

# CURRENT SCIENCE

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FARADAY BICENTENARY

## Tribute to Michael Faraday

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*Michael Faraday was an experimental genius with unparalleled accomplishments. His inexhaustible thirst for knowledge led him to explore a variety of vital problems in chemistry and physics. He has left a legacy of such splendour that it continues to evoke admiration and awe from every generation. Faraday was 'not of an age, but for all time'.*

The year 1991 marked the bicentenary of the greatest experimental philosopher the world has known, Michael Faraday. It is difficult to think of another experimental scientist who has left such an indelible mark of achievement in pure and applied science as Faraday. His monumental contributions to science span a variety of fields, including chemistry, physics, materials science and engineering. One is left wondering whether such an individual ever lived. Clearly Faraday was a unique human being gifted with extraordinary imagination and experimental creativity. His life has elicited a romantic response one generation after another. We get some insight into the personality of Faraday through his own words:

Do not suppose that I was a very deep thinker or was marked as a precocious person. I was a very lively imaginative person and could believe in the Arabian Nights as easily as in the Encyclopaedia. But facts were important to me and saved me. I could trust a fact and always cross-examined as assertion.

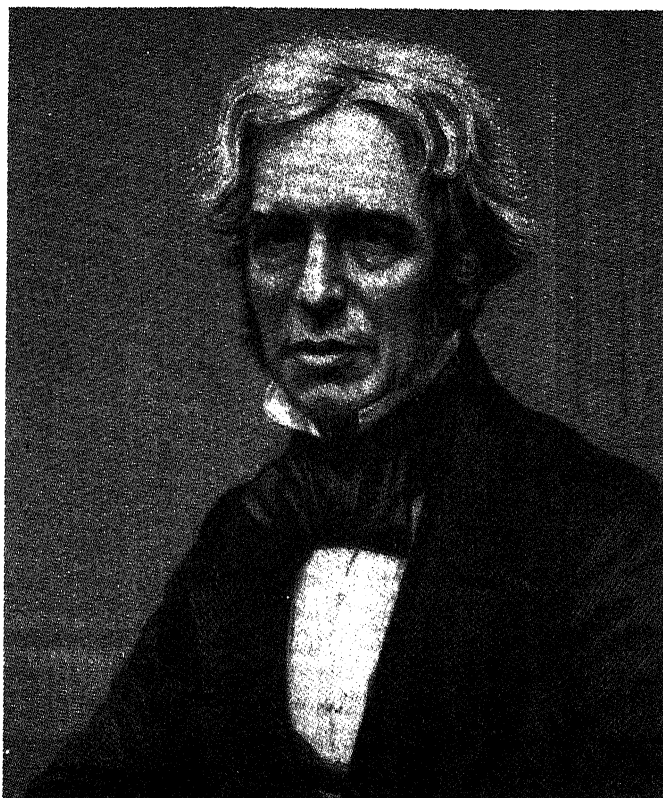
He possessed a child-like awe and a great sense of purpose combined with humility. Faraday was not spoiled by formal education; he was self-taught. He left school at the age of thirteen and started his career as an errand boy, then as a bookbinder, and rose to become one of the greatest scientific giants. He was a prolific writer and wrote about 450 research publications. There is not a single mathematical equation in any of his works, because he knew no mathematics. Yet, as Albert Einstein remar-

ked, Faraday was responsible, along with Maxwell, for the greatest change in the theoretical basis of physics since Newton.

### Biography

Faraday was the third child of a blacksmith, born in Newington Butts near London on 22 September 1791. After merely learning elementary reading, writing and arithmetic, he left school and

worked first as a newspaper boy and then learnt the art of bookbinding. While doing so, he also took interest in the contents of scientific books and began to do simple experiments in chemistry by spending a few pence every week. He attended some of the lectures of Sir Humphry Davy in 1812 at the Royal Institution in London and became so impressed by what he heard and saw that he sought an appointment under Davy. He accompanied Davy as his



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