NEWS and VIEWS

Chemistry at Leeds: Retirement of Prof. W. R. Whytlaw-Gray, O.B.E., F.R.S.

PROF. ROBERT W. WHYTLAW-GRAY is retiring from the chair of chemistry in the University of Leeds at the end of this month after twenty-two years service. During his administration, the Department of Chemistry has undergone many changes, including its entry into a new building, in the design and equipment of which he took a leading part, and which has proved to be almost ideally arranged for both teaching and research. Throughout his academic life at University College, London, in Bonn, at Eton or in Leeds, Prof. Whytlaw-Gray has devoted himself wholeheartedly to research work, whether in pursuit of exact knowledge for its own sake or (for the second time) in the application of his special experience to his country's war-time problems. Before going to Leeds, he had developed a technique for the examination of smokes with the ultra-microscope which led to the determination of particle size and number, and to the discovery that these aerial systems, unlike the more familiar hydrosols, are unstable and undergoing continuous coagulation. At Leeds, with the help of collaborators, notably Dr. Colvin, Mr. H. S. Patterson and Dr. W. Cawood, the coagulation process was fully explored, new methods developed both for counting the particles when suspended and after sedimentation, and, in a series of papers, the kinetics of smoke coagulation established on a sound quantitative basis. The results of these investigations and their bearing on aerial systems in general were summarized in the Liversidge Lecture delivered before the Chemical Society in 1935 and in a book entitled "Smokes" written in collaboration with H. S. Patterson.

Prof. Whytlaw-Gray has always been much interested in the determination of the atomic and molecular weights of gases by physico-chemical methods, and many investigations in this field have been made in the Leeds laboratories. Previous experience in determining the density of radon by means of a Steele and Grant microbalance led him to the development of a buoyancy microbalance capable of high accuracy in which constancy of zero was ensured by a torsion fibre suspension. With this instrument the limiting densities of xenon, carbon monoxide, carbon dioxide, ethylene, carbon tetrafluoride, methyl fluoride, silane, nitrous oxide and hydrogen sulphide were determined, and values for the atomic weights of carbon, fluorine, nitrogen, sulphur and silicon obtained which are independent of stoichiometric relationships. This work with gases containing carbon first brought to light an error in the atomic weight of carbon which, prior to 1933, was accepted by the International Committee as 12·00. The mean value found at Leeds was 12·011, which has been amply confirmed since by modern stoichiometric determinations and also by mass-spectrographic evidence. In these and other ways, Whytlaw-Gray has built up an influential research school at Leeds, and well and truly carried on the tradition of his distinguished teacher, Ramsay. He has never rested on his achievements, although these have received universal recognition. Ripening experience has, in his case, resulted rather in more devotion to experimental work and to its stimulation in others. It is a source of great satisfaction to his colleagues that he is to continue his investigations in the Department of Inorganic and Physical Chemistry at Leeds.

Prof. M. G. Evans and Prof. E. G. Cox

WITH the retirement of Prof. Whytlaw-Gray, the Council has decided to unite the hitherto separate Departments of Inorganic and Physical Chemistry. The combined Department will have two professors, of whom Prof. M. G. Evans, professor of physical chemistry in the University since 1939 (see *Nature*, July 1, 1939, p. 15), will be the senior. Dr. E. G. Cox, reader in chemical crystallography in the University of Birmingham, has been appointed to the second chair in the Department. For several years Dr. Cox has been on leave of absence to undertake highly specialized and secret work in the Government service, and has had charge of a laboratory. Latterly he held the rank of lieutenant-colonel on the staff of the B.L.A. in Europe. Dr. Cox is well known as one of the ablest experimenters in X-ray crystallography. His researches in the carbohydrate field, and also in connexion with co-ordination compounds, have won for him a high place as an investigator in structural chemistry. Graduating with first-class honours in the University of Bristol some twenty years ago, he proceeded to the Davy Faraday Laboratory at the Royal Institution and became a pupil of Sir William Bragg. From there he was appointed to a lectureship in physical chemistry in the University of Birmingham, and has been associated with Prof. W. N. Haworth in constitutional work on sugars and polysaccharides. One of his most notable researches was on the structure of vitamin C.

Penicillin Production in Great Britain

ON September 20, Glaxo Laboratories, Ltd., Greenford, Middlesex, gave a demonstration of the preparation of penicillin and showed the factory operation of freeze-drying and other processes through which the finished product goes; Sir Cecil Weir, director-general of equipment and stores, Ministry of Supply, was present. Sir Cecil said that during the War when key installations were open to enemy attack, it would have been wrong to give information about the location of factories concerned; but now it is possible to disclose that the production of penicillin is under way, or about to commence, in twelve factories in Britain, operated by eight firms well known in the pharmaceutical field or in fermentation processes. Britain will soon have in operation the largest penicillin production unit in the world at Speke, and one of the largest at Barnard Castle; the latter is to be run by Glaxo Laboratories, and will make four for which the firm is responsible.

As soon as it became evident in 1942 that factory production of penicillin was feasible, the Ministry of Supply brought together potential manufacturers and scientific men, and the present results are due to the team-work thus initiated. As British resources in building and operational labour, as well as scientific and technical staff, were fully extended, it was not expected that progress would be so rapid in Britain as in the United States, but close touch was maintained on the subject between the two countries. Britain has shared with the United States for military purposes the greater production which that country was able to obtain during the War; but it will not be long before Britain is producing penicillin on a comparable basis. The history of penicillin pro-