time of van Helmont, with many references to earlier and contemporary writers on the subject (e.g., Hales, Haller, Hoffmann, Macquer, and Scheele). Chemical experiments on various types of stones are described, and the most useful solvents for them are discussed. Analyses of the stones by several methods and the data obtained are presented. The entire work is of considerable chemical interest. Titius published other investigations on organic compounds in plants but died at the early age of thirty-five. Not in the usual bibliographies. (Blake, 454; Ferchl, 538; Poggendorff, II, 1112)

TOERNSTEN, Olavus

Dissertatio Physica, de Experientia Vulgari, . . . praeside, Mag. Samuele Duræo, . . . pro gradu magisterii, . . . Olavus Törnsten, Angermannus. . . XVII. Jun. Anni MDCCLVIII. . . .

Stockholm: Typis Grefingianis. (1758).

First edition. 4to. 12 pp. Large woodcut head- and tailpieces. Fine copy. Bound with: Wimermark, Sven, *De Diversa Radiorum* (Uppsala, 1776), and 30 other dissertations.

ON THE importance of performing experiments on familiar subjects (e.g., air, water, fire, and magnetism). The author illustrates his thesis by citing the researches of Boyle on air and vacua. Also mentioned are Archimedes, Francis

Bacon, Galileo, Torricelli, et al. On page 10 there is a statement relating to the invention of the telescope. No reference to the author or this work has been found.

TOLL, Jacob

Jacobi Tollii Fortuita. In quibus, praeter Critica nonnulla, Fabularis Historia Graeca, Phoenicia, Aegyptiaca, ad Chemiam pertinere asseritur.

Amsterdam: Apud Janssonio-Waesbergios. 1687.

First edition. 8vo. 8 leaves, “375” (i.e., 379), (33) pp. With 2 full-page copperplates and 1 folding printed table. Woodcut printer’s device on title. Fine copy with wide fore-margins, completely uncut and untrimmed, in contemporary marbled boards with old sheep spine, maroon morocco label. Bound with: Toll, Jacob, *Manuductio ad Caelum Chemicum* (1688) and *Sapientia Insaniens* (1689).

TOLL (1633–1696) studied under Gronovius, Aemilius, and Vossius and was an alchemist and iatrochemist. He graduated M.D. in 1669 and practiced medicine at Noordwyck, later becoming rector at Leyden and eventually professor of history, rhetoric, and Greek at Duisburg. “In 1687 he was at Utrecht, and published his book *Fortuita*” (Ferguson), after which he resigned his professorship and traveled throughout central Europe, Germany, Hungary and Italy, meeting the notable men of the time, seeing the curiosities of art and nature, and examining the libraries. The *Fortuita* “is of particular historical interest as one of the most detailed attempts at connecting ancient mythology and alchemy” (Duveen). It is Toll’s most important work but was criticized by Kopp (*Beiträge zur Geschichte der Chemie*, 1869, I, 15–16). Newton owned a copy, the present location of which is unknown (see Harrison, 250). The title of the Young copy is in red and black (see Ferguson); in this copy it is only in black. The Young copy lacks the printed table. Rare. (Caillet, 10743; Duveen, 583; Ferchl, 539; Ferguson, II, 458; Guaita, 1018 [imperf.]; Neu, 4068; Poggendorff, II, 1116; Verginelli, 324)

TOLL, Jacob

Jacobi Tollii Manuductio ad Caelum Chemicum.

Amsterdam: Apud Janssonio-Waesbergios. 1688.

First edition. 8vo. 16 pp. Woodcut printer’s ornament on title. Fine copy with wide fore-margins, uncut and untrimmed. Bound with: Toll, Jacob, *Fortuita* (1687) and *Sapientia Insaniens* (1689).

AN INTRODUCTION to “chemical heaven” (i.e., alchemy), with discussions of the works of Basilius Valentinus, Helvetius, Philaletha, the Museum Hermeticum, philosopher’s stone, transmutation, liquor alkahest, acids and alkalies, metals (especially antimony, copper, gold, iron, lead,

mercury, and silver), salts, etc. At the end the tract is dated September 1688. Ferguson (II, 458) lists an undated edition of twenty pages, to which Caillet (10744) assigns the date 1715. (Duveen, 583; Edelstein, 2309; Ferchl, 539; Ferguson Coll., 702; Krivatsy, 11912; Neu, 4070; Poggendorff, II, 1116; Verginelli, 324)

TOLL, Jacob

Jacobi Toli Sapiientia Insaniens, sive Promissa Chemica. Ad Perillustres & Amplissimos Consules Inclytæ Civitatis Amstelaedamensis.

Amsterdam: Apud Janssonio-Waesbergios. 1689.

First edition. 8vo. 64 pp. With folding printed table. Woodcut printer's ornament on title. Fine copy with wide fore-margins, uncut and untrimmed. Bound with: Toll, Jacob, *Fortuita* (1687) and *Manuductio ad Caelum Chemicum* (1688).

ENTITLED "Inspired wisdom, or the promise of chemistry" this tract purports to establish a relationship between alchemy and astrology. Toll quotes long passages from Basilius Valentinus and from works on transmutation by Geber, Morhof, Norton, et al. The table ("De planetis, seu vi clavibus Basilii Valentini") correlates the seven known planets with their respective angels, functions, symbols, arts, virtues, celestial signs, gems, colors, physical and chemical properties and processes, periods of a person's lifetime, movements, and times of the day. There are chapters on each of the planets, and their reputed alchemical significance. At the end the tract is dated December 1688. (Duveen, 583; Edelstein, 2311; Ferchl, 539; Ferguson Coll., 702; Krivatsy, 11913; Neu, 4072; Poggendorff, II, 1116; Verginelli, 324)

TOPHAM, John

An Epitome of Chemistry, wherein the Principles of the Science are illustrated in one hundred entertaining and instructive experiments, capable of being performed without the aid of any apparatus, except a few wine glasses, an oil flask, and a crucible; and unattended with the least danger. . . . Third edition.

London: Printed for G. and W. B. Whittaker. 1824.

Third edition. 12mo. 1 leaf (half title), vi, 145, (1) pp., 1 leaf (advertisement). Very fine copy, uncut, in the original boards, rebaced in calf antique. From the library of Professor Franz Sondheimer (without bookplate).

AN EXCELLENT introductory textbook written for students at the Royal Grammar School (of King Edward VI), Bromsgrove (near Birmingham), of which the Rev. John Topham, M.A., was headmaster. A prospectus of the school appears on the final leaf. Sotheran (Cat. 907 [1954], 375)

lists an edition of 1822, described as "scarce," and Bolton (*First Supplement*, 413) mentions a later edition (London, 1840). The present edition of 1824 is not in the British Library. Rare. Not in Bolton, Duveen, Edelstein, Ferchl, Ferguson Coll., Morgan, Partington, Smith, Waller, etc. (Sondheimer, 1557)

TOPSELL, Edward

The History of Four-footed Beasts and Serpents: Describing at Large Their True and Lively Figure, their several Names, Conditions, Kinds, Virtues (both Natural and Medicinal) Countries of their Breed, their Love and Hatred to Mankind, and the wonderful work of God in their Creation, Preservation, and Destruction. . . . Collected out of the Writings of Conradus Gesner and other Authors. . . . Whereunto is now Added, The Theater of Insects; or, Lesser living Creatures. . . . A most Elaborate Work: By T. Muffet, Dr. of Physick. The whole Revised, Corrected, and Inlarged with the Addition of Two useful Physical Tables, by J(ohn) R(owland) M.D. London: Printed by E. Cotes, for G. Sawbridge at the Bible on Ludgate-hill, T. Williams at the Bible in Little-Britain, and T. Johnson, at the Key in Pauls Church yard. 1658.

First collected edition. Folio. 8 leaves, 818 pp., 3 leaves; 6 leaves, pp. 889–1130, 3 leaves. Pp. 819–888 omitted, but text complete; pagination erratic. Numerous large woodcuts in text and large woodcuts on each of the 3 title pages. Fine copy, with the rare half title, in original calf, tastefully rebaced, maroon morocco label.

TOPSELL (1572–1628), divine and author, attended Christ's College, Cambridge, and later became rector of East Hoathly (1596), then perpetual curate of St. Botolph, Aldersgate, London (1604). His *Historie of Foure-footed Beastes* (1607) and *Historie of Serpents* (1608) are here united and augmented in this, the best, English edition. Based largely on Conrad Gesner's *Historiae Animalium*, these works contain the fundamental corpus of zoological knowledge of the period, including fictitious animals (dragons, unicorns, etc.). The section on insects is an English translation of the *Insectorum. . . theatrum* (1634), by Thomas Muffet (1553–1604), whose daughter is said to be the little Miss Muffet of the nursery rhyme. This work contains much of iatrochemical interest. Fine copies (as here) are very rare. (Bruno, 80; Cushing, T131; D.S.B., IX, 441; Eales, 343; Freeman, 3730; Knight, 26; Krivatsy, 11927; Watt, II, 911z; Wing, G624)

TORNESI, Carolus Amaton

Dissertatio Chimica de Antimonio Diaphoretico, . . . Praeside . . . Georgio Wolffgango Wedelio, . . . Authore & Respondente Carolo Amaton Tornesi, Jenensi, ad diem (blank) Octobr., M.DC.XC. . .

Jena: Literis Krebsianis. (1690).

First edition. 4to. 20 pp. Fine copy in quarter maroon morocco antique, marbled boards, spine gilt-lettered and dated.

AN INTERESTING dissertation on the preparation and purification of diaphoretic antimony, a sudorific (sweat-promoting) medicine much used in the seventeenth and eighteenth centuries. It consisted mainly of antimonic acid, prepared by reacting nitric acid with butter of antimony (antimony trichloride). The author, who lived in Jena, was a pupil of the well-known chemist Georg Wolfgang Wedel. Tornesi refers to the works of Basil Valentine, Becher, Charas, Langelott, Libavius, Zwelfer, et al. He describes the preparation of antimonic acid by several different methods. Very rare. No bibliographical reference to Tornesi or this work has been found.

TÖRNQUIST, Gustav

Dissertatio Chemica de Alumine. . . Praeside Mag. Johanne Gadolin, . . . Pro gradu philosophico Publicae Censurae modeste subjicit Gustavus Törnquist, Stip. Bilmark. Aboënsis. In Auditorio Majori die XX Jun. MDCCCV. . .

Åbo: Typis Frenckellianis. (1805).

First edition. 4to. 1 leaf, 16 pp. Mint copy, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. 11 Dissertations. 1792–1805.

A DISSERTATION ON the history, mineralogy, preparation, and physical and chemical properties of alum (potassium aluminum sulphate), presented by Törnquist under the direction of Gadolin, professor of chemistry at Åbo. The preparation of aluminum sulphate from alum, by precipitating aluminum hydroxide, filtering, and dissolving in sulphuric acid is described. Numerous references are cited to the researches on alum of earlier and contemporary chemists. (Waring, 221)

TORRICELLI, Evangelista

Lezioni Accademiche d'Evangelista Torricelli Mattematico, e Filosofo del Sereniss. Ferdinando II Gran Duca di Toscana Lettore delle Mattematiche nello Studio di Firenze e Accademico della Crusca.

Florence: Nella Stamp. Di S. A. R. Per Jacopo Guiducci, e Santi Franchi. 1715.

First edition. 4to. xlix, (1) pp., 1 leaf, 96 pp. Engraved vignette on title page, woodcut capitals, head- and tailpieces. With the rare, finely engraved portrait of Torricelli (by P. Anichini, facing p. 1) and 3 woodcuts in text. Very fine, crisp copy, in contemporary vellum, almost invisibly rebaked in matching vellum. With engraved armorial bookplates of Marchioness Salsa and William Ward, 3rd Viscount Dudley, and bookplate of Dr. E. N. da C. Andrade, F.R.S.

GALILEO'S MOST promising pupil, Torricelli (1608–1647), succeeded him as professor of mathematics at Florence. Published nearly seventy years after his death, this volume contains the lectures he gave to the Accademia Crusca and on other occasions, dealing with problems in mathematics, mechanics, meteorology, military architecture, and physics. The long preface by the editor, Tommaso Bonaventuri, contains an account of Torricelli's life and work and reprints the two letters on the barometrical experiments with which his name is usually linked. In his lecture on winds he advanced the modern theory that they are products of differences in air temperature and density. The introduction contains a figure of the barometer (p. xxviii), one of the most important discoveries in the history of physics. A masterpiece of fine eighteenth-century Italian printing, this copy has an important provenance. (Cushing, Y138; Dibner, 149; D.S.B., XIII, 437–439; Honeyman, 2993; Partington, II, 513; Poggendorff, II, 1119; Roller, 554; Smith, 484; Sotheran, Cat. 692 [1909], 4914 ["Rare"]; Sparrow, 190; Waller, 20353; Watt, II, 912j; Wolf, I, 316)

TOURNEFORT, Joseph Pitton de

Materia Medica; or, a Description of Simple Medicines Generally us'd in Physick; fully and accurately demonstrating their uses, virtues, and places of growth. As also, their operating and acting upon human bodies according to the Principles of the New Philosophy, Chymistry, and Mechanism. With an appendix, shewing the nature and use of Mineral Waters. Written originally by the learned Monsieur Tournefort, Botanist to the French King. Faithfully translated into English.

London: Printed by J. H. for Andrew Bell at the Cross-keys and Bible in Cornhill. 1708.

First edition. 8vo. 10 leaves, 406 pp., 1 leaf (advertisements). Neat signature ("Tho. Kingston—1709") in top margin of title page and a few minor stains; otherwise good copy, in paneled calf antique, original maroon morocco label.

THE FIRST appearance of this important work on the materia medica, published shortly after the author died. The anonymous translator of the French manuscript was probably the eminent physician William Cockburn (1669–1739), whose note to the publisher, Andrew Bell, is on the verso of the title page (see D.N.B., and Munk, I, 507). The

French edition did not appear until nine years later, under the title *Traité de la matière médicale* (Paris, 1717, 2 vols.). Tournefort (1656–1708) taught courses on chemistry and medicine at the University of Montpellier until 1683, after which he became professor of botany at the celebrated Jardin du Roi. In the preface of this work Tournefort states that sal ammoniac is a compound of ammonia and an acid that he does not name. That this salt is ammonium chloride was first explained by Homberg. “A well-rounded naturalist, Tournefort was also interested in minerals and shells. . . . In addition [he] was a physician with a considerable practice. Through his teaching and his publications he exerted an enormous influence until the end of the eighteenth century” (D.S.B., XIII, 443). (Blake, 456; Partington, III, 56; Watt, II, 913s)

TOWNSEND, David

Principles and Observations applied to the Manufacture and Inspection of Pot and Pearl Ashes. By David Townsend, Inspector of Pot and Pearl Ashes for the Commonwealth of Massachusetts. Published according to Act of Congress. Printed at Boston: By Isaiah Thomas & Ebenezer T. Andrews, Faust's Statue, No. 45, Newbury-Street. 1793.

First edition. 4to. 48 pp. Bottom of title page remargined (not affecting imprint); otherwise a very good copy, uncut, in maroon cloth, spine gilt-lettered.

NO INFORMATION on the author or this book has been found, apart from that given in the title. The manufacture of potash and pearlash by calcining plant materials was of the greatest importance to the commerce of the newly created United States. These alkalies were used in the preparation of chemicals and drugs, also in bleaching, dyeing, and the manufacture of the finest glass. Townsend here describes the best methods for preparing the various grades of potash and pearlash. On page 13 there is an unfavorable note on Samuel Hopkins' patented method of making potashes. A further account of Hopkins' methods and references to his patent appear on pages 47–48. Hopkins, of Philadelphia, received the very first United States patent on 31 July 1790. It was signed by George Washington, Edmund Randolph, and Thomas Jefferson. A reproduction of Hopkins' patent is tipped into this copy. Townsend's book is very rare and is not mentioned by any of the usual bibliographical sources. (Blake, 456)

TOWNSON, Robert

Philosophy of Mineralogy.

London: Printed for the Author. Sold by John White, Fleet-Street. 1798.

First edition. 8vo. xiv, 219, (1) pp. 1 folding printed leaf (table I, facing p. 136; table II on verso). With 3 engraved plates (2 colored, including 1 on title page; 1 uncolored of crystals) and 2 leaves of explanation of plates. Fine copy in contemporary tree calf, gilt-ruled, maroon morocco label gilt. Bound with: Brisson, Mathurin-Jacques, *Elements of the natural history and chemical analysis of mineral substances* (London, 1800).

THE AUTHOR'S “chief work” (D.N.B.). Townson (fl. 1792–1798), an expert mineralogist and traveler, received the M.D. (Göttingen, 1795) and was LL.D. and fellow of the Royal Society of Edinburgh. In the preface to this work on mineralogy and chemistry, the author states that the book was printed in “a small edition at my own expence.” In addition to the long lists of chemical analyses of minerals, at the end there is a comprehensive list of works on mineralogy, including its history and systems. Especially useful are the lists of books on the mineralogy of Great Britain, Europe, America, and Asia. Townson also published *Travels through Hungary* (1793) and other works (on which see Watt). Very rare. Blake and Ferchl list other titles by Townson. Not in the usual early chemical bibliographies. (Hoover, 794 [gives incomplete collation]; Sotheran, Cat. 875 [1946], 2390; Watt, II, 914o)

TRAITÉ

Traité de Chymie, Philosophique et Hermetique, Enrichi des Opérations les plus curieuses de l'Art.

Paris: Chez Charles Maurice d'Houry, seul Imprimeur de Monseigneur le Duc d'Orleans. 1725.

First edition. 12mo. 2 leaves, 292 pp., 2 leaves. Woodcut ornament on title page. Very good copy in original calf, rebounded, with most of the old gilt spine laid on, brown morocco label.

THE ANONYMOUS author of this treatise provides a “very detailed description of alchemical operations” (Duveen). Gold, silver, mercury, and other metals are discussed, as well as preparations of their salts. The final part (pp. 234–286) describes the most curious and practical operations of “Frere Basile Valentin” on the seven known metals and compounds made from them. Rare. Not in Blake, Cole, Edelstein, Ferchl, Ferguson, Partington, etc. (Bolton, 1060; Caillet, 10791; Duveen, 585; Ferguson Coll., 705; Guaita, 1019; Mellon, 152; Neu, 4093; Smith, 485; Verginelli, 329)

TRAUZL, Isidore

La Dynamite Substance Explosive inventée par M. A. Nobel, Ingénieur Suédois. Extrait d'une brochure Allemande de M. Isidor [sic] Trauzl . . . par Paul Barbe . . . Avec notes du traducteur.

Paris: Imprimerie Viéville et Capiomont. 1870.

First edition. 8vo. 1 leaf, 123, (1) pp. With 2 large steel-engraved folding plates (by Couroux and André). Very good copy in contemporary half roan, marbled boards, spine gilt-ruled.

THE FIRST work giving an account of the invention of dynamite by Alfred Nobel and a milestone in the chemistry of explosives. Prior to Nobel's discovery, the traditional explosives were gunpowder and, later, guncotton. "Nobel (1833–96), between 1859 and 1866, showed that nitroglycerine, alone or absorbed in kieselguhr, could safely be made to explode with great violence if a small quantity of mercury fulminate . . . was exploded in contact with it" (J. McGrath [in Charles Singer et al., *A History of Technology*, 1958, vol. V, p. 285 et seq.]). Trauzl is famous for having invented the lead block test (so-called Trauzl test) for quantitatively comparing the relative power of different high explosives, including dynamite, on which see John Read (*Explosives*, 1942, pp. 63–64). Trauzl describes all that was then known about the chemical and physical properties of dynamite and its practical uses in blasting passages through mountains, in mining, etc. It was the use of dynamite that made the American West and other parts of the world accessible to roads and railways. A most important and rare book in chemical technology. Not in the usual early chemical libraries. (Sotheran, *Bibliotheca Chémico-Mathematica*, Cat. 692 [1909], 4925)

TRIEWALD, Mårten

Mårten Triewalds Tal, Om Åmne och Orsaker til Metallernes och Mineraliernes Födo, Tiltagande och Mognande Växt I Jorden. . . . År 1740 den 9 Januarii. . . .

Stockholm: Lars Salvius. 1748.

First edition. 8vo. 24 pp. Large woodcut devices on title page and on pages 3 and 24. Very good copy in dark maroon half morocco, marbled boards, spine gilt-lettered and dated.

IN JANUARY 1740 Triewald (1691–1747) delivered this presidential discourse to the Royal Swedish Academy of Sciences, which he had helped found. Ferguson (II, 467) mentions the presidential discourse of 1740 and describes the German translation (Leipzig, 1795) in the Young Collection but does not refer to this first Swedish edition. In this address Triewald discusses the chemical development of mineral deposits in the earth. Having spent ten years in

England (1716–26), partly as an overseer in a coal mine in Newcastle, he became acquainted with Desaguliers and Newton. Upon his return to Stockholm, Triewald taught experimental physics and mechanics at the Ritterhaus and was appointed by the king to be director of mechanics and, later, captain of mechanics and fortification. Triewald was an important Swedish scientist who published mainly on practical subjects, some of chemical interest. Scarce. Not in Blake, Bolton, Duveen, Ferguson, Hoover, Neu, Partington, Poggendorff, Smith, Sondheimer, Waller, Watt, etc. (Edelstein, 2318; Ferchl, 542)

TRISSMOSIN, Salomon

Aureum Vellus, oder Guldin Schatz und Kunstkammer: darinnen der aller fürnembsten, fürtreffentlichsten, ausserlesensten, herrlichsten und bewehrtesten Auctorum Schrifften Bücher, aus dem gar ubralten Schatz der uberbliebenen, verborgenen, hinterhaltenen Reliquien und Monumenten der Aegyptiorum, Arabum, Chaldaeorum & Assyriorum, Königen und Weysen. Von dem Edlen, Hoherleuchten, fürtreffentlichen bewehrten Philosopho Salomone Trissmosino (so des grossen Philosophi und Medici Theophrasti Paracelsi Praeceptor gewesen) in sonderbare unterschiedliche Tractetlein disponirt, und in das Deutsch gebracht. . . .

Erstlich Gedruckt zu Rorschach am Bodensee, Anno M.D.XCIX. (1599).

First 8vo. edition, 2 "tractates" in 1 vol. Part I: 8 leaves (last blank), 214 pp., 1 leaf (verso blank). Part II: 1 leaf, 165, (1) pp. Title of part I in red and black, with woodcut portrait of Paracelsus on verso. Alchemical woodcuts on pages 46, 75, 121, and 179 of part I; and on pages 58, 78, 79, 80, 90, 96, 157, 158, 163, and 165 of part II. Some leaves slightly embrowned owing to quality of German paper of the period, also lacking signature G8 (pp. 111–112) of part I and signature G2 (pp. 97–98) of part II; otherwise a fine copy in contemporary blind-ruled vellum with ties.

THE FIRST 8vo. edition, of legendary rarity, of this important collection of alchemical works. Part I contains works by Trissmosin, and part II comprises works by Paracelsus and Bartholomeus Korndorffe. A second volume was issued later (ca. 1600), on which see Bolton. The very rare first edition of the *Aureum Vellus* appeared in 1598 (not 1599, as stated on the title of this 8vo. edition), with further parts through 1604 (see Mellon, No. 53). Almost all surviving copies are imperfect. The present copy lacks only two leaves and is more complete than that in the Young Collection. The printer of this 8vo. (ca. 1600) edition was possibly Hening Gross, the industrious alchemical publisher in Leipzig. Much doubt exists on the exact identity of Trissmosin; for details see Ferchl, Ferguson, Kopp, et al. Another German edition appeared (Hamburg, 1708–1718),



Ane
w
kan in der Kun
der Philosophē
nus / das er sic
vbe / den das e
che / dergleich
im Buch *Luz*
es ist sich mit
ten / ich erma
mit am höch

186 Splendor Solis.

Die Sechste Gleichnus.

Sofinus spricht / das er welle durch ein Gesicht anzeigen / das er hat gese
hen vom einem Menschen / der was Todt / und was doch auff's höchste
am Leib ganz reich / wie ein Sals / dem waren seine Glieder zertheylet
und sein Haupt was sein Guldin / aber vom Leib abgescheiden / bey
dem stünd ein ungesalter Man / von Angesicht grausam und schwarz / der hat
ein zwen schneidig Schwert / inn seiner rechten Hand / mit Blut vermischet
und er was des guten Menschen Todtschläger / zu seiner Linken Hand hat er ein
Zedel / daran stünd geschriben : Ich hab dich darumb getödtet / das du ein
überflüssiges Leben uderkommest / aber dein Haupt will ich verbergen / damit dich
die Welt nicht soll sehen / und dein Leib in die Erde verweisen / und den
selben begraben / auff das er Faul werde / und vermehre
sich / und bring ein ungalbare
Frucht.

Die

Splendor Solis. 187

Die Sibende Gleichnus.

Vidius der Alt Boet hat dergleichen angesehen / so er schreibt vom der
weisen alten / der sich widerumb wolte verjüngern / er sollte sich lassen
zertheilen / und kochen / bis zu seiner vollkommenen Kochung / und nicht
weiter / dann wurden sich die Glieder wider Vereinigen / und wider
umb verjüngen in vil Kräfte.

Ha 2 Hernach

Top: Trissosin. Aureum Vellus. Rorschach am Bodensee, 1599.
Bottom: Trissosin. Aureum Vellus. Hamburg, 1708.

and a French translation (Paris, 1612 and 1613), according to Mellon, p. 173. (Bolton, 954; Ferchl, 542; Ferguson, II, 469; Sudhoff, *Paracelsus*, 247)

TRISSMOSIN, Salomon

Aureum Vellus oder Guldin Schatz und Kunst-Kammer, darinnen der . . . bewehrtesten Auctorum, Schrifften und Bücher, auss dem gar uralten Schatz der uberblibnen, verborgnen, hinderhaltenen Reliquien und Monumenten der Aegyptiorum, Arabum, Chaldaeorum & Assyriorum Königen und Weysen. . . . Sampt anderen Philosophischen alter unnd newer Scribenten sonderbaren Tractälein . . . Vormahls gedruckt zu Rorschach am Bodensee, Anno M.D.XCVIII, und zu Basell 1604 in fünff verschiedenen Tractaten; itzo aufs neue aufgelegt und in ein Volumen gebracht. Hamburg: bey Christian Liebezeit, in der St. Joh. Kirch. 1708.

First complete edition, first issue. 4to. 8 leaves, 816 pp. Title page in red and black. Divisional titles dated 1708. Copperplate portrait of Paracelsus (p. 90), 39 engraved plates, and numerous woodcuts of chemical apparatus in text. A unique copy that has printed on the verso of the main title the full-page bookplate of Godefridi Iac. F. Thomasi, Philosophi et Medici (presumably Godofredus Thomasius), drawn by Joh. Jacob de Sandrart and engraved by J. Bapt. Homann. Fine copy with wide margins, in original vellum.

ONE OF the most important collections of alchemical texts ever to appear in the German language, comprising exact reprints of the treatises originally published in parts I–III of the *Aureum Vellus* (Rorschach, 1598; Ferguson, II, 469) and parts IV–V (Basel, 1604). Bolton lists the more than one hundred titles. A major source for the earlier alchemical authorities and for the symbolic engravings (see Jung, for example); the sheets of this edition were reissued ten years later under the title *Eröffnete Geheimnisse des Steins der Weisen oder Schatz-Kammer der Alchymie* (Hamburg: Christian Liebezeit, 1718; Ferguson, I, 246). Very rare. Not in Blake, Duveen, etc. (Bolton, 954–958; Edelstein, 2319; Ferchl, 542; Ferguson Coll., 706; Hall, 157; Heym, *Ambix*, I [1937], 57; Verginelli, 332)

TROIL, Uno von

Letters on Iceland: containing Observations on the Civil, Literary, Ecclesiastical, and Natural History; Antiquities, Volcanos, Basaltes, Hot Springs; Customs, Dress, Manners of the Inhabitants, &c. &c. Made, during a Voyage undertaken in the Year 1772, by Joseph Banks . . . Assisted by Dr. Solander . . . Dr. J. Lind . . . Dr. Uno von Troil . . . and several other Literary and Ingenious Gentlemen. Written by Uno von Troil . . . To which are added the Letters of Dr. Ihre and Dr. Bach to the Author . . . also Professor Bergman's Curious Observations and Chemical Examination of the Lava and other Substances produced on the Island. . . . London: Printed by and for W. Richardson, in the Strand; also for J. Robson, in New Bond Street, and N. Conant, in Fleet Street. 1780.

First English edition. 8vo. xxvi, 400 pp. With engraved frontispiece of a geyser and large folding engraved map of Iceland. Fine copy in original gilt-ruled calf, spine richly gilt, maroon morocco label.

A COLLECTION OF letters describing a voyage to Iceland led by the English naturalist Sir Joseph Banks and the Swedish botanist Daniel Solander, both of whom were members of Captain James Cook's first voyage to the South Seas. Uno von Troil (1746–1803), archbishop of Uppsala, was first chaplain to the king of Sweden and a member of the Academy of Sciences in Stockholm. Originally appearing as *Bref rörande en resa til Island* (Uppsala, 1777), the book was quickly translated into English (London, 1780; Dublin, 1780), French (Paris, 1781), and German. Included are contributions by Johan Ihre on Edda, Abraham Bach on elephantiasis, and the important chemical analyses of lava by Torbern Bergman. Of value is the 120-item bibliography of works on Iceland (pp. xvi–xxiv). (D.S.B., IV, 549; Moström, 123; Roller & Goodman, II, 513; Ward & Carozzi, 2201; Watt, II, 916x)

TROIS TRAITEZ

Trois Traitez de la Philosophie Naturelle, non encores imprimez; sçavoir, la Turbe des Philosophes, qui est appellé le code de verité en l'art, autre que la Latine. Plus, la parole delaissee de Bernard Trevisan. Et un petit traicté, tres-ancien, intitulé, les douze portes d'Alchymie, autres que celles de Ripla.

Paris: Par Jean Sara, rue S. Jean de Beauvais, devant les Escholes de Decret. 1618.

First edition. 8vo. 4 leaves, 65, (1) + 52 + 18 pp. Paper lightly embrowned with early annotations; otherwise fine copy, with wide fore- and lower margins, in original limp vellum. The Duveen copy.

AN EXTREMELY rare collection of three alchemical works. "The first tract is a French edition (the first in that language?) of the 'Turba Philosophorum.' This is followed by the first edition of Bernardus Trevisanus, 'La Parole Délaissée.' The third tract I have been unable to identify. Schmieder (p. 234) says it is by Ripley, but Ripley's tract, although it has a similar title, is quite different. . . . This is an interesting copy, which has numerous contemporary notes by an adept and 10 pages with notes inserted by him" (Duveen). These three tracts were reprinted, with several others, in *Divers traités de la philosophie naturelle* (Paris, 1672). (Duveen, 587–588; Ferchl, 38–39; Ferguson, I, 216 [not in Young Coll.]; Neu, 4110; Verginelli, 336; Wellcome, I, 6368)

TROMMSDORFF, Johann Bartholomä

Anfangsgründe der Agrikulturchemie. . . .

Gotha: In der Hennings'schen Buchhandlung. 1816.

First edition. 8vo. 1 leaf, 112 pp., 2 leaves (advertisements). Few leaves lightly embrowned; otherwise fine copy in original blue wrappers.

AN INTRODUCTORY work on agricultural chemistry, including the important and recently published researches of Humphry Davy. Trommsdorff discusses the chemical composition of plants, the soils in which they grow, chemical fertilizers, and optimal climates and temperatures. The roles played by oxygen and carbon dioxide are described. Chemical elements important for the growth of plants are covered, and the researches of many chemists are cited (e.g., Lavoisier, Scheele, Gay-Lussac, and Thenard). Rare. (Bolton, 878; Ferchl, 543; Poggendorff, II, 1137)

TROMMSDORFF, Johann Bartholomä

La Callopiatria ossia la Chimica diretta al Bello del Mondo Elegante del Dottor Bartolommeo Trommsdorff Professore di Chimica. Traduzione dal Tedesco con aggiunte del Dottor Giovanni Pozzi.

Milan: Dalla Tipografia di Giovanni Silvestri. 1805.

First Italian edition. 12mo. 262 pp. Crisp copy in contemporary quarter vellum, marbled boards, black morocco label gilt. Old stamp on title: Carlo Bianconcini. Bound with: Chaptal, J. A. C., *Osservazioni Chimiche sull'Arte di Levare le Macchie dalle Stoffe* . . . (Piacenza, 1808).

THE ITALIAN translation of the author's *Kallopiatria oder die Kunst der Toilette* (Erfurt, 1805), written expressly for ladies and gentlemen, dealing with the preparation of chemicals, perfumes, oils, and cosmetics used in beautification and good grooming. There are directions for dyeing the hair any desired color and for bleaching it. Trommsdorff

was a versatile scientist who published on analysis, gases, pharmacy, manufactures (he first used iron retorts for making potassium), history of chemistry, etc. His life was devoted to improving the scientific basis of pharmacy, and in this regard he was eminently successful. He was "a very highly esteemed man, well known in public life" (Partington). The present rare work contains many references to contemporary chemists. Bolton (*First Supplement*, 416) cites this edition but gives a slightly different title. Not in the usual early chemical libraries.

TROMMSDORFF, Johann Bartholomä

Darstellung der Säuren, Alkalien, Erden und Metalle; ihrer Verbindungen zu Salzen und ihrer Wahlverwandschaften in zwölf Tafeln . . .

Erfurt: in der Hennings'schen Buchhandlung. 1800.

First edition. Folio. 2 leaves + 12 double-page printed tables. Fine copy, uncut, in modern unlettered boards.

IN THE present important work, which is a greatly enlarged version of his *Allgemeine Uebersicht der einfachen und zusammengesetzten Salze* (Gotha, 1789, 4 tables), Trommsdorff (1770–1837) classifies chemical compounds into three distinct types: acids, alkalies, and metals and their salts. He also takes into account single and double elective attractions in tabular form, as well as the new French nomenclature, with references to the researches of contemporary chemists (e.g., Bergman, Berthollet, Kirwan, Klaproth, Richter, Scherer, and Wenzel). "Trommsdorff was the first German chemist (1789) to separate acids and bases from the class of 'salts'" (Partington, III, 588). Other editions: Gotha, 1800; Erfurt, 1806 (see Bolton, 79). Professor of chemistry at Erfurt, Trommsdorff was a prolific author whose writings became very popular in Germany and appeared in several editions and translations (see D.S.B., XIII, 465–466). Rare. Not in Duveen, Ferguson, Partington, Smith, etc. (Cole, 1291; Edelstein, 2323; Ferchl, 543; Poggendorff, II, 1137)

TROMMSDORFF, Johann Bartholomä

Geschichte des Galvanismus oder der galvanischen Electricität, vorzüglich in chemischer Hinsicht. Besonders abgedruckt aus J. B. Trommsdorff Chemie im Felde der Erfahrung.

Erfurt: in der Hennings'schen Buchhandlung. 1803.

First separate edition. 8vo. 3 leaves, 260 pp., 2 leaves. With folding copperplate. Very good copy, uncut, in maroon quarter morocco, marbled boards, spine gilt-lettered and dated, with original plain blue wrappers bound in.

AN EARLY history of galvanic electricity, with particular emphasis on electrochemistry. Trommsdorff (1770–1837) was first an apothecary and then professor of physics and chemistry at the University of Erfurt from 1795 until its dissolution in 1816. In 1796 he founded a Chemico-Physical-Pharmaceutical Institute in Erfurt, which boarded pupils and functioned for thirty-three years. “He was the author of many books and edited several journals, e.g., the *Journal der Pharmacie*, in which most of his papers were published. . . . Trommsdorff was the first German chemist (1789) to separate acids and bases from the class of ‘salts’” (Partington, III, 588). Sotheran (*Bibliotheca Chemico-Mathematica* [1921], vol. II, 15337), describing the second edition (Erfurt, 1808, 264 pp.), states: “An interesting history of the first period of galvanism.” Only the second edition is described by Wheeler Gift, 691. Not in the usual early chemical libraries. Very scarce. (Bolton, 162–163)

TROTTER, Thomas

A Proposal for Destroying the Fire and Choak-Damps of Coal-Mines; and their production explained on the Principles of Modern Chemistry: addressed to the Owners and Agents of Coal-Works, &c. By Thomas Trotter, M.D. . . .
Newcastle: Printed and Sold by J. Mitchell . . . 1805.

First edition. 8vo. 47, (1) pp. Original printed blue wrappers with woodcut of coal mine, river, coal barges, etc. Fine, uncut, presentation copy, inscribed in ink on title page: “Mr. Russell with the Author’s Compts.” Bound in half calf antique, marbled boards, gilt-lettered and dated red morocco label.

THE FAMOUS naval physician Trotter (1760–1832), having retired to Newcastle, found the same problems of ventilation and fumigation in coal mines as he had encountered in ships. He suggested the use of “oxygenated muriatic acid gas” (i.e., hypochlorous acid) to minimize the explosive properties of “fire-damp” (methane) that accumulates in mines. His proposal was immediately attacked in a pamphlet by Henry Dewar in 1806, who pointed out the faulty chemistry in Trotter’s process. Trotter then (1806) published a response defending his method. This was rapidly repudiated in a second pamphlet by Dewar, which appears to have settled the argument against the practical use of Trotter’s process. On Trotter, see D.N.B. Very rare. N.U.C. lists only two copies. (Kress, B4990; Watt, II, 917d)

TRYAL OF SKILL

A Tryal of Skill of Three Great Artists.
(London?: no printer or publisher, not dated.)

First edition? 8vo. 2 leaves (signed * and *2, respectively). Unpaginated. Few minor stains; otherwise good copy. Bound with: Emes, Thomas, *A dialogue between alkali and acid*

(London, 1699); and *ibid*, *A letter to a gentleman concerning alkali and acid* (London, 1700).

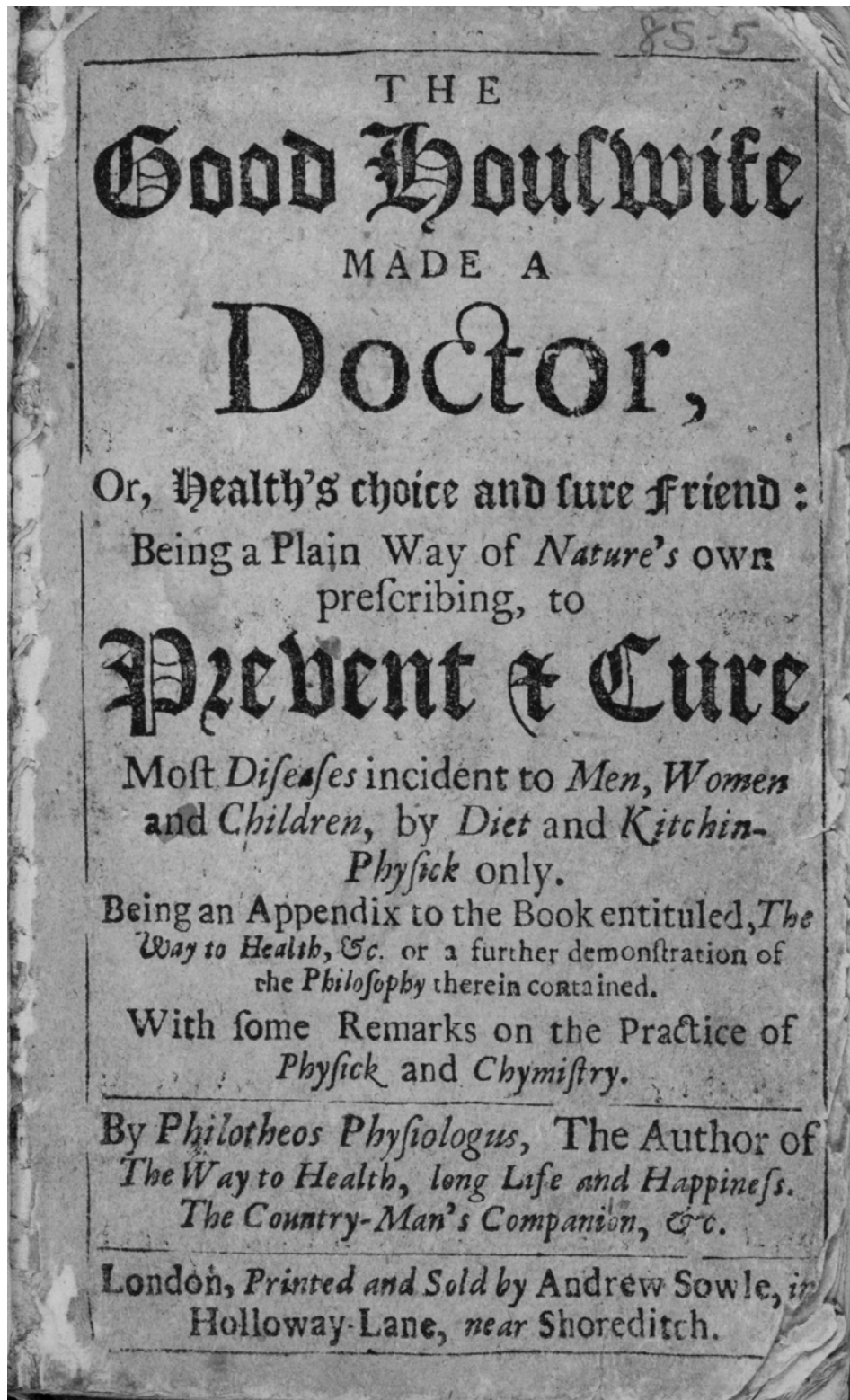
AN ANONYMOUS medical poem, in spirited doggerel style, printed ca. 1680–1700, on the techniques of bleeding used by three physicians when they treated a member of the royal family, possibly King William III or Queen Mary. The lampoon begins: “This Tryal of Skill, Of a threefold Sibyl, Is to shew Royal Blood safely how to spill. Three Wise Men of late, Held a learned Debate, On a desperate Case of a Lamb o’ the State; Where each shot his Bolt; And on the Result, Did declare they opin’d the Distemper occult. . . .” The names of the physicians are disguised as “Beau H—s, fresh from School,” “G—bb-s,” and “R—t—ff.” Extremely rare, and apparently unrecorded. Not in Wing.

TRYON, Thomas

The Good Housewife made a Doctor, or, Health’s choice and sure Friend: being a Plain Way of Nature’s own prescribing, to Prevent & Cure most Diseases incident to Men, Women and Children, by Diet and Kitchin-Physick only. Being an Appendix to the Book entituled, The Way to Health, &c. or a further demonstration of the Philosophy therein contained. With some Remarks on the Practice of Physick and Chymistry. By Philotheos Physiologus, the Author of The Way to Health, long Life and Happiness. The Country-Man’s Companion, &c.
London: Printed and Sold by Andrew Sowle, in Holloway-Lane, near Shoreditch. (ca. 1685)

First edition. 8vo. 6 leaves, 232 pp., 3 leaves (advertisements of books by Tryon). Some wearing on margins of title page and preface and on margins of advertisements (affecting a few letters). Small piece cut from top of contents leaf (with loss of about 4 lines); otherwise good copy, in mid-nineteenth-century half calf, pebbled cloth, spine gilt-ruled, maroon label.

TRYON (1634–1703) studied the works of Behmen and became a Pythagorean, refusing to eat all meat and fish. He published several books on mystical philosophy and dietetics, including *Health’s grand preservative* (London, 1682), which forms a link between the Behmenists and early Quakers (see D.N.B.). He was an advocate of a vegetable diet and the abstinence from strong or alcoholic drinks. His book, *The Way to Health*, attracted much attention, and even Benjamin Franklin became a “Tryonist.” The present work, a compendium of secrets for the housewife or “home-doctor,” contains a section on the “Practice of Chymistry” (pp. 98–114). The advertisement states that *The country-man’s companion* (1684) was “lately published,” and *The way to make all people rich* (1685) was “now in the press.” The present undated work is, therefore, ca. 1685. Extremely rare. (Wing, T3180)



Tryon. Good Houswife. London, ca. 1685.

TRYON, Thomas

The Way to Health, Long Life and Happiness: Or, A Discourse of Temperance, and the Particular Nature of all Things requisite for the Life of Man . . . To which is Added, A Treatise of most sorts of English Herbs, with several other remarkable and most useful Observations, very necessary for all Families . . . By Thomas Tryon, Student in Physick. . . . To which is added a Discourse of the Philosophers Stone, or Universal Medicine, Discovering the Cheats and Abuses of those Chymical Pretenders.
London: Printed and are to be Sold by most Booksellers. 1697.

Third edition. 8vo. 8 leaves, 312, 305–456, 24 pp. (N.B. Pagination skips, but text complete; two signatures are signed “X.”) Fine copy in contemporary calf, rebacked with original gilt-ruled spine and red morocco label laid on.

FIRST PUBLISHED in 1683, this work most clearly demonstrates Tryon’s philosophy of life and describes the way he believed that mankind can achieve happiness, consistent good health, and longevity. A strict vegetarian, he abstained from luxuries, studied medicine, and visited America. At the end is a curious “Dialogue between an East-Indian Brackmanny, or Heathen Philosopher, and a French Gentleman.” This edition is the first to include “A Discourse of the Philosophers Stone,” in which Tryon condemns some “Chymical Philosophers” for being “led astray by their Errors, to the Ruin of themselves and their families.” (Duveen, 588; Ferguson Coll., 710; Krivatsy, 11996 [imperf.]; Neu, 4120; Parkinson & Lumb, 2441; Watt, II, 917q; Wing, T3202)

TUDECIO, Simone Aloysio

Appendix sive Nucleus Alter Pharmaceuticus ex Armentario Mynsichtiano, horis in fuga otii extractus, privato alias commodo destinatus, nunc vero, in gratiam Medici Practici, publici juris factus. . . .
Nuremberg: Sumptibus Johannis Ziegeri & Georgii Lehmanni. 1699.

First edition. 12mo. 1 leaf, 298 pp., 3 leaves (index). 3 leaves (6 pp.) of the index wrongly imposed by the printer and page 298 misnumbered 398. Unobtrusive inscription dated 1699 on title page; otherwise fine copy in eighteenth-century quarter calf, gilt, marbled boards, all edges gilt.

TUDECIO (Tudecius, fl. 1679–ca. 1699), originally from Monte Galea, graduated M.D. at Karlova University, Prague, and became a prominent physician in that city. Nothing appears to have been recorded of his life. He published *Medicus pharmaceuticus* (Helmstädt, 1691; Ferchl, 545), *Amussis antiloimica* (Nuremberg, 1695; Krivatsy,

12005), and *Nucleus pharmaceuticus* (Nuremberg, 1695, 12mo.), a copy of which is in the British Library. The present book, a sequel to the *Nucleus pharmaceuticus*, is based on the famous *Thesaurus et armamentarium medico-chymicum* of Hadrian Mynsicht (ca. 1603–1638), which first appeared in 1631 with many editions published throughout the seventeenth century. Alphabetically arranged, this iatrochemical work consisting principally of pharmaceutical preparations contains matter of purely chemical interest. It was evidently scarce in the early eighteenth century, as Manget (*Bibliotheca Scriptorum Medicorum*, 1731, II, part 2, p. 401) does not mention this title in the list of works by Tudecio. Extremely rare. Unknown to the usual bibliographers.

TUNBORG, Andreas Nicolaus

Dissertatio Chemica de Diversa Phlogisti Quantitate in Metallis, quam, . . . praeside Mag. Torb. Bergman, . . . publice ventilandam sistit Andreas Nicolaus Tunborg, Dalekarlus. . . . 13 Dec. 1780.

Uppsala: Typis Direct. Johan. Edman. (1780).

First edition. 4to. 1 leaf, 16 pp. Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the quantities of phlogiston supposedly in different metals, by Tunborg (dates unknown), with Bergman presiding. Partington (III, 196) describes this as an “important memoir” and mistakenly says it is undated; however, he lists it as no. XLVII of Bergman’s memoirs in the *Opuscula* with the wrong date (1782). Berzelius and Fourcroy also misdated it 1782 and 1783, respectively. “The research had the object of determining the quantity of phlogiston which each metal contains. Bergman came to the conclusion that the quantities of phlogiston are inversely as the weights of the metals” (Partington [*loc. cit.*, 196–197], who discusses the work in detail). A French translation by Rozier appeared in the *Observations sur la physique* (Paris, 1783, vol. 22, pp. 109–121). A rare and important work in the history of chemistry and metallurgy. Not in the usual early chemical bibliographies. (Moström, 158; Partington, III, 183)

TURNER, Edward

Elements of Chemistry, including the Actual State and Prevalent Doctrines of the Science. By the late Edward Turner, . . . Edited by Justus Liebig . . . and William Gregory . . .

London: Printed for Taylor and Walton . . . 1842.

Seventh edition. 8vo. xviii, 1247 pp. Very fine copy, in purple half calf antique, pebbled cloth boards, red morocco label, spine gilt-ruled and dated.

BORN IN Jamaica, Turner (1796–1837) studied medicine in Edinburgh (M.D., 1819) and practiced as a physician at Bath for a year. After a visit to Paris in 1820, he became very interested in chemistry and lectured on this subject for four years in Edinburgh. The present is the first posthumous edition of his “excellent text-book” (Partington), the first edition of which (Edinburgh, 1827) was followed by eight updated editions. “In 1827 Turner was appointed professor in the new London University, opened in 1828” (Partington). When he died at the early age of forty, his manuscripts for a new edition were carefully revised with additions by Justus Liebig and edited by William Gregory. The final edition appeared in 1847, and there were about eight American editions and a German translation (Leipzig, 1829). Cole (1297–1299) lists the following editions: London, 1831; Philadelphia, 1835 and 1846. Not in Duveen, Edelstein, Roller & Goodman, etc. (Bolton, 880; D.S.B., XIII, 499; Ferchl, 546; Partington, IV, 227; Poggendorff, II, 1146; Smith, 487)

TURNER, William

Syllabus of a Course of Lectures on Mechanics, Hydrostatics, and Pneumatics. Read in the New Institution, Newcastle upon Tyne. By William Turner, Lecturer. . . .
Newcastle: Printed by S. Hodgson. 1803.

First edition. 8vo. (in 4s). 1 leaf, 26 pp. With folding engraved plate (containing 33 geometrical figures). Minor edge foxing of paper of a few leaves; otherwise very good copy, in gilt-ruled half calf antique, marbled boards, spine gilt-lettered and dated.

A SYLLABUS OF lectures of peripheral chemical interest, by Turner (1761–1859), a lecturer in Newcastle-upon-Tyne. It deals mainly with the “Science of Physics [which] comprehends Natural History, Natural Philosophy, and Chemistry. . . . Chemistry treats of the particular properties of bodies . . . which are not reducible to the laws of Mechanical Philosophy, but are discoverable by the application of Heat and Mixture.” Most of the lectures are on mechanics and physics. Watt states that Turner was a clergyman who published religious works and lectured on natural philosophy. Rare. (Watt, II, 920g)

TYNDALL, John

Essays on the Floating-Matter of the Air in Relation to Putrefaction and Infection. By John Tyndall, F.R.S. (M.D., Tübingen).

London: Longmans, Green, and Co. 1881.

First edition. 8vo. xx, 338 pp., 1 leaf (advertisements of other works by Tyndall). Fine, crisp copy, uncut, in the original publisher’s maroon blind-stamped cloth, gilt-lettered on spine.

A CLASSIC WORK in which Tyndall reports numerous experiments on the nature of the minute floating particles in normal air and their relationship to disease and contagion. Tyndall extended the work of Pasteur in bacteriology and demonstrated (confirming the work of Pasteur) that air carefully filtered from all floating matter does not lead to fermentation or infection. However, air that has not been filtered, under the same conditions as the filtered air, leads to fermentation and infection. Tyndall thus confirmed Pasteur’s theory that infection can travel from one organism to another by means of airborne dust carrying bacteria and spores. Scarce.

Tyndall (1820–1893), a native of Leighlin Bridge, County Carlow, was a natural philosopher whose researches enriched several fields: mathematics, physics, chemistry, etc. He was a pupil of Bunsen and became professor of natural philosophy at the Royal Institution (1853) and a colleague of Faraday, whom he succeeded as director (1867–87). He was elected F.R.S. in 1852. The present fundamental work contains much of chemical interest and importance. It was the investigations of Pasteur and Tyndall (as reported herein) that finally laid to rest the long-held theory of the “spontaneous generation” of bacteria, molds, and mildews. Despite its chemical and medical significance, this work is not mentioned by Bolton, Duveen, Morgan, Osler, Thornton & Tully, or Waller. (Knight, 156; Partington, IV, 750)

TYTLER, Robert

Disputatio Chemica Inauguralis de Oxygenio; quam, annuente summo numine, ex auctoritate reverendi admodum viri, D. Georgii Baird . . . Academiae Edinburgenae Praefecti . . . Robertus Tytler, Scotus, Chirurgus . . . VIII Calendas Julias . . .
Edinburgh: Excudebant Adamus Neill et Socii. 1807.

First edition. 8vo. (in 4s). 2 leaves, 35, (1) pp. Fine copy in modern boards, spine lettered and dated.

THE DOCTORAL dissertation of Tytler, presented under the direction of George Husband Baird (1761–1840), principal of Edinburgh University. Of Tytler, a surgeon, nothing appears to be known. The dissertation is on the history, physical and chemical properties, and medical uses of oxygen. There are many references to Hooke, Mayow, Priestley, Scheele, Ingenhousz, Kirwan, Cavallo, Crawford, Lavoisier, Davy, et al. Rare. (Waring, II, 603)

ULLOA, Antonio de

Noticias Americanas: entretenimientos fisico-historicos sobre la America meridional, y la septentrional oriental: comparacion general de los territorios, climas y producciones en las tres especies Vegetal, Animal y Mineral . . .

Madrid: La Imprenta Real. 1792.

Second edition. 4to. 8 leaves, 342 pp. Fine copy in original Spanish tree calf, spine gilt, maroon morocco label.

THE SPANISH naval officer and scientist Ulloa (1716–1795) was appointed in 1735 a member of a ten-year expedition to Peru to measure a degree of the meridian at the equator. As a result of his scientific work, he published *Noticias Americanas* (Madrid, 1772), which is a storehouse of facts on Spanish America, with particular emphasis on Peru and Ecuador. The present second and best Spanish edition contains much of interest to the historian of chemistry, mining, and metallurgy. Chapters 11 through 16 describe copper, silver, gold, and lead mines in Peru and Ecuador. The extraction of these metals is described, including the age-old practice of amalgamation with mercury. Assaying processes are noted, and methods for refining metals and their commercial values are covered. Nonmetals are also discussed (e.g., sulphur, salts, mineral waters, drugs, and dyes). Ulloa first mentioned the very rare metal platinum in his *Relacion historica* (Madrid, 1748, p. 606), and the metal is touched on in this work. Partington (III, 176) refers to Ulloa but not this title. Ulloa served on several scientific commissions and established the first natural history and the first metallurgical laboratory in Spain and the astronomical observatory at Cadiz. Poggendorff (II, 1154) and D.S.B. (XIII, 531) mention only the first edition. Scarce. (Palau, 343418; Sabin, 36806)

ULLOA, Antonio de, and JUAN, George

A Voyage to South-America: describing at large the Spanish Cities, Towns, Provinces, &c. on that extensive Continent. Interspersed throughout with Reflections on the Genius, Customs, Manners, and Trade of the Inhabitants; together with the Natural History of the Country, and an Account of the Gold and Silver Mines. . . . By Don George Juan . . . and Don Antonio de Ulloa . . .

London: Printed for L. Davis and G. Reymers, against Gray's-Inn-Gate, Holborn. 1758.

First English edition. 2 vols., 8vo. I: xvi, (8), 432, 453–509, (3) pp. (pagination skips but text complete). II: 3 leaves, 420, (18) pp. With 7 engraved plates (6 folding). Very good copy in contemporary gilt-ruled calf, rebacked, red morocco labels.

THE FIRST English translation of *Relacion historica del viaje a la America Meriodional* (Madrid, 1748; D.S.B., II, 530), which contains an accurate description of the greater part of South America, its natural history, and its inhabitants. The rare metal platinum is first described, as well as many other subjects of chemical and metallurgical importance. For a discussion of Ulloa and his work on rare metals, see D. McDonald, *A History of Platinum* (London, 1960, pp. 15–19). The information collected during the exploration makes this work a primary source for the natural and scientific history of South America. (Blake, 462; Cox, *A Reference Guide to the Literature of Travel*, II, 275; Hill, *Collection of Pacific Voyages*, 297; Sabin, 36813; Watt, II, 923e; Weeks, *Discovery of the Elements*, 1960, 409–412)

ULSTADT, Philip

Celum philosopho. Heimlichkeit der naturen genant dis buchlin Neulich in latein coligiert von den wogelerte Ulstadius von Niereinberg und ietz in teutsch getruckt. Darin herfür bracht, wie man die rechte kunst, & Quinta Essentia. distilliere. Und den schatz Auru potabili. Gold in ein trinklich wesen bring, dz lang zeit verborge gewesen. Und auch sunst vil güter dig zu & artznei, menschlichem leben hilfflich ir leib in gesuntheit zubehalte Auchzum teil dienend Alchamei. Auch angehenkt, etliche usszüg un lere vo Marsilio vicino, die er dan selber gebraucht, und rüwigs alters. 120. iar alt worde. (Colophon: Strassburg: Johannes Grienynger, 1527).

First edition in German. Folio (in 6s). 78 leaves (numbered on recto only). Large woodcut on title and numerous large woodcuts (some full page) of distillation equipment throughout. Paper slightly embrowned and some skillful marginal repairs; otherwise a very good copy with wide margins, in full blind-stamped calf antique (simulating an early-sixteenth-century German binding).

THE FIRST translation into German of the *Coelum Philosophorum* of Ulstad (fl. 1500), a physician and professor at Nuremberg who taught medicine at Fribourg, Switzerland. Originally published in Latin (Strassburg, 1525), this is the first translation into the vernacular. It is a very important milestone of early distillation literature. The “epistel” is dated “Friburg, 1525,” as in the Latin original, and at the end (folios 63–78) is the commentary (*Von guter Artzney*) of Marsilius Ficinus (1433–1499). Ulstad was closely connected with Hieronymus Brunschwig (1450–1512), and each used the same woodblocks in their books on distillation. Apart from the influence of Brunschwig, Ulstad's work is based on those of John of Rupecissa, Raymond Lull, Arnald of Villanova, and Albertus Magnus. Of the greatest rarity, this first German-language edition is unknown to almost all bibliographers and chemical historians. For a

discussion of this edition and its contents, see Edward R. Atkinson and Arthur H. Hughes, *J. Chemical Education* (March 1939), pp. 103–107. (D.S.B., XIII, 535; Edelstein, 2332; Ferguson Coll., 715)

ULSTADT, Philip

Coelum Philosophorum seu de Secretis naturae. Liber.
(Colophon: Strassburg: Ioannis Grienynger, 1528).

Third Latin edition. Folio (in 6s). 64 leaves (numbered on recto only). Large woodcut on title and numerous large woodcuts (some full page) of distillation equipment in text. A fine, crisp copy, in seventeenth-century calf, maroon morocco label, spine richly gilt. With unobtrusive, neat pen and pencil marginal annotations (sixteenth to eighteenth centuries) in English, French, German, and Latin. From the library of the famous French chemist Jean Hellot (1685–1766), with his neat signature (“Hellot”) in ink at top of title page.

THE VERY rare third Latin edition of the famous *Coelum Philosophorum* (“Heaven of the Philosophers”), one of the most important early books on the chemicals that can be prepared in more or less pure form by the process of distillation, with additional comments on their medicinal uses. Partington discusses the contents of this work in detail. The equally rare first and second editions (Strassburg, 1525 and 1526) are described by Partington, who also lists later Latin editions. The book was very popular and was translated into German and French editions in various forms appearing throughout the sixteenth and early-seventeenth centuries. Newton owned a copy of the Lyon, 1572 edition, also another of 1630 (see Harrison, 1651 and 1652; and Villamil, p. 101). This is a particularly desirable copy, having once belonged to Jean Hellot. Not in Caillet, D.S.B., Edelstein, Poggendorff, Rosenthal, Smith, Sondheimer, Waller, etc. (Bolton, 1062; Durling, 4447; Duveen, 591; Ferchl, 547; Ferguson, II, 482 [not in Young Coll.]; Ferguson Coll., 713; Forbes, 128; Hoefler, I, 472; Neu, 4136; Partington, II, 84; Thorndike, V, 541; Watt, II, 9231; Wellcome, I, 6398)

UNONIUS, Israel

Dissertatio Chemica de Natura Metallorum cujus partem priorem . . . praeside Mag. Johanne Gadolin, . . . pro gradu publico examini subjicit Israel Unonius Wiburgensis in audit. maj. die XIX Junii MDCCXCII, . . .

Åbo: Typis Frenckellianis. (1792).

First edition. 4to. 1 leaf, 22 pp. Fine, crisp copy, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated. Bound with: Forsell, Isaac, *Dissertatio chemica de natura metallorum cujus partem posteriorem* (Åbo, 1792).

A DISSERTATION ON metals presented by Unonius, a pupil of Johan Gadolin, professor of chemistry at the University of Åbo, Finland. The history of metals and their supposed composition are discussed, as well as their physical and chemical properties. The phlogiston theory and the reactions involved in the formation of oxides, sulphides, and salts are covered. Part II of this dissertation was presented by Isaac Forsell. Not in Blake, Waller, Wellcome, or the usual bibliographies. (Bolton, *First Supplement*, 177; Ferchl, 169)

URBIGERUS, Baron

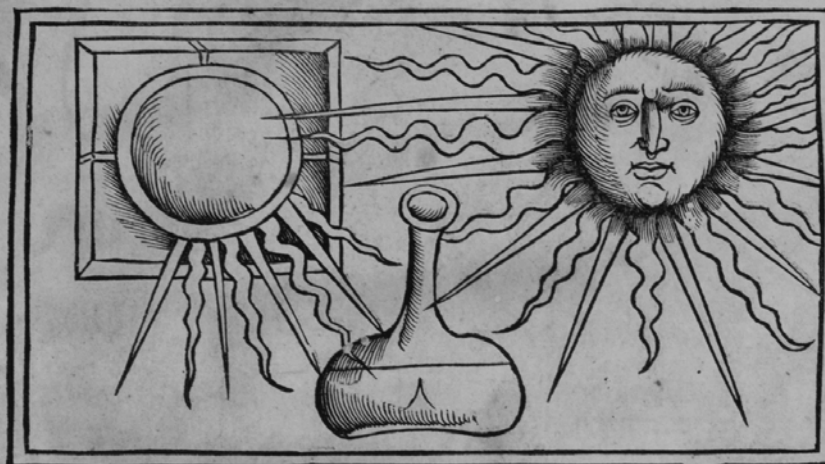
Aphorismi Urbigerani, oder Gewisse Reguln, welche klarlich anweisen die 3. unfehlbahren Wege umb das Grosse Elixir, oder Circulatum Majus der Philosophen zubereiten, wodurch entdecket werden so wohl die grösten Geheimnisse . . . Erst gedruckt zu Londen [sic] bey Henrii Faithorn 1690. Nunmehr aber verteutschet, und publicirt zu Erffurd. Von selbigen Authore.

(Erfurt:) Gedruckt bey Johann Georg Hertzen. N.d. (ca. 1700).

First edition, second issue. 8vo. 41 leaves. Fine engraved allegorical frontispiece (J. G. Göbel sc.), with alchemical symbols. Occasional early neat annotations in text; otherwise very good copy, in quarter calf antique, marbled boards, maroon morocco label.

IN HIS preface to the *Chymische Schriften* of Basil Valentine, Petraeus ascribes this extremely rare alchemical work to Baron Urbigerus (Borghese or C. de Siebenburg), whose “true secrets” were found to be correct by Duke Frederick of Saxe-Gotha, the dedicatee of the book. The secrets are revealed in 101 aphorisms demonstrating the preparation of the grand elixir and the philosopher’s stone. Ferguson (II, 488) discusses the author. Signature D4 is a divisional title: *Circulatum Minus Urbigeranum, oder das Philosophische Elixir aus dem Vegetabilischen Reiche*; the following nine leaves reveal thirty-one other secrets. The final three leaves of text interpret the alchemical symbolism of the frontispiece. The first issue of the first German edition (Erfurt, 1691; Caillet, 10943; Ferchl, 548; Ferguson, II, 487) is here reissued with a reset title and different publisher’s name. The second issue has not been found in the bibliographies, and this is the copy that belonged to Duveen (*Supplement*, 389). The book originally appeared in English (London, 1690; Duveen, 593; Krivatsy, 12079; Pritchard, 420.1)

COELVM PHILOSO
PHORVM SEV DE SECRETIS
naturæ. Liber.



PHILIPPO VLSTADIO PATRICIO
Nierenbergensi. Authore.

M. Claude de Hottentot

Ulstadt. Coelum Philosophorum. Strassburg, 1528.

URBIGERUS, Baron

Besondere Chymische Schrifften, wie nemlich I. Die Medicina Universalis zu praepariren damit alle Metalle und Kranckheiten können curirt werden, II. Viele Manieren wie ein jedweddes Metall vor und an sich selbst Via Particulari zu verbessern sey, III. Die Tugenden und Eigenschafften des Antimonii und eine sichere Methode das Aurum potabile so wol in forma Sicca als humida zu machen, IV. Allerhand rare Secreta für Medicos und Chirurgos, V. 101 Gewisse Regeln oder kurtze Aphorismi durch 3. Wege das grosse Elixir der Philosophorum zu bereiten, &c. Mit saubern Kupffern heraus gegeben von Baron Urbigero, Gottes getreuen Priestern im Tempel der Natur.

Hamburg: Bey Benjamin Schillern, Buchhändlern im Thum. 1705.

First edition. 8vo. 4 leaves, 109, (1) pp., 28 leaves. With engraved frontispiece, 5 unusual mystical-alchemical plates, and 2 plates of furnaces and chemical apparatus. Very good copy, in eighteenth-century mottled boards. From the library of Daniel Wilhelm Nebel (1735–ca. 1805), professor of chemistry and pharmacy at Heidelberg, with his bookplate.

THE VERY rare first collected edition of the alchemical works of Urbigerus. Describing the copy in the Young Collection, which lacks all but one of the interesting plates, Ferguson gives a summary of the contents and states that he could find no biographical information on Urbigerus (which may be a pseudonym). The 101 *Aphorismi* and 31 secrets of the *Circulatum* each have a separate divisional title page. This copy does not contain the “138 Regeln” mentioned by Ferguson but is complete as issued. The additional 138 *Regeln* were apparently not issued with all copies. The frontispiece to the *Aphorismi* is an unsigned re-engraved version of that by Göbel in the Erfurt edition of circa 1700. (Duveen, 593; Ferchl, 548; Ferguson, II, 487–488; Ferguson Coll., 717)

URE, Andrew

A Dictionary of Arts, Manufactures, and Mines: containing a clear Exposition of their Principles and Practice. By Andrew Ure . . . Fourth edition, corrected and greatly enlarged.

London: Longman, Brown, Green and Longmans. 1853.

Fourth edition. 2 vols., 8vo. I: xvi, 1118 pp. II: 2 leaves, 998 pp. + 32 pp. (publisher's catalogue). With 1 folding table, and 1,588 woodcut figures in text. Fine untrimmed set in original blind-stamped brown pebbled cloth, gilt-lettered spines.

AN ENCYCLOPEDIAIC treatise covering numerous subjects of interest on pure and applied chemistry: e.g., assaying, bleaching, brewing, calico printing, ceramics, dyeing, firearms, fireworks, gas lighting, glassmaking, gunpowder, metallurgy, perfumery, photography, silk manufacture,

ventilation, and winemaking. The first edition in two volumes appeared in 1839, and updated editions were published until that of 1878–81, in four volumes. Facing page 820 of volume II in the present edition is a very large “table of analytical chemistry, arranged by James Haywood, professor of chemistry at Sheffield.” Numerous American editions appeared, as well as translations into German, on which see Cole. (Bolton, 80; D.S.B., XIII, 548; Partington, III, 722; Poggendorff, II, 1160)

URE, Andrew

A Dictionary of Chemistry, on the basis of Mr Nicholson's; in which the principles of the science are investigated anew, and its applications to the phenomena of nature, medicine, mineralogy, agriculture, and manufactures, detailed. By Andrew Ure . . . With an introductory Dissertation; containing instructions for converting the alphabetical arrangement into a systematic order of study.

London: Printed for Thomas & George Underwood, etc. 1821.

First edition. 8vo. xix, (1), (752) pp. (unpaginated). With 15 engraved plates (3 folding). Very good copy in original half calf, marbled boards, spine gilt.

THE SCOTTISH chemist Ure (1778–1857), graduated M.D. (Glasgow, 1801), was briefly an army surgeon, then in 1804 succeeded George Birkbeck as professor of natural philosophy at the Andersonian Institution in Glasgow. He was elected F.R.S. (1822). The great interest Ure “took in the application of science to the arts and industry bore fruit in his *Dictionary of Chemistry* (1821). This work was originally undertaken at the request of the publishers as a revision of William Nicholson's *Dictionary of Chemistry*, but Ure said that so much of the latter was obsolete that the work had largely to be rewritten” (D.S.B.). Ure was a pioneer in the teaching of science to artisans and was one of the first to earn a living as a consultant to industry. He kept the *Dictionary* up-to-date by publishing three subsequent editions. An American edition appeared (Philadelphia, 1821; Edelstein, 2369; Smith, 490). (Bolton, 79; Cole, 1304; D.S.B., XIII, 547; Duveen, 594; Ferchl, 548; Morgan, 781; Partington, III, 722; Poggendorff, II, 1160)

URE, Andrew

A Dictionary of Chemistry, on the Basis of Mr Nicholson's . . .
London: Printed for Thomas Tegg, etc. 1824.

Second edition, second issue. 8vo. xvii, (1), 816 pp. With 14 engraved plates (2 folding). Preliminary and final leaves with marginal damp stains; otherwise good copy in original blind-ruled reverse calf, maroon morocco label.

AN UPDATED edition of this useful dictionary, containing corrections, additions, many new articles, and tables of data. The title has the same wording as the 1821 edition. Several plates of the first edition have been re-engraved for this edition. The Duveen copy of the first issue (title page dated 1823) is “not paginated.” The present second issue is the first to be paginated throughout. Scarce. Not in Cole, D.S.B., Edelstein, Ferchl, Smith, etc. (Bolton, 79; Duveen, 594; Partington, III, 722)

URE, Andrew

A Dictionary of Chemistry, in which the principles of the science are investigated anew . . .

London: Printed for Thomas Tegg, etc. 1828.

Third edition. 8vo. xii, 829, (1) pp. With 9 engraved plates. Top of spine worn, front hinge partly cracked; otherwise good copy in original half calf, marbled boards, black morocco label.

THE TITLE of this edition omits any reference to Nicholson. Thoroughly revised, all “obsolete or useless details . . . I have been sedulous to expunge, and replace by matter equally interesting and new” (advertisement). Two tables are first introduced (pp. 431–446), under “Equivalents (Chemical),” which are based on the “writings of Berzelius.” Included is an important discussion on the merits and shortcomings of Dalton’s atomic theory and the composition of water (pp. 424–425). The valuable researches of Davy on electrochemistry and those of Prout, Thomson, Wollaston, and others are covered in detail. (Bolton, 79; Partington, III, 722)

URE, Andrew

A Dictionary of Chemistry and Mineralogy, with their Applications. By Andrew Ure . . . With numerous improvements.

London: Printed for Thomas Tegg, 73, Cheapside, and R. Griffin and Co. Glasgow. 1831.

Fourth edition. 8vo. xii, 844 pp. With 9 engraved plates (plate 5 is frontispiece). Fine copy in original half calf, marbled boards, rebacked, green morocco label, spine dated.

THE FINAL edition, in which the title has been changed from that of the third edition (London, 1828). “Ure adopted Berzelius’s notation and in the article ‘Equivalents’ showed discernment in dealing with contemporary theories” (Partington, III, 723). The author states “such has been the activity of the Chemical world . . . as already to furnish copious materials for addition and emendation . . . I have felt it my duty to introduce . . . many articles entirely new, and to rewrite . . . several of those under old titles” (advertisement). The fourth edition is wrongly dated 1835 in

D.S.B. (XIII, 548); the 1835 “edition” is merely a reprint of the present edition. Scarce. Not in Duveen, Edelstein, Partington, Smith, etc. (Cole, 1306)

URE, Andrew

The Philosophy of Manufactures: or, an Exposition of the Scientific, Moral, and Commercial Economy of the Factory System of Great Britain, By Andrew Ure . . .

London: Charles Knight, Ludgate-Street. 1835.

First edition. 8vo. xii, 480 pp. With engraved frontispiece, 1 folding engraved plate (power loom factory), 1 folding printed table (textile factories in United Kingdom), and many woodcuts in text. Very good copy in contemporary blind-stamped pebbled cloth, rebacked, with original gilt-lettered spine laid on. Bookplate (nineteenth century): Greenock Botanical Library.

AN IMPORTANT book on the state of British factories in the 1830s. It embodies the first clear recognition that what came to be called the industrial revolution was a novel and irreversible alteration in the human condition. The book “was based on a tour of the manufacturing districts of Lancashire, Derbyshire, and Cheshire” (D.S.B.). Conditions under which people worked long hours—including young children—were deplorable. Ure speaks disapprovingly of unions, and it appears that his sentiments were more for the factory owners than for the plight of the workers. Knight describes Ure’s book on the factory system as the “standard work . . . deservedly a classic.” It had considerable impact on the public and passed through at least four editions. (D.S.B., XIII, 547–548; Knight, 121–122; Partington, III, 722; Poggendorff, II, 1160)

URE, Andrew

The Revenue in Jeopardy from Spurious Chemistry, demonstrated in Researches upon Wood-Spirit and Vinous Spirit. . . .

London: James Ridgway. 1843.

First edition. 8vo. 35, (1) pp. Very fine copy, in maroon quarter dāwth antique, marbled boards, spine lettered in gilt.

ABOUT 1830 URE moved from Glasgow to London and became one of the first professional chemical consultants. From 1834 he was chemist to the Board of Customs and was adept at analyzing alcohol-containing materials. In this work he proves that large cargoes of so-called naphtha, imported from America, were in fact 70 to 90 percent ethyl alcohol and thus subject to considerable import duty. He reports (p. 8) that the “naphtha . . . is, therefore, a fraudulent importation of spirits under the mask of pyroligneous acid.” The importers sent a sample for analysis to Thomas

Graham, F.R.S., who certified that it contained no alcohol. Another sample was sent to William Thomas Brande, F.R.S., who also found no alcohol in it. A heated exchange of acrimonious letters took place between the chemists, recorded herein, with the final vindication of Ure and an apology to him from Brande but not from Graham. Not in Cole, Duveen, Edelstein, Smith, etc. (Bolton, 883; Ferchl, 549; Partington, III, 722; Poggendorff, II, 1160)

USLAR, Johann Julius von

Chemico-Physiological Observations on Plants. By M. von Uslar. Translated from the German, with additions, by G. Schmeisser, F.R.S. &c.

Edinburgh: Printed for William Creech. 1795.

First English edition. 8vo. xii, 171, (1) pp. Fine copy, in quarter calf antique, marbled boards, spine gilt-lettered.

TRANSLATED FROM VON Uslar's *Fragmente neuerer Pflanzenkunde* (Braunschweig, 1794) by Johann Gottfried Schmeisser (1767–1837), F.R.S. (1794), who has made useful additions, this work contains new information on photosynthesis and the chemistry of plants. The recent “discoveries in chemistry have shown that the principles (in plants) are chiefly the following: Matter of Heat, Matter of Light, Oxygen, Hydrogen, Azote or Nitrogen, Carbon, and their combinations.” Each of these subjects is discussed in detail, with frequent references to the researches of Black, Cavendish, Humboldt, Ingenhousz, Lavoisier, Mayow, Priestley, et al. Numerous new experiments are also de-

scribed in this early work on phytochemistry. Rare. (Duveen, 594; Ferchl, 549; Neu, 4153; Pritzel, 9646; Watt, II, 837q, 924u)

USUFUR

Usufur womit ein vornehmer Italianischer Furst von einem vermeinten Chymico listiger Weise betrogen worden. Vor einigen Jahren Welsch, nun aber Teutsch publicirt. So als ein Anhang zum Fegefeuer der Chymisten dienen kan. Frankfurt & Leipzig: zu finden in Taubrischen Buchladen. 1717.

First edition. 8vo. 12 leaves (unpaginated). Top outer margins of last two leaves neatly repaired (not affecting text); otherwise very good copy, in nineteenth-century quarter calf, marbled boards, spine gilt-lettered and dated.

A VERY RARE tract describing the alchemical uses of cinnabar (native mercuric sulphide). According to the text, in 1554, during the reign of Cosimo I (1519–1574) of the Medici family in Tuscany, there came to Cosimo's court an alchemist named Daniel von Siebenburgen. This alchemist claimed that a red powder, which he called “usufur,” possessed marvelous properties and was able to multiply gold when mixed with pure gold. “The term Usufur denoted cinnabar; here it was used for the supposed gold producing powder” (Ferguson). The final four pages list the names of famous alchemists from Hermes to Trismosin. (Ferchl, 549; Ferguson, II, 489; Rosenthal, 869)

VALERIIS, Valerius de

Aureum sane Opus, in quo ea omnia brevitur explicantur, quae scientiarum omnium Parens, Raymundus Lullus, tam in scientiarum Arbore, quam arte generali tradit. . . .

Augsburg: Imprimebat Michael Manger. 1589.

First edition. 4to. 4 leaves, 179, (1) pp. Roman and italic letter. Historiated woodcut capitals. An exceptionally fine, crisp copy, on strong paper with wide fore- and lower margins; in half vellum antique, marbled boards. Author's presentation copy, neatly inscribed in ink on title page to Joannes Velsch.

VALERIIS (fl. 1580), a patrician of Venice, dedicated this book to Anton Fugger, a member of the famous German banking family. "A very rare critical work on the *Arbor Scientiae*, Lull's great scientific encyclopaedia explaining the relationship between ideas. The book contains a good deal of scientific matter, including some on chemistry" (Duveen). The author also comments on Lull's *Ars Generalis*. This is a precious copy containing a specimen of the handwriting of Valerius, which is of considerable rarity. He also published *De la transformation métallique* (Paris, 1561), which was translated into Italian (Brescia, 1572) and Latin (Hannover, 1593). Not in Caillet, Durling, Ferguson, Thorndike, Watt, Wellcome, etc. (Adams, V57; British Library, *S.T.C. German, 1455–1600*, p. 882; Duveen, 371; Ferchl, 550; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 433; Neu, 4161; Palau, IV, 294; Sarton, II, 913; Waite, 305)

VALLA, Giorgio

De simplicium natura liber unus.

Strassburg: Per Henricum Sybold. 1528.

First edition. 8vo. 104 leaves (A–N⁸, unpaginated). Title page with fine woodcut border. Colophon dated August 1528. Very good copy with wide margins, in calf antique, spine gilt-lettered and dated. From the Surgeon General's Library, with old stamp on title and release stamp on sig. Aii.

VALLA (ca. 1430–1499), an Italian physician born at Pienza, was professor of belles lettres at Venice. Thorndike (vol. V) cites Valla several times but not this posthumous treatise on the materia medica. It is of considerable chemical interest as it describes the components of pharmaceutical preparations used at the time (e.g., salts, metals, sulphur, and minerals). Authors whose works are cited include Aetius, Avicenna, Celsus, Pliny, and particularly Dioscorides. The preface to the reader is by Henricus Sybold, professor of medicine, who edited this volume. Not in the usual chemical and medical bibliographies. Very rare. (British Library, *S.T.C. German, 1465–1600*, p. 883; Durling, 4485; Watt, II, 926q; Wellcome, I, 6437)

VALLEMONT, Pierre Le Lorrain de

Curiosities of Nature and Art in Husbandry and Gardening. Containing Several new Experiments in the Improvement of Land, Trees, Fruits, &c. And also nice and useful Observations in the Vegetation and Propagation of Plants; with choice Secrets to make Plants, Flowers and Fruits larger, more beautiful, and to ripen quicker than usual. With several Copper Cuts.

London: Printed for D. Brown, at the Black Swan without Temple-Bar; A. Roper, at the Black Boy over against St. Dunstan's Church in Fleetstreet; and Fran. Coggan, in the Inner-Temple Lane. 1707.

First English edition. 8vo. 8 leaves, 352 pp. Fine engraved frontispiece (by M. Van der Gucht) and 12 curious engraved plates. Lower corner of frontispiece repaired (no loss); otherwise very good copy, in early-nineteenth-century dark-blue half morocco, marbled boards.

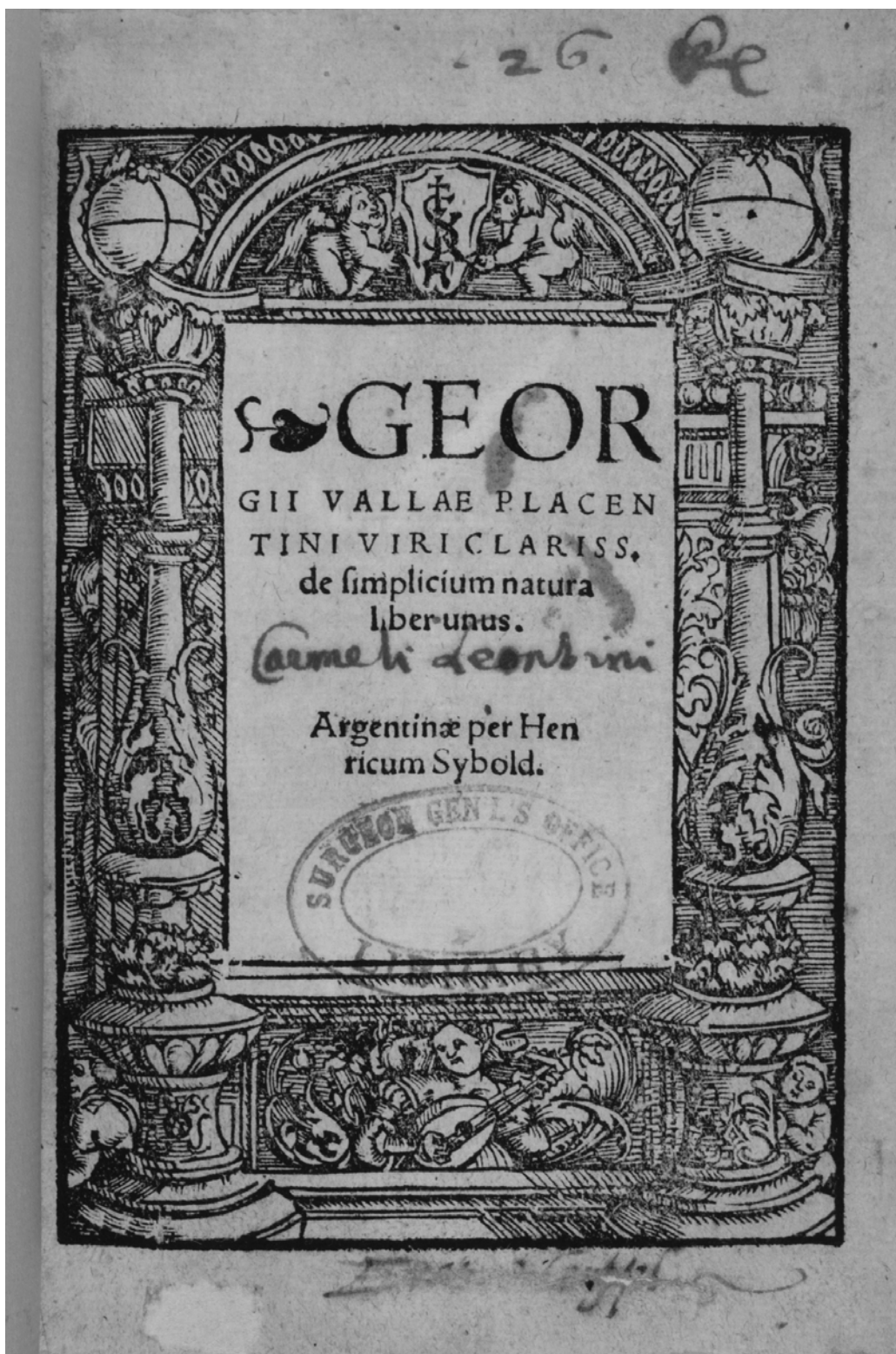
THE AMATEUR alchemist and botanist Vallemont (1649–1721), doctor of theology, was physician and professor at the College of Cardinal Lemoine. This rare English translation of the first French edition (Paris, C. Cellier, 1705; Caillet, 10982) was published anonymously. It has been attributed to William Fleetwood (1656–1723), bishop of Ely, or to an otherwise unknown person, Arthur Young. Fascinated by mysticism in nature and its supposed connection with alchemy, Vallemont was renowned for his cabinet of curiosities, the seventeenth-century precursor of modern museums. Uniting obscure alchemical speculation with practical information on horticulture, this work contains occult theorizing on the doctrine of sympathies in nature, artificial metallic vegetation, palingenesis of plants and animals, etc. Paradoxically, it exemplifies the syncretist spirit that prevailed at Versailles in the later 1600s. There are many references to early chemists and their works (e.g., Boyle, Fludd, Helmont, Lemery, Lemnius, Palissy, Porta, and Rochas). (Henrey, II, 413–414, III, 588; Hunt, 416; McDonald, 160–162; Perkins, 1002; Wellcome, II, 420)

VALLERIUS, Harald

Disputatio Physica de Vacuo . . . sub praesidio . . . Matthias Steuchii . . . In Regiae Upsaliensis Aeademiae Auditorio Gustaviano Majori ad diem 15 May Anni 1678 . . . Pro gradu Magisterii . . . Harald Valierius O-Gothus.
Stockholm: Excudit Hendrius Keyser. (1678).

First edition. 4to. 2 leaves, 28 pp. (unpaginated). Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated, old marbled wrappers bound in.

A DISSERTATION FOR and against the possibility of producing a vacuum, presented by Vallerius (1646–1716)



Valla. De simplicium natura liber unus. Strassburg, 1528.

under the direction of Matthius Steuch, professor of metaphysics at the Royal Academy of Uppsala. Vallerius became professor of mathematics in 1690 at the University of Uppsala. In twenty-nine “theses” he discusses the possibility of producing vacua, reviewing the subject from ancient times (citing Democritus, Epicurus, Lucretius, et al.) up to the mid-seventeenth century. He describes the investigations of Gassendi, Galileo, Guericke, Kircher, Schott, Torricelli, Voss, and others but was unaware of the important contemporary researches carried out by Boyle and Hooke. The dedication is dated 6 April 1678. Vallerius is briefly noted by Poggendorff (II, 1168), but not this work. The author also published *Exercitium philosophicum de tarantula* (Uppsala, 1702; Waller, 11977), in conjunction with his son Georgius Vallerius (1683–1742). Very rare. Not in Krivatsy or the usual reference works. (Thorndike, VII, 642)

VALMONT de BOMARE, Jacques Christophe

Dictionnaire Raisonné Universel d'Histoire Naturelle; contenant l'Histoire des Animaux; des Végétaux et des Minéraux, et celle des Corps célestes, des Méteores, & des autres principaux Phénomènes de la Nature. Avec l'Histoire et la Description des Drogues simples tirés des Trois Regnes; et la détail de leurs usages dans la Médecine, dans l'Economie domestique & champêtre, & dans les Arts & Métiers. Par M. Valmont de Bomare . . .

Paris: Chez Didot, le Jeune, Musier, Fils, De Hansy, Panckoucke. 1764.

First edition. 5 vols., 8vo. I: xxiv, 644 pp. II: (4), 659, (1) pp. III: (4), 606, (2) pp. IV: (4), 659, (1) pp. V: (4), 711, (5) pp. Fine set in original mottled calf, spines richly gilt, maroon and green morocco labels.

VALMONT DE BOMARE (1731–1807) studied chemistry and pharmacy at Rouen before going to Paris in 1751. He then traveled all over Europe, studying “the geology and mineralogy of the countries he visited, and . . . inspected mines and chemical and metallurgical works in addition to meeting foreign scientists” (D.S.B.). In 1756, at the Jardin des Plantes, he began a highly successful public course in natural history. The *Dictionnaire* was his “most important work” (D.S.B.), which was enlarged in four more editions, up to fifteen volumes in 1800. The first volume of the present edition contains an extensive list of authors whose works were consulted. There is much of chemical, metallurgical, and mineralogical interest in this comprehensive treatise, which “served as a model for all similar works” (D.S.B.). (Blake, 468; D.S.B., XIII, 565; Ferchl, 550; Poggendorff, II, 1170)

VANDELLI, Domenico

Epistola de Holothurio, et Testudine Coriacea ad celeberrimum Carolum Linnaeum equitem naturae curiosorum Dioscoridem II. . . .

Patavii (Padua): Ex Typographia Conzatti. 1761.

First edition. 4to. 12 pp. Large copperplate vignette on title and 2 folding copperplates at the end. A superb copy in pristine condition, uncut and unpressed, on large paper, in the original pasteboards. Bound with: Vandelli, Domenico, *Tractatus de Thermiss Agri Patavini* (Padua, 1761).

A LETTER ADDRESSED to Linnaeus on holothurians (sea slugs, sea cucumbers, or trepangs), and turtles. These animals are illustrated in the plates. The letter is dated 6 March 1761. Very scarce. Not in Blake, Eales, Ferchl, Osler, Watt, etc. (Duveen, 595; Neu, 4176; Waller, 11982)

VANDELLI, Domenico

Tractatus de Thermiss Agri Patavini. Accessit Bibliotheca Hydrographica, & Apologia contra Cel: Hallerum.

Patavii (Padua): Ex Typographia Conzatti. 1761.

First edition. 4to. 4 leaves, 234 pp., 1 leaf (Emendanda); 53, (1) pp., 1 leaf (blank); 44 pp. One half-page copperplate on page 73 and 5 folding, full-page copperplates on separate sheets. Title pages to each of the 3 sections, with large copperplate vignettes. Copperplate initials, head- and tailpieces. A superb copy in pristine condition, uncut and unpressed, on large paper, in the original white pasteboards. Bound with: Vandelli, Domenico, *Epistola de Holothurio* (Padua, 1761).

A SPLENDID EXAMPLE of mid-eighteenth-century Italian printing and a classic, comprehensive work by Vandelli (1735–1816) on the mineral hot springs of the Padua area. The first part of six chapters covers the history, medicinal uses, and virtue of the waters, with chapter 4 (pp. 127–161) entirely on their chemical analysis. Vandelli refers to many earlier and contemporary chemists, citing Boyle’s *Sceptical Chymist*, Newton’s *Opticks*, and the works of Hooke, Lemery, Boerhaave, et al. The second part (*Bibliotheca Hydrographica*, 54 pp.) is an important bibliography of the mineral waters of European countries, including Great Britain. The third part (*Apologia contra Cel: Hallerum*), dated 1760, is a commentary on Haller and his writings. A very scarce book, especially when in pristine condition. The author published several other works on mineral waters, but this is by far his most ambitious and important book on the subject. Not in Bolton, Eales, Edelstein, Ferguson, Ferguson Coll., Osler, Partington, Poggendorff, Smith, Watt, etc. (Blake, 469; Duveen, 595; Ferchl, 550; Neu, 4179; Waller, 9809)

VANDERMONDE, Charles Auguste, MONGE, Gaspard, and BERTHOLLET, Claude Louis

Avis aux Ouvriers en Fer, sur la Fabrication de l'Acier, Publié par ordre du Comité de Salut Public.

Paris: De l'Imprimerie du Département de la Guerre, rue de la Michodière, No. 3. N.d. (1793).

First edition. 4to. 34 pp. With 5 folding engraved plates (Sellier sc.). Fine copy in marbled boards antique, gilt-lettered brown morocco label.

A CLASSIC WORK on the chemistry of steelmaking, by Vandermonde (1735–1796), Monge, and Berthollet, acknowledged experts in the field. The second plate shows a steel furnace in Newcastle, England. “Importation of steel from England and Germany having been cut off because of the Revolution, the French were forced to increase their own production. This booklet published in 1793 by order of the Committee for Public Safety, gives a brief summary of the nature of iron and steel and then proceeds to give clear instructions for the making of steel in accordance with the carbon theory” (Cole). A shorter (possibly a trial) version of thirty-one pages and a caption title also appeared in 1793 (see Duveen). Of the present work at least three states of the plates exist. In the Cole copy plates II, IV, and V are not signed. In this copy, plate I is numbered in the top left margin, and the figures are numbered in a different type font from those in my second copy, which is plate I in the top right margin. On the verso of plate I of the present copy is written “Cans,” indicating that this is a cancel. Plate III in this copy is unsigned; in the other copy it is signed. In this copy, plate V is at top right; in the other copy it is numbered in the top left margin. The text is the same in both copies. Smith devotes a whole chapter to this important work. Very rare. Not in N.U.C. (Cole, 1311; D.S.B., XIII, 571; Duveen, 75; Roller & Goodman, 530; C. S. Smith, *Sources for the History of the Science of Steel 1532–1786*, [1968], p. 279)

VANDERMONDE, Charles Auguste, MONGE, Gaspard, and BERTHOLLET, Claude Louis

Avis aux Ouvriers en Fer, sur la Fabrication de l'Acier, Publié par ordre du Comité de Salut Public.

Paris: De l'Imprimerie du Département de la Guerre, rue de la Michodière, No. 3. N.d. (1793).

First edition. 4to. 34 pp. With 5 engraved plates (Sellier sc.), of which 3 are folding. Fine copy, uncut with wide margins, in maroon quarter cloth antique, spine gilt-lettered and dated, with original beige wrapper bound in, marbled boards.

ANOTHER COPY of this very rare work, with some of the plates in a different state (cf. other copy).

VARIGNANA, Guilielmus

Secreta medicine. Guilielmi Varignane secreta sublimia ad varios curados morbos verissimis autoritatibus illustrata: flosculi item nonnulli proficue super additi cum marginalib(us) decorationibus. Que nuperrime castigatissime dantur excusa.

(Colophon:) Lugduni impressum per Benedictus Bonyn Anno salutis 1533, 16 aprilis.

Square 8vo. 77 folios + 3 leaves (index). With fine woodcut title, including large rectangular printer's device (repeated on recto of final leaf), and many historiated woodcut initials. Text printed in black letter. Fine, crisp copy, bound in antique style half vellum, marbled boards.

VARIGNANA (ca. 1270–1339) was one of the most important members of a famous family of Bologna physicians. The plan of his famous book is simple and convenient. The author begins with the head and goes through all the diseases in detail down to the feet, describing their treatment and the remedies to be employed. His information is derived from earlier writers and is similar to but shorter than the massive volume produced by his contemporary Jacobus de Dondis, of Padua. The book consists of five sermons: on pathology, fevers, wounds and abscesses, toxicology, and dermatology. The section on toxicology and medicines is of pharmaceutical chemical interest and gives a good impression of the primitive state of chemical knowledge in the late thirteenth and early fourteenth centuries.

Durling, Reynolds, the Ferguson Collection catalogue, Waller, and Wellcome cite editions published between 1519 and 1597, which attests to the popularity and importance of the work. No reference has been found to the present Lyons edition of 1533, and it is obviously of considerable rarity. Ferguson (*Books of Secrets*, II, *First Supplement*, 18; *Second Supplement*, 206–210) describes various editions of the *Secreta*, stating that the “earliest edition I have found mentioned is dated 1519.” There is no edition in Duveen, Ferchl, Ferguson, Neu, Smith, Watt, etc.

VAUGHAN, Thomas

Anima Magica Abscondita: Or A Discourse of the Universal Spirit of Nature, With his strange, abstruse, miraculous Ascent, and descentury By Eugenius Philalethes. . . .

London: Printed by T. W. for H. B. 1650.

First edition. 8vo. 7 leaves, 56 pp., 1 leaf. Running headlines on some pages a little cropped; otherwise fine, crisp copy, in modern vellum.

THE WELSH alchemist and poet Vaughan (1622–1666) was the twin brother of the “Silurist” poet Henry Vaughan (1622–1695). A controversy beginning in 1650 with the

theologian Henry More (1614–1687), who was a disciple of Cornelius Agrippa, prompted Vaughan to publish several alchemical books under the pseudonym “Eugenius Philalethes,” which took More’s writings to task. The present title was published together with the *Anthroposophia Theomagica* (London, 1650). The *Anima magica abscondita* “is principally a treatise against what Eugenius imagines to be the doctrines of the Scholastics and of Aristotle. He blames them for the discordant and violent history of Christianity and for the ‘Abuse of Reason’ . . . ‘I am one that stands up for a true Naturall knowledge’” (Hall). The “H. B.” in the imprint stands for Henry Blunden, who, on the last leaf, has printed a laudatory poem “To his ever honour’d friend, the Learned Author.” In London, Vaughan gained the patronage of Sir Robert Moray (d. 1673), one of the founders of the Royal Society and supposed Rosicrucian patron. Vaughan is reputed to have been fatally poisoned by inhaling the vapor of hot mercury during an experiment at the house of the alchemist and theologian Samuel Keme (1604–1670), in Albury. (Duveen, 598; Edelstein, 2373; Ferguson, II, 197 [not in Young Coll.]; Ferguson Coll., 727; Hall, 127; Neu, 4183; Osler, 5541; Waite, 189; Watt, II, 929h; Wing, V142)

VAUGHAN, Thomas

Anthroposophia Theomagica: Or A Discourse of the Nature of Man and his state after death; Grounded on his Creator’s Proto-Chimistry, and verifi’d by a practicall Examination of Principles in the Great World. By Eugenius Philalethes. . . . London: Printed by T. W. for H. Blunden at the Castle in Corn-hill. 1650.

First edition. 8vo. 8 leaves, 70 pp. Title within woodcut border. Engraved portrait of Agrippa (sharp impression) on page 52. Running headlines on some pages a little cropped; otherwise fine, crisp copy, in modern vellum.

THE DEDICATION is dated from Oxford, 1648, to the Brotherhood of the Rosy Cross. Vaughan’s main postulate in this work is “that man was ‘in the Originall a Branch planted in God’ though since degenerated, and hence in native possession of a natural knowledge of God and of all other things macrocosmic. Newton held such a doctrine of *prisca scientia*. This early knowledge, now lost, may be recovered by an examination of the occult constitution of Nature, the ‘Proto-Chymistry of the Spirit,’ which knowledge, being contact and unity with God, discovers our own true essential divinity and is the ‘proper efficient of our Regeneration.’ It is, he says, ‘the Doctrine of the Schoolmen which in a manner makes God and Nature contraries’” (Hall). (Duveen, 598; Edelstein, 2374; Ferguson, II, 195 [not in Young Coll.]; Ferguson Coll., 727; Hall, 128 [imperf.]; Neu, 4185; Osler, 5540; Waite, 189; Watt, II, 929h; Wing, V143)

VAUGHAN, Thomas

A Breif[sic] Natural History Intermixed with variety of Philosophical Discourses; and observations of the burnings of Mount Aetna. With refutations of such Vulgar Errors as our Modern Authors have omitted. By Eugenius Philalethes. London: Printed for Matthew Smelt next door to the Castle near Moor-Gate. 1669.

First edition. 8vo. 8 leaves, “120” pp. (recte 118: pp. 97–118 misnumbered 99–120; misnumbered 13 for 31, and 50 for 48). Lacks A1 (blank), top margin of title shaved, and some page numerals slightly cropped; otherwise very good copy, in nineteenth-century calf, spine gilt-lettered. From the library of the naturalist Henry D. Lee (1826–1888), with his signature on title and page 1 (see D.N.B.).

ALTHOUGH HE published several works on alchemy, the present work by Vaughan deals with natural history in general, including subjects of chemical interest (e.g., fire, elements, metals, salts, stones, and Paracelsian *tria prima*). Ferguson mentions this title but says that it is “possibly not” by Vaughan. The style of writing resembles that of Vaughan, but as the work is posthumous it is possible that it was printed from a manuscript left by Vaughan and edited by an anonymous person. Rare. Not in Duveen, Edelstein, Neu, Smith, etc. (Ferguson, II, 197 [not in Young Coll.]; Ferguson Coll., 727; Verginelli, 251; Waite, 189; Wing, V145A)

VAUGHAN, Thomas

The Man-Mouse Taken in a Trap, and tortur’d to death for gnawing the Margins of Eugenius Philalethes. . . . Printed in London, and Sold at the Castle in Corn-hill. 1650.

First edition, variant issue. 8vo. 6 leaves, 116 pp. Pages 26–27 and 30–31 misnumbered 28–29 and 32–33, respectively; page 43 not numbered. Edges of some leaves slightly embrowned; otherwise very good copy, in blind-ruled calf antique, morocco label.

A REPLY TO the *Observations upon Anthroposophia Theomagica and Anima Magica Abscondita* (London, 1650; Wing, M2667) of Henry More, who, under the pseudonym “Alazonomastix,” had severely criticized Vaughan. In his dedication to this work, Vaughan describes More as a “Master of Arts of Cambridge . . . [who] . . . is indeed a scurvie, slabbie, snotty-snouted thing. Hee is troubl’d with a certain Splenetic loosnes, & hath such squirts of the Mouth, his Readers cannot distinguish his Breath from his Breech.” More answered Vaughan in *The Second Lash* (London, 1651; Wing, M2677), to which Vaughan quickly responded with *The Second Wash: or the Moore Scour’d once more* (London,

1651; Wing, V154). Vaughan and More heaped opprobrious epithets upon each other, but Vaughan appears to have been the winner of this vitriolic dispute. Some copies (e.g., Duveen, Neu, and Osler) lack four of the six preliminary leaves (here present: viz. dedication to Mathew Harbert, three leaves, and one leaf poem signed "P. B."). (Duveen, 598; Edelstein, 2377; Ferguson, II, 197 [not in Young Coll.]; Ferguson Coll., 728; Hall, 134 [imperf.]; Neu, 4192; Osler, 5543; Smith, 492; Waite, 189; Watt, II, 929h; Wing, V153A)

VAUQUELIN, Louis Nicolas

Manuel de l'Essayeur, par le Citoyen Vauquelin . . . Approuvé par l'Administration des Monnoies, sur le rapport du Citoyen Darcet, Inspecteur-général des essais.

Paris: Chez le Citoyen Bernard, Libraire pour les Mathématiques, Sciences et Arts, Quai des Augustins, No. 37. An VII (1799).

First edition. 4to. 80 pp. Insignificant foxing of half title; otherwise fine copy with wide margins, in original marbled boards, rebacked in gilt-ruled sheep, green morocco label.

A PUPIL AND collaborator of Fourcroy, Vauquelin (1763–1829) was an outstanding chemist of the post-Lavoisier period. He was particularly skilled in analytical chemistry and discovered two new elements: chromium (1797) and beryllium (1798). The present work describes balances, furnaces, cupellation, nitric acid purification, analysis of gold and silver alloys, etc. "The directions given are concise, simple and clear" (Cole). At the end (pp. 77–78), D. P. Darcet, the chief analyst at the Mint, recommends that the book be printed and used by the assayers at the bureau. In 1802 Vauquelin became assayer to the Mint. A slightly enlarged edition appeared (Paris, 1812; Bolton, 885; Pogendorff, II, 1182), which was reprinted in 1835 and 1836. The first edition is very rare. A German translation appeared (Königsberg, 1800). Not in the usual bibliographies. (Cole, 1314; D.S.B., XIII, 597; Partington, III, 551)

VÉE, Amédée Alexandre

Recherches Chimiques et Physiologiques sur la Fève du Calabar. . .

Paris: Imprimerie Felix Malteste et Cie. 1865.

First edition. 4to. 36 pp. Fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL thesis of Vée, the noted mid-nineteenth-century organic chemist and pharmacist. The calabar bean is the seed of the leguminous plant *Physostigma venenosum*, a native of tropical Africa. The highly poisonous beans con-

tain almost one percent alkaloids, the most important of which is eserine, or physostigmine. The history, chemical isolation, properties, and pharmacological uses of eserine in medicine are described. Eserine acts biochemically by inhibiting the destruction of acetylcholine, the result being that the patient's heart begins to slow, blood pressure falls, and the bronchi are constricted. These dire symptoms are alleviated by the use of atropine. Eserine is still employed in ophthalmology in cases of glaucoma. An important chemical, pharmacological, and medical work, which contains a remarkable amount of information on this useful alkaloid. (Waring, 618)

VEGETIUS RENATUS, Flavius

De Re Militari, Libri Quatuor. Sexti Iulii Frontini Stratagematon, libri totidem. Aelianus de instruendis aciebus. Modestus de vocabulis rei militaris. Omnes quidem post Hermolai Barbari, Budaei, & quorumcumque aliorum editiones diligenter recogniti & emendati: Vegetius vero & subinde Frontinus etiam notis illustrati, a Francisco Modio Brug. . .

Cologne: Apud Maternum Cholinum. 1580.

First Modius edition. 8vo. 24 leaves, 379, (1) pp., 2 blank leaves, 1 leaf, 77, (1) pp. Historiated woodcut capitals and few woodcut text diagrams. Good copy in contemporary vellum.

THE FIRST edition edited with notes and commentary by Franciscus Modius (1556–1597), dedicated to Adolph Scheiffarte (preface dated 12 May 1580). A famous compendium of four early works on military strategy, of scientific interest. The chief book is by Vegetius Renatus (fl. ca. 400), an imperial bureaucrat of Rome, who compiled the *De re militari* from ancient sources. He "was not a practical soldier and did not realize that the military reform and revival of the ancient organization of the legion he proposed had become impossible because of the evolution of warfare. By one of the strange mutations of history, when later the crossbow and gunpowder deprived cavalry of its shock power, the tactics of Vegetius became ideal for armies, and his work became a military bible for European soldiers for hundreds of years" (*Encyclopaedia Britannica*). Also included in whole or in part are the *Strategemata* of Sextus Julius Frontinus (30–104), Roman magistrate and governor of Britain (74–78); *De instruendis*, a work on tactics by Aelianus (second century Greek); and the *De vocabulis rei militaris* of Julius Modestus, a Roman grammarian in the time of Augustus. Circulated in manuscript in the Middle Ages, the first printed edition appeared in 1473–74 (Stillwell, 898), with an English translation by John Sadler in 1572 (Cockle, 17; S.T.C. 24631). Rare. (British Library, *S.T.C. German, 1455–1600*, p. 885)

VEGETIUS RENATUS, Flavius

Vier Bucher der Ritterschafft. . . . Mit einem zusätz von Büchsen geschoss, Pulver, Fewrwerck, Auff ain newes gemeeret unnd gebessert.

(Colophon:) Augsburg: Gedruckt durch Heinrich Stainer. 1529.

First Stainer edition. Folio (in 6s). 102 unnumbered leaves (last blank). Black letter. Large woodcut on title page. With 121 full-page woodcuts and 2 half-page woodcuts after Weiditz. Fine copy in early-nineteenth-century quarter vellum, marbled boards, orange morocco label. Bookplate: Prince von Liechtenstein.

THE FIRST edition published by Stainer and the first to appear with the very important appended treatise on the manufacture of gunpowder, cannons, and fireworks for military purposes. The first German text edition appeared ca. 1476; the second (Erfurt, 1511) and the present 1529 edition were published with a new translation and the remarkable woodcuts. The classic work on the science of making war by Vegetius Rensus is here brought up to the early Renaissance with the employment of handguns, cannons, and fireworks. The woodcuts illustrate underwater diving suits, siege equipment, cannons, air mattresses for the comfort of soldiers in the field, etc. This edition is of importance in the history of chemical explosives as it contains the first printed text on making gunpowder; the purification of saltpeter, sulphur, and charcoal; different formulations of these materials for various applications; etc. Partington discusses this work in detail, stating that it is based on an anonymous manuscript (*Feuerwerkbuch*) dating from the early 1400s. Before the discovery of more powerful explosives in the middle of the nineteenth century, gunpowder mixtures were used for civilian purposes and in warfare, and they are still used in fireworks. A very rare book in the history of chemical technology. Not in Brock, Guttmann, Philip, Watt, Wellcome, etc. (British Museum, *S.T.C. German*, 885; Cockle, 17; Partington, *History of Greek Fire and Gunpowder*, 152–158)

VELTHEIM, August Ferdinand von

Etwas über Memnons Bildsäule, Neros Smaragd, Toreutik und die Kunst der Alten in Stein und Glas zu schneiden, als Zusätze zur Abhandlung über die Reformen in der Mineralogie. . . .

Helmstedt: bey C. G. Fleckeisen. 1793.

First edition. 8vo. 61, (1) pp., 1 leaf. Large engraved title vignette. Fine copy. Bound with: Veltheim, A. F. von, *Ueber der Herren Werner und Karsten Reformen in der Mineralogie. . . .* (Helmstedt, 1793).

A STUDY of the techniques and processes of engraving on glass and stone used by the ancient Egyptians, Greeks, and Romans, of chemical and mineralogical interest. Duncan (*Bibliography of Glass*, 14089) lists another book on glass by Veltheim but not the present title. Ferchl, copying Poggen-dorff, gives the wrong date: 1794. Scarce. (Ferchl, 554; Poggen-dorff, II, 1192)

VELTHEIM, August Ferdinand von

Ueber der Herren Werner und Karsten Reformen in der Mineralogie; nebst Anmerkungen über die ältere und neuere Benennung einiger Stein-Arten. . . .

Helmstedt: bey C. G. Fleckeisen. 1793.

First edition. 8vo. 84 pp. Fine copy in nineteenth-century boards, with printed paper label on spine. From the library of Prince Fürstenberg, Donaueschingen, with small stamp on verso of title leaf. Bound with: Veltheim, A. F. von, *Etwas über Memnons Bildsäule. . . .* (Helmstedt, 1793).

AN IMPORTANT work, of chemical interest, on the reforms made in the characterization of minerals by Abraham Gottlob Werner (1749–1817) and Diedrich Ludwig Gustav Karsten (1768–1810). Veltheim (1741–1801) was director of the mines at Braunschweig and other mining centers in Germany. Poggen-dorff gives a long list of his publications. Not in Mather & Mason, Partington, Waller, Watt, Woodward, Zittel, etc. (Ferchl, 554; Poggen-dorff, II, 1191–1192)

VENDRIN

Catalogue des Livres de Fonds et partie d'assortiment, qui se trouvent chez Vendrin, libraire, rue des Mathurins-Saint-Jacques, No. 15, acquéreur du fonds et successeur de Mme. Ve. Villier. . . .

Paris: De l'Imprimerie de P. N. Rougeron. 1817.

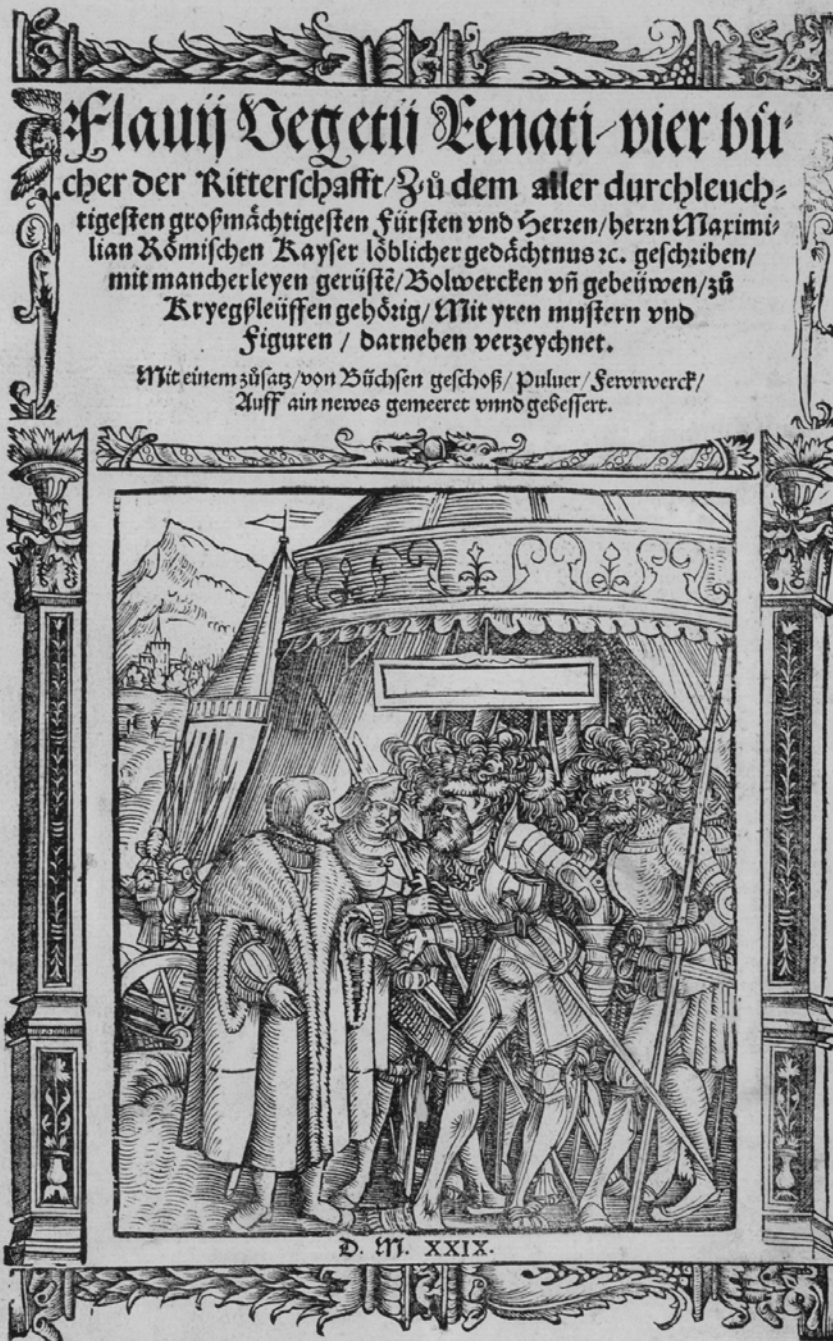
First edition. 8vo. 16 pp. Bound with: Berthollet, C. L., *Éléments de l'art de la teinture* (Paris, 1804).

A RARE BOOKSELLER'S catalogue listing hundreds of eighteenth- and early-nineteenth-century works on chemistry, mineralogy, natural history, botany, agriculture, medicine, etc. The price of each item is given. Not found in any available bibliography.

VENETTE, Nicolas

Traité des Pierres qui s'engendrent dans les Terres & dans les Animaux, ou l'on parle exactement des causes qui les forment dans les Hommes. La Methode de les prévenir & les abus pour s'en garantir & pour les chasser même hors du Corps. . . . Enrichie des Figures.

Amsterdam: Chez Jean & Gilles Janssons à Waesberge. 1701.



Vegetius Renatus. Vier Bucher der Ritterschafft. Augsburg, 1529.

First edition. 12mo. 2 leaves, 326 pp., 1 leaf (adverts). Title page in red and black. Engraved portrait frontispiece of Venette at age 60, dated 1691, and 7 copperplates (1 folding). Fine copy in original speckled calf, gilt, black morocco label. Unidentified eighteenth-century armorial bookplate.

ONE OF the physicians to the king, Venette (1631–1698), M.D. Bordeaux, was also an eminent practitioner at La Rochelle. In this posthumous work he covers every aspect of the formation of stones in the animal and mineral kingdoms. Of considerable chemical interest are detailed discussions on the processes of petrification, subterranean fermentation, formation of salts and stones (including those in the human body), sulphur, bitumen, naphtha, petroleum, alum, niter, borax, soda, sal ammoniac, vitriol, etc. Numerous references are made to ancient and modern chemists and physicians. The beautiful folding plate depicts Mount Etna in eruption, and the other plates show types of coral, fossils, etc. The fine frontispiece portrait was first used in the author's *De la generation de l'homme* (1696) and is listed as no. 3041.1 in R. Burgess, *Portraits of Doctors & Scientists* in the *Wellcome Institute of the History of Medicine* (London, 1973). Not in the usual chemical bibliographies. (Blake, 471; Caillet, 11077; Hoover, 817)

VENNER, Tobias

Via Recta ad Vitam Longam. Or, a plain Philosophicall Demonstration of the Nature, Faculties, and Effects of all such things as by way of nourishments make for the preservation of health, with divers necessary dieteticall observations; . . . Whereunto is annexed . . . a necessary and compendious Treatise of the famous Baths of Bathe, with a Censure of the medicinable faculties of the water of Saint Vincent's Rocks neere the City of Bristoll. As also an accurate Treatise concerning Tobacco.

London: Printed by R. Bishop, for Henry Hood, and are to be sold at his shop in Saint Dunstons Churchyard in Fleetstreet. 1638.

First complete edition, second issue. 4to. 8 leaves, 364 pp. Divisional titles to *The Baths of Bathe*, and *Treatise . . . of Tobacco* dated 1637 (pagination continuous). Lacks blank leaf before title (A1); otherwise very good copy in original calf, rebaked, maroon label, spine gilt-ruled and dated. From the library of Randle Wilbraham Falconer (1816–81), with his signature on front pastedown endpaper.

VENNER (1577–1660), M.D. (Oxford, 1613), practiced at Petherton and, in season, at Bath. His three books are of chemical and medical interest: *The Baths of Bathe* (1620), *Via Recta ad Vitam Longam* (1620), and *Treatise . . . on Tobacco* (1621). These works are combined in the present

edition, of which the first issue is dated 1637 and the second 1638 (as here). Falconer, a former owner of this copy, graduated in medicine (Edinburgh, 1839), was physician at Bath General Water Hospital, and became mayor of Bath (1857). He published *The Bath Mineral Waters* (1860) and used this volume, in which there are several penciled marginalia. His grandfather William Falconer (1744–1824) published works on Bath waters, the use of soda water for dissolving gallstones, etc. (see Partington, III, 248). Other editions appeared in 1650 and 1660. Scarce. (S.T.C., 24647; Waring, 709; Watt, II, 831w; Wellcome, I, 6534)

VENUTI, Marquis Don Marcello di

A Description of the First Discoveries of the Antient City of Herculaneum. Found near Portici, a Seat of his Majesty the King of the Two Sicilies. Written in Italian by the Marquis Don Marcello di Venuti. Translated into English. To which are added, translations of some letters on this subject, which passed between Cardinal Quirini, and the learned Professors Gesner, Reimar, and Feverlinus.

London: Printed by and for Geo. Woodfall, at the King's-Arms, Charing-Cross. (Price Two Shillings). N.d. (ca. 1750).

First edition of this translation. 8vo. xvi, 110 pp., 1 leaf (advertisement of books sold by Woodfall). Very good copy in worn contemporary quarter calf, gilt, marbled boards, maroon morocco label (entitled: "Pamphle[ts]"). Bound with: Cohausen, J. H., *Hermippus Redivivus: or, the Sage's Triumph* (London, 1749); and Marmontel, J. F., *The life of Belisarius* (London, 1759).

AN IMPORTANT work describing the discovery in 1689, 1711, and later years of the remains of Herculaneum, which was buried under volcanic ash during the eruption of Vesuvius in A.D. 79. The author describes the treasures recovered and the people who were suddenly killed in the act of pursuing their lives and trades (some of chemical interest). On page 82 et seq. are details of the wall paintings found and their removal by coating them with a special type of clear varnish invented by Alfieri Moriconi, a Sicilian. The translator of this English edition was not Wickes Skurray, whom the anonymous translator takes to task for his poor rendition of the Italian edition. Watt (I, 860c), who did not know the present translation, states that the Skurray edition appeared in 1750. This edition must have been published the same year or very shortly thereafter. Very rare.

VERBEZ, David

Pro Raymundi Mindereri, . . . Disquisitione Iatrochymica de Chalcantbo, ad Dodecaporii Chalcantbini Petri Castelli . . . partem priorem responsio. . .

Augsburg: Apud Sebastianum Mylium Bibliopolam. 1626.

First edition. 4to. 8 leaves, 198 pp., 1 leaf (with large woodcut device). Fine, crisp copy, in original vellum, with 4 green silk ties. Presentation copy with "Dno Johanni Faulhabero Ulmensem Ingeniario mittit autor" neatly written in ink on title page.

VERBEZ (1577–1644), a physician from Laibach (capital of Slovenia), practiced in Augsburg, Strassburg, and Speyer. The present iatrochemical work is a defense of the book on vitriol (*De chalcantbo seu vitriolo*, Augsburg, 1617) by Raymond Minderer (ca. 1570–1621), another physician of Augsburg. Verbez also published two works on the plague (see Wellcome, I, 6539, 6540). This copy has an important provenance, having been inscribed by Verbez and presented to Johann Faulhaber (1580–1635), a famous mathematician of Ulm who also "lost his time over Rosicrucianism and goldmaking" (Ferguson, I, 265). Very rare. Not in the usual chemical and medical bibliographies. (Ferchl, 554; Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 484)

VERDRIES, Johann Melchior

Physica sive in Naturae Scientiam Introductio in usum Auditorii Sui adornata. Editio Tertia denuo recognita et aucta cum indice necessario.

Giessen: Sumtu Joannis Mulleri. 1735.

Third edition. 4to. 6 leaves, 560 pp., 14 leaves (index). Title page in red and black. With engraved frontispiece portrait of Verdries. Very good copy, in contemporary unlettered half vellum, marbled boards.

THE THIRD, final, and best edition of an introductory textbook on physics, of some chemical interest (first, 1720; second, 1728). Verdries (1679–1735) was born and died at Giessen. Trained as a physician, he was professor of physics and medicine at the University of Giessen, where he published works on thermometers, copper, mercury, meteorology, and medical subjects. The present book covers the macrocosm and microcosm, elements (air, earth, fire, water), minerals, metals, magnets, electricity, plants, animals, man, etc. There are references to Archimedes, Descartes, Huygens, Leibniz, Newton, Tournefort, and others. Of chemical interest are discussions on naphtha, phosphorus, luminescence, niter and its (oxidative) properties, gold (believed to be made of mercury and the purest sulphur),

silver, copper, and other metals. Only the 1728 edition is mentioned by Blake, Harvey, and Roller & Goodman. The 1735 edition is not in the usual bibliographies. Rare. (Blake, 471; Harvey, 171; Roller & Goodman, II, 536)

VERGIL, Polydore

An Abridgement of the notable woorke of Polidore Vergile conteynnyng the devisers and firste finders out aswell of Artes, Ministeries, Feactes & civill ordinaunces, as of Rites, and Ceremonies, commoly used in the churche: and the originall beginnyng of the same. Cependiously gathered by Thomas Langley.

Imprinted at London within the precincte of the late dissolved house of the Grey Friers, by Richard Grafton Printer to the Princes grace, the xvi daie of Aprill, the yere of our lorde M.D.xlvi. (1546).

First edition. Sm. 8vo. (8), 156, (12) ff. (A^s, a–x^s). Black letter. Woodcut crest of Edward, prince of Wales (Edward VI) on A8v. Numerous historiated woodcut initials. Large woodcut printer's device on final leaf. Few sixteenth-century annotations in ink, lower corner tips of several leaves missing, 1 leaf missing (el supplied in neat eighteenth-century MS.); otherwise very good copy in eighteenth-century sheep, morocco label, spine dated. From the library of George Marshall (fl. 1554), poet, with ms. couplet on colophon leaf; and William Maitland Fuller (1813–1876) with bookplate (see D.N.B.).

TRANSLATED, abridged, and edited by Thomas Langley (d. 1581), canon of Winchester, and his "chief work" (D.N.B.). Born at Urbino, the historian P. Vergil (c. 1470–1555) also lived in England (D.N.B.). Frequently reprinted, his *De inventoribus rerum* (Venice, 1499) covers many topics, mentioning sources. Subjects include the history of printing, metals, chemicals, glass, medicine, and technology. Three issues appeared in 1546, textually different in minor details: (1) first issue, title page dated xxv January; (2) second, title page dated xxv Jan., colophon, xvi April; (3) third, title page and colophon, xvi April (as here). Ferguson (*Books of Secrets*, I, pt. 2, 29–30) discusses these issues, all of which are extremely rare. Not in Duncan, Durling, Stillwell, Thorndike, or the usual early chemical and medical bibliographies. (Joseph Ames, *Typographical Antiquities*, Dibdin ed., London, 1816, vol. 3, p. 451, no. 1462; Ferguson Coll., 734; Ferguson, *Bibliography of Technology*, 1968, p. 15; S.T.C. 24656)

VERGIL, Polydore

Di Polidoro Virgilio da Urbino de Gli Inventori delle Cose. Libri Otto. Tradotti per M. Francesco Baldelli, con due tavole, una de' capitoli, e l'altra delle cose piu notabili. Nuovamente stampati con licenza de' superiori.
Florence: Per Filippo, e Jacopo Giunti, e Fratelli. 1587.

First Florentine edition. 4to. (in 8s). 12 leaves, 426 pp., 24 leaves. Large woodcut on title page and recto of final leaf. Many large historiated woodcut initials and other ornaments in text. Fine, crisp copy in contemporary vellum.

THE FIRST translation into Italian by Francesco Baldelli, beautifully printed in Florence by the famous Giunta press. The dedication by Baldelli is dated 10 January 1587. The catalogue of the Ferguson Collection in the University of Glasgow lists three earlier translations into Italian by Pietro Lauro: viz. Venice, 1543, 1545, 1550, all printed by Gabriel Giolito of Ferrara. Ferguson (*Books of Secrets*), who describes many editions of this famous work, does not mention the present edition, which contains an Italian translation of the dedication to Lodovico Odassio, dated 5 August 1499. The copy in the Wellcome Library has only twenty-one leaves at the end. Very rare. Not in the usual bibliographies. (Ferguson Coll., 736; Wellcome, I, 6548)

VERGIL, Polydore

A Pleasant and Compendious History of the first Inventers and Instituters of the most Famous Arts, Misteries, Laws, Customs and Manners in the whole World. Together, with many other rarities and remarkable things rarely known, and never before made publick. To which is added, several curious inventions, peculiarly attributed to England & English-men. The whole work alphabetically digested, and very helpful to the readers of history. Licensed October 29th 1685. R.L.S.
London: Printed for John Harris, at the Harrow against the Church in the Poultry, 1686. Price Bound One Shilling.

12mo. 8 leaves, 159 pp., 2 leaves (advertisements). Pagination erratic. Good copy in original blind-ruled speckled calf, neatly rebacked, maroon morocco label gilt, spine dated.

MANY EDITIONS of this famous work in Latin, French, German, Spanish, Italian, and English are listed by Ferguson (*Books of Secrets*, I, part 2, pp. 22 et seq.), who states in 1883 that "in spite of these 80 editions and translations, Polydore Vergil's treatise is not common . . . it seldom appears in catalogues. A further proof of its rarity is that the larger libraries contain comparatively few editions." The final seventeenth-century English edition, being an abridged version of Langley's earlier editions. Alphabeti-

cally arranged sections include alchemy, fire, and metals. The appendix (pp. 155–159) includes inventions by Englishmen (e.g., printing introduced into England by William Caxton, the pendulum of Mr. [Robert] Hook[e], manufacture of copperas [ferrous sulphate], an engine for spinning glass, the separation of gold from silver, and a fire extinguishing engine). Rare. (Duveen, 480; Ferguson Coll., 735; Ferguson, *Books of Secrets*, I, pt. 1, 5; *ibid.*, pt. 3, 14; Wing, V598)

VERGNAUD, Amand Denis

Manuel de l'Artificier, ou l'art de faire toutes sortes de feux d'artifice a peu de frais, et d'après les meilleurs procédés; contenant Les Élémens de la Pyrotechnie civile et militaire; ceux de l'Art du Salpêtrier et du Poudrier; leur application pratique a tous les artifices connus jusqu'à ce jour, et à de nouvelles combinaisons fulminantes. Par A.D. Vergnaud. . .
Paris: Floret, Libraire, Rue Hautefeuille, au coin de celle du battoir. 1828.

Second edition. 12mo. iv, 283, (1) pp. With 2 folding plates, 3 folding tables, and figures in text. Very good copy in original marbled boards, later unlettered calf spine.

VERGNAUD (1791–1885), a captain in the French artillery, attended the École Polytechnique and was a "membre titulaire" of the Paris Société Royale Académique des Sciences. In this revised, corrected, and greatly enlarged edition (first: Paris, 1826) he describes all types of pyrotechnic devices for military and civilian applications. Detailed descriptions are given of the chemicals used in the formulations of mixtures for fireworks. Of particular interest are very dangerous, shock-sensitive, highly explosive combinations containing potassium chlorate, sulphur, and carbon; also Howard's recently discovered mercury fulminate mixed with sulphur and carbon. The present very rare 1828 edition remained unknown to Philip (p. 155), who states: "The N.U.C. quotes an 1828 edition which I suspect is a ghost." Philip lists eight editions and translations from 1826 to 1981, under various titles, attesting to the continued importance of this comprehensive work. Bolton (*First Supplement*, 421) describes editions in Italian (Naples, 1834) and Spanish (Madrid, 1841), neither of which were known to Philip. This edition not traced in the usual bibliographies.

VICAT, Louis Joseph

A Practical and Scientific Treatise on Calcareous Mortars and Cements, Artificial and Natural . . . By L. J. Vicat . . . Translated, with the addition of explanatory notes, embracing remarks upon the results of various new experiments. By Captain J. T. Smith, Madras Engineers, F.R.S. . . . London: John Weale, Architectural Library, 59, High Holborn. 1837.

First English edition. 8vo. 2 leaves, xxiv, (2), 302, (2) pp. With 3 engraved plates + 28 pp. (advertisements). Top of front free endpaper cut off (to remove early signature?); otherwise very good copy in original blind-stamped brown cloth.

THE ENGLISH translation of Vicat's *Recherches sur les substances a chaux hydrauliques et ciments* (Paris, 1837). John Thomas Smith (1805–1882), a civil engineer, was noted for improvements that he made on lighthouses at Hope's Island and Madras, his various public works departments in India, and his numerous ingenious inventions and minting reforms. He undertook the translation of Vicat's valuable treatise while in England in 1837, adding the results of many of his original experiments in the field. Smith points out that not since Bryan Higgins' book on cement in 1780 had anything on the subject appeared in English. Scarce. (Sotheran, Cat. 894 [1951], 950)

VICAT, Louis Joseph

Recherches Expérimentales sur les Chaux de Construction les Bétons et les Mortiers Ordinaires. Par L. J. Vicat. Paris: Chez Goujon, etc. 1818.

First edition. 4to. 1 leaf, xii, 97, (1) pp., 1 leaf, 25 leaves (printed tables, 1 folding), 2 leaves (index). With engraved plates. Very fine copy, uncut, with wide margins, in half calf antique, marbled boards, crimson morocco label, spine richly gilt and dated, original purple wrappers bound in.

THE FIRST book published by Vicat (1786–1861), engineer in chief of the department of bridges and roads of France, marking the beginning of his important researches on mortar, cement, and concrete as building materials. He describes the hydraulic properties of certain types of lime (known to the ancient Romans) and discusses a volcanic earth (pozzolana), which, when added to various non-hydraulic limes, would produce mixtures with hydraulic properties (i.e., would set under water). A remarkable feat of technological research, this work was highly praised in a report to the Académie des Sciences given by Gay-Lussac, Girard, and Prony. A classic work in the history and chemistry of cement. Duveen describes a copy with only two plates. The pioneering investigations of Vicat were continued by J. Apsdin, who brought them to success by developing Portland cement. (Duveen, 602; Ferchl, 555;

Poggendorff, II, 1202; Singer, *History of Technology*, IV, 447–448, 487)

VICOMERCATUS, Franciscus

Francisci Vicomercati Mediolanensis in Quator Libros Aristotelis Meteorologicorum Commentarii, et eorundem librorum e Graeco in Latinum per eundem conversio. . . . Lutetiae Parisiorum (Paris): Apud Vascosanum. 1556.

First edition. Folio. 6 leaves, 372, 130 pp., 1 leaf (errata). Collation: A–Z⁶, Aa–Ii⁶, A–L⁶. Historiated woodcut initials, head- and tailpieces. With 23 large woodcut figures in text. Few fore-edges lightly water stained; otherwise a very fine, crisp copy, with wide margins, in contemporary gilt-ruled calf, large gilt medallion on each cover, maroon morocco label, gilt.

AN IMPORTANT commentary on the *Meteorologia* of Aristotle, and a sumptuous example of sixteenth-century French printing, with text in Greek and Latin. The *Meteorologia* and the numerous references to subjects of chemical and metallurgical interest it contains are discussed in detail by Partington (I, p. 72, et seq.). The author, Francesco Vimercati (Latinized as Vicomercatus, ca. 1512–1570), of Milan, was summoned to France by King François I, who appointed him his first professor of ancient philosophy at the newly established Collège de France. Vimercati also published other commentaries on Aristotle's works (e.g., *De Anima Commentarii*, Paris, 1543; and *Metaphysicorum Aristotelis Commentarii*, Paris, 1551). All of his books are very rare. Not in Durling, Partington, Wellcome, etc. (British Library, *S.T.C. French Books, 1470–1600*, p. 27; Houzeau & Lancaster, 2574; Thorndike, VI, 368; Watt, II, 934b)

VICTORIUS, Petrus

Petri Victorii Explicationes suarum in Catonem, Varronem, Columellam castigationum.

Paris: Ex officina Roberti Stephani typographi Regii. 1543.

First edition. 8vo. 72 leaves. Printed in italics throughout. Fine copy in sixteenth-century maroon paneled calf with gilt ornamentation on both covers, rebaked with original gilt spine laid on. Bound with: Cato, Marcus Porcius, et al., *Libri De Re Rustica* (Paris, 1543).

A COMMENTARY on the agricultural writings of the Roman authors Cato, Varro, and Columella, by Victorius or Vettori (1499–1585), an eminent Italian scholar. Subjects of chemical interest include discussions of sulphur, salts, fermentation, pharmaceutical preparations, and medicines. A very rare book, published as a companion volume to the *De Re Rustica* (1543), edited by Victorius, and printed by Robert Estienne (1503–1559), one of the greatest printers of the sixteenth century. Estienne was royal printer to King Francis I. Not in Durling, Watt, Wellcome, etc.

VIGANI, Giovanni Francesco

Chymia jam Variis Experimentis aucta, multisque Figuris illustrata. . . . Cum Indice rerum & verborum locupletissimo.
London: Impensis Henrici Faithorne, & Joannis Kersey ad insigne Rosae in Caemeterio D. Pauli. 1688.

Third London edition. 8vo. 4 leaves, 70 pp. Title page in red and black. With engraved frontispiece and 3 folding copper-plates of furnaces and chemical apparatus. Early inscription partly erased on title and old stamp on verso; otherwise fine copy in modern boards, printed paper label on front cover.

THE THIRD London printing (or possibly the third issue of the first London edition). The original edition of only nineteen pages (Danzig, 1682) was considerably enlarged by Vigani and published by Faithorne and Kersey in 1683 under the title *Medulla chymiae* and again in 1685, followed by the 1688 printing with a reset title reading *Chymia*, as here. Vigani (ca. 1650–1712), of Verona, came to England about 1680 and gave private lectures at Cambridge (1682–1703). He was appointed professor of chemistry in 1702 but was not formally associated with the university. This, the only book by the author, is “not a systematic treatise, but only an exposition of some methods which he had found best for the making of certain drugs” (Ferguson). “Vigani seems to have been completely free of any alchemical tinge. His main object was to teach in a plain and reliable way the methods of preparing useful chemical compounds” (D.S.B.). Coleby suggests that this 1688 printing is actually the 1683 edition with the date misprinted. Most authorities cite only the 1683 or 1685 printings. (Coleby, *Annals of Science* [1952], vol. 8, p. 49; D.S.B., XIV, 27; Duveen, *Supplement*, 395; Ferguson, II, 510; Partington, II, 686; Thorndike, VIII, 393; Wing, V373B)

VIGANI, Giovanni Francesco

Medulla Chymiae Variis Experimentis Aucta multisque Figuris illustrata. Cum Indice Rerum & Verborum Locupletissimo.
Nuremberg: Apud Haeredes Jo. Dan. Tauberi. 1718.

First Nuremberg edition. 8vo. 5 leaves, 134 pp. With 6 copper-plates of furnaces and chemical apparatus (3 plates on 1 folding leaf). Large woodcut on title page. Small amount of worming (pp. 83–134) slightly affecting text; otherwise good copy in calf antique, maroon morocco label, spine dated.

THE FINAL and most complete edition, enlarged with additional matter. The first seventy pages are a reprint of the London (1688) edition. Following this is a section entitled *Chymia curiosa variis, non solum ex Regno vegetabili, sed etiam ex Minerali & Animalis, Experimentis adornata* (pp. 71–109), by David Stam; and *Appendix Processuum Chymicorum in*

Jo. Franc. Vigani Medullam Chymiae, in Collegio Chymico . . . Joh. Bohnii . . . (pp. 110–134). The plates are re-engraved versions of those in the London edition. Ten pages at the beginning contain a new introduction (dated London, 10 September 1682), and a reprint of the preface in the London edition. Ferchl mentions Nuremberg editions of 1658 (a misprint for 1685), 1682, 1690, and 1713, but no Nuremberg edition prior to the present one has been traced. Baumer (*Bibliotheca chemica*, Giessen, 1782) lists an edition of 1658, which is obviously wrong, as Vigani was then only about eight years old. Kopp (*Geschichte der Chemie*, 1847, IV, 106) makes the same error. Scarce. Not in Blake, Bolton, Duveen, Edelstein, Neu, Watt, etc. (Baumer, 21; Coleby, *Annals of Science* [1952], vol. 8, p. 49; Ferchl, 556; Ferguson, II, 510; Ferguson Coll., 740; Partington, II, 686; Thorndike, VIII, 393)

VIGENÈRE, Blaise de

Traicté du Feu et du Sel. Excellent et rare Opusculé du Sieur Blaise Vigenere Bourbonnois, trouvé parmi ses papiers après son décès.

Paris: En la boutique de l'Angelier. Chez Claude Cramoisy au premier pilier de la grand Salle du Palais. 1622.

First edition, second issue. 4to. 2 leaves, 267, (1) pp., 2 blank leaves. Title in red and black, with large engraved vignette. Very good copy with wide margins (some uncut), in original mottled calf, spine gilt, covers ruled in gilt. From the library of Denis I. Duveen, with his bookplate.

THE CLASSICAL scholar Vigenère (1523–1596) was “secretary to the Duc de Nevers and King Henri III, [he] wrote a theological-alchemical treatise on fire and salt, quoting the Zohar, Hermes, Geber, Rhases, Avicenna, etc., which was published posthumously (1618). . . . In this he describes the preparation of oil of vitriol by the bell process, but the most interesting passage is that describing crystalline benzoic acid, obtained by the sublimation of gum benzoin” (Partington). Although sometimes described as the second “edition,” the present is in fact the second issue of the first edition, differing only in the preliminary text on a2 following the title. Only the imprint on the title of the first issue (1618) has been changed from “Chez la veufue Abel l'Angelier, au premier pilier de la grand Salle du Palais” to read as above in the second issue. The paper of the present title leaf and dedication is identical to that of the main text. The *privilege* and *extraict* are dated 7 and 17 October 1617, respectively. Patterson makes it clear that an edition of 1608 (mentioned by the bibliographers) is a ghost. The 1622 issue is much rarer than the first (1618), cited by most of the bibliographers. (Bolton, *First Supplement*, 422; Caillet, 11161; Duveen, 603; Ferchl, 556; Ferguson Coll., 740;

Goldsmith, 552; Guaita, 1059; Neu, 4226; Partington, III, 16; Patterson, *Annals of Science*, IV [1939], 62; Smith, 495; Verginelli, 341)

VIGENÈRE, Blaise de

A Discourse of Fire and Salt, discovering Many secret Mysteries, as well Philosophicall as Theologicall.

London: Printed by Richard Cotes. 1649.

First English edition, first issue. 4to. 2 leaves, 162 pp., 1 blank leaf. Title page with woodcut border and small vignette, woodcut capitals and headpieces. Fine copy in sprinkled half calf antique, marbled boards, brown morocco label, spine dated.

THE ENGLISH translation, by Edward Stephens, of the posthumously published *Traicté du feu et du sel* (Paris, 1618 and 1622), the only alchemical work of the author. The book is important as it first describes the preparation of crystalline benzoic acid. Also described are the preparation of sulphuric acid and other inorganic chemicals, with references to the works of Geber, Lull, et al. Vigenère believed that there is spagyric "salt" in everything and that metals are nothing but "congealed and baked salts" formed by repeated decotions deep in the earth. Two issues of the 1649 English edition appeared: the first with the imprint as above, the other with the imprint "Printed by Richard Cotes, and are to be sold by Andrew Crooke at the Green-dragon in Pauls Church-yard" (see T. S. Patterson, *Annals of Science*, IV [1939], 61–64). Cole, Duveen, and Ferguson cite the second issue. Not in Krivatsy. (Cole, 1318; Duveen, 604; Edelstein, 2387; Ferchl, 556; Ferguson, II, 510; Ferguson Coll., 740; Hall, 162; Honeyman, 344; Neu, 4227; Partington, III, 16; Waite, 305; Wing, B3128)

VILLAIN, Etienne François

*Histoire Critique de Nicolas Flamel et de Pernelle sa Femme, Recueillie d'Actes anciens qui justifient l'origine & la médiocrité de leur fortune contre les imputations des Alchimistes. On y a joint le Testament de Pernelle & plusieurs autres Pieces intéressantes. Par M. L. V***. . .*

Paris: Chez G. Desprez, Imprimeur & Libraire ordinaire du Roi & du Clergé de France, rue St Jacques, à Saint Prosper & aux trois Vertus. 1761.

First edition. 12mo. xii, 403, (1) pp., 2 leaves. With engraved frontispiece portrait of Flamel, folding copperplate of his house in Paris, and 1 engraved headpiece. Fine copy, in original mottled calf, spine richly gilt, maroon morocco label.

THE BASIC biography of Nicolas Flamel (ca. 1330–1418), a famous name in alchemical literature. Flamel was a wealthy French businessman and philanthropist and is reputed to have acquired his wealth by practicing alchemy.

This theory, based mainly on Flamel's narrative in his *Hieroglyphics*, was supported in the eighteenth century by Antoine Joseph Pernety, who had seen an alchemical manuscript, dated 1414, purportedly written by Flamel. In response to Pernety, the Abbé Villain wrote the present biography of Flamel, in which he attempts to prove that it is not necessary to assume that Flamel's wealth (which he maintains was only moderate) was due to a knowledge of the "Hermetic Secret." Sarton states that the alchemical writings that appear under the name of Flamel are falsely ascribed to him. Ferguson gives a detailed account of the rival claims of Pernety and Villain in this matter. Both Caillet and Guaita describe this book as an "ouvrage rare." (Bolton, 199; Caillet, 11176; Cushing, V149; Duveen, 604; Edelstein, 884; Ferguson, I, 281, II, 491–492; Ferguson Coll., 741; Guaita, 1061; Hall, 64; Neu, 4233; Sarton, III, 1576–78; Smith, 495; Waller, 16824; Watt, I, 370p; Wellcome, III, 31)

VILLARS, Nicolas Pierre Henri de Montfaucon

Le Comte de Gabalis, ou Entretiens sur les Sciences Secretes.

Renouvellé & augmenté d'une Lettre sur ce sujet. . .

Cologne (i.e., Geneva): Chez Pierre Marteau. N.d. (ca. 1675).

12mo. 1 leaf, 161, (1) pp. Very good copy, in gilt-ruled tan calf antique, green morocco label. The front and back flyleaves bear neat notes in ink, some signed S. (or J.) R. Pollmann (early eighteenth century). Signature on title page: "Fr. Wrangham"; i.e., Francis Wrangham (1769–1842), classical scholar and prebendary of York (see D.N.B.).

THE ABBÉ Montfaucon de Villars (ca. 1635–1673) was born near Toulouse but was assassinated on the road to Lyon, probably by adherents to the Brotherhood of the Rosy Cross, against whose doctrines the author inveighed in this famous book (first: Paris, 1670; Duveen, 411). Caillet (III, p. 130) states that its publication caused an immediate scandal and that the abbé became very unpopular as the result. In addition to the theosophical alchemical content, there are references to the works of Dorn, Fludd, Nollus, Paracelsus, et al. (p. 31 et seq.). Such was the resentment against the book that no editions were printed in France for several decades. A sequel containing additional material appeared forty-two years after the author's death (Amsterdam, 1715). "Édition rare, l'une des premières" (Guaita). An English translation was published (London, 1690; Wing, V386). The chief importance of this work is that it influenced Pope, who is generally agreed to have derived the outline of *The Rape of the Lock* (1714) from it. Very rare, as are all early editions of this controversial work. The present

edition is not in the British Library or the usual chemical bibliographies. (Guaita, 1905; Krivatsy, 12431)

VITALI, Girolamo

Lexicon Mathematicum Astronomicum Geometricum, hoc est rerum omnium ad utramque immo & ad omnem fere Matheaim quomodo documque spectantium, collectio, & explicatio. Adjecta brevi novorum theorernatum expensione, verborumque exoticorum dilucidatione ut non injuria. Disciplinarum omnium mathematicarum summa, & promptuarium dici possit. . . .
Paris: Ex Officina Ludovic. Billaine, in Palatio Regio. 1668.

First edition. 8vo. 24 leaves, 1 leaf (blank), 540, 100 pp. Engraved title page, large woodcut on letterpress title, and woodcut ornaments in text. Very good copy in original vellum.

AN EARLY dictionary of scientific terms and definitions, containing a great deal of information on the history of science, including chemistry. The last section (60 pp.), a discourse on the word *sympathia*, is an essay on the powder of sympathy and the magnetic cure of wounds. Of particular interest to the historian of chemistry are discussions of acids, alkalies, salts, metals, phosphorescence, etc. Other topics covered include magnetic materials, materia medica, respiration, and circulation of the blood and its relationship with atmospheric air. Thorndike discusses the book from the viewpoint of its astrological content. Vitali (d. 1698) was a monk of Capua, Italy, and this work bears the approval of the church. A revised edition (Rome, 1690) underwent radical change, most of the astrology being discarded. Rare. Not in Caillet, Guaita, Krivatsy, Watt, etc. (Goldsmith, 526; Poggendorff, II, 1311; Ricardi, *Vitali*, I, 1; Thorndike, VIII, 329)

VITALIS, Jean Baptiste

Manuel du Teinturier, sur fil et sur Coton filé; ouvrage qui renferme un grand nombre de Procédés nouveaux . . . de tout ce qui concerne la teinture du coton en rouge dit des Indes ou d'Andrinople. Par J. B. Vitalis . . .

Rouen: Chez Mégard, Libraire, successeur de N. Labbey, rue Beauvoisine, no. 88. 1810.

First edition. 8vo. xii, 156 pp. Verso of half title signed in ink by the editor, P. M. Mégard. Minor stain in upper blank margin of some leaves; otherwise fine copy in original sprinkled calf, spine gilt-ruled, crimson morocco label.

A COMPREHENSIVE TREATISE on dyeing cotton various shades of red, containing an account of the chemical processes involved. Vitalis (dates unknown), professor of applied chemistry at the University of Rouen, was perpetual secretary of the Rouen Academy of Sciences, Belles-Lettres,

and Arts. He also published a *Cours élémentaire de teinture sur laine, soie, et coton* (Paris, 1823), which passed through several editions. Rare. Not in Bolton, Duveen, Ferchl, Partington, Poggendorff, Smith, etc. (Edelstein, 3620; Lawrie, 757; Ron, 1076)

VOGEL, Hermann Wilhelm

The Chemistry of Light and Photography in its Application to Art, Science, and Industry. . . .
London: Henry S. King & Co. 1875.

First English edition. 8vo. xi, (1), 288 pp. + 35, (1) pp. (publisher's catalogue, dated Dec. 1874). Woodburytype frontispiece of the moon from Rutherford's original negative + a negative and positive of the "licht-paus" process + 2 mounted photographic portraits of the celebrated singer, Mlle. Artot, one with retouched negative + 3 other plates and woodcuts in the text. Fine copy, in original gilt-lettered, decorated publisher's red cloth.

THE PHOTOCHEMIST and spectroscopist Vogel (1834–1898) is remembered for his discovery (December 1873) that treatment of collodion emulsion with certain aniline dyes produced sensitivity in the silver bromide plates to light of a wavelength similar to the absorption maxima of the dyes. Thus the plates could be made sensitive to the whole range of visible light (orthochromatic), and Vogel is credited as the inventor of the so-called orthochromatic plate. "Vogel's discovery was another milestone in the history of photography, for it not only paved the way for correct reproduction of colours in paintings, landscapes, and portraiture, obviating a lot of retouching, but also proved an essential step in colour photography" (Gernsheim, *History of Photography*, p. 334). First appearing as *Die Wirkungen des Lichts an die Photographie* (Berlin and Leipzig, 1874), Vogel's classic treatise on the improvement of photographic processes was translated into English and published (as here) in the International Scientific Series. Very scarce. (Bolton, 891 [wrong date: 1872]; Roller, 570; Roller & Goodman, II, 543)

VOGEL, Rudolph Augustin

Historia Materiae Medicae ad Novissima Tempora Producta. In usum academicum. Editio nova correctior ac emendatior.
Frankfurt & Leipzig: N.p. 1760.

Second edition. 8vo. 4 leaves, 410 pp., 16 leaves (last blank). Woodcut on title page, woodcut head- and tailpieces. Very good copy in original unlettered vellum. Engraved bookplate (eighteenth century): Friedrich August H. v. B. O.

A TEXTBOOK ON the materia medica of chemical interest. Vogel (1724–1774), professor of medicine at Göttingen, begins his book by reviewing earlier works on the subject

(43 pp.), then covers medicinal substances derived from animals, plants, and minerals. At the end (16 pp.) is a detailed list of chemical-pharmaceutical works consulted by Vogel, followed by an index. First appearing at Leyden in 1758 (Watt, II, 938h), this very popular work was published with additions in 1760 (as here), 1762, 1764 (Neu, 4243), 1774, and 1784. Not in Bolton, Edelstein, Ferguson, Kopp, Partington, Poggendorff, Schelenz, Smith, etc. (Blake, 476; Blocker, 409; Ferchl, 559; Waller, 15229)

VOGEL, Rudolph Augustin

Institutiones Chemiae ad Lectiones Academicas Accomodatae. Editio nova polita et locupletata.
Frankfurt & Leipzig. 1762.

Second (first Frankfurt and Leipzig) edition. 8vo. 4 leaves, 382 pp., 5 leaves (index). Woodcut ornament on title page, woodcut head- and tailpieces. Fine copy in original mottled calf, spine richly gilt.

THE TEXTBOOK used by Vogel in his classes at Göttingen, with numerous references to earlier literature on the subject. It is an introductory work on general chemistry, the first edition of which (Göttingen, 1755) was reprinted at Leyden and Leipzig (1757). The text of the present (corrected) edition was reprinted in 1764 and 1774. A German translation appeared (Weimar, 1775) with notes by J. C. Wiegleb, and a second edition of this was published in 1785. The copy described by Cole (no. 1320) and Ferguson (II, 516), with a Bamberg, Frankfurt, and Leipzig imprint, 1762, has different pagination and is a reprint of the present edition but is misnumbered. The present rare edition, with the Frankfurt and Leipzig imprint, was unknown to Gmelin (II, 686) and is not in the usual bibliographies. (Blake, 476)

VOGEL, Rudolph Augustin

Practisches Mineralsystem entworfen von D. Rudolf Augustin Vogel. . .

Leipzig: verlegt Bernhard Christoph Breitkopf. 1762.

First edition. 8vo. 4 leaves, 518 pp., 5 leaves (index). Woodcut ornament on title page, woodcut head- and tailpieces. Very fine copy in original blind-ruled sheep, red morocco label. Old stamp on first free endpaper: Bibliothek Schloss Liblin.

A MAN OF wide and varied knowledge, Vogel's "interest extended to various branches of natural history, botany, mineralogy, physiology, and chemistry, of which he made a special study. . . . His knowledge of chemistry was turned further to account for mineralogy, as appears in his *Practical System of Mineralogy* published at Leipzig in 1762, and again in 1776. Though defective in arrangement this book contains

observations which were new for the time. In his investigations on these subjects he paid special attention to the phenomena attendant upon the calcination of metals and their increase in weight" (Ferguson, II, 516 [not in Young Coll.]). The book contains much on the composition of minerals and their chemical analysis. Rare. Not in the usual bibliographies of chemistry and mineralogy. (Ferchl, 560; Hoover, 831; Poggendorff, II, 1217)

VOGTER, Bartholomaeus

Wie man alle Gebrechen und Kranckheiten des menschlichen Leibs, auswendig und ynwendig, von dem Haupt an bisz auff die Füß, artzneyen und vertreiben soll, mit ausz gepranten Wassern . . . Newlich zu samen gesetzt und gezogen.

Augsburg: Haynrich Steyner. 1531.

First edition. 4to. 8 leaves, ff. 80. Large woodcut on title of a distillation laboratory. Fore-edge of title page repaired (just touching corner of woodcut border); otherwise very good copy in unlettered quarter vellum, the boards covered in vellum leaves from a fifteenth-century printed book.

AN OCULIST who lived in the small Bavarian town of Dilligen, Vogter (fl. 1531) published several works of medical importance. In this book on distillation he describes many pharmacological recipes for the cure of numerous diseases, especially those that affect the eyes. The fine large woodcut on the title page depicts a chemist in his laboratory, with several bunches of plants on the floor from which healing waters and oils are to be extracted by distilling them. Also shown is a large still on a furnace, with a distillation in progress, together with five shelves of flasks containing distillates, each of which is labeled. Nearby a female assistant helps the chemist by filling several flasks as the distilled liquids are produced. An enormously popular book in the first half of the sixteenth century, there were editions of 1533 (Neu, 4246; Waller, 10035), 1536, 1541 (Duveen, 606; Neu, 4247), 1547, 1549 (Cushing, V167), and 1550. All are "very rare" (Duveen), undoubtedly owing to the heavy use to which they were exposed in chemical laboratories. The first edition (as here) is extremely rare. The copy in the National Library of Medicine is imperfect, lacking twelve leaves. (British Library, *S.T.C. German, 1455-1600*, p. 901; Durling, 4686; Ferchl, 560; Wellcome, I, 6666)

VOLCKAMER, Christoph Theophil

Thaumantiados Thaumasia: sive Iridis Admiranda sub rationis accuratius examen revocata eruditorum(ue) ventilationi publicae in Alma Altdorffina Universitate exposita sub Praesidio M. Job. Christophori Sturmii, Mathem. & Phil. Nat. PP. à Christophoro Theophilo Volcamero, P.N.

Nuremberg: Wolfgangum Mauritium Endterum. 1699.

First (only) edition. 4to. 1 leaf, 185 pp. With 34 figures on 4 folding engraved plates. Fine copy in contemporary paneled calf, maroon morocco label, spine gilt.

A THESIS PRESENTED at Altdorff University by Volckamer, a student of the famous professor J. C. Sturm. It deals with the formation of the rainbow, with references to Newton, Mariotte, Gassendi, Boyle, et al. Topics of chemical interest include discussions of distillation (p. 47), colored glasses (p. 78), cause of iridescence (p. 102), and the generation of colors in matter (p. 111). A description of Newton's spectrum and the composition of white light is given on page 123. A copy in poor condition, from the library of the earl of Bute, was in the celebrated Honeyman collection (Sotheby auction, 20 May 1981, lot 3069). Very rare. Unknown to the usual bibliographic authorities. (Sotheran, Cat. 795 [1925], no. 9110)

VOLTA, Alessandro Giuseppe Antonio Anastasio

Collezione dell'Opere del Cavaliere Conte Alessandro Volta . . .

Florence: Nella Stamperia di Guglielmo Piatti. 1816.

First collected edition. 5 vols., 8vo., in 3. I: 5 leaves, xii, 277, (3) pp. II: 505, (3) pp. III: 2 leaves, 268, (2) pp. IV: 302, (4) pp. V: x, (2), 387, (5) pp. Fine engraved frontispiece portrait of Volta and 7 folding engraved plates of apparatus. Fine set in contemporary crimson quarter morocco, marbled boards, spines, gilt, blue labels.

THE EARLIEST collected edition of Volta's writings on chemistry and electricity, edited by Vincenzo Antinori. "His work, which started a new era in electrical science, includes the discovery of the electric decomposition of water, and the invention of the electric battery, the Voltaic pile, electrophorus, his condensing electroscope (proving contact electricity), etc." (Zeitlinger). Volta dramatically overthrew Galvani's theory of animal electricity when, in 1799, he made a voltaic cell (consisting of alternating plates of silver and zinc separated by aqueous absorbent material), which produced an electric current independent of any animal matter. His voltaic pile revolutionized research on electricity and made possible the great investigations on electroly-

sis by Humphry Davy, Michael Faraday, William Nicholson, and others. (D.S.B., XIV, 81; Ekelöf, 616; Ferchl, 562; Gartrell, 534; Partington, III, 814; Poggendorff, II, 1233; Sotheran, Cat. 692 [1909], 5128; Wheeler Gift, 731)

VOLTA, Alessandro Giuseppe Antonio Anastasio

Lettere del Signor Don Alessandro Volta . . . sull'Aria Inflammabile Nativa delle Paludi.

Milan: Nella Stamperia di Giuseppe Marelli. 1777.

First edition. 8vo. 147, (1) pp. With engraved vignette on title page and 13 engraved head- and tailpieces in text. Very fine copy, in original patterned boards.

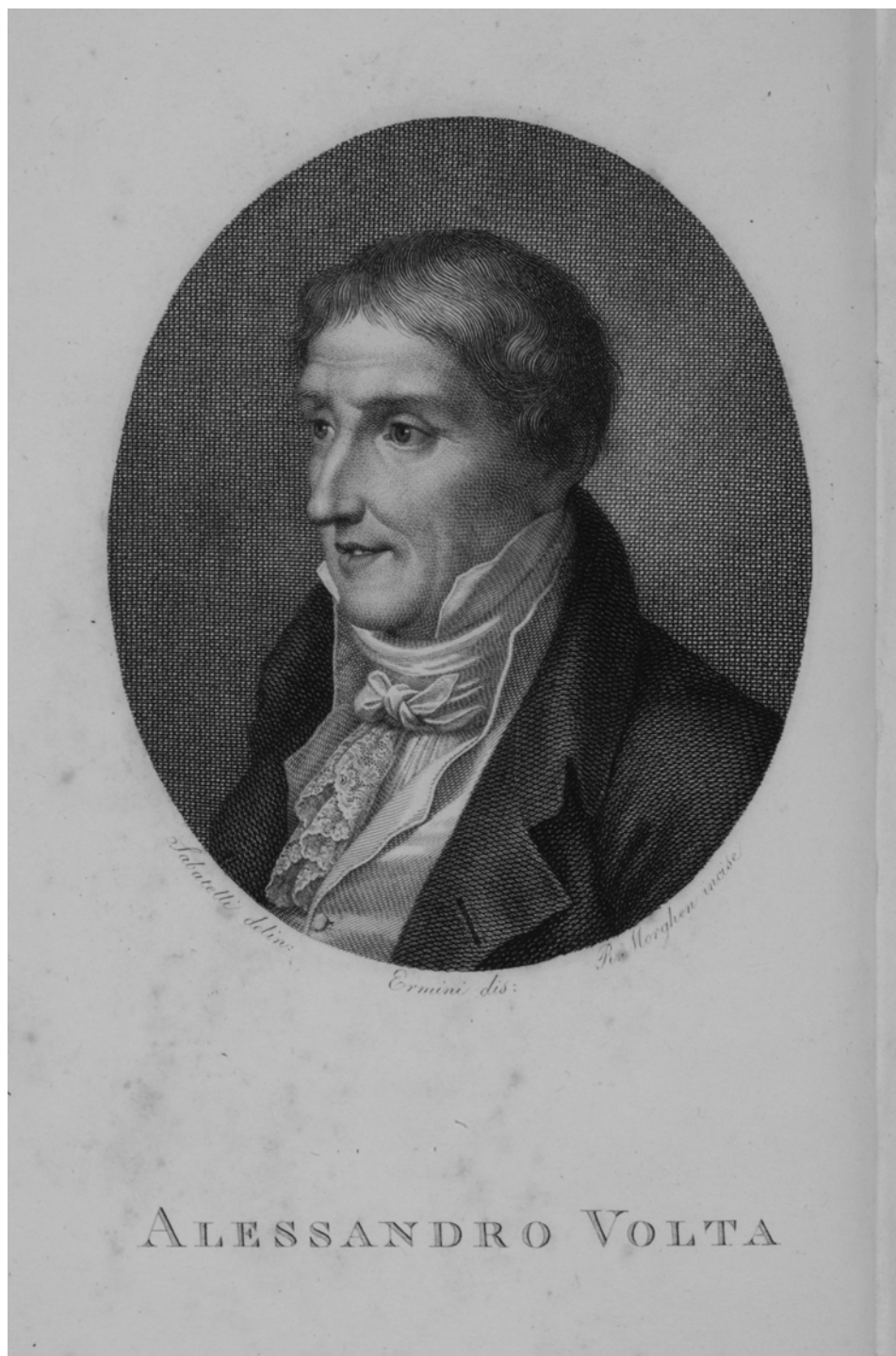
AT THE beginning of his career the Italian physicist Volta (1745–1827) studied the properties of gases, then a subject of international interest. He had just been nominated as an instructor in physics in his native Como. His early experiments with oxygen, hydrogen, and the sparking of mixed gases led to this treatise on marsh gas (methane), which he first distinguished from "inflammable air" (hydrogen) in 1776. This work comprises seven letters written to his friend Carlo Giuseppe Campi (Nov. 1776–Jan. 1777), in which he shows experimentally that hydrogen, on combustion, requires one-fourth the volume of oxygen needed for the complete combustion of methane and that only the latter forms carbon dioxide. Volta carefully describes how he collected the marsh gas in water-filled gas jars. An Italian translation (pp. 22–25) of a letter from Benjamin Franklin to Joseph Priestley recounts Franklin's experiments with marsh gas in New Jersey in 1764. There are numerous references to the researches of Priestley and several to those of Lavoisier. The first six letters have pictorial headpieces showing the collecting of marsh gas, apparatus, etc. (Cole, 1321; D.S.B., XIV, 81; Duveen, 606; Ferchl, 561; Harvey, 663; Neu, 4249; Partington, III, 814; Poggendorff, II, 1231; Smith, 496; Sotheran, Cat. 800 [1926], 12194)

VOLTA, Alessandro Giuseppe Antonio Anastasio

Lettres de Mr. Alexandre Volta, . . . sur l'Air Inflammable des Marais auxquelles on a ajouté trois Lettres du même Auteur tirées du Journal de Milan. Traduites de l'Italien. . .

Strasbourg: De l'Imprimerie de J. H. Heitz, Imprimeur de l'Université. 1778.

First French edition. 8vo. 4 leaves (first blank), 191, (1) pp. With 1 folding copperplate of apparatus. Woodcut on title page, woodcut head- and tailpieces. Very fine copy, uncut and unpressed, in modern gilt-ruled quarter calf, cloth boards, spine gilt-lettered and dated, original speckled brown wrappers bound in.



Volta. Collezione dell' Opere. Florence, 1816.

THE FRENCH translation by Barbier de Tinan of *Lettere . . . sull'aria infiammabile nativa delle paludi* (Milan, 1777). Also included are three letters by Volta taken from *Scelta d'opuscoli interessanti* (Milan, 1777), which describe further experiments and details of his "electric pistol" with additional notes by the translator. Written at Como (April–May 1777) these letters are addressed to the Marquis Francois Castelli. Many of the experiments were repeated by the translator in the presence of Volta when he passed through Strasbourg late in 1777. A German translation by Carl Heinrich Kostlin appeared (Strasbourg, 1778). (Bolton, 893; Cole, 1322; Edelstein, 2393; Ferchl, 561; Gartrell, 538; Partington, III, 814; Poggendorff, II, 1231)

VOLTAIRE, François Marie Arouet de

Éléments de la Philosophie de Newton, mis à la portée de tout le monde. Par Mr. De Voltaire.

Amsterdam: Chez Etienne Ledet & Compagnie. 1738.

First edition, first issue. 8vo. 1 leaf, 399, (1) pp. Title in red and black. With engraved frontispiece (apotheosis of Newton), portrait of Voltaire, engraved vignette on title page, 6 copperplates, 1 folding table, engraved head- and tailpieces, and engravings in text. Very fine copy in original marbled calf, spine richly gilt.

THE FIRST edition of Voltaire's celebrated commentary on Newton's philosophy and especially his *Principia* and *Opticks*. The book did much to popularize the Newtonian system in France and other Continental countries. A fervent admirer of Newton while he was living in exile in England (1726–29), Voltaire probably visited him just before he died in 1727 and attended his funeral. The present book was written in collaboration with Madame du Chatelet, and a poem and dedication to her precede the text. The elegance of printing and illustrations by Folkema, B. Picart, and others make this one of the most attractive scientific books of the eighteenth century. There were two issues: in the first (as here) the title has Ledet's imprint; the second has Desbordes' imprint. (Babson, 120; D.S.B., XIV, 83; Gray, 155; Norman, 2165; P.M.M., 161; Poggendorff, II, 1233; Waller, 11031)

VOLTAIRE, François Marie Arouet de

Éléments de la Philosophie de Newton. Contenant la Métaphysique, la Théorie de la Lumière, & celle du Monde. Par Mr. De Voltaire. Nouvelle Édition.

"A Londres" (i.e., Paris: Prault). 1741.

First revised edition. 12mo. 2 leaves, viii, 5–12, 40, 43–232, 209–230, 257–471, (5) pp. (pagination erratic, text complete). Title page in red and black. With engraved frontispiece por-

trait of Newton (P. Dupin sculp.), engraved title vignette (by Duflos), 8 engraved plates (1 folding), and numerous small plates in text. Very good copy in original mottled calf, rebacked with richly gilt spine laid on, beige morocco label.

THE FIRST edition of the *Éléments* to be completely revised and rewritten by Voltaire, and the first in duodecimo format. "It is this edition in which appeared the well-known story of the falling apple which is supposed to have started the train of thoughts that led Newton to the discovery of the law of universal gravitation. The incident was related to Voltaire, when staying in London, by Mrs. Conduitt" (Zeitlinger). The account appears on pages 287–288. "For many years tradition marked the tree in the garden at Woolsthorpe: it was shown to Sir David Brewster in 1814, and was taken down in 1820" (D.N.B.). Not in Babson or Gray. (Sotheran, Cat. 828 [1931], 3618 ["Very Rare"]; Wallis, 156.2)

VOLTAIRE, François Marie Arouet de

The Elements of Sir Isaac Newton's Philosophy. By Mr. Voltaire. Translated from the French. Revised and Corrected by John Hanna . . . With Explication of some Words in Alphabetical Order. . . .

London: Printed for Stephen Austen at the Angel and Bible in St. Paul's Church-Yard. 1738.

First English edition. 8vo. xvi, 363, (3) pp. With 10 engraved plates (A4 folding) and woodcut diagrams in text. Fine copy in contemporary tree calf, rebacked, green morocco label.

THE ENGLISH translation of Voltaire's *Éléments de la philosophie de Newton* (Amsterdam, 1738), which had appeared earlier the same year. The translator, John Hanna (dates unknown), a "Teacher of the Mathematicks," may have communicated with Voltaire, as he says in his preface: "The Author himself hath observed several Errors in the French Edition, printed at Amsterdam; and therefore it was necessary in this Edition, which is taken from it, to make several Amendments." Hanna has added a number of important footnotes. (Babson, 121; Gray, 157; Sotheran, Cat. 789 [1924], 5774 ["Rare"]; Wallis, 157)

VOLTAIRE, François Marie Arouet de

Letters Concerning the English Nation. By Mr. De Voltaire.

London: Printed for C. Davis in Pater-Noster-Row, and A. Lyon in Russel-Street, Covent-Garden. 1733.

First edition in English. 8vo. 8 leaves, 253 pp., 9 leaves (index). Signature A8 is an advertisement leaf. Ornamental woodcut device on title. Fine copy, printed on thick paper, in contemporary paneled calf, spine gilt in compartments, gilt-lettered maroon label.



Voltaire. *Éléments de la Philosophie de Neuton. Amsterdam, 1738.*

VOLTAIRE (1694–1778) is important in the history of science for his famous popularization of Newton. In 1738 he published his *Éléments de la Philosophie de Neuton* and collaborated with his companion and mistress, Emilie, marquise du Chatelet, in her translation of the *Principia* into French. Voltaire lived in London between 1726 and 1729 and attended Newton's funeral in Westminster Abbey in 1727. In 1728 he wrote his *Lettres philosophiques*, or *Lettres sur les Anglais*, which contain his first published work on scientific matters. This English translation from Voltaire's manuscript preceded the French edition, which did not appear until 1734. His *Lettres* were publicly burned in Paris, but that did not prevent them from exercising far-reaching influence on French thought. The work is of great philosophical and scientific interest, comprising twenty-four letters on aspects of English life (e.g., Quakers, Church, Parliament, Trade, Inoculation, Francis Bacon, John Locke, Descartes, Newton, Comedy, Tragedy, and the Royal Society). Four letters deal directly with Newton and his theories, including for the first time the famous anecdote of the falling apple, which gave Newton the idea of the law of gravitation. This account is found on pages 127–128. Other topics of scientific interest covered in this work include astronomy, density of bodies, light and colors, comets, Descartes' work, Leibnitz and the calculus, and Newton's telescopes. A rare work. Wallis suggests that the translator was possibly John Lockman (1698–1771). Not in Cushing, Osler, Poggendorff, Rosenthal, etc. (Knight, 79; Wallis, 424; Watt, II, 938q)

VOSS, Gerhard Johann

De Philosophia et Philosophorum Sectis Libri II.

The Hague: Apud Adrianum Vlaeq. 1658.

First edition. 4to. 4 leaves, 182 pp., 7 leaves (last blank). Title page in red and black, with large woodcut device. Fine copy, in contemporary vellum-backed marbled boards.

BORN NEAR Heidelberg, Voss (1577–1649) was a scholar “and very learned writer . . . the author of a great many works, which are . . . considered of authority and accuracy” (Watt). He came to England and was made canon of Canterbury in 1629, but returned to Amsterdam in 1633 to become professor of history (see D.N.B.). His son was the celebrated Isaac Voss (1618–1689). The present work on the various subdivisions of philosophy includes chapters on the origins of medicine, illustrious physicians, military arts, politics, divination, theology, and other subjects. The ninth chapter, “De chemia” (pp. 66–74), is devoted exclusively to chemistry, its history, and its uses. There are also many other chemical references throughout the book. Poggendorff (II, 1235) and Thorndike (VII, 675) list other titles by Voss. (Watt, II, 939m)

VOSS, Isaac

De Lucis Natura et Proprietate. . . .

Amsterdam: Apud Ludovicum & Danielem Elzevirios. 1662.

First edition. 4to. 4 leaves, 85, (3) pp. Woodcut printer's device on title page and 18 woodcut figures in text. Fine, crisp copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated. Small stamp of Radcliffe Observatory, Oxford, on verso of title page.

AN IMPORTANT early work of some chemical interest on the nature and properties of light in which Voss (1618–1689) accuses Descartes of plagiarism from Willebrord Snel (1580–1626) of his law of refraction, discovered ca. 1621. THE BOOK is significant as it contains the first printed account of the discovery of Snel, who never published the law himself but lent his (now lost) manuscript containing it to Voss. Snel's law is discussed on pages 36–37, with a diagram. Voss thought that light and fire are similar and noncorporeal, and he proposes herein a bold new theory of light, in which sulphur plays a key part. Sulphur was believed to be a component of almost all bodies and was responsible for their color, as flame assumes the colors of burning sulphur. A Dutch theologian and scholar of considerable ability, Voss wrote against Cartesianism and edited many works by earlier writers (e.g., Scylax, St. Ignatius, Pliny, Catullus, and Juvenal). In 1670, at the invitation of Dr. John Pearson, he came to England, received the D.C.L. (Oxford, 1670), and became canon of Windsor (1673–1689). His biography is in the D.N.B. (D.S.B., XII, 501; Poggendorff, II, 1235; Sotheran, Cat. 773 [1919], no. 2136 [“Rare”]; Thorndike, VII, 661; Watt, II, 939l)

VOSS, Isaac

Variarum Observationum Liber.

London: Prostant apud Robertum Scott Bibliopolam. 1685.

First edition. 4to. 4 leaves, 397, (1) pp., 1 leaf (errata, verso blank). Large woodcut (vase of flowers) on title page and 11 woodcuts (some full-page) in text. Full-page copperplate map on page 13. Divisional title pages on pages 207, 295, and 343. Small marginal wormhole toward end of volume (not touching text); otherwise fine copy with wide margins, in original mottled calf, spine gilt in compartments.

THE PRESENT work contains Voss's observations on many subjects of classical interest: e.g., the antiquity of Rome, the arts and sciences of the Chinese, and the construction of triremes. It also discusses subjects of scientific (including chemical) interest. Chapter XV (pp. 86–94), on gunpowder and other fulminating mixtures, mentions Roger Bacon, as well as the production of gunpowder-like formulations from niter, pyrites, charcoal, etc. On page 71 Voss

lists authors (e.g., Cesalpino) who claimed to have preceded Harvey in the discovery of the circulation of the blood. Thorndike (vol. VII and VIII) discusses Voss but not this work. Not mentioned by the usual chemical and medical bibliographers. (Krivatsy, 12499; Watt, II, 939j; Wing, V707)

VREAM, William

A Description of the Air-Pump, according to the late Mr. Hawksbee's best and last Improvements; with the manner of making Fifty of the most curious Experiments upon it: The Figures of the Air-Pump-Glasses, and all the Machines belonging to it, being curiously engraven in Copper Plates. By William Vream, Pneumatical Instrument-Maker.

London: Printed by J. H. for the Author, and Sold only by himself at his House in Earl-street, near the Seven Dials, within two Doors of the Royal Oak; and Mr. Richard Bridger, at the upper End of Hind-Court, Fleet-street. 1717.

First edition. 8vo. 24 pp. With 2 folding engraved plates. Fine copy, interleaved with contemporary blank paper, in half calf antique, marbled boards, maroon morocco label.

THE SOLE edition of a very rare tract describing air pumps and their construction, as well as experiments illustrating their uses in chemistry, physics, and biology. The advertisement following the title leaf states that the pumps and other apparatus "are Made and Sold by Richard Bridger, (who was Apprentice to the late Mr. Hawksbee, F.R.S.) . . . and William Vream . . ." The pumps are based on the designs of Francis Hauksbee the elder (d. 1713), author of *Physico-Mechanical Experiments* (London, 1709). The plates in the present work are identical to those in Hauksbee's book. Newton owned a copy of this tract, bound with the *Physico-Mechanical Lectures* (London, 1717) of J. T. Desaguliers (see Harrison, 1701). As stated on the title page, this work was printed (no doubt in a small number of copies) for distribution by Vream and Bridger. Unrecorded in the usual bibliographies.

VREESWYCK, Goosen van

Het Licht der Mane, of Glans der Sonne, waer in gehandelt, wort van de verborgentheden der overnatuurlijke dingen, bewerkingen der mineraelsche Medicijnen, van hare Souten, Verwen, &c. Item van de ware materie der Oude Wijsen, als mede van de Slagh-roeden, Kooren Brandewijnen ende meer andere Konsten, ende metallische Labores uyt liefde mede gedeelt. . . .

Rotterdam: Gedrukt by Barent van Santbergen, Boeckverkooper op de Beurs. 1678.

First edition. 8vo. 8 leaves, 85, (1) pp., 5 leaves. Small woodcut ornament on title page, historiated woodcut capital on *2, and numerous alchemical symbols in text. Fine copy in quarter calf antique, marbled boards, maroon morocco label, spine dated.

AN ALCHEMICAL work, dedicated to King Charles III of "Groot Britaninen Schotlant en Yerland," by Vreeswyck (1626–ca. 1689), a Dutch chemist, metallurgist, and mineralogist of whose life Ferguson says "there is no notice extant." The author describes himself as a "Bergh-wercker" at the end of the dedication. The leaf preceding page 1 lists twenty-eight alchemical symbols used throughout the text, as well as the titles of five previous works published by Vreeswyck (1670–1675). In addition to giving one of the earliest clear descriptions of the preparation of hydrochloric acid (from common salt and sulphuric acid), processes are given for making other acids, bases, and salts. The philosopher's stone and transmutation are described, with special emphasis on the works of Basil Valentine, Isaac Holland, Sendivogius, et al. (Duveen, *Supplement*, 398; Ferchl, 562; Ferguson, II, 520–521; Ferguson Coll., 747; Partington, II, 350)

VREESWYCK, Goosen van

Silvere Rivier, ofte Konings Fontein. Waer in ontdekt worden veele notable Medicijnen der nude Philosophen; ook van't Sout en . . . der Metalen, ende wat voor krachten der Medicijnen daar in verborgen zijn; als mede het leven en de dood vande Metalen en Mineralen, haar verwen en tinctuur. . . .

The Hague: By Pieter Haagen, Boekverkoper, woonende op de Hoog-straat, in de Stadt Basel. 1684.

First edition. 8vo. (in 4s). 12 leaves, 132 pp., 6 leaves. Woodcut title vignette, woodcut headpiece and capitals, and numerous alchemical symbols in text. Few leaves with faint underlining; otherwise very good copy, in quarter calf antique, marbled boards, maroon morocco label, spine dated.

A RARE ALCHEMICAL work, of iatrochemical interest, in which Vreeswyck discusses the philosopher's stone and its use in transmutation. The experiments of many early and contemporary chemists are cited, with particular emphasis on the writings of Basil Valentine. Medicines prepared from various minerals, metals, and salts are described. Originally owned by Duveen, this copy has been rebound. (Duveen, *Supplement*, 65; Ferchl, 562; Ferguson, II, 521; Hoover, 848; Krivatsy, 12503; Partington, II, 341)

W., J.

Beauty's Treasury: or, the Ladies Vade Mecum. Being a collection of the newest, most select and valuable receipts, for making all sorts of cosmetick-washes, oils, unguents, waters, &c. Useful in repairing lost beauty, maintaining and improving good complexions, removing blemishes of any kind, and procuring handsomeness. To which are added, receipts for making the best cordial-waters, as also the finest essences and especially a collection of the best perfumes, and excellent snuffs. Published for the general good, after many years experience of the efficacy and excellence of every one of them. By J. W. — Philo-Chym. & Med.

London: Printed and to be sold, by S. Malthus next the Rose and Crown in London House-Yard near the West-End of St. Paul's. 1705.

First edition. 12mo. 12 leaves, 117, (1) pp., 1 leaf (i.e., signatures A-F¹²). With fine engraved frontispiece of a seated lady attended by 6 cherubs. Paper slightly browned, few lower margins trimmed close; otherwise a very good copy in contemporary blind-ruled sheep, rebacked, maroon morocco gilt-lettered label, spine dated at foot. From the library of Charles Kirkpatrick Sharpe (1781?–1851), antiquary and artist, with his signature in ink on the front pastedown endpaper. Sharpe, a literary recluse, was a lifelong friend of Sir Walter Scott; his biography is in the D.N.B.

A BOOK OF great practical chemical interest describing the cosmetics, perfumes, medicinal potions, cordials, etc., used by ladies at the beginning of the eighteenth century. For “Breasts hanging down . . . to reduce them to a Round Plumpness” (pp. 32–33) a special ointment is recommended. After twelve days “you will find them reduced . . . like two Ivory Globes or little Worlds of Beauty” that will “captivate the wondering Gazers Eyes, and dart warm Desires into his Soul.” The author, a lover of chemistry and medicine, has not been identified. Complete copies, as here, are extremely rare. The only other copies traced, both imperfect, are in the Ferguson Collection. (Ferguson Coll., 748)

WAALS, Johannes Diderik van der

Over de Continuïteit van den Gas- en Vloeïstoftoestand. . . door Johannes Diderik van der Waals . . .

Leiden: A. W. Sijthoff. 1873.

First edition. 8vo. viii, 134 pp., 1 leaf (errata). With folding engraved plate (containing 8 figures). Very good copy in half calf antique, pebbled cloth, gilt-lettered and dated maroon morocco label, with original printed wrappers bound in.

THE 1910 NOBEL laureate in physics, van der Waals (1837–1923), published his doctoral dissertation in Dutch, his native language. It contains the first publication of his

famous “equation of state” for gases and liquids. “As Maxwell said, ‘this at once put his name among the foremost in science’ . . . the dissertation gave a satisfactory molecular explanation for the phenomena observed in vapors and liquids by Thomas Andres and other experimenters, especially the existence of a critical temperature, below which a gas can be condensed to a two-phase system of vapor and liquid; while above it there can be only a homogenous vapor phase” (D.S.B.). This classic work “opened a chapter in the history of science . . . [it] secured for Van der Waals a noteworthy place among the founders of the Kinetic Theory of Matter” (J. H. Jeans, *Memorial Lectures delivered before the Chemical Society 1914–1932* [1933], p. 75). Translations were made into English, French, and German. Very rare. (D.S.B., XIV, 109; Partington, IV, 638; Sondheimer, 1608)

WACKENRODER, Heinrich Wilhelm Ferdinand

De Antbelminthicis Regni Vegetabilis . . . commentatio . . . Die IV Junii MDCCCXXVI. . .

Göttingen: Typis Dieterichianis. (1826).

First edition. 4to. 3 leaves, 67, (1) pp. Fine copy in original gilt-ruled crimson boards.

IN 1824 WACKENRODER passed the pharmacy examination, and from 1825 to 1827 he was assistant to Friedrich Stromeier in the pharmacy institute at Göttingen. It was during this period that he published the present pharmaceutical chemical work, which was awarded the Göttingen Prize for 1826. “The author enumerates 100 vegetable antihelminthics, of many of which he gives an elaborate chemical analysis with the view of fixing the nature of their active principles” (Waring). Very scarce. Not in the usual chemical and medical bibliographies. (Bolton, 895; Ferchl, 562; Poggendorff, II, 1237; Waring, 128)

WACKENRODER, Heinrich Wilhelm Ferdinand

De Cerevisiae Vera Mixtione et Indole Chemica et de Methodo Analytica Alcoholis Quantitatem Recte Explo-randi. Commentatio qua Professionem Chemiae Ordinar-iam . . . XX. M. Aprilis . . . observantissime invitat Dr. H. Wackenroder.

Jena: Typis Schreiberi. 1850.

First edition. 8vo. 48, 4 pp. Fine copy in original blue printed wrappers, all edges gilt, bound in later patterned black boards.

A DETAILED WORK on chemical technology describing methods for the quantitative analysis of different kinds of beer, with references to earlier publications by Berzelius,



W., J. Beauty's Treasury. London, 1705.

Erdmann, Liebig, Mitscherlich, et al. Wackenroder (1798–1854), professor at the Pharmaceutical Institute in Jena, was mainly interested in analytical chemistry. He discovered carotene, solanine, pentathionic acid, and other compounds and “was exceptionally successful as a teacher, researcher, and scientific writer, and, most important, he made pharmacy an independent science” (D.S.B.). Scarce. Not in D.S.B., Duveen, Edelstein, Ferguson Coll., Morgan, Partington, Smith, Waller, etc. (Bolton, 895; Ferchl, 563; Poggendorff, II, 1237)

WADE, Walter

Syllabus of a Course of Lectures on Botany, and its connexion with Agriculture, Rural Economy, and the Useful Arts. In four parts. 1. Introductory, 2. Theoretical, 3. Practical, 4. Demonstrative, and Conclusion. By Walter Wade . . .
Dublin: Printed by Graisberry & Campbell, 10, Back-Lane. 1802.

First edition. 8vo. iv, 50 pp., 1 leaf (blank). Very fine copy. Bound with: Higgins, William, *A Syllabus of a Course of Chemistry* (Dublin, 1801); Lynch, James, *Syllabus [on] Natural and Experimental Philosophy* (Dublin, 1802); and Peall, Thomas, *Syllabus . . . on the Veterinary Art* (Dublin, 1802).

THE FIRST printed syllabus of the course on botany delivered to the Dublin Society in 1802 by its professor of botany, Walter Wade (d. 1825). An M.D. who practiced in Dublin, he was a member of the Linnaean Society and F.R.S. (1811). “In 1796 Wade was asked to arrange the plants in the newly formed Dublin Society’s botanic garden at Glasnevin, and to be ‘Professor and lecturer in botany.’ He lectured on botany in connection with diet, medicine, agriculture, and rural economy, also on meadow, pasture, and artificial grasses” (Henrey, II, 156). Wade published several important books on the botany of Ireland as the result of his extensive tours throughout that country. Rare. Unknown to the bibliographers.

WAGNER, Georg Christoph

Exercitatio Academica de Jure Cerevisiario . . . de Commerc. & Mercatoribus suscepta, & sub praesidio Dn. Joh. Ottonis Taboris, . . . Publicae ac Solenni Eruditorum Censurae exposita ad d. (blank) Mens. Februar. a Georgio Christophoro Wagnero, Lignic-Silesio.
Strassburg: Typis Josiae Staedelii, Academiae Typographi. 1656.

First edition. 4to. 3 leaves, 102 pp. Fine copy, in contemporary vellum. Bound with: Kirchmaier, Georg Caspar, *Institutiones metallicae* (Wittenberg & Leipzig, 1687), and 3 other works on law.

A RARE DISSERTATION on commerce and mercantile law, which covers subjects of scientific (including chemical) interest. Wine and beer are discussed (pp. 1–5), with references to the works of Barth, Matthiolus, Scaliger, Sebitz, et al. The laws regarding the fermentation and preparation of wines and spirits, their commercial exploitation, and transport by sea are extensively discussed, as are the uses of spirituous liquors in medicine. The praeses, Johann Otto Tabor, is briefly cited by Watt (II, 892w), who lists two of his works but not the present title. No reference to Wagner has been located.

WAGNER, Thomas von

Ueber den Beweiss der Regalität des deutschen Bergbaues von Thomas von Wagner . . .
Freiberg: bei der Crazischen Buchhandlung. 1794.

First edition. 8vo. 1 leaf, 54, 14 pp. Very good copy in contemporary blue boards. Bound with: Kapf, Georg Friedrich, *Skizzen aus der Geschichte des schlesischen Mineralreichs* (Breslau, 1794).

AN INTERESTING work on the history of the laws relating to the mining of ores in Germany from the medieval period to the last quarter of the eighteenth century. The author, on whom no information has been found, published another work on the laws relating to the mining of metals (*Corpus iuris metallici recentissimi et antiquioris*, Leipzig, 1791), on which see Hoover, no. 854. Rare. Not mentioned by the usual bibliographies.

WAHL, William H.

Galvanoplastic Manipulations. A practical guide for the gold and silver electroplater and the galvanoplastic operator. Comprising the electro-deposition of all metals by means of the battery and the dynamo-electric machine, as well as the most approved processes of deposition by simple immersion, with descriptions of apparatus, chemical products employed in the art etc. . . .
Philadelphia: Henry Carey Baird & Co. 1883.

8vo., pp. xxviii, 656 + 31, [1] advertisements. With 189 line engravings within text. Leaves lightly browned; otherwise a very good copy in original publisher’s embossed diaper cloth, spine decorated and lettered gilt, inner hinges cracked.

FIRST EDITION, based on Roseleur’s *Manipulations hydroplastiques . . .* first published in 1855.

WAHRE PANACEA AUREA

Wahre Panacea Aurea, oder Güldene Essentz, nach ihrer Krafft und Würckung umbständlich beschreiben.

N.p., n.d. (ca. 1680).

First edition. 4to. 16 pp. Woodcut capital on page 2 and large woodcut tailpiece on page 16. Fine copy in maroon quarter morocco, marbled boards, spine gilt-lettered and dated.

ON THE “true golden panacea,” describing the preparation and medicinal uses of potable gold. The anonymous German author, an iatrochemist, refers to the writings of Quercetanus and lists the diseases that his gold-containing solution is reputed to cure. An extremely rare work, apparently unrecorded, of considerable pharmaceutical chemical interest.

WALDENSTRÖM, Johan Karl

Dissertatio Chemica de Atramentis Sympatheticis. . . . Praeside Doct. Christiani Wollin . . . Pro Exercitio Ventilandam Exhibet Johannes Carolus Waldenström Gothoburgensis. In Aud. Acad. Carol. Major. Die 28 Maji An. MDCCLXXXI.

Lund: Typis Berlingianis. (1781).

First edition. 4to. 2 leaves, 15, (1) pp. Fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A COMPREHENSIVE DISSERTATION on the chemistry of sympathetic (invisible) inks, presented by Waldenström under the direction of the professor of chemistry and pharmacy at the University of Lund, Christian Wollin (1730–1798). Numerous inks based on inorganic salts are described, including those containing bismuth, cobalt, copper, gold, iron, lead, tin, and other metals. Inks containing starch, sugar, milk, plant and fruit juices, and similar organic substances are also discussed. Reference is made to the works of Cadet, Hellot, Lemery, Macquer, et al. Rare. Not in the usual bibliographies. (Ferchl, 588; Poggendorff, II, 1364)

WALL, J.

Experiments and Observations on the Malvern Waters. . . . With an Appendix, Containing some farther Particulars Relating to their Nature and Uses, . . .

London: W. Sandby, J. Rivington, R. Dodsley; and Worcester: S. Mountfort and R. Lewis. (1757).

Second edition. 4to. Half title + 78 pp. Very good copy, finely bound in modern half calf, marbled boards, antique. With wide margins and some fore-edges uncut.

THIS BOOK contains a good deal on the chemical analysis of these waters, as well as much on their medicinal properties. Rare. (Duveen, 608; Waring, II, 796)

WALL, Martin

Dissertations on Select Subjects in Chemistry and Medicine. . . . Oxford: Printed for D. Prince and J. Cooke. 1783.

8vo. xv[3], 166 pp. Full-page woodcut illustrations of symbols. Brown wrappers (last section loose). Repair of small tear on title page, but a good copy.

FIRST EDITION of the author's dissertations on the study of chemistry, the origin and use of symbols in astronomy and chemistry, and the very interesting account of the diseases, particularly lues venerea, of the South Sea Islands. This is also of historical importance for the account of the first appearance of venereal disease in Europe and the controversy as to the place of origin.

Wall (1746?–1824), a distinguished physician at Oxford, was physician to the Radcliffe Infirmary and Litchfield professor of clinical medicine. He delivered the Harveian oration of 1788. Sir William Osler states that the “essay on symbols is useful” and that in a passage on alchemy “pp. 46–47 are notes on the house of Roger Bacon ‘on the southern bridge over the Isis’” (*Bibliotheca Osleriana*, 4183). (*Munk's Roll*, II, 372; Duveen, p. 608)

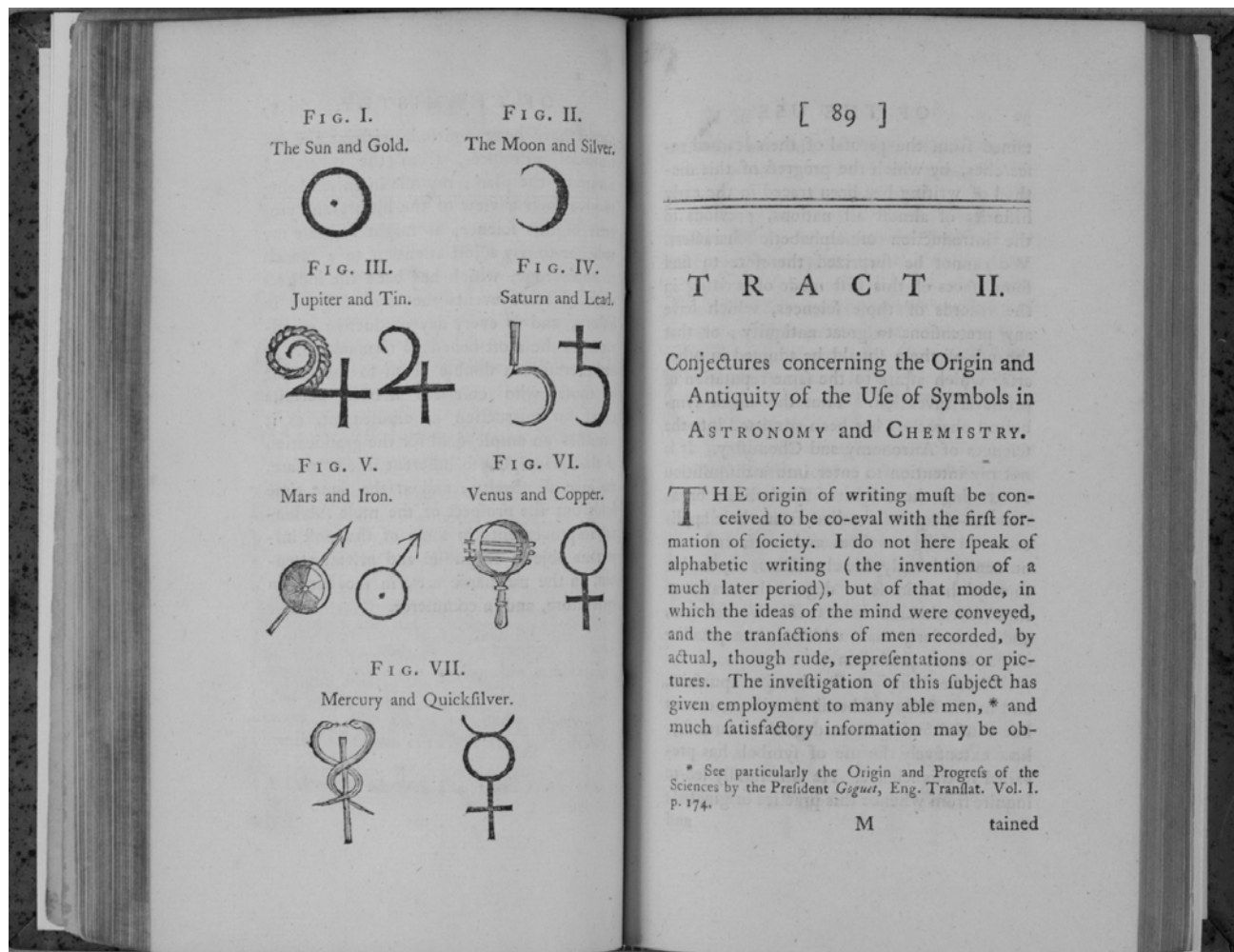
WALLER, William

An Essay on the Value of the Mines, late of Sir Carbery Price. By William Waller, Gent. Steward of the said Mines. Writ for the private Satisfaction of all the Partners.

London: Printed in the Year, MDCXCVIII. (1698).

First (only) edition. Sm. 4to. 12 leaves, 55 pp. With 2 folding plates (1 woodcut cross-section of the Cardiganshire mine and 1 copperplate of the silver mine of Potosi, mounted on the verso of a second copy of the first woodcut plate). Very good copy in contemporary gilt-paneled sheep. From the library of Thomas Littleton Powys, fourth Baron Lilford (1833–1896), celebrated ornithologist (see D.N.B.), with his engraved ducal bookplates on the front pastedown endpaper.

THE FAMOUS copper, silver, and lead mines of Sir Carbery Pryse, or Price (d. 1695), were discovered in 1690 on his estates in Cardiganshire, Wales, and their reputed value was so great that they were called the “Welsh Potosi.” Pryse formed a company of himself and twenty-four shareholders, but they were opposed by the Society of Royal Mines, and several lawsuits followed. When Pryse died in 1695, Sir Humphrey Mackworth (1657–1727) purchased the shares and formed the famous Company of Mine Adventurers. Mackworth was later accused of embezzlement and



Wall, Martin. Dissertations on . . . Chemistry. Oxford, 1783.

found guilty by the House of Commons in 1710. He must later have had a change of heart, as he was one of the founders of the Society for Promoting Christian Knowledge.

This privately printed work is dedicated to Mackworth and about sixty other dedicatees, including Sir Christopher Wren, and was written to induce wealthy investors to exploit the riches of these mines. In addition to detailed discussions of economic matters, there are sections of chemical interest. Pages 36–50 concern the silver that can be extracted from these mines, and pages 10–14 describe the silver mines of Potosi in Bolivia, with the Welsh mines being very favorably compared with them. This is a copy of the issue without the printer's name, of which Wing W552A records only the Harvard copy: it is probably the first issue. The second issue of 1698 has "F. Collins" in the imprint (Wing W552) and is less rare than the first issue.

WALLERIUS, Johan Gotschalk

Agriculturae Fundamenta Chemica, Akerbrukets Chemiska Grunder . . . Praeside, Johanne Gotsch. Wallerio . . . Publice ventilanda exhibet, Gustavus Adolphus Gyllenborg, Comes. . . . XXIII. Maji Anni MDCCLXI.
Uppsala: (N.p.). 1761.

First edition. 4to. 2 leaves, 321, (1) pp. Fine copy in contemporary half calf, speckled boards, contrasting leather label on spine.

THE DOCTORAL dissertation of Count Gustaf Adolf Gyllenborg (fl. 1761), prepared under the direction of Wallerius at the University of Uppsala. A fundamental work in the history of agricultural chemistry, it is the first book in which the title indicates the relationship between agriculture and chemistry. The text is in Latin and Swedish on facing pages. Wallerius was the first university professor to make the study of agricultural chemistry a subject of student research. "Wallerius' interest in agriculture naturally led him to pursue agricultural chemistry, especially since agriculture was of great importance for the national economy. His research proved so basic and of such scope that he was called the father of agricultural chemistry. His principle work in this field was *Agriculturae fundamenta chemica* (1761). . . . [He] established as a fundamental, necessary principle that agricultural chemistry should be based on comparative study of the chemical composition not only of plants but also of the earth in which they grow" (D.S.B.). This rare milestone work was very well received, and translations appeared in German (1764), French (1766), English (1770), and Spanish (1794). The contents are extensively discussed by C. A. Browne, who illustrates the title page. Bolton lists the work with a Stockholm imprint. (Bolton, 901; Browne,

A Source Book of Agricultural Chemistry, 1944, 126–134; D.S.B., XIV, 144–145; Partington, III, 169–172; Poggendorff, II, 1252; Smith, 500)

WALLERIUS, Johan Gotschalk

Chymische Grundsätze des Feldbaues, welche unter dem vorsize Hrn. Job. Gotsch. Wallerius, der Chymie, Metallurgie &c. ordentl. Prof. bey der königl. Akad. zu Upsal &c. öffentlich vertheidigte Graf Gustaf Adolf Gyllenborg, den 23. may 1761. Aus dem lateinischen Texte übersezt.
Bern: Aus Unkosten der typogr. Gesellschaft zu Bern. 1765.

First Swiss edition. 8vo. 204 pp. Very fine copy in original blue boards, printed orange paper label on spine.

THE RARE first Swiss edition, and the second translation into German, of the important *Agriculturae fundamenta chemica* (Uppsala, 1761). The first German translation appeared the previous year (Berlin, 1764). For details on this work, see the description given for the French translation (Yverdon, 1766). Not in Blake, Browne, Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Poggendorff, Smith, Sondheimer, Waller, Watt, etc. (Bolton, *First Supplement*, 428; Ferchl, 566; Partington, III, 170)

WALLERIUS, Johan Gotschalk

Elemens d'Agriculture physique et chymique, traduits du Latin de M. Wallerius, . . .
Yverdon: n.p. 1766.

First French edition. 8vo. 6, 226 pp. An exceptionally fine copy, in pristine condition, in the original mottled calf, gilt-lettered tan leather label, spine gilt with flower motifs. From the library of Professor Franz Sondheimer, with his bookplate on the front endpaper.

A FUNDAMENTAL WORK in the history of agricultural chemistry. Wallerius was the first university professor to make agricultural chemistry a subject of student research. This doctoral dissertation was written under the direction of Wallerius by his student Count Gustavus Adolphus Gyllenborg, and it is the first book to indicate specifically the relationship of chemistry to agriculture in its title. The original dissertation, printed in Latin and Swedish on opposite pages, was titled *Agriculturae fundamenta chemica* (Uppsala, 1761). The contents of this important milestone work are discussed in detail by C. A. Browne (*A Source Book of Agricultural Chemistry*, 1944, pp. 126–134). In his biography of Wallerius, Uno Boklund in the D.S.B. says that the research done by Wallerius "proved so basic and of such scope that he was called the father of agricultural chemistry. . . . Wallerius established as a fundamental, necessary principle

that agricultural chemistry should be based on comparative study of the chemical composition not only of plants but also of the earth in which they grow." In addition to this French translation, editions in English, German, and Spanish appeared. The famous eighteenth-century chemist Richard Watson owned a copy of this French edition: "bought . . . to improve his estate in Westmorland, where he lived while Bishop of Llandaff, and took to planting, and what Wordsworth called a vegetable manufactory" (Henry Zeitlinger, Sotheran, Cat. No. 757, [1915], item 15445). This French edition is very scarce and is not mentioned by Blake, Bolton, Browne, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Morgan, Neu, Poggendorff, Smith, Waller, Watt, etc. (Ferchl, 566; Partington, III, 170; Sondheimer, 1612)

WALLERIUS, Johan Gotschalk

*De l'Origine du Monde, et de la Terre en particulier; ouvrage dans lequel l'Auteur développe ses Principes de Chymie & de Minéralogie, & donne, en quelque manière, un abrégé de tous ses Ouvrages . . . Traduit par M. J. B. D** . . .*

Varsovie et Paris: Chez J. Fr. Bastien, . . . 1780.

First French edition. 12mo. 100, 360, 8 pp. (advertisement). With folding copperplate. Fine copy, in original mottled calf, gilt, maroon morocco label.

THE FRENCH translation of *Meditationes physico-chemicae de origine mundi* (Stockholm & Leipzig, 1779), a cosmological work. Wallerius bases his theories of the formation of the material world on the laws of chemistry and physics. "The work begins with a treatment of fire, heat and light, the most subtle principles and progresses to the more fixed, water and earth" (Cole). Authors whose works are cited include Becher, Boerhaave, Boyle, Black, Eller, Lavoisier, Marggraf, Pott, and Priestley. The translator, Jean Baptiste Dubois (1753–1808), has added a long preliminary discourse in which he reviews the theories of other writers on the subject (e.g., Buffon, Burnet, Whiston, and Woodward). Not in Bolton, D.S.B., Ferchl, Hoover, etc. (Cole, 1335; Duveen, 609; Neu, 4261; Partington, III, 170; Ward & Carozzi, 2287)

WALLERIUS, Johan Gotschalk

Disputationum Academicarum Fasciculus Primus continens Physico-Chemicas et Chemicas Pharmaceuticas emendatas et correctas nee non necessariis observationibus et annotationibus illustratas. . . Fasciculus Secundus, continens Chemicas Mineralogicas et Metallurgicas, . . . a Joh. Gotsch. Wallerio, . . . Stockholm and Leipzig: Impensis Magni Swederi, 1780, 1781.

First edition. 2 vols., 8vo., in 1. I: 4 leaves, 422 pp., 1 leaf. II: 2 leaves, 367, (1) pp. Very good copy, entirely uncut, in the original pasteboards, spine lettered in ink.

AN IMPORTANT collection of thirty-eight doctoral dissertations over which Wallerius presided, the titles of each being listed by Partington. The subjects covered display the wide range of his lifelong research interests (e.g., principles of bodies, alkaline salts, nature and origin of niter, vegetable oils, fire and light, calcination of metals, chemical medicines, minerals and their chemical composition, origin of mountains, and volcanoes). Rare. Not in Blake, Browne, Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Hoover, Morgan, Neu, Smith, Waller, Watt, etc. (Bolton, 1st Supplement, 428; D.S.B., XIV, 145; Partington, III, 170; Poggendorff, II, 1253; Sondheimer, 1613)

WALLERIUS, Johan Gotschalk

Inträdes-tal om Salternas Ursprung och Anledning, at utleta Orsaken til Kallbräckt Järn. . . af . . . Herr Johan Gottschalk Wallerius, . . . den 2. Junii 1750.

Stockholm: Tryckt hos Lars Salvius. (1750).

First edition. 8vo. 16 pp. Large woodcut ornament on title. Woodcut head- and tailpieces. Fine copy, uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated. Bound with: Wallerius, J. G., *Försvars Skrift* . . . (Stockholm, 1746).

A DISSERTATION BY Samuel Schultze on the origin of naturally occurring salts, written under the direction of Wallerius. The uses of these salts in making sulphuric, hydrochloric, and nitric acids are discussed, as are their value in the manufacture of glass and other materials. There are references to Becher, Stahl, Macquer, et al. No details on Schultze have been found. Rare. Not mentioned by any bibliographer, except Ferchl (p. 566).

WALLERIUS, Johan Gotschalk

Johan Gotschalk Wallerii . . . Försvars Skrift, hvarutinnan Job. Jul. Salbergs Kongl. Ammiralitets Apothek. Tal, hållit och trykt år 1745, besvaras, angående en del Saltarter.

Stockholm: Trykt hos Lars Salvius. (1746).

First edition. 8vo. 32 pp. Fine copy, uncut, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated. Bound with: Wallerius, J. G., *Inträdes-tal om salternas ursprung* (Stockholm, 1750).

A COMPREHENSIVE DISSERTATION on the history and preparation of several different salts, by Johan Julius Salberg (1680–1753), written under the direction of Wallerius. Included are detailed discussions of the chemical reactions of

common salt, natron, borax, potash, Glauber's salt, Epsom salt, etc., with numerous references to earlier and contemporary chemists. On the verso of the title page there is a fourteen-line note by Carl Linnaeus, dated 20 May 1746. Salberg was an important apothecary in Stockholm, and Poggendorff (II, 739) lists him but not this work. Bolton (*First Supplement*, 366) mentions another title of 1746 by Salberg. No reference to this very rare work has been found in any available bibliography.

WALLERIUS, John Gottschalk

Mineralogia, eller Mineralriket . . .
Stockholm: L. Salvius. 1747.

One folding engraved plate. 19 p.l., 479 pp. 8vo., cont. half sheep and speckled boards. Extremities rather worn; occasional light foxing and browning.

FIRST EDITION of the author's "first great work, which was received as an outstanding handbook of contemporary knowledge; never before had such a wealth of minerals been presented so systematically. Wallerius' clear and precise descriptions, which gave more weight to essential chemical properties than to exterior appearance, opened a new epoch in mineralogy" (D.S.B., XIV, p. 144). Wallerius (1709–1785), predecessor of Tobern Bergman in the chair of chemistry at Uppsala, applied chemistry with great success to agriculture and made numerous investigations into the composition of mineral, vegetable, and animal substances. Good copy. Rare. (Partington, II, 169–172)

WALLERIUS, Johan Gotschalk

Mineralogie, ou Description Générale des Substances du Règne Minérale. Par Mr. Jean Gotschalk Wallerius, . . . Ouvrage traduit de l'Allemand. . .
Paris: Chez Durand, Pissot, . . . 1753.

First French edition. 2 vols., 8vo. I: xlviii, 569 pp., 1 leaf. II: 3 leaves, 284, 256 pp. 4 folding copperplates. Very fine copy in contemporary mottled calf, gilt-lettered maroon leather labels, spines richly gilt. From the library of Trapaud Labruyere (late eighteenth century), with his signature in ink on both title pages.

FIRST EDITION in French of the first rational classification of minerals. Wallerius (1709–1785) was the predecessor of Bergman in the chair of chemistry at Uppsala. "Contemporaries compared him with Linnaeus, and this book, which also included his *Hydrologie*, became the standard introduction to mineralogy in France" (Guerlac; the first edition was published in Swedish with the title *Mineralogia, eller Mineralriket* [Stockholm, 1747]). Baron d'Holbach, the French philosopher of German descent and collabora-

tor in the *Encyclopédie*, translated this important work from the excellent German edition (Berlin, 1750) of J. D. Denso, professor of chemistry at Stargard. Wallerius and Denso worked together on the German translation, and Wallerius believed that the German version was superior to the Swedish edition. D'Holbach acknowledges the assistance he received from Bernard de Jussieu and G. F. Rouelle, the great French chemist. The *Hydrologie*, first published in Swedish (1748) and translated into German (1751), forms the second part of volume II. It extends Wallerius's classification to all kinds of fluids. This French edition is dedicated to D'Arclais de Montamy. "*Mineralogia* . . . his first great work, which was received as an outstanding handbook of contemporary knowledge; never before had such a wealth of minerals been presented so systematically. Wallerius' clear and precise descriptions, which gave more weight to essential chemical properties than to exterior appearance, opened a new epoch in mineralogy" (Uno Boklund, in D.S.B., XIV, 144). Not in Blake, Bolton, D.S.B., Duveen, Ferguson, Neu, Poggendorff, Smith, Waller, etc. (Edelstein, 2406; Ferchl, 565; Hoover, 862; Partington, III, 169; Watt, II, 945c)

WALLERIUS, Johan Gotschalk

Systema Mineralogicum, quo Corpora Mineralia in Classes, Ordines, Genera et Species suis cum varietatibus divisa describuntur, atque observationibus, experimentis et figuris aeneis illustrantur, à Joan. Gotsch. Wallerio. . . Tom. I. in quo terrae et lapides describuntur, cum indice quadruplici. Tom. II. in quo minerae & concreta describuntur. . . Editio altera correcta.

Vienna: In Officina Krausiana. 1778.

First Vienna edition. 2 vols., 8vo. I: Engraved frontispiece portrait of Wallerius (C. Schütz sc. 1777). 8 leaves, 448 pp., 20 leaves (last blank). 1 folding copperplate. II: 8 leaves, 640 pp., 30 leaves. 1 folding copperplate. Fine, crisp copy, in contemporary speckled calf, gilt-lettered tan leather labels, spines gilt-ruled.

ORIGINALLY PUBLISHED in Stockholm (1772–75), this Vienna edition is the second, corrected version of the *Systema Mineralogicum*. It is a greatly enlarged and updated work based on the author's *Mineralogia*, which originally appeared in 1747 and was translated into German and French. Many new chemical experiments are included, and minerals are classified according to their reactions to a variety of chemical reagents. The work is made especially valuable by having indices in four languages (i.e., Latin, Swedish, French, and German). Rare. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferchl, Ferguson, Ferguson Coll., Morgan, Neu, Poggendorff, Smith, Sondheimer, Waller, Watt, etc. (Hoover, 864; Partington, III, 169)

WALLQUIST, Elof

Chemicæ Praeparandi Methodi, Aequationibus Explicatae. Dissertatio, quam venia Ampi. Facult. Philos. Upsal. P. P. Mag. Elavus Wallquist . . . P. 1 (-17).

Uppsala: Excudebant Regiae Academiae Typographi. 9 April 1836–13 June 1840.

First editions. 4to. 1 leaf, pp. 1–8, 1 leaf, pp. 9–16, 2 leaves, pp. 17–24, 1 leaf, pp. 25–32, 2 leaves, pp. 33–40, 1 leaf, pp. 41–48, 1 leaf, pp. 49–56, 1 leaf, pp. 57–64, 1 leaf, pp. 65–72, 2 leaves, pp. 73–80, 1 leaf, pp. 81–88, 2 leaves, pp. 89–96, 1 leaf, pp. 97–104, 1 leaf, pp. 105–112, 1 leaf, pp. 113–120, 2 leaves, pp. 121–128, 1 leaf, pp. 129–138. A beautiful copy, in immaculate condition, bound in modern patterned boards, black gilt-lettered label.

A VERY SCARCE collection of dissertations by students of Wallquist (1797–1857), who was professor of physiological chemistry and pharmacy in the University of Stockholm. These dissertations contain some of the earliest attempts to show balanced chemical equations of all the then-known elements and their reaction with acids and bases to form salts. The students whose names are represented by dissertations in this collection are Jonas Risberg, Axelius Claudius Holmgren, Petr. Magn. Christ. Tenggren, Carolus Maur. Hellström, Georgius Gezelius, Oscar Elis Leonard Dahm, Leonhard. Magnus Waern, Petrus Georgius Palmgren, Algotus Joh. Carlander, Moses Gröndahl, Petrus Carolus Gustafsson, Johannes Osc. Walmstedt, Carolus Maur. Nyman, Canutus Olivecrona, Antonius Julius Hörlin, Antonius Fr. Jacobson, and Mauritius Augustus Geber. Some of these students went on to become noted chemists. Bolton (p. 902) mentions a *Dissertatio chemicæ praeparandi methodi aequationibus explicatae. III partes* (Upsaliae, 1822). No reference to the present series of dissertations has been found. Poggendorff (II, 1256) cites a similar title (in three parts) of 1851.

WALMSTEDT, Lars Peter, and
IDSTRÖM, Anders Fredrik

Tentamen Chemicum sistens Analysin Fossilis recens reperti. . . . Publico examini deferunt Mag. Laur. P. Walmstedt, . . . et Andreas Fred. Idström, . . . In Audit. Gust. d. XVI Octobris MDCCCXIII. . . .

Uppsala: Excudebant Stenhammar et Palmblad. (1813).

First edition. 4to. 1 leaf, 10 pp. (last blank). Mint copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine lettered in gilt: Idstrom. Analysin Fossilis. 1813.

A DISSERTATION ON the chemical analysis of certain recently discovered aluminosilicate minerals containing iron, manganese, and tin, presented by Walmstedt (1782–1858)

and his student Idström. The researches of Berzelius, Häüy, Werner, et al., are cited. Walmstedt later became professor of mineralogy at the University of Uppsala. Ferchl and Poggendorff refer to Walmstedt but not to this title, which is unrecorded by the usual bibliographers.

WARD, Samuel

The Wonders of the Load-Stone or, the Load-Stone newly reduc't into a Divine and Morall Use. By Samuel Ward, of Ipswich. . . .

London: Printed by E. P. for Peter Cole, and are to be sold at his shop, at the signe of the glove and Lyon in Cornehill, over against the Conduit. 1640.

First edition. 12mo. 12 leaves (last blank), 1–96, 111–142, 151–271, 172–173, 274–275, 176–177, 278–279, 180–181, (1) pp. (pagination erratic, text complete). Very good copy in eighteenth-century speckled calf, inner and outer dentelles in gilt on covers, rebaced with gilt spine laid on, green morocco label. Engraved armorial bookplates: William Powell Hunt and Robert Traill Spence Lowell.

A TRANSLATION BY Sir Harbottle Grimston (1603–1685) of Ward's *Magnetis reductorium theologicum tropologicum* (London, 1637; S.T.C. 25028), a long sermon on the magnetic nature of the lodestone. The magnet is used as a metaphor for encouraging the faithful to “steer their owne soules to the haven of heaven, as well as their ships to the harbour.” Dedicated to Charles I, the book covers the many practical uses of magnets and their physical and chemical properties, with references to the works of Aristotle, Gilbert, Lucretius, Pliny, Scaliger, et al. Educated at Cambridge, Ward (1572–1643) was chaplain to Charles I (1611), one of the translators of the Apocrypha, prebendary of Wells (1615), then of York (1618), and a leading puritan (see D.N.B.) A frontispiece was issued with some copies, not present here. (Ekelöf, 115; Osler, 5569; S.T.C., 25030; Wellcome, I, 6693; Wheeler Gift, 111a)

WARLTIRE, John

Tables of the Various Combinations and Specific Attraction of the Substances employed in Chemistry. Being a Compendium of that Science: Intended Chiefly for the Use of those Gentlemen and Ladies Who attend the Author's Lectures. By John Warltire, Lecturer in Chemistry and Experimental Philosophy.

London: Printed for the Author. 1769.

First edition. 8vo. 23, (1) pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A SYNOPSIS OF the course on chemistry given by Warltire (1739–1810) of Wolverhampton, an itinerant lecturer who

also sold apparatus and chemicals. Priestley described him as "a good chymist" and bought from Warltire the "red precipitate" (mercuric oxide) from which he first obtained oxygen. In addition to chemistry, Warltire gave lectures on natural philosophy, including astronomy, mechanics, hydrostatics, and physics. Partington (III, 327–328) discusses Warltire and his relationship with Erasmus Darwin, Joseph Priestley, and Josiah Wedgwood but does not mention this title. Cole (nos. 1338 and 1339) describes two other tracts by Warltire. ESTC records only two copies of the present very rare work: British Library and National Library of Medicine. (Blake, 481)

WARREN, John

Dissertatio Medica Inauguralis de Cortice Peruviano: quam, annuente summo numine, ex auctoritate reverendi admodum viri, Gulielmi Robertson, . . . pro gradu doctoris, . . . eruditorum examini subijcit Joannes Warren, Britannus. Ad diem 12 Junii, . . .

Edinburgh: Apud Balfour, Auld, et Smellie, Academiae Typographos. 1770.

First edition. 4to. 3 leaves, 51, (1) pp. Fine, crisp copy, in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt. Presentation copy with inscription in ink on verso of title page: "For Mr. Stewart from his Friend & Servt. The Author."

THE DOCTORAL dissertation of Warren (fl. 1750–1780), dedicated to the great Dr. William Cullen and presented under the praeses Dr. William Robertson at the University of Edinburgh. It deals with the use of cinchona bark (so-called Peruvian bark), which contains quinine and other alkaloids. Warren refers to the earlier work of Sydenham, Hoffmann, Pringle, Cleghorn, MacBride, Percival, et al. Descriptions are given of attempts to extract quinine from the bark using water, alcohol, and other solvents. The work is mainly of medical and pharmaceutical chemical interest and importance. It is not mentioned by most of the early medical and chemical bibliographies. (Waring, 345)

WASSER, Ludwig Johann Tobias

Dissertatio Inauguralis Chémico-Médica de Sale Sedativo Hombergii. . . . Pro obtinendis in arte salutari honoribus D. SIII Octobris MDCCLII. Publice defendet Ludovicus Joannes Tobias Wasser Oettinga-Rhetus.

Gottingen: Litteris Hagerianis. (1759).

First edition. 4to. 3 leaves, 26 pp. Crisp copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A COMPREHENSIVE DISSERTATION on borax (sodium biborate, $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$) and boric acid (H_3BO_3), in which their history, preparation, properties, and medicinal uses are discussed. The works of earlier and contemporary chemists are cited, particularly those of Becher, Geoffroy, Homberg, and Lemery. Waring (p. 686) lists an edition of 1768 but not this. Rare. Not found in the usual bibliographies.

WASSERBERG, Franz August Xaver von

Francisci de Wasserberg Institutiones Chemiae, in usum eorum qui scientiae huic operam dant. Regnum minerale. Metalla in genere: metalla perfecta. (Tomus II. Semi-metalla).

Vienna: Apud Rudolphum Graeffer. 1778, 1779.

First edition. 2 vols., 8vo., in 3. I: 398 pp., 1 leaf (blank).

II: 392 pp. Woodcut figure of apparatus for subliming flowers of zinc and antimony on page 353. III: 366 pp., 1 leaf (blank). Fine copy in contemporary quarter calf, speckled boards, with original printed paper labels on spines. From the Prince Fürstenberg library, Donaueschingen, with old stamps on verso of title pages.

WASSERBERG (1748–1791), a printer's reader in Vienna, translated many French and Latin works into German. He produced this excellent textbook on metals and semi-metals, which is divided into approximately 2,600 numbered paragraphs. Volume I deals with so-called perfect metals, and volume II (two parts in two volumes) covers semimetals. According to Partington a third volume on non-metallic inflammable substances appeared later (Vienna, 1780). Each volume is complete in itself, and the third volume is often missing. Very scarce. Not in D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Hoover, Morgan, Pogendorff, Smith, Sondheimer, Waller, Watt, etc. (Blake, 482 [1780 vol. missing]; Bolton, 904; Ferchl, 567 [1780 vol. missing]; Neu, 4271 [1780 vol. missing]; Partington, III, 575)

WATIN

L'Art du Peintre, Doreur, Vernisseur, Ouvrage utile aux Artistes & aux Amateurs qui veulent entreprendre de Peindre, Dorer, & Vernir toutes sortes de sujets en Bâtimens, Meubles, Bijoux, Equipages, &c. in 8°. de plus de 400 pages en trois Parties: Par le Sieur Watin, Peintre, Doreur, Vernisseur, & Marchand de Couleurs, Dorures & Vernis. Quatrième Édition, Revue, corrigée & augmentée. . . .
Paris: Chez l'Auteur. 1785.

Fourth edition. 8vo. Very good, crisp copy, in the original quarter calf, marbled boards, spine richly gilt, maroon label.

A VERY USEFUL book containing recipes and processes for painters, varnishers, gilders, etc. There is much of purely chemical interest and importance regarding the making of various dyes, pigments, gilding alloys, varnishes, etc. The book first appeared in 1772, with second and third editions in 1773 and 1776, respectively. Nothing appears to be recorded in the bibliographies concerning the author, "Watin," not even his first name. Information regarding Watin's activities can be gleaned from the prefaces to all four editions (which are reprinted here). The *approbation* is very interesting as it is dated "A Paris, ce 4 Avril 1784. Macquer." Macquer died on 15 February 1784, so this must have been one of the last books he read and approved for publication. Rare. Not listed in the usual chemical and technological bibliographies.

WATSON, Joseph Yelloly

A Compendium of British Mining, with Statistical Notices of the Principal Mines in Cornwall; to which is added, the History and Uses of Metals, and a Glossary of the Terms and Usages of Mining. Compiled for the use of persons interested but not conversant with the subject. By Joseph Yelloly Watson. London: Printed for Private Circulation. 1843.

First edition. 8vo. 2 leaves, 82 pp., 1 leaf (list of subscribers). Fine copy in modern quarter calf, cloth boards, spine gilt-lettered.

A RARE WORK printed by private subscription: the list of subscribers lists only 124 copies spoken for. Watson, on whom no biographical information has been found, was evidently well versed in the methods of British, and especially Cornish, mining. Most of the book deals with the mines of Cornwall, particularly those producing tin, silver, copper, lead, gold, zinc, mercury, cobalt, manganese, antimony, platinum, nickel, and arsenic. Detailed accounts are given of the numerous mines in Cornwall, with the names and principal metals produced by each mine, the monetary values of the several ores, statistical data, etc. Mines in Cumberland, Essex, Bedfordshire, Derbyshire, Yorkshire, Cardiganshire, Anglesea, Flintshire, Shropshire, and other areas of Great Britain are also covered. Pages 63–76 trace the history of metals, with many references to early mineralogists, alchemists, chemists, and geologists. The history of tin, copper, gold, silver, iron, lead, zinc, mercury, cobalt, nickel, manganese, antimony, platinum, and arsenic is of interest to the chemical historian. Pages 77–82 comprise a valuable glossary of mining terms, some of them no longer in use. No reference to this significant work has been found, which supersedes the *Mineralogia Cornubiensis* (London, 1778) of William Pryce in presenting more recent information on mining methods.

WATSON, Richard

Anecdotes of the Life of Richard Watson, Bishop of Landaff; Written by Himself at Different Intervals, and Revised in 1814. Published by His Son, Richard Watson, LL.B., Prebendary of Landaff and Wells.

London: T. Cadell and W. Davies. 1817.

First edition. Large 4to. 1 leaf (title page), 552 pp. With fine frontispiece portrait of Watson (excellent impression), engraved by W. T. Fry from an original picture by Romney. A very fine, crisp, large-paper copy, in contemporary polished half calf, marbled boards, dark-blue morocco lettering label, raised bands, gilt. Bookplate: Thomas Harman Brenchley (possibly a nineteenth-century relation of Julius Lucius Brenchley [1816–1873], curate at Maidstone in 1843. See D.N.B.).

THE DEFINITIVE biography of Richard Watson (1737–1816), who wrote the very popular *Chemical Essays* (Cambridge, 1781–87, 5 vols.), which Gibbon praised as "a classic book, the best adapted to infuse the taste and knowledge of chemistry" (see *Decline and Fall of the Roman Empire*, ch. 52). A very scarce biography. Not mentioned in Bolton, Duveen, Ferchl, Ferguson, Morgan, Poggendorff, or Waller. (Partington, II, 765; Smith, 501)

WATSON, Richard

Institutionum Chemicarum in Praelectionibus Academicis Explicatarum, Pars Metallurgica.

Cambridge: Typis Academicis Excudebat J. Archdeacon. 1768.

First edition. 4to. 4 leaves, 58 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt.

ON THE death of John Hadley (1731–1764), professor of chemistry at the University of Cambridge, Watson (1737–1816) was elected by the senate to succeed him. At that time Watson was completely ignorant of chemistry, but after fourteen months of intensive study with an "operator" from Paris he became a competent chemist. The *Institutionum* formed the textbook for part of the author's course on chemistry, and his lectures were well attended. In fifteen chapters Watson covers the chemistry of the known metals and their compounds (i.e., Hg, Sb, Bi, Zn, Co, Ni, Pb, Cu, Fe, Sn, Ag, Au, and Pt). This, the first of his chemical publications, was reprinted unchanged in the fifth volume of the famous *Chemical Essays* (London, 1787, pp. 301–375) and in subsequent editions of that work. Not in Blake, Ferguson, Ferguson Coll., Hoover, Smith, Sondheimer, Waller, etc. (Bolton, 904; D.S.B. XIV, 191; Duveen, 610; Edelstein, 2413; Ferchl, 567; Morgan, 795; Neu, 4276; Partington, II, 765; Poggendorff, II, 167; Watt, II, 953g)

WATSON, William

Experiments and Observations Tending to Illustrate the Nature and Properties of Electricity. In one Letter to Martin Folkes, Esq.; President, and Two to the Royal Society. By William Watson, F.R.S. The Third Edition.

London: C. Davis, Printer to the Royal Society. 1746.

Third edition. 8vo. 1 leaf (t.p.), viii, 3–59 pp., (p. 60 bl.). Fine copy, uncut and unpressed, in modern old-style half calf, marbled boards. Bound with: Watson, W., *A Sequel to the Experiments and Observations . . . Electricity* (London, 1746).

SIR WILLIAM WATSON (1715–1787), physician and naturalist, became a fellow of the Royal Society in 1741. He published botanical papers from 1744, some articles on his electrical experiments (1745–63), and some medical papers (1762–68). There were three editions of the present title in 1746. In this work Watson observed “that although ice, as well as water, is an ‘electric’ or non-conductor, moist air conducts, and he explains thereby the failure of electrical experiments in wet weather” (D.N.B.). “Watson’s electrical experiments became famous outside scientific circles. George III (then Prince of Wales), the Duke of Cumberland . . . , and other fashionable people went to see them at his house in Aldersgate Street” (D.N.B.). This work and the *Sequel* (1746) contain numerous references to subjects of chemical interest and importance (e.g., phlogiston; combustibility of oils, esters, etc.; explosions of hydrogen, methane, etc.; phosphorus; and gunpowder). A very scarce work. Not mentioned by Partington, etc. (Wheeler Gift Cat., 333, with a full-page illustration of p. 40 of this book)

WATSON, William

A Sequel to the Experiments and Observations Tending to Illustrate the Nature and Properties of Electricity: Wherein it is presumed, by a Series of Experiments expressly for that Purpose, that the Source of the Electrical Power, and its Manner of acting are demonstrated. Addressed to the Royal Society. By William Watson, F.R.S.

London: C. Davis, Printer to the Royal Society. 1746.

WATSON WAS “among the earliest experimenters on electricity, the first to investigate passage of current through rarified gas and to discover that conductivity increases; attempted to improve output of Leyden jar” (*World Who’s Who in Science*). “He agrees with the Abbé Nollet in regarding electricity as existing normally everywhere in a state of equilibrium, and regards the electrical machine as comparable to a pump which accumulates electricity on the bodies we term ‘electrified.’ Watson’s theory, though less clearly formulated, is hardly distinguishable from that of Benjamin

Franklin” (D.N.B.). Of considerable chemical interest in connection with early theories of the nature of fire, flame, combustion, etc. The works of Guericke, Boyle, Homberg, Lemery, s’Gravesand, Bose, Boerhaave, etc., are mentioned and cited. (Wheeler Gift Cat., 333b; Sotheran, Cat. 757 [1915], no. 15473 [“Rare”])

WATSON, William

The Visitors’ Guide to the Guisbrough Alum Works; or, the manufacture of alum and its salts explained. By W. Watson.

Stokesley: Printed by W. F. Pratt. 1854.

First edition. 8vo. 93, (1) pp., 1 leaf (advertisement). Very good copy, in the original blind-stamped green cloth, front cover gilt-lettered.

AN IMPORTANT monograph dealing with every aspect of the manufacture of alum (potassium aluminum sulphate) and aluminum salts derived from it. The text is written in question and answer form. “[T]he manufacture of alum has been called the earliest chemical industry. There were alumworks in England in Elizabethan times at Guisborough (in Yorkshire).” This locally printed guide gives a full account of alum making and outlines its history. Watson reprints a paper on the subject, originally published in the *Philosophical Transactions of the Royal Society* in 1675. This interesting book was published in the same year that St. Claire-Deville started to manufacture aluminum. Very scarce. Not listed in available bibliographies.

WATT, Alexander

Electro-Metallurgy Practically Treated. By Alexander Watt, F.R.S.S.A.

London: John Weale. 1860.

First edition. 12mo. viii, 116 pp. Large woodcut illustration on title page and woodcut illustrations in text. Fine copy in tan calf antique, green morocco label gilt, spine dated.

AN IMPORTANT early work on electrochemistry and electrometallurgy. Watt (1823–1892) lectured on these subjects and was one of the editors of *The Chemist*. In the preface he says that he had worked on electrometallurgy for twenty years and wrote this book on its practical aspects. The title-page illustration shows two men in the process of electroplating metal teapots and jugs, in a bath connected with two batteries. Several later editions appeared, but the first edition is very rare. Even the great Wheeler Gift library catalogue lists only the fifth (1874) and sixth (1877) editions. Not in Bolton, D.S.B., Duveen, Edelstein, Ekelöf, Perchl, Ferguson Coll., Partington, Poggendorff, Smith, Sondheimer, Waller, etc. (Mottelay, 670)

ELECTRO-METALLURGY

PRACTICALLY TREATED.

BY

ALEXANDER WATT, F.R.S.S.A..

Lecturer on Electro-Metallurgy, &c. ;
Formerly one of the Editors of "THE CHEMIST."



LONDON :
JOHN WEALE, 59, HIGH HOLBORN.
1860.

Watt, Alexander. Electro-Metallurgy. London, 1860.

WATT, James

Correspondence of the late James Watt on his Discovery of the Composition of Water. With a letter from his son. Edited with introductory remarks and an appendix by James Patrick Muirhead . . .

London: John Murray; Edinburgh: William Blackwood and Sons. 1846.

First edition. 4to. 3 leaves, cxxvii, (1), 264 pp. With frontispiece portrait of Watt (E. Finden sculpt.). Very fine large-paper copy, in contemporary dark-blue morocco (by C. Lewis), all edges gilt, covers with outer and inner gilt rules, spine gilt-ruled and dated, armorial crest in gilt of the earl of Dartmouth on both covers. Editor's presentation copy, inscribed in ink on flyleaf: "The Right Hon. The Earl of Dartmouth, with the Editor's best respects and regards." A holograph letter from Muirhead to the earl, dated 5 December 1846, is inserted.

AN IMPORTANT work on the so-called water controversy. Muirhead (1813–1898) collected, edited, and carefully analyzed the letters of Watt and papers published in the *Philosophical Transactions*, together with other material, to prove Watt's rights to claim the discovery of the composition of water. An excellent summary is given of the controversy that involved Cavendish and Lavoisier, followed by extracts from Watt's correspondence with Sir Joseph Banks, Black, De Luc, and Priestley. The appendix contains the texts of the papers on the subject by Cavendish, Lavoisier, Monge, and Watt; extracts from Arago's eulogy of Watt; and a historical note by Lord Brougham. In 1846 an octavo edition of this work appeared with the same pagination and printed from the same setting of type but with changes in the signatures. (Bolton, 253; Cole, 1344; D.S.B., XIV, 198; Duveen & Klickstein, 64; Duveen, *Supplement*, 140; Edelstein, 2416; Partington, III, 344; Sotheran, Cat. 800 [1926], 12217)

WEBER, Jacob Andreas

Beschreibung der grossen Saline bei Gmunden in Oberbsterreich und einige Gedanken fiber andere Salinen von J. A. Weber.

Tübingen: bei Jacob Friedrich Heerbrandt. 1789.

First edition. 8vo. 96 pp. Some dark stains on margins of last few leaves; otherwise a good copy, uncut with wide margins, in modern marbled boards, with gilt-lettered and dated maroon morocco label on spine.

ALTHOUGH HE graduated in medicine (M.D., Tübingen, 1760), Weber was also a very skillful chemist and was employed at the Von Sand plant, near Coburg, which manufactured pigments and dyes. Most of Weber's writings are on chemistry, and this work contains a detailed description of the saltworks near Gmunden in Austria and the pro-

cesses used there. Weber considers possible improvements and discusses the novel ideas of other German chemists as well as methods used in various European countries. Scarce. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Neu, Partington, Smith, Sondheimer, Waller, Watt, etc. (Ferchl, 569; Poggendorff, II, 1271)

WEBER, Jacob Andreas

Nützliche Wahrheiten für Fabrikanten and Künstler von J. A. Weber.

Vienna: bei Joseph Stahel. 1787.

First edition. 8vo. 271, (1) pp. Very good copy, uncut with wide margins, in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt, with original blue wrappers bound in.

AN IMPORTANT book on late-eighteenth-century German chemical technology. Weber (1741–1792), a doctor of medicine, first lived in Tübingen, then Vienna, and finally in Grub near Coburg, where he manufactured Prussian blue and conducted research on the improvement of technical processes for the large-scale manufacture of various inorganic compounds. He is now remembered for his pioneering investigations on Prussian blue, which are discussed in detail in the present work (pp. 213–241). Other subjects covered include the production of saltpeter (potassium nitrate), Naples yellow (lead antimonate), phosphorus, cinnabar (mercuric sulphide), and sal ammoniac (ammonium chloride). Scarce. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Partington, Smith, Waller, Watt, etc. (Ferchl, 569; Poggendorff, II, 1271)

WEBER, Jacob Andreas

Vollständige theoretische and praktische Abhandlung von dem Salpeter, and der Zeugung desselben, nebst einer Abhandlung von der Gahrung, durch physische and chemische Grundsätze and Erfahrungen bestätigt von J. A. Weber.

Tübingen: bei Jacob Friederich Heerbrandt. 1779.

First edition. 8vo. 362 pp. Very fine copy in the original boards, ink-lettered paper label on spine. From the Prince Fürstenberg library, Donaueschingen, with old stamp on verso of title page.

AN IMPORTANT work divided into two parts, the first of which (pp. 15–234) is a comprehensive monograph on all aspects of the manufacture, purification, and applications of niter (saltpeter, potassium nitrate), including the preparation of nitric acid and various nitrates. The second part (pp. 235–362) deals with the physics and chemistry of fermentation processes, with descriptions of the preparation and purification of ethyl alcohol, acetic acid, ethyl acetate,

etc. Not in Blake, D.S.B., Edelstein, Ferguson Coll., Morgan, Smith, Sondheimer, Waller, Watt, etc. (Bolton, 906; Duveen, 610; Perchl, 568; Ferguson, II, 531 [not in Young Coll.]; Neu, 4281; Partington, III, 574; Poggendorff, II, 1271)

WEBER, Joseph

Ueber das Feuer. Ein Beitrag zu einem Unterrichtsbuche aus der Naturlehre . . . Landshut im Verlage, Bei Anton Weber Hofbuchbinder.

Lauingen: gedruckt bei Joachim Speck, pfalzbaierischer Buchdrucker. 1788.

First edition. 8vo. 4 leaves, 216 pp., 1 leaf. 1 folding copperplate. Mint copy, in original boards, from the Fugger family library (noted German bankers).

ONE OF the most interesting minor scientists of the late-eighteenth and early-nineteenth centuries, Weber (1753–1837) was a Catholic priest who studied with the Jesuits at Augsburg. He was appointed professor of physics and philosophy at the University of Dillingen and later became professor of physics and chemistry at the University of Ingolstadt. This interesting book on heat, light, and fire is divided into three main parts: 1) nature of heat, 2) nature of light, and 3) luminescence. There are many references to Stahl, Ingenhousz, Lambert, Newton, Marat, Priestley, et al. Weber discusses basic problems of optics, sources of light, origin of colors, electroluminescence, the luminescence of the sea, minerals, animals, etc. “A theory based on ‘Feuerstoff’ as a principle of heat and light is developed and used to explain related phenomena. There is a long section dealing with the effect of light on plants” (Cole). “The work is rare and remained unknown to Poggendorff, Bolton and to the author’s biographer in the *Allgemeine Deutsche Biographie*” (Duveen). Poggendorff (II, 1272) lists another edition (Regensburg, 1801). (Cole, 1351; Duveen, 611; Ferchl, 569; Neu, 4282; Sotheran, Cat. 828 [1931], 3931)

WEBSTER, Charles, and IRVING, Ralph

The Edinburgh New Dispensatory: containing I. The Elements of Pharmaceutical Chemistry. II. The Materia Medica: or, An alphabetical Arrangement of the Substances employed in Medicine; with an Account of their Virtues and Uses. III. Pharmaceutical Preparations. IV. Medicinal Compositions. The two latter parts comprehending the Preparations and Compositions of the last London and Edinburgh Pharmacopoeias, with such of the old ones as are kept in the Shops; also the most Useful of those directed in the London Hospitals, and in the Royal Infirmary of Edinburgh; together with the most esteemed Foreign Medicines, and a Variety of

elegant Extemporaneous Forms. Digested in a Regular Method: and the Different Departments enriched by the Introduction and Application of the Later Discoveries in Natural History, Chemistry, and Medicine; with Particular Directions for performing the various Processes; Remarks on the Properties and Uses of the several Subjects; the Means of distinguishing spurious Substitutes, and of detecting Adulterations, &c. New Tables of Elective Attractions, Single and Double; of Antimony, Mercury, &c. and Copperplates of Chemic-Pharmaceutical Instruments. The whole being an Improvement upon the New Dispensatory of Dr. Lewis. By Gentlemen of the Faculty at Edinburgh.
Edinburgh: Charles Elliot, and G. G. J. and J. Robinson. 1786.

First edition. 8vo. 1 leaf, xxxii, 1–64, *65–94*, 65–720 pp. With 3 double-page plates (between pp. 48–49, 52–53, and 56–57). Fine copy in contemporary speckled tan calf.

BASED ON the *Edinburgh Pharmacopoeia* (1756) of Dr. William Lewis, this work has been entirely revised and augmented by Dr. Charles Webster (d. 1796), a Scotsman who received the M.D. degree from Edinburgh (1777). Webster was a fellow of the College of Physicians of Edinburgh and physician to the army. He taught chemistry at Edinburgh, and pages xvii–xxxii comprise an “Abstract from Dr. Webster’s Syllabus of Lectures on Chemistry.” Topics covered included acids, alkalis, salts, inflammable bodies, metals, water, and airs (gases). There are references to the work of Black, Bergman, Macquer, Priestley, et al. The doctrine of phlogiston is maintained but with reservations on page xix: “some deny the existence of phlogiston.” This first edition is rare. Neu and Wellcome list later editions. (Munk, II, 443; Watt, II, 955p)

WEBSTER, John

Elements of Mechanical and Chemical Philosophy. . . .
Taunton: Printed for the Author, by J. Poole . . . , n.d. [1819?].

First (only) edition. 8vo. Very good copy of this privately printed work, in modern quarter calf, cloth sides, maroon label, gilt.

DUVEEN (p. 611) dates this work “1816,” although on what evidence I do not know. In the present copy the flyleaf facing the title page is plainly watermarked “1819” in the paper. The slight foxing spots offset onto the title exactly match so that this flyleaf is contemporary with the rest of the book. Hence the book cannot have been printed before 1819. A rare work.

WEBSTER, John

Elements of Natural Philosophy; Explaining the Laws and Principles of Attraction, Gravitation, Mechanics, Pneumatics, Hydrostatics, Hydraulics, Electricity, and Optics: with a general view of the Solar System. Adapted to Public and Private Instruction. By John Webster.

London: Printed for J. Johnson. 1804.

First edition. 8vo. Pp. xvi, 302. With numerous woodcut diagrams in the text. Fine, crisp copy, in contemporary calf, with marbled endpapers, tastefully rebacked, with green morocco lettering label, gilt, spine dated at foot.

THIS IS the first edition of the first of three books written by John Webster, about whose life little has been recorded. Duveen (p. 611), referring to another of Webster's books, states that "no bibliographical record of this author can be found, he was probably a local man." Webster evidently lived most of his life in or near Taunton, Devonshire. The present work is dedicated to "Mr. John Bonnycastle, Mathematical Master at the Royal Academy, Woolwich; . . . from a regard to his talents." Possibly Webster was educated at Woolwich. Bonnycastle (1750?–1821), whose biography is in the D.N.B., was professor of mathematics at the Royal Military Academy, Woolwich. This copy bears on the title page the signature "Robert Gardiner, 1823" in ink. This was possibly Robert William Gardiner (1781–1864), general of the British army, who entered the Royal Artillery in 1797 and who fought at Waterloo in 1814, etc., on whom see the D.N.B. Although this work deals with physics, astronomy, etc., it contains matter of chemical interest. According to the Wheeler Gift Catalogue, a new, augmented edition appeared in 1807. A very rare book. (Wheeler Gift Catalogue, No. 666)

WEBSTER, John

Metallographia: or, an History of Metals. Wherein is declared the signs of Ores and Minerals both before and after digging, the causes and manner of their generations, their kinds, sorts, and differences; with the description of sundry new Metals, or Semi Metals, and many other things pertaining to Mineral knowledge. As also, the handling and shewing of their Vegetability, and the discussion of the most difficult Questions belonging to Mystical Chemistry, as of the Philosophers Gold, their Mercury, the Liquor Alkabeſt, Aurum potable, and such like. Gathered forth of the most approved Authors that have written in Greek, Latine, or High-Dutch; with some Observations and Discoveries of the Author himſelf. . . .

London: Printed by A. C. for Walter Kettily at the Bishops-head in St. Pauls Churchyard. 1671.

First edition. 4to. 8 leaves, 388 pp., 1 leaf (advertisements).

Fine copy, in original speckled calf, gilt, maroon morocco label. Signature on first free endpaper: "Roger Garstell his Book 1689."

THE MOST important and comprehensive English book on metallurgy that had appeared to that date, including much on alchemy and mineralogy. Melting and refining, especially in England, are covered with reference to Camden's *Britannia*. There is a critical bibliography "Of those Authors that have treated of Metals and Minerals" (pp. 25–39). The Yorkshireman Webster (1610–1682), a student of medicine and theology at Cambridge, learned chemistry from the Hungarian alchemist John Huniades in White-chapel (see D.N.B.). "As an illustration of the method of dealing with mineralogy and metallurgy in the seventeenth century, this book is interesting, and it displays considerable knowledge and wide reading" (Ferguson). Webster cites his sources in the margins, with page references. (Annan, 41; Bolton, 907; Cole, 1353; Cushing, W87; D.S.B., XIV, 210; Duveen, 611; Edelstein, 2426; Ferchl, 569; Ferguson, II, 531; Ferguson Coll., 753; Hoover, 867; Krivatsy, 12613; Neu, 4284; Partington, II, 112; Thorndike, VII, 263; Ward & Carozzi, 2293; Watt, II, 955s; Wing, W1231A)

WECKER, Johann Jakob

Antidotarium Generale à Io. Iacobo Vueckero . . . Physico nunc primum laboriosè congestum, methodicè digestum. Cum elencho locupletissimo . . .

Basel: Per Eusebium Episcopium & Nicolai Frat. haeredes. 1580.

Second edition. 4to. 8 leaves, 198 pp., 5 leaves (index, last leaf lacking). Woodcut device on title page and approximately 50 woodcuts in text of chemical apparatus and furnaces. Final 2 leaves of index with marginal repairs (no loss); otherwise very good copy. Neat signature in ink on title page: Michael Ignatius Sauer, Prague, 1644. Bound with: Wecker, Johann Jakob, *Antidotarium Speciale* (Basel, 1577).

A COMPANION VOLUME to the *Antidotarium Speciale* (1577) and the *De Secretis* (1582). The first edition appeared four years earlier by the same printers (Basel, 1576; Durling, 4702; Ferguson, II, 533; Wellcome, I, 6701). Wecker lists the names of 121 authors he consulted when writing this work (e.g., Albertus Magnus, Avicenna, Brasavola, Brunschwig, Gesner, Monardes, Paracelsus, Sylvius, and Ulstad). The book is primarily concerned with the preparation of chemical compounds for medicinal use, using contemporary laboratory processes. Chemicals made from minerals and metals, acids, alkalies, salts, etc., are described. Different techniques and procedures for distillation of plants and animals are covered in detail (pp. 140–163), with excellent large woodcuts of apparatus and furnaces of various types.

This very rare edition is not in the British Library, Wellcome, or the usual bibliographies. The copy in the National Library of Medicine is seriously defective, lacking pages 141–184 (including the chemical woodcuts) and the final two pages. (Durling, 4703)

WECKER, Johann Jakob

Antidotarium Generale et Speciale: ex opt. Authorum tam veterum quam recentiorum scriptis fideliter & methodice a Ioan. Iacobo Weckero Basiliense congestum & dispositum: nunc vero supra priores editiones omnes multis novis & optimis Formulis, maxime vero Extractis auctum: Adjectis Indicibus locupletissimis.

Basel: Per Conr. Waldkirch, sumptibus Episcopianorum. 1601.

Second edition. 4to. 8 leaves, 60 folios (including 8 pp. index). Title within woodcut border. 2 columns of text per page. Woodcut capitals, head- and tailpieces. Many large woodcut illustrations (furnaces, distillation equipment, chemical apparatus, etc.). Very good copy, in modern vellum, gilt-lettered maroon morocco labels on spine and front cover.

THE FIRST edition of 1595 appeared at Basel, and, although complete by itself, the present book is the first part only of the work (i.e., the “general” section). It is “a companion volume to the author’s *De Secretis*, and treats almost exclusively of chemical and medical secrets and preparations. Of special interest is the general part (as here), which gives instructions how to conduct chemical operations, and illustrates a large variety of distilling apparatus. The work . . . is much rarer than *De Secretis*” (Zeitlinger). The woodcuts are of high quality and depict the most important chemical apparatus of the period. Wecker compiled his book by consulting well over two hundred authors who had written on the subject and whose names he lists. (Duveen, 612; Neu, 4288; Partington, II, 29; Sotheran, Cat. 832 [1932], 5803)

WECKER, Johann Jakob

De Secretis Libri XVII. Ex varijs authoribus collecti, methodicéque digesti. Per Ioannem Iacobum Weckerum Basiliensem, Medicum Colmariensem. Accessit Index locupletissimus. Cum Gratia & Privilegio.

Basel: (No printer or publisher). 1582.

First edition. 8vo. 24 leaves, 962 pp. Woodcut printer’s device on title page and woodcuts in text. Fine copy in the original blind-tooled vellum over oak boards with 2 brass clasps (1 missing). Binding tooled in compartments, with small portraits of Philipp Melanchthon and Martin Luther amid floral designs. Neat signature in ink on title (Georg. Schripp, 1585).

WECKER (1528–1586) was professor of logic and Latin in Basel, then qualified in medicine and went as town physician (1566) to Colmar. His deservedly famous book of secrets passed through many editions (the last in 1753), as well as translations. Book III (pp. 44–96) deals entirely with chemical operations and distillation. The remainder of the book contains numerous references to topics of chemical, pharmaceutical, and metallurgical interest. Wecker compiled this important work from ancient as well as contemporary authors, a list of which he gives. The dedicatory epistle to Baron Lazarus Svendius is dated: Colmariae, Kalend. Augusti. 1582. The first edition is of the greatest rarity, and Ferguson states that he had never seen a copy. The copy in the Duveen collection has a damaged title page: the printer’s device and imprint are missing. A copy in as fine condition as this must be considered to be almost unique. Not in Bolton, Caillet, Ferchl, Ferguson Coll., Osler, Smith, Waller, Wellcome, etc. (Durling, 4707; Duveen, 612; Ferguson, II, 534 [not in Young Coll.]; Neu, 4292; Partington, II, 29; Watt, II, 956b)

WECKER, Johann Jakob

De Secretis Libri XVII. Ex variis authoribus collecti, methodicéque digesti, & aucti . . . Accessit index locupletissimus.

Basel: Sumptibus Ludovici Regis. 1642.

8vo. 8 leaves, 667, (1) pp., 14 leaves (last blank). Woodcut printer’s device on title, woodcut text illustrations, capitals, head- and tailpieces. Few leaves slightly embrowned; otherwise very sound copy in contemporary speckled calf, gilt, maroon morocco label; with eighteenth-century engraved bookplate of C. van Baviere.

DESCRIBING THIS edition in 1883, Ferguson (*Secrets*) states: “Another edition of Wecker’s *Secrets* . . . appeared at Basil, and is one of the most respectable copies I have seen. Usually the work is printed badly on spongy paper stained with foxing, so that it is quite a relief to meet a copy like the present on firm fair paper.” “Cet ouvrage est toujours recherché des curieux, pour les choses singulières qu’il renferme” (*Biogr. Univ.*). A scarce edition. (Ferchl, 569; Ferguson, II, 534 [not in Young Coll.]; Ferguson, *Books of Secrets*, 1, pt. 2, p. 48; Smith, 503; Sotheran, Cat. 907 [1954], 388)

WECKER, Johann Jakob

Les Secrets et Merveilles de Nature. Recueillis de divers Auteurs, & divisez en XVII livres. . . . Reveu, corrigé, & augmenté. Avec une Table tres-ample.

Rouen: Chez Theodore Reinsart, devant la Palais, à l’Homme Armé. 1608.

First Rouen edition. 8vo. 8 leaves, 982 pp., 24 leaves (index, last blank lacking). Large woodcut printer's device on title. Ornamental woodcut capitals, head- and tailpieces. With 60 woodcut text illustrations. Fine copy, in mid-eighteenth-century tree calf, gilt.

THE FRENCH translation, by Pierre Meyssonier, of the first Latin edition (Basel, 1582) originally appeared at Lyons in 1584 (Ferguson, *Books of Secrets*, II, 3rd suppl., p. 34). Other Lyons editions were published in 1586, 1600, 1611, and later years. The present first edition to be printed at Rouen was again reprinted in 1608 in smaller format (12mo., Duncan, 14489) in the same city. Later Rouen editions, based on the present one, appeared: 1614 (Duveen, 613; Wellcome, I, 6716); 1627 (Ferguson Coll., 754); 1639 (Caillet, 11370); 1651 (Ferguson, II, 534); 1663 (Ferguson Coll., 754); 1680 (Ferguson, II, 534). The present well-printed edition is possibly the earliest to contain the sixty charming woodcuts. It is extremely rare and is not in the British Library. Ferguson (II, 534) mentions this edition, but it is not in the Young Collection.

WECKER, Johann Jakob

Eighteen Books of the Secrets of Art & Nature, being the Summe and Substance of Naturall Philosophy, Methodically Digested. First designed by John Wecker Dr. in Physick, and now much Augmented and Inlarged by Dr. R. Read. A like work never before in the English Tongue.

London: Printed for Simon Miller at the Starre in St. Pauls Church-yard. 1660.

First English edition, first issue. Folio. 4 leaves, 346 pp., 4 leaves (index). Woodcut device on title, woodcut text figures, capitals, and headpieces. Bottom corner of 4 index leaves repaired (slight loss of text), and few minor stains and contemporary marginal annotations; otherwise very good copy, in half calf antique, gilt, cloth boards, maroon morocco label. Neat signature (p. 249): "John Wright his Booke, 1676." Armorial bookplate (eighteenth century): Edw. Leigh.

THE ONLY English translation, by Dr. R. Read, containing additional information from more modern authors: e.g., Francis Anthony, Francis Bacon, Thomas Browne, Kenelm Digby, John French, William Harvey, and Hugh Plat. Some copies were issued with an engraved title page (containing portraits of Alexis, Albertus Magnus, Francis Bacon, Harvey, Lull, Dr. Read, and Wecker), together with three pages of Simon Miller's publications at the end. Neither the Duveen nor the Ferguson Collection copies have the engraved title page. The sheets of this 1660 issue were reissued with a reset title dated 1661. The book contains much information on the making of pigments, dyes, inks, and painting. It is possible, therefore, that the signature on page

249 is that of the English artist John Wright (1625?–1700), portrait painter and rival of Sir Peter Lely (1618–1680). (Duveen, 613; Ferchl, 569; Ferguson, II, 534 [not in Young Coll.]; Ferguson, *Books of Secrets*, II, 3rd Suppl., p. 35; Ferguson Coll., 753; Neu, 4295; Sondheimer, 1635; Sotheran, Cat. 692 [1909], 5296 ["Very Rare"]; Watt, II, 956c; Wing, W1236)

WECKSTRÖM, Jacob Daniel

M. G. H. Strödde Chemiske Anmärkningar, til uplysning i Svenska Lagfarenheten. Första delen utgifven med vederbörandes samtycke och vid Kongl. Lärosätet i Åbo . . . Herr Pehr Adrian Gadds . . . Af Jacob Daniel Weckström . . . d. 16 Jun. 1770.

Åbo: Tryckt hos Joh. Christoph. Frenckell. (1770).

First edition. 4to. 3 leaves, 13, (1) pp. Very good copy with wide margins, uncut, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the chemical uses and economics of a variety of Swedish minerals (e.g., alum, iron ores, porphyry, and talc), as well as mineral acids (hydrochloric, nitric, sulphuric), presented by Weckström (dates unknown) under the direction of Pehr Adrian Gadd (1727–1797), professor of chemistry, physics, and economics at Åbo, Finland. The works of du Halde, Maupertuis, Tournefort, and others are mentioned. Not in N.U.C. or the usual bibliographies.

WEDEL, Georg Wolfgang

Amoenitates Materiae Medicae.

Jena: Symptibus Johannis Bielkii, Bibliop. Literis Wertherianis. 1704.

First edition, second issue. 4to. 7 leaves, 512 pp., 7 leaves.

Title page in red and black, with large woodcut device printed in red. Fine copy, in contemporary vellum. Bound with: Wedel, G. W., *Pharmacia in artis formam redacta* (Jena, 1693), and 2 other works by Wedel.

A COMPREHENSIVE TREATISE on the materia medica. That this is a reissue of the first edition of 1684 is shown by the stub of the 1684 edition being still in place. The dedication and preface are both dated 1684, and the only thing different about this 1704 reissue is the reset title page. Divided into two main sections, the first describes the physiological effects produced by different pharmaceuticals, while the second discusses medicinal preparations for the cure of various diseases. (Blake, 484; Watt, II, 956f)

WEDEL, Georg Wolfgang

De Medicamentorum Compositione Extemporanea, ad praxin Clinicam & usum hodiernum accommodata, liber, tribus sectionibus distinctus. . . .

Jena: Sumptibus Johannis Bielkii, Bibliop. Typis Viduae Samuelis Krebsii. 1693.

Second edition. 4to. 4 leaves, 212 pp., 6 leaves. Title page in red and black, with large woodcut printer's device. Date trimmed from bottom of title; otherwise fine copy, in contemporary vellum. Bound with: Wedel, G. W., *Pharmacia in artis formam redacta* (Jena, 1693), and 2 other works by Wedel.

DEDICATED TO the Academia Naturae Curiosorum, this is a sequel to *De medicamentorum facultatibus cognoscendis et applicandis* (Jena, 1678). The first edition of the present work (Jena, 1678) was evidently popular, as it was reissued with the date changed to 1679. An unchanged reprint of the first edition, this second edition has identical pagination but is from a different setting of type. The book contains new information on the chemicals used in medicine. (Krivatsy, 12651; Watt, II, 956e)

WEDEL, Georg Wolfgang

De Medicamentorum Facultatibus Cognoscendis et Applicandis, Libri Duo. . . .

Jena: Sumtu Joannis Bielki, Bibliopolae, Literis Nisianis. 1696.

Second edition. 4to. 10 leaves, 238 pp., 5 leaves (index) + 2 leaves (catalogue of works by Wedel). Title page in red and black, with large woodcut ornament. Fine copy, in contemporary vellum. Bound with: Wedel, G. W., *Pharmacia in artis formam redacta* (Jena, 1693), and 2 other works by Wedel.

A PHARMACEUTICAL CHEMICAL treatise that describes the preparation of medicines for specific diseases and disorders of the human body. The catalogue with separate divisional title page at the end lists twenty-one books written by Wedel and other works edited by him. In addition there is a list of 142 dissertations (with names of doctoral candidates) presented under the direction of Wedel up to the year 1696 at the University of Jena. The first edition (Jena, 1678) was translated into English as *An introduction to the whole practice of physick* (London, 1685; Wing, W1244B). (Krivatsy, 12653)

WEDEL, Georg Wolfgang

Georgii Wolffgangi Wedelii, Hereditarii in Schwartzza, Medicinae doctoris, comitis Palatini Caesarei, serenissimorum Saxoniae Ducum consilarii et archiatri, theoretices professoris publici ordinarii, facultatis medicinae h.t. decani, Propempticon Inaugurale de Quaesitis per Urim et Thummim.

Jena: Litteris Krebsianis. (Colophon: 22 June, 1710).

First edition. 4to. 12 pp. Fine, crisp copy, bound in maroon half morocco, marbled boards, antique, spine gilt-lettered and dated.

A VERY RARE alchemical work on the Urim and Thummim of the ancient Jews. As Partington (II, 315) has pointed out, Wedel "regarded Moses as an alchemist." According to the *Oxford English Dictionary*, the Urim referred to "certain objects, the nature of which is not known, worn in or upon the breastplate of the Jewish high-priest, by means of which the will of Jehovah was held to be declared." The *Oxford English Dictionary* quotes Milton: "The Counsel would be as the Oracle Urim and Thummim, those oraculous gems on Aaron's breast." From this it would appear that the Urim and Thummim were precious stones that were supposed to have alchemical significance. The subject is now wrapped in mystery, and several possible explanations have been put forward. In this work Wedel cites the writings of Josephus, Gesner, Gockelius, Mynsicht, et al., as well as quotations from the Old and New Testaments of the Bible. Hufbauer states that Wedel "stood midway between medieval and modern world views, defending astrology and alchemy and championing iatrochemistry. He . . . influenced a whole generation of physicians, including Hoffmann and Stahl" (*Dict. Sci. Biog.*, XIV, 212). No reference to this work has been found in available bibliographies.

WEDEL, Georg Wolfgang

Introductio in Alchimiam.

Jena: Sumptibus Johannis Bielkii, Bibliop. Litteris Christophori Krebsii. 1705.

First edition, first issue. 4to. 2 leaves, 60 pp. Large woodcut printer's device on title page. Fine copy, in gilt-ruled calf antique, maroon morocco label.

AN ENTHUSIASTIC believer in alchemy, Wedel included a reprint of the *Tabula Smaragdina* of Hermes in this work (pp. 59–60), taken from the *De Alchemia* (Nuremberg: J. Petreium, 1541; see Ferguson, I, 18). Divided into twenty-one chapters, this treatise discusses the objections to alchemy by various authors, the frauds and fallacies of the alchemists, the fundamental precepts of the art, alchemical experiments, the antiquity of alchemy, authors who have



Wedel, Georg. *Opiologia*. Jena, 1674.

written on alchemy, the universal matter, animals, vegetables, minerals, mercury, antimony, the use of chemical furnaces, etc. The writings of numerous early and contemporary alchemists and chemists are cited. The present very rare first issue of 1705 was followed by the second issue in 1706, which is the one listed by Bolton, Duveen, Ferguson, etc. (Blake, 484; Ferguson Coll., 755; Partington, II, 315)

WEDEL, Georg Wolfgang

Opiologia ad mentem Academiae Naturae Curiosorum.

Jena: Sumptibus Johannis Fritschii, Bibliopolae Lipsiensis. Typis Samuelis Krebsii. 1674.

First edition. 4to. 4 leaves, 170 pp., 1 leaf. Title page in red and black, with large copperplate vignette (opium being collected by a Turk). Occasional minor foxing; otherwise fine copy, in polished half calf antique, marbled boards, maroon morocco label, spine dated by Bayntun.

A CLASSIC AND comprehensive treatise on the early chemistry and physiological effects of opium and related alkaloids. The history of opium and its origin, preparation, and

use internally and externally as an analgesic, astringent, soporific, cathartic, diaphoretic, and antipyretic are described. Slightly enlarged second (Jena, 1682) and third (Jena, 1739) editions appeared. (Ferchl, 570; Krivatsy, 12663; Parkinson & Lamb, 2565; Waring, 585; Watt, II, 956e)

WEDEL, Georg Wolfgang

Pharmacia Acroamatica.

Jena: Sumptibus Johannis Bielckii, Bibliop. Literis Viduae Samuelis Krebsii. 1686.

First edition. 4to. 8 leaves, 520 pp., 8 leaves (index). Title page in red and black, with large woodcut. Fine copy in contemporary vellum. Bound with: Wedel, G. W., *Medicamentorum Compositione Extemporanea* (Jena, 1693), and 2 other works by Wedel.

A PUPIL OF Werner Rolfinck at Jena, Wedel (1645–1721) became professor of medicine at Jena (1673) and believed in alchemy (see Partington). The present work on pharmacy describes chemical operations (e.g., solution, crystallizations, effervescence, fermentation, and distillation). The

increase in weight of metals (e.g., antimony, lead) on calcination is explained as being due to the absorption of igneous particles (cf. Robert Boyle). "The book deals with chemistry as much as pharmacy" (Partington). Wedel "introduced into practice certain medicines which bear his name, and he was a strong supporter of the iatro-chemical principles of De la Boe Sylvius" (Ferguson, II, 536). "Wedel stood midway between medieval and modern world views, defending astrology and alchemy and championing iatro-chemistry" (D.S.B., XIV, 212). Scarce. Not in the usual bibliographies. (Ferchl, 570; Krivatsy, 12666; Neu, 4301; Partington, II, 316)

WEDEL, Georg Wolfgang

Propempticon Inaugurale de Quaesitis per Urim et Thummim.

Jena: Litteris Krebsianis. (Colophon: 22 June, 1710).

First edition. 4to. 12 pp. Fine copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

AN EXTREMELY rare alchemical tract on the Urim and Thummim of the ancient Jews. Partington (II, 315) points out that Wedel "regarded Moses as an alchemist." The *Oxford English Dictionary* states that the Urim referred to "certain objects, the nature of which is not known, worn in or upon the breastplate of the Jewish high-priest, by means of which the will of Jehovah was held to be declared. The O.E.D. quotes Milton: "The Counsel would be as the Oracle Urim and Thummim, those oraculous gems on Aaron's breast." From this it appears that the Urim and Thummim were precious stones that were supposed to have an alchemical significance. The subject is now wrapped in mystery, and several possible explanations have been proposed. Wedel cites the writings of Josephus, Gesner, Gockelius, Mynsicht, and others, as well as quotations from the Old and New Testaments of the Bible. Hufbauer states that Wedel "stood midway between medieval and modern world views, defending astrology and alchemy and championing iatrochemistry. He . . . influenced a whole generation of physicians, including Hoffmann and Stahl" (D.S.B., XIV, 212). Unknown to the usual bibliographers.

WEDEL, Georg Wolfgang

Syllabus Materiae Medicae Selectioris.

Jena: Sumptibus Johannis Bielckii, Typis Christophori Krebsii. 1701.

First edition. 4to. 40 pp. Large woodcut on title page. Fine copy in contemporary vellum. Bound with: Wedel, G. W., *Pharmacia acroamatica* (Jena, 1686), and 2 other works by Wedel.

A SELECTION of the syllabus on the materia medica delivered by Wedel at Jena. It comprises a detailed list of chemicals and medicinal preparations for treating different diseases and conditions, in thirty-three sections. Numerous chemical symbols are used throughout. Rare. Not in the usual bibliographies. (Blake, 484)

WEDEL, Johann Adolph

Ioannis Adoiphi Wedelii, philosoph. et medic. doctoris, professoris publici ordin. et med. Due. Prov. Saxovinar. ac Ienensis reip. phys. facultatis medicae h.t. decani, Propempticon Inaugurale de Fornacum Emendatione III. Jena: Litteris Ritterianis. (Colophon: 5 February, 1719).

First edition. 4to. 12 pp. Fine, crisp copy, in maroon half morocco antique, marbled boards, spine gilt-lettered and dated.

JOHANN ADOLPH WEDEL (1675–1747), born in Jena, was the third son of the famous chemist and physician Georg Wolfgang Wedel. He was professor of theoretical medicine (1717) and later of practical medicine and chemistry in Jena. Wedel published dissertations on chemical subjects (see Partington, II, 317). The present work is on the most advantageous construction and operation of chemical furnaces, which, of course, were much used in laboratories of the time. There are references to the writings of Teichmeyer and other chemists. Very rare. Not mentioned in any available bibliography.

WEEKES, W. H.

A Memoir on the Universal Portable Eudiometer, an Apparatus designed with a View to Operative Convenience and Accuracy of Result, in the Researches of Philosophical Chemistry; and Directions for its Construction and modes of use. By W. H. Weekes, Surgeon, Lecturer on Chemistry and Experimental Science to the Canterbury Philosophical and Literary Institution, &c.

Sandwich: Printed for the Author, at the Minerva Press, by T. E. Stow, and may be had of the Booksellers. 1828.

First edition. 4to. viii, 37, (1) pp. + errata slip. Large lithographed folding frontispiece of the apparatus (after the drawing by the author). Very good copy, with wide margins, in original printed boards, rebaced in unlettered cloth, corners tipped with leather (worn). Presentation copy, with neat 3-line holograph inscription in ink on title page: "To James Fletcher, Esq. this Copy is presented as a testimony of the sincere esteem entertained for him, by The Author." Bookplate: Library U.S. Patent Office.

THE SELF-ACTING eudiometer designed and constructed by the author is described in detail with its use in various applications, including the chemical analysis of gaseous mixtures formed by detonation with an electric spark. No

biographical information has been located on Weekes, who claims that his improved eudiometer is superior to those of Humphry Davy, Michael Faraday, Thomas Charles Hope, and Alessandro Volta. As it was printed at the expense of the author, it is probable that very few copies were made. Extremely rare. Not found in available bibliographies.

WEIDENFELD, Johann Seger von

De Secretis Adeptorum, sive de Usu Spiritus Vini Lulliani Libri IV. Opus practicum per concordantias Philosophorum inter se discrepantium, tam ex antiquis, quam modernis Philosophiae adeptae Patribus mutuo conciliatis summo studio collectum, & novissima concinne methodo ita digestum, ut vel tyrones possint discernere, vegetabilium, animalium, mineralium praeparationes, supposititias sophisticas a veris, sive pro re medica, sive metallica, atque sic cavere sibi a vagabundis deceptoribus, imaginariis processibus & suarum pecuniarum dilapidatione.

Hamburg: Apud Gothofredum Schultzen. Typis Nicolai Spieringii. 1685.

Second (first Hamburg) edition. 12mo. 24 leaves, 602 pp., 5 leaves. Very fine copy, in original unlettered vellum.

A TREATISE ON Lull's spirit of wine (first: London, 1684), by Weidenfeld, of whose life little is known. "Weidenfeld in 1684 tried to counteract the obscurity of hermetic writings by making public property of his own researches concerning the spirit of wine, in which the whole secret of the art was centered. Although he called the spirit of wine Lullian, his inspiration presumably went back to the quintessence of John of Rupescissa. . . . His book is a collection of menstrua, first vegetable, then mineral, divided into simples and compounds, and taken from various earlier writers" (Thorndike, VIII, 394). The last page of the index lists unprinted manuscripts the author had used in compiling this work, including *De Magisterio sive de investigatione secreti occulti Lullii: ab illustri Dn. Roberto Boyleo*. This is probably one of the manuscripts burned in 1688, about which Boyle complained in *An Advertisement . . . address'd to Mr. J. W.* (see Fulton, no. 188). This book is dedicated to Boyle, and the J. W. referred to is most likely Weidenfeld. (Ferchl, 571; Ferguson, II, 538 [not in Young Coll.]; Ferguson Coll., 756; Ferguson, *Secrets*, I, pt. 2, p. 44; Fulton, no. 281; Krivatsy, 12901; Verginelli, 346)

WEIGEL, Christian Ehrenfried

Observationes Chemicæ et Mineralogicæ quas inclyti ordinis medici consensu in Academia Georgia Augusta pro gradu doctoris legitime impetrando publice defendet auctor Christianus Ehrenfried Weigel, Sundensis Pomeranus. Die XXVII. Martii MDCCLXXI.

Göttingen: Aere Dieterichiano. (1771).

First edition. 4to. 3 leaves, 78 pp., 2 leaves. 1 engraved plate. Very good copy in modern blue boards.

THE DISSERTATION for the M.D. degree of Weigel (1748–1831) at the University of Göttingen. It consists of fifteen discourses on a variety of chemical and mineralogical subjects (e.g., distillation of alcohol, mercury and its reactions, dissolution of tin, various types of clay, salts, diethyl ether and its properties, gold and silver, and Iceland spar). It is historically important because Weigel describes (pp. 16 et seq.) an early version of the so-called Liebig condenser, constructed of two concentric tubes with water flowing between them. The plate clearly illustrates the condenser. A second dissertation, independent of the first but with similar title, appeared two years later (Greifswald, 1773). In 1774 Weigel was appointed to the new chair of chemistry and pharmacy in the medical faculty of the University of Griefswald and held this post for the rest of his life. He kept German chemists informed of foreign developments in chemistry by his translations of works by Wallerius, Guyton de Morveau, Maret, Durande, Scheffer, Lavoisier, and von Engeström. Not in Blake, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Smith, Sondheimer, Waller, Watt, etc. (Bolton, 908; D.S.B., XIV, 224; Ferchl, 571; Partington, III, 148; Poggendorff, II, 1283)

WELLS, William Charles

An Essay on Dew, and Several Appearances connected with it. By William Charles Wells, M.D. F.R.S.

London: Printed for Taylor and Hessey, No. 93, Fleet Street. 1814.

First edition. 4to. 2 leaves, 146 pp. + 16 pp. (advertisements). Fine copy, uncut and unpressed, in original plain boards, re-backed, printed paper label on spine.

ONE OF the great classics of physical chemistry, physics, and meteorology, for which the author was awarded the Rumford Medal of the Royal Society. "Wells's most important contribution was his meticulous study of the formation of dew and the correct interpretation of his data. He proved that dew is neither invisible rain, . . . nor 'sweat' from plants, but is due to condensation from air in contact with objects that have been cooled by radiating their heat

into the cloudless night sky. He showed that a dark substance, charcoal, accumulated more dew than pale material, such as chalk, and that poor conductors of heat, such as plants, were covered with more dew than good conductors, such as metal objects. . . . This complete and original theory was not generally accepted until its confirmation and extension by John Aitken in 1885" (D.S.B.). This research was termed by Tyndall "a beautiful investigation, a model of wise enquiry and lucid exposition," and by Sir John Herschel "one of the most beautiful specimens of inductive experimental enquiry." "His researches . . . were of major importance in the development of the science of ventilation, particularly in its relation to relative humidity" (Garrison-Morton). Born in South Carolina of Scottish parents, Wells (1757–1817) was educated at Edinburgh (M.D., 1780), elected F.R.S. (1793), and was physician at St. Thomas's Hospital, London (1800–1817). For biographical details on Wells, see D.N.B., D.S.B., Munk, etc. Very scarce. (Cushing, W131; D.S.B., YIV, 253; Edelstein, 2441; Garrison-Morton, 1604; Knight, 191; Middleton, *Theories of Rain*, 188; Munk, II, 383; Poggendorff, II, 1293; Sotheran, Cat. 692 [1909], 5322 ["excessively scarce"]; Watt, II, 957g)

WELSCH, Georg Hieronymus

Curationum propriarum, & Consiliorum Medicorum Decades X, cum commentario, sive necessaria exegeisi. Opus posthumum, astronomiae & medicorum veterum placitis, nec non modernis pharmacorum legibus admensum & accuratum. Augsburg: Apud Theophilum Göbelium, Typis Koppmayerianis. 1681.

First edition. 4to. 5 leaves, 676 pp., 16 leaves. With 19 finely engraved copperplates (mainly astronomical and astrological, with alchemical symbols for metals). Very fine copy, from the library of Elias Ashmole. Bound with: Welsch, G. H., *Hecatosteeae. II. Observationum physico-medicarum* (Augsburg, 1675); and Schroeck, L., *Memoria Welschiana* (Augsburg, 1678).

A POSTHUMOUS IATROCHEMICAL work by Welsch describing numerous case histories, edited by his close friend Lucas Schroeck (1646–1730), who has contributed a laudatory preface and introduction. Welsch is now chiefly remembered for his extensive survey of dracontiasis (diseases caused by metazoan parasites) in *Exercitatio de vena Medinensi* (Augsburg, 1674; Garrison-Morton, 5336.1). The preparation and properties of numerous pharmaceutical chemicals are described. Undoubtedly Elias Ashmole, from whose library this came, was interested in the excellent medico-astrological plates contained in this volume. There are separate indexes for authors cited, the diseases and cures, and medical and chemical terms. (Krivatsy, 12924)

WELSCH, Georg Hieronymus

Hecatosteeae. II. Observationum Physico-Medicarum ad Illustrem Societatem Naturae Curiosorum in Germania. Augsburg: Impensis Theophili Goebelii, Bibliopolae. Typis Joannis Schönigkii. 1675.

First edition. 4to. 5 leaves, 130 pp., 3 leaves; 69, (1) pp., 13 leaves. Finely engraved frontispiece (J. H. Schoenfeldt delineavit, Melchior Haffner sculpsit) and 12 copperplates (crystals, minerals, fossils, etc.). Floral woodcut on title page. Very fine copy in contemporary unlettered English calf. From the library of Elias Ashmole, with note on first free endpaper ("Pr. 10s. To Dr. Ashmole. May 18, 1683") and with extensive annotations on the materia medica neatly written on the front and rear pastedown endpapers. Armorial bookplate (eighteenth century): Wm. Constable, F.R.S. & F.A.S. Bound with: Schroeck, L., *Memoria Welschiana* (Augsburg, 1678); and Welsch, G. H., *Curationum propriarum . . . medicorum decades X* (Augsburg, 1681).

THE CELEBRATED Augsburg physician Welsch, or Velsch (1624–1677), was a member of the Academia Naturae Curiosorum. In this work he describes the pharmacological uses of naturally occurring materials (e.g., animals, plants, minerals, and fossils). There is much of chemical interest, and the author cites many chemists and their works (e.g., Beguin, Brendel, Digby, Helmont, Libavius, Ruland, Sennerst, and Zwelfer). This copy has a distinguished provenance, having once belonged to the antiquary, astrologer, and physician Elias Ashmole (1617–1692), founder of the famous Ashmolean Museum, Oxford, to which he left most of his library. (Eales, 845; Ferchl, 573; Krivatsy, 12929; Manget, *Bibl. Script. Medicorum* [1731], II, pt. 2, p. 474; Parkinson & Lumb, 2575)

WENELL, Eric

Dissertatio Chemica, de Sulphate Potassae Acidulo, . . . Praeside Mag. Joh. Gadolin, . . . pro laurea publice ventilandam sistit Ericus Wenell, Wiburgensis. In Auditorio Majori die IX Junii MDCCCII. . . . Åbo: Typis Frenckellianis. (1802).

First edition. 4to. 1 leaf, 8 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. 5 Dissertations. 1797–1805.

A DISSERTATION ON the history, preparation, and physical and chemical properties of potassium bisulphate, presented by Wenell under the direction of Gadolin, professor of chemistry at Åbo. The researches of Baumé, Bergman, Link, Rouelle, and other chemists are cited. The preparation of double sulphates is also described. (Partington, III, 236)

WENZEL, Carl Friedrich

Carl Friedrich Wenzel Lehre von der Verwandtschaft der Körper.

Dresden: bey Johann Samuel Gerlach. 1782.

First edition, second issue. 8vo. 2 leaves, 491, (1) pp. Fine, crisp copy, in contemporary half calf, speckled boards, original printed paper label on spine. From the Donaueschingen library, with old stamp on verso of title page.

A PIONEER WORK in stoichiometry. "This is one of the most important (chemical works) of its time, and contains a very great amount of quantitative and qualitative experimental work" (Ferguson). Wenzel's main contribution was a collection of analyses of salts, which are given in the present book. His analyses were tabulated (with those of Bergman and Kirwan) by Guyton de Morveau. He made an important contribution to the early history of the development of the law of mass action by his studies on the rates of dissolution of metals in acids, on which see Partington. The first issue of the first edition appeared in 1777, and the 1782 second issue (as here) is identical except for the imprint and date on the title. It was edited with notes again in 1800, which was the edition used by Thomas Thomson, who said "Wenzel never obtained the confidence of chemists . . . and his book fell almost dead-born from the press." Nevertheless, Partington discusses the book at length, saying that he has found "Wenzel quite often quoted" and that "all Wenzel's books are scarce." Not in Blake, Caillet, D.S.B., Duveen, Edelstein, Neu, Sondheimer, Waller, Watt, etc. (Bolton, 911; Ferchl, 574; Ferguson, II, 544 [not in Young Coll.]; Kopp, II, 356–359; Partington, III, 671, IV, 575–576; Poggendorff, II, 1297; Smith, 507; Sotheran, Cat. 757 [1915], 15506 ["rare"]; Thornton & Tully, 165)

WENZEL, Carl Friedrich

Chymische Untersuchung des Flusspaths.

Dresden: im Verlag bey Johann Samuel Gerlach, 1783.

First edition. 8vo. 51, (1) pp. Very good copy in contemporary blue boards. Bound with: Bergman, T. O., *Sciagraphia Regni Mineralis* (Leipzig & Dresden, 1783); and Suckow, G. A., *Mineralogische Beschreibung des Natürlichen Turpeths* (Mannheim, 1782).

WENZEL STUDIED chemistry and metallurgy in Leipzig. In 1780 he became director of the Freiberg mines and in 1786 was chemist to the Meissen porcelain factory. He held some peculiar views, believing in alchemy, which damaged his reputation. Wenzel regarded metals as composed of phosphorus, a coloring earth, a talc-like earth, and a salt, etc. His principal contribution to chemistry was a collection of analyses of salts. Partington (III, 671–673) discusses

Wenzel's researches. The present work describes his investigations on fluorspar (naturally occurring calcium fluoride). By the action of sulphuric acid on fluorspar (described on pp. 40–41), he obtained gaseous hydrofluoric acid, which he described as extremely corrosive to glass but not so corrosive to lead. Wenzel (1740–1793) was a member of the Economic Society of Leipzig and of the Royal Danish Academy at Copenhagen. Partington (p. 671) says that "all Wenzel's books are scarce." Not mentioned by Duveen, Edelstein, Morgan, Neu, Smith, Sondheimer, Waller, etc. (Bolton, 911; Ferchl, 574; Ferguson, II, 544 [not in Young Coll.]; Partington, III, 671; Poggendorff, II, 1297)

WEPFER, Johann Jacob

Historia Cicutae Aquaticae, qua non solum plantae hujus venenatae structura naturalis, vires & operationes deleteriae in Homini ac Brutis adcurate describuntur, . . . Antimonii denique, Arsenici, Auripigmenti, & Mercurii, . . . Adjectae sunt ad Calcem Dissertationes de Thee Helvetico ac Cymbalaria. Curante Theodoro Zwingero . . .

Basel: Ex Officina Episcopiana. 1716.

Second (first Zwinger) edition. 3 parts in 1 vol., 4to. 10 leaves, 336 pp., 4 leaves (index, 1 blank); 24, 20 pp. Full-page copperplate facing page 10 (map and view of Donau Eschingen) and 4 full-page woodcuts of plants. Occasional minor browning; otherwise good wide-margined copy in original vellum. With engraved Chippendale bookplate of William Cullen (1710–1790), tutor and professor of Joseph Black at Edinburgh University, and late-eighteenth-century pencil signature of "Mr. Thomson 1/1" on first free endpaper. "Ex libris Societatis Medicae Edinensis" in nineteenth-century hand on title page.

THE FIRST posthumous and complete edition of this "immortal work" (Haller), containing a classic description of the poisonous compounds in the water hemlock. To the text of the first edition of 1679 the editor, Theodor Zwinger (1658–1724), has added two dissertations: on tea and cymbalaria. Here the Swiss chemist and physician Wepfer (1620–1695) describes his experiments on the effects of poisonous plants and minerals and establishes his reputation as a founder of modern toxicology. Also important is a historically significant provenance, having belonged to William Cullen and later purchased for thirteen pence by "Mr. Thomson" (i.e., the famous chemist Thomas Thomson [1773–1852]) when a pupil attending Joseph Black's chemical lectures at Edinburgh before graduating M.D. in 1799. (Blake, 486; D.S.B., XIV, 256; Garrison–Morton, 974.1; *Heirs of Hippocrates*, 535; Partington, II, 319; Waring, 336)

WERTMÜLLER, Carl Heinrich

Dissertatio Chemica de Fonte Acidulari Dannemarkensi, quam . . . praeses Mag. Torb. Bergman, . . . et respondens . . . Carolus Henr. Wertmüller, Stockholmiensis, . . . die 15 Dec. 1773.

Uppsala: Typis Edmannianis. (1773).

First edition. 4to. 1 leaf, 14 pp. Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION ON the acidulous spring in the parish of Denmark, presented by Wertmüller (dates unknown), with Bergman presiding. Wertmüller describes the use of various reagents to analyze the water and on page 12 gives its chemical composition. He also published another work, *Diss. botanico-medica de catechu* (Göttingen, 1779, 4to.), on the preparation and medicinal virtues of catechu (see Waring, 321). Not in the usual early chemical bibliographies. (Moström, 85; Partington, III, 182; Waller, 934)

WESTON, Stephen

Werneria; or, Short Characters of Earths: with Notes according to the Improvements of Klaproth, Vauquelin, and Hauy. By Terrae Filius.

London: C. and R. Baldwin, and W. Miller. 1805.

First edition. 8vo. Pp. viii, 106. Fine, crisp copy, in contemporary half calf, marbled boards, spine gilt-ruled. Bound with, Weston, Stephen, *Werneria, (Part the Second) or, Short Characters of Earths and Minerals* (London, 1806). From the library of General Sir John Alexander Ewart, K.C.B., with his armorial engraved bookplate on the front pastedown endpaper.

WESTON (1747–1830), antiquary and man of letters, was educated at Blundell's School, Tiverton. He became a fellow of Exeter College, Oxford (1768–84), M.A. (1770), and B.D. (1782), and, after traveling as a tutor on the Continent, became rector of Mamhead (1777–90) and Little Hempston, Devon (1784–1823). He was elected F.R.S. (1792) and F.S.A. (1794). Weston was a man of wide and varied learning who published notes on travel, classical texts and annotations, notes on Shakespeare, scriptural commentaries, and translations from Arabic, Chinese, and Persian (1776–1828). The present work describes minerals, with their classification according to the system of Abraham Gottlob Werner (1749–1817). Minerals are divided into genera and species, following Born and Babington, and notes are added “in conformity with the new (chemical) analyses of Kirwan, Klaproth, and Vauquelin, and the comments and annotations of De Lisle and Hauy.” This first volume discusses earths only (e.g., silicates, carbonates, and sulfates) and is of considerable interest in the history of

mineralogical chemistry. Very rare. Not mentioned by Bolton, Duveen, Ferchl, Morgan, Smith, etc. (Watt, II, 958z)

WESTPHAL, Georg

Disputatio, de Currentibus Sibi Invicem Obviis. . . praeside, Mag. Samuele Duræo, . . . pro gradu . . . Georgius Westphal, Pet. Fil. Gotthlandus. . . III. April. Anni MDCCLXXIII.

Uppsala: Typis Edmannianis. (1773).

First edition. 4to. 15, (1) pp. Fine copy. Bound with: Wimermark, Sven, *De Diverse Radiorum* (Uppsala, 1776), and 30 other dissertations (q.v.).

A PHYSICAL DISCOURSE on ocean currents, with references to the works of Kircher, Varenius, Dampier, Bergman, Anson, Buffon, Halley, Ray, et al. No reference to Westphal or this work has been found.

WESTPHAL, Sven

Dissertatio Gradualis, de Origine Fontium, . . . moderante . . . Johanne Gotsch. Wallerio, . . . submittit . . . Sveno Westphal, Gotthlandus, . . . ad diem XIV Martii anni MDCCLXI.

Uppsala. (1761).

First edition. 4to. 2 leaves, 11, (1) pp. Good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION OF chemical interest on the origin of mineral springs, by Westphal (dates unknown), presented under the direction of J. G. Wallerius (1709–1785), professor of chemistry at Uppsala. The works of many scientists are cited (e.g. Becher, Buffon, Descartes, Halley, Mariotte, and Sturm). Very rare. Unknown to the usual authorities.

WESTRUMB, Johann Friedrich

Geschichte der neu entdeckten Metallisirung der einfachen Erden. Nebst Versuchen und Beobachtungen. . .

Hannover: In der Helwingschen Hofbuchhandl. 1791.

First edition. 8vo. viii, (2), 143, (1) pp. Fine copy in contemporary marbled boards. Stamp on title (“Bibliothek der Königl. Landw. Hochschule zu Berlin”) and stamp on verso of title (“Z. Bibl. D. Berl. Naturf. Gesellsch.”).

AN APOTHECARY in Hannover and later in Hameln, Westrumb (1751–1819) attempted to establish commercial bleaching with chlorine in Hameln, where he was senator and commissioner of mines. The present book describes the author's experiments on the reduction of simple earths, which disprove the “supposed reduction of baryta, magnesia, etc., described in a letter to Baron Born by Ruprecht

and Tondi [or Tondy] in 1790" (Partington). "The method, using powdered charcoal and the earth mixed with oil and covered with bone ash, gave phosphides and not the metals; especially, iron phosphide was obtained from the iron in the clay of the crucibles" (Cole). "The author shows that the alleged discovery of metallic bases of the earths by Ruprecht and Tondy is fallacious" (Bolton). A "fairly complete history of the [Ruprecht-Tondi] episode" (Hufbauer). Rare. Not in Duveen, Edelstein, Ferguson, Roller & Goodman, Watt, etc. (Bolton, 166; Cole, 1368; Ferchl, 576; Hoover, 882; Hufbauer, *The Formation of the German Chemical Community [1720–1795]*, p. 107n; Partington, III, 571; Pogendorff, II, 1307)

WETHERILL, Charles Mayer

The Manufacture of Vinegar: its Theory and Practice, with Especial Reference to the Quick Process. . . .

Philadelphia: Lindsay and Blakiston. 1860.

First edition. 8vo. 300 pp., 1 leaf (advertisements). With 16 woodcut figures in text. Spine faded; otherwise fine copy in original gilt-lettered, blind-stamped pebbled cloth.

THE FIRST American book on the chemistry and technology of making vinegar and, for its time, the definitive work on the subject. The first part (pp. 1–205) covers the historical and theoretical principles, including the chemistry of sugar, alcohol, and acetic acid. The second part (pp. 207–294) describes the practical details of manufacturing vinegar from various starting materials, including processes used in Europe and America. Born in Philadelphia, Wetherill (1825–1871) graduated from the University of Pennsylvania, then studied under Pelouze in Paris and later spent two years under Liebig in Giessen, where he received his doctorate in 1848. Returning to America, he had an extensive career in public service and was the first chemist of the U.S. Department of Agriculture (1862–63). He was a special agent for President Lincoln on the investigation of gunpowder production during the Civil War. The present important book, of which one thousand copies were printed, is Wetherill's longest treatise. He was a brilliant chemist but died at the early age of forty-five. Scarce. Not in D.S.B., Duveen, Edelstein, Partington, etc. (Bolton, *First Supplement*, 433; Miles, *American Chemists and Chemical Engineers* [1976], p. 502; Smith, 508)

WHEWELL, William

History of the Inductive Sciences.

London: Parker & Son. 1857–1860.

3 vols. Philosophy of the Inductive Sciences. 3 parts in 4 vols. Together 7 vols. 8vo. Original tolled cloth.

Fine set of pioneering work on the history and philosophy of sciences, in the third edition. The *Philosophy* volumes are divided into the following parts: I. History of scientific ideas (2 volumes, 1858); II. *Novum Organum Renovatum* (1858); and III. *On the Philosophy of Discovery* (1860). Sarton, discussing the work, calls it the first modern history of science, "a book which maintained the dignity of a classic in English libraries and colleges during the whole of the Victorian age and beyond" (Sarton, *Guide to the History of Science*, pp. 49–50).

WHISHAW, J.

Some Account of the late Smithson Tennant, Esq. F.R.S. Professor of Chemistry in the University of Cambridge.
London: Printed by C. Baldwin. 1815.

First edition. 8vo. 46 pp. Fine, crisp copy, in nineteenth-century dark-blue calf, covers ruled in blind and gilt, spine gilt-lettered. Presentation copy, with author's neat inscription in ink on title page: "To David Dundas Esq. from his sincere friend J. Whishaw."

AN IMPORTANT biography of Smithson Tennant (1761–1815), discoverer of the precious metals iridium and osmium and later business partner of Dr. William Hyde Wollaston. "The present narrative was composed . . . in consequence of an intimation that Dr. (Thomas) Thomson . . . Editor of the *Annals of Philosophy*, intended to publish . . . a biographical notice respecting the late Mr. Tennant" (advertisement). The writer of this biography was Whishaw, a close friend of Tennant. It was published in Thomson's *Annals* for 1815, and in the advertisement (dated 1 August 1815) Whishaw states: "A few copies of the work, with some slight additions, are now printed, for the purpose of distribution among Mr. Tennant's friends." This is one of the "few copies," and it is now rare. It was unknown to D. C. Goodman, Tennant's biographer in the D.S.B., and, apart from Partington, is not mentioned by the early chemical bibliographies. (Partington, III, 704)

WHISTON, William

A New Theory of the Earth, from its Original, to the Consummation of all Things. Wherein the Creation of the World in Six Days, the Universal Deluge, and the General Conflagration, as laid down in the Holy Scriptures, are shewn to be perfectly agreeable to Reason and Philosophy. With a large Introductory Discourse concerning the Genuine Nature, Stile, and Extent of the Mosaick History of the Creation. . . .

London: Printed by R. Roberts, for Benj. Tooke at the Middle-Temple-Gate in Fleet-street. 1696.

First edition. 8vo. 2 leaves, 95, (1), 388 pp., 2 leaves (advertisement and errata). Engraved frontispiece of solar system with

comet, 7 engraved plates (1 folding), and 5 half-page text engravings. Very good copy in blind-ruled calf antique, red morocco label gilt.

WHISTON (1667–1752), bishop of Norwich, became deputy to Newton in the Lucasian professorship at Cambridge (1701) and succeeded Newton as professor (1703). The present work confirmed the narrative in Genesis on Newtonian grounds, and Whiston praised the *Principia* in his Latin dedication to Newton. “He supposed the earth had originally been a comet, which happened to approach the sun, and was melted into a coherent mass. As it travelled away from the sun, a re-arrangement of the earth’s material began; the heavier particles formed a solid nucleus, the lighter particles . . . the superficial parts; the surface was covered by water . . . After the Fall . . . a great comet stood above the Equator, its tail came into contact . . . with the earth, shook out waterspouts, and simultaneously the subterranean waters escaped and inundated the earth’s surface. The Flood destroyed plants, animals, and human beings” (Zittel). “His most important work . . . It may be said that all the cosmogonies based on the impact of celestial bodies, including that of Jeans, owed something to Whiston’s inventions” (D.S.B.). There are references to subjects of chemical and mineralogical interest. (D.S.B., XIV, 295–296; Hoover, 883; Poggenorff, II, 1311; Sotheran, Cat. 692 [1909], 5385 [“rare”]; Wallis, 344.9; Watt, II, 961b; Wing, W1696; Wolf, 1,353; Zittel, 30)

WHITAKER, Tobias

Tractatus de Sanguine Uvae, ejusque natura et usu, diaetetice & pharmaceutice. . . .

Frankfurt: Ex Officina Typographica Wolfgangi Hoffmanni. 1655.

First Latin edition. 8vo. 118 pp. Upper inner margin of title leaf slightly defective (not affecting text); otherwise good copy in marbled boards antique, maroon morocco gilt-lettered label.

WHITAKER (d. 1666), physician in ordinary to the royal household of Charles II, originally published this (his most important) work as *The Tree of Human Life, or the Bloud of the Grape* (London, 1638; S.T.C., 25356), of which this is the Latin translation. He advocated the use of wine as a universal remedy against disease and maintained that it was possible to enjoy excellent health from infancy to old age by its judicious use. Cures of various diseases by drinking wine are illustrated by many case histories, and the book is of interest for its pharmaceutical chemical information. The English editions of 1638 and 1654 are extremely rare, and this Latin edition is rare. Not in the usual chemical and medical bibliographies. (Waring, 741; Watt, II, 961y)

WHYTT, Robert

An Essay on the Virtues of Lime-Water in the Cure of the Stone. . . . With an Appendix, containing the Case of the Honourable Horatio Walpole, Esquire, written by himself.
Edinburgh: Printed by Hamilton, Balfour, and Neill. 1752.

First edition. 12mo. 6 leaves, 178 pp., 1 leaf (blank). Fine copy, in original speckled calf, rebacked. Bound with: Alston, Charles, *A Dissertation on Quick-Lime and Lime-Water* (Edinburgh, 1752).

FIRST PHYSICIAN to George III in Scotland (1761), Whytt (1714–1766) was professor of the theory of medicine at Edinburgh University from 1747. Elected F.R.S. (1752), he was Scotland’s first neurologist and the first after Thomas Willis to make fundamental contributions to knowledge of the central nervous system and its functions. In this work Whytt describes his detailed medico-chemical study on the preparation and properties of quicklime (calcium oxide) and limewater (calcium hydroxide), made by calcining oyster shells (i.e., naturally secreted calcium carbonate). Whytt and Alston heatedly disputed the relative merits of quicklime prepared from oyster shells and limestone. Alston preferred limestone, but Whytt contended that oyster shells were superior because he believed that limestone on burning absorbs “particles of fire.” These works strongly influenced Joseph Black as he was beginning his classic research on the calcination of magnesia (magnesium carbonate) in 1752–53. See Partington on the dispute between Whytt and Alston. (Blake, 488; D.S.B.; XIV, 322; Ferchl, 578; Partington, III, 136; Waring, 295; Watt, II, 965w)

WHYTT, Robert

An Essay on the Virtues of Lime-Water in the Cure of the Stone. The Second Edition corrected, with Additions. . . . With an Appendix, containing the Cases of the Right Hon. Horace Walpole, Esquire; the Reverend Dr. Newcome, Canon of Windsor, &c.
Edinburgh: Printed by Hamilton, Balfour, and Neill. 1755.

Second edition. 12mo. 6 leaves, 213 pp., 1 leaf (errata). With engraved plate (bladder stone). Separate divisional title page to appendix. Fine copy, in original speckled calf, spine gilt-ruled, maroon label. From the library of Hugh Montgomerie (1739–1819), twelfth earl of Eglinton and captain in the army during the American war, with armorial bookplate. Bound with: Alston, Charles, *A Dissertation on Quick-Lime and Lime-Water* (Edinburgh, 1754), and 2 other works by Alston.

WHYTT’S ESSAY had originally appeared in the *Edinburgh Medical Essays* (1743, vol. 5, part 2). In the second edition the errors of the first (1752) are corrected. It is claimed in

the appendix that by drinking two quarts of limewater per day stones in the bladder are dissolved. Numerous experiments with quicklime, slaked lime, and limewater are described. The chemical composition of quicklime and limewater is discussed, with references to Black, Boerhaave, Hales, Homberg, Macquer, Mayow, et al. The second edition was translated into French by A. Roux (Paris, 1757). Whytt and Aiston contributed much to the chemical knowledge of quicklime and limewater in the mid-eighteenth century. (Blake, 488; Cole, 1372; D.S.B., XIV, 322; Ferchl, 578; Ferguson Coll., 763; Partington, III, 136; Waller, 10274; Waring, 295; Watt, II, 965w)

WHYTT, Robert

An Essay on the Virtues of Lime-Water and Soap in the Cure of the Stone. The Third Edition corrected, and enlarged with an Appendix, containing the Cases of Lord Walpole. The Bishop of Llandaff. William Hay Esq. Mr. L. Trevigar, &c. . . .

Edinburgh: Printed by Hamilton, Balfour, and Neill. 1761.

Third edition. 12mo. xii, 220 pp. With engraved plate (bladder stone). Separate divisional title page to appendix. Very good copy, in contemporary calf, spine gilt-ruled, maroon label.

THE LAST and most complete edition, containing Whytt's final thoughts on the subject. "In the third Edition, several Things less material, and some Conjectures concerning the Nature of Quick-lime, which appeared not to be well founded, are omitted; and the Appendix is enlarged . . ." (advertisement, 9 June 1761). The case of Horace Walpole, which is continued in this edition, was written by himself. It is followed by a description of his postmortem by Whytt. Of chemical interest, the book includes commentaries on the work of Stephen Hales and Joseph Black. (Blake, 488; Cushing, W176; D.S.B., XIV, 322; Duveen, 619; Neu, 4344; Waring, 295)

WIBOM, Carl Peter

Animadversiones Chemicæ, ad Ictum Fulminis in Arce Regia Upsaliensi D. XXIV. Aug. MDCCLX. . . . præside, . . . Job. Gotschalk Wallerio, . . . publicis ventilandas exhibit Carolus Petrus Wibom, Nericius. . . . 31 Oct. MDCCLXI.

Uppsala. (1761).

First edition. 4to. 2 leaves, 59, (1) pp. Text in Latin and Swedish on facing pages. Very good copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION BY Wibom (dates unknown), with J. G. Wallerius presiding. A fiery meteor seen on 24 August 1760 fell to earth near Stockholm, leaving a pungent sulphurous odor in the atmosphere. The meteorite was found, and

the author says that it was composed largely of iron and calx (iron oxide), mixed with iron sulphide. He subjected the meteorite to chemical analysis and discusses similar meteorites that had fallen in other parts of Sweden. This interesting work was reprinted in the *Disputationum Academicarum* (Stockholm and Leipzig, 1780, vol. I) of Wallerius (see Partington, III, 170). Very rare. No bibliographical reference to this original dissertation has been found.

WICKELGREN, Johan Lorenz

Dissertatio Chemica de Sale Ammoniaci Secreto Glauberi, . . . Publico Examini Subjiciunt Johannes Wennlund, Philosophiæ Magister, & Respondens Johannes Laur. Wickelgren, Smolandus. Die XXXI Maji, A. MDCCXCVII.

Lund: Litteris Berlingianis. (1797).

First edition. 4to. 12 pp. Mint copy, in maroon quarter cloth antique, marbled boards, spine labeled: Wollin. 3 Dissertations. 1783–1797.

A DISSERTATION ON the so-called secret ammoniacal salt of Glauber (i.e., ammonium sulphate), prepared "ex alcali volatile et acido vitriolia." Presented by Wickelgren under the aegis of Johan Wennlund at the University of Lund. The works of Digby, Gren, Kunckel, Pott, Scheffer, et al., are cited. Very rare. Unknown to the usual bibliographers.

WIEGLEB, Johann Christian

Fortgesetzte kleine chymische Abhandlungen.

Langensalza: bey Johann Christian Martini. 1770.

First edition. 8vo. Pp. (113)–182 (i.e., signatures H–L⁸, M⁴). Fine copy in contemporary speckled boards. Bound with: Simon, Johann Christian, *Die Kunst Salpeter zu machen* (Dresden, 1771); and Pauli, Johann, *Chymisch-Medicinische Abhandlung* (Copenhagen, 1770).

ALTHOUGH COMPLETE in itself with separate title page (but continuous pagination and signatures), this work forms the continuation of the *Kleine chymische Abhandlungen von dem grossen Nutzen der Erkenntniss des Acidi Pinguis* . . . (Langensalza, 1767, 112 pp.). The first edition contained only seven essays on Meyer's theory of *acidum pingue*, which Wiegleb enthusiastically supported. In the present work he added three more essays and combined them with the sheets of the first edition of 1767 to form the second edition, which appeared at Langensalza in 1771. For a discussion of the contents of this interesting work, see Ferguson and Partington. It is probable that this work was published separately, as it appeared a year before the second edition of the *Kleine Abhandlungen* (1771). The D.S.B., Ferchl, Poggen-dorff, et al., list it as a separate publication of Wiegleb. Not

in Blake, Edelstein, Ferguson Coll., Smith, Sondheimer, Waller, Watt, etc. (Bolton, 915; D.S.B., XIV, 333; Duveen, 619; Ferchl, 579; Ferguson, II, 547; Neu, 4355; Partington, III, 147; Poggendorff, II, 1320)

WIEGLEB, Johann Christian

Handbuch der allgemeinen Chemie von Johann Christian Wiegleb. . . . Zwote neuberichtigte Auflage. Mit Königlich-Preussischer allergnädigsten Freiheit.

Berlin und Stettin: bey Friedrich Nicolai. 1786.

Second edition. 2 vols., 8vo. I: 3 leaves, 656 pp. (last page misnumbered 456). II: 740 pp., 25 leaves (index). Woodcut vignette on each title page. Very slightly browned owing to the quality of the paper; otherwise a fine copy in the original half calf, speckled boards, black and green gilt-lettered labels, spines gilt-ruled.

AN EXCELLENT textbook on all branches of chemistry and chemical technology. First published in a single volume of 632 pages (Berlin and Stettin, 1781), this second edition is enlarged to two volumes. The third and final edition, in three volumes, appeared in 1796 but was by then rather out of date. Pages 716–740 comprise a valuable bibliography of about 300 books on chemistry, chemical technology, metallurgy, and related subjects. Wiegleb (1732–1800) was an excellent chemist who supported the phlogiston theory throughout his life. “He enriched pharmaceutical and technical chemistry by valuable observations” (Prof. Ernst von Meyer). For details on the life and work of Wiegleb see the D.S.B., Ferguson, and Partington. The publisher of this book was Friedrich Nicolai, polygraph and friend of Lessing. The second edition appears to be very scarce, as Ferguson and Poggendorff mention only the first and third editions. Even Ferchl gives the wrong date (1787). There is a copy of the third edition (1796) in the Smith Collection. Not in Blake, Caillet, Edelstein, Ferguson Coll., Morgan, Sondheimer, Waller, Watt, etc. (Bolton, 915; D.S.B., XIV, 333; Duveen, 620; Ferchl, 579; Neu, 4352; Partington, III, 567)

WIEGLEB, Johann Christian

A General System of Chemistry, Theoretical and Practical. Digested and arranged, with a particular view to its application to the arts. Taken chiefly from the German of M. Wiegleb. By C. R. Hopson, M.D.

London: Printed for G. G. J. and J. Robinson. 1789.

First English edition. 4to. 2 leaves, viii, 670 pp., 21 leaves. With 4 folding tables and 2 copperplates of chemical apparatus (1 folding). Very fine copy with wide margins, in the original tree calf, tastefully rebounded, with the original gilt-lettered maroon morocco label preserved.

CHARLES RIVINGTON HOPSON (1744–1796), physician at Finsbury Dispensary, was educated at St. Paul’s School and the University of Leiden (M.D., 1767), on which see the D.N.B. He published *An Essay on Fire* (London, 1782) and believed that fire is a compound of phlogiston and an acid. The present work is the English translation of Wiegleb’s *Handbuch der allgemeinen Chemie* (second edition, 2 vols., 8vo., Berlin and Stettin, 1786), with additions by Hopson. In the preface (dated 10 February 1789) Hopson refers to recent works by Cavendish, Lavoisier, Fourcroy, Guyton-Morveau, Bergman, Priestley, and other important chemists. Partington states that the book is “still based on the phlogiston theory, but clear and well-arranged.” Hopson gives detailed descriptions of many important industrial chemical processes, as he wished to impart “a knowledge of Chemistry among the manufacturers and artists,” as well as being “plain and perspicuous to students” (preface, p. ii). He also added a section on specific heats written by Gadolin and an account of gases taken from Fourcroy, and he replaced the phlogistic views of Wiegleb with a hybrid theory of combustion. There is a full account of all types of luminescence. A very scarce book. Not in Blake, Duveen, Edelstein, Ferguson, Neu, Waller, etc. (Bolton, 542 915; D.S.B., XIV, 333; Ferchl, 249, 579; Ferguson Coll., 763; E. N. Harvey, 168, 667; Partington, III, 567–568, 630; Poggendorff, I, 1140; Smith, 510; Sondheimer, 54; Watt, I, 513m)

WIEGLEB, Johann Christian

Historisch-Kritische Untersuchung der Alchemie, oder der eingebildeten Goldmacherskunst; von ihrem Ursprunge sowohl als Fortgange, und was nun von ihr zu halten sey. . . .
Weimar: bey Carl Ludolf Hoffmann. 1777.

First edition. 8vo. 11 leaves, 437, (3) pp. Small piece missing from lower blank corner of title leaf and first leaf of text without loss; otherwise fine copy in original boards, gilt-lettered label.

THE MOST important work of Wiegleb (1732–1800), which became widely known and earned him high esteem in learned circles. An apothecary at Langensalza, the author was a leading member of the steadily growing group of apothecaries in the eighteenth century who played an increasingly active role in scientific research, especially in chemistry. “Wiegleb discusses the production and amount of gold in ancient times; the evidence for an early acquaintance with transmutation; reported cases of transmutation, some of which he examines minutely and controverts; and the nature of gold and silver which renders transmutation impossible” (Ferguson, II, 546; describing the second edition, Weimar, 1793). There is a valuable bibliography of books on alchemy and transmutation (pp. 372–377), listing works published from 1572 to 1776. (Blake, 489; Bolton

1066; Caillet, 11429; D.S.B., XIV, 333; Duveen, 620; Ferchl, 579; Ferguson Coll., 763; Neu, 4354; Partington, III, 567; Poggendorff, II, 1320; Smith, 511)

WIEGLEB, Johann Christian

Neuer Begriff von der Gährung und den ihr unterwürfigen Körpern vorgetragen von Johann Christian Wiegleb . . .
Weimar: bey Karl Ludolf Hoffmann. 1776.

First edition. 8vo. 6 leaves, 132 pp. Woodcut head- and tailpieces. Fine copy. Bound with: Wiegleb, J. C., *Chemische Versuche . . .* (Berlin & Stettin, 1774).

AN EARLY work on theories of fermentation and the chemical processes involved. "In his book on fermentation he supposed that alcohol and vinegar are present as such in the fermentable substances in a state of firm combination and are separated by fermentation" (Partington). This theory was disproved by Westrumb. Not in Blake, Cole, Duveen, Edelstein, Ferguson Coll., Neu, Smith, etc. (D.S.B., XIV, 333; Ferchl, 579; Ferguson, II, 548 [not in Young Coll.]; Partington, III, 569; Poggendorff, II, 1320)

WIER, Jean

Opera Omnia. Quorum contenta versa pagina exhibet. Editio nova & hactenus desiderata. Accedunt indices rerum & verborum copiosissimi.
Amsterdam: Apud Petrum vanden Berge, sub Signo Montis Parnassi. 1660.

First collected edition. 4to. 22 leaves, 418 pp., 5 leaves (paginated 419–424), pp. 425–1002, 30 leaves (index). Title page in red and black, with engraved vignette. Engraved portrait of Wier (at age 60), engraving of girl on page 760 (Barbara, age 10), and woodcut illustrations in text. Fine copy, in original vellum. Bookplates: John Coakley Lettsom, M.D., F.R.S., and James Broun Craven, D.D.

WIER, WEYER, or Weiher (1515–1588), a Belgian, was a pupil of Heinrich Cornelius Agrippa von Nettesheim (1486–1535) and later served the duke of Cleves as his personal physician. In the important book *De praestigiis daemonum* (Basel, 1563) Wier first challenged the medieval belief that madness and witchcraft were the work of the devil and advocated the case for treating these conditions as psychological illnesses. This volume reprints all of Wier's works on alchemy (with illustration of distillation equipment), astrology, iatrochemistry, medicine, surgery, and witchcraft. There are numerous references to the writings of Agricola, Agrippa, Dorn, Fallopio, Fernel, Paracelsus, Porta, Vesalius, et al. The text is preceded by a brief biography of Wier and a commentary on his works by the physician Martin Schoock (1614–1667). This copy has a

distinguished provenance, having belonged to the famous physician John Coakley Lettsom (1744–1815) and later to the hermeticist James Broun Craven, author of books on Michael Maier and Robert Fludd. (Caillet, 11430; Dorbon, 5270; Ferguson Coll., 764; Krivatsy, 12984; Norman, 2224; Watt, II, 966p)

WILKINS, John

Mathematicall Magick. Or, the Wonders that may be performed by Mechanicall Geometry. In two Books. Concerning Mechanicall Powers, Motions. Being one of the most easie, pleasant, usefull (and yet most neglected) part of Mathematicks. Not treated of in this language. By I. W. M. A. . . .
London: Printed by M. F. for Sa: Gellibrand at the brassen Serpent in Pauls Church-yard. 1648.

First edition, first issue. 8vo. 7 leaves (lacks A1, blank), 295, (1) pp. With added engraved frontispiece portrait of Wilkins (ca. 1680). Many text woodcuts and 8 fine copperplates. Old signature (Willm. Wilson) on title and embrowning of some leaves; otherwise good copy in tan calf by Sangorski and Sutcliffe.

BISHOP OF CHESTER and one of the founders of the Royal Society, of which he was its first secretary, Wilkins (1614–1672) published this successful work on mechanics "for gentlemen in the improvement of their estates, as in the draining of mines and coalpits, and for 'common artificers' in gaining a 'right understanding of the grounds and theory' of the arts they practice" (D.S.B.). Wilkins describes devices for mechanical advantage (e.g., balance, lever, and pulley), as well as flying machines, huge magnets, a submarine, an Archimedes screw, perpetual motion, and so forth. Of chemical interest is a long section on subterranean perpetual lamps (pp. 224–256). This important work set the agenda for the experimental program of the Royal Society, several of the devices described being the subject of experiments conducted by Hooke, Petty, and Wilkins himself. Two settings of the book came out in 1648. The first issue has the author's initials on the title as "I. W." (as here), with the bookseller's name as "Sa:". In the second issue these are given as "J. W." and "Sa.", respectively. Not in Krivatsy, Thorndike, etc. (Cushing, W190; D.S.B., XIV, 365; Honeyman, 3120; Keynes, 4184; Knight, 108; Poggendorff, II, 1328; B. J. Shapiro, *John Wilkins*, 1969, pp. 43–45; Thornton & Tully, 89; Watt, II, 967v; Wheeler Gift, 126; Wing, W2198; Wolf, I, 545)

WILL, Heinrich

Outlines of the Course of Qualitative Analysis followed in the Giessen Laboratory. By Henry Will, Ph.D. Professor Extraordinary of Chemistry in the University of Giessen. With a Preface by Baron Liebig.
London: Taylor & Walton. 1846.

First (only) edition. 8vo. Pp. xii, 104. With 5 double-page tables. At the end there are 8 pages of advertisements of books, chemical, medical, etc., by Walton & Maberly (not forming part of the collation of the main work). Fine, crisp, and spotless copy, entirely uncut, in the original publisher's dark-grey, blind-stamped cloth, gilt-lettered on spine and front cover.

AN EXTREMELY important milestone work in the bibliography of analytical chemistry, which originally appeared as *Anleitung zur (qualitativen) chemischen Analyse zum Gebrauche im chemischen Laboratorium zu Giessen* (Heidelberg, 1846). Liebig, who states in his preface that this work was prepared by Professor Will under his direction, stresses that the "want of an introduction to chemical analysis, adapted for the use of a laboratory, has given rise to the present work, which contains an accurate description of the course I have followed in my laboratory with great advantage for twenty-five years." This is the first book that described the familiar "group separations" in tabular form and is a sequel to the very rare *Acht Tafeln* (1842). On Will (1812–1890), who was a star pupil and assistant professor under Liebig and who succeeded Liebig, see Partington, IV, 318. A rare book. (Partington, IV, 296).

WILLERDINGEN, Anna Sophia

Göttliche, wie such Natürliche and Elementische Erkänntniss, von Gott durch die Natur, such Elementen entstandenen Geschöpfen; wie solche Magnetice ihre Würckungen vollbringen, and wie alle Kranckheiten ubrsprünglich zu erkennen, auch diejenigen, die sonst incurable geachtet, durch die von Gott erschaffene höchste Medicin magnetice so wohl inn-als äusserlich viel besser wie durch die bisberige ordinaire Medicin können curiret werden, aus Liebe zur Wahrheit und meinem Neben-Menschen zu dienen herausgegeben von des Hoch-Fürstl. Brauns. Lün. Hof-Secretarii Henninges She-Frauen Anna Sophia Willerdingen.
Frankfurt and Leipzig, 1739.

First edition. 8vo. 22 leaves, 99, (1) pp. Superb copy in mint condition, in contemporary speckled calf, spine richly gilt, maroon morocco label gilt. Bound with: Rothe, Gottfried, *Gründliche Anleitung zur Chymie* (Leipzig, 1733); and *ibid.*, *Anhang zu seiner Chymie* (Leipzig, 1733).

A REMARKABLE CHEMICAL and medical work by a woman author on the origin of the elements as described in the Bible. The dedication to King George II of Great Britain

is dated 21 March 1739, from Blanckenburg. No biographical information has been found on the author, who was obviously a well-educated Bible scholar. She discusses the Aristotelian elements, metals, minerals, salts, alcohol and other organic compounds, magnets, etc., and their medicinal uses. A very rare book that is not mentioned by the usual early chemical bibliographies. (Blake, 490)

WILLIAMS, John

Letters from the Highlands of Scotland, Addressed to G. C. M. Esq; By, John Williams, Mineral Engineer.
Edinburgh: Printed for William Creech; and sold by T. Cadell, London. 1777.

First edition. 4to. 2 leaves, iv, 40 pp. Very fine copy, in quarter calf antique, marbled boards, spine gilt-lettered and dated.

APPARENTLY THE unrecorded genuine first edition, not in the British Library or N.U.C. The text is the same as the author's *An account of some remarkable ancient ruins lately discovered in the Highlands and northern parts of Scotland, addressed to G.C.M. Esq.* (Edinburgh: Creech, 1777, 8vo.; N.U.C., 5 copies). This quarto edition is surely more likely to be the first edition than that in octavo format of 1777. Williams (1730–1795), an opponent of Hutton and director of mining, also published *The natural history of the mineral kingdom* (Edinburgh, 1789, 2 vols.; Challinor, 65; Watt, II, 969; Zittel, 109). Especially important are a letter from James Watt to George Clerk-Maxwell (pp. 35–37) and one to Williams from Dr. Joseph Black, "Professor of Chymistry" at Edinburgh (pp. 39–40). Both letters discuss Williams's letters on the subject of the sintered or vitrified stone walls observed in different parts of Scotland. Partington (III, 142–143) excerpts Black's letter: "There are, in most parts of Scotland, different kinds of stone, which can, without much difficulty, be melted or softened by fire, to such a degree, as to make them cohere together." Black names several (e.g. sand- and clay-containing limestones, granite, and puddingstone). The identity of "G.C.M.," recipient of Williams's twelve letters, remains unknown. Partington states that Black's letter occurs on pages 81–83 of the 4to. edition, but he is probably referring to the 8vo. edition. Extremely rare.

WILLIAMSON, George

Memorials of the Lineage, Early Life, Education, and Development of the Genius of James Watt. By George Williamson, Esq., Late Perpetual President of the Watt Club of Greenock. (London?): Printed for the Watt Club by Thomas Constable, Printer to Her Majesty. 1856.

First edition. 4to. x, (2), 262 pp. With engraved portrait frontispiece of Watt (by Robt. C. Bell) and 15 engraved plates

(portraits, facsimiles of writing, folding map, steam engines, steam boats, etc.), including 2 folding pages and 1 double page. Very fine copy with wide margins, in contemporary maroon morocco, lettered and paneled in gilt, all edges gilt.

THE SOLE edition of a privately printed work for members of the Watt Club, in a small number of copies. Bound at the end, a printed slip of paper states that a copy of this sumptuous volume was presented to Queen Victoria by the editor and the members of the Watt Club. A note thanking the donors (signed by C. Grey) states that "Her Majesty cannot but admire the manner in which this volume is got up, and I am commanded to express the pleasure with which she accepts it for the Royal Library." The book is beautifully illustrated with fine tinted lithographs, engravings, facsimiles of Watt's handwriting and letters, etc. A "valuable" work (Knight). Writing in 1909, Henry Zeitlinger described this as a "very scarce" book and the "chief authority on Watt's early life." (D.S.B., XIV, 198; Edelstein, 2423; Knight, 223, 232; Roller & Goodman, II, 560; Soth-eran, Cat. 692 [1909], 5262)

WILLIARDTS, Johann Christian

Dissertatio Inauguralis de Spiritu Salis Ammoniaci cum Calce Viva, praecipueque de eius a spiritu salis ammoniaci cum alc. fix. parato differentia, . . . Christianus Fridericus Jaeger, . . . d. (blank) Aug. MDCCLXVIII . . . respondente Joanne Christiano Williardts, Esslingensi.

Tübingen: Litteris Jo. Ad. Sigmundi. (1768).

First edition. 4to. 30 pp., 1 leaf (blank). Fine copy in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

A DISSERTATION on the preparation and properties of ammonia made from sal ammoniac (ammonium chloride) and quicklime (calcium oxide). The reactions of ammonia with acids to form ammonium salts are also covered. Williardts (dates unknown), a pupil of C. F. Jaeger, professor of medicine at Tübingen, cites the works of many scientists (e.g., Boyle, Hales, Mayow, and Black). A rare and important work on the history of alkalies, unknown to the usual authorities. (Ferchl, 257)

WILLICH, Anthony Florian Madinger

Lectures on Diet and Regimen: being a systematic inquiry into the most rational means of preserving health and prolonging life. Together with physiological and chemical explanations, calculated chiefly for the use of families; in order to banish the prevailing abuses and prejudices in medicine.

London: T. N. Longman. 1799.

First edition. 8vo. xxiv, 643 pp., 2 leaves (advertisements of books). Fine copy, in the original tree calf, spine richly gilt, dark-blue morocco gilt-lettered label.

THE VERY rare first edition of this chemical and medical classic. Willich was physician to the Saxony embassy at the court of George III. The book is dedicated to the Marquis of Lansdown, from Downing Street (November 1798), and the advertisement states that "these Lectures . . . were delivered last winter at Bath, and in the spring at Bristol, to numerous and respectable audiences." Willich acknowledges his indebtedness to "many English and German writers," especially "the excellent writings of Ingenhousz and Priestley" on air, and other chemists and physicians (e.g., Cullen, Falconer, Fothergill, Hahnemann, and Zimmermann). This is one of the earliest books on biochemistry as it relates to the diet, metabolism, health, and well-being of humans. The historical references are particularly interesting as they trace man's knowledge of diet, chemical composition of foods and drinks, etc., from the Egyptians, Romans, Paracelsus, and Libavius, through to the end of the eighteenth century. Every aspect of human life and activity is covered from the chemical, biochemical, and medical standpoints. Neu (4361) and Watt (971d) mention only the second edition, which appeared later in 1799. As Watt appeared in 1824, this is an indication of how rare this first edition must be. It is not mentioned by Bolton, Cole, Cushing, Duveen, Ferchl, Ferguson, Garrison-Morton, Knight, Morgan, Osler, Partington, Poggendorff, Smith, Waller, et al. No reference to the first edition could be found in any available bibliography. "Chemistry contributes the principal share in spreading useful knowledge . . . (and) . . . medicine . . . is in great measure founded upon . . . Chemistry" (introduction).

WILLICH, Anthony Florian Madinger

Lectures on Diet and Regimen: being a Systematic Inquiry into the most Rational Means of preserving Health and prolonging Life: together with Physiological and Chemical Explanations, . . .

London: Longman, etc. 1809.

Fourth edition. 8vo. Fine copy, entirely uncut, in the original blue boards.

INCLUDES COMMENTARIES on ventilation, baths, dress, drink and spices, teeth, and eyes and cautions against excessive indulgence in sexual activities (with remarks upon their dire effects), etc. Also contains references to Paracelsus, Mesmer, alchemy, blood transfusion, etc.

WILLIS, Francis

Synopsis Physicae tam Aristotelicae, quam novae ad Usum Scholae accommodata. . . .

London: Prostant venales apud Joh. Place, . . . & N. Cox, Oxon. 1690.

First edition. 8vo. 10 leaves, 108 pp. With 4 copperplates in text. Contemporary mottled sheep, rebacked with original unlettered spine laid on. Fine copy, with a page of contemporary transcribed manuscript notes in ink from Robert Boyle on verso of penultimate flyleaf.

A TREATISE COMPARING Aristotle's *Physics* with sixteenth- and seventeenth-century concepts of the universe. Willis (b. 1663), perpetual fellow of New College, Oxford, "took the degrees in Arts, entered in the Physic Line, took degrees in that Faculty, and practised in Oxon" (Anthony Wood, *Athenae Oxonienses*, London, 1721, vol. II, col. 996). The book contains much of chemical interest, with discussions of the Aristotelian four elements, atomic theory, fire, heat and cold, effluvia, colors, metals, stones, gems, etc. Magnetism, earthquakes, plants, animals, physical senses, etc., are also covered. Willis frequently cites the works of Boyle (including *The Sceptical Chymist*), Newton (*Principia*), Gilbert (*De Magnete*), Descartes, Gassendi, Grew, Plot, et al. A very rare book that is not in the usual bibliographies. (Wing, W2804)

WILLIS, Thomas

Diatribae duae Medico-Philosophicae: quarum prior agit de Fermentatione, sive de motu intestino particularum in quovis corpore; altera de Febribus, sive de motu earundem in sanguine Animalium. His accessit Dissertatio Epistolica de Urinis. . . .

London: Typis Tho. Roycroft; Impensis Jo. Martin, Ja. Allestry, & Tho. Dicas, ad Insigne Campanae, in Coemeterio D. Pauli. 1662.

Third edition. 12mo. 24 leaves, 376 pp., 3 leaves (advertisements, first blank). Copperplate frontispiece (2 women, 1 naked, with chemical laboratory in background). Fine copy, in original blind-ruled calf, rebacked, maroon label, spine dated.

ONE OF the founders of the Royal Society and friend of Boyle, Hooke, Wallis, Wren, et al., Willis (1621–1675) was a great physician and good chemist. He was among the "first to recognise an active principle of combustion in the air, to represent combustion and respiration as similar phenomena (with an explanation of the source of animal heat), and to put forward a reasonable theory of fermentation" (Partington). "Willis completed by 1656 his first scientific work, *De fermentatione*. During the late 1650s he supple-

mented this with a major work on fevers, . . . and a shorter piece on urine, . . . they were published in 1659 as *Diatribae duae medico-philosophicae*. In *De fermentatione* Willis argued that all bodies are composed of five kinds of particles: those of spirit, sulphur, salt, water, and earth, in order of decreasing activity. Any body containing a mixture of these particles is capable of fermentation, which Willis defined as an intestine (internal) motion of a body's chemical particles leading to the perfection or transformation of that body. . . . Willis cast his explanations into atomistic and chemical terms that Boyle . . . made so popular among his Oxford friends" (D.S.B.). This book is also notable for containing the "first description of epidemic typhoid" (Garrison-Morton, 5020). (Blocker, 422; D.S.B., XIV, 405; Ferchl, 582; Keynes, 4202; Krivatsy, 13022; Partington, II, 305; Thornton, 95; Watt, II, 971p)

WILLIS, Thomas

Diatribae duae Medico-Philosophicae: quarum prior agit de Fermentatione, sive de motu intestino particularum in quovis corpore; altera de Febribus, sive de motu earundem in sanguine Animalium. His accessit Dissertatio Epistolica de Urinis. . . . *Editio postrema prioribus longe emendatior atque auctior*.

Amsterdam: Apud Gerbrandus Schaghen. 1663.

First Amsterdam edition. 12mo. 16 leaves, 376 pp. Copperplate frontispiece (1 naked woman and 1 clothed, with chemical equipment in background). Fine copy, in original vellum (small pieces missing from top and bottom of spine).

THE GREAT English physician Willis (1621–1675) was one of the founders of the Royal Society and friend of Boyle, Hooke, Wallis, Wren, et al. He was a good chemist and was among the "first to recognise an active principle of combustion in the air, to represent combustion and respiration as similar phenomena (with an explanation of the source of animal heat), and to put forward a reasonable theory of fermentation" (Partington). "Willis completed by 1656 his first scientific work, *De fermentatione*. During the late 1650s he supplemented this with a major work on fevers, *De febribus*, and a shorter piece on urine, *Dissertatio epistolica de urinis*, . . . they were published in 1659 as *Diatribae duae medico-philosophicae*. In *De fermentatione* Willis argued that all bodies are composed of five kinds of particles: those of spirit, sulphur, salt, water, and earth, in order of decreasing activity. Any body containing a mixture of these particles is capable of fermentation, which Willis defined as an intestine (internal) motion of a body's chemical particles leading to the perfection or transformation of that body. . . . Willis's theories were new versions of ideas widely discussed on the Continent during the 1640s and 1650s, but with

the important difference that Willis cast his explanations into atomistic and chemical terms that Boyle had made so popular among his Oxford friends" (D.S.B.). (Blocker, 422; D.S.B., XIV, 405; Ferchl, 582; *Heirs of Hippocrates*, 343; Krivatsy, 13025; Partington, II, 305; Thornton, 95; Watt, II, 971p)

WILLIS, Thomas

Pharmaceutice Rationalis. Sive Diatriba de Medicamentorum Operationibus in Humano Corpore. . .
Oxford: E Theatro Sheldoniano, Prostant apud Ric. Davis. 1679.

Third edition., 4to. 18 leaves, 164 pp., 6 folding engraved plates; 10 leaves, 210 pp., 7 leaves, 8 folding engraved plates. 2 parts in 1 volume. Engraving of the Sheldonian Theatre on the main title page. Very good, crisp copy, in contemporary speckled calf, spine gilt, maroon morocco gilt-lettered label, joints and corners repaired.

THE *Pharmaceutice rationalis* first appeared (Oxford, 1674) as a smaller work, but by the time it reached its third edition, as here, it was in its complete and final form as prepared by the author just before his death in November 1675. It gives a valuable epitome of the materia medica and pharmaceutical chemistry of the period. Partington (II, 307–310) discusses the numerous chemicals and their preparations in this work: e.g. diethyl ether, succinic acid, compounds of iron, mercury, gold, antimony, and acids and bases. The second part was praised by Osler for its description of whooping cough. Willis noted the sweetness of the urine in cases of diabetes mellitus, which is discussed on pages 81–90 of the first part. He differentiated between this condition and diabetes insipidus. The postscript to the second part gives an account of the author and his important accomplishments. Partington points out that, although he calls his pharmacopoeia "rational," true to his seventeenth-century beliefs, Willis still describes preparations containing human skull, powdered dried toads, pearls, coral, and the waters of snails and earthworms. Immensely popular, several Latin editions appeared in England as well as on the Continent, and it was translated into English (London, 1684). No edition is listed by Bolton, Cushing, Duveen, Edelstein, Ferguson, Morgan, Smith, etc. The first edition is listed by the D.S.B. (XIV, 409), Ferchl (p. 582), Garrison-Morton (no. 3926), Partington (II, 305), Pogendorff (II, 1332), Waring (p. 61), and Watt (II, 971q). Neu, Osler, and Waller list other editions. (Wing, W2847)

WILSON, George

A Compleat Course of Chymistry. Containing near Three Hundred Operations; Several of which have not been Publish'd before. Also, the Structure of several Furnaces, with near Three Hundred Characters, which are dispers'd in Chymical Authors; and such Instruments and Vessels as are necessary in a Compleat Elaboratory. All cut in Copper.
By George Wilson, Chymist.

London: Printed for W. Turner, at Lincolns-Inn-Back-Gate; and R. Basset at the Mitre in Fleetstreet, 1700.

First edition, second issue. 8vo. 8 leaves, 358 pp., 1 leaf (blank); 2 copperplates on 1 folding sheet, leaf of explanation of plates; 1 copperplate, 1 leaf of explanation; 1 copperplate, 1 leaf of explanation; 2 copperplates on 1 folding sheet, 1 leaf of explanation; 1 copperplate ("Chymicall Characters"); 2 copperplates ("Chymical Characters," etc., and "Chymical Characters," e.g., metals, zodiacal signs, elements, minerals, and salts). Total number of copperplates = 9. Very fine, crisp copy, in full morocco antique, spine gilt-lettered and dated.

WILSON (1631?–1711) dedicated this excellent chemical textbook to Lord Paston, who possessed an "Exquisite Skill in whatever relates to Chymistry" (sig. A2 verso). Part I (pp. 1–193) deals with chemical processes and inorganic compounds. Part II (pp. 195–288) covers vegetable materials, and Part III (pp. 289–341) discusses animals and insects. Page 343 describes Wilson's courses (2.5 guineas), and pages 344–358 list the preparations carried out during the April and September courses. Confusion exists concerning the publication date of the first edition. Partington, copying Ferguson, states that it was 1691, but Wing lists no edition before 1699. Duveen describes the first edition, identical in pagination with this copy, but with only eight plates and different imprint. The present copy is, therefore, the second issue of the first edition, with an additional plate. The text of this edition does not suggest that there was any earlier edition than that of 1699. Very rare. Not in Bolton, Cushing, Edelstein, Ferguson Coll., Smith, Waller, Watt, etc. (Duveen, 622; Ferchl, 582; Ferguson, II, 553 [not in Young Coll.]; Morgan, 822; Neu, 4378; Partington, II, 760; Wing, W2893 [3 copies])

WILSON, George

A Compleat Course of Chymistry Containing not only the Best Chymical Medicines but also Great Variety of Useful Observations. The Third Edition, carefully corrected, very much enlarged, and illustrated with copper plates. To which are added the author's Experiments upon Metals, by Way of Appendix. By George Wilson, Chymist.

London: Printed for John Bayley, at the Judge's-Head in Chancery-lane. 1709.

Third edition. 8vo. 8 leaves, 3 plates (2 of "Chymical Characters"), 1 leaf, 1 plate, 1 leaf, 1 plate, 1 leaf, 1 plate, 1 leaf, 1 plate, 1 leaf, 1 plate, 1 leaf (i.e., 8 plates and 6 alternating leaves of explanation); 8 leaves (contents), 413, (1) pp., 8 leaves (index). Fine frontispiece portrait of Wilson at 78 (E. Knight del., M. Vdr. Gucht Sculp.). Title printed in red and black. Fine copy in contemporary paneled calf, rebounded, spine gilt-lettered. From the library of John Missing, with large armorial Chippendale bookplate on front endpaper.

THE APPENDIX, which first appears in this edition, describes the author's experiments on the transmutation of metals from 1661 to 1704. He concludes that transmutation is not impossible but is very difficult ("I . . . always fell short of, or was entirely baffled in my expectations."). On 11 December 1688, a "mad Mob taking me for a Conjuror, or something worse, broke my Glasses and Athanor, saying, I was preparing the Devil's Fireworks, purposely to burn the City and White-Hall." Wilson's book was very successful, and this was the last edition to appear in his lifetime (he died in 1711). The fourth edition was published in 1721, and the fifth in 1736. "The book is similar to Lemery's *Cours de Chymie* and is very clear and practical" (Partington). Not in Bolton, Cushing, Duveen, Ferguson Coll., Morgan, Poggenдорff, Waller, etc. (Blake, 491; Edelstein, 2453; Ferchl, 582; Ferguson, II, 553; Neu, 4379; Partington, II, 760; Smith, 512; Thorndike, VIII, 167; Watt, II, 972y)

WIMERMARK, Sven

Dissertatio Physica, de Diversa Radium Luminarium Refrangibilitate, . . . praeside Mag. Samuele Duraeo . . . pro gradu . . . Sveno Wimermark Ostro-Gothus . . . XII Junii MDCCCLXXVI.

Uppsala: Tppis Edmannianis. (1776).

First edition. 4to. 2 leaves, 16 pp. Fine copy in contemporary boards. From the library of John Lee, F.R.S. (1783–1866), scientist and collector of antiquities (see D.N.B.), with his neat signature in ink on front pastedown. Lee was the son of John Fiott, B.A. (whose armorial bookplate dated 1806 is in this copy). Bound with: 31 other dissertations on chemistry, physics, etc., all presided over by Samuel Duraeus (1718–1789), professor of physics at the University of Uppsala.

A DISSERTATION MAINLY on the physics and mathematics of the refrangibility of various colors of light by different substances (e.g., inorganic crystals and glass), with many references to Newton's *Opticks*, the *Philosophical Transactions of the Royal Society*, etc. No reference has been found to the author or this work.

WINCKLER, Daniel

De Opio Tractatus, in quo simul liber de opio D. Job. Freitagii examinatur, . . .

Leipzig: Impensis Henningi Grosii. 1635.

First edition. 8vo. 1 leaf, 268 pp., 5 leaves. Paper slightly embrowned (characteristic of the period) and inner margins of last 3 leaves fragile; otherwise good copy in half calf antique, pebbled boards, spine gilt-lettered and dated.

A COMPREHENSIVE EARLY work on the chemical, physical, and medical properties of opium, with many references to chemists and physicians. The works of Libavius are frequently cited. Winckler (fl. 1620), a physician of Breslau (now Wrocław), Poland, also published *Dissertatio de vita foetus in utero* (Jena: T. Steinmann, 1630, 4to.). Not in the usual chemical and medical bibliographies. (Manget, *Bibliotheca Scriptorum Medicorum*, 1731, vol. II, part II, p. 635; Waring, 585; Wellcome, I, 6748)

WINTER, Anders Heinrich

Dissertatio Chemica de Sulphate Argillae. . . Praeside Mag. Johanne Gadolin, . . . Pro gradu philosophico Publicae Censurae modeste subjicit Andreas Henricus Winter, Wirburgensis. In Auditorio Majori die V Jun. MDCCCV. . .

Åbo: Typis Frenckellianis. (1805).

First edition. 4to. 2 leaves, 8 pp. Fine copy, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. 11 Dissertations. 1792–1805.

A DISSERTATION ON the history, preparation, and physical and chemical properties of aluminum sulphate, presented by Winter under the direction of Gadolin, professor of chemistry at Åbo. The extraction of aluminum sulphate by heating clay (an aluminosilicate) with sulphuric acid is described, as are its reactions with alkali metal sulphates to form various alums. The researches of Bergman, Chaptal, Gellert, Hellot, Macquer, Pott, Scheele, and other chemists are cited. Rare. Unknown to the usual bibliographers.

WINTER, Andreas

Dissertatio Chemica de Sulphate Ammoniacae. . . Praeside Mag. Johanne Gadolin, . . . Pro gradu philosophiae Publicae Censurae subjicit Andreas Winter, Wiburgensis. In Auditorio Majori d. XXII Maji MDCCCV. . .

Åbo: Typis Frenckellianis. (1805).

First edition. 4to. 1 leaf, 8 pp. Fine copy, uncut with wide margins, in maroon quarter cloth antique, marbled boards, spine labeled: Gadolin. 5 Dissertations. 1797–1805.

A DISSERTATION ON the history and chemical properties of ammonium sulphate, presented by Winter under the direction of Gadolin at Åbo. References to the works of Bergman, Fourcroy, Glauber, Macquer, Stahl, and other chemists are cited. The composition of ammonium sulphate is discussed, based on the quantitative analyses of Kirwan, Richter, and Wenzel. It is not known whether Andreas Winter is the same person as Anders Heinrich Winter, also of Wiburg, whose dissertation on aluminum sulphate was presented under Gadolin at Åbo in 1805. Waring (p. 223) lists another work by A. Winter, *Dissertatio de Ammoniacâ* (Åbo, 1805, 4to.), but not the present title. Unknown to the usual bibliographers.

WINTERL, Jacob Joseph

Prolusiones ad Chemiam Saeculi Decisi Noni.

Budapest: Typis ac sumptibus Typographiae Regiae Universitatis Pestinensis. 1800.

First edition. 8vo. 2 leaves, xii, 270 pp. Woodcut head- and tailpieces. Fine copy in original patterned brown boards.

WINTERL (1732–1809), professor of chemistry and botany in Budapest, held very unconventional ideas on the chemical elements and on chemistry in general. The present book summarizes his theoretical views, which include severe criticism of Lavoisier and the new chemistry. On page 10 Winterl uses the term *amphoteric bodies* (corporum amphoteriorum, i.e., acidorum and basicorum simul) to describe compounds that possess both acidic and basic properties (e.g., oxides of lead, tin, zinc, and aluminum). This is probably the earliest use of the word *amphoteric*, and the book is important for that reason. Winterl also “recognised that acids need not contain oxygen, that silica has acidic properties . . . , and that many metallic calces are acidic” (Partington, who discusses the author’s work at length). A supplement was published three years later: *Accessiones novae ad prolusionem suam primam et secundam* (Budae, 1803). Scarce. Not in Blake, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Hofer, Neu, Smith, Sondheimer, Waller, etc. (Bolton, 925; Ferchl, 583; Kopp, *Geschichte der Chemie*, II, 282; Partington, III, 599–600; Poggendorff, II, 1340; Watt, II, 975q)

WISLICENUS, Johann

Über die räumliche Anordnung der Atome in organischen Molekullen und ihre Bestimmung in geometrisch-isomeren ungesättigten Verbindungen . . .

Leipzig: Bei S. Hirzel. 1887.

First edition. Tall 8vo. 1 leaf, 77, (1) pp. 186 figures in text. Very good copy, in contemporary unlettered quarter cloth, marbled boards.

A WORK OF great historical importance on the spatial arrangement of atoms in organic molecules. “One of the classic contributions to stereo-chemistry” (Zeitlinger). Wislicenus (1835–1902) succeeded Kolbe at Leipzig in 1885. “Wislicenus was the leader in applying and extending the ideas of van’t Hoff and Le Bel, and his successes helped to bring chemists to the new field of stereochemistry. . . . In 1887 Wislicenus published an important paper on the stereoisomerism of unsaturated carbon compounds, extending the hypothesis along the lines suggested by van’t Hoff and also considering the attractive-repulsive forces of the atoms in order to determine the most probable geometric configuration of the atoms in the molecule. He showed how the interpretation of maleic and fumaric acids as geometric isomers explained their chemical transformations. In addition he determined the configurations of many unsaturated isomeric carbon compounds and investigated geometric isomerism in cyclic compounds” (D.S.B.). The optical activity of isomeric organic compounds is explained by postulating that the carbon atom has four equal bonds, each of which is oriented toward the corner of a regular tetrahedron. (Bolton, 926; D.S.B., XIV, 455; Duveen, 623; von Meyer, *Hist. of Chemistry*, 1906, pp. 370–371; Partington, IV, 810; Smith, 514; Sotheran/Zeitlinger, II, 15604)

WITHERING, William

A Chemical Analysis of the Water at Caldas da Rainha.

By William Withering . . .

Lisbon: Printed by the Academy. 1795.

First separate edition. 4to. 2 leaves, 61, (3) pp., 1 leaf (errata). With title pages and text in Portuguese and English on facing pages. Very fine (essentially mint) copy, uncut with wide margins, in gilt-ruled maroon morocco antique, spine gilt-lettered and dated.

THE FIRST separate edition of the author’s last book. The son of an apothecary, Withering (1741–1799) became a physician (Edinburgh, M.D., 1766) and F.R.S. (1784). He was “active in Birmingham’s vigorous Lunar Society . . . which included Joseph Priestley, Erasmus Darwin, Josiah Wedgwood, Matthew Boulton, and James Watt” (D.S.B.). A competent chemist, Withering discovered native barium carbonate (witherite). He is famous for his discovery of the pharmacological use of digitalis for treating dysfunctions of the heart, published in 1785 (see Garrison & Morton, 1836). In an attempt to slow the chronic pulmonary condition from which he suffered during the last fifteen years of his life, Withering spent two winters in the warmer climate of Portugal. At the request of the Portuguese court, he analyzed the hot mineral waters of Caldas da Rainha, and his results were published in the *Transactions of the Royal Academy of Sciences of Portugal* and also in the Royal Society’s

Philosophical Transactions. Very rare. Not in D.S.B., Duveen, Partington, Waring, Wellcome, etc. (Blake, 493; Cole, 1384; Cushing W255; Thornton & Tully, 196)

WITTE, Georg Christian

De Analysi Medicamentorum Simplicium Chemica ad Virtutes ipsorum Determinandas hactenus perperam adhibita. Specimen inauguratae quod praeside . . . Rudolpho Augustino Vogelio . . . pro summis in medicina honoribus . . . A.D. XXVII IVL. MDCCLXIII. publice defendet Georgius Christianus Witte Soltaviensis Luneburgicus.
Göttingen: Litteris Joannis Henrici Schulzii, Acad. Typogr. (1764).

First edition. 4to. 24 pp. Fine copy with wide margins, in maroon quarter morocco antique, marbled boards, spine gilt-lettered and dated.

THE DOCTORAL dissertation of Witte (dates unknown), of Luneburg, on the benefits of chemically analyzing substances used in medicine to determine their virtues and properties, presented under the direction of the celebrated professor of chemistry and medicine Rudolph Augustin Vogel (1724–1774). The works of Boerhaave, Geoffroy, Neumann, et al., are mentioned. Not in the usual chemical and medical bibliographies. (Ferchl, 559, 584; Poggendorff, II, 1217; Waring, 73)

WITTIE, Robert

Scarborough Spaw, or, a Description of the Nature and Vertues of the Spaw at Scarborough in Yorkshire. Also a Treatise of the Nature and Use of Water in general, and the several sorts thereof, as Sea, Rain, Snow, Pond, Lake, Spring, and River Water, with their Original Causes and Qualities. Where more largely the Controversie among Learned Writers about the Original of Springs, is discussed. To which is added, a short Discourse concerning Mineral Waters, especially that of the Spaw. By Robert Wittie, Dr. in Physick.

London: Printed for, and are to be sold by Charles Tyus, at the three Bibles on London Bridge, and by Richard Lambert in York, near the Minster. 1660.

First edition. 8vo. 8 leaves, 254 pp., 1 leaf (errata). Very good copy with wide margins, in original blind-ruled sheep, gilt-lettered green morocco label. Old signature (Edw. Pryme) on title page. Armorial bookplate: Francis Gray Smart.

ONE OF the earliest of the “spa-doctors,” Wittie (1613–1684) resided for several years in Hull, where he became a close friend and colleague of Dr. James Primrose. The publication of the present book was the starting point of a bitter controversy, which was kept alive for many years. The chief antagonists of Wittie were William Simpson and

George Tunstall. For an interesting account of this controversy, see F. N. L. Poynter, *A Seventeenth-Century Medical Controversy Robert Witty versus William Simpson* (in *Essays . . . written in honour of Charles Singer*, 1953, vol. 2, pp. 72–81). Wittie discusses the chemical composition of the Scarborough waters and his analytical methods, stating that “this water hath its vertue from its participation of Vitriol, Iron, allome, Nitre and Salt.” “The earliest book on these waters” (Duveen). The second edition (York, 1667) was attacked by Simpson in *Hydrologia Chymica* (London, 1669) and by Tunstall in *Scarborough Spaw spagyrically anatomized* (London, 1670). To the former, Wittie published a sharp response entitled *Pyrologia Mimica* (London, 1669). (Duveen, 624; Ferguson Coll., 774; Krivatsy, 13106; Munk, I, 414; Neu, 4397; Waring, 800; Wing, W3231)

WITTIE, Robert

Scarboroughs Spagyricall Anatomizer dissected. Or an Answer to all that Dr. Tonstall hath Objected in his Book against Scarborough Spaw. The Innocency and Excellency of that Spaw is further asserted. 1. Concerning the Rise and Growth of the Art of Physick. 2. Touching the Causes of the Petrifying Property that is in some Springs, and more especially that of the Dropping Well at Knaresbrough. 3. About the Signs, Symptomes and Cures of Diseases. As also Reflections upon a late Piece, called a Vindication of Hydrologia Chymica. By Robert Wittie Doctor in Physick.

London: Printed by B. G. for Nath. Brooke at the Angel in Cornhil and R. Lambert at Minster-Gate in York, Anno Dom. 1672.

First edition. 8vo. 16 leaves, 127, (1) pp. Very good copy, in original blind-ruled, unlettered sheep.

A RESPONSE TO *Scarborough Spaw spagyrically anatomized* (London, 1670) by George Tunstall (or Tonstall, b. 1616). Of considerable chemical interest, Wittie gives numerous examples of contemporary analytical methods. He refers to many other writers on mineral waters (e.g., French, Heers, Helmont, Jorden, and Kircher) and refutes objections that William Simpson had made in *Hydrologia Chymica* (London, 1669). For further details, see F. N. L. Poynter, *A Seventeenth-Century Medical Controversy Robert Witty versus William Simpson* (in *Essays . . . written in honour of Charles Singer*, 1953, vol. 2, pp. 72–81). Very rare. Unknown to Munk and not in the usual bibliographies. (Krivatsy, 13107; Waring, 800; Watt, II, 977m; Wing, W3233)

WOLF, Hans Kaspar

Diodori Euchyontis de Polychymia, Libri Quatuor.
N.p. 1567.

First edition. 8vo. 8 leaves, 229, (1) pp., 5 leaves (index).
Woodcut of calcining furnace on title page and leaf P3.
Woodcut capitals. Roman letter. Fine, crisp copy, in blind-stamped calf antique, spine gilt-lettered and dated. Engraved bookplate: Ex donat: Molliana.

AN IMPORTANT alchemical and iatrochemical work by the Swiss physician Wolf (or Wolff, 1525–1601), published under the pseudonym Diodorus Euchyon. Wolf, who succeeded Conrad Gesner at Zurich as professor of physic and later of Greek language, was one of the most eminent physicians of the sixteenth century. The book is on practical chemistry and gives clear directions for the preparation of various recognizable compounds. It is divided into four parts: waters, oils, salts, and the philosopher's stone. Although the place of publication is not indicated, it was probably Basel or Zurich. Libavius mentions this work among the authorities he consulted when writing his *Aichemia* (1597). Duveen describes this edition as "extremely rare." Second (Amsterdam, 1604) and third (Frankfurt, 1609) editions appeared. The present work was unknown to Hirsch (VI, 312) and to the compilers of Wolf's biography in the *Biographie Universelle* (45, 13) and in the *Allgemeine Deutsche Biographie* (43, 777). Not in Bolton, British Library, Durling, Ferguson, Manget, Thorndike, etc. N.U.C. records only one copy, at Yale. (Adams, E971; Duveen, 626; Edelstein, 2464; Ferchl, 147; Ferguson Coll., 776; Lenglet Dufresnoy, III, 149, 158; Neu, 11, 100; Partington, II, 253; Smith, 516; Waite, 285; Watt, I, 344w; Wellcome, I, 1764)

WOLFF, Carol Ferdinand

Dissertatio Inauguralis Physico-Chemica de Natura Aquae Uliginosae atque Turfae . . . in Academia Georgia Augusta pro gradu doctoris philosophiae . . . die III M. Aprilis A. MDCCCXXX publice defendet Carol. Ferdinand. Wolff. . .
Göttingen: Impressit Fratr. Baier. (1830).

First edition. 4to. 2 leaves, 28 pp. Good copy in maroon quarter morocco antique, marbled boards, spine lettered and dated in gilt.

AN UNUSUAL doctoral dissertation on the physical and chemical properties of turf or peat moss, presented at the University of Göttingen by Wolff (dates unknown), who came from Rintheln. Many interesting experiments are described on the substances extracted from peat moss by treating it with acids, alkalis, salts, and organic solvents. On page 23 et seq. Wolff describes the products obtained when turf is subjected to dry distillation and comments on

the use of turf as a source of gas for illumination and the manufacture of useful chemicals. A very uncommon work. No biographical or bibliographical information on Wolff or this book has been found.

WOLLASTON, Francis John Hyde

A Plan of a Course of Chemical Lectures, by Francis John Hyde Wollaston, M.A. F.R.S. Jacksonian Professor in the University of Cambridge.

Cambridge: Printed by J. Archdeacon and J. Burges, Printers to the University. 1794.

First edition. 4to. 1 leaf, 48 pp. Fine copy, uncut, in contemporary boards; interleaved throughout, with notes in ink by an unidentified eighteenth-century student in shorthand on some leaves. Bound with: Parish, William, *A Plan of a Course of Lectures on Arts and Manufactures* (Cambridge, 1796). From the library of Professor Franz Sondheimer.

WOLLASTON (1762–1823), who succeeded Isaac Milner as Jacksonian professor of chemistry (1792–1813), was the brother of the celebrated chemist William Hyde Wollaston (1766–1828). Elementary in scope, these lectures provide an interesting insight into the level at which chemistry was taught in the final decade of the eighteenth century at Cambridge University. The many subheadings indicate that the course was largely on descriptive chemistry, with very little theoretical discussion. Under the heading "Airs" (i.e., gases), oxygen and nitrogen were still described as dephlogisticated and phlogisticated airs, respectively. It is not clear from these headings whether or not the New Chemistry of Lavoisier and his circle was introduced to the students who attended this course of elementary chemistry. A rare work that is not mentioned by Bolton, Duveen, Ferchl, Ferguson, Neu, Partington, Poggendorff, Waller, Watt, etc. (Smith, 516)

WOLTERSdorFF, Johann Lucas

Systema Minerale in quo, Regni Mineralis Producta Omnia Systematice per Classes, Ordines, Genera et Species proponuntur. Mineral-System worinn alle zum Mineral-Reich gehörige Körper in ordentlichem Zusammenhange nach ihren Classen, Ordnungen, Geschlechtern and Arten vorgetragen werden von Johann Lucas Woltersdorff. Anjetzo mit neuen Observationen auch einer Nachricht von der sonst geheimen Kunst das Holtz zu versteinen herausgegeben von Eberhard Friederich Stadel, Apotheker in Ulm.

Ulm: auf Kosten des Verfassers and in Commission bey Daniel Bartholomai and Sohn. 1755.

First edition by Stadel. Oblong 4to. 54 pp. Large woodcut headpiece on page 3. Very good copy in the original speckled boards. From the Prince Fürstenberg library, Donaueschingen, with eighteenth-century inscription in ink on recto of first free

endpaper: "Ex Bibliotheca Doctoris Brix de Wohlberg Archiatri Furstenbergii."

WOLTERSdorff (1721–1772), a minister at the Gertraudten-Kirche, Berlin, published his classification of minerals as *Systema minerale* (Berlin, 1748). Eberhard Friederich Stadel (?–1755), an apothecary of Ulm, brought out this revised edition, with so many additions that it constituted an essentially new work. Stadel reproduces Woltersdorff's Latin text with a German translation in two columns. The classifications of minerals, metals, salts, etc., and descriptions of their chemical and physical properties are interesting and historically important. Partington briefly refers to this work, stating that "Wallerius, J. L. Woltersdorff, F. A. Cartheuser and J. H. Ir. von Justi had followed Linnaeus in dividing minerals into *peptrae*, *minerae*, and *fossilia*." A rare book. Not in Blake, Bolton, D.S.B., Duveen, Edelstein, Ferguson, Ferguson Coll., Hoover, Neu, Smith, Waller, Watt, etc. (Ferchl, 512, 588; Partington, III, 171; Poggendorff, II, 978, 1364)

WOOD, Anthony

Athenae Oxonienses. An Exact History of all the Writers and Bishops Who have had their Education in the most ancient and famous University of Oxford, from the fifteenth year of King Henry the Seventh, Dom. 1500, to the end of the year 1690. . . . To which are added, the Fasti or Annals, of the said University. . . .

London: Printed for Tho. Bennet at the Half-Moon in S. Pauls Churchyard. 1691, 1692.

First edition. 2 vols., folio, in 1. I: 4 leaves, 904 numbered columns, 9 pp. (advertisement and index). II: 3 leaves, 906 numbered columns, 4 leaves (index). Titles in red and black. Text in double columns. Last leaf of index to volume II lacking; otherwise very good copy, in original paneled calf, rebacked, maroon morocco label, spine dated. Armorial bookplate (nineteenth century): Matthew Bell.

EDUCATED AT New College and Merton College, Oxford, the celebrated antiquary and historian Wood (1632–1695) made collections for the history of Oxfordshire and published *Historia et antiquitates Universitatis Oxoniensis* (Oxford, 1674). An English version by him was issued by John Gutch (1791–96). The work by which Wood is principally remembered, *Athenae Oxonienses*, is a biographical dictionary of Oxford writers, including many scientists (e.g., Francis Bacon, Elias Ashmole, Kenelm Digby, Robert Boyle, Robert Hooke, Richard Lower, and John Mayow). "This work is extremely useful, and has long borne a high character" (Watt). It contains much information not available elsewhere and is valuable to the historian of science. The first volume (published in June 1691) brings the lives

down to 1640, and the second, "compleating the whole work," brings them down to 1690. (Watt, II, 980m; Wing, W3383, 3383A)

WOOD, Anthony

Athenae Oxonienses. An Exact History of all the Writers and Bishops who have had their Education in the most Antient and famous University of Oxford, . . . Second edition, very much corrected and enlarged . . .

London: Printed for R. Knaplock, D. Midwinter, and J. Tonson. 1721.

Second edition. 2 vols., folio. I: 7 leaves, 742 numbered columns (Athenae) + 286 numbered columns (Fasti), 4 leaves (index). II: 3 leaves, 1186 numbered columns (Athenae) + 238 numbered columns (Fasti), 4 leaves (index). Title pages in red and black, with 2-page list of subscribers (vol. I). Fine copy, in original, gilt-ruled paneled calf, rebacked, brown morocco labels. Armorial bookplate: Richard Richardson (1663–1741), antiquary, botanist, and physician of University College, Oxford (see D.N.B.).

THE LAST and best edition of this classic work to appear in Wood's lifetime, covering the period from 1500 until his death in November 1695. At the end of each volume, added to the biographical *Athenae*, is a new draft of his *Fasti Oxonienses*. These additional annals of the university served as a means of using some of Wood's surplus material. Wood was fond of severe reflections, and throughout his work he adopted reckless charges and criticisms, for which he was prosecuted by Henry Hyde, second earl of Clarendon, for libeling his father Edward Hyde. Wood was found guilty, and the offending pages were publicly burned. The second edition professes to have thousands of corrections and additions from Wood's proof-copy in the Ashmolean and more than 500 additional lives. Isaac Newton is listed as a subscriber for a "large paper" copy; however, no copy of this work was listed by Huggins (1727) or the Musgrave Catalogue (ca. 1766) of Newton's library (see Harrison). (Watt, II, 980m)

WORLIDGE, John

Vinetum Britannicum: or a treatise of cider, and other wines and drinks extracted from fruits growing in this kingdom. With the method of propagating all sorts of vinous fruit-trees. And a description of the new-invented ingenio or mill, for the more expeditious making of cider. And also the right way of making metheglin and birch-wine. The second impression, much enlarged. To which is added, a discourse teaching the best way of improving bees. With copper plates. By J. Worlidge. Gent.

London: Thomas Dring, and Thomas Burrel. 1678.

Second edition. 8vo. 12 leaves, 240 pp., 5 leaves, 42 pp., 6 leaves. Fine engraved frontispiece (cidermaking equipment in operation) and 4 full-page copperplates (3 forming part of pagination but plate facing p. 106 on separate leaf). Woodcut capitals and headpieces. Small woodcut figure in margin of page 130. The *Apiarium; or a discourse of . . . bees* has a separate divisional title page, with its own signatures and pagination. Fine copy in contemporary blind-ruled calf, with gilt-lettered maroon morocco label.

WORLIDGE (fl. 1669–1698) was a notable agricultural writer who published *Systema Agriculturae, the mystery of agriculture discovered* (London, 1669), his principal work, and *Systema Horti-culturae: or, the art of gardening* (London, 1677). He also published two smaller but no less important works: *Vinetum Britannicum* (London, 1676) and *Apiarium* (London, 1676), dedicated to Elias Ashmole. In the preface to this second edition the author states that he has “added several material Improvements” and “Experiments made to the great improvement of Cider.” The book is, of course, primarily of agricultural interest, but there are many topics inter alia of importance to the history of industrial chemistry (e.g., winemaking, theories of fermentation, the nature of salts which separate from various wines, distillation, sulphur as a preservative, etc.). Fussell, in *The Old English Farming Books, 1523 to 1730* (London, 1947, pp. 68–71), discusses these works. (Wing, W-3609)

WORM, Ole

Museum Wormianum. Seu Historia Rerum Rariorum, tam Naturalium, quam Artificialium, tam Domesticarum, quam Exoticarum, quae Hafniae Danorum in aedibus Authoris servantur. Adornata ab Olao Worm, Med. Doct. & in Regiâ Hafniensi Academia, olim Professore publico. Variis & accuratis Iconibus illustrata.

Lugduni Batavorum (Leiden): Apud Iohannem Elsevirium, Acad. Typograph. 1655.

First edition. Folio (in 4s). 6 leaves, 389 pp., 1 leaf. Woodcut printer's device on title. Double-page engraving of the museum (by G. Wingendorp) and fine engraved portrait of Worm at 66 (C. van Mander pinxit, G. Wingendorp sculp.). Numerous large text woodcuts. Woodcut capitals, head- and tailpieces, and 10 large copperplates in text (some full-page). Fine copy in contemporary vellum, spine gilt, maroon gilt-lettered label.

NEWTON HARVEY describes this important book as follows: “Just as scientific societies began in the sixteenth century with private gathering of friends to discuss scientific subjects, so the scientific museum, a collection of various objects of natural or philosophical interest, can be traced to the same period. The material was assembled in a special room by important learned individuals, and became a per-

manent display. One of these remarkable collections belonged to Olaf Worm (1588–1654), the physician and professor at Copenhagen. The contents of his collection was described in *Museum Wormianum . . .*, 1655). This book, published posthumously by his son, Willem Worm, was no mere catalogue of specimens, but a summary of the scientific opinion of his day, a real contribution to knowledge. It included an essay on the Bolognian phosphor.” There are extensive sections describing metals, minerals, salts, and other chemicals, as well as organic materials prepared from plants and animals. The D.S.B gives a biographical account of Worm and his museum. The collection passed to King Frederik III and eventually became one of the first Danish museums to be open to the public. Rare. Not in the usual chemical bibliographies. (Cole, 456; D.S.B., XIV, 505; Newton Harvey, 100; Waller, 20413)

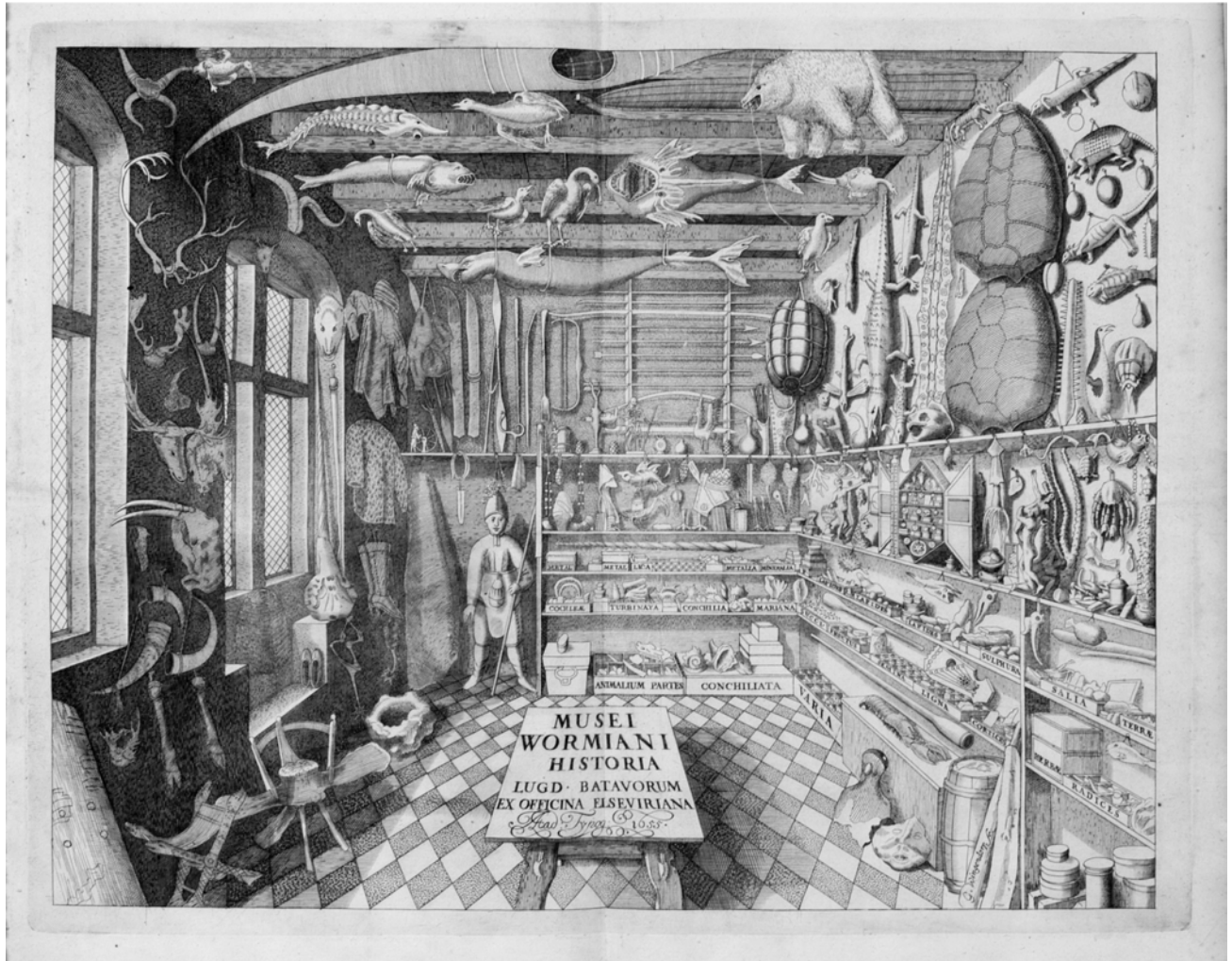
WOTTON, William

Reflections upon Ancient and Modern Learning. . .

London: Printed by J. Leake, for Peter Buck, at the Sign of the Temple, near the Inner-Temple-Gate, in Fleet-street. 1694.

First edition. 8vo. 16 leaves, 359, (1) pp. Fine copy in original calf, rebounded, green morocco label.

WOTTON (1666–1727) was chaplain to Daniel, earl of Nottingham, to whom he dedicated this work. The *Reflections* are still considered the best summary of the discoveries in science and medicine to the end of the seventeenth century. Sir William Temple (1628–1699), in his essay “Upon Ancient and Modern Learning” (in *Miscellanea*, 1691), asserted the superiority of the “ancients” over the “moderns” in almost all things. In his *Reflections* Wotton defends the “Moderns,” especially in science, logic, philology, and architecture. Several chapters discuss alchemy and “modern chymistry,” “elementary bodies and minerals,” and related topics. This work is very important for first reprinting in Latin (pp. 211–212) the passage from the *Christianismi Restitutio* (Vienna, 1553) by Michael Servetus (1511–1553), in which he demonstrated the lesser circulation of the blood. Servetus and his book were convicted of heresy, and he was burned at the stake. Only three copies (one imperfect) of this classic by Servetus survive. For more than a century the great contribution to the study of the circulation was unknown until resurrected by Wotton. (Blocker, 427; Eales, 1088; Fulton & Stanton, *Michael Servetus* [1953], 84–85; *Heirs of Hippocrates*, 731; Knight, 31; Krivatsy, 13153; Reynolds, 4460; Thorndike, VIII, 619; Watt, II, 985f; Wing, W3658)



Worm. Museum Wormianum. Lugduni Batavorum (Leiden), 1655.

WOTTON, William

Reflections upon Ancient and Modern Learning. By William Wotton, B.D. Chaplain to the Right Honourable the Earl of Nottingham. The Second Edition, with Large Additions. With a Dissertation upon the Epistles of Phalaris, Themistocles, Socrates, Euripides; &c. and Aesop's Fables. By Dr. Bentley.

London: Printed by J. Leake, for Peter Buck, . . . 1697.

Second edition. 8vo. 4 leaves, xxxvii, (3), 421, (1) pp., 1 leaf (blank), 152 pp. Very good, crisp copy, in contemporary blind-stamped paneled calf, rebacked, with the original spine laid on. From the library of the celebrated critic and biographer Lytton Strachey (1880–1932), with his bookplate on the front pastedown.

THE *Reflections* by the English scholar William Wotton are still considered the best summary of the discoveries in medicine and the physical sciences, including chemistry, until the date of its publication. It is “chiefly devoted to the clear statements of facts” and maintains the superiority of the “moderns” over the “ancients.” In 1690 Sir William Temple, in his work *Upon Ancient and Modern Learning*, asserted the superiority of the “ancients” over the “moderns.” The most interesting and important part of this work is Wotton’s discussion of Servetus’s discovery of the lesser circulation and his first translation into English of certain passages (pp. xxv–xxxiii), which appears only in this second edition. Only by then had he seen a manuscript copy of the legendary *Christianismi, Restitutio* (1553) and was able to discuss the respective passages in greater detail. With separate pagination is the first edition of Dr. Richard Bentley’s *Dissertation*, in which he proves that the “Aesopian” fables were not the work of Aesop and that the letters of Phalaris were a forgery of a later age. “Bentley (1662–1742) was and remains the greatest of English classical scholars. His reputation was made by his *Dissertation*” (*Printing and the Mind of Man*, 178). Osler states that “Bentley’s work . . . is the earliest model of the new scientific criticism.” This second edition is rarer than the first of 1694. (Osler, 5602; Watt, II, 985f; Wing, W3659, B1928)

WOYT, Johann Jacob

Gazophylacium Medico-Physicum, of Schat-Kamer der Genees- en Natuur-Kundige Zaaken, behelzende . . . alle de Mineralen, Metaalen en Aarden. Vreemde en Inlandsche-Dieren, Kruiden, Bloemen, Zaaften, Zappen, Olyen, Harsten enz: alle zeldzaame Speceryen in de Medicynen gebrukelyk. . . alles in een . . . Latynsche Alphabet . . . in de Hoogduitsche Taale beschreven door den Heer Johannes Jacob Woyt, . . . met Aanmerkingen verrykt door Joann. Christ. Schmellentin, . . .

Amsterdam: By De Janssoons van Waesberge, Hendrik Vieroot, Abraham en Isaak Graal. 1741.

First edition in Dutch. 4to. 14 leaves (including fine engraved frontispiece), 590 pp., 14 leaves. Title in red and black. With 4 copperplates (tables of chemical names and symbols). Very good copy in original quarter maroon calf, marbled boards, old green paper label lettered in ink. Bookplate: Bibliotheek van 'S Rijks Kweekschool voor Militaire Geneeskundigen.

WOYT (1671–1709) was professor of medicine in Königsberg. His most important work, the *Gazophylacium . . . oder Schatzkammer medicinische und natürlichen Dinge* appeared in many German editions, those after his death being edited by J. E. Hebenstreit. It is a pharmaceutical chemical and medical dictionary, the definitions being clear and unambiguous. Blake, Ferchl, Ferguson Coll., Neu, and Waller list editions, all in German with Leipzig imprints, published between 1724 (4th edition) and 1761 (15th edition). The present is the first translation into Dutch, edited by J. C. Schmellentin, a physician in Amsterdam. The preface is dated 1741. Very rare. Not in the usual bibliographies.

WRIGHT, Edward

Dissertatio Medica Inauguralis de Ferri Historia Naturali, Praeparatis, et Usu Medico: . . . pro gradu doctoratus, . . . subjicit Eduardus Wright, Scotus. Ad diem 15 Junii, . . . Edinburgh: Apud Hamilton, Balfour, et Neill. 1753.

First edition. 4to. 2 leaves, 59, (1) pp. Fine copy in maroon half morocco antique, marbled boards, spine lettered and dated in gilt.

THE DOCTORAL dissertation of Wright (dates unknown) on the chemical and medicinal properties of inorganic compounds of iron. It is well documented with references to the chemical works of Lemery, Becher, Stahl, Geoffroy, Hales, Homberg, et al. On pages 17 and 20 there are references to Newton and Boyle, respectively. Spielmann (*Institutiones chemiae*, 1763 and 1766) speaks highly of Wright and lists this title in his bibliography. Rare. Not in Blake, Bolton, Cushing, Duveen, Edelstein, Ferguson, Ferguson Coll., Neu, Osler, Partington, Poggendorff, Smith, Waller, Watt, etc. (Ferchl, 590; Waring, 431)

WURTZ, Charles Adolph

A History of Chemical Theory from the age of Lavoisier to the present time. By Ad. Wurtz . . . Translated and edited by Henry Watts . . .

London: Macmillan and Co. 1869.

First English edition. 8vo. 4 leaves, 220 pp. + 52 pp. (advertisements, dated December 1868). Neat signature in top margin of

title page (L. W. Fulcher); otherwise very good copy in original brown cloth, spine gilt-lettered.

THE ENGLISH translation of *Histoire des doctrines chimiques depuis Lavoisier jusqu'à nos jours* (Paris, 1869). "The graphic History of Chemical Theory here presented to the English reader, forms the Introductory Discourse to M. Wurtz's 'Dictionnaire de Chimie'" (preface by the chemist Henry Watts [1815–1884], dated February 1869). When the French edition first appeared it was much criticized for its opening sentence: "La chimie est une science française." Watts mentioned the "national partiality" but states that Wurtz "has habitually done full justice to the labours of chemists belonging to other nations." Watts has also updated this translation with notes on "discoveries having important bearings on the development of chemical theory" omitted by Wurtz. Although editions in several languages are listed by Bolton (p. 169), curiously he does not mention this English translation. (D.S.B., XIV, 531; Edelstein, 2475; Ferchl, 590; Partington, IV, 478; Roller & Goodman, II, 597; Smith, 519)

WURTZ, Charles Adolph

Introduction à l'Étude de la Chimie. Par Ad. Wurtz. . .
Paris: G. Masson, Éditeur Libraire de l'Académie de Médecine. 1885.

First edition. 8vo. 2 leaves, vi, 276 pp. With 79 woodcut figures in text (crystal structures and laboratory apparatus). Fine copy in quarter calf antique, marbled boards, gilt-ruled spine, original printed wrappers bound in.

ONE OF the last works by Wurtz, this is an excellent textbook for introducing chemistry to students. The first chapter describes the history of chemistry from its ancient beginnings to the mid-nineteenth century (pp. 20–84). "On y trouve un aperçu historique tracé de main de maître sur le développement de la chimie" (C. Friedel). The other three chapters discuss the physical and chemical properties of matter, with tables of data and atomic weights (pp. 241–242). An early periodic table (pp. 259–260) divided into twelve series includes many blank spaces for as-yet-undiscovered elements (mainly rare earth metals). The work of Mendeleef is discussed (pp. 261–262). Very scarce. Not in Duveen, D.S.B., Edelstein, Ferchl, Partington, Roller & Goodman, Smith, etc. (Bolton, 935; Sotheran, Cat. 800 [1926], 12296)

WURTZ, Charles Adolph

Leçons de Philosophie Chimique. Par Adolphe Wurtz.
Paris: Librairie de L. Hachette et Cie. 1864.

First edition. 8vo. 2 leaves, ii, 224 pp. Nineteenth-century marginal annotations in English; otherwise fine copy in original half calf, marbled boards and endpapers, spine richly gilt, black morocco label.

ONE OF the great French chemists of the nineteenth century, Wurtz (1817–1884) was a pioneer of synthetic organic chemistry. At first an assistant to Dumas, in 1849 he succeeded him at the École de Médecin and later taught at the Sorbonne. Wurtz prepared the first organic derivative of ammonia, ethylamine, in 1849, and in 1856 he made ethylene glycol. The well-known Wurtz reaction for preparing paraffin hydrocarbons (alkanes) is named for him. "Wurtz excelled as a practical chemist, and almost all his contributions were of lasting value" (D.S.B.). The present work deals with "questions in theoretical chemistry, and . . . found much acceptance because of its clearness and charming style" (E. von Meyer). Scarce. Not in Bolton, Edelstein, Roller & Goodman, Smith, etc. (D.S.B., XIV, 531; Duveen, 627; Ferchl, 590; Meyer, *History of Chemistry*, 1906, p. 307; Partington, IV, 483)

WURTZ, Charles Adolph

An Introduction to Chemical Philosophy according to the Modern Theories. By Dr. Adolphe C. Wurtz, F.R.S. Translated from the French, by permission of the Author, by William Crookes, F.R.S.

London: J. H. Dutton, "Chemical News" Office, 1, Wine Office Court, Fleet Street. 1867.

First English edition. 8vo. viii, 192 pp. Diagrams and tables. Very good copy in original blind-ruled maroon cloth, spine gilt-lettered and dated. From the library of the celebrated American chemist Campbell Morfit (1820–1897), with his bold signature in ink on the first free endpaper.

THE ENGLISH translation of *Leçons de philosophie chimique* (Paris, 1864). "At a time when the philosophy of chemistry is becoming more and more clearly apprehended, we need to be reminded of its historical development. . . . For these reasons the appearance in English dress, and in a separate volume of Professor Wurtz's 'Introduction to Chemical Philosophy,' must be regarded as peculiarly seasonable" (introduction, by Crookes). The history, development, and present state of chemical theories are reviewed in three parts: "I. Equivalents, Atomic Weights, and Molecular Weights"; "II. Theories of Types and Atomicity"; "III. Connection between Organic and Inorganic Chemistry." Each part is divided into sections. The book concludes with discussions

of the dualistic hypothesis, the unitary system, and the new chemistry. An important association copy, having once belonged to Campbell Morfit, professor of analytical and general chemistry at the University of Maryland (1854–57). Very scarce. Not in Bolton, Duveen, Morgan, Partington, Waller, etc. (Ferchl, 590; Smith, 519)

WURTZ, Charles Adolph

La Théorie Atomique. Par Ad. Wurtz . . .

Paris: Librairie Germer Baillière et Cie. 1879.

First edition. 8vo. 2 leaves, 248 pp., 2 leaves (advertisement), 32 pp. (Baillièrè's catalogue of books, dated Oct. 1878). With folding lithographed plate of periodicities of the elements as a function of atomic weight, by Lothar Meyer (facing p. 248). Fine copy in original publisher's maroon cloth, gilt-blocked on spine and both covers.

ONE OF the best histories of the development of the chemical atomic theory to appear in the nineteenth century. "Its title denoted more than the atomic-molecular theory of Avogadro or Ampere; it designated a theory that incorporated the idea of combining power or atomicity of the atoms—a new concept for which Wurtz had helped to clear the ground" (D.S.B.). Bolton and Partington give the date of publication as 1880. Not in Duveen, Edelstein, Morgan, Smith, Waller, etc. (Bolton, 169; D.S.B., XIV, 531; Ferchl, 590; Partington, IV, 478; Roller & Goodman, II, 598; Sotheran, Cat. 692 [1909], 5533)

WURTZ, Charles Adolph

The Atomic Theory. By Ad. Wurtz . . . Translated by E. Cleminshaw . . .

London: C. Kegan Paul & Co., 1 Paternoster Square. 1880.

First English edition. 8vo. viii, 344 pp. + 4 pp. + 32 pp. (advertisements). With folding lithographed plate of periodicities of the elements as a function of atomic weight, by Lothar Meyer.

Fine copy in original publisher's red cloth, spine gilt-lettered, covers blocked in black ornamental design. Nineteenth-century inscription in ink on flyleaf: "Presented to Brighton and Sussex Natural History Society by Charles F. Dennet 9/9/83."

THE ENGLISH translation of *La Théorie Atomique* (Paris, 1879). On the title the translator, Cleminshaw, is described as an assistant master at Sherborne School. He was a fellow of the Chemical Society (F.C.S.) and fellow of the Institute of Chemistry (F.I.C.). This is volume XXX of the International Scientific Series and first contains a useful index not in the French edition. Several later editions of this popular work appeared: e.g., 1881 (Duveen, 627) and 1888 (Edelstein, 2473). Not in D.S.B., Morgan, Smith, etc. (Partington, IV, 478; Roller & Goodman, II, 597; Sotheran, Cat. 692 [1909], 5534)

WYKISSALY, Wenceslaus

Dissertatio Inauguralis Practico-Medica de Mercurii Sublimati Corrosivi, in siphylide, efficaci, tutoque usu, . . . Publicae disquisitioni submittit Wenceslaus Wykissaly Bohemus . . . Die (blank) Mense Julii, Anno 1780.

Vienna: Typis Joannis Josephi Jahn. (1780).

First edition. 8vo. 7 leaves, 44 pp. Ornamental woodcut initials, head- and tailpieces. Very good copy in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated, with original colored wrappers bound in.

THE DOCTORAL dissertation of Wykissaly (Wynkissely or Wykissaby), a physician of Vienna (dates unknown), on the preparation and pharmaceutical uses of corrosive sublimate (mercuric chloride) in the treatment of venereal diseases. The author traces the history of the subject, with references to the writings of Boerhaave, Hoffmann, Lemery, Pringle, Spielmann, et al. Rare. Not found in the usual chemical and medical bibliographies. (Waring, 500)

YOUNG, Thomas

Life of Thomas Young, M.D., F.R.S., &c., and one of the eight foreign associates of the National Institute of France. By George Peacock, D.D., F.R.S., F.G.S., F.R.A.S., F.C.P.S., etc., Dean of Ely, Lowndean Professor of Astronomy in the University of Cambridge, and formerly Fellow and Tutor of Trinity College.

London: John Murray, 1855.

First edition. 8vo. 7 leaves, 514 pp. With fine mezzotint portrait frontispiece of Young and plate facing page 22. Fine copy, uncut, in the original blind-stamped brown cloth, spine gilt-lettered. Presentation copy to an unknown recipient, with "From the Author" neatly written in ink on the recto of the flyleaf preceding the half title.

THE DEFINITIVE biography of the great natural scientist Thomas Young (1773–1829). Very scarce. (D.S.B., XIV, 571; Osler, 1312; Poggendorff, II, 1384; Sotheran, Cat. 692 [1909], 5570; Waller, 18000)

YOUNG, Thomas

A Numerical Table of Elective Attractions; with Remarks on the Sequences of Double Decompositions. . . .

London: Printed by W. Bulmer and Co. Cleveland-Row, St. James's. 1809.

First separate edition. 4to. 15, (1) pp. Fine copy with wide margins, in maroon quarter cloth antique, marbled boards, spine gilt-lettered and dated.

AN OFFPRINT from the *Philosophical Transactions*, being the text of a lecture read before the Royal Society, 9 February 1809. Young had studied chemistry under Joseph Black at Edinburgh, and in this report he investigates the double decomposition of several hundred compounds, based on information in Fourcroy's great textbook. Errors in earlier tables of single and double elective attractions are corrected, and attempts are made to place chemical reactions on a rational and quantitative basis. "Young's tables of affinity . . . are little known and of much interest" (Zeitlinger). Partington describes the tables as "old fashioned." Very rare. Not in N.U.C. or the usual chemical libraries. (Partington, III, 710; Poggendorff, II, 1384; Sotheran, Cat. 879 [1947], 3054; Watt, II, 991m)

Y-WORTH, William

Cerevisiarum Comae: the New and True Art of Brewing, Illustrated by various Examples in Making Beer, Ale and other Liquors, So that they May be most Durable, Brisk and Fragrant; and how they may be so ordered, as to yeild [sic] the greatest Quantity of Spirits in Distillation. To which is added, The right way to Refine and Bottle Beer and

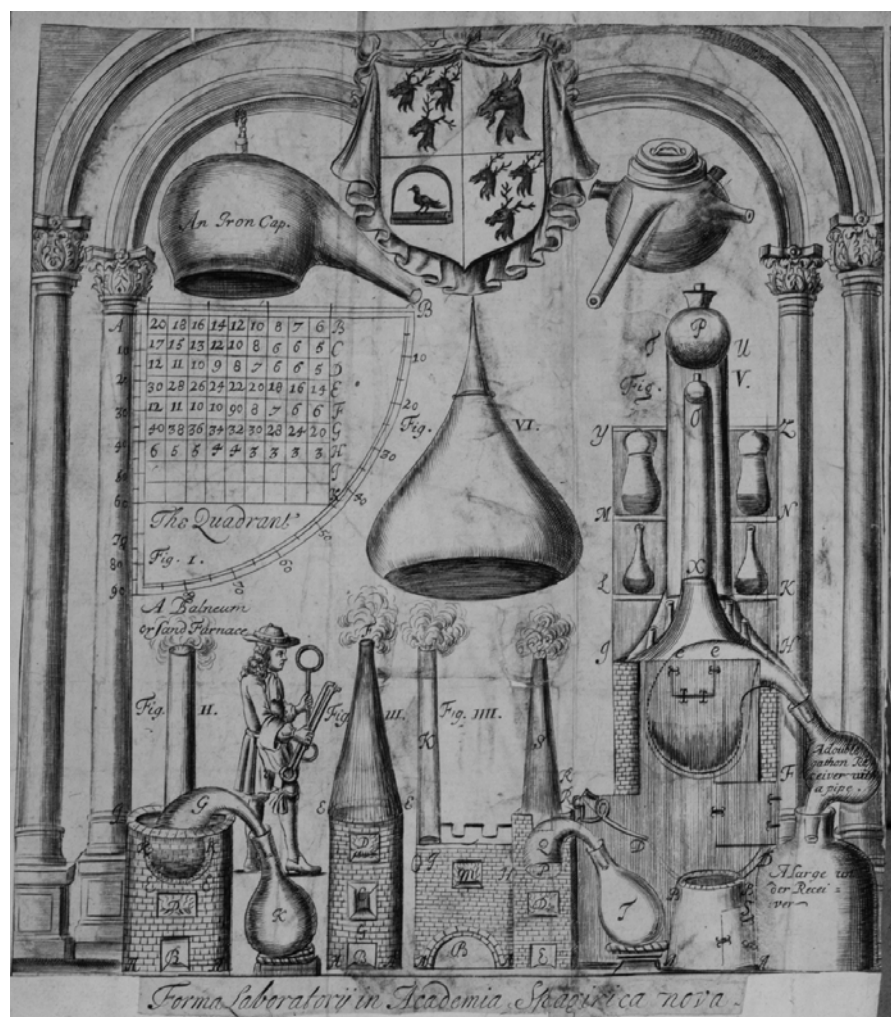
Cider . . . as also the true Method of Manuring Lands and the Art of making Salt Water Fresh. All proved by Demonstration and Sound Philosophy, to be more agreeable to Man's Body than otherwise, and so not only fit for English Constitutions, but also for Transportation. . . . By W. Y. Worth . . .
London: Printed for J. Taylor at the Ship, and S. Clement at the Swan, in S. Paul's Church-Yard. 1692.

First edition. 12mo. 10 leaves, 121, (3) pp. Fine copy in medium-brown smooth calf antique (by Larkins), double gilt rules on covers, 2 maroon morocco labels, spine richly gilt and dated.

THE "EPISTLE to the Reader" is signed by W. Y-Worth, who gives his address in London as the "Accademia Spagyrica Nova." This work on the manufacture, bottling, and curative properties of various beers, wines, and liquors discusses the chemistry and technology of fermentation processes as then understood. Although largely practical, the author gives his philosophical opinions on the universal spirit within mankind, which properly brewed beer can assist in liberating. He believed that beer was a healthful beverage with many curative properties but only if brewed in a correct manner. He added spice to the beer, especially when the water of the river Thames was used. Cider, wines, and spirits are covered. Artificial fermentation without yeast is achieved by the use of Glauber's sal mirabilis (i.e., sodium sulphate), especially "if some fresh Hops be put to the water" (p. 89). The final preliminary leaf and last three pages contain advertisements of books by Robert Boyle, John Evelyn, and William Salmon, and the nostrums of Y-Worth. Extremely rare. Wing lists six copies, only two in the United States (W. A. Clark; Yale). Not in the usual bibliographies. (Ferchl, 593; Ferguson, II, 559 [not in Young Coll.]; Watt, II, 991w; Wing, Y216)

Y-WORTH, William

Chymicus Rationalis: or, the Fundamental Grounds of the Chymical Art Rationally Stated and Demonstrated, by Various Examples in Distillation, Rectification, and Exaltation of Vinor Spirits, Tinctures, Oyls, Salts, Powers, and Oleosums; in such a Method as to retain the Specifick Virtue of Concrets in the greatest Power and Force. In all which the Chymical Doctrines are Illustrated upon a new Hypothesis or Spagirick Course, composed agreeable to Practical Philosophy and the best Authority of Art, for Mysteries treated of by Cartes, Starkey, Sylvius, Glauber, Helmont, Paracelsus, and others, are explicated and exemplarified, after a more particular and exact Manner than heretofore, and so fitted in order for the Publick Service. In which is contained, a Philosophical Description of the Astrum Lunare Microcosmicum, or Ithospheros. . . .



Y-Worth. Chymicus Rationalis.
London, 1690.

London: Printed for Thomas Salusbury, at the Sign of the Temple near Temple-Bar in Fleet-street. 1690.

First edition. 8vo. 8 leaves, 154 pp., 3 leaves. Large folding copperplate frontispiece of the *Forma Laboratorij in Academia Spagyrice nova* (laid down). Fore-edges of first 4 leaves neatly strengthened with contemporary paper; otherwise very good copy, in calf antique, maroon morocco label, spine dated.

DEDICATED TO his "sincere Friend," the "Honoured and truly Ingenious Robert Boyle," from his laboratory in "S. Pauls, Shadwel, London," by Y-Worth (fl. late seventeenth century), this work clearly describes the preparation of many recognizable salts and other compounds. The author says that he gave Boyle the "rough Draght" of this work for "Correction and candid Censure." Boyle died on 30 December 1691, so whether he contributed any comments on the draft remains unknown. Very rare. (Duveen, 629–630; Ferchl, 593; Ferguson, II, 559 [not in Young Coll.]; Fulton, 294; Krivatsy, 13169 [imperf.]; Wing, Y217)

Y-WORTH, William

Introitus Apertus ad Artem Distillationia; or the Whole Art of Distillation Practically Stated, and Adorned with all the New Modes of Working now in Use. In which is Contained, the Way of making Spirits, Aquavitae, Artificial Brandy, and their Application to Simple and Compound Waters in the exact Pondus of the Greater and Lesser Composition; as also many Curious and Profitable Truths for the exalting of Liquors, being the Epitomy and Marrow of the whole Art; supplying all that is omitted in the London Distiller, French and Baker &c. Experience being the true Polisher hereof. To which is added, the True and Genuin Way of preparing Powers by three noble Menstruums, and also a Purified Sal Armoniack, the Volatile Salt of Tartar, and Sal Panaristos, through which they are exalted to an higher degree of Perfection than any hitherto Extant, together with their Virtues and Dose. . . .

London: Printed for Joh. Taylor at the Ship in St. Paul's Church-yard. 1692.

First edition. 8vo. 8 leaves, 189, (3) pp. With 5 engraved plates of distillation equipment (frontispiece by M. van der Gucht, others unsigned). Blank fore-edges of frontispiece and title page neatly strengthened; otherwise very good copy in calf antique, black morocco label.

A RARE WORK on distillation in which the aim of the author was to gather into a single volume all the necessary information on the subject. A citizen of Rotterdam residing in London, Y-Worth was a distiller who taught practical chemistry. He sold chemicals and medicinal preparations from his laboratory. In a notice facing page 1 he names his "Disciple and Operator Tho. Newton" as agent for his "Spiritus Odontugiasus or Mouth-wash." Y-Worth styled himself "Spagirick Physician and Philosopher by Fire." (Cole, 1392; Duveen, 629; Ferchl, 593; Ferguson, II, 558 [not in Young Coll.]; Ferguson Coll., 781; Forbes, 254; Krivatsy, 13170; Neu, 4415; Pritchard, 285; Sondheimer, 1667; Wing, Y218)

Y-WORTH, William

The Compleat Distiller: or the Whole Art of Distillation Practically Stated, and Adorned with all the New Modes of Working now in Use. . . . To which is Added, Pharmacopoeia Spagyrica nova: or an Helmontian Course; being a Description of the Philosophical Sal-Ammoniack, Volatile Salt of Tartar, and Circulatum Minus, &c. Together with their Use and Office in Preparing Powers, Arcanums, Magisteries, and Quintessences, the Dose and Vertues being Annexed. . . .
London: Printed for J. Taylor, at the Ship in St. Paul's Church-Yard. 1705.

Second edition. 8vo. 12 leaves, 276 pp., 1 leaf (advertisement). Pages duplicated in pagination. Divisional title page (p. 147) to *Pharmacopoeia Spagyrica nova*. With 5 engraved plates of chemical apparatus (frontispiece by M. van der Gucht, others unsigned), identical to those of the first edition (1692). Fine copy, in original unlettered paneled calf.

THE REVISED and enlarged final edition, to which Y-Worth has added his *Pharmacopoeia Spagyrica nova* (pp. 147–276), which he collected "through exceeding hard Labour . . . out of the Writings of the ancient Philosophers. . . . I first began with Starkey's Nature's Explication, diligently tracing Helmont, and his great Master Paracelsus, Bacilius, Lully, and others . . . till I came to conclude with Hermes's Confirmation." For the period, the *Pharmacopoeia* is written in clear and unambiguous language, as are other works by Y-Worth. The wording of the first part of the main title is identical to that of the first edition. (Blake, 497; Duveen, 630; Ferchl, 592–593; Ferguson, II, 558; Ferguson Coll., 781; Forbes, 254; Neu, 4416; Pritchard, 285; Smith, 519; Sotheran, Cat. 832 [1932], 6228)

ZAPATA, Giovanni Battista

Maravigliosi Secreti di Medicina e Chirurgia, dell'eccellente medico il S. Gio. Battista Zapata nuovamente ritrovati. Con l'aggiunta d'altri secreti, raccolti dalli suoi discepoli. . . .
Rome: Per Tito, e Paolo Diani. 1586.

First edition. 8vo. 20 leaves, 272 pp. Woodcut title ornament, historiated initials, head- and tailpieces. Very good copy in contemporary vellum with 2 thongs.

AN IMPORTANT book of medical and chemical secrets that passed through many editions. Translations in German appeared up to 1685 and in Latin until 1696. Libavius quoted Zapata's method of making butter of antimony (SbCl_3) by distilling a mixture of corrosive sublimate (HgCl_2) and stibnite (Sb_2S_3), on which see Partington (II, 261), who does not mention this work. Zapata (ca. 1520–1586) covers secrets of medicine (pp. 1–160) and surgery (pp. 161–272), which he claims to be “newly discovered.” “This book . . . contains . . . a good deal of chemistry as applied to pharmacy. This makes it valuable for the history of science, for here we get the processes employed three hundred years ago for preparing certain well-known compounds . . . Chapter XV is of special importance, for, according to it, Zapata had invented a method of making oil of vitriol (H_2SO_4)” (Ferguson, *Books of Secrets*). Another book by Zapata of similar title (Turin, 1581) appeared, but a note to the present 1586 edition in Wellcome states that the texts are different. Undoubtedly the text of the 1586 edition is based on that of 1581, but in this posthumous first edition the preliminaries are dated 15 July 1586 and signed by G. Scientia, B. Palmerio, G. Bosio, A. Buonhomo, and G. B. Ciotano. Editions of 1590 and 1629 are listed by Duveen, and Waller lists only the final edition (Ulm, 1696). Rare. Not in Bolton, Edelstein, Ferguson, Neu, Osler, Smith, etc. (Durling, 4784; Ferchl, 593; Ferguson Coll., 782; Ferguson, *Books of Secrets*, II, *First Supplement*, 30; Wellcome, I, 6797)

ZAPATA, Giovanni Battista

Li Maravigliosi Secreti di Medicina, e Chirurgia. Nuovamente ritrovati, per guarire ogni sorte d'infermita. Raccolti dalla prattica dell'eccellente medico M. Gio. Battista Zapata. Da Gioseppe Scientia Chirurgico, suo discepolo.
Venice: Appresso Nicolo Tebaldini. 1602.

Second Venice edition? 8vo. 24 leaves (including blank sign. c8), 190 pp. Woodcut on title. Printed in italics throughout. Very good copy in contemporary plain pasteboards.

NOT MERELY a reprint of the Rome (1586) text but an updated, rewritten version by Gioseppe Scientia, a distin-

guished surgeon and former pupil of Zapata. Ferguson (*Books of Secrets*, II, *First Supplement*, 30) mentions an earlier 1595 edition (first Venice edition?), which he had not seen, in the Bodleian Library. The present is possibly the second Venice edition to be based on the Rome (1586) edition. Very rare. Not listed in the usual bibliographies.

ZIEGLER, Caspar

Rabulistica sive de artibus Rabulariis Dissertatio. . . .
Dresden: Sumptibus Michaelis Güntheri. 1685.

First edition. 4to. 4 leaves, 175 pp. Fine copy, in contemporary vellum. Bound with: Kirchmaier, Georg Caspar, *Institutiones metallicae* (Wittenberg & Leipzig, 1687), and 3 other works on law.

A RARE DISSERTATION on the art of presenting a legal case at great length. *Webster's Dictionary* defines the word *rabulistic* as characterized by “railing or pettifoggery.” The Latin word *rabula* refers to a brawling advocate. There are several references to scientific writers (e.g., Aristotle, Pliny, and Schott) and the planetary signs of the metals (pp. 101–102). The book is mainly concerned with verbal techniques whereby lawyers can wear down their opponents by the use of interminably long summations and arguments in which numerous authors are cited in support of their clients. Ziegler (1621–1690) was professor of law at Wittenberg, and Watt (II, 992w) lists three titles by him but not the present work.

ZIEGLER, Johann Heinrich

Specimen Physico-Chemicum de Digestore Papini, ejus Structura, Effectu & Usu, primitias Experimentorum Novorum circa fluidorum a calore rarefactionem & vaporum elasticitatem exhibens. Quod, Gradum ad Doctoratum in Medicina . . . submitit Joh. Henricus Zieglerus, Vitoduranus, . . .
Basel: Typis Johannis Schweighauseri. 1769.

First edition. 4to. 2 leaves, 68 pp. With 2 copperplates (I. R. Holzhalb delin. et sculps.). Fine copy, uncut, with wide margins, in contemporary unlettered pasteboards.

THE DOCTORAL dissertation of Ziegler (1738–1818), a celebrated physician and later industrialist at Winterthur. Presented under the direction of the professor of physics and medicine Johann Gesner (1709–1790), to whom it is dedicated, this work describes the structure of the digester (i.e., autoclave) first invented by Denis Papin (1647–ca. 1712), with recent improvements. Ziegler gives detailed descriptions of the experiments in physics and physical chemistry he carried out using his autoclave at various pressures. He

cites the works of many authorities (e.g., Boyle, Eller, Fahrenheit, Hales, and Martine). The excellent plates illustrate the component parts of the autoclave, and the numerical data are presented in several tables. Rare. (Ferchl, 595; Pogendorff, II, 1401)

ZIMARA, Marco Antonio

Antrum Magico-Medicum: in quo Arcanorum Magico-Physicorum, Sigillorum, Signaturarum & Imaginum Magicarum . . . Curationum Magneticarum & Characteristicarum ad omnes corporis humani affectus curandos, thesaurus . . . Cui Medicamenta etiam varia Chymica ex Mineralibus & Vegetabilibus conficiendi modus . . . De variis Metallorum & Minerarum praeparationibus, & experimentis plurimis . . . Accessit Motus perpetui Mechanici absque vilo aquae, vel ponderis adminiculo conficiendi documentum . . .

Frankfurt: Typis Ioannis Friderici Weisii. 1625.

First edition. 8vo. 8 leaves, 525, (1) pp., 1 leaf (blank). With woodcut symbols of the 7 metals (p. 402). Fine copy in original vellum, with ink-lettering on spine; eighteenth-century bookplate on verso of title of Adam von Jerin and his signature dated 1737 on title page. Bound with: Zimara, M. A., *Antri Magico-Medici Pars Secunda* (Frankfurt, 1626).

ZIMARA (1460–1532), the reputed author, studied medicine at Padua and, later, Aristotelianism and Averroistic philosophy. This collection of natural marvels, alchemical secrets, magnetical cures of wounds, and medical notes first appeared in the second half of the sixteenth century. The present version contains considerable additional material. Ferguson doubts the attribution to Zimara, as “a number of authorities quoted in the book were not known in 1532 when Zimara died [and] a later hand must have been busy with this edition, and I have little doubt that its true date is a century later, that is, 1625.” Parts V and VI discuss medicines prepared from minerals and plants, and parts VII and VIII comprise experiments. Ferguson and Thorndike discuss the contents. The rarity of this volume was noted even in the seventeenth and eighteenth centuries by various authorities. (Caillet, 11589; Duveen, 633; Ferchl, 596; Ferguson, II, 567 [not in Young Coll.]; Ferguson Coll., 784; Ferguson, *Books of Secrets*, VI, 8–12; Guaita, 1095; Krivatsy, 13272; Neu, 4428; Thorndike, VI, 602; Watt, II, 992y; Wellcome, I, 6811)

ZIMARA, Marco Antonio

Antri Magico-Medici Pars Secunda. In qua Arcana Naturae, Sympathiae & Antipathiae rerum in Plantis, Animalibus, animalium que morbis & partibus, Signaturae internae rerum . . . omniumque corporis humani morborum . . . cura Hermetica, Specifica . . . Accesserunt Portae Intelligentiarum sive Canones Hebraeorum, Chaldaeorum, Arabum, Aegyptiorum, Orphicorum, Pythagoraeorum, Graecorum & Latinorum priscorum . . . Et Canones Hermetici, de Spiritu, Anima & Corpore Maioris & Minoris Mundi.

Frankfurt: Typis & Sumptibus Wecheliorum, apud Danielelem & Davidem Aubrios, & Clementem Schleichium. 1626.

First edition. 8vo. 8 leaves, 749, (1) pp., 1 leaf (blank). Title page misdated 1526 (for 1626). Fine copy in original vellum. Bound with: Zimara, M. A., *Antrum Magico-Medicum* (Frankfurt, 1625).

THE SEQUEL volume to the *Antrum Magico-Medicum* (Frankfurt, 1625). Ferguson (in 1888) admitted that he had not seen a copy of this work, which comprises the preparation of chemicals and recipes for curing a wide variety of diseases. At the end is a section on the Chaldean mysteries, together with those of the Egyptians, Persians, Pythagoreans, Greeks, Romans, and others. Finally there is a discussion of the alchemical concepts of spirit, soul, and body as they relate to the macrocosm and microcosm. Of alchemical interest are references to the works of Hermes, Geber, Paracelsus, and the *tria prima* (philosophical salt, sulphur, and mercury). Very rare. This volume is sometimes found bound with the first part of 1625, as here, but the Duveen copy lacked it. (Caillet, 11589; Ferchl, 596; Ferguson, II, 597 [not in Young Coll.]; Ferguson Coll., 785; Ferguson, *Books of Secrets*, VI, 9; Guaita, 1095; Krivatsy, 13272; Thorndike, VI, 602; Wellcome, I, 6812)

ZOBEL, Friedrich

Tartarologia Spagirica, seu medicamentorum ex tartaro in Laboratorio Gottorpiensi paratorum fidelis descriptio. E Bibliotheca Georgii Wolffgangi Wedelii.

Jena: Typis Gollnerianis. 1684.

Second edition. 12mo. 6 leaves, 100 pp., 2 leaves. Title in red and black, with printer's woodcut ornament. Very fine copy in contemporary vellum. From the Prince Fürstenberg library, Donaueschingen. Bound with: Glaser, C., *Chimischer Wegweiser* (1684); Gehema, J. A. à, *Dietetica rationalis* (1688) and *Der . . . Feld-Medicus* (1689).



Zumbe. Nutz- und sonderbahre Erfindung. Frankfurt and Leipzig, 1690.

A PHARMACEUTICAL CHEMICAL work, first published in Jena, 1676, edited by Georg Wolfgang Wedel from a manuscript. The third edition was also in 12mo. (Jena, 1708). Dedicated to the famous chemist Joel Langelott, the text is in German and Latin. The book gives a detailed description of the chemical and pharmaceutical uses of tartar (potassium hydrogen tartrate) and related compounds. Zobel (d. 1647), a native of Holstein, was a competent chemist who became physician to Duke Friedrich of Holstein-Gottorp about 1636 and director of the chemical laboratory at Gottorp. For details on Zobel, see J. J. Manget, *Bibliotheca Scriptorum Medicorum*, 1731, vol. 2, p. 688. Only the 1676 edition is mentioned by Ferchl (p. 597), Ferguson Coll. (p. 785), and Poggendorff (II, 1418). The second edition is rare. Not in Bolton, Duveen, Edelstein, Neu, Partington, Smith, Waller, Watt, etc. (Ferguson, II, 569; Thorn-dike, VII, 202; Waring, 640)

ZUMBE, Carl

Nutz- und sonderbahre Erfindung einer neuen Seigerung u. Ertz-Beizung, nemlich wie man mit Holtz alle Operationes bey Seigerung der Silberichten Kupffer, an statt der Kohlen verrichten, und die Kupffer-Ertze, mit grösserm Vortheil, als ins gemein, zu gut bringen könne . . .

Frankfurt & Leipzig: Verlegts Augustus Boëtius. 1690.

First edition. 12mo. 48 leaves, 324, 140 pp., 11 leaves (index). Engraved frontispiece, 5 folding copperplates, and 2 folding tables. Gothic letter. Fine copy, in contemporary calf, spine richly gilt, triple gilt fillets on covers, inner gilt dentelles.

AN IMPORTANT and rare treatise on European practices in mining, extractive metallurgy, smelting, refining, assaying, and related subjects. Detailed descriptions are given of the purification of silver, gold, mercury, copper, lead, and other metals. A competent metallurgist, Zumbe (dates unknown) challenges some statements made by Becher and other

chemists concerning metals and advances his own views. (Duveen, *Supplement*, 66 [no. 407]; Sotheran, *Cat.* 806 [1927], 14277)

ZWELFER, Johann

Pharmacopoeia Augustana Reformat cum ejus Mantissa & Appendice, simul cum Animadversionibus, . . . Cui annexa est ejusdem authoris Pharmacopoeia Regia ut & Mantissa Spagyrica. Accessere etiam huic editioni bini Discursus Apologetici contra Otth. Tachenium & Franciac. Verny.

Dordrecht: Apud Vincentium Caimax, Bibliopolam. 1672.

First Dordrecht edition. 4to. 4 leaves, 876 pp., 18 leaves (index); 4 leaves, 66 pp., 1 leaf (index); 4 leaves, 239, (1) pp. Elaborate engraved title page, letterpress title, and 3 divisional title pages each with woodcut. With 5 copperplates (chemical apparatus and Prague Medal). Fine copy, in half morocco antique, cloth boards, blue morocco label, spine dated.

THE *Pharmacopoeia Augustana* originally appeared at Augsburg in 1564 under the title *Enchiridion, sive . . . dispensatorium*, and it was one of the earliest official German works on pharmacy. Zwelfer (1618–1668), who was first an apothecary and later a physician in Vienna, published a revision of the Augsburg *Pharmacopoeia* (Vienna, 1652), together with his criticisms of it as *Animadversions* (Gouda, 1653). The present volume contains an updated version of the Augsburg *Pharmacopoeia*, plus the author's *Mantissa Appendix*, and *Animadversiones*. Also included are his *Pharmacopoeia regia* (first, 1662) and his *Discursus apologeticus, . . . adversus Ottonis Tachenii* (first, 1668). Zwelfer, who claimed to be the first to reduce pharmacy to a rational system, had controversies with Lucas Schroeck, Otto Tachenius, and Francois Verny. His chemistry is covered by Partington, and his conflicts with contemporary apothecaries are discussed by Multhauf (*D.S.B.*, XIV, 639). The engraving on page 796 depicts the famous Prague Medal,

reputedly of alchemical gold. (Ferguson, II, 572 [not in Young Coll.]; Krivatsy, 8923; Partington, II, 298; Watt, II, 993w)

ZYPE, Franz van den

Fundamenta Medicinae Reformatae, Physico-Anatomica. Editio secunda, ex-M.S. Authoris aucta, correcta, & emendata.

Brussels: Apud Aegidium t'Serstevens, Bibliopolam juratum è regione PP. Dominicanorum. 1687.

Second edition. 8vo. 6 leaves, 524 pp. Fine engraved allegorical title page (Gasp: Bouttats fecit). Very good copy, in quarter calf antique, marbled boards, spine gilt-lettered.

PROFESSOR OF anatomy and surgery at the universities of Brussels and Louvain, Zype (fl. 1683–1692) published this medical and iatrochemical work to illustrate the progress made in reformed medicine. "In the preface . . . he took a very rosy view of 'the happy age in which we live,' with chemists toiling untiringly, physicists disputing interminably, and all intent on snatching nature's arcana from her within a few years. . . . Naked truth was sought after. Zype wrote to reflect this great progress. . . . He rather preferred the three elements of Descartes to the four of Aristotle or three of the chemists" (Thorndike). The much shorter first edition (Brussels, 1683; Cushing, Z17; Ferchl, 599; Parkinson & Lumb, 2655) was reviewed in the *Acta eruditorum* (1683, p. 536). Other editions appeared at Lyons (1692) and Brussels (1693). The present second and best edition, the last to appear in the author's lifetime, was already rare in the eighteenth century, as Manget (*Bibliotheca Scriptorum Medicorum*, 1731, II, pt. 2, p. 699) lists only the first edition (1683) and Zedler (*Grosses Vollständiges Universal Lexicon*, 1732–1750) lists only the Brussels (1683 and 1693) and Lyons (1692) editions. (Krivatsy, 13297; Thorndike, VIII, 444 ; Watt, II, 993x)

Appendix

ANGSTRÖM, A[nders] J[onas]

Recherches sur le Spectre Solaire . . . [with] Spectre Normal du Soleil. Atlas de Six Planches.

Upsal: W. Schultz. 1868.

First edition. 2 vols. I (text): folio in 2s. 4 leaves, 42 pp., xv (tables and mathematical equations), 1 leaf. II (atlas): large folio. 2 leaves, 6 plates, 2 leaves. Nicely preserved engraved frontispiece, "Spectrometre," in volume I. Original paper covers on both volumes. Clean wide-margined paper in good condition save for water stain throughout text volume and cover of atlas. Minor tears and creases around edges of atlas cover.

BORN THE second son of a minister, Angström went at the age of nineteen to the University of Uppsala to study mathematics and physics, thereby beginning an association with Uppsala that would end only with his death in 1874. After receiving his Ph.D. in the optics of conical refraction, Angström stayed at Uppsala as a lecturer in physics. Continuing his work on optics, he proposed a relationship between the emission and absorption spectra of a chemical element that was more completely presented only by Gustav Kirchhoff. By the early 1860s Angström had moved to studying the spectra of the sun, especially with respect to the presence of hydrogen and other elements in the solar atmosphere. *Recherches sur le Spectre Solaire*, published by the Imprimeur de l'Université (Uppsala), represents some of Angström's best work, especially the *Atlas de Six Planches* of the solar spectrum, which contains "measurements of the wavelengths of approximately a thousand lines determined by the use of diffraction gratings" (D.S.B., vol. 1, 166). So well regarded was this work that the unit he used to express his results—one ten-millionth of a millimeter—was named the "angstrom" in his honor. Angström went on to study the aurora borealis, win the Rumford Medal of the Royal Society of London, and twice share the Wallmarsh Prize of the Royal Academy of Stockholm. He did not publish much, and *Recherches sur le Spectre Solaire* remains one of his best-known works. (D.S.B., vol. 1, 167; Cajori, 176)

BECQUEREL, Henri

"Récherches sur une Propriété Nouvelle de la Matière Activité Radiante Spontanée ou Radioactivité de la Matière." In Mémoires de l'Académie des Sciences de l'Institut de France. Vol. 46.

Paris: Typographie de Firmin-Didot. 1903.

First edition. 4to. in 4s. 4 leaves, 360 pp., 2 leaves, 71 photographs on 13 leaves of plates, original blue wrappers and flyleaves bound in, 2 leaves. Bibliography contains 214 works on radioactivity from 1896 to 1903. Over 30 figures and tables in text. Very minor stains on fore-edge owing to an unknown liquid. Rebound in three-quarter dark red calf. Spine gilt-lettered and dated.

THE SON and grandson of famous physicists, Henri Becquerel (1852–1908) is known mostly for his discovery of radioactivity and his subsequent 1903 Nobel Prize in physics, which he shared with the Curies. A member, and later permanent secretary, of the Academy of Sciences, Becquerel at one time or another held three chairs of physics, one at the Conservatoire National des Arts et Métiers, a second at the Museum d'Histoire Naturelle, and a third at the École Polytechnique. In early 1896, in the span of two months, Henri wrote three papers on uranium. The third announced his discovery that uranium was a new type of matter, which he termed *radioactive*. His "Récherches" is his definitive work and includes a chronological narrative of his investigations, his developed conclusions, and a definitive (for the time) bibliography on the subject of radioactivity. (Carter, *Printing and the Mind of Man*, 393; Dibner, *Heralds of Science*, 163; D.S.B., I, 560)

BRISSON, Mathurin-Jacques

Dictionnaire Raisoné de Physique, Par M. Brisson. . . .

Paris: Hotel De Thou. 1781.

First edition. 3 vols. (vol. 3 an atlas). 4to. in 4s. I: 3 leaves (1 blank), xvi, 708 pp., 1 blank leaf. II: 3 leaves (1 blank), 769 pp., 1 blank leaf. Atlas: 2 leaves (1 blank), 90 leaves, 1 blank leaf. Woodcut printer's device on title pages of volumes I and II, with large woodcut head- and tailpieces throughout. Water

stain in volume I and leaf π^4 , and minor staining throughout volumes I and II. Atlas includes 90 plates (1 folding) depicting scientific instruments, mechanical devices, and natural wonders (Benard Direacit with Fossier, Del). Plates and paper in all volumes clean and crisp with wide margins. Mottled edges, pastedowns, and flyleaves in all volumes. Bound in original mottled calf, in need of extensive repair. Heavy insect damage to spine on volume I. Boards of both volumes I and II heavily damaged. Atlas displays significant wear to both boards and severe insect damage to spine. Spines on volumes I and II gilt-ruled and -lettered with five raised bands. Atlas spine is unadorned save for gilt-lettered morocco label.

IT IS COMMON for scientists to change their research interests during their careers. These developments, however, usually reflect relatively minor shifts within a broad category of research. Mathurin-Jacques Brisson (1723–1806) made a wholesale change from botany to experimental physics. Despite earning his B.A. in theology and rising to the level of subdeacon, Brisson decided against a life of the cloth. Instead he joined with his aunt's renowned brother-in-law René Antoine Ferchault de Réaumur (1683–1757) as caretaker and demonstrator of Réaumur's Natural History Cabinet. With this, Brisson began his career in botany that ended with his six-volume *Ornithologie* (1760). Turning to experimental physics on the advice of Abbé Jean-Antoine Nollet (1700–1770), Brisson went on to translate Priestley's *History of Electricity* (1771); teach physics at the College de Navarre, the École Centrale, and the Lycée Bonaparte, Paris; and even author a few books on chemistry. A member of the Académie Royale des Sciences, Brisson presented papers on refraction, barometers, magnetism, and atmospheric density. His *Dictionnaire Raisoné de Physique* was well received at the time, yet was soon out of date because of its lack of experimental physics, as well as the increasing rate of change occurring in eighteenth-century physics. An accomplished scientist in a wide array of fields, Brisson is remembered mostly for his teaching skills, which helped disseminate rapidly changing scientific information. Very rare and known to only a few bibliographers (D.S.B., vol. 1, 475; Poggendorff, vol. 1, 301)

CATALOGUE OF ALCHEMICAL AND CHEMICAL BOOKS

Catalogue of Alchemical and Chemical Books Presented to the Chemical Society by Sir Henry Enfield Roscoe, D.C.L., LL.D., F.R.S. Compiled by F. W. Clifford, Librarian. Reprinted from the *Proceedings of the Chemical Society [London]*. 1906. Vol. 22.

First (only) edition. 4to. 25 pp. Very good copy in clean paper, yet with slight vertical fold down length of work and tear in back wrapper. Original wrappers rebound in maroon quarter

morocco antique, mottled boards, spine gilt-lettered and dated. Signature of Irving Mason on title page.

THE SON of a local judge who died when he was three years old, Henry Roscoe's interest in chemistry (like that of many great scientists) was cultivated at a young age. Later he studied chemistry under some of the great minds of his era: with Thomas Graham and A. W. Williamson, and with Robert Bunsen at Heidelberg, where, amazingly, Henry earned his Ph.D. by oral examination in only six months. By the age of twenty-four he became chair of chemistry at Owens College, Manchester (later Victoria University), a struggling school that Henry worked his entire life to turn into a world-class science institution. Known mostly as an educator, Henry was active in many other arenas, including the Chemical Society of London. This *Catalogue* brings to light Henry's not-very-well-documented interest in the history of chemistry, as well as his philanthropic side in presenting his collection to the Chemical Society for others to enjoy. Exceedingly rare; only known copy.

THE CHEMIST

The Chemist; Or, Reporter of Chemical Discoveries and Improvements, And Protector of the Rights of the chemist and Chemical Manufacturer. Edited by Charles Watt, Esq. Lecturer on Chemistry, and John Watt, Jun. (later edited by Charles and John Watt).

London: Printed for the Proprietors (later by Alexander Watt). 1840–1843.

First edition. 4 vols. 8vo. in 8s. I (1840): 24 leaves (23 blank), vi, 398 pp., 23 blank leaves. II (1841): 4 leaves (3 blank), viii, 408 pp., 3 blank leaves. III (1842): 4 leaves (3 blank), vii, 392 pp., 3 blank leaves. IV (1843): 4 leaves (3 blank), viii, 576 pp., 3 blank leaves. Nice, clean paper throughout. Volume IV contains several woodcuts in text and one folding plate. Volume I bound in half calf with mottled boards. Volumes II through IV bound in half calf with cloth boards. All spines gilt-lettered. Signature of John L. Hiley, M.B., on volume I title page.

FIRMLY GROUNDED in the self-determination ideals of the early and mid-nineteenth century (especially in relation to the Mechanics Institutes), many British Victorian-era science journals focused on reaching a general audience with easy-to-read articles describing feasible and practical experiments and projects. The editors of *The Chemist*, conversely, recognized the lack of a publication dedicated to communicating up-to-date chemical and pharmaceutical information in a way that would appeal to a scientifically minded audience. Thus, *The Chemist*, with its small format (8vo.) and short articles coupled with varied sources and numerous authors, looks like a popular science periodical of the time. Yet its title alone is exclusionary, informing

potential readers that *The Chemist* provides information expressly for chemists, chemical manufacturers, and pharmacists. The editors further this theme, stating, before a single article begins, that their publication has been “adapted for the chemical reader.” While *The Chemist* was not the first periodical dedicated to chemistry (it was not even the first with that specific title), it was one of the earliest chemical journals that enjoyed a measure of success, paving the way for the future increase in scientific publication. (Bolton, 1096–1097)

CURIE, Marie

Traité de Radioactivité.

Paris: Gauthier-Villars, Imprimeur-Libraire du Bureau des Longitudes, de l'École Polytechnique. 1910.

First edition. 2 vols. 4to. in 8s. I: 5 leaves, xiii, 426 pp., 1 leaf. II: 4 leaves, 548 pp. Tables and illustrations in text. Fine frontispiece photograph of Pierre Curie. Original wrappers and flyleaves bound in. Rebound in contemporary brown half morocco. Spine richly gilt and lettered.

PUBLISHED THE year before Curie received her 1911 Nobel Prize in chemistry for her discovery of the elements radium and polonium (her second Nobel; the first, received in 1903 in physics, she shared with her husband, Pierre, and Henri Becquerel for their work on radiation). *Traité de Radioactivité* is, in essence, a summary of all work on radiochemistry up to that point. Most important, Curie describes in detail the theory of nuclear transformations and its consequences. Lord Rutherford privately criticized the two volumes as “heavy and very long . . . with very little critical discussion,” yet publicly stated in his review in *Nature* that there was “much to admire in this notable work” (Eve, *Rutherford*, p. 194). (D.S.B., III, 503)

FLAMEL, Nicolas

Le Grand Esclairissement de la Pierre Philosophale pour la transmutation de tous les Metaux. Par N. Flamel. Avec Privilege du Roy.

Paris: Chez Louys Vendosmes, Marchand Libraire rue de la harpe a la roze rouge. 1628.

First edition. 8vo. in 4s. 8 leaves, 56, 65–99 pp. (pagination skips pp. 57–64), (1), 2 leaves. Engraved title page by J.[ohn Paul] Blanchin, with repaired inner margin. Some legible marginalia. Bound in old vellum with maroon morocco label. From the library of the seventeenth-century author Francois Jacquet with his faint signature (crossed out), dated 1665, on title page verso.

A TREATISE ON the preparation and properties of the philosopher's stone for the transmutation of metals. According to Schmieder, this book is a translation of a portion of Christoph de Paris's *Elucidarius*. Duveen states that he has a sixteenth-century manuscript of a French translation of the works of de Paris, to which is added (in later handwriting) the preliminary matter of this 1628 edition of Flamel's work. In this work the dedication is signed P.[ierre] Beraud, to whom the privilege was granted 3 April 1628, while the colophon is dated 13 August 1628. Reprints appeared at Paris in 1638 and Amsterdam in 1782. Former owner Francois Jacquet published *Les bibles catholiques deffendues contre les accusations de David Mallebouin* at Liege in 1679. Rare. Not in Bolton, Edelstein, Ferguson, or Wellcome. (Caillet, 3977; Duveen, 221; Ferchl, 157; Ferguson Coll., 236; Goldsmith, F297; Guaita, 620; Neu, 1442; Poggenorff, I, 758; Waite, 286)

FLAMEL, Nicolas

Nicolas Flammel, His Exposition of the Hieroglyphical Figures which he caused to be painted upon the Arch in St. Innocents Church-yard, in Paris. Together with the secret Booke of Artephius, and the Epistle of John Pontanus: Concerning both the Theoricke and the Practicke of the Philosophers Stone. Faithfully, and (as the Majesty of the thing requireth) religiously done into English out of the French and Latine Copies. By Eirenaeus Orandus, qui est, Vera veris enodans. . . .

London: Imprinted . . . by T. S. for Thomas Walkley. 1624.

First English edition. 12mo. in 6s and 12s. 6 leaves, 247 pp. (pp. 241–247 hand numbered). Eight textual woodcuts of various sizes and woodcut capitals and headpieces throughout. Separate divisional title page to “Artephius.” Lacks the folding woodcut plate. Wide-margined paper with annotations (mainly in the “Artephius”), bound in calf antique. Spine gilt and lettered. Dedicated by Eirenaeus Orandus to “the most excellently accomplished Lady.”

THE FIRST English translation of three alchemical writings by Flamel, Artephius, and Pontanus based, in part, on Pierre Arnould's *Trois traitez de la philosophie naturelle* (Paris, 1612), which, unfortunately, does not include the tract by Pontanus. Ferguson (II, 212) quipped that Pontanus “himself printed nothing, and if what he had written had not been published by others, his name would have been unknown.” The English translator, Eirenaeus Orandus, has also not been identified. Flamel (ca. 1130–1418), a Paris scrivener, was the most famous of the French alchemists. He “exerted a profound influence upon medieval alchemy . . . It was through him that the search for the Philosopher's Stone became the mania of the fifteenth century” (Read,

Prelude to Chemistry). Complete copies are extremely rare. The Ferguson Collection has three copies, all imperfect with only one retaining the folding plate. (Bolton, 984; Cushing, F179; Duveen, 221; Edelstein, 883; Ferguson Coll., 236; Neu, 1444; S.T.C., 11027; Waite, 286; Wellcome, I, 2311)

FOURCROY, Antoine Francois de

Mémoires et Observations de Chimie, . . . Pour servir de suite aux Éléments de Chimie, publiés en 1782, par l'Auteur. Paris: Chez Cuchet. 1784.

First edition. 8vo. in 8s. 3 leaves, xvi, 447 pp., 1 leaf. Three engraved copperplates (Sellier sculp.). Fine copy in original mottled calf. Spine gilt with maroon morocco label. With the nineteenth-century bookplates of Henri Tardivi and Paul Gavelle, with neat signature of the latter on title page.

INTENDED TO supplement the *Léçons élémentaires d'histoire naturelle et de chimie* (Paris, 1782), this collection of twenty-seven chemical memoirs includes many that were read to the Académie Royale des Sciences between 1777 and 1784 but never published. Nine of the memoirs are published here for the first time. The first tract concerns the method of conducting chemical research, which Smeaton states could be read with profit by anyone beginning research even to this day. Other memoirs include reports on the actions of alkalies on iron salts; two papers on the analysis of marsh gas; accounts of the detonation of various compounds containing niter; and papers on the preparation of pure alkalies, a new blowpipe using oxygen, and several compounds of arsenic and antimony. Various chemical theories are discussed, including combustion and calcination, the causes of deliquescence and efflorescence, and the representation of chemical affinity by numbers. A German translation by Hebenstreit appeared in Leipzig in 1785. (Blake, 153; Bolton, 448; Duveen, 225; Edelstein, 901; Ferchl, 161, Ferguson, I, 287; Neu, 1480; Partington, III, 537; Poggendorff, I, 783; Smeaton, 20; Smith, 179; Sondheimer, 538; Thornton & Tully, 170; Wellcome, III, 48)

FYFE, Andrew

Elements of Chemistry, for the use of Schools and Academies, Comprising the Principal Part of a Manual of Chemistry, for the use of Pupils of Mechanics Institutions. By Andrew Fyfe . . . with additions and alterations by John W. Webster, M.D., Erving Professor of Chemistry in Harvard University. Boston: Published by Richardson and Lord. 1827.

First American edition. 8vo. in 6s. 4 leaves, x, 1 leaf, 394 pp., 3 leaves. Numerous woodcut illustrations in text. Large water stains over first quarter of book and minor browning and foxing throughout. Ownership marks of Caroline A. Yale and John P. Stony on first blank flyleaf and second blank flyleaf, respec-

tively. Good copy in early-nineteenth-century mottled calf, spine gilt with maroon morocco label.

AT FIRST glance the career of Andrew Fyfe pales in comparison to that of his better-known father and namesake, Andrew Fyfe (1754–1824). Yet the younger Fyfe was very much his own man: he graduated M.D. from Edinburgh in 1814, was elected president of the Edinburgh College of Surgeons by age fifty, and was the longtime assistant to the famed Thomas Charles Hope. By 1844 he had left Edinburgh to become professor of chemistry at the University of Aberdeen, a post he held until his death in 1861. In addition to articles in such early-nineteenth-century journals as the *Edinburgh Philosophical Journal* and *Philosophical Magazine*, Fyfe also wrote texts, of which *Elements of Chemistry* is probably the best known. While mostly an update of his earlier *Manual of Chemistry*, this one-volume first American edition includes discussions on light, electricity, and galvanism. It also has the added appeal of additions and alterations by John W. Webster, a competent chemist who is more widely known for the murder and dismemberment of George Parkman in his Harvard University lab—a crime for which he was later hanged. (Bolton, 465; Ferchl, 168; Morgan, 60–61; Partington, III, 724; Poggendorff, I, 824; Smith, 186)

GUILLOT-Duhamel, Jean Pierre Francois

Geometrie Souterraine Elementaire Theorique et Practique, ou l'on traite des felons ou Veines minerales, & de leurs dispositions dans le sein de la Terre; de la Trigonometrie appliqué a la connoissance de Filons, a la conduite des travaux de Mines & a la confection de leurs Plans & Profils. Avec Figures, et des Tables qui, sans calcul, indiquent la valeur des deux cotes de tout Triangle rectangle, dont l'hypotenuse est connue.

Paris: De l'Imprimerie Royale. 1787.

First (only) edition. Vol. 1 of 2. 4to. in 4s. 2 leaves, xxiii, 294 pp., 183 pp. of tables, 14 plates (7 folding) illustrating mining geometry. Includes textual tables, head- and tailpieces, and vignette printer's device on title page. Bookbinder's ticket (A Colmar chez Xavier Fontaine le cadet, Libraire, vis-à-vis du Palais) on front pastedown. Various water stains throughout (none intruding on text). Bound in millboards in need of repair. Nice copy with wide margins and clean, crisp, deckle-edged leaves. Tucked into the volume is a nicely preserved 2-leaf ALS (unknown) dated 18 January 1775.

Geometrie Souterraine, or “underground geometry,” was the “first serious treatise published in France” that sought to describe underground survey plans and layouts mathematically. At the time of its publication Guillot-Duhamel was one of France's most well-respected authorities on mining

and the first French professor who lectured and wrote on the exploitation of mines and metallurgy (*Annals of the Mines*, 1817). In fact, he wrote all of the *Encyclopaedia* articles that relate to mines and mining. The father of Jean Baptiste Duhamel (1767–1847), Guillot-Duhamel also wrote on his and Gabriel Jars's three years of observing mining and metallurgical operations in (among other countries) Germany, Sweden, and Norway in their well-received *Voyages Metallurgiques*. Extremely rare, *Geometrie Souterraine* was unknown to most bibliographers, even Herbert Hoover. (BM [compact ed.], vol. 11, 270; Poggendorff, I, 616)

HERMETIC MUSEUM

The Hermetic Museum Restored and Enlarged, most faithfully Instructing all Disciples of the Sopho-Spagyric Art how that Greatest and Truest Medicine of the Philosopher's Stone may be found and held, now first done into English from the Latin Original published at Frankfort in 1678, containing Twenty-two most Celebrated Chemical Tracts [translated by Arthur Edward Waite].

London: James Elliott and Co. 1893.

First edition. 2 vols. 4to. in 8s. I: 6 leaves, xi, 357 pp., 3 leaves. II: 7 leaves, 322 pp., 3 leaves. Frontispiece in each volume. Includes woodcut illustrations reproduced from original work. Pencil marginalia in volume I. Lacks copy number and signature. Very nice copies with clean paper and bound in original olive cloth with spines lettered.

ONE OF only 250 copies printed (this copy lacks a copy number and publisher signature), Waite's translation of the enlarged and revised 1678 edition of the original 1625 *Musaeum Hermeticum Reformatum et Amplificatum* ushered into English some of alchemy's great thinkers. While Waite's intention was to "supply in a compact form a representative collection of the more brief and less ancient alchemical writers," *Hermetic Museum* should not be seen as an introductory text (Waite, preface). Of the twenty-two total tracts included are those by Nicolas Flamel, Basilius Valentinus, Michael Sendivogius, Eirenaeus Philalethes, and Michael Maier. Reproductions of the seventeenth-century illustrations are included, but unfortunately they pale in comparison to the originals. Nevertheless, an English translation of such famous texts is an invaluable tool for researchers, librarians, and scholars. Deceptively rare owing to very small print run. (Duveen, 419; Ferguson, II, 120; Osler, 3483)

ISTITUTO DELLE SCIENZE DI BOLOGNA

De Bononiensi Scientiarum et Artium Instituto Atque Academia Commentarii.

Bologna: Ex Typographia Laelii a Vulpe, apud Metropolitanam. 1731.

First edition. Vol. 1 of 5 (in 8 vols.). 4to. in 4s. 7 leaves, 647 pp., 2 leaves. 9 engraved folding plates. Beautiful engraved title page by Quadri (Quadrata de Perone?) depicting the Palazzo Poggi (the home of the Istituto delle Scienze since 1714). Excellent copy with clean, crisp pages and wide margins. Bound in eighteenth-century calf with the binder's stamp of A. Milne Forres. on front pastedown. Spine gilt and lettered "Academia Bononiae."

FOUNDED BY Luigi Ferdinando Marsili (upon decree by the Bologna Senate) and modeled after the Paris Academy and the Royal Society of London, the Istituto delle Scienze di Bologna's function was to unite the prevailing theoretical epistemology with newly emerging experimental practices. Chemistry, being essential to the study of medicine, was therefore taught from the start. In print from 1731 to 1791 *De Bononiensi Scientiarum et Artium Instituto Atque Academia Commentarii* serves as the published report of the Istituto in the same manner as transactions or proceedings of a science society. Volume 1 begins with a lengthy dedication to Pope Clement XII by Franciscus Maria Zanottus, followed by a brief recount of the origin of the Istituto. Commentaries on major disciplines and the "Opuscula Varia" on various subjects, however, make up the majority of the work. Both interesting and important owing to contributions by many significant professors, including Giovanni Battista Morgagni and Eustachio Manfredi. Rare. (Blake, 230)

LA GALLA, Giulio Cesare

De Phaenomenis in Orbe Lunae Novi Telescopii Usu A D. Gallileo Gallileo Nunc Iterum Suscitatis Physica disputation, ad Iulio Caesare la Galla in Roman Gymnasio habita, Philosophiae in eodem Gymnasio Primario Professore. Necnon de Luce, et Lumine Altera disputation. Superiorum Permissu, et Privilegio.

Venice: Apud Thomam Balionum. 1612.

First edition. 4to. 4 leaves, 72 pp. Large woodcut printer's device on title page, woodcut capitals and headpiece, and one small woodcut on page 23. Many catchwords missing owing to poorly shaved lower margins; otherwise a very good edition in modern vellum. From the library of Professor Franz Sondheimer (1926–1981), with his bookplate on the front pastedown.

A FAMOUS AND important book that apart from its significance in Galileo literature (it contains the earliest printed

record of the word *telescope*) is of equal importance for containing (in its second part) the first written account of the properties of the Bolognian phosphor. La Galla (1576–1624), an eminent professor of philosophy at the Collegio Romano in Rome, received samples of the Bolognian stone from Galileo, who himself did not write about it. The “Bologna phosphorus” (or Bolognian stone), was discovered circa 1602–1604 by the shoemaker alchemist Vincenzo Casciorolo, who prepared it by calcining a translucent mineral he found in fields near Bologna. This mineral contained barium, arsenic, sulphur, and other elements, and, when suitably calcined (sometimes in the presence of egg white), it possessed the property of glowing in the dark after exposure to light. La Galla accounted for the luminescent properties of the stone by saying that it absorbed “fire and light substance” like a sponge, later releasing the light slowly—a surprisingly modern viewpoint that is not too far from the truth. Partington and Newton Harvey give long accounts of this phosphor. Partington also cites this book twice regarding its importance in the history of atomism. A very rare book that is not in Duveen, Ferguson, Neu, Smith, Waller, or Wellcome. (D.S.B., VII, 375; Newton Harvey, 94, 307; Partington, II, 335, 386, 417; Poggendorff, I, 1341)

LEMOINE, Clement Georges

“*Theorie des Reactions Simples Limitées par l’Action Inverse: Application a la Transformation du Phosphore.*” In *Annales de Chimie et de Physique*. XXVII, 1872.

Bound with: *Theorie Des Reactions Simples Limitées Par L’Action Inverse: Application a la Transformation du Phosphore.*

Paris: Gauthier-Villars. 23 October 1871.

Bound with: *Recherches sur la Transformation Reciproque des deux Etats Allotropiques du Phosphore.*

Paris: Gauthier-Villars. 25 September–2 October 1871.

First edition all. Various sizes. Title I: 8vo. 83 pp. Title II: folio. 6 pp. Title III: folio. 9 pp. Nice paper throughout with only minor staining on title I and slight brittleness in all 3. Rebound in red cloth with spine gilt-lettered and dated. All 3 are association copies inscribed by Lemoine to Charles Sainte-Clair Deville.

A MAN OF many interests as well as talents, Lemoine was at one time an inspector of highways (with a specialization in hydrology), a teacher, and a chemist. His teaching career began in 1866 at the Polytechnic School and continued at the Catholic University of Paris, where he was professor of chemistry. As a chemist he wrote on a number of different subjects, including the action of light on chemical compounds, the catalysis of hydrogen peroxide by oxides and

coal, and hydrocarbons from American petroleum. Lemoine also conducted significant work on the chemical equilibrium between hydrogen and gaseous iodine. An early interest in phosphorus led to his discovery of phosphorus sesquisulfide, an ingredient in the manufacture of matches. The subject of phosphorus is here represented in two short papers published by the Academy of Sciences (Gauthier-Villars, Imprimeur-Libraire des Comtes Rendus des Seances de l’Academie des Sciences) and one long article that originally appeared in *Annales de Chimie et de Physique*. All three have been inscribed by Lemoine to mineralogist and geologist Charles Joseph Sainte-Clair Deville (1814–1876), who had conducted work on the allotropic forms of sulphur some twenty-five years earlier. Unfortunately not much has been written on Lemoine.

LOWNDES, Thomas

Brine-Salt Improved: Or, the Method of Making Salt from Brine, that shall be as good or better than French Bay-Salt. In a Letter to the Right Honourable the Lords Commissioners of the Admiralty. Dated 8 July 1746.

London: Printed for S. Austen. 1746.

First edition. 4to. in 4s. 1 leaf, 38 pp., 1 leaf. Large head- and tailpieces accompanied by numerous woodcut capitals with guide letters only. The minor browning and poorly shaved edges do not affect text. Rebound in quarter morocco with red mottled boards. Spine gilt-lettered and dated.

A LIFELONG SCHEMER, Thomas Lowndes’s (1692–1748) interest in science at first glance appears to have been purely financial. As provost-marshal of South Carolina he proposed, among other ideas, that the colony manufacture potash as a bulwark against Russian trade, as well as extract oil from sesame, which would increase the value of South Carolina’s pinelands. This book, while appearing much later in Lord Lowndes’s life, was intended to boost both England and himself monetarily. After several years and much lobbying (with the help of the Royal College of Physicians) Lowndes finally persuaded the House of Commons to accept his plan. Unfortunately, he died two years later without seeing his plan come to fruition. The title discloses Lowndes’s intent to make public the details of the English salt trade, but close scrutiny reveals that it is actually a series of letters that, when taken together, bring to light England’s great need for its own salting enterprise. After Lowndes died, he left his estate to found the first chair of astronomy at Cambridge University, a gift that hints at his real love of science. Extremely rare. (D.N.B., vol. 23, 210)

LUMMER, O[tto], and PRINGSHEIM, E[rnst]

A Determination of the Ratio (x) of the Specific Heats at Constant Pressure and at Constant Volume for Air, Oxygen, Carbon-Dioxide, and Hydrogen. Vol. 26, no. 6 of Smithsonian Contributions to Knowledge. 1126. Hodgkins Fund.

Washington, DC: Published by the Smithsonian Institution. 1898.

First (only) edition. Folio. 2 leaves (1 blank), v, 29 pp., 1 blank leaf. Two black-and-white photographs and 3 engraved figures illustrate instruments. Many tables included with text. Extremely clean, wide-margined paper. Most leaves uncut. Bound in original paper covers.

IN 1848 JOSEPH HENRY, the first secretary of the Smithsonian, initiated *Smithsonian Contributions to Knowledge*, the institution's first publication, in part to comply with James Smithson's stipulation that his bequest be "for the increase & diffusion of knowledge." Henry also firmly believed that the Smithsonian's importance lay not just with what it collects but also with "what it sends forth to the world." Aware of the high cost of scientific publishing, he sought to use *Contributions*, and the Smithsonian as a whole, to increase the worldwide circulation of scientific information. This edition of *Contributions* is one of the many collaborations between the two great physicists of the *fin de siècle*, Otto Lummer (1860–1925) and Ernst Pringsheim (1859–1917). Lummer, known for his work in the field of thermal radiation, identified the phenomenon of Lummer fringes and coined both the Lummer-Gehrcke interference spectroscopy and the Lummer-Brodhun cube photometer. Pringsheim's work was largely experimental, leading not to inventions but to published papers. Both students of Helmholtz, Lummer and Pringsheim were also professors at the University of Breslau, which ensured close communication and a near-constant intellectual environment. Their greatest work came not directly but through their work on black bodies. Their findings encouraged Max Planck (1858–1947) to rethink his laws of radiation, leading to the founding of the quantum theory. Rare as a single issue. (D.S.B., vol. 11, 151)

MARGINAC, Jean Charles Glassard de

Oeuvres Completes. Par E. Ador.

Geneve: Ch. Eggimann & Cie. 1902–1903.

First edition. 2 vols. Large 4to. in 4s. I: 8 leaves, lv, 701 pp., 3 leaves, 12 engraved plates (5 folding). II: 6 leaves, 839 pp., 2 leaves, 5 engraved plates (2 folding). Portrait (print after an engraving) of Marignac following table of contents. Library stamps of "Ecole Physique et de Chimie" and "Ecole Physique

et de Chimie Industrielles Laboratoire de Chimie Mr. Etard Professeur" on volume I title page and table of contents, respectively. Paper slightly browned and brittle at edges; otherwise nice large copies quarter-bound in calf. Spines gilt-lettered.

A CHRONOLOGICAL ARRANGEMENT of Marignac's 111 papers along with a complete list of his atomic weights, edited by Emile Ador. Volume I contains a lengthy biography by Ador and is titled *Notice Biographique—Travaux Divers 1840–1860*. Volume II, *Memoires et Critiques 1860–1887*, has a useful "Index Bibliographique" that inventories Marignac's articles alphabetically by journal title. The Swiss chemist Marignac's (1817–1894) work on atomic weights suggested the possibility of isotopes, while his experimentation on rare earth elements led to his discovery in 1878 of ytterbium and in 1880 of gadolinium. In addition to the chairs of both the chemistry and mineralogy departments at the Académie de Genève, Marignac was also from 1846 to 1857 the joint editor of the Swiss journal *Archives des Sciences*. Known mostly for his work in inorganic chemistry, Marignac is remembered for determining the atomic weights of over twenty elements in addition to sorting out the chemistry of niobium, tantalum, the silicates, and the rare earths. Rare. (D.S.B., IX, 110)

NEW UNIVERSAL HISTORY OF ARTS AND SCIENCES

A New Universal History of Arts and Sciences, Shewing Their Origin, Progress, Theory, Use and Practice, and Exhibiting the Invention, Structure, Improvement, and Uses, of the most considerable Instruments, Engines, and Machines, with Their Nature, Power, and Operation, Decyphered in Fifty Two Copper-Plates. In Two Volumes. London: Printed for J. Coote. 1759.

First edition. 2 vols. 4to. in 4s. I: 3 leaves (1 blank), xlv, 606 pp., 2 blank leaves. II: 2 leaves (1 blank), 1 folding plate, 563 pp., 4 leaves (index and binder instructions), 2 blank leaves. Identical woodcut printer's device on each title page. Woodcut head- and tailpieces. Lavishly illustrated (B. Cole, sculp.) with large frontispiece (S. Wale, del.), 20 copperplates (5 in vol. 1 and 15 in vol. 2), and 28 large folding copperplates (13 in vol. 1 and 15 in vol. 2). Numerous textual illustrations, tables, and mathematical equations. Old armorial bookplate (with name removed) on front pastedown of each volume. Old shelf mark label (blank) on front pastedown of each volume. Poorly repaired (lengths of glossy tape) gutters of both volumes. Water stains on front pastedown and first blank flyleaf of volume I (possibly from attempts to remove ownership marks). Paper slightly dirty; otherwise crisp and wide margined. Rebacked with original torn calf binding laid on. Carelessly, yet securely, rebound in half calf. A diced and gilt maroon morocco label adorns a five raised band, gilt-lettered spine.

THE EIGHTEENTH century witnessed a veritable explosion of scientific knowledge to the extent that the zeal for ordering and classifying this information also increased. While encyclopedias have for a thousand years been used for just this purpose, by the late seventeenth century their form had been called into question. Until that time encyclopedias were attempts to unify human knowledge. John Harris's *Lexicon Technicum* (1704) broke away from this mold, employing an alphabetical arrangement to present information in user-friendly form. *A New Universal History of Arts and Sciences* appeared, along with several other richly illustrated encyclopedias, during this period of rethinking the best way to present information. Arranged alphabetically, it includes such nonscientific entries as Grammar, Law, and Logick. Its anonymous publication in English coupled with the use of bookseller craftsmen Samuel Wale (d. 1785) and B. Cole as delineator and sculptor, respectively, points to a mass-printed publication aimed not at scientists but at the reading public. The large illustrations do not serve a specific scientific role but are merely depictions of the latest technical information. Exceedingly rare and not mentioned in any bibliography.

NEWTON, Sir Isaac

Alchemical Manuscript by Newton. With two other unidentified works.

N.p. Ca. 1692.

Newton MSS: AL. Folio size tipped-in leaf headed "Roth Mallor's Work," subheaded "The 3rd Period." Item marred by several burn marks, small stains, and fold lines. Otherwise excellent leaf in Newton's distinctive, yet legible, left-handed reverse script. Unidentified AL #1: 8vo. size tipped-in leaf titled "Experimentum Bolling." 12 lines of large script in Latin. In excellent condition save a few minor stains and ink blotches. Unidentified AL #2: folio size tipped-in leaf. 27 lines of neat script in English divided into 2 sections headed "Aqua Fortis" and "Preparing Silver." Small figure at bottom depicting the apparatus used to prepare silver. Attractively bound in red calf antique. Spine gilt-ruled and -lettered.

ISAAC NEWTON's place at the top of the scientific pantheon is secured both by his brilliance and by the fact that his name has survived while many other names have been lost to all but historians of science (e.g., Gottfried Leibniz). What most do not know, however, is the extent of Newton's confrontational personality and of his love of alchemy. His quarrels and reprisals against fellow scientists—Robert Boyle, in particular—are legendary. After Boyle died in 1691, Newton asked John Locke, one of three executors of Boyle's estate, to locate and send to him a specific alchemical recipe, one that Boyle would never have given Newton. On receiving only one of the steps of the recipe, a sulking Newton wrote back to Locke, informing him that it did

not matter since he did not really believe in alchemy. This was false, as most then knew and as we know now. Newton spent years of his life experimenting in laboratories, yet included very little chemistry in his famous works. He also left many books and personal papers filled with alchemical notes and transcriptions. Most of Newton's alchemical papers were sold at auction by Sotheby's in 1936, with many going to private collectors and thereby lost to the public. *Alchemical Manuscript by Newton*, lost for nearly seventy years, is Lot No.18 of this auction. The note reveals that Boyle received the recipe from Erasmus Rothmaler (fl. 1685); at the top of the leaf is written in Newton's hand "Roth Mallor's work." This document provides further proof that Newton did have a passion for alchemy, which he followed to the point of searching for and locating the "third period" of Rothmaler's recipe. (See *Chemical Heritage* 22:4 [2004], 6–7; and *Chemical & Engineering News*, vol. 82, no. 19 [2004], 49.)

ROSCOE, Henry Enfield

Spectrum Analysis. Six Lectures Delivered in 1868, Before the Society of Apothecaries of London . . . with Appendices, Coloured Plates, and Illustrations.

London: MacMillan and Co. 1869.

First edition. 8vo. in 8s. xv, 348 pp. Heavily illustrated with color folding frontispiece, 4 additional plates (2 color, 2 black and white), and 72 woodcut figures in text. Printer's device on half title recto, many pages uncut, old library number on spine and front pastedown, and binder's ticket of "Born & Co. Kirby St E.C." on back pastedown. Minor foxing and loose front and back boards; otherwise a nice clean copy in original gilt-stamped cloth, with an inlaid colored spectrum on front cover. Spine gilt-lettered yet lacking colored spectrum inlay.

A CLASSIC WORK on spectrochemical analysis and the first book on the subject to appear in English. Roscoe (1833–1915), after studying at Liverpool and University College, London, under Graham and Williamson, respectively, went to Heidelberg and worked with Bunsen on the photochemical reaction of hydrogen with chlorine. In 1857 he succeeded E. Frankland as professor at Owens College, Manchester (later Victoria University), remaining there until his retirement in 1885. Knighted in 1884 by Queen Victoria, Roscoe was known as a brilliant experimenter and carried out important work on vanadium and its compounds, as well as spectral analysis (see Partington, iv, 899–902). Enlarged additions of the present work appeared in 1870, 1873, and 1885. Scarce. Not in Duveen, Smith, Thornton & Tully, or Waller. (Bolton, 784)

ROSCOE, Henry Enfield

Spectrum Analysis. Six Lectures Delivered in 1868, Before the Society of Apothecaries of London . . . with Appendices, Coloured Plates, and Illustrations.

London: MacMillan and Co. 1870.

Second edition. 8vo. in 8s. xvi, 404 pp. Even more illustrated than the previous edition, with identical color folding frontispiece ("Spectra of the Metals of the Alkalies and Alkaline Earths") and identical additional plates, yet with 94 textual illustrations. Very fine copy with previous owner's ("Wentworth Enek") signature on title page. Clean pages in same gilt cloth, inlaid binding as original edition.

THE FIRST edition of this very important work appeared a year earlier, in 1869. In the preface to this second edition Roscoe states that "in the year that has elapsed since the first publication . . . much has been done . . . in this branch of science. . . I have . . . found it necessary to rewrite almost the whole portion of the book relating to celestial chemistry, introducing . . . the latest discoveries of Huggins, Lockyer, Janssen, and Zollner." The many new illustrations are a good indication of this recent scholarship that Roscoe had to communicate. This was the standard work on spectral analysis that Roscoe kept up-to-date with third (1873) and fourth (1885) editions.

ROSCOE, Henry Enfield

Spectrum Analysis. Six Lectures Delivered in 1868, Before the Society of Apothecaries of London . . . with Appendices, Coloured Plates, and Illustrations.

London: MacMillan and Co. 1873.

Third edition. 8vo. 5 leaves, xx, 484 pp., 1 leaf. 94 textual illustrations and 10 plates (6 color, 4 black and white). From the libraries of "La Roy F. Griffin, Andover, [Maryland], Sept. 25, 1874, no. 319," with his signature on first blank flyleaf, and James P. Marsh, no. 1850, with his bookplate on front pastedown. Includes prefaces to editions 1 through 3. In need of repairs, yet good copy in brown cloth binding with color spectrum.

BY THE early 1870s Roscoe had become firmly entrenched as a leader of both experimental and pedagogical science. His reputation was further enhanced by a willingness to lend his expertise to such local civic problems as water and gas analysis. This third edition of *Spectrum Analysis* (with one more in 1885) illustrates not only Roscoe's enthusiasm for the sciences but also his keen interest in staying abreast of the escalating specialization of late-nineteenth-century science. Although Roscoe's research interests were wide ranging (centering on inorganic chemistry), he understood specialization and helped young scientists by appointing

them his assistants and demonstrators, while allowing them unprecedented independence in following their own pursuits.

SAGE, B[althzar] G[eorges]

Des pierres Meteoriques ou aerolites. par B.G. Sage.
N.p., n.d.

A.L.S. 20.5 cm. 4 leaves. Blue paper bound with string. Several vertical folds running length of paper. N.d., ca. 1800.

AFTER SCORNFULLY declaring that "except as founder of the Paris Écoles des Mines, there is little reason to rate Sage as an important scientific figure," the *Dictionary of Scientific Biography* goes on to give Sage six pages of biography, notes, and bibliography. Even a cursory reading reveals that while Sage may not have been one of the world's great scientists, he did do some things of merit. In addition to founding the Paris École des Mines, he discovered hypophosphoric acid and, independent of Guyton de Morveau, solid potassium ferrocyanide. His assistant at the École des Mines was Guillot-Duhamel, and some of his early students were Chaptal, Rome de l'Isle, and the future surgeon Jean Demeste. *Des pierres Meteoriques ou aerolites* shows another side of Sage, one that demonstrates a dedicated curiosity and interest in meteorites, mining, and metallurgy.

SMITH, Edgar Fahs

Men of Science from the Keystone State. By Edgar Fahs Smith Provost University of Pennsylvania. Address delivered before the Franklin Institute, Philadelphia May 20, 1914.
N.p., n.d.

First (only) edition. 15cm. 15 pp. Original paper covers intact. Tear at bottom edge and loose leaves throughout; otherwise nice clean copy.

"BETWEEN 1883 and 1918 [Edgar Fahs] Smith directed the research of eighty-seven doctoral students" (ANB, vol. 20, 161). While this feat alone should give pause, Smith's entire life sets him apart as one of America's great scientists and historians. Born in a Pennsylvania grist mill, Smith earned his Ph.D. (Göttingen, 1876) under the guidance of the great German chemist Friedrich Wöhler. Teaching at several Pennsylvania colleges until landing at the University of Pennsylvania, Smith wrote 169 research articles and 12 books on general, inorganic, and organic chemistry as well as electrochemistry (it was in electrochemistry that Smith was most acclaimed). His work (on tungsten for use in incandescent lamps, for example) could have made him a wealthy man. Yet Smith never applied for a single patent and preferred to use what money he did earn for the

benefit of others. Cofounding the ACS Section (later Division) for the History of Chemistry, being elected ACS president (1895, 1921–1922) and APS president (1902–1908), and winning the Priestley Medal (1926) were just a few of Smith's achievements. Smith was very much in demand as a public speaker, and "Men of Science from the Keystone State" was just one of his many talks on such great Pennsylvanians as John Bartram, David Rittenhouse, Benjamin Smith Barton, and Joseph Leidy. Exceedingly rare.

TYNDALL, John

Heat Considered as a Mode of Motion: Being a Course of Twelve Lectures Delivered at the Royal Institution of Great Britain in the Season of 1862.

London: Longman, Green, Longman, Roberts, & Green. 1863.

First edition. 8vo. 5 leaves (2 blank), xix, 468 pp., 32 pp. (advertisement and index of works published by Longman, Green and Co.). 100 textual figures and 1 folding copperplate. Nice clean copy with no tears or folds. Bound in brown, blind-blocked cloth with spine lettered. Several loose leaves, and spine in need of repair. Presentation copy from the author to Henry Faucett dated 14 March 1863 (on dedication page), with Faucett's signature on first blank flyleaf.

THE FIRST popular treatment of the subject and widely considered to be Tyndall's (1820–1893) best book, *Heat Considered as a Mode of Motion* was taken from an acclaimed lecture series given at the Royal Institution. Tyndall's uncommon capacity as a lecturer and teacher, coupled with an extensive range of interest (despite a tragically shortened career he published more than 180 experimental papers, over 60 lectures and addresses, and a considerable number of monographs on such nonscientific subjects as religion, travel, and literature), allowed Tyndall to exert a significant influence on the public's perception of science. Tyndall's most important work, however, was in the area of radiant heat, especially in relation to gases and vapors. In this work the reader is given, in an easy and straightforward manner, Tyndall's theories on radiant heat, while the illustrations demonstrate his ingenuity in designing specialized apparatus. Rare. Not in the usual biographies or bibliographies.

VALLEMONT, Pierre Le Lorrain de

Curiositez de la Nature et de l'Art Sur la Vegetation: Ou l'Agriculture, et le Jardinage Dans Leur Perfection. . . . Par Mr. l'Abbe de Vallemont.

Paris: Chez Claude Cellier, rue S. Jacques; Brussels: Chez Jean Leonard, Libraire Imprimeur. 1708.

Second French edition. 8vo. in 8s. 15 leaves (2 blank), 472 pp., 5 leaves (1 blank). Footnotes throughout. Head- and tailpieces with woodcut capitals. Excellent copy, with clean crisp paper with wide margins nicely bound in contemporary calf. Spine gilt-lettered and dated. Bookplate of "Markee Library, Re-arranged in 1913 by Bryan Cooper" on second blank flyleaf recto.

BETTER KNOWN as Abbé de Vallemont (1649–1721), Pierre Le Lorrain Vallemont was a fixture at the court of Louis XIV through the employ of the Marquis de Dangeau (to whom this edition is dedicated), a favorite of the king. As avocations, Vallemont collected curiosities and explored the gardens of Versailles. He was also a professor at the college of Cardinal Lemoine; wrote popular books on a wide range of topics, including physics, gardening, and numismatics; and was a physician. An amateur alchemist, Vallemont was fascinated by mysticism and the occult in relation to nature and was notorious for getting mixed up in peculiar disputes, including one involving divining. *Curiositez de la Nature* reflects perfectly Vallemont's curious spirit if not the best science. Vallemont is not discussed in most biographical dictionaries, and his works, including this one, are very rare. For a brief look at Vallemont's scientific ideas see Koen Vermeir, "The Magic of the Magic Lantern (1660–1700)" (*BJHS*, June 2005, 151–159). (Caillet, 10982)

VAUQUELIN, Nicolas Louis

Instruction sur la Combustion des Vegetaux, la Fabrication du Salin, de la Cendre Gravelee, et sur la Maniere de Saturer le eaux Salpetrees.

Tours: De l'Imprimerie d'Auguste Vauquer et Lheritier. [1794].

First edition, second issue. 4to. in 4s. 1 blank leaf, 39 pp., 1 blank leaf. 1 large engraved headpiece, 1 large folding table (titled "Tableau de Lessivage"), and 3 large folding plates depicting architectural plans and elevations together with instruments in relation to furnaces. Excellent copy with clean, crisp paper, wide margins, and deckle edges. Both the table and the plates are in good repair. Bound in late-nineteenth-century mottled boards.

THE COMBINATION of skill and luck is almost always a recipe for success, and Vauquelin (1763–1829) was definitely blessed with both. After leaving his position as pharmacy assistant, he went in search of work to Paris, where he met a pharmacist who was a cousin of Antoine Fourcroy. By the age of twenty-one Vauquelin had become Fourcroy's lab and lecture assistant and in time became Fourcroy's equal in nearly every way. Never a great lecturer, Vauquelin instead was known as a first-class experimenter and writer. In the summer of 1793 he was sent to Tours to oversee the production of saltpeter, which was desperately needed for

France's war effort. One of the results was *Instruction sur la Combustion des Vegetaux* (translated into Portuguese in 1798 as *Instrucao sobre a combustao dos vegetates*), a treatise on the production of pearl ash that provides instructions for each step of the process and on the use of lixiviated pearl ash in making saltpeter. Vauquelin went on to write more than 366 articles and discover two new elements—chromium and beryllium—both in 1798. (Bolton, 885; Cole, 1316; D.S.B., vol. 13, 596; Ferchl, 552; Poggendorff, 1182)

W[ALCHIN], D[orothea] I[uliana]

Das Mineralische Glüten, Doppelter Schlangen-Stab, Mercurius Philosophorum, Langer und kurtzer Weg Zur Universal-Tinctur. Deutlich und klarlich entdecket und angewiesen Durch D.I.W. von Weimar aus Thuringen. Leipzig: In Verlegung Joh. Heinrichs Wittwe. 1705.

First edition. 8vo. in 8s. 3 leaves (2 blank), 118 pp., 2 leaves blank. Head- and tailpieces, 1 woodcut capital, and 1 folding woodcut (poorly repaired with white mesh tape, no text obscured). Small alchemical symbols nicely incorporated into text, with marginalia throughout. Minor fading of German black-letter printing on slightly browned, yet well-maintained, paper. Very good copy bound in quarter calf with blue mottled boards. Maroon morocco label. Spine gilt-lettered and dated.

OFTEN BOUND with other tracts by the same author, this is an exceedingly rare unaccompanied first-edition alchemical work compiled by a woman. Walchin's (also referred to as Wallich) real identity was, and remains, unknown. From around the middle of the eighteenth century, writers such as Fictuld began to interpret the initials on the title pages (D. I. W.) as Dorothea Juliana Walchin because this name is mentioned in the book. Since then many theories regarding Walchin have sprung up, including that she was "a female well schooled in chemistry" (Zedler) and that she was the daughter of an adept (Kopp). Walchin claimed to have discovered a cobalt mineral that, when distilled, turned out to be the prized "first matter," resulting in a huge demand for the discovery. Most bibliographers (including Duveen and Partington) refer only to the 1722 edition. (Blake, 479; Caillet, 11340; Ferguson, II, 525–526; Gmelin, II, 320; *Printing and the Progress of Man*, pt. xiv, 130)

W[ALCHIN], D[orothea] I[uliana]

Schlüssel zu dem Cabinet der geheimen Schatz-Kammer der Natur, zur Such- und Findung des Steins der Weisen, durch Fragen und Antwort gestellet. Verfertiget und der Welt gezeigt durch D. I. W. von Weimar aus Thuringen. Leipzig: Verlegts Johann Heinrichs Witwe. 1706.

First edition. 8vo. in 8s. 3 leaves (2 blank), 288 pp., 2 blank leaves. Head- and tailpieces, 1 woodcut capital, and small alchemical symbols nicely incorporated into text. Neat German black letter and marginalia on good paper. Browned throughout, with minor staining and slight soiling. Smartly bound in quarter calf with mottled boards. Maroon morocco label. Spine gilt-lettered and dated.

COMING ON the heels of her 1705 *Das Mineralische Glüten*, this work represents Walchin's third first edition issued in less than two years. Such effort came at a price, however; Fictauld, in his *Probiar-Stein* (1753), ruthlessly attacked the treatises as "ertz-sophistisch" and "argchimistisch," declaring them worthless science that should be burned. Vindication came later when Pott, in his *Dissertations Chymiques* (1759), gives Walchin credit over Teichmeyer and Hellot for the first description of cobalt synthetic ink. The debate over Walchin's real identity continued with Wiegleb (1790), who declared that Jacob Waitz was responsible for all three works. Exceedingly rare. (Ferguson, II, 525–526; Partington, II, 318; *Printing and the Progress of Man*, pt. xiv, 130)

WALKER, Adam

A System of Familiar Philosophy: In Twelve Lectures; Being the Course Usually read by Mr. Walker. Containing the Elements and the Practical Uses to be Drawn from the Chemical Properties of Matter: The Principles and Application of Mechanics; Of Hydrostatics; Of Hydraulics; Of Pneumatics; Of Magnetism; Of Electricity; Of Optics; And of Astronomy. Including Every Material Modern Discovery and Improvement to the Present Time. A New Edition, in Two Volumes. London: Printed for the Author, [by T. Davison] at his House. 1802.

Second (new) edition. 2 vols. 4to. in 4s. I: 3 leaves (1 blank), xvi, 354 pp., 28 plates, 1 blank leaf. II: 2 leaves (1 blank), iv, 251 pp., 21 plates, 13 leaves (index), 1 leaf (advertisement), 1 leaf blank. Plates nicely preserved and very clear. Signed presentation copy "From Arthur Charles Verelst to Edward Joshua Cooper Dec. 8th 1812" on title page of both volumes with Cooper's bookplate on front pastedown of each volume. Bookbinder's ticket written in ink on volume 1 first blank flyleaf. Old library sticker on upper left-hand corner of front pastedown of each volume. Very nice copies with clean crisp, wide-margined paper. Bound in half calf with spine gilt-lettered.

THE SON of a woolen manufacturer, Adam Walker (1731?–1821) was removed from school at a very young age. While unfortunate, this did not end his thirst for knowledge, as by the age of eighteen the self-taught Walker had earned the position of writing master and accountant at the Free School at Macclesfield, where he also found the time to study mathematics. A natural-born lecturer, Walker went

on to earn a reputation as the eighteenth century's most famous itinerant lecturer, speaking on such topics as astronomy, natural philosophy, mathematics, chemistry, electricity, hydrostatics, magnetism, and mechanics. Walker (who was also a well-known and widely patented inventor) can be seen as the vanguard of the mechanics institutes, which accomplished so much for public education. *A System of Familiar Philosophy* is a perfect reflection of Walker's wide range of interests published in the lecture style with which he was so familiar. The beautiful plates display many of his inventions and afford a visual representation, giving the reader a glimpse of what Walker's lectures may have been like. Rare. Unknown to most bibliographers. (D.N.B., vol. 59, 42; Smith, 499)

WARD, John

The Lives of the Professors of Gresham College: To which is prefixed The Life of the Founder, Sir Thomas Gresham. With An Appendix, consisting of Orations, Lectures, and Letters, written by the Professors, with other Papers serving to illustrate the Lives.

London: Printed by John Moore in Bartholomew lane for the Author. 1740.

First edition. Folio in 2s. 4 leaves (1 blank), xxiv, 338 pp., 156 pp. (appendix and index), 1 blank leaf. Frontispiece portrait of Thomas Gresham is accompanied by 2 single-page plates and 2 large folding plates (Georgius Vertue, sculpsit, 1739). Includes footnotes throughout and neat marginalia indicating textual corrections or directing readers to additions and addenda pages. Clean, crisp, and wide-margined paper, with some browning and staining. Head- and tailpieces, and printer's device on title page. Original blind-tooled leather laid onto rebacked oak panels. Gilt-ruled tan morocco label on gilt-ruled spine with 6 raised bands. Once belonging to Gresham professor of astronomy S. A. Saunder, this copy was bequeathed to W. H. Wagstaff, Gresham professor of geometry. Bookplate of the Baptist Union of Great Britain and Ireland, Library on top obscuring another bookplate bearing "Presented by W. B. Gurney, Esq." on front pastedown paper.

ESTABLISHED IN 1597 to provide free public lectures on divinity, astronomy, geometry, music, law, medicine, and rhetoric, Gresham College was the brainchild of Sir Thomas Gresham (1519?–1579), founder of the Royal Exchange. On the death of Gresham's widow, classes began and were held at Gresham's Bishopsgate mansion until 1768. The first home of the Royal Society, Gresham College operates today in the same manner as it has for over four hundred years, governed by a council with the lord mayor of London as president. The son of a dissenting minister, John Ward (1679?–1758) was elected F.R.S. during Sir Isaac Newton's presidency in 1723. While active within the Royal Society, Ward wrote nothing of lasting

scientific consequence. *The Lives of the Professors of Gresham College* is Ward's most enduring work, being a compendium of biographies, orations, lectures, letters, and other material on past Gresham professors. Among those with long entries and bibliographies are Christopher Wren (astronomy) and Robert Hooke (geometry). The beautiful, yet all too few, engravings were completed in 1739 by the Englishman George Vertue, whom Joseph Strutt deemed "one of the most industrious artists England ever produced" (Strutt, vol. 2, 388). A valuable book for its biographies of lesser-known scientists and a worthy addition to any collection. (D.N.B., vol. 59, 321)

WATSON, R[ichard]

An Essay on the Subjects of Chemistry and their General Division.

Cambridge: Printed by J. Archdeacon. 1771.

First edition. 8to. in 4s. 1 leaf, 43 pp., Slight fold throughout in upper right-hand corner, and large fold mark on A2r; otherwise excellent copy with very clean, crisp paper rebound in three-quarter calf with mottled boards. Gilt-lettered and dated maroon morocco label.

RICHARD WATSON, one of late-eighteenth-century England's great thinkers, writers, and teachers, expounded not just on the sciences but on divinity and religion as well. A close reading of Watson's career also reveals that while being all of the above, he was also adept at being elected to positions for which he was totally unqualified, including the two posts that launched his career. In 1764 he was chosen professor of chemistry at Cambridge despite having "never read a syllable on the subject, nor seen a single experiment" (D.N.B., 24). In November 1771 he was elected Cambridge's Regius Chair of Divinity after less than a month of study on the subject. Despite these shortcomings, Watson served with the utmost distinction in both stations. Elected F.R.S. in 1769, his most popular treatise was *Apology for the Bible . . . Letters to . . . Thomas Paine* (1796), an answer to Paine's "Second Part" (1795) where Watson attacks Paine's treatment of the scripture. While Watson considered Paine unworthy of his time, the *Apology* was widely read in both America and Great Britain, with numerous reprints and translations into French as late as 1829. *An Essay on the Subjects of Chemistry and their General Division* represents one of the three treatises Watson wrote as professor of chemistry. He suggested that air would condense to a solid when chilled, thus anticipating Lavoisier's later observations. (Bolton, 904; D.N.B., vol. 60, 24; Duveen, 610; Poggendorff, II, 1267)

WATTS, Henry

A Dictionary of Chemistry and the Allied Branches of Other Sciences. Founded on that of the late Dr. Ure. By Henry Watts . . . Assisted by Eminent Contributors. In Four Volumes (later in Five Volumes).

London: Longman, Green, Longman, Roberts, & Green. 1863–1868.

First edition. 5 vols. 8to. in 8s. I: 3 leaves (2 blank), xi (1 leaf, list of contributors, unnumbered), 1137 pp., 2 blank leaves. II: 3 leaves (2 blank), 985 pp., 2 blank leaves. III: 5 leaves (2 blank), 1096 pp., 2 blank leaves. IV: 4 leaves (2 blank), 806 pp., 3 leaves (2 blank). V: 4 leaves (2 blank), vi, 1 leaf (list of contributors), 1120 pp., 2 blank leaves. Each volume has its own index. Engraved textual illustrations of instruments and tables in all volumes. Nice clean wide-margined paper throughout. Bound in half calf with mottled boards. Maroon calf labels, gilt-lettered and ruled. Spines richly gilt-lettered and -ruled, with six imitation raised bands. Bookbinder's ticket (E. & F. N. Spon, 48, Charing Cross London, S.W.) in volume I, last blank flyleaf. All bindings extremely loose and in need of repair; otherwise a nice complete set.

A TRAINED CHEMIST (B.A., University of London, 1841) and later assistant to George Fownes and A. W. Williamson, Watts would appear to be the perfect candidate for a long-term professorship of chemistry. Unfortunately, an incurable speech defect precluded him from teaching. Instead, Watts turned to chemical literature as his life's work. In 1848 the Cavendish Society engaged Watts to translate and enlarge Gmelin's *Handbuch der Chemie*, a project that took him eighteen volumes and twenty-four years to complete. A year later he was voted editor of the Chemical Society's *Journal*. These and other projects helped him build his reputation, and in 1858 the publishing firm of Longman and Co. approached Watts to prepare a new edition of Andrew Ure's *Dictionary of Chemistry*. Finding that Ure's work was woefully out of date, Watts proceeded to write, with the help of many experts, *A Dictionary of Chemistry and the Allied Branches of Other Sciences*, a true encyclopedia dedicated exclusively to the science of chemistry. As each volume was separately published over the course of six years, the summaries were scientifically current, yet readable. In 1871 Watts, who had been made Chemical Society librarian in 1860, was asked to edit the abstracts that began to appear in the Chemical Society's *Journal*, thereby establishing the model for later series such as *Chemical Abstracts*. Watts was elected F.R.S. in 1866, and his ideas laid the foundation for later scientific editing, publishing, and organization. (D.N.B., vol. 60, 67; Ferchl, 568)

WEBSTER, John

Elements of Chemistry.

London: Printed for the Author [J. Poole, Printer, Taunton] and Sold by Messrs. Johnson and Co. St. Paul's Church-Yard; And Messrs. Crosby and Co. Paternoster-Row. 1811.

First (only) edition. 8vo. in 8s. 5 leaves (2 blank), xx, 223 pp. (numbered 22–245), 2 blank leaves. Paper very slightly browned; otherwise excellent copy with wide-margined paper. Handsomely bound in lightly rubbed contemporary tree calf, red morocco label, spine gilt.

A COMPLETE LACK of biographical details concerning the author merely adds to the charm of this very rare and interesting book. Dedicating his work to the Society of Schoolmasters, Webster states early on that he wrote the book to aid his lectures “amongst a juvenile class of auditors in many of the most respectable schools” due to the inability of students to remember everything they hear in a lecture (leaf 6r). The book acts as a combined lecture aid and course syllabus. Webster goes on to acknowledge the many great chemists who came before, singling out “Professor [Humphry] Davy” for laying the “superstructure” of the then-known science of chemistry (xix). The last page contains an announcement of Davy's discoveries that muriatic acid is composed of oxymuriatic acid (chlorine) and hydrogen and that chlorine is an element. The main body of work contains chapters on oxygen, vegetable acids, neutral salts, and animal structure and functions. Extremely rare. (Cole, 1354)

WELD, Charles Richard

A History of the Royal Society, With Memoirs of the Presidents. Compiled from Authentic Documents . . .

London: John W. Parker, West Strand. 1848.

First edition. 2 vols. 8vo. in 8s. I: 5 leaves, xix, 527 pp., 2 blank leaves. II: 4 leaves, viii, 611 pp., 2 blank leaves. Volume II augmented by 18 appendices. Fourteen (9 in vol. 1 and 5 in vol. 2) engraved illustrations (P. Stopford, del. after Anne Weld), including arms of the Royal Society, Newton's telescope, Newton's death mask, and the Rumford Medal. Some leaves unopened. Excellent copy with clean, wide-margined paper. Endpapers and edges nicely mottled. Bound in dark blue calf, cleanly diced and gilt edge rolled. Maroon morocco labels on a handsomely gilt-ruled and -lettered spine. Slight rubbing on the hinges and headcaps; otherwise a superior set.

LIKE MANY in the profession, Weld, after finding that his various studies and vocations did not suit him, became in 1845 librarian to the Royal Society. Remaining at the Royal Society for sixteen years, Weld wrote this work (illustrated by his wife, Anne), which has been well received since it

was published and described as “a well-written and much-needed supplement to the histories of Birch and Thomson” (D.N.B., vol. 60, 157). The half-brother of Isaac Weld and brother-in-law to Alfred and Charles Tennyson, Weld was well connected to the scientists at the Royal Society. In addition to writing a series of travel books, Weld was instrumental in the planning of Sir John Franklin’s arctic expedition and represented Great Britain as an assistant commissioner at the Paris Exhibition of 1867. Weld died suddenly in 1869, and although not a scientist was still respected at the Royal Society owing to his writing and innate ability to understand science despite a near-total lack of scientific education. (Babson Newton Coll., 325; Bolton, 166; D.N.B., vol. 60, 157; Osler, 6120; Thornton & Tully, 370)

WHEWELL, William

The Philosophy of the Inductive Sciences, Founded Upon their History. In Two Volumes.

London: John W. Parker. 1840.

First edition. 2 vols. 8vo. in 8s. I: 4 leaves (1 blank), cxx, 532 pp., 2 leaves (1 blank). II: 3 leaves (1 blank), iv, 586 pp., 2 leaves (1 blank). Engraved printer’s device on both title pages and 1 large, 2-color folding plate in volume II. Exceptionally clean paper with mottled edges and endpapers. Bound in contemporary calf with elaborate gilt boards. Spines with black morocco labels and 5 raised bands. A small number of marks on both front boards and minor wear to hinges; otherwise an excellent set.

THIS WORK, the sequel to his *History of the Inductive Sciences* (1837), earned Whewell much-deserved recognition and, along with his other work, elevated him to the status of a top scientist of his day alongside such men as Faraday, Herschel, and Dalton. An ordained minister in the Church of England (1826), Whewell was good at everything he did. He composed sermons, wrote essays on architecture, and invented an anemometer (a device that measures the direction, velocity, and duration of the velocity of the wind), all while being a member or honorary member of at least twenty-five British and foreign scientific societies. Whewell introduced the terms *physicist* and *scientist*, as well as (in correspondence with Michael Faraday) the now familiar *ion*, *anode*, and *cathode*. Although he was widely published, taken together *History* and *Philosophy* constitute the pinnacle of Whewell’s scholarly activity, with *Philosophy* regarded as a masterpiece of Victorian philosophy of science. Here Whewell theorizes that induction is the basic method of science, since induction is demonstrative and thus yields necessary truths. Not as well-known today as many of his contemporaries, during his life Whewell was one of the

most widely recognized figures in Victorian science (D.N.B., vol. 60, 462; D.S.B., vol. 14, 293; Poggendorff, II, 1310).

WILLIAMS, C[harles] W[ye]

The Combustion of Coal and the Prevention of Smoke Chemically and Practically Considered. . . . With Numerous Illustrations.

London: John Weale; New York: Appleton. 1854.

Third edition. 8vo. in 8s. 9 leaves (1 blank), iii, 242 pp., 40 pp. (advertisement), 1 blank leaf. 141 textual illustrations and figures. Minor foxing on front and back flyleaves. Deep fold marks on several pages; otherwise good copy with clean pages. Firmly bound in original gilt-lettered, blind-stamped red cloth.

WILLIAMS DEDICATED this third edition to the Right Hon. Lord Viscount Palmerston (John Henry Temple, 1784–1865), secretary of state for the Home Department, in recognition of Palmerston’s Act “making the abatement of [furnace] smoke nuisance *compulsory*.” As the founder and managing director of the City of Dublin Steam Packet Company (founded 1822), Williams had dedicated much of his life to reducing air pollution in Great Britain. Palmerston’s act, therefore, conferred official acknowledgment on this work. Recognition is further enhanced by an appendix in which Andrew Ure and William Thomas Brande, among others, express a favorable opinion. Williams goes on to offer a timely chastisement of manufacturers for their reluctance to reduce pollution based on the “nature of their respective operations.” Much in the same manner as today’s businesses, mid-nineteenth-century manufacturers protested that pollution control would hurt profits. For this edition Williams increased the number of textual illustrations accompanied by straightforward and well-written explanations. So well received was this edition that it was translated into French in 1860. Rare; not in the usual bibliographies.

WILLIAMS, Stephen

An Experimental History of Road Water in Wiltshire, With a Short Mechanical Account of its Virtues; and of Chronic Distempers. In a Letter to the Revd Dr. Derham, Canon of Windsor, F.R.S.

London: Printed for A. Bettesworth and C. Hitch, in Pater-Noster-Row, and J. Leake at Bath. 1731.

First (only) edition. 8vo. in 4s. 1 leaf, 72 pp. Woodcut head- and tailpieces, and 2 woodcut capitals with guide letters only. Overall nice copy in wide-margined paper, clean save for a few stains and minor browning, mainly on title page and last page owing to high acid content of flyleaves. Several fold marks throughout. Rebound in poor quality one-quarter cloth with brown pressboards. Spine gilt-lettered and dated.

LOCATED SEVEN miles from the city of Bath, the small village of Road possessed, according to Dr. Williams, mineral water of excellent medicinal characteristics. In this letter to Rev. William Derham (1657–1735), Williams provides a detailed account of his experiments on the water, its properties, and mineral content. In the second part Williams uses this information to suggest some diseases Road water may be useful in curing. While there is no mention as to why the letter was directed to Derham, his entry in the D.N.B mentions a keen interest in the natural sciences. In fact, Derham (F.R.S., 1703) edited a work on birds and insects and another on Robert Hooke and other eminent scientists. He also revised an edition of the *Miscellanea Curiosa* (1726) and had a large collection of birds and insects. What he did with Williams's information on Road water is unknown. Not much is known about Williams either. He was elected F.R.S. in 1734 but died in 1741 at age forty. An extremely rare and useful work in the history of the scientific analysis of mineral waters. (Blake, 490; Duveen, 621; Neu, 4360)

WÖHLER, Friedrich

Elements de Chimie Inorganique et Organique. Traduits de l'Allemand sur les Editions 11 et 5 Par Louis Grandeau, Avec le concours Du Docteur F. Sacc, Et des additions De. H. Sainte-Claire Deville.

Paris: Emile Mellier; Nancy: Grimblot, Ve Raybois et Comp. 1858.

First edition. 8vo. in 8s. 3 leaves, 589 pp., 2 leaves. Good sound copy with clean, yet slightly browned paper (owing to acidic paper) and mottled pastedown and end papers. Bound in quarter calf antique with blue, slightly worn boards. Spine gilt-ruled and -lettered. Presentation copy from Louis Grandeau, with his signature on half title recto.

CONTROVERSY HAS always been a major component of the sciences, with many quarrelsome scientists refusing to shy away from—and some even courting—heated debates. Wöhler, however, was not of this type. His career was dominated by a series of lifelong friendships that produced both voluminous correspondence and historically important work. Earning an M.D. by age twenty-three, Wöhler followed his passion, becoming professor of chemistry at Göttingen in 1836. A student of both Gmelin and Berzelius, Wöhler developed into the consummate experimenter. His many notable preparations include artificial urea (1828) and the extraction of aluminum, for which he was honored by Napoleon III. It is for his work with Justus von Liebig, however, that Wöhler is best known. During a forty-four-year friendship Liebig and Wöhler came together for three major projects: proving the existence of a body that was

constant from one compound to another (1832); discovering amygdalin, the first example of a glycoside (1836); and engaging in a study of uric acid that described fourteen new compounds (1838). Sadly, Wöhler failed (for many reasons, some not of his own making) to keep current with new theories, never again writing anything as important as his earlier works. *Elements de Chimie Inorganique et Organique* is representative of Wöhler's later work, writing elementary textbooks in organic, inorganic, and analytical chemistry. Not in the usual bibliographies.

WÖHLER, Friedrich

Hand-Book of Inorganic Analysis; One hundred and Twenty-Two Examples, Illustrating the Most Important Processes for Determining the Elementary Composition of Mineral Substances. Edited by A. W. Hofmann . . . Professor in the Royal College of Chemistry.

London: Walton and Maberly. 1854.

First English edition. 8vo. in 8s. 2 leaves (1 blank), viii, 239 pp., 1 blank leaf. Excellent copy with good, clean paper. Eight textual illustrations. Nicely bound in original green, blind-tooled cloth. Spine gilt-lettered.

AFTER THEIR groundbreaking study of uric acid in 1838, Liebig and Wöhler, while continuing to publish joint papers, never again collaborated on a major project. Liebig turned his focus to agricultural and physiological chemistry, while Wöhler concentrated on inorganic chemistry. Specifically, Wöhler rekindled his fascination with mineral analyses, including meteorites. He went on to write over fifty works on these subjects (including one on the passivity of meteoric iron), making up a significant percentage of his total output. It was common for mid-nineteenth-century inorganic chemists to be interested mainly in the materials themselves—that is, the identification of rocks, crystals, or chemicals. Not surprisingly, Wöhler became a leader in the field, with some of his methods being industrialized, such as preparing phosphorus by heating calcined bones with sand. He was the first to make acetylene from calcium carbide (1862), and he also discovered and described silicon hydride. His *Hand-Book of Inorganic Analysis* (first published anonymously in 1853 as *Practische Übungen in der chemischen Analyse*) exemplifies his veer toward mineral analysis. By writing a student laboratory manual that provides instruction on mineral analysis, Wöhler combined his two interests—minerals and teaching. (Bolton, 930; Edelstein, 2459; Partington, IV, 324)

WOLLASTON, William Hyde

On Super-Acid and Sub-Acid Salts. From the Philosophical Transactions. [Read before the Royal Society, January 28, 1808].

London: Printed by W. Bulmer and Co. 1808.

First offprint edition. Disbound. 4to. in 4s. 1 leaf (title page), 7 pp. Beautiful copy with clean, wide-margined paper. No marks or folds. Nicely bound in lightly mottled half calf antique with mottled boards. Maroon morocco label, spine gilt-ruled, -lettered, and dated.

IT IS HARD today to appreciate fully the confusion within the chemical sciences that resulted from John Dalton's atomic theory. The career of William Hyde Wollaston, while distinguished in many ways, illustrates the deep uncertainty that followed Dalton's work. Known for his ability to work with unusually small quantities of material, Wollaston at first embraced Dalton's atomic theory. He even predicted that arithmetical relations between atoms would be insufficient to explain chemical combination and speculated on the possible atomic composition of the oxalates of potash. Within a few years, however, he publicly reversed himself, stating that such considerations as the number of atoms in a particular compound were purely theoretical and of no value for practical chemistry. Wollaston (along with many other English chemists who enthusiastically joined him) abandoned conjecture and theory to embrace purely descriptive chemistry devoid of hypothetical reasoning. By 1822 Wollaston had come full circle, confidently asserting that the existence of atoms could be confirmed through planetary observation. Wollaston's *On Super-Acid and Sub-Acid Salts* is one of the earliest papers in support of Dalton's work and thus represents a point in time just prior to the general upheaval of the chemical community. Extremely rare as an offprint. (D.S.B., vol. 14, 493)

WOLLASTON, William Hyde

A Synoptic Scale of Chemical Equivalents. From the Philosophical Transactions. [Read before the Royal Society, November 4, 1813].

London: Printed by W. Bulmer and Co. 1814.

First offprint edition. 4to. in 4s. 1 leaf (title page), 22 pp., 1 folding plate. Clean, wide-margined paper. No stains or fold marks, but slightly foxed on title page; otherwise excellent copy bound in quarter calf antique with mottled boards. Maroon morocco label, spine gilt-ruled and -lettered.

AT CAMBRIDGE, Wollaston studied botany and astronomy; later he completed his medical studies in London. Several years after being elected F.R.S., he left medicine to con-

centrate on chemistry, winning the Copley Medal of the Royal Society in 1802. His experimentation skills were revealed with investigations on the platinum metals, which, in addition to earning him wealth and fame, became the standard method for producing compact metals from powder. Secretive and cautious, Wollaston was especially interested in bringing uniformity to the chemical sciences (this trait probably led to his early embrace of Dalton's atomic theory). Recognizing that Dalton's theory did not allow chemists to establish the number of atoms in a particular compound, Wollaston set about devising a logarithmic scale that would compute the proportions in which the common chemical substances combined. Wollaston announced that his scale of "equivalents" was not "warped" by Dalton's theory, and the scale was in general use for over twenty years, with such luminaries as Faraday and Berzelius extolling its virtues. *A Synoptic Scale of Chemical Equivalents* is Wollaston's introduction to his scale with instructions on its use, a numerical table of equivalents, and an extremely well-preserved folding plate of the scale itself. Of greatest rarity as an offprint.

WOOD, George B[acon]

Syllabus of the Course of Lectures on Materia Medica and Pharmacy, Delivered in the University of Pennsylvania. Philadelphia: Printed by Lydia R. Bailey. 1842.

First edition. 8vo. 7 leaves (5 blank), 70 pp. (interleaved with 217 ruled leaves), 2 blank leaves. Pastedown and endpapers slightly browned and foxed. Several poorly mended leaves. Bound in original nineteenth-century sheep. Both boards worn and loose, both headcaps torn. Otherwise good copy with annotations, marginalia, and provenance ("J. Spotswood Wellford/Columbia House Philadelphia/October 27, 1845") in ink on first blank flyleaf recto, "Dr. Beverly R. Wellford/No 88 Columbia House" in pencil on title page, and "John Spotswood Wellford" in pencil on third ruled note page. 2 pages of notes in unknown hand (possibly Wood?).

BORN INTO a farming family in the tiny Delaware Bay coastal village of Greenwich, New Jersey, George Bacon Wood (1797–1879) quickly set out on a decidedly different path. Earning his A.B. from the University of Pennsylvania by age eighteen, Wood continued his studies, receiving his M.D. in 1818. He soon established a successful private practice and devoted most of his life to teaching and writing, becoming one of the nineteenth century's most influential and well-respected physicians. In addition to his long-standing posts as attending physician at various hospitals, Wood also taught chemistry and materia medica at the Philadelphia College of Pharmacy and the University of Pennsylvania. A wealthy man by marriage, Wood earned

substantial income from his work with Franklin Bache in writing both the *United States Pharmacopoeia* and the *Dispensary of the United States*. The latter, first published in 1833, went through twenty-seven editions, continuing to be published until 1973. Wood, a fellow of both the College of Physicians of Philadelphia and the American Philosophical Society, gave well-attended lectures hailed by some as “splendid, almost magnificent.” His *Syllabus of the Course of Lectures on Materia Medica and Pharmacy* was written as a companion to these lectures, acting as a supplementary notebook (hence the blank note pages) that students used in conjunction with more inclusive textbooks.

WORCESTER, Edward Somerset, Marquis of

A Century of the Names and Scantlings of Such Inventions, As at present I can call to mind to have tried and perfected, which (my former Notes being lost) I have, at the Instance of a powerful Friend, endeavoured now in the Year 1655, to set these down in such a Way, as may sufficiently instruct me to put any of them in practice.

London: Printed in the year 1663. Reprinted, and sold by T. Payne. 1746.

First reprint edition. 12mo. in 12s. 2 leaves (1 blank), xxx, 94 pp., 1 leaf (advertisement of books sold by T. Payne), 1 blank leaf. Head- and tailpieces. Several woodcut capitals with guide letters. Binder's stamp “Bound by J. Mackenzie & Son” on first flyleaf verso. Excellent copy without stains, marks, or folds of any type. Moderate rubbing on hinges and fore-edges; otherwise nicely rebound in ruled half calf. Marbled boards, paste-down and flyleaves. Spine elaborately gilt, lettered, and dated with raised bands. A very nice copy.

THE SCIENCES have always had their share of dreamers and tinkerers, and the seventeenth century was no exception. The main difference, however, was that seventeenth-century “inventors” tended to be landed gentry able to leave detailed records of their activities. Edward Somerset, sixth earl and second marquis of Worcester (1601–1667) was a key player in the English Revolution and Restoration, but just prior to and after this momentous period his main activity was experimenting with mechanics. Worcester claimed to have invented and published designs for a steam engine for pumping water out of Vauxhall House, south of London. First described in *A Century of the Names and Scantlings of Such Inventions* (1663), Worcester's “steam engine” (No. 68) and other machines (including a perpetual motion machine, No. 100) have been denounced as “nebulous ideas without any attempt to work them out in practical detail” (D.N.B., vol. 53, 236). Further, Worcester's promise of a book putting his devices into execution was never written. Although there were “eye-witness accounts” of Worcester's steam engine in action, no conclusive evidence has

been found. Be that as it may, *A Century of the Names and Scantlings of Such Inventions* went through nine “editions” (reprints, actually) and was reprinted in magazines throughout the nineteenth century. The 1746 printing is extremely rare, in fact rarer than the 1663 (first) edition. (BM, compact edition, vol. 23, 957; DNB, vol. 53, 236; Ferguson, *Secrets*, supp. 2, 62 [Ferguson has correct title, but Worcester is listed as “Henry”]; Osler, 4003)

YOUNG, Thomas

A Course of Lectures on Natural Philosophy and the Mechanical Arts. In Two Volumes.

London: Printed for Joseph Johnson . . . by William Savage. 1807.

First edition. 2 vols. 4to. in 4s. I: 3 leaves (1 blank), xxiv, 1 leaf, 796 pp., 43 engraved plates (2 hand colored) (Joseph Skelton, sculp.), 1 table. II: 2 leaves (1 blank), xii, 1 blank leaf, 738 pp., 1 table, 15 engraved plates, 1 blank leaf. Textual illustrations and tables. Very good copy with clean, wide-margined paper. Slightly browned throughout and a small hole in volume II title page. Handsomely rebound in brown half calf antique with mottled boards. Spine gilt-ruled and -lettered.

THE TERM *prodigy* conjures up images of an adolescent Mozart or of Felix Mendelssohn. Thomas Young (1773–1829), while not nearly as well known, should be placed within this category. Reading by age two and learning Latin by six, Young had advanced, by age thirteen, to the study of natural philosophy and fluxions, while making microscopes and telescopes. His two M.D.s (Göttingen, 1796, and Cambridge, 1808) earned him a lifetime position at St. George's Hospital, which, among other income, allowed Young financial freedom. A respected Egyptologist (he aided in deciphering the Rosetta Stone), Young's early career was notable for his work on physiological optics and the structure of the human eye. *A Course of Lectures on Natural Philosophy and the Mechanical Arts* (Young's first book) are his published lectures from his time as professor of natural philosophy at the Royal Institution in 1802–1803. Covering nearly the whole of theoretical science and technology, it includes his undulating theory of light and the first use of the term *energy*, coupled with lectures on hydraulics, astronomy, and drawing. In the second volume a lengthy index is supplemented by a 20,000-entry bibliography and reprints of his early articles. Criticized as obscure, overly technical, and too detailed for a popular audience, this work nonetheless provides ample evidence of Young's brilliance. While many have lessened his stature to that of a gentleman scholar, Young, although frequently not finishing his hypotheses, laid the theoretical groundwork for later scholarship. (Cajori, 149; D.N.B., vol. 63, 398; D.S.B., vol. 14, 571; Osler, 7783)

