

GENEALOGY DATABASE ENTRY

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Berthelot, Pierre Eugène Marcellin

1827 - 1907

DEGREE: D.Sc.

DATE: 1854

PLACE: Collège de France

TEACHER/RESEARCH ADVISOR: Balard

was one of the first to use the word synthesis to denote the production of organic compounds from their elements; while working on glycerin, established the concept of polyatomic alcohols and synthesized stearin and palmitin; showed that sugars behave partly as polyatomic alcohols and partly as aldehydes; first to distinguish simple sugars from polysaccharides; discovered acenaphthene and fluorene; prepared ethanol from ethylene and sulfuric acid; prepared methanol by preparing methane, forming methyl chloride by reaction with chlorine, and then hydrolyzing the halide, achieving the first synthesis of an aliphatic alcohol from simple carbon compounds; with Saint-Gilles, showed the significance of reaction velocity - when Guldberg and Waage formulated the Law of Mass Action they acknowledged their debt to Berthelot; made an extensive study of heats of reaction, coining the terms exothermic and endothermic and devising the bomb calorimeter for combustions with oxygen; studied explosions, finding that explosions propagate in explosive waves; laid the foundations of the field of chemical archaeology via his analysis of metallic objects from ancient Egypt and Mesopotamia; made outstanding contributions to the history of chemistry by his work on ancient and medieval alchemical texts - his editions of alchemical works are still unsurpassed.

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4. *J. Chem. Soc.* **1911**, 2353-2371.
5. *Bull. Soc. Chim. Fr.* **1913**, *13*, i-cclx.
6. *Z. Angew. Chem.* **1907**, *20*(pt 1), 689-694.
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8. *J. Chem. Ed.* **1927**, *4*, 1217-1232.
9. *J. Roy. Soc. Arts* **1927-28**, *76*, 145-171.
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