



Letter from Richard Adolf Zsigmondy to Georg Bredig, October 1905

Zsigmondy, Richard Adolf. "Letter from Richard Adolf Zsigmondy to Georg Bredig, October 1905," October 23, 1905. Papers of Georg and Max Bredig, Box 1, Folder 72. Science History Institute. Philadelphia.

<https://digital.sciencehistory.org/works/dfkz52l>.

Courtesy of the Science History Institute, prepared December 14, 2024 18:22 UTC

Translated by Jocelyn R. McDaniel

English Translation

Image 1

Jena, October 23, 1905

Dear Professor,

Many thanks for your kind, appreciative letter. I was instantly delighted to be able to flawlessly prove the heterogeneity of the hydrosols in some cases, which you have always emphasized. I believe it is very important if, in the present disarray of opinions in the

Image 2

(page 2)

field of colloidal chemistry, agreement can be reached on at least some fundamental questions.

My remarks in the introduction and in Chapter I of my book are mainly directed at Stöckl, Vanino, Müller, Neisser and Friedemann and others, who want to exclude the metal hydrosols from the group of colloidal solutions and will therefore emphasize metal sols for colloidal research. I believe that we completely agree on this point because you also use metal hydrosols in your superb experiments on ferments. Moreover, you very aptly express that they are

(page 3)

inorganic models of organic enzymes.

Now, most chemists, physicians, and physiologists etc., will hardly decide to call a solution of glue, colloidal LiNO_2 , LiO_2 etc., a suspension, because it is usually understood as a simple suspension of these entities. If only I had kept the expression "suspension" that you used for the gold hydrosols, many people would confirm the erroneous notion that gold sols are crasser derivations when compared to glue solutions.

Image 3

(page 4)

Yet that would have given Messrs Vanino, and Müller etc. grist for their mill and I wanted to avoid that at all costs.

Regarding the experiments of Calcar and Lobry de Bruyn, I have followed the guidance of these researchers. I know that they do not agree with what is generally assumed, but on the other hand, I can't imagine that experienced researchers believe that differences in concentration can be proved, which do not actually exist.

In terms of the movement of particles and many other questions mentioned in my book,

Image 4

(page 5)

II

I do not intend to claim that the insights I have expressed must be correct. As you have seen, it is often a matter of preference if no decision has been made.

I will be very interested to hear about the results of your ultra-microscopic experiments, and I ask you not to forget about me when sending the relevant offprints.

Sincerely,

R. Zsigmondy.