

# GENEALOGY DATABASE ENTRY

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Ostwald, Friedrich Wilhelm

1853 - 1932

DEGREE: PhD

DATE: 1878

PLACE: Dorpat

TEACHER/RESEARCH ADVISOR: Schmidt

Nobel Prize 1909 - especially in recognition of his studies on catalysis; co-established (with Arrhenius and van't Hoff) physical chemistry as a separate discipline; first to show that stronger acids are more extensively dissociated in solution; proposed idea that catalysts lower energy of activation of chemical reactions; popularized use of physical properties such as density and refractive index to study chemical reactions; formulated first scientific theory of indicators; discovered industrial catalytic method for the oxidation of  $\text{NH}_3$  to nitrogen oxides; invented a volumetric method to measure the relative strengths of monobasic acids.

FOOTNOTE: Lemberg (who was Schmidt's principal assistant) instructed Ostwald during his stay in Dorpat. Lemberg taught Ostwald to pay close attention to problems in chemical equilibrium, mass action, and reaction velocity: all themes of Ostwald's later work.

1. Asimov, I. *Asimov's Biographical Encyclopedia of Science and Technology (2nd Ed.)*; Doubleday: 1982; p544-545.
2. *Great Chemists*; Farber, E., Ed.; Interscience: 1961; p1019-1030.
3. Partington, J. R. *A History of Chemistry*; Macmillan: 1964; vol. 4, p595-600.
4. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 15, p455-468.
5. *A Biographical Dictionary of Scientists*; Williams, T. I., Ed.; Wiley: 1969; p398-399.
6. *J. Chem. Soc.* **1933**, 316-332.
7. *Mem. Lect. Chem. Soc.* **1933-1942**, 4, 1-17.
8. *J. Chem. Ed.* **1933**, 10, 539-542 and 609-613.
9. *J. Chem. Ed.* **1948**, 25, 2-10.
10. *Nature* **1932**, 129, 750-751.
11. *Science* **1932**, 75, 454-455.
12. *Chem. Ber.* **1932**, 65, 101A-141A.
13. Ostwald, W. *Lebenslinien - Eine Selbstbiographie*; Klasing & Co.: 1926.
14. Walden, P. *Wilhelm Ostwald*; Wilhelm Engelmann: 1904.
15. Ostwald, G. *Wilhelm Ostwald, Mein Vater*; Berliner Union: 1953.