

fication of ketone-amine condensates, aldehyde-amine condensates and secondary aromatic amines. Phenols and their derivatives are mainly of interest on account of the low degree of staining which they impart to the vulcanized rubber. Copper salts, in small amounts, are usually introduced into rubber via the raw materials or in processing, and since these salts are powerful oxidation promoters, it is essential to use copper inhibitors to ensure satisfactory service use of the rubber. Heat and light increase the rate of oxidation, the effect of heat being an increase in stiffness and a decrease in elongation, while light causes crazing due to the production of an inelastic skin. It is essential to add suitable antioxidants to delay these effects. Also the use of anti-flex cracking antioxidants is one of the most important branches

of rubber chemicals, their importance arising from the demands of the tyre industry. Amines and their derivatives such as phenyl- β -naphthylamine, diphenyl-*p*-phenylene diamine and dimethoxy phenylene diamines are effective antioxidants for the purpose.

Ozone in minute quantities is one of the most powerful agents for producing cracks in strained rubber, and the concentration normally present in the atmosphere is sufficient to produce cracking. Various methods have been proposed for overcoming this problem, such as the use of wax or varnish film on the rubber. Phenylene diamines in concentrations of 2-4 parts for 100 parts rubber hydrocarbon have been claimed by the Americans to give good protection against ozone. These are used together with other antioxidants.

C. E. H. BAWN

NEWS and VIEWS

Psychology at Reading: Prof. M. D. Vernon

DR. M. D. VERNON, who has been appointed to succeed Prof. R. Oldfield (*Nature* of June 16, p. 1109) in the chair of psychology in the University of Reading, has not only gained an international reputation among students of visual perception as an experimenter, but also has had long and wide experience of psychological work in the field, particularly in industrial and social connexions, and in the study of children. A scholar of Newnham, she was placed in Class I of the Natural Science Tripos and started research in the Cambridge Psychological Laboratory under Mr. (later Sir Frederic) Bartlett in 1922. She remained at Cambridge until 1946, as a member of staff, at first of the Industrial Health Research Board and later of the Medical Research Council. Her earlier work was chiefly in the field of industrial psychology, in which her father, the late Dr. H. M. Vernon, is remembered as an outstanding pioneer. From 1927 onwards she was engaged in a series of studies of visual perception, of uncommonly solid and coherent character. Apart from the scientific value of her findings, these set a standard of patience and rigour which her students and colleagues could not fail to appreciate. During the same period she produced two major works, "Visual Perception" (1937) and "Further Studies of Visual Perception" (1952), the sound scholarship of which have guided and helped those of like interest everywhere. She joined the Department of Psychology at Reading as lecturer in 1946, and became reader in 1956. Dr. Vernon has performed numerous and varied services to her colleagues and her subject, notably as assistant to the editor of the *British Journal of Psychology* during 1932-48, as president of the Experimental Psychology Group during 1952-54, and as president of the Social Psychology Section of the British Psychological Society during 1948-49. Her active interests, backed by full experience in teaching, research and administration, promise a fruitful development of the Reading Department along the catholic yet distinctive lines impressed upon it by the first holder of the chair, Prof. A. W. P. Wolters.

Organic Chemistry in Sydney: Prof. C. W. Shoppee, F.R.S.

THE appointment is announced of Prof. C. W. Shoppee to the chair of organic chemistry in the

University of Sydney, in succession to Prof. A. J. Birch. Prof. Shoppee's earliest researches were carried out in 1923 at the Imperial College of Science and Technology, London, under Dr. C. K. Ingold, with the nominal direction of the late Sir Jocelyn Thorpe. In 1924, he accompanied Prof. Ingold to the University of Leeds, and in 1928, after having held an 1851 Senior Studentship, was appointed to the staff of that University. In 1939, he was elected to a Rockefeller Research Fellowship, which he chose to hold in the Laboratory of Prof. T. Reichstein at the University of Basle. In 1944 he was appointed to a readership in chemistry in the University of London, tenable at the Royal Cancer Hospital, and, in 1948, to the chair of chemistry in the University of Wales, at University College, Swansea.

Prof. Shoppee is distinguished for his contributions to organic chemistry, and especially for his work in collaboration with Prof. Reichstein on the hormones of the adrenal cortex, which led to the establishment of the detailed structures of these physiologically important compounds. At the Chester Beatty Research Institute (Institute of Cancer Research: Royal Cancer Hospital), he applied his special knowledge of the microchemical and chromatographic investigation of natural products to problems of the isolation and identification of endogenous carcinogenic substances present in human tissues. In the steroid field, Prof. Shoppee rapidly gained an international reputation, and his later work involved application of the newer conceptions of the mechanism of organic reactions to the determination of chemical configuration in natural products, an ultimate aim being to illuminate the highly specific relationship between molecular configuration and physiological activity. These aims he has continued to pursue at University College, Swansea, where he has been successful in building a vigorous school. In collaboration with Dr. K. W. Sykes (now professor of physical chemistry at Queen Mary College, London), he was able to promote work on high-temperature kinetics, and more recently has introduced fundamental and applied infra-red spectroscopic studies in association with Dr. H. E. Hallam, and, finally, the complementary study of Raman spectra, in association with Dr. D. A. Long. Prof. Shoppee was elected to the fellowship of the Royal Society in March of this year.