Debye–Waller factor was reviewed. The Commission agreed that the significance of such estimated standard deviations may be ambiguous. In the case of high anisotropy, the estimated standard deviation is necessarily large although the individual anisotropic parameters may be well determined. In future, the presence of unusual anisotropy should be referred to in the text (including the maximum and minimum amplitudes and any nonpositive-definite coefficients found), or in the table of B_{eq} (by use of an asterisk), or illustrated by a plot of the atomic vibrational ellipsoids.

Calculated hydrogen-atom coordinates: Calculated hydrogen-atom coordinates will be published in future only at the Co-editor's discretion and if they are necessary to the understanding of the paper. They will otherwise be deposited.

Graphical chemical formulae: A graphical structural formula should always be given in the report of a structure determination of an organic or organometallic compound. The figure showing the atomic positions is not adequate for this purpose. However, a plot of the atomic vibrational ellipsoids can be used to illustrate atomic positions. Authors should ensure that such plots are of good contrast and quality. The numbering of atoms should be consistent throughout a paper and, as far as possible, correspond to the systematic name |*Acta Cryst.* (1982). B**38**, 700|.

Least-squares planes: Least-squares planes and the deviations from them will only be published if they are referred to in the text of the paper and are significant in the consideration of the structure. They will otherwise be deposited.

Absorption correction: In a structural paper the absorption correction, if any, should always be described and the maximum and minimum corrections stated.

Melting point: In a structural paper the melting point of a compound should always be given if it is known.

Stereofigures: The requirement on stereofigures is one per structure unless the Co-editor and referees feel that more are necessary for the understanding of the structure described in the paper. These stereoviews must fit into a single column (80 mm wide). Authors are reminded that a nonstereo view (half a pair) is often an acceptable alternative to the stereo pair. In stereo pairs the relative sizes of the molecule and the whole figure should be such that when the figure is printed in a column of 80 mm, the individual atoms are easily distinguishable. The center-to-center separation in stereofigures must not exceed 55 mm.

In a charge density paper only one or two figures are required to illustrate the techniques or results described: any others will be deposited. The text should be adequate to give the remaining information.

Figures

Size: Illustrations should normally present information so that each figure or part of a figure can be printed in one column (80 mm width). Co-editors will need to be satisfied that the information density is high enough, if authors wish figures to be printed larger than this.

Half-tone illustrations: When a paper includes half-tone illustrations (photographs), particularly diffraction photographs, authors are asked to indicate on a photocopy which are the important parts of the figure, so that these may be given the correct emphasis when the paper is printed.

The attention of authors is also drawn to notices concerning stereofigures |*Acta Cryst.* (1978). B**34**, 3846|, dimensions of material for deposition |*Acta Cryst.* (1979). B**35**, 792|, estimated standard deviations, SI units and anisotropic thermal parameters |*Acta Cryst.* (1979). B**35**, 1302|, submission of connected computer output |*Acta Cryst.* (1979). B**35**, 2284–2285|, chemical-connectivity relationships |*Acta Cryst.* (1980). B**36**, 1524|, estimated standard deviations with a zero value for varied parameters |*Acta Cryst.* (1980). B**36**, 2508|, standards for the publication of powder pattern data |*Acta Cryst.* (1981). B**37**, 1161|, deposition of macromolecular atomic coordinates and structure factors with the Protein Data Bank |*Acta Cryst.* (1981). B**37**, 1161; (1982). B**38**, 1050|, submission of manuscripts based on powder diffraction profile fitting or refinement (Rietveld) methods: deposition of data |*Acta Cryst.* (1981). B**37**, 1162|, format for papers to be published in *Acta Crystallographic*, Section C |*Acta Cryst.* (1982). B**38**, 699|, and chemical formulae and nomenclature |*Acta Cryst.* (1982). B**38**, 700|, in addition to the information given in *Notes for Authors* |*Acta Cryst.* (1978). A**34**, 143–157|.

Acta Cryst. (1982). A**38**, 396

Structure Reports

Volume 44B and Volume 46A of *Structure Reports* have recently been published. Volume 44B covers the literature for organic compounds for 1978, is bound in two parts (572 pages and 707 pages) and costs 374 Netherlands guilders for subscribers with standing orders. The full price for individual copies is 440 guilders but personal subscribers may buy a copy for their own use at 220 guilders. Volume 46A covers the literature for metals and inorganic compounds for 1980 (464 pages) and costs 153 Netherlands guilders for subscribers with standing orders. The full price for individual copies is 180 guilders but personal subscribers may buy a copy for their own use at 90 guilders. Orders for these publications may be placed direct with the publisher, D. Reidel Publishing Company, PO Box 17, 3300 AA Dordrecht, The Netherlands, or with any bookseller. Trade orders should be sent to Reidel.

Acta Cryst. (1982). A**38**, 396–397

Molecular Structures and Dimensions

The International Union of Crystallography and the Cambridge Crystallographic Data Centre have published Volume 12 of the series, entitled *Bibliography* 1979–80, *Organic and Organometallic Crystal Structures*. It contains bibliographic information on 3836 structures published during 1979–1980. As in previous volumes the entries are arranged in 86 chemical classes and cover organic compounds, complexes and organometallic compounds. There are extensive indexes for authors, compound names and formulae.

The price of the new volume is 100 Netherlands guilders. Personal copies may be purchased at a reduced price of 75 Netherlands guilders. Copies are available directly from D. Reidel Publishing Company, PO Box 17, 3300 AA Dordrecht, The Netherlands, or from any bookseller. Trade orders should be sent to Reidel.

Acta Cryst. (1982). A**38**, 397

Fifty Years of Electron Diffraction

Fifty Years of Electron Diffraction was published in 1981 by D. Reidel Publishing Company for the International Union of Crystallography and is edited by Peter Goodman, CSIRO, Melbourne, Australia. This important publication is the first of its kind to present the history and the current status report of this rapidly growing subject. It provides a valuable reference source for students and researchers in the associated fields of crystallography, scattering physics, molecular structures in gases and the electron microscopy of solids. Part I gives a lively, newly researched account of the pioneer period, 1924–1928, when industrial research and early quantum mechanics produced the first definite evidence for electron diffraction. Part II completes the history with memoirs from 36 of the most distinguished scholars in the field. Part III is a text-level reference on six branches of the subject, ranging from scattering theory through to structure analysis. Liberally illustrated, the volume incorporates a comprehensive literature survey.

Both cloth- and paper-bound copies are available at 155 and 80 Netherlands guilders respectively. Copies may be ordered from the publishers, D. Reidel Publishing Company, PO Box 17, 3300 AA Dordrecht, The Netherlands or from any bookseller.

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. (1982). A**38**, 397

Crystals: growth, properties and applications. Vol. 4. Edited by H. C. FREYHARDT. Pp. 219. Berlin, Heidelberg, New York: Springer Verlag, 1980. Price DM 98.00, US $ approx 57.90.

This volume contains three independent review articles. Each article is well organized, thorough, clear, and, therefore, easy to read. Each includes much practical information about experimental methods and results, with ample discussion of underlying theory.

The first article is *High purity organic molecular crystals* by Norbert Karl. The article begins with a section on purification, which concentrates principally on zone refining, but also discusses sublimation, distillation, recrystallization, chromotography, chemical reaction, and synthesis. Next is a section which covers methods of growing single crystals, including Bridgman, sublimation, pulling, solution, and melt methods. The next section discusses characterization of the crystals, including analysis of their purity and structural perfection. Finally, two sections cover the preparation of oriented and polished specimens, and applications of the materials. This article has 100 pages and 315 references.

The second article is *Rare-earth germanates* by Ludmila N. Demianets, Anatoly N. Lobachev & Gennadi A. Emelchenko. The first section reviews the crystal structures of these materials. The second section discusses single-crystal growth; it concentrates mainly on hydrothermal methods, with a brief discussion of solution (flux) methods. The final section discusses characterization of the materials, principally by spectroscopic methods. This article has 44 pages and 102 references.

The third article is *Growth, properties, and applications of narrow gap semiconductors* by Horst Maier & Joachim Hesse. This article discusses $Pb_{1-x}Sn_xTe$, $Pb_{1-x}Sn_xSe$, and $Hg_{1-x}Cd_xTe$, and their applications as infrared detectors and laser diodes. First, the material requirements of these devices are discussed. Then a discussion of the phase diagrams of the three systems is given. Two following sections cover the growth of single crystals and epitaxial films. Melt, solution, vapor, Bridgman, zone melting, travelling solvent, solid-state recrystallizatin, and annealing methods are discussed. Liquid phase, vapor phase, molecular beam, and r.f. sputtering methods of epitaxial film growth are covered. The final section discusses infrared detector and laser diode device structures and technologies. This article has 75 pages and 249 references.

This book is highly recommended to anyone interested in the subjects covered. It will be found useful whether or not the reader has previous experience in these subjects.

M. D. LIND

Rockwell International
PO Box 1085
Thousand Oaks
California 91360
USA

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Structural phase transitions. I. Edited by K. A. MÜLLER and H. THOMAS. Pp. x + 190. Berlin: Springer Verlag, 1981. Price $29.50, DM 50.00.

With the inevitable increase in the degree of specialization, one encounters the problem of either having single-author