



Letter from Svante Arrhenius to Georg Bredig, January 1913

Arrhenius, Svante. "Letter from Svante Arrhenius to Georg Bredig, January 1913," January 1, 1913. Papers of Georg and Max Bredig, Box 1, Folder 4. Science History Institute. Philadelphia.

<https://digital.sciencehistory.org/works/58vp7os>.

Courtesy of the Science History Institute, prepared June 15, 2025 07:45 UTC

Translated by Jocelyn R. McDaniel

English Translation

Image 1

The Fields for Experiments at the Royal Swedish Academy of Agriculture and Forestry,
1 January 1913

Dear old friend, [Bredig]

Thank you for your kind letter, which arrived yesterday evening on New Year's Eve in the last hours of the old year as I was reading. We sat here completely alone, I, my wife, and mother-in-law, who was upset because no one would go to church with her. Above all, little Sven was here and is growing and becoming smarter with each passing day. The rain was pounding on the windows, which made us feel especially comfortable in the nice warmth of the room. Sven is our special pride and joy. Moreover, I can tell you that we are expecting a new baby in time for the feast of St. Hans. You may understand such things, but I do not. My older son, Olle, is doing exceptionally well. He will become a student in the spring of 1914.

Image 2

[page 2]

On account of travel, I have many appointments. Unfortunately, my wife cannot accompany me, and it would be wrong to leave her and little Sven under such circumstances. In late summer, I will go to the British Association to visit my various friends there and also drop in on our Dutch friends. However, I can hardly afford any more time.

I am pleased that you are so interested in the various branches of physical chemistry. It shows that you are still young and hopeful that many problems will be solved. I also have many interests and would like to devote more time to them. However, I also must keep up with my prior research and prepare new volumes when the older ones are sold out. Moreover, it takes me twice as long than someone who writes in their mother tongue. Everything takes a lot more time and thought while writing. Everything must be checked by someone who speaks the language and

[page 3]

I must diligently read all the corrections myself. This is completely different than what Ostwald does. For example, he speaks into a Dictaphone and has everything transcribed by a secretary. He only looks at the secretary's copy once and corrects inadvertent mistakes. I sense that he can produce ten times as much as me in the same amount of time. In addition, he writes three times about the same topic: once in the Annals of Nature Philosophy, once in a newspaper or academic journal, and next in the Sunday sermon or a book, where everything is copied word for word. Thus, he produces about 30 times as much as me with the same amount of energy. Nevertheless, he is nervous and overworked because he has devoted himself to a field where ambition abounds. That's the way he wants it because he wants to give the impression that he is revolutionizing the world. I am glad to be free on this inclination. As for the mathematical heyday under Planck, Einstein and so on, I am rather skeptical.

Image 3

[page 4]

Next to Lorentz, Planck is the most revered scholar and I have the greatest respect for his achievements. However, I still remember well when he helped us. He was really useful then because our opponents naively revered mathematics. He only partially understood what the question was, and when he disguised van't Hoff's ideas in somewhat obscure mathematical terms, he made specific demands from which I had to assertively steer him away from. In

addition, he concurred with Wien's displacement law as long as it was considered correct. When Rubens and Pringsheim found another formula to be superior, he proved it with the help of the "next most probable hypothesis." At the moment, he continuously changes his opinion about the interesting quantum question, just like Einstein does with the question of relativity. Mathematics is awkward for most people and produces false results in the event of careless manipulation. For this reason, I will wait until something reliable is published by the mathematical physicists. Duhem's paper science is a good example. Farewell and my wife and I wish you and yours a happy and successful New Year! Yours Truly, Svante Arrhenius