



Michael Faraday

1791-1867

On August 29, 1831, Michael Faraday, the great English chemist and physicist, discovered electromagnetic induction, when he found that moving a magnet through a coil of copper wire caused an electric current to flow in the wire. Since the electric motor and generator are based on this principle, Faraday's discovery profoundly changed the course of world history. When asked by the British prime minister years later what use could be made of his discoveries, Faraday quipped, "Some day it might be possible to tax them."

Faraday, one of 10 children of a blacksmith, was born near London. He was first apprenticed to a bookbinder, but at age 22 he realized his boyhood dream by becoming assistant at the Royal Institution to his idol, the great chemist Sir Humphry Davy. He remained at the Institution for 54 years, taking over Davy's position when Davy retired. Faraday was perhaps the greatest experimentalist who ever lived, with achievements to his credit in nearly all the areas of physical science under investigation in his time. To describe the phenomena he investigated, he and a science-philosopher friend invented new words such as electrolysis, electrolyte, ion, anode, and cathode. To honor him, the unit of capacitance is named the *farad*.

(Source: D. Johnson, J. Johnson and J. Hilborn, *Electric Circuit Analysis*, Prentice-Hall, 1989)