

EUGENÈ MELCHIOR PÉLIGOT.

Eugene Melchior Péligr̄ot was born in Paris, February 24th, 1811, and died in that city on the 15th of April last in his seventy-ninth year.

The death of Péligr̄ot is a severe blow to science, which loses in him an unpretentious master and an indefatigable worker.

His life was devoted to the teaching of chemistry. As a lecturer he was noted for the perfection of his method, the clearness of his exposition, the largeness of his views, and the simplicity of his diction.

After completing his studies at the College of Henry the Fourth, he entered as "*élève ingénieur*" at the *Ecole Centrale des Arts et Manufactures*, in 1829.

The influence of the incomparable lectures of Dumas, then professor of chemistry at that school, was soon felt by Péligr̄ot, whose calling from that date was irrevocable. He devoted himself to the study of chemistry and had hardly left the school when Dumas, who had appreciated his capacity, admitted him to his laboratory.

His first researches comprised the study of the compounds of chromium.

He discovered and described the monoxide of this element and its sulphate, oxalate and chloride, the dioxide of chromium and the dichromate of potassium chloride.

In 1834 he was appointed assistant professor of chemistry at the *Ecole Centrale*, and, two years later, being only 25 years old, he succeeded Dumas, his illustrious master, and occupied this position until 1873.

In 1835 Dumas chose him as collaborator in the brilliant researches which they made in common on methylic alcohol and its principal derivatives, one of the most remarkable achievements of the time in organic chemistry. This was soon followed by the

description of ethalic ether, sulphacetic acid, cetyl chloride and by researches of Péligot alone on the benzoates.

In 1838 he prepared monobrombenzoic acid by the action of bromine upon silver benzoate.

As early as 1789 Klaproth had discovered "uran" in pitchblende. This body was examined by Arfvedson and Berzelius and later by Ebelmen and Péligot.

In 1823 Arfvedson thought that he had isolated a metal by acting with hydrogen upon the green oxide of uranium, but in 1840 Péligot demonstrated that "uran," which until that time had been considered as an element, was in reality a compound of oxygen with a metal which he isolated and called uranium. This important discovery was followed by an exhaustive study of the salts of uranium and their molecular constitution.

In 1845, being "répétiteur" at the Ecole Polytechnique, he was chosen as commissioner by the Chamber of Commerce of Paris to the Exposition of Industrial Products at Vienna, and on his return was appointed professor of chemistry at the *Conservatoire des Arts et Métiers* and *chief assayer* at the Mint.

In 1852 he was elected member of the Academy of Sciences. From that time Péligot devoted himself to the study of applied chemistry.

His researches on the analysis of natural waters, as fertilizers, and on the disease of the silk worms, are printed in the *Mémoires de l'Académie*.

His works on the combination of ordinary sugar with bases, and especially with lime and baryta, have established on a firm basis the theory of the extraction of sugar from beet juice and from its residues, molasses, and have been of the greatest importance to one of the most extensive European industries.

He thoroughly studied and gave the theory of the manufacture of glass. He demonstrated that glass must be composed of a mixture of silicates in indefinite proportions to prevent crystallization, which renders the glass very brittle. He obtained dichroic glass by introducing oxide of uranium into the mixture of silicates.

He pointed out that an excess of alkalies in the composition of

glass, and particularly in bottle glass destined to contain wines, was to be avoided.

The celebrated antique vase known as the "Portland Vase," now in the British Museum, had been thought to be an early example of ceramic art until Pélégot, examining it critically, discovered it to be an ancient specimen of glass manufacture.

His lectures at the Ecole Centrale are well remembered by the numerous engineers and chemists who, like the writer, had the good fortune to follow them. They heard the master with the deep respect that a profound knowledge of science commands.

In April, 1854, he was made "*Chevalier de la Légion d'Honneur*," "*Officier*" in 1857, "*Commandeur*" in 1878, and "*Grand Officier*" in 1885.

In 1873 Pélégot, then member of the Institute, Secretary of the Society for the Advancement of Sciences, since 1836, member of the "*Conseil d'hygiène et de Salubrité*" (Board of Health), professor at the "*Conservatoire des Arts and Métiers*," and at the "*Institut Agronomique*" and Director of the assays at the Mint, felt that his health was failing and gradually retired from active work.

The following are his principal publications :

Traité élémentaire de manipulations chimiques. 1836.

Recherches sur la nature et les propriétés chimiques des sucres. 1838.

Recherches sur l'analyse et la composition chimique de la betterave à sucre. 1839.

Rapport sur les expériences relatives à la fabrication du sucre et à la composition de la canne à sucre. 1842.

He edited the *Traité d'analyse chimique de H. Rose*, in 1843.

Rapport sur les produits exposés à Vienne, en 1845. 1846.

Le Verre, son histoire et la fabrication, in 1875.

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