

NAMED EQUATIONS AND LAWS IN CHEMISTRY

(A – D)

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Svante August Arrhenius



19 February 1859 - 2 October 1927
Swedish, b. Wijk, near Uppsala, Sweden

Nobel Prize Chemistry 1903

Arrhenius equation, Arrhenius plot

Arrhenius, S., *Z. Physik. Chem.* **1889**, 4, 226

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Lorenzo Romano Amedeo Carlo Avogadro, Conte de

Quaregno e Cerreto



9 August 1776 - 9 July 1856

Italian, b. Turin, Italy

Avogadro Law

Avogadro, L.R.A.C., *J. Physique* **1811**, 73, 58

Biographical References:

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Partington, J.R., *A History of Chemistry*, Vol. IV, Macmillan and Co., Ltd.: London, 1964, p. 213

August Beer

31 July 1825 - 18 November 1863

German, b. Trier, Germany

Beer-Lambert-Bouguer Law

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Bouguer, P., *Essai d'optique sur la generation de la lumiere*, Paris, 1729

Lambert, J.H., *Photometria*, 1760

Biographical References:

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Ronald Percy Bell

24 November 1907 - 1996

British, b. Maidenhead, Berkshire, England

Bell equation

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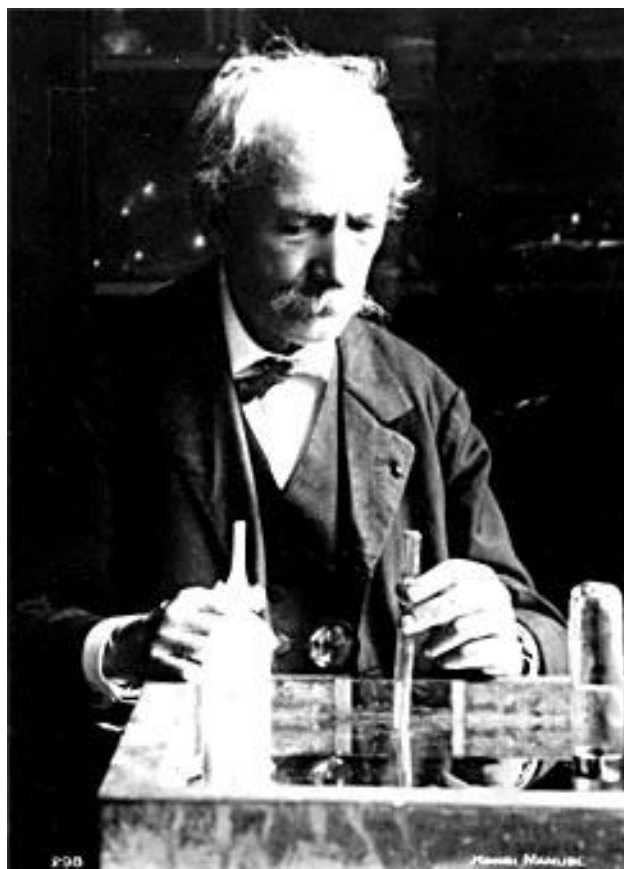
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Pierre Eugène Etienne Marcelin Berthelot



25 October 1827 - 18 March 1907

French, b. Paris, France

Berthelot's equation

Berthelot, M., *Ann. Chim. Phys.* **1875**, 4, 5

Biographical References:

Sabatier, P., *J. Chem. Educ.* **1926**, 3, 1099

Farber, Eduard (ed.), *Great Chemists*, Interscience Publishers: New York, 1961

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Jacob Bigeleisen

2 May 1919 –

American, b. Paterson, New Jersey, USA

Bigeleisen-Goeppert-Mayer heavy atom approximation

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Bigeleisen-Wolfsberg equation

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Niels Janniksen Bjerrum

11 March 1879 – 30 September 1958

Danish, b. Copenhagen, Denmark

Brönsted-Bjerrum equation

Brönsted, J.N., *Z. Phys. Chem.* **1922**, 102, 169

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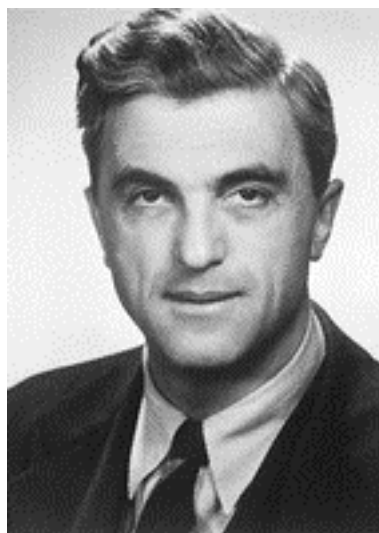
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Pogg. **1967**, 7B(1), 406

Felix Bloch



23 October 1905 - 10 September 1983
Swiss-American, b. Zurich, Switzerland

Nobel Prize Physics 1952

Bloch equations

Bloch, F., *Phys. Rev.* **1956**, 102, 104

Bloch, F., *Phys. Rev.* **1946**, 70, 460

Bloch $T^{3/2}$ law for magnetization

Biographical References:

Hofstadter, R., *Biog. Memoirs Natl. Acad. Sci.* **1994**, 64, 35

Daintith, J.; Mitchell, S.; Tootill, E.; Gjersten, D., *Biographical Encyclopedia of*

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Pierre Bouguer

16 February 1698 - 15 August 1758
French, b. Croisic, Brittany, France

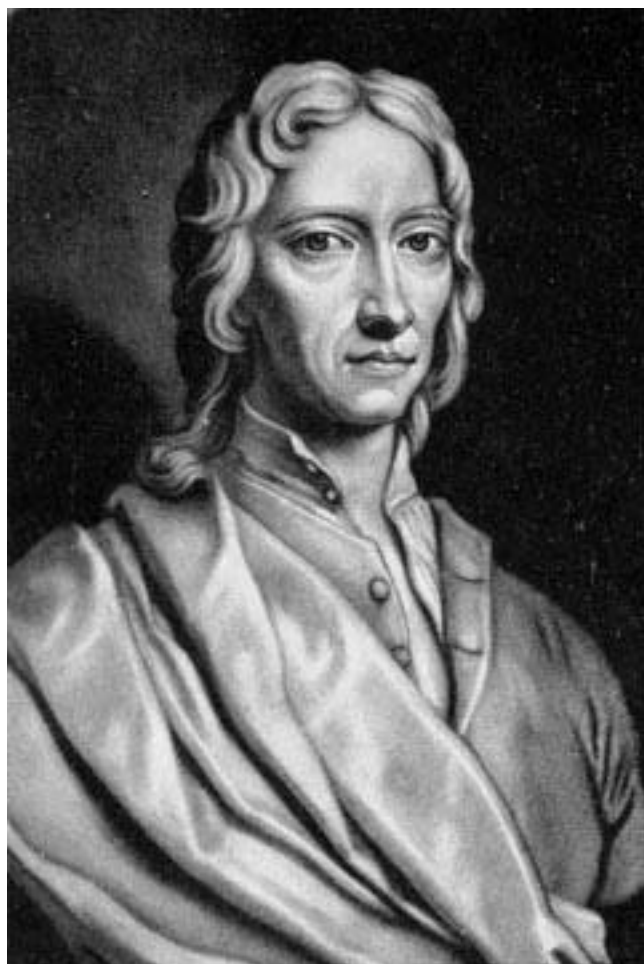
Beer-Lambert-Bouguer law

see August Beer

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The Honourable Robert Boyle



25 January 1627 - 30 December 1691
Irish, b. Lismore Castle, Munster, Ireland

Boyle's law

Boyle, R., *A Defense of the Doctrine Touching the Spring and Weight of the Air*, 2nd ed., 1662

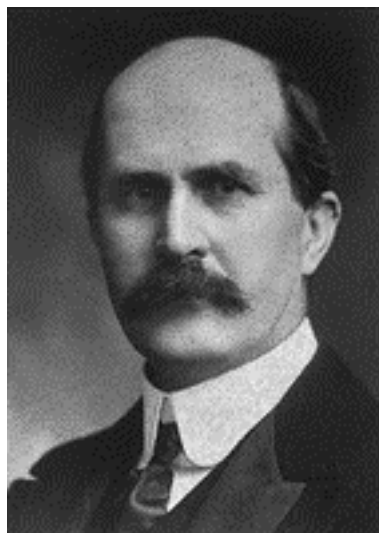
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Sir William Henry Bragg



2 July 1862 - 12 March 1942
British, b. Westward, Cumberland, England

Nobel Prize Physics 1915

Biographical References:

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Andrade, E.N. da C., *Roy. Soc. Obit. Not.* **1942 - 1944**, 4, 277

Sir William Lawrence Bragg



31 March 1890 - 1 July 1971

British, b. Lefevre Terrace, North Adelaide, Adelaide, Australia

Nobel Prize Physics 1915

Bragg equation, Bragg angle of diffraction, Bragg planes, Bragg reflection indices

Bragg, W.L., *Proc. Cambridge Phil. Soc.* **1912**, 17, 43

Biographical References:

Phillips, Sir D., *Biog. Memoirs Fellows Roy. Soc.* **1979**, 25, 75

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George Edward Briggs

25 June 1893 - 7 February 1985
British, b. Grimsby, England

Briggs-Haldane solution

Briggs, G.E.; Haldane, J.B.S., *Biochem. J.* **1925**, 19, 338

Biographical references:

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Prince Louis Victor Pierre Raymond, 7th Duc de Broglie



15 August 1892 - 19 March 1987
French, b. Dieppe, France

de Broglie's law, de Broglie wavelength

de Broglie, L., *Ann. Physik* **1925**, 3, 22

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Johannes Nicolaus Brønsted



22 February 1879 - 17 December 1947
Danish, b. Varde, Jutland, Denmark

Brønsted catalysis law, Brønsted plot

Brønsted, J.N.; Guggenheim, E.A., *J. Am. Chem. Soc.* **1927**, 49, 2554

Brønsted, J.N.; Pedersen, K., *Z. Phys. Chem.* **1924**, 108, 185

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Joseph Frederick Bunnett



26 November 1921 -
American, b. Portland, Oregon, USA

Bunnett-Olsen equations

Bunnett, J.F.; Olsen, F.P., *Can. J. Chem.* **1966**, 44, 1899

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Biographical References:

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Dean Burk

21 March 1904 - ?
American, b. Oakland, California, USA

Lineweaver-Burk plot

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John Alfred Valentine Butler

14 February 1899 – 16 July 1977

British, b. Winchcombe, Gloucestershire, England

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Jacques Alexandre César Charles



12 November 1746 - 7 April 1823
French, b. Beaugency, Loiret, France

Charles' law (Gay-Lussac's law)

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Bénoit Paul Emile Clapeyron



26 February 1799 - 28 January 1864

French, b. Paris, France

Clapeyron equation of state

Clapeyron, E., *J. Ecole Polytech. (Paris)* **1834**, 14, 153

Clausius-Clapeyron equation

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Daintith, J.; Mitchell, S.; Tootill, E.; Gjersten, D., *Biographical Encyclopedia of Scientists*, Institute of Physics Publishing: Bristol, UK, 1994

Rudolf Julius Emmanuel Clausius



2 January 1822 - 24 August 1888

German, b. Kösslin, Germany

Clausius-Clapeyron equation

Clausius equation

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Robin Cox

1943 -

British-Canadian, b. England

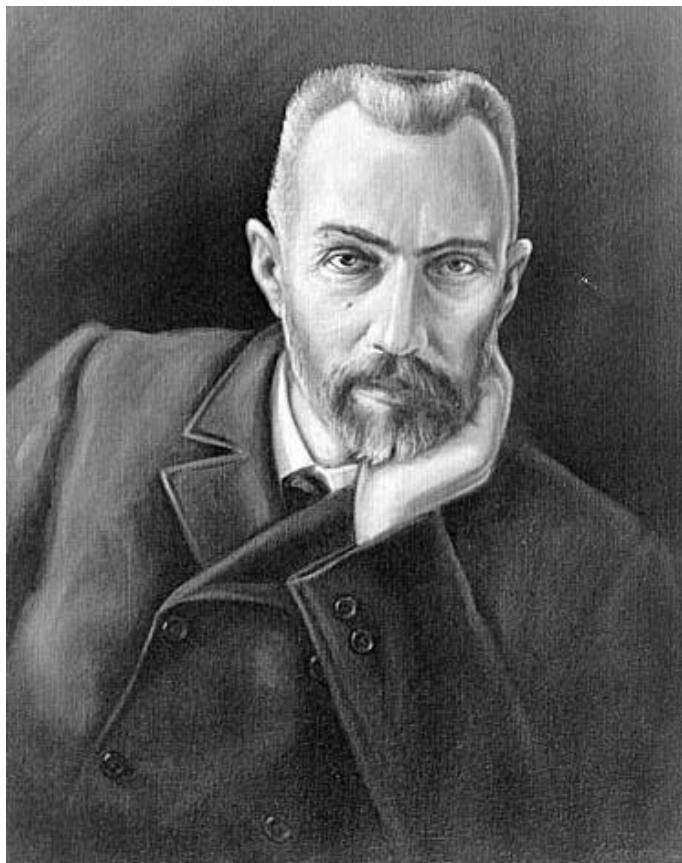
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Pierre Curie



15 May 1859 - 19 April 1906
French, b. Paris, France

Nobel Prize Physics 1903

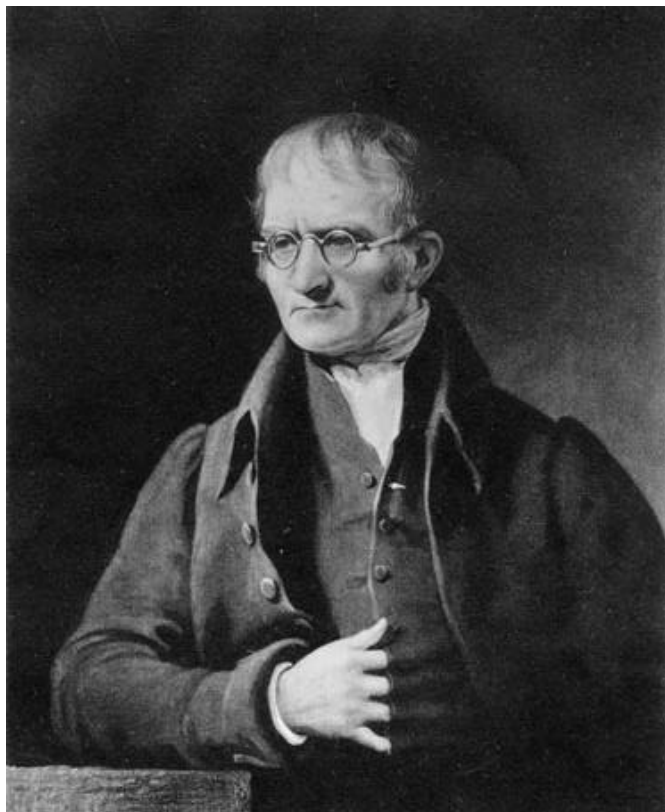
Curie law, Curie temperature, Curie point

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John Dalton



6 September 1766 - 27 July 1844

British, b. Eaglesfield, near Cockermouth, Cumberland, England

Dalton's law of partial pressures

Dalton, J., *Mem. Liter. Phil. Soc. Manchester* **1802**, 5, 535

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Dalton's law of evaporation

Dalton's law of solubility of gases

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Dalton's temperature scale

Dalton unit of molecular weight

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Peter Joseph Wilhelm Debye



24 March 1844 - 2 November 1966
Dutch-American, b. Maastricht, Netherlands

Debye-Hückel law

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Debye equation for polarization

Debye T^3 law, Debye temperature

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Debye unit of electric dipole moment

Debye length

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John William Draper



J. W. Draper.

5 May 1811 - 4 January 1882
British-American, b. St. Helens, Lancashire, England

Grotthuss-Draper law

Draper, J.W., *Phil. Mag.* **1841**, 19, 195

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Pierre Maurice Marie Duhem



10 June 1861 - 14 September 1916
French, b. Paris, France

Gibbs-Duhem equation

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Duhem, P., *Le Potentiel Thermodynamique et ses Applications*, 1886

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Pierre Louis Dulong



12 February 1785 - 18 July 1838
French, b. Rouen, France

Dulong-Petit law

Dulong, P.L.; Petit, A.T., *Ann. Chim.* **1819**, 10, 395

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