*cyclo*hex-2-enyl hydroperoxide as the primary product. Farmer's subsequent work showing the widespread importance of α-methylenic reactivity, and his discussions of its mechanistic features greatly stimulated activity in this field, notably in the United States, and also served to advance the opinion that the chemistry of complex substances is often resolved most expeditiously by initial studies of model systems. His final researches were concerned with the reactions between sulphur (in various forms) and olefins, and have provided a new experimental background from which to approach the intricacies of rubber vulcanization.

Farmer leaves a widow, Marjorie (*née* Wilson-Smith), whom he married in 1930; she has assisted him in some of his researches.

GEOFFREY GEE

Prof. Kurt H. Meyer

KURT HANS MEYER, whose death at the age of sixty-eight occurred on April 14, was the son of the late Hans Horst Meyer, the veteran Viennese physiologist and pharmacologist. Kurt Meyer was a chemist of quite unusual breadth of interests within his science. From early youth he was strongly attracted to the field of biology, and indeed he began his academic career as a medical student. This orientation was scarcely surprising, since his father was that very Meyer whose name, linked with that of Overton, is known to all biologists in the Meyer–Overton theory of the role of lipoids in cell permeability. For K. H. Meyer, however, the appeal of organic chemistry proved too strong to be ignored. A pupil of Zincke and Hantzsch, he made his name in Baeyer's laboratory with work on the keto-enol equilibrium of aceto-acetic ester; and in 1918, at Willstätter's invitation, he took over the organic department at the Chemisches Institut in Munich, where he continued his study of aceto-acetic ester and accomplished the separation of keto and enol forms by a simple distillation.

Meyer's growing interest in dyes and dyeing soon led to his appointment as director of the Hauptlaboratorium der I. G. Farbenindustrie at Ludwigshafen. From that laboratory, he and H. Mark published in 1930 their historic treatise, "Der Aufbau der hochpolymeren organischen Naturstoffe (auf Grund molekular-morphologischer Betrachtungen)", the outcome of joint researches begun in 1927. In this early study they put forward, as part of a general scheme, molecular models developed by them for cellulose, cellulose derivatives and related substances, such as hemicelluloses and chitin; for rubber, gutta percha and balata; for proteins (in particular for silk fibroin); and they discussed the importance of the chain-molecule concept in plant and animal morphology, its relation to macroscopic and molecular changes in shape, and to muscular contraction and protoplasmic movement in particular. At the time of publication it was a bold and daring work, in sweep of conception without precedent; it remains, a little more than two hundred pages in extent—an impressive epitome of a field which it is unlikely will ever be reviewed in a single volume again.

In the early 'thirties, feeling the need for developing his ideas in the freer climate of the academic world, Meyer moved to the University of Geneva as professor of organic and inorganic chemistry. As chief 'assistant' he brought with him Dr. A. J. van der Wyk, and was always the first to acknowledge how much he owed to his second-in-command, not only for constructive criticism but also, as shown by their many works of collaboration, in the formal elaboration of his ideas.

During the war-years he again reviewed the field of high-polymer chemistry in his "Natural and Synthetic High Polymers", with its remarkable sub-title, "A Textbook and Reference Book for Chemists and Biologists". Never before had the biologist found himself in such distinguished company. The second edition of this work, published in 1950, probably reached the limit of one man's ability to review a field which in twenty years had become the province of new and major industries, and had shown itself to be the proper science of many of the oldest arts and crafts of mankind. To every part of that field contributions had been made by Meyer and his school in Geneva. The diversity of his interests was such that few of his colleagues can have been familiar with all aspects of his work. In Great Britain he is probably best known for that series of researches which led to the kinetic theory of rubber-like elasticity, researches covering an extraordinary range of materials, from plastic sulphur, amorphous selenium and other inorganic elastomers, through rubber and synthetic plastics to natural products, such as collagen, elastin, keratin and muscle itself. Of scarcely less general interest was his work on polysaccharides: on the structure of cellulose, on the permeability of cellulose membranes, on polysaccharides containing amino-sugars, and on the constitution and enzymatic breakdown of starch. To these may be added pioneer work on the crystallography of peptides, on narcotics, recent work on hormones, and a series of papers on the properties of high polymers in solution.

Kurt Meyer had a unique sympathy for and interest in the biological field, and he saw, as no chemist before him, that morphological chemistry is as intimately related to plant and animal morphology as it is to physiology. He was essentially a morphologist himself: he believed intensely in the value of three-dimensional models of molecular structure as a means of refining concepts (by providing a concrete picture for criticism), and as a means of limiting the immediate field of inquiry. Those who worked with him will remember his infectious enthusiasm and tireless energy, and that fertility in hypothesis which he restrained by constant appeal to evidence obtained by the application of as wide a range of techniques as possible: X-ray analysis, studies of elastic and thermo-elastic properties, viscosity and solubility data, chemical analyses—any model must take into account all these; to rely on one technique was to court disaster. The biologist will remember that in papers as early as 1929, as well as in his book with Mark, Kurt Meyer pointed the way to a new cytology; for he saw, perhaps more clearly than anyone else at that time, the relevance of the growing field of high-polymer chemistry to biology.

L. E. R. PICKEN

Prof. F. H. Newman, C.B.E.

FREDERICK HENRY NEWMAN was born in Bath in 1891 and his first school was St. Saviour's, Bath, whence he went by scholarship to the City of Bath Boys' School in 1904. In 1911 he entered the Royal College of Science, London, graduated in 1913 and, after a further year of research, became an assistant lecturer at University College, Aberystwyth. In 1916