

Further Reading: Michael Faraday

General reading

Geoffrey Cantor, *Michael Faraday: Sandemanian and Scientist. A Study of Science and Religion in the Nineteenth Century*, (London, 1991).

David Gooding, *Experiment and the Making of Meaning: Human Agency in Scientific Observation and Experiment*, (Dordrecht, 1991).

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Frank A.J.L. James (ed.), *'The Common Purposes of Life': Science and society at the Royal Institution of Great Britain*, (Aldershot, 2002).

Frank A.J.L. James, *Michael Faraday: A very short Introduction*. (Oxford, 2010)

Alan E. Jeffreys, *Michael Faraday: A List of His Lectures and Published Writings*, (London, 1960).

Published books by Faraday, mainly collections of papers and lecture notes, some published after his death:

Chemical Manipulation, Being Instructions to Students in Chemistry. (1827).

Experimental Researches in Electricity, Vol I, II& III (1837, 1844, 1855)

Experimental Researches in Chemistry and Physics (1859).

W. Crookes. ed. *A Course of six lectures on the Various Forces of Matter* (1860)

W. Crookes. ed. *A Course of six lectures on the Chemical History of a Candle*, (1861)

W. Crookes. ed. *On the Various Forces in Nature*. (1873)

The liquefaction of gases (1896.)

Published texts by Faraday

The vast majority of Faraday's manuscripts, apart from letters, have been published on microfilm and cd. Frank A.J.L. James, *Guide to the Microfilm edition of the Manuscripts of Michael Faraday (1791-1867) from the Collections of the Royal Institution, The Institution of Electrical Engineers, The Guildhall Library [and] The Royal Society*, (2nd ed., Wakefield, 2001).

A typescript edition of Faraday's experimental notebooks has been published. Thomas Martin, *Faraday's Diary*, 7 volumes and index, London, 1932–36.

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In-depth reading:

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Henry Bence Jones, *Life and Letters of Faraday*, 1st and 2nd editions, 2 volumes, London, 1870

Giovanni Boato and Natalia Moro, 'Bancalari's role in Faraday's discovery of diamagnetism and the successive progress in the understanding of magnetic properties of matter', *Annals of Science*, 1994, **51**: 391-412.

Brian Bowers and Lenore Symons, *'Curiosity Perfectly Satisfied': Faraday's travels in Europe 1813-1815*, (London, 1991).

- Z. Buchwald, 'William Thomson and the mathematization of Faraday's electrostatics', *Historical Studies in the Physical Sciences*, 1977, **8**: 101-136
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- Geoffrey Cantor, 'The Scientist as Hero: Public Images of Michael Faraday', in M. Shortland and R. Yeo (eds.), *Telling Lives in Science: Essays on Scientific Biography*, (Cambridge, 1996), 171-93.
- Geoffrey Cantor, 'How Michael Faraday brought law and order to the West End of London', *Physis*, 1992, **29**: 187-203
- Geoffrey Cantor, 'Educating the Judgment: Faraday as a Lecturer', *Bulletin for the History of Chemistry*, 1991, **11**: 28-36,
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- Isobel Falconer and Frank A.J.L. James, 'Fame and Faraday', in Elaine Moohan (ed.), *Reputations*, (Milton Keynes, 2008), pp.85-122.
- June Z. Fullmer and Melvyn C. Usselman, 'Faraday's Election to the Royal Society: A Reputation in Jeopardy', *Bulletin for the History of Chemistry*, 1991, **11**: 17-28.
- Graeme Gooday, 'Faraday Reinvented: Moral Imagery and Institutional Icons in Victorian Electrical Engineering', *History of Technology*, 1993, **15**: 190-205.
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- David Gooding, 'Mathematics and Method in Faraday's Experiments', *Physis*, 1992, **29**: 121-147
- David Gooding, 'Mapping Experiment as a Learning Process: How the First Electromagnetic Motor Was Invented', *Science Technology and Human Values*, 1990, **15**: 165-201.
- David Gooding, "'Magnetic curves' and the Magnetic Field: Experimentation and Representation in the History of a Theory' in David Gooding, Trevor Pinch and Simon Schaffer (eds.), *The uses of experiment: Studies in the natural sciences*, (Cambridge, 1989), pp.183-223,
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- David Gooding, 'Experiment and concept formation in electromagnetic science and technology in England in the 1820s', *History and Technology*, 1985, **2**: 151-176,
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- L. Hannah, *Electricity before Nationalisation: A Study of the Development of the Electricity Supply Industry in Britain to 1948*, (London, 1979),
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- Frank A.J.L. James, 'Harriet Jane Moore, Michael Faraday, and Moore's mid-nineteenth century watercolours of the interior of the Royal Institution', in James Hamilton (ed.), *Fields of Influence: Conjunctions of Artists and Scientists, 1815-1860*, (Birmingham, 2001), pp.111-128.
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Allan A. Mills, 'The Early History of Insulated Copper Wire', *Annals of Science*, 2004, **61**: 453-467

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Herbert T. Pratt, 'Michael Faraday's Bible as Mirrors of his Faith', *Bulletin for the History of Chemistry*, 1991, **11**: 40-7.

James Frederic Riley, *The Hammer and the Anvil: A Background to Michael Faraday*, (Clapham, 1954) which also covers the Sandemanians, but contains inaccuracies.

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Sydney Ross, 'The Search for Electromagnetic Induction', *Notes and Records of the Royal Society of London*, 1965, **20**: 184-219.

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J. Brooks Spencer, 'On the Varieties of Nineteenth-Century Magneto-Optical Discovery', *ISIS*, 1970, **61**: 34-51

Oliver Stallybrass, 'How Faraday "Produced Living Animalculae": Andrew Crosse and the Story of a Myth', *Proceedings of the Royal Institution*, 1967, **41**: 597-619.

Friedrich Steinle, 'The Practice of Studying Practice: Analyzing Laboratory Records of Ampère and Faraday' in Frederic Lawrence Holmes, Jürgen Renn and Hans-Jörg Rheinberger (eds.), *Reworking the Bench: Research Notebooks in the History of Science*, (Dordrecht, 2003), pp.93-118, especially, 106-13

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Frans van Lunteren, *Framing Hypotheses: Conceptions of Gravity in the 18th and 19th centuries*, (Utrecht, 1991).

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Michael Faraday, English physicist and chemist whose many experiments contributed greatly to the understanding of electromagnetism. Among his achievements, he was the first to produce an electric current from a magnetic field and invented the first electric motor and dynamo. Learn about his life and career.Â John Stambaugh Professor of the History of Science; Director, Program in the History and Philosophy of Science and Technology, Cornell University, Ithaca, New York. Author of *Michael Faraday*. Last Updated: Jan 22, 2021 See Article History. Michael Faraday, (born September 22, 1791, Newington, Surrey, Englandâ€”died August 25, 1867, Hampton Court, Surrey), English physicist and chemist whose many experiments contributed greatly to the understanding of electromagnetism. Michael Faraday (1791-1867) is the famous British scientist who became famous in the field of experimental physics. It is known for the opening of electromagnetic induction which formed later the basis of industrial production of electricity. Faraday was a member of the numerous scientific organizations, including the London royal society and St. Petersburg academy of Sciences. He is considered by right the largest scientist-experimenter in the history of science. From poverty to science. Michael Faraday was born on September 22, 1791 in working family. His father and the elder brother were en Michael Faraday achieved his early renown as a chemist. He made many important contributions to chemistry. In 1820, Faraday produced the first known compounds made from carbon and chlorine, hexachloroethane (C₂Cl₆) and tetrachloroethene (C₂Cl₄).Â Michael Faraday provided evidence for this fact by applying pressure to liquefy chlorine gas and ammonia gas for the first time. These were till then believed to be “permanent gases”, or gases incapable of liquefaction. During ammonia liquefaction, Faraday also noted that when he allowed the ammonia to evaporate again, it caused cooling. Further Reading: Michael Faraday General reading Geoffrey Cantor, *Michael Faraday: Sandemanian and Scientist. A Study of Science and Religion in the Nineteenth Century*, (London, 1991). David Gooding, *Experiment and the Making of Meaning: Human Agency in Scientific Observation and Experiment*, (Dordrecht, 1991). David Gooding and Frank A.J.L. James (eds.), *Faraday Rediscovered: Essays on the Life and Work of Michael Faraday, 1791â€”1867*, (London, 1985). Frank A.J.L. James (ed.), “The Common Purposes of Life”TM: Science and society at the Royal Institution of Great Britain, (Aldershot, 2002). Frank A