

GENEALOGY DATABASE ENTRY

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Rowland, Henry Augustus

1848 - 1901

DEGREE: Civil Eng.

DATE: 1870

PLACE: Rensselaer

TEACHER/RESEARCH ADVISOR: none

proved that magnetic permeability varies with the "magnetizing force"; demonstrated (with Helmholtz) that the motion of charged bodies produced magnetic effects; established an authoritative figure for the absolute value of the ohm; redetermined the mechanical equivalent of heat and conclusively showed that the specific heat of water varies with temperature; invented the concave spectral grating and the engine for ruling it; remapped the solar spectrum.

FOOTNOTE: Rowland graduated from Rensselaer in 1870 with a civil engineering degree, and returned to Rensselaer in 1872 as a physics instructor. He accepted the chair in physics at Johns Hopkins in 1875, but spent a year in Europe. He spent the longest period (four months) in Helmholtz's laboratory doing experiments. He was already well-known in Europe as an independent investigator when he took this trip.

1. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 11, p577-579.
2. *National Cyclopaedia of American Biography*; James T. White & Co.: 1921-1984; vol. 11, p25-26.
3. *Sci. Am.* **1982**, 246(Feb.), 150-161.
4. *Science* **1901**, 36, 681-684.
5. *Nature* **1901**, 64(2May), 16-17.
6. *Dictionary of American Biography*; Malone, D., Ed.; Charles Scribner's Sons: 1936; vol. 16, p198-199.
7. *Am. J. Phys.* **1960**, 28, 155-161.
8. *Am. J. Phys.* **1963**, 30, 877-886.
9. *The Physical Papers of Henry Augustus Rowland*; Johns Hopkins Press: 1902; p1-17.
10. *Isis* **1972**, 63, 5-27.
11. *Biog. Mem. Nat. Acad. Sci.* **1905**, 5, 115-140.