Maclean of Beauly, Inverness, and on retirement from India lived first at Royston, and later at Harpenden. L. L. FERMOR

WE regret to announce the following deaths :

Dr. Arthur M. Cloudman, senior biologist at the Argonne National Laboratory in the United States, formerly research pathologist at the Roscoe B. Jackson Memorial Laboratory, on August 8, aged forty-eight.

Prof. Alexander Meek, emeritus professor of zoology in the University of Durham (King's College, Newcastle upon Tyne), aged eighty-four.

Sir Richard Needham, C.I.E., known for his work in connexion with medical studies in India and other parts of Asia and in Africa, on October 24, aged seventy-two.

NEWS and VIEWS

Royal Society : Medal Awards for 1949

HIS MAJESTY THE KING has been graciously pleased to approve the following recommendations made by the Council of the Royal Society for the award of the two Royal Medals for 1949 : Sir George Thomson, for his distinguished contributions to many branches of atomic physics, and especially for his work in establishing the wave properties of the electron ; Prof. R. A. Peters, for his distinguished biochemical researches, in particular his investigations of (i) the biochemical role of vitamin B_1 in tissue metabolism ; and (ii) the mechanism of the toxic action of lewisite and other arsenical compounds.

The following awards of medals have been made by the President and Council of the Royal Society :

Copley Medal to Prof. G. C. de Hevesy, for his distinguished work on the chemistry of radioactive elements and especially for his development of the radioactive tracer technique in the investigation of biological processes.

Davy Medal to Prof. A. R. Todd, for his structural and synthetic studies and achievements in organic and biochemistry, with special reference to vitamins B_1 and E and the naturally occurring nucleosides.

Sylvester Medal to Prof. L. J. Mordell, for his distinguished researches in pure mathematics, especially for discoveries in the theory of numbers.

Hughes Medal to Prof. C. F. Powell, for his distinguished work on the photography of particle tracks and in connexion with the discovery of mesons and their transformation.

Nobel Prize for Chemistry for 1949 : Prof. W. F. Giauque

THE Nobel Prize for Chemistry this year has gone to Prof. W. F. Giauque, professor of chemistry in the University of California. Of French-Canadian extraction, he first trained as an engineer, but soon became interested in physical chemistry and joined the famous Berkeley School, founded by G. N. Lewis and presided over by him until his death a few years ago. Giauque's name first became familiar to a wider circle by his discovery in 1929 (with Johnston) of the rare oxygen isotope 18 (and soon afterwards of the still rarer one 17), the existence of which he deduced from the interpretation of absorption spectra. He is best known, however, for his suggestion—independent of that of Debye—of the so-called magnetic method of cooling which, partly in his own hands, has in the last fifteen years extended the temperature region attainable in the laboratory to about a hundredth of a degree off the absolute zero. The great bulk of his work and that of his collaborators is composed of a systematic, patient and very accurate investigation of specific heats at low temperatures, guided by a thorough understanding of the theoretical problems involved. It was largely his work which has created for the chemist the conditions necessary for applying the Third Law of Thermodynamics, and has provided him in this way with a wealth of material for the calculation of equilibrium data. Giauque's low-temperature laboratory, founded on sound engineering practice, was the nucleus and is now the centre of America's fast-growing school of low-temperature research.

St. Bartholomew's Hospital : Prof. F. L. Hopwood

PROF. F. L. HOPWOOD has retired from St. Bartholomew's Hospital, where he has been physicist since 1919, and professor of physics in the Medical College since 1924. The years have been active in teaching, research and committee work ; in the last respect he has been an active member of the British Empire Cancer Campaign since its formation in 1924 and of the British Committee for Radiological Units over the same period. It is particularly to radiology and ultrasonics that his research work has been directed, though not exclusively, for his work in submarine acoustics in the First World War led to Admiralty recognition and an award. When the Strangeways Laboratory at Cambridge took up the study of biological effects induced by X-rays and radium, Hopwood's services as a physicist were timely and ensured a quantitative basis for this research work, which has had such an important bearing on the treatment of malignant disease. A wide range of interests is a fortunate equipment for a hospital physicist, for at some time or other a large proportion of those engaged in treatment meet difficulties in which he can help, and Hopwood has served well here. His knowledge of X-ray technique and method was put to the test when 'Bart's' decided to install a million-volt X-ray installation for treatment. This development was for some reason not followed in other hospitals of the country, though there are now many signs going to show that high-voltage (X-ray or electronic) devices will come into much more general use in the treatment of cancer in the next few years. Hopwood was a Sylvanus Thompson medallist and an honorary member of the Faculty of Radiologists, an honorary fellow of Queens' College, Cambridge, was given the degree of M.A. (Cantab.) *honoris causa* in 1940 and retires with the well-deserved title of professor emeritus in physics in the University of London.

Metallurgy at Birmingham

THE professorial staff of the Department of Metallurgy of the University of Birmingham has now been further enlarged by the appointment of two new professors : Dr. G. V. Raynor as professor of metal physics, and Dr. A. H. Cottrell as professor of physical metallurgy. Dr. Raynor was educated at Nottingham High School and Keble College, Oxford. At Oxford he worked under Dr. W. Hume-Rothery as research

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