

struments and tools for the study of crystals and the production of crystal devices. These included, for example, an automatic X-ray diffractometer and plotting device [*Acta Cryst.* (1954), **7**, 620; (1955), **8**, 741], a successful high-temperature powder diffraction camera [*Rev. Sci. Instrum.* (1958), **29**, 654], and an instrument for determining lattice constants to a few parts in 10^6 [*Acta Cryst.* (1960), **13**, 814].

A member of Bell Telephone Laboratories' research department for forty years, he retired in 1968 to spend nine productive years at Stanford University in California. During this time he wrote a compendium of useful information, techniques, and instrumentation for crystal work. The book is entitled *Crystal Technology* and was published by Wiley in 1976. In the same year Walter Bond was awarded the Longstreth Medal of the Franklin Institute. He is survived by his wife, Eunice.

Professor **B. A. Bilby**, Head of the Department of the Theory of Metals at Sheffield University, Dr **P. Duncumb**, Tube Investments Research Laboratories, Saffron Walden, Professor **G. N. Ramachandran**, Professor of Biophysics at the Indian Institute of Science, Bangalore, and Professor **J. M. Thomas**, Head of the Department of Chemistry at University College, Aberystwyth, have been elected Fellows of the Royal Society.

Professor **F. C. Frank**, lately Professor of Physics at Bristol University, has been made a Knight Bachelor.

Professor **S. Krimm** of the Physics Department at the University of Michigan, Ann Arbor, has been awarded the High Polymer Physics Prize of the American Institute of Physics.

Dr **T. M. Sabine**, Head of the School of Physics and Materials at the New South Wales Institute of Technology has been elected President of the Australian Institute of Physics.

Dr **J. N. Sherwood** has been appointed a personal professor in the Department of Pure and Applied Chemistry, University of Strathclyde, Scotland.

Professor **C. A. Taylor**, Professor of Physics at University College, Cardiff, has been appointed Professor of Experimental Physics at the Royal Institution, London.

Professor **B. K. Vainshtein**, Director of the Institute of Crystallography of the Academy of Sciences of the USSR, in Moscow,

and Vice-President of the International Union of Crystallography, has been elected a full member (Academician) of the Academy of Sciences of the USSR in recognition of his contributions to physics and crystallography.

International Union of Crystallography

Structure Reports

Volumes 40B and 41A of *Structure Reports* have recently been published. Volume 40B, covering the literature for organic compounds for 1974, is bound in two parts (viii + 582 pages and ii + 645 pages) and costs 320 Netherlands guilders. Volume 41A, covering the literature for metals and inorganic compounds for 1975, (viii + 477 pages) costs 150 Netherlands guilders. A 47-page supplement for 1974-1975 to Section A (*Metals and Inorganic Compounds*) of the 60-Year *Structure Index* is being sold with Volume 41A, and is included in the price for that volume. Additional copies of the supplement are available at a price of 10 Netherlands guilders.

Orders for these publications may be placed direct with the publisher, Bohn, Scheltema & Holkema, Emmalaan 27, Utrecht, The Netherlands, with Polycrystal Book Service, PO Box 11567, Pittsburgh, PA 15238, USA, or with any bookseller.

World Directory of Crystallographers: Fifth Edition

The Fifth Edition of this most useful Directory has just been published on behalf of the International Union of Crystallography by Polycrystal Book Service, PO Box 11567, Pittsburgh, Pennsylvania 15238, USA, from whom copies may be ordered direct at a price of US \$10.00 post free. It contains short biographical data on 7641 scientists from 71 countries, arranged in alphabetical order by countries, and by individuals within the countries. The biographical data include full name and title, address, year of birth, highest degree, field of study, university and year of highest degree, present position, telephone number and major scientific interests. There is also a comprehensive name index.

The General Editor of the Directory is Dr S. C. Abrahams and the Associate Editor is Dr A. L. Bednowitz. Crystallographers have completed Data Input Forms and have submitted them to the national Sub-Editors. The Directory has been produced by a computer-controlled experimental printer from punched cards or magnetic tapes prepared by the Sub-Editors. All National Committees for Crystallography, and also all Sub-Editors for countries not represented in the Union but included in the Directory, have been given the opportunity to compile block orders for copies at a specially reduced price. These orders had to be submitted before the Directory was printed, but many countries took this opportunity to secure low-priced copies of the Directory for the personal use of their crystallographers.

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, 13 White Friars, Chester CH1 1NZ, England).

Crystal Growth Award of the American Association for Crystal Growth

The establishment of a new award for 'outstanding contributions to the field of crystal growth' was announced at Boston, Massachusetts, on 21 July 1977 by the American Association for Crystal Growth (AACG), at the Fifth International Conference on Crystal Growth. The Crystal Growth Award of the AACG, supported by the Union Carbide Corporation, will consist of a certificate citing the contributions for which the Award is given, a medal and an honorarium of \$3000.

The Award, to be presented triennially at the AACG's national meetings, will be given first in 1978. It may be shared by more than one individual, and the recipient(s) will be invited to deliver a lecture during the course of the ceremony. The basic criterion for eligibility is outstanding contributions to the field of crystal growth, through technical achievements, publications and presentations, and their impact on science and technology in crystal growth worldwide. Those selected need not be citizens of the United States. Nominations, together with concise supporting documentation, should be for-

warded by 1 November 1977 to Dr E. A. Giess, AACG Awards Committee, IBM, T. J. Watson Research Center, Yorktown Heights, NY 10598, USA.

Current Awareness Profile on Crystallography

A new publication entitled *Current Awareness Profile in Crystallography* is being published fortnightly by the Chemical Information Center, which is part of the Department of Chemistry of Indiana University. Each issue represents a computerized search of two consecutive issues of *Chemical Abstracts*, using the Chemical Abstracts Condensates tapes. Marketing restrictions on the use of these tapes currently prevent sales of the profile in some countries in Europe and elsewhere. The profile excludes all references to citations from *Acta Crystallographica*, since inclusion of these citations would have increased the cost of the profile by about 40% and it was felt that most potential subscribers to the profile would scan *Acta Crystallographica* in any case. However, the profile does include citations from the *Journal of Applied Crystallography*.

For subscribers in the USA the annual subscription is US \$37.50. Further information may be obtained from the Chemical Information Center, Department of Chemistry, Room 003, Indiana University, Bloomington, Indiana 47401, USA.

Proceedings of the Sagamore V Conference

The proceedings of the Sagamore V Conference on charge, spin and momentum densities, which was held in Kiljava, Finland, 16–20 August 1976, are about to be published in *Physica Scripta*. Orders for single copies should be addressed to *Physica Scripta*, Institute of Physics, PO Box 530, S-751 21 Uppsala, Sweden. The price is 50 Swedish Crowns. Conference participants and subscribers to *Physica Scripta* will receive copies automatically. The conference was organized with the assistance of the Commission on Charge, Spin and Momentum Densities of the International Union of Crystallography.

It is planned to hold the next conference in the series, Sagamore VI, during the period 19–25 August 1979 at Mont Tremblant, Quebec, Canada, under the chairmanship of Professor V. H. Smith, Department of Chemistry, Queen's University,

Kingston, Ontario, Canada K7L 3N6. Anyone wishing to have his name added to the Sagamore mailing list, in order to receive news of this conference and other projects of the Commission on Charge, Spin and Momentum Densities, should write to Dr M. J. Cooper, Department of Physics, University of Warwick, Coventry, Warwickshire CV4 7AL, England.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.

Advances in X-ray analysis. Vol.

19. Proceedings of the 24th annual conference on applications of X-ray analysis, Denver, Colorado, 6–8 August, 1975. Edited by R. W. Gould, Charles S. Barrett, John B. Newkirk and Clayton O. Ruud. Pp. xvi + 784. Dubuque, Iowa: Kendall/Hunt, 1976. Price \$37.00.

This tome contains fifty-two papers, of which forty-six are devoted to topics in X-ray spectroscopy and six are concerned with X-ray diffraction, together with an appendix on some parameters for calculating X-ray absorption coefficients. It is not an easy book to read because of the mathematical expressions involved in some papers. Nevertheless, the scientific content is varied, the overall presentation is of high standard, and the papers contain many valuable references, so that it should appeal to a wide range of practising X-ray analysts.

The forty-six papers on X-ray spectroscopy are divided into six headed sections. The first of these contains fourteen papers on mathematical correction procedures which suffer a little from the repetition of material, but the reader may forgive this minor irritation when considering the immense value of individual contributions. The third section contains fifteen papers on environmental analysis, and the fourth section contains three papers on biomedical applications. Both of these sections will be found invaluable to workers in the two fields, and the concentration of effort on small-sample analysis should be of interest to workers in other disciplines. The second section of five papers on phenomena and applications might well have been integrated with the fifth section of five papers on

laser analysis and the sixth section of four papers on soft X-ray and surface analysis under one heading, such as 'techniques'. However, this comment reflects on aesthetic feeling and should not deter the prospective reader in any way.

For the user of crystal-dispersive X-ray fluorescence spectroscopy the picture is one of consolidation rather than of technical advance, thereby implying a confidence which in itself might be regarded as significant advance. The energy-dispersive technique continues to stimulate interest because of the advantages in simultaneously displaying wide spectral regions, and despite the somewhat limited resolution of present equipment. It seems possible that excitation by monochromatic sources will find increasing use in both crystal-dispersive and energy-dispersive analyses because of the reduction of unwanted background and also the advantages gained in performing matrix corrections as compared with techniques using polychromatic excitation sources. However, the ultimate goal, an absolute method of instrumental element analysis, does not yet seem to be near at hand despite the advances made in computer control.

The six papers on X-ray diffraction are incorporated into one section. The first two papers deal with environmental analyses and particular attention is given to problems associated with determining asbestos levels. The next two papers are concerned with analysing residual stress in metals, one using a position-sensitive X-ray detector together with computer automation, and the other considering the separation of anomalous and true macrostresses which arise in uniaxial plastic deformation. The fifth paper deals with automating the study of orientation by back-reflexion Laue photographs, and the final paper is concerned with peak height as a measure of integrated intensity for quantitative X-ray powder-diffraction phase analyses. At first sight the X-ray diffraction content of this book may seem to be outweighed by the comparatively large number of papers on X-ray spectroscopy. However, there is much here to interest the discerning crystallographer who can draw parallels between analytical procedures with an eye to future developments.

Finally, although no special search has been made for errors or omissions (particularly amongst the complex mathematical expressions), there is an obvious gap at the bottom of p. 628. Occasional infelicities of language have been noted, but these can be ignored by most readers.