becoming in 1931 an assistant to Prof. Faure-Fremiet at the Institut de Biologie Physico-Chimique. Among his numerous writings on these subjects, his book on tissue culture, published in 1932, is now an acknowledged classic. An interest in genetics, occasioned by his studies of tissue culture, led him to apply for a second Rockefeller Foundation fellowship to work with Prof. T. H. Morgan at California Institute of Technology during 1934–35. In the course of his experiments there in genetics and tissue culture, he observed that a certain combination of genes which causes death in embryonic mice is not necessarily lethal at the cellular level, since individual tissue cultures from these embryos will survive far beyond the embryo's ten-day life-span. In 1935 Ephrussi returned to France, accompanied by Prof. G. W. Beadle. Together they undertook a series of eye-disk transplantation experiments in *Drosophila* which resulted in the first experimental proof of the genetic control of biochemical reactions. After the Second World War he began his post-war studies on yeast, and soon discovered that mutations caused by acridine dyes transform aerobic into anaerobic strains. His subsequent classic investigations probed the biochemical interplay between cytoplasmic and nuclear elements, and resulted in a second book dealing with the significance of nuclear and cytoplasmic genetic variation in embryological development. He is now entering on a study of the genetics of mammalian somatic cells in tissue culture.

Prof. W. K. Heisenberg, For.Mem.R.S.

Prof. Heisenberg won the Nobel Prize for Physics in 1932, for the creation of quantum mechanics. His was a fundamental approach to the problems of atomic mechanics, based on observable physical properties such as the frequencies and intensities of spectral lines emitted by atoms and molecules; this system, known as matrix mechanics, dispensed with unwarranted assumptions inherent in earlier atomic theory, arising from pictorial representations of planetary orbits within the atom. In 1927 he solved the puzzle posed by the existence of two separate spectra of helium gas, showing that one of them arises when the two electrons of the helium atom are paired with opposite spin and the other when the spins are in the same direction. He then predicted, by analogy, that the hydrogen molecule should exist in two forms: one in which the paired hydrogen nuclei spin in the same direction, and another in which they spin in opposite directions. Two years later the two forms of hydrogen were experimentally shown to exist. It was also in 1927 that Heisenberg formulated his famous principle of indeterminacy (or uncertainty principle), which maintains that regardless of the nature of the experiment there is an inherent theoretical limit to the precision with which both position and momentum of a particle can be established simultaneously. He showed that this ultimate limit of physical measurement is defined by a fundamental universal constant that had been introduced into physics by Max Planck at the turn of the century.

Prof. V. Prelog

Prof. Prelog was born in Sarajevo, Yugoslavia, in 1906. He studied chemistry and chemical engineering at the Prague Institute of Technology, where in 1929 he received the degree of doctor of technical sciences. He headed the research laboratory of the G. J. Driza Co. in Prague until 1935, when he joined the Department of Technology of the University of Zagreb as an associate professor. In 1942 he joined the Department of Organic Chemistry of the Swiss Federal Institute of Technology (Eidgenossische Technische Hochschule) in Zurich, where he became associate professor in 1947, professor in 1950, and director of the Department in 1957. He is the author of some 270 scientific papers on such topics as alkaloids and steroids, heterocyclic and many-membered-ring compounds, antibiotics, and stereochemistry.

Applied Mathematics at Belfast: Dr. A. Dalgarno

Dr. A. Dalgarno, though only thirty-three years old, has been appointed to a chair of quantum mechanics in the Department of Applied Mathematics at the Queen's University of Belfast. He began his brilliant research career at University College, London, where in 1951 he obtained a Ph.D. degree. In the same year he moved to Belfast as an assistant lecturer, and was promoted successively to lecturer in 1952 and reader in 1956. Last year he was made director of the newly established Digital Computing Laboratory—an appointment he still holds. Since 1951 he has paid a number of prolonged visits to the United States as guest research worker at the Massachusetts Institute of Technology, and as consultant to Air Force Cambridge Research Center and to the Geophysics Corporation of America. Dr. Dalgarno's research interests include the methods of quantum mechanics (especially perturbation theory), atomic and molecular structure, collision processes and upper atmospheric physics. His skill at mathematical analysis is exemplified by his classical paper with Dr. J. T. Lewis (*Proc. Roy. Soc.*, A, **233**, 70; 1956) on the calculation of long-range forces between atoms. This paper gives the exact solution to an important problem which had been treated by approximate methods for more than a quarter of a century. As well as being very creative, Dr. Dalgarno is a stimulating supervisor of research students. His appointment will consolidate the strength of the postgraduate school at Belfast.

Machine Tool Engineering at Manchester: Prof. F. Koenigsberger

Dr. Franz Koenigsberger has been appointed to the newly created chair in machine tool engineering in the Faculty of Technology in the University of Manchester. Dr. Koenigsberger received his engineering training in the Technische Hochschule, Berlin-Charlottenburg, where he qualified for the degree of Dipl.Ing. in 1931 with honours. He obtained the degree of M.Sc.Tech.(Manchester) in 1952 and the degree of D.Sc.(Manchester) in 1954. After a period of research experience under Prof. Schlesinger in Berlin, he obtained industrial experience in Berlin and later in Belgium. During 1935–38 he was chief engineer and chief designer in the Machine Tool Department of Ansaldo, Genoa, and in 1939 became chief mechanical engineer for Messrs. Cooke and Ferguson, Ltd., a post he held until he was appointed lecturer in mechanical engineering in the Manchester College of Science and Technology in November 1947. He was appointed senior lecturer in production engineering in 1955, and reader in machine tools and production processes in May 1957. Dr. Koenigsberger is well known for his work in the field of production engineering, and is a member of the International Institution for Production Engineering Research.