

## Nicholas Joseph Callan

[Life](#) [Works](#) [Criticism](#) [Commentary](#) [Quotations](#) [References](#)

[Notes](#)

### Life

1799-1864, b. Dundalk, Co. Louth; ed. under William Neilson, at the Dundalk Academy, and Seminary; entered Maynooth 1816; ord. 1823; DD, Rome, 1826; appt. Maynooth Prof. of Natural Philosophy; encouraged to investigate magnetism by his predecessor, Cornelius Denvir (later Bishop of Down and Connor); followed in footsteps of Galvani and Volta (whom he met in Rome); invented the Induction Coil, thus providing a basis for cheap energy in industry; constructed a giant battery of 577 piles at Maynooth, using iron-zinc, later manufactured by E. M. Clarke of the Strand, London; made an independent discovery of Ohm's law; issued 20 religious tracts and was influential in the conversion of Henry Newman; published in *Sturgeon's Annals of Electricity*, and *Philosophical Magazine*; his reputation secured in a paper by J. D. Gallivan to the Dublin British Association meeting of 1957 (rep. in *Nature*); his 1837 induction coil is preserved at Maynooth, where a prominent lecture theatre is dedicated to him. **DIB**

[ [top](#) ]

### Criticism

Charles Mollan & John Upton, *The Scientific Apparatus of Nicholas Callan (1799-1864) and Other Historic Scientific Instruments* (Co. Kildare: Maynooth 1994). See also a definitive paper by Rev M. T. Casey, in IEE Proceedings, Dec. 1985 (cited in Roy Johnston, 'Godless Colleges and Non-Persons', *Causeway*, 1, Autumn 1993, pp.36-38).

[ [top](#) ]

### Commentary

**Dr. William Reville**, 'Spark of Genius', column on Nicholas Joseph Callan; b. Darver, Co. Louth, son of well-to-do farmers; ed. Dundalk Acad.; entered Maynooth, 1816; studied Physics in third yr. under Cornelius Denvir; ord. 1823; doctorate from Sapienza Un., Rome, 1826; acquainted with work of Galvani and Volta; chair of Physic after Denvir, 1826; invented induction coil following discovery of electro-magnetic induction by Faraday in 1831 and the invention of the electromagnet by William Sturgeon in 1825, which innovations Callan combined; generated 60,000 volts by interrupting the current between coils; once connected 577 batteries and lifted 2 tons; William Walsh, later archb. of Dublin, rendered unconscious by an experimental shock; discovered self-exciting dynamo, 1838; constructed electric motors; on visiting Birr to see the telescope he was not admitted; on the earl of Rosse's coming to Maynooth to view the coil, Callan suggested he return to Birr and view it through his telescope; the induction coil invention erroneously attrib. to Heinrich Ruhkorff (1803-1877); his authorship established by P. J. McLaughlin in 1936 and officially acknowledged in 1953; d. Maynooth, 1854; Maynooth museum holds effects from his laboratory. (See *The Irish Times* [Weekend], 21 Feb. 2002.)

[ [top](#) ]

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