



Antoine Henri Becquerel

1852 - 1908

Awarded the Nobel Prize for Physics in 1903

Antoine Henri Becquerel, the famous French physicist, is known for his discovery of radioactivity. He was born into a distinguished family in Paris, on December 15th, 1852. His grandfather had fought at the Battle of Waterloo in 1815 and afterwards he devoted himself to science and made an important contribution to the study of electrochemistry. His father was also a scientist: he studied photography, heat and luminescence. His grandfather, father and then Henri himself were members of the Academy of Sciences. Henri held chairs of physics at the École Polytechnique and at the Conservatoire National des Arts et Métiers and became the chief engineer in the National Administration of Bridges and Highways.

Becquerel began his early education at the Lycée Louis le Grand, and continued at the École Polytechnique, from which he went to the École des Ponts et Chaussées. In 1877 he was awarded his engineering degree.

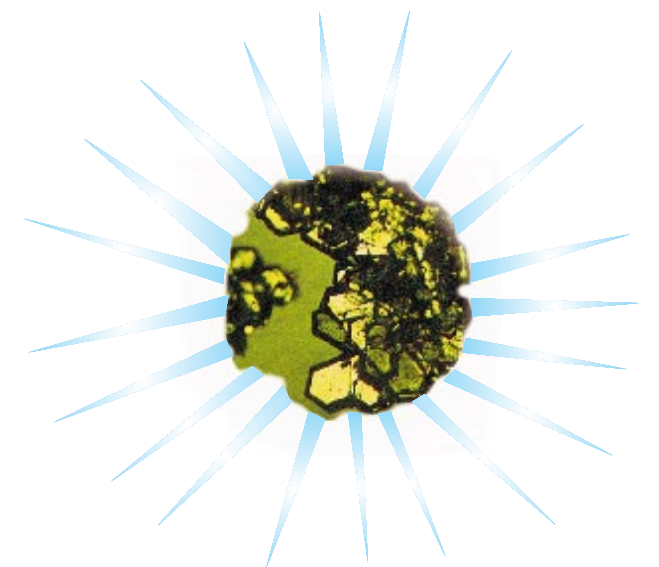
In 1874 Becquerel married the daughter of a physics professor. The marriage was not to last very long, however, because she died in 1878, a few weeks after the birth of their only son Jean.

Becquerel pursued a variety of research interests. He investigated the properties of a number of materials in magnetic fields, absorption of light in crystals and luminescence. He also studied the effect of the earth's magnetic field on the atmosphere.

In 1890 Becquerel married his second wife. She was the daughter of the inspector general of a mine. The couple had no children.



*Becquerel
discovered
radioactivity*



Educated mainly at the École Polytechnique, he became Professor of Physics there in 1895. One year later he discovered radioactivity almost by chance. He wondered whether the production of Röntgen's X-rays might always be associated with luminescence. To test this hypothesis, Becquerel wrapped photographic plates in black paper and placed potassium uranyl sulphate on top of them and all the assemblage was then placed in sunlight. After the photographic plates were developed, he concluded that sunlight had caused the uranium salt to luminesce, thereby giving off X-rays. The rays penetrated the black paper and exposed the photographic plates.

On March 1, 1896, Becquerel decided to develop the photographic plates, which he had used in his experiments but without sunlight and had stored together with crystals in a dark place. Surprisingly, he found that the plates had been exposed as if they had been set in the sunlight. **Some sort of radiation other than X-rays had been emitted from the uranium salt** and affected the plates. When he found later that a pure uranium metal also produced the penetrating rays, Becquerel's discovery of radioactivity was established.

His immediate successors, Marie and Pierre Curie, looked for unknown elements and discovered other radioactive materials: polonium and radium. Becquerel, Marie Curie and her husband, Pierre Curie, were all awarded the Nobel Prize in 1903 for the discovery of spontaneous radioactivity.

In 1908 Becquerel became the President of the Academy of Sciences but soon after he died at his wife's family estate in Brittany.



*His grandfather
fought at the Battle
of Waterloo*