

# NAMED EQUATIONS AND LAWS IN CHEMISTRY

## (E – G)

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<http://www.chem.yorku.ca/NAMED/>

### George Sharp Eadie

3 May 1895 - 1976

Canadian-American, b. Toronto, Ontario, Canada

Eadie plot

Eadie, G.S., *J. Biol. Chem.* **1942**, 146, 85

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American Philosophical Society: Philadelphia, 1982

### John Oelhaf Edwards

22 July 1922 - ?

American, b. Sewickley, Pennsylvania, USA

Edwards equation

Edwards, J.O., *J. Am. Chem. Soc.* **1956**, 78, 1819

#### Biographical References:

Press, Jaques Cattell (ed.) *American Men & Women of Science*, 14th ed., R.R. Bowker

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## Paul Ehrenfest



18 January 1880 - 25 September 1933

Austrian, b. Vienna, Austria

Ehrenfest equation, Ehrenfest theorem

Ehrenfest, P., *Z. Physik* **1927**, 45, 455

Ehrenfest adiabatic law

Ehrenfest, P., *Ann. Physik* **1916**, 51, 327

Ehrenfest, P., *Phil. Mag.* **1917**, 33, 500

Ehrenfest symmetry factor

Ehrenfest, P.; Trkal, V. *Ann. Physik* **1921**, 65, 609

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<http://www-groups.dcs.st-and.ac.uk/~history/BiogIndex.html>

## Manfred Eigen



9 May 1927 – 6 February 2019

German, b. Bochum, Ruhr, Germany

Nobel Prize Chemistry 1967

Eigen curve

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Biographical References:

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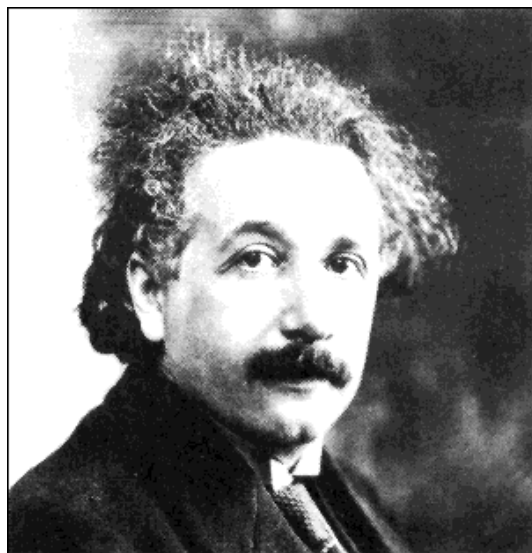
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Peter Bedrick Books: New York, 1983

Howes, L. *Chem. Eng News* **2019**, 97(7), 8

Albert Einstein



14 March 1879 - 18 April 1955

German-Swiss-American, b. Ulm, Bavaria, Germany

Nobel Prize Physics 1921

Einstein mass-energy equation

Einstein, A., *Ann. Physik* **1905**, 17, 891

Einstein, A., *Ann. Physik* **1916**, 49, 769

Einstein, A., *Berlin Sitzber.* **1915**, 778; 799; 831; 844

Einstein equation for specific heat, Einstein law, Einstein temperature

Einstein, A., *Ann. Physik* **1907**, 22, 180

Stark-Einstein law of photochemical equivalence

Einstein, A., *Ann. Physik* **1912**, 37, 832

Einstein relation for mobility of an ion

Einstein-Smoluchowski equation

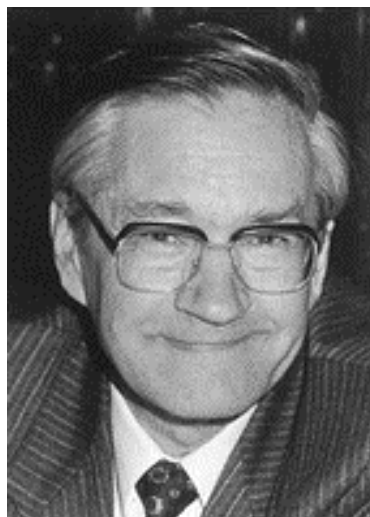
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Biographical References:

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Whittaker, Sir E., *Biog. Memoirs Fellows Roy. Soc.* **1955**, 1, 37

Richard R. Ernst



14 August 1933 -  
Swiss, b. Winterthur, Switzerland

Nobel Prize Chemistry 1991

Ernst angle

Biographical references:

Hill, H. in James, Laylin K. (ed.), *Nobel Laureates in Chemistry 1901 - 1992*, American Chemical Society: Washington, DC, 1993, p. 759

## Meredith Gwynne Evans

1904 - 25 December 1952

British, b. Atherton, Lancashire, England

Evans-Polanyi relation

Evans, M.G.; Polanyi, M., *Trans. Faraday Soc.* **1938**, 34, 11

Biographical references:

Bawn, C.E.H., *J. Chem. Soc.* **1956**, 1916

Melville, H.W. *Obituary Not. Fellows Roy. Soc.* **1952-1953**, 8, 395-409

## Henry Eyring

20 February 1901 - 26 December 1981

Mexican-American, b. Colonia Juarez, Mexico

Eyring equation, Eyring plot

Eyring transition state theory

Eyring, H., *Z. Physik. Chem. B* **1931**, 12, 279

Eyring, H., *J. Chem. Phys.* **1935**, 3, 107

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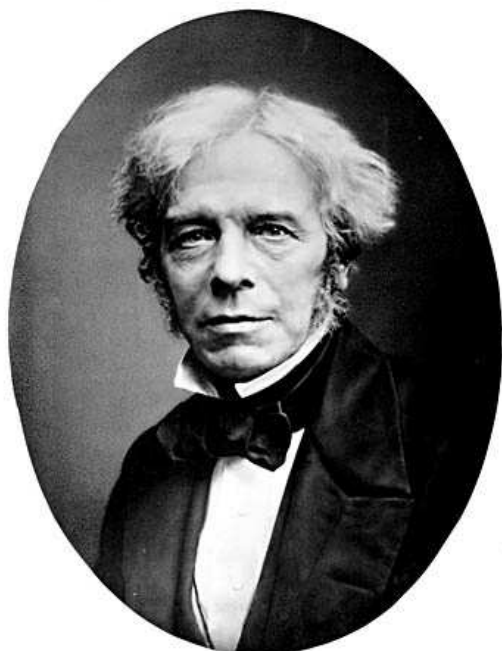
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Anon., *Chem. Eng. News* **1998**, 76(2), 171

## Michael Faraday



22 September 1791 - 25 August 1867

British, b. Newington Butts, Surrey, near London, England

Faraday's law, Faraday effect

Faraday, M., *Phil. Trans.* **1833**, 123, 23

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## Adolph Eugen Fick

3 September 1829 - 21 August 1901

German, b. Kassel, Germany

Fick's first law of diffusion

Fick's second law of diffusion

Fick, A., *Ann. Physik* **1855**, 94, 59

### Biographical References:

Rothshuh, K.E. in Gillispie, Charles Coulston (ed.), *Dictionary of Scientific Biography*, Charles Scribner & Sons: New York, 1971, Vol. 4, 614

## Paul John Flory



19 July 1910 - 8 September 1985

American, b. Sterling, Illinois, USA

Nobel Prize Chemistry 1974

Flory equation, Flory-Huggins theory

Flory, P.J., *J. Chem. Phys.* **1942**, 10, 51

Flory, P.J., *J. Chem. Phys.* **1941**, 9, 660

Huggins, M.L., *J. Phys. Chem.* **1942**, 46, 151

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Johnson, W.S.; Stockmayer, W.H.; Taube, H. *Biog. Memoirs Fellows Natl. Acad. Sci.* **2003**, 82, 115

## Vladimir Alexandrovich Fock (Fok)

22 December 1898 - 27 December 1974

Russian, b. St. Petersburg, Russia

Hartree-Fock equation

Hartree-Fock orbital

Hartree-Fock method

Hartree-Fock limit

Hartree-Fock approximation

Fock operator

Fock, V., *Z. Physik* **1930**, 61, 126

Fock, V., *Z. Physik* **1926**, 39, 226

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Fock, V., *Z. Physik* **1929**, 55, 127

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## George Gamow

4 Mar 1904 - 20 August 1968

Ukranian, b. Odessa, Ukraine

Gamow-Condon-Gurney law

Gamow, G. *Z. Physik* **1928**, 51, 204

Condon, E.U.; Gurney, R.W. *Phys. Rev.* **1929**, 33, 127

### Biographical references:

Stuewer, R.H. in Gillispie, Charles Coulston (ed.), *Dictionary of Scientific Biography*, Charles Scribner & Sons: New York, 1972, Vol. 5, 271

## Joseph Louis Gay-Lussac





6 December 1778 - 9 May 1850

French, b. St. Léonard, Haute Vienne, France

### Gay-Lussac's law

Gay-Lussac, J.L., *Ann. Chim. Phys.* **1802**, 43, 137

Gay-Lussac, J.L., *Mem. Soc. Arcueil* **1807**, 1, 180

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Webb, K.R. *Endeavour* **1950**, 9, 207

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## Hans Johannes Wilhelm Geiger

30 September 1882 - 24 September 1945

German, b. Neustadt-an-der-Haardt (now Neustadt-an-der-Weinstrasse), Rheinland-Pfalz, Germany

### Geiger-Nuttall law

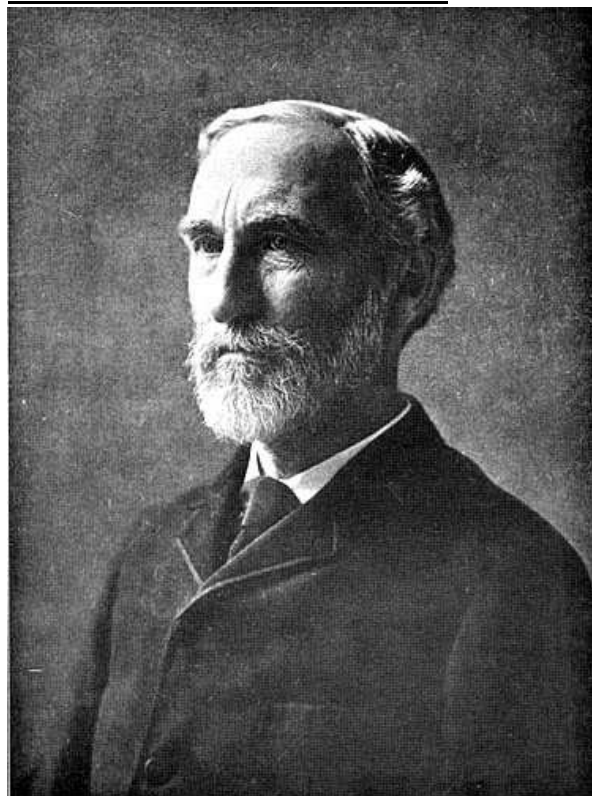
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Trenn, T.J. in Gillispie, Charles Coulston (ed.), *Dictionary of Scientific Biography*, Charles Scribner & Sons: New York, 1972, Vol. 5, 330

## Josiah Willard Gibbs



11 February 1839 - 28 April 1903

American, b. New Haven, Connecticut, USA

Gibbs equation

Gibbs-Duhem equation

see Pierre Maurice Marie Duhem

### Biographical References:

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Klein, M.J. in Gillispie, Charles Coulston (ed.), *Dictionary of Scientific Biography*, Charles Scribner & Sons: New York, 1972, Vol. 5, 386

## Maria Goeppert-Mayer



28 July 1906 - 20 February 1972

German-American, b. Kattowitz, Upper Silesia, now Katowice, Poland

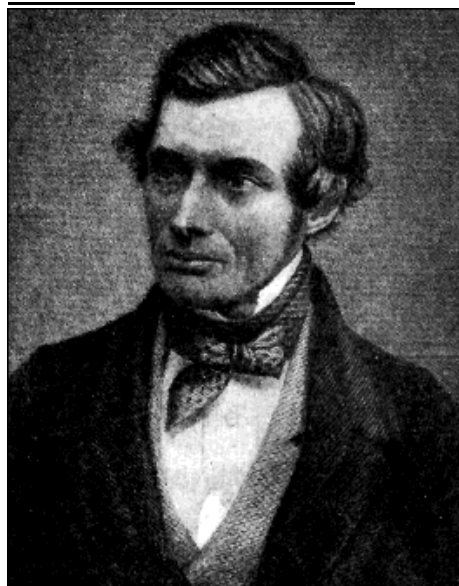
Bigeleisen-Goeppert-Mayer heavy atom approximation  
see Jacob Bigeleisen

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## Thomas Graham



20 December 1805 - 11 September 1869

Scottish, b. Glasgow, Scotland

### Graham's law

Graham, T., *Quart. J. Sci.* **1829**, 2, 74

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## Philipp Gross

30 September 1899 - 1974

Austrian, b. Vienna, Austria

### Gross-Butler equation

see John Alfred Valentine Butler

### Biographical references:

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Brandes, E.A. *Chem. Br.* **1974**, 10, 483

## Theodor Christian Johann Dietrich von Grotthuss

20 January 1785 - 26 March 1822

German, b. Leipzig, Germany

### Grotthus-Draper law

see John William Draper

### Biographical References:

Stradins, J.P. in Gillispie, Charles Coulston (ed.), *Dictionary of Scientific Biography*, Charles Scribner & Sons: New York, 1972, Vol. 5, 558

Partington, J.R., *A History of Chemistry*, Vol. IV, Macmillan and Co., Ltd.: London, 1964, p. 25

## Ernest Max Grunwald

2 November 1923 - 28 March 2002

German-American, b. Wuppertal, Germany

### Grunwald-Winstein equation

Grunwald, E.; Winstein, S., *J. Am. Chem. Soc.* **1948**, 70, 846

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Morrisey, S. *Chem. Eng. News* **2002**, 80(32), 53

Arnett, E.M. *Biog. Memoirs Natl. Acad. Sci.* **2003**, 84, xx

## Ronald Wilfried Gurney

1898/1899 ? - 15 April 1953

British, b. Cheltenham, Gloucester, England

Gamow-Condon-Gurney law

See George Gamow

Biographical references:

Mott, N.F. *Nature* **1953**, 171, 910

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