



Sir John Cockcroft: Nobel Prize in Physics 1951



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Sir John Cockcroft was born in Todmorden, England, on May 27th, 1897. He was educated at Todmorden Secondary School and studied mathematics at [Manchester University](#). After serving in the Royal Field Artillery he returned to Manchester to study electrical engineering at the [College of Technology](#). After two years' apprenticeship he went to [St. John's College, Cambridge](#), and took the Mathematical Tripos in 1924. He then worked for Lord Rutherford in the [Cavendish Laboratory](#).

He first collaborated with Kapitsa in the production of intense magnetic fields and low temperatures. In 1928 he switched to work on the acceleration of protons by high voltages, and Ernest Walton soon joined in this work. In 1932 they succeeded in transmuting lithium and boron into high energy protons. In 1933, they managed to produce radioactivity and a wide variety of transmutations produced by protons and deuterons (the nucleus of the H^+ atom). In 1934 Cockcroft took charge of the Royal Society Mond Laboratory in Cambridge and continued pioneering research in transmutation of atomic nuclei. They built the famous "Cockcroft-Walton" machine to enable them to continue their research. Sir John Cockcroft and Ernest Walton received the Nobel Prize in Physics 1951, "for their pioneer work on the transmutation of atomic nuclei by artificially accelerated atomic particles".

In 1929 Cockcroft was elected to a Fellowship at [St. John's College, Cambridge](#) and became successively University demonstrator, lecturer and in 1939 Jacksonian Professor of Natural Philosophy. He was knighted in 1948. For the period 1954-1959 he was scientific research member of the U.K. Atomic Energy Authority, and afterwards continued this function on a part-time basis. He became the Master, [Churchill College, Cambridge](#), in October 1959. In addition he was Chancellor of the [Australian National University](#), Canberra, and President of the Institute of Physics, the Physical Society (1960 to 1962) and the British Association for the Advancement of Science (1961 to 1963).

He married Eunice Elizabeth Crabtree in 1925 and they had four daughters and a son. He died in 1967.