

Obituary

William Howard Barnes 1903–1980

W. H. Barnes, FRSC, passed away on 25 October 1980, after a brief illness. His loss will be felt deeply, particularly by Canadian crystallographers. After Dr Barnes established the X-ray Diffraction Section at the National Research Council of Canada many young crystallographers from abroad spent a year or two on Postdoctorate Fellowships in his laboratory. Subsequently several of them have set up new X-ray crystallographic research or teaching centres in Canada. Thus, Dr Barnes played a major role in the development of structural X-ray crystallography throughout Canada.

Son of the distinguished physicist Howard Turner Barnes, William H. Barnes was born in Montreal on 9 January 1903. He studied at McGill University in Montreal where he obtained a BSc in chemistry in 1924, MSc in 1925, and PhD in 1927 with a thesis on thermal properties of carbon dioxide and of ice. He also served there as Demonstrator, 1924–26. During the tenure of two Fellowships, one awarded by the National Research Council of Canada (1926–27) and the other a Ramsay Memorial Fellowship, London, UK (1927–29), he worked at the Royal Institution under the supervision of Professor Sir William Henry Bragg, KBE, FRS, where he developed his interest in the analysis of crystal structures by X-rays. There he carried out important pioneer work on the structure of ice.

On his return from the UK in 1930, he joined the staff at McGill University where he stayed until 1946. In 1936 he published a student textbook entitled *General Chemistry Laboratory Manual*, and in 1938 he was elected a Fellow of the Royal Society of Canada.

During the years at McGill he maintained his interest in crystallography, mainly as a hobby that he enjoyed and cherished. His return to full-time crystallography started with a Guggenheim Fellowship (1946–47), spent at the Massachusetts Institute of Technology with Professor Martin J. Buerger. He returned to Canada in 1947 in order to establish

an X-ray Diffraction Section in the Division of Physics at the National Research Council of Canada (NRCC), and remained Head of the Section until his retirement in 1968.

His major scientific interests were structural studies of vanadium minerals, the use of powder diffraction for the identification of narcotics and drugs and the determination of the structures of drug-related compounds. Early in the 1950's Dr Barnes realized the significant role that general-purpose digital computers could play in the study of crystal structures and took positive steps towards the development of generalized crystallographic computer programs for the determination and refinement of crystal structures.

In 1948, he played a major part in persuading the NRCC to adhere to the International Union of Crystallography, and served as Chairman of the Canadian National Committee for Crystallography (1948–67). He did an outstanding job as Chairman of the Organizing Committee for the very successful IVth International Congress of Crystallography held in Montreal in 1957. For the period 1960–66 he served as a Member of the Executive Committee of the International Union of Crystallography.

Dr Barnes published approximately 100 papers, mostly in the field of X-ray crystallography, but some, written early in his career, were in the fields of adiabatic calorimetry, history of chemistry and electron microscopy. His work was characterized by remarkable thoroughness and keen attention to precision and detail.

All his students and coworkers cherish memories of his friendly, sincere personality and his wise guidance as well as the warm hospitality of his wife Margaret. We deeply regret that he will not be present at the XIIth Congress of Crystallography which will be held in Ottawa in August 1981.

F. R. AHMED
L. D. CALVERT
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Notes and News

Historic Scientific Instruments

The Scientific Instrument Commission of the Division of History of Science of the International Union of the History and Philosophy of Science aims to stimulate the production of inventories and catalogues of historic scientific instruments, and facilitate the exchange of information in this field.

Priority is given to the latter objective and meetings will be held in Bucharest in 1981 and Kassel in 1982. National inventories of scientific instruments are available for Belgium, France, Italy, Poland and the USSR; one for the UK should be published in 1981. Anyone interested in these activities should write to Lt Cdr H. D. Howse, National Maritime Museum, Greenwich, London SE10, England, or Dr G. L. E. Turner, Museum of the History of Science, Oxford, England.