

NEWS and VIEWS

Organic Chemistry at the Imperial College :
Sir Ian Heilbron, F.R.S.

THE departure of Sir Ian Heilbron from the chair of organic chemistry at the Imperial College of Science and Technology will be a great loss to the Royal College of Science and to the University of London. For the past thirty years at the Universities of Liverpool (1920-33), Manchester (1933-38) and London (1938-49), Sir Ian has led and inspired large schools of research in many different branches of organic chemistry. One of the most distinguished organic chemists of this period, he has made numerous outstanding contributions to his subject which have deservedly brought to him both national and international fame and honours. There are few fields in organic chemistry which he has not entered, but particular mention must be made of his important work on the chemistry of the sterols, vitamins, triterpenes, penicillin, heterocyclic and acetylenic compounds.

Sir Ian believes in the closest collaboration between academic and industrial workers. He himself has kept pace with developments in both spheres, and by his vision and foresight he has seen more clearly than most of his contemporaries the shape of things to come, the goals to be reached and the prizes to be won. Always eager to try new devices, new reagents and new reactions, he has made the greatest possible use of physical methods both for the isolation of pure materials and for the elucidation of their structures. He was one of the first to use chromatography in Great Britain. His influence on the development of organic chemistry during the past thirty years has been profound and far-reaching, and his brilliant lectures have done much to stimulate interest in this branch of chemistry. Sir Ian Heilbron is, above all, an organic chemist in the true classical tradition, and by his work, his example and his outlook he has shown in unmistakable terms his firm belief that in the further elucidation of the chemistry of natural products and processes organic chemistry has a great future.

Prof. R. P. Linstead, C.B.E., F.R.S.

DR. R. P. Linstead has accepted an invitation to succeed Sir Ian Heilbron as professor of organic chemistry and director of the organic chemistry laboratories at the Imperial College of Science and Technology. He thus returns to the College where he received his early training and where he was for many years a member of the staff. His earlier work has already been referred to in a previous notice (see *Nature*, 156, 415; 1945), although one might mention, in addition, some interesting work on liquid-phase reactions under very high pressures done in collaboration with Prof. D. M. Newitt, and on the chemistry and pharmacology of the heart poisons with Prof. O. Kraye. As director of the Chemical Research Laboratory, Teddington, Prof. Linstead has occupied a key position in the linking together of Government, academic and industrial chemical research. The time of his appointment (1945) coincided with the transition period from war- to peace-time conditions, with consequent re-orientation of work and planning for the future. To this task he brought a wide scientific knowledge combined with administrative ability. Under his vigorous leadership objective fundamental research at the Laboratory received fresh impetus

and direction. In his new post Prof. Linstead becomes the successor of a series of distinguished men who have built up a school of organic chemistry second to none in Great Britain, and one may confidently predict that under his aegis it will continue to flourish.

National Research Council of Canada :

Dr. R. W. Boyle

DR. ROBERT WILLIAM BOYLE, who, since 1929, has been director of the Division of Physics, National Research Council of Canada, retired last year. Born in Carbonear, Newfoundland, he received his early education at St. John's College and then proceeded to McGill University, where he graduated in electrical engineering in 1905, obtaining his master's degree in 1906, and doctorate in 1909. As an 1851 Exhibition scholar he studied radioactivity under Rutherford at Manchester during 1909-11, and then returned to McGill as lecturer. From 1912 to 1929 he was professor and dean of applied science in the University of Alberta. During 1916-19 he had a brilliant record of service, first with the Admiralty Board of Inventions and Research and later with the Anti-submarine Division. Here he was in charge of the scientific research and development of what later became known as the 'Asdic' for submarine detection. It is in this sphere of ultra-sonics that Dr. Boyle has specialized, and he and his co-workers have produced a wealth of data on ultra-sonic propagation, energy distribution in beams, reflexion, transmission, interference and detection. Dr. Boyle organised the Division of Physics and Engineering of the National Research Council in 1929, and the steady growth and expansion of this Division owes much to his directorship. In 1937 it became the Division of Physics and Electrical Engineering; and during the Second World War the radio and electrical engineering branches expanded so greatly that they were split off in 1948 as a separate Division, and the parent was renamed the Division of Physics. Dr. Boyle has been succeeded by Dr. G. Herzberg (see *Nature*, February 12, p. 241).

Medical Physics at the University of Pennsylvania :
Dr. Britton Chance

DR. BRITTON CHANCE has been appointed director of the Elbridge Reeves Johnson Foundation of Medical Physics in the University of Pennsylvania in succession to Dr. Detlev W. Bronk. Dr. Chance, who was previously associate professor of biophysics in the University of Pennsylvania, graduated from that University in 1935 and became interested in the kinetics of enzyme action. In 1938 he started work at Cambridge on an electronic device of his own invention for steering ships, and later undertook research in the United States on electronic circuits in radar. At the end of the War, Dr. Chance was able to return to his enzyme studies in the laboratories of Prof. H. Theorell in Stockholm and Prof. D. Keilin in Cambridge. His work on the enzymes peroxidase and catalase constitutes an entirely new approach to the study of the very short-lived intermediate compounds which these enzymes form with peroxides. The formation of such compounds is characterized by changes in absorption spectra; but the reactions are too rapid to be recorded at concentrations sufficiently high for normal methods of spectroscopic observation. Dr. Chance's extensive knowledge and experience of radio technique enabled him to develop the Roughton and Millikan method for the study of rapid reactions to a stage where optical density changes of the order

of 0.001 could, through high amplification of a photocell current, be instantaneously and accurately recorded. At the high dilutions which can in consequence be employed, the enzyme-substrate reactions proceed at rates which permit detailed analyses. The value and scope of this experimental technique in the field of reaction kinetics can scarcely be overestimated.

Mechanical Engineering in Queensland:

Prof. Mansergh Shaw

THE appointment of Mr. Mansergh Shaw to the new chair of mechanical engineering in the University of Queensland, Brisbane, Australia, marks another important step in an unusually successful engineering career. It is interesting to note that, after serving a normal engineering apprenticeship with Messrs. Davy Brothers, Prof. Shaw became an undergraduate at the University of Sheffield through the award of a Whitworth scholarship; he graduated in 1935 with first-class honours and was awarded the Mappin Medal. Thereafter he became a lecturer at the University of Sheffield and conducted research work on fluid flow through nozzles and on other subjects. He was appointed senior lecturer in engineering at the University of Melbourne in 1938, a position which he occupied with conspicuous success for some ten years under Prof. A. E. Burstall. During the War, in addition to undertaking special defence training duties, Shaw was responsible for organising the University workshops at Melbourne for research on new methods of production and on the precision manufacture of optical and other instruments required by the Australian Defence Forces. At the same time he was engaged upon new investigations of transient cutting forces and of factors affecting surface finish. This research is reflected in a number of published works on engineering production methods. On his return to England last year on extended leave, he was appointed as the first Tube Investments Research Fellow in engineering production in the University of Birmingham. Prof. Shaw has an important task awaiting his arrival at Brisbane, where he will have to build up a new Department of Mechanical Engineering. His wide experience of engineering practice, teaching and research, and his great energy and enthusiasm, augur well for the future progress of engineering education in Queensland.

Kodak Research Laboratories

ON March 25 and 26 a conversazione was held at the Research Laboratories of Kodak, Ltd., Harrow, to mark the twenty-first anniversary of their opening. The Laboratories were visited on March 25 by representatives of all fields of scientific interest, and on the following day by members of the six thousand factory and sales staff. The exhibits displayed the range of scientific endeavour of the Laboratories. A historical exhibit provided a reminder that the photographic industry has always been closely associated with scientific research, particularly since 1912 when Dr. C. E. K. Mees, now vice-president of the Eastman Kodak Company, left the old-established firm of Wratten and Wainwright to found and direct the research laboratories of the Eastman Kodak Company. The English branch of the organisation became an independent centre for research in 1928, when Dr. W. Clark set up the first Kodak, Ltd., Research Laboratory. Since 1931, Mr. E. R. Davies has been director of research.

In the fields of photographic physics and emulsion making, attention was directed to the application of photographic emulsions to the study of atomic phenomena. Photographs and drawings of tracks in emulsions were shown, which gave ample support to the claim that the photographic emulsion can now rival the cloud chamber as a nuclear research instrument. In another section a new instrument for the study of colour vision was shown. This has been designed particularly for the examination of adaptation phenomena, of paramount importance in the subjective aspects of colour photography. Examples of work in organic chemistry were to be seen in two sections. Sensitizing dyes continue to demand a considerable effort, while the chemistry of colour photography presents new problems. Some new and original apparatus was seen in the physical chemistry section, including a sensitive swell-recording device for studies of the physical properties of gelatin. In optics, war-time work on the resolving power of the lens-film system is being extended to cover the range of focal lengths in use in amateur and professional photography. The electron microscope has been added to the list of resources available for studying the fundamental problem of the latent image, and many properties of the individual silver halide grain have been shown for the first time. The applications of photography to science and industry were fully displayed. Some of the most interesting examples were those dealing with animal studies, such as the tongue action of reptiles, for which a high-speed stroboscopic light source has been designed.

Ray Society: Annual General Meeting

THE hundred and fifth annual general meeting of the Ray Society was held on March 18. The volume of Pennant's "Tour on the Continent 1865", edited by Prof. G. R. de Beer, was published and distributed during the past year, and it was announced that Prof. N. J. Berrill's volume on "Tunicates" had gone to press; that the manuscript of the first volume of Messrs. Locket and Millidge's work on "British Spiders" had been received and had gone to tender, and that the manuscripts of the second volume of Prof. Balfour-Browne's "British Water-Beetles", of the late Prof. Tattersall's "British Mysidacea" and of Messrs. Dandy and Milne-Redhead's "Watsonian Vice-counties" were expected in the near future; and it was hoped that one or more of these volumes would also be published during 1949. It was pointed out that this programme of publication would put a serious strain on the Society's finances, and it was urged that every effort should be made to increase the membership and to enlist other means of support. Prof. G. R. de Beer, Mr. A. C. Townsend and Dr. Errol White were re-elected president, honorary treasurer and honorary secretary respectively; Dr. Edward Hindle and Dr. John Smart were elected vice-presidents, and Dr. W. J. Rees, Mr. Herlihy, Mr. M. A. C. Hinton and Prof. F. E. Weiss new members of council.

Nature of Plastics

A NEW 16-mm. sound and colour film, "The Nature of Plastics" which has been sponsored by Bakelite, Ltd., was shown for the first time at the British Council Theatre in London on April 5. The film, which runs for about 20 minutes, is a scientific documentary and is designed to explain to the intelligent layman the broad principles of the structural characteristics of plastics and their