

LORD RUTHERFORD OF NELSON.

(1871-1937.)

The Rt. Hon. Lord Rutherford of Nelson, C.M., F.R.S., D.Sc., LL.D., etc., Cavendish Professor of Experimental Physics and Director, Cavendish Laboratory, Cambridge, was elected an Honorary Fellow of the National Institute in 1935.

Ernest Rutherford was born of middle-class parents at Nelson, New Zealand, on the 30th of August 1871. He was educated at Nelson and Canterbury Colleges of the University of New Zealand. His University career was very brilliant, and after graduation he started researches on his own initiative in New Zealand on the effect of high frequency discharge on the magnetism of iron, which led to his discovery of the magnetic detector of Hertzian waves. He came to England for further studies and passed the M.A. Examination of the Cambridge University with first-class honours in Mathematics and Physics in 1893. At the recommendation of the University of New Zealand he was awarded in 1894 an Overseas scholarship by the Royal Commissioners for the Exhibition of 1851, and he prosecuted researches at the Cavendish Laboratory, Cambridge, under Prof. Sir J. J. Thomson till his appointment as the Macdonald Professor of Physics at the McGill University, Montreal, Canada, in 1898, which post he held till 1907 when he was appointed Langworthy Professor and Director, Physical Laboratory, University of Manchester. In 1919 he was selected to succeed his old teacher Sir J. J. Thomson as the Cavendish Professor of Experimental Physics at Cambridge, and was elected a Fellow of Trinity College. During all these years he carried out fundamental researches on X-rays and ionization of gases, on radioactivity, which led in co-operation with Prof. Soddy to the theory of successive and spontaneous disintegration of elements. On his return to England, he took up the subject of the structure of the atom which results in the nuclear theory of the atom now considered as the foundation of atomic physics. At Cambridge he concentrated his attention on the nucleus of the atom, and it is due to his great organising ability and experimental skill that the Cambridge School was able to make such fundamental contributions as the discovery of the neutron—practical methods for transmutation of elements. These works naturally brought him recognition from the whole world—several Universities of Europe and America vied with each other in conferring on him their highest academic distinctions. He was elected a Fellow of the Royal Society of London (1903), awarded the Rumford Medal (1905), the Bressa Prize of the Turin Academy of Sciences (1908), Nobel Prize for Chemistry (1908), Barnard Medal (1910), Copley Medal (1924), Albert Medal (1928) and Faraday Medal (1930). He was knighted in 1914 and in 1932 was made a Peer of the Realm.

Rutherford was elected President of the British Association for the Advancement of Science in 1923 and was President of the Royal Society of London from 1925 to 1930. He was to have presided over the Joint Session of the Indian Science Congress Association and the British Association for the Advancement of Science in 1938, and had already prepared a very learned and inspiring address for this occasion when, following an operation for hernia, he suddenly died in October 1937. In his Presidential Address to the Science Congress he gave a brief summary of his work in connection with the transmutation of matter.

As Niels Bohr, the famous Danish Physicist and a former pupil, speaking of Rutherford's work at Bologna, said, 'His achievements are so great that at a gathering of physicists like the one here assembled, they provide the background of almost every word that is spoken.'

Lord Rutherford had a charming personality and used his colossal energies and tireless enthusiasm in the service of Science. He has been described as the 'Prince of Experimenters', and Sir James Jeans rightly remarked 'He has been cut off in the fulness of his powers—leaving as his monument a rich and full life's work, such as few men have equalled, but also leaving a feeling that he might have accomplished more, and possibly even greater, things had he been left with us a few years longer.'

B. P.