

tified by the spectacular achievements in the field since 1934.

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## Crystallographers

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*This section is intended to be a series of short paragraphs dealing with the activities of crystallographers, such as their changes of position, promotions, assumption of significant new duties, honours, etc. Items for inclusion, subject to the approval of the Editorial Board, should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England).*

Dr **Gopinath Kartha** died of a heart attack at the age of fifty-seven on 18 June 1984. Dr David Harker writes that Kartha had been a member of the staff of the Biophysics Department of Roswell Park Memorial Institute in Buffalo, New York, since November 1959, except for a six-month stay at the University of Madras in 1961. After receiving his PhD in physics at the University of Madras in 1953 and holding postdoctoral positions there, at the Cavendish Laboratory and at the National Research Council of Canada, he joined the Protein Structure Project at the Polytechnic Institute of Brooklyn early in 1959 and moved with it to Roswell Park in Buffalo late that same year. G. Kartha is author or co-author of eighty-nine publications and has presented eighty-two papers at scientific meetings. All dealt with one or other aspect of structural crystallography and the vast majority with the structures of molecules of biological interest. Of greatest importance is his determination of the molecular structure of the enzyme ribonuclease in 1967. This was the first protein structure elucidated and published in the United States. Of almost equal value is Kartha's work with G. N. Ramachandran on the structure of the fibrous protein collagen published in 1954 and 1955. Several of his papers dealt with methods of solving crystal structures using data furnished by X-ray diffraction. Pre-eminent among these is his use of anomalous dispersion to facilitate the location of heavy atoms in crystal structures containing large numbers of light atoms, and of applying this knowledge to finding the phases of the coefficients in the Fourier series representing these structures. This method was of great value in solving the

structure of ribonuclease and has since been widely used in solving the structures of proteins and other macromolecules. G. Kartha was a member of Sigma Xi, of the New York Academy of Sciences, and a Fellow of the Indian Academy of Sciences. His election to these honorary societies attests to the importance and originality of his contributions to science. His association with the Protein Structure Project, of which the author of this obituary was director, ensured the accomplishment of its mission. All structural crystallographers and especially those interested in biologically significant substances will keenly regret that Gopinath Kartha is no longer with us.

Dr **W. H. Taylor**, emeritus Reader in Crystallography in the University of Cambridge, died on 14 May 1984 at the age of 79. Dr. R. C. Evans writes that after graduating in physics in W. L. Bragg's laboratory at Manchester University in 1926, W. H. Taylor remained there as a research student and assistant lecturer until 1934 and in these eight years of exceptionally fruitful work published some dozen papers on the crystal structures of silicate minerals. In 1934 the award of a Leverhulme Research Fellowship enabled Taylor to spend two years working first in Cambridge, under J. D. Bernal, and then at the Davy Faraday Laboratory in London under Sir William Bragg. In these years he extended his interests into the field of organic structures but he resumed the study of silicates on his return to Manchester in 1936 as Head of the Physics Department of the College of Technology (now UMIST). He remained in this post until in 1945 he moved to Cambridge as Reader in Crystallography in the Cavendish Laboratory, an appointment he held until his retirement in 1971. It was a challenging task to re-establish the Crystallographic Laboratory after the war but Taylor's reputation attracted research workers in many fields and from many countries. He, himself, was able, with collaborators, to continue his work on feldspars and zeolites and to extend his interests into the field of metals and alloys.

Taylor's scientific talents were combined with exceptional ability as an administrator and diplomatist, and his services outside the laboratory were understandably in constant demand. He was a member of a number of governmental and other scientific committees, Chairman (1950–52) of the X-ray Analysis Group of the Institute of Physics and later (1955–64) a Vice-President of that Institute. He was actively associated with the organization of the international conference in London in 1946 that led to the

foundation of the International Union of Crystallography and he served the Union as Chairman of the Organizing Committee for the Fifth Congress in Cambridge in 1960 and as Chairman of the Programme Committee for the Sixth Congress in 1963.

Taylor's activities did not cease with his retirement: for five years thereafter he edited the *Philosophical Magazine* and simultaneously maintained his interest in feldspar studies in collaboration with an Italian group under Professor Quareni in Padua. In 1979, in recognition of over fifty years of research in mineralogy, he was honoured by the award of the Roebling Medal of the Mineralogical Society of America.

Professor **James A. Ibers** and Professor **Michael G. Rossmann** have been elected members of the National Academy of Sciences. Professor Ibers is leaving the Department of Chemistry at Northwestern University, Evanston, Illinois; he has recently accepted a new position at Santa Barbara.

Dr **Isabella Karle** has been selected by the American Institute of Chemists as one of the 1984 Chemical Pioneers for her work on the symbolic addition procedure for crystal structure determination.

## Notes and News

*Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England).*

*J. Appl. Cryst.* (1984), **17**, 373–374

### The M. J. Buerger Award

The first award in the name of Professor Martin J. Buerger is scheduled for presentation at the August 1985 meeting of the American Crystallographic Association in Stanford, California. The purpose of the award is to recognize a mature scientist who has made contributions of exceptional distinction in areas of interest to the American Crystallographic Association. These criteria were deliberately made very broad to reflect the wide range of contributions made by Professor Buerger, which included areas of crystal growth, morphology, structure analysis, phase transitions and instrumentation as well as education through his teaching and many classic text and reference books. Candidates are not restricted as to nationality, race, sex, religion or membership in ACA.

Nominations for the 1985 award, with accompanying documentation, should be submitted in writing to one of the members of the selection committee. The committee consists of Deane K. Smith (Chairman), Wayne A. Hendrickson, Charles T. Prewitt and Bernardt T. Wuensch. Nominations must be received by 15 January 1985.

*J. Appl. Cryst.* (1984). **17**, 374

### **The Sixth B. E. Warren Diffraction Physics Award**

The sixth Bertram Eugene Warren Diffraction Physics Award will be presented at the August 1985 meeting of the American Crystallographic Association in Stanford, California.

This award was established by students and friends of Professor Warren on the occasion of his retirement from the Massachusetts Institute of Technology. It is to be given for an important recent contribution to the physics of solids or liquids using X-ray, neutron or electron diffraction techniques. This includes, for example, work such as elastic or inelastic scattering studies of imperfections in crystals, or studies of liquids or amorphous materials, or developments in the diffraction theory or techniques appropriate to such problems; it does not include crystal structure determinations. Previous recipients of the award are U. Bonse and M. Hart (1970), J. D. Axe and G. Shirane (1973), S. Iijima and J. M. Cowley (1976), F. W. Lytle, D. E. Sayers and E. A. Stern (1979) and B. Post (1982).

Work eligible for this award must have been published between 1 July 1978 and 30 June 1984. There are no restrictions as to age, experience or nationality of recipients. The award, which is given every three years, consists of a certificate and \$2000 (increased this year from \$1000).

The following committee has been appointed to select the 1985 award recipient: B. Batterman, J. M. Cowley, F. K. Ross and R. A. Young (Chairman).

The selection committee requests that all interested persons send nominations with supporting documentation to arrive by 1 January 1985. Correspondence should be addressed to Professor R. A. Young, School of Physics, Georgia Institute of Technology, Atlanta, Georgia 30332, USA.