

Royal Institution from October 1, 1925, until his retirement on August 31, 1951. He was, however, much more than this.

He was born in Burnley on July 23, 1885, the youngest of a large family. His father died when he was one year old, and although he received a sound preliminary education at Burnley Grammar School he was not able to go to a university, and his further education was through night-schools. Before going to the Davy Faraday Laboratory, he had an appointment in the analytical department of the British Dyestuffs Corporation. Once in the Davy Faraday Laboratory, he made himself invaluable. He constructed apparatus that could not be bought; he kept the stores of chemicals and the files of reprints; he taught new research workers the rudiments of vacuum technique and of X-ray methods; he helped to develop the α -ray integrating photometer and the 5- and 50-kW. X-ray equipments, each of the latter being for a time under his sole charge; he assisted with researches on the magnetic properties of crystals, on the compressibility of crystals and on crystal dynamics. Successive workers in the Laboratory came to rely on his judgment, his fund of useful suggestions regarding experimental details, his manual dexterity, his ability to locate 'leaks' and his invari-

able good humour. When his services were not in demand by someone or other, he carried out useful research work on his own account.

The debt that his colleagues have owed to him has been partly acknowledged in many published papers, and his own research work has been recorded in a series of joint papers in *Nature*, the *Proceedings of the Royal Society*, the *Proceedings of the Physical Society*, the *Journal of Scientific Instruments*, the *Philosophical Magazine* and the *Physical Review*. It is interesting to record that he read one of these papers at the meeting of crystallographers in Cambridge in 1942 which led to the formation of the X-ray Analysis Group of the Institute of Physics.

The sympathy of his many friends will be with his widow and his only son. KATHLEEN LONSDALE

WE regret to announce the following deaths:

Dr. G. W. M. Findlay, president of the Royal Microscopical Society, on March 14, aged fifty-nine.

Mr. P. C. Pope, secretary during 1927-46 of the Institute of Fuel, on March 1, aged eighty.

Dr. Thomas Wayland Vaughan, director during 1924-36 of the Scripps Institution of Oceanography, La Jolla, California, on January 16, aged eighty-one.

NEW FELLOWS OF THE ROYAL SOCIETY

AT the meeting of the Royal Society on March 20, the following were elected to fellowship:

SIR WALLACE AKERS, C.B.E., director, Imperial Chemical Industries, Ltd., distinguished for his technical direction of the atomic energy project during the War and for the building of large research departments and plants in Imperial Chemical Industries.

PROF. C. E. H. BAWN, Grant-Brunner professor of inorganic and physical chemistry, University of Liverpool, distinguished for his researches on chemical kinetics, especially on the mechanism of polymerization, oxidation and hydrocarbon free radical reactions.

PROF. N. J. BERRILL, Strathcona professor of zoology, McGill University, Montreal, distinguished for his analytical studies of development, morphogenesis and regeneration particularly in the Tunicata, on which his monograph, published by the Ray Society, is now the standard British work.

DR. J. H. CRAIGIE, associate director, Science Service, Dominion Department of Agriculture, Ottawa, distinguished for his elucidation of the mechanism of sexual reproduction of the rust fungi and for his studies of the genetics and epidemiology of the cereal rusts; he has made notable contributions to scientific agriculture in Canada.

DR. F. J. DYSON, associate professor of theoretical physics at the Floyd Neuman Laboratory of Nuclear Studies, Cornell University, Ithaca, N.Y., distinguished for his discoveries in the geometry of numbers and for his contributions to quantum electrodynamics.

DR. HONOR B. FELL, Foulerton Research Fellow of the Royal Society, director of the Strangeways Research Laboratory, Cambridge, distinguished for her researches on the development and differentiation of tissues and rudiments of organs *in vitro*; she has made fundamental contributions to knowledge of the mechanisms governing cartilage and bone formation.

DR. D. LL. HAMMICK, Aldrichian praelector in chemistry, University of Oxford, distinguished for his work in physical chemistry, especially in the application of physical methods in the study of organic chemical reactions.

PROF. L. HAWKES, professor of geology, Bedford College, University of London, distinguished for his researches in igneous geology and petrology, especially of Iceland.

DR. W. O. JAMES, reader in botany (plant physiology), University of Oxford, distinguished for his studies in plant physiology, in particular for his contributions to our present understanding of the catalytic mechanisms of respiration in higher plants, and of the relation of respiration to plant syntheses.

PROF. HARRY JONES, professor of mathematics, Imperial College of Science and Technology, University of London, distinguished for his contributions to the theory of the solid state and the detonation processes of solid explosives.

PROF. B. KATZ, professor of biophysics, University College, London, distinguished for his contributions to neurophysiology, particularly in respect of nervous impulses and muscle end-plate potentials.

DR. R. LEMBERG, director, Biochemical Department of the Institute of Medical Research, Royal North Shore Hospital, Sydney, distinguished for his contribution to the study of the metabolism of pigments derived from haemoglobin; he has initiated new botanical researches through his discovery of pigments of the bile type in plants.

PROF. W. H. MCCREA, professor of mathematics in the University of London (Royal Holloway College), distinguished for his contributions to theoretical astrophysics and cosmology.

PROF. J. S. MITCHELL, professor of radiotherapeutics, University of Cambridge, and director of the