

Plus Lucis (more light)

W. GERHARD POHL

Linz, Austria

ABSTRACT. A historical narrative will tell the story of the invention of the incandescent gas light and the electrical metal wire lamp. Both methods for artificial light sources were invented by the Austrian chemist Carl Auer von Welsbach (1858-1929). This year we celebrate his 150th birthday. After studying chemistry in Vienna Auer obtained his Ph.D. under the guidance of Robert Bunsen in Heidelberg. He then returned to Vienna and rented a private laboratory in the Chemical Institute of Professor Adolf Lieben at the University of Vienna. There he invented the incandescent gas light in 1885. He sold his patents for a high price and became very wealthy. Later he moved to Althofen in Carinthia where he built his own castle with a private laboratory. He used spectroscopy, a powerful analytical method, which he had learned in Bunsen's laboratory for isolating four new elements in the group of the rare earths. The priority of these findings were challenged by Bohuslav Brauner in Prague and George Urbain in Paris. Later Auer became his own competitor when he invented the first metal wire lamp in 1898, which was a great improvement compared to the Edison lamp. Unfortunately Auer used Osmium as material for the wire, because he had found in the literature that it should be the metal with the highest melting point. Other inventors found tungsten to be a better material and Auer's Osmium-patent became worthless. Some additional scientific and industrial activities of Auer von Welsbach in connection with his personality will be presented in my contribution. The question will be discussed if a scientist and inventor of our days could be as successful as Auer von Welsbach was at the end of the 19th and beginning of the 20th century.