

field of study, university and year of highest degree, present position, telephone number and major scientific interests. There is also a comprehensive name index.

For those crystallographers whose names have not been included in the Sixth Edition and for any whose entries

contain errors, Data Entry forms for the Seventh Edition are available from Dr Allan L. Bednowitz, General Editor, IUCr World Directory of Crystallographers, c/o IBM T. J. Watson Research Center, PO Box 218, Yorktown Heights, NY 10598, USA.

## 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.*

*Acta Cryst.* (1981). A37, 944

**Дифракционный и резонансный структурный анализ.** Г. С. ЖДАНОВ, А. С. ИЛЮШИН И С. В. НИКИТИНА (**Diffraction and resonance analysis.** By G. S. ZHDANOV, A. S. ILYUSHIN and S. V. NIKITINA.) Pp. 250. Moscow: Nauka, 1980. Price 80 k.

As mentioned in the preface by Zhdanov, editor of this book, this work is intended for students of physics and for research workers for whom structure analysis is not their major speciality. The book consists of two parts: the first eight chapters deal with diffraction methods, while the remaining five chapters are concerned with nuclear gamma resonance (NGR).

The first part begins with a brief formulation of the main problems of structure analysis, which is followed by a consideration of Fourier transforms, the interference function of a crystal, symmetry and extinction conditions and, finally, the scattering of X-rays by atoms and crystals.

The book elucidates experimental methods and gives a description of some apparatus, mainly of Soviet instrumentation. In a survey of structural investigations, which is, by necessity, brief, the authors touch on such problems as scattering by ageing alloys, phase analysis including phase transitions, X-ray dilatometry, and transformations at high temperatures and pressures. The actual determination of atomic structure is not touched upon. The exposition is concerned, in the main, with X-ray diffraction, and only the ideal crystal is considered, as in the Bragg case, this being done in the old-fashioned Darwin style.

The second part of the book is a brief exposition of the principles of the theory of nuclear gamma resonance, and of the experimental methods and parameters and the standardization of spectra associated with the Mössbauer effect.

Of special interest are chapters XI and XII, which are devoted to NGR spectroscopy and diffraction. The author (Nikitina) considers these effects as a possible means for the investigation of crystal structure, always having in mind such problems as a determination of the value and orientation of electric and magnetic fields, and the magnetic and electric structure of crystals. Mention is also made of phase composition, coordination of atoms and some other parameters of the crystalline medium.

For the time being, the reviewer does not share the authors' optimism about the creation of Mössbauer diffraction, in particular, as applied to supercomplex structures.

The book under review can be recommended as a useful textbook, which is a rather general, although brief, exposition of the problems touched on in the text.

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## Books Received

*The following books have been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay.*

**Landolt-Börnstein. Numerical data and functional relationships in science and technology. Group III. Crystal and solid state physics. Vol. 7. Crystal structure data of inorganic compounds. Part d2.** By A. PIES and A. WEISS. Key elements: B, Al, Ga, In, Tl, Be. Substances Nos *d*7000 to *d*8399. Pp. xxv + 327. Berlin: Springer-Verlag, 1980. Price DM 425.00, US\$250.80. The companion part, part *d*, containing data of substances *d*1 to *d*6999, is expected during 1981.

**Direct methods in crystallography.** By CARMELO GIACOVAZZO. Pp. xv + 432. London and New York: Academic Press, 1980. Price £37.80, US \$87.00. A review of this book, by Paul T. Beurskens, has been published in the September 1981 issue of *Acta Crystallographica*, Section B, page 1801.