

## International Union of Crystallography

### *International Tables for X-ray Crystallography*

The Executive Committee of the International Union of Crystallography has found it necessary to increase the prices of the four volumes of the present series, which are published for the Union by The Kynoch Press. Volumes I, II and III will now cost £9.50 per volume whilst Volume IV, which was published in September 1974, will cost £11.50. Orders may be placed direct with The Kynoch Press, Witton, Birmingham B6 7BA, England, with Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A. or with any bookseller.

Preferential prices for *bone fide* crystallographers, who must give a written undertaking when purchasing a volume that it is for their own use only, have been increased to £5.00 for Volumes I, II and III and £7.00 for Volume IV. Orders for volumes at preferential prices must be sent direct to The Kynoch Press or Polycrystal Book Service, from whom prospectuses are obtainable. All prices include postage.

### *Molecular Structures and Dimensions*

The International Union of Crystallography and the Cambridge Crystallographic Data Centre announce the publication of the latest volume in this series: Volume 7, entitled *Bibliography 1974-75, Organic and Organometallic Crystal Structures*. This volume covers the literature till mid 1975 for the principal journals and contains references to over 2400 structure determinations.

The price of the new volume is 70 Netherlands guilders. Personal copies may be purchased at a reduced price of 50 Netherlands guilders. Copies are available directly from Bohn, Scheltema & Holkema (formerly Oosthoek, Scheltema & Holkema), Emmalaan 27, Utrecht, The Netherlands. Alternatively, orders may be placed with Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A. or with any bookseller.

## Book Review

*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.*

**Atlas of optical transforms.** By G. HARBURN, C. A. TAYLOR and T. R. WELBERRY. Pp. 33, Figs. 2, Plates 32. London: Bell, 1975. Price £6.00.

The original idea of Sir Lawrence Bragg of exploiting the analogy between optical diffraction and X-ray diffraction in solving structural problems received its greatest stimulus from the work of the Manchester school of research under Professor H. Lipson in the early 1950's. With their background of experience, optical transform methods have since evolved as a useful aid in the elucidation of structures from X-ray diffraction patterns. The gradual realization of the diverse fields of applicability of optical transforms such as electron microscopy, image processing and astronomy and their immense potential in teaching optics at all levels, as witnessed by various publications in this field, has further increased their importance. In spite of the amazing advance made by the advent of digital computers towards easing computational burdens, the use of optically-derived transforms will retain its own importance in all fields of investigation where use of Fourier transform principles has any relevance, owing to the inherent appeal of visual presentation of transforms in two dimensions. The *Atlas of Optical Transforms* is a welcome addition to the scanty collection of books in this field. The book offers a wonderful display of optical transforms of objects with gradually increasing complexity. The text is reduced to a minimum. The 32 plates depicting the transforms comprise the main bulk of the book. The immaculate quality of the photographs of the transforms recorded with a laser diffractometer, with a wide selection of objects ranging from simple

molecules to the double helix, amply demonstrates the authors' perseverance, experience, ability and above all their sincerity of purpose in presenting to the prospective users a volume that may be justifiably called an 'atlas'. Coverage given to the visual illustration of basic properties of Fourier transforms, convolution and multiplication processes, optical Fourier synthesis and the effects in transform space of various kinds of disorders in lattice structure adds to the educative value of the book. The use of two languages (English and French) for the notes on the plates, as well as in the main text, enlarges its sphere of utility. One aspect of the book that I do not feel very happy about is the confinement of the selection of the objects to more or less hypothetical structures. Inclusion of a few transforms of original structures by way of explaining the underlying principles would have added to the objectivity and stature of the book. Further, reduction of the text appears to me to be rather severe for newcomers in the field. A few blemishes in reproduction of the transform photographs, particularly in plate 2, may perhaps be attributed to the publisher's oversight. The book is well printed in an attractive format worthy of an atlas. On the whole the aim of the book is achieved successfully.

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