have been used by generations of students and which have been translated into many languages. His early work was accomplished with slender resources in cramped accommodation, but led to widely acclaimed generalizations such as the size factor rule and the existence of electron compounds. He was elected a Fellow of the Royal Society in 1937, and has received awards and honours from scientific societies in Britain, the United States, The Netherlands and Italy, including the Platinum Medal of the Institute of Metals in 1949.

Metallurgy at Oxford has always been associated with the name of Hume-Rothery, and without his enthusiasm it would never have attained the status of an independent Final Honour School. His interests in teaching no less than in research have been fully engaged since the Second World War, and he hands on to his successor a Department which already enjoys a high reputation. All will wish "H. R." a long and happy retirement, but it will be surprising if he does not immediately begin work on another book.

Prof. P. B. Hirsch, F.R.S.

Dr. P. B. Hirsch, reader in physics at the Cavendish Laboratory, Cambridge, has been elected to the Isaac Wolfson professorship of metallurgy in the University of Oxford, as from October 1, 1966, in succession to Prof. W. Hume-Rothery. He was born in 1925, and graduated at Cambridge in 1946, with a first-class honours degree in physics. He then joined the late J. N. Kellar as a research student in the Cavendish Laboratory, and together they developed an X-ray microbeam technique for the study of the microstructure of deformed metals, under the direction of Dr. W. H. Taylor. In 1950, Dr. Hirsch initiated at the Cavendish Laboratory, on behalf of the National Coal Board, an X-ray diffraction study of the structure of coals and of the carbonization process. From about 1955 onwards he turned his attention again to problems in plasticity, work-hardening and defects in metals. He was responsible for developing, with Dr. M. J. Whelan, the electron microscope transmission technique for the study of defects in crystals. This work led in 1956 to the first direct observations of the movement of dislocations in metal foils. During the next few years Dr. Hirsch and his colleagues developed the experimental techniques and theories of image contrast which make it possible to determine from electron micrographs the detailed nature of defects. During this period the collaboration of Hirsch, Howie and Whelan was particularly successful. The technique was also applied to a number of problems, including dislocation interactions, defects in quenched and irradiated metals, dislocation distributions in metal crystals deformed in tension and fatigue, and recrystallization. This work was a major and fruitful advance in metal physics and it established the electron transmission microscope technique as a powerful tool in metallurgy. Dr. Hirsch also made outstanding contributions to the theory of dislocations and work hardening. It is recognized internationally that the group which has grown around him in the Cavendish is a leading one in the field of metal physics. Dr. Hirsch was elected a Fellow of Christ's College, Cambridge, in 1960, a Fellow of the Royal Society in 1963, and was awarded the Rosenhain Medal of the Institute of Metals in 1961, and the C. V. Boys Prize of the Institute of Physics and the Physical Society in 1962. When he takes up his new appointment he will be responsible for the proposed expansion of metallurgy at Oxford and for broadening the interests of the Department towards materials science.

Geography in the University of Reading :

Prof. A. Austin Miller

Prof. A. Austin Miller retired from the chair of geography in the University of Reading on September 30 after nearly forty years in the Department of Geography there. A graduate in geology of University College, London (B.Sc. first-class honours 1922, M.Sc. 1925, D.Sc. 1940), he was appointed lecturer in geography at Reading in 1926 and professor of geography in 1943. His work has dealt mainly with the physical aspects of geography and in 1931 he established an international reputation for himself with the publication of *Climatology* which, with due revision through nine editions and several translations, remains a standard text-book in 1965. In addition to many papers, his publications also include *The Skin of the Earth* (1953) and (with M. Parry) *Everyday Meteorology* (1958). For his work in geomorphology and climatology he received the Murchison Award of the Royal Geographical Society in 1963. A founder-member of the Institute of British Geographers, he became in due course its youngest president in 1946–48, and later was president of Section E of the British Association for the Advancement of Science (1956) and of the Geographical Association (1963). He has served on the Council of the Royal Geographical Society and was advisory editor on geography to the new *Chambers' Encyclopaedia*, 1945–49. In 1958 he was elected Fellow of University College, London, the same year in which he was visiting professor at the Universities of Indiana and British Columbia. He also held offices at meetings of the International Geographical Union at Lisbon 1949, Washington 1952, Rio de Janeiro 1956, and Stockholm 1960.

Prof. T. G. Miller

Mr. T. G. Miller, who has just taken over the chair of geography at the University of Reading from Prof. A. Austin Miller, is a geologist by training. Demobilized after the Second World War with the rank of major, he then graduated in geology at Cambridge and was appointed University demonstrator in geology and Fellow of Jesus College, a post that he occupied until 1953, when he transferred to the University College of North Staffordshire (now University of Keele). Prof. Miller's interests have been in the realms of physical geography—exemplified in his *Geology and Scenery of Great Britain*—in Carboniferous palaeontology and in stratigraphy; while in the Territorial Army he has been concerned with terrain studies from a military point of view. He thus continues at Reading the wide interest in the physical aspects of geography that Prof. Austin Miller has cultivated for almost forty years.

Assistant Chief of the National Bureau of Standards Textile and Apparel Technology Center :

Dr. F. C. Brenner

Dr. F. Cecil Brenner has been appointed assistant chief of the Textile and Apparel Technology Center of the National Bureau of Standards Institute for Applied Technology. He will be responsible for developing new research projects and managing existing ones. The programme of research of the Textile and Apparel Center is designed specifically to meet the needs of industry. Dr. Brenner will maintain close contact with technical and trade associations and educational institutions as well as with industry, enabling him to carry on research useful to the industry. He is particularly well qualified for his new position as he has conducted research on fabric properties for end-use performance. He has also investigated the effect of textile finishing processes on the mechanical behaviour of fabrics which determines their stiffness, drape and wrinkling performance. Recently, Dr. Brenner was a member of the Chemstrand Research Center in Durham, North Carolina, and earlier of Johnson and Johnson Co. He gained his Ph.D. degree in polymer chemistry at the Polytechnic Institute of Brooklyn, and was appointed an instructor at the Institute, and later an assistant professor of physical chemistry at Vanderbilt University. Dr. Brenner is a member of the American Chemical Society, Fiber Society, Inc., and the American Association of Textile Chemists and Colorists.