2. *International Tabels for X-ray Crystallography*

The sterling prices of *International Tables for X-ray Crystallography* remain unaltered at £6·50 per volume, with a preferential price of £3·75 for *bone fide* crystallographers purchasing a copy for their own use. The equivalent dollar prices are now $17.00 and $10.00. Orders may be placed direct with the publishers, The Kynoch Press, P.O. Box 216, Witton, Birmingham 6, England, with Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A. or with any bookseller.

3. *Structure Reports* and other publications of the Union

The prices of these publications are given in Netherlands Guilders (*f*) with the current equivalent dollar and sterling prices in parentheses.

(i) *Structure Reports*

Volume 8	*f* 80 ($25.00 or £ 9·60)
Volume 9	*f* 70 ($22.00 or £ 8·40)
Volume 10	*f* 55 ($17.00 or £ 6·60)
Volume 11	*f*100 ($31.00 or £12·00)
Volume 12	*f* 70 ($22.00 or £ 8·40)
Volume 13	*f*100 ($31.00 or £12·00)
Volume 14	*f* 35 ($11.00 or £ 4·20)
Volume 15	*f*110 ($34.00 or £13·20)
Volume 16	*f*120 ($37.50 or £14·40)
Volume 17	*f*125 ($39.00 or £15·00)
Volume 18	*f*120 ($37.50 or £14·40)
Volume 19	*f*100 ($31.00 or £13·20)
Volume 20	*f*100 ($31.00 or £13·20)
Volume 21	*f*100 ($31.00 or £13·20)
Volume 22	*f*140 ($43.50 or £16·80)
Volume 23	*f*120 ($37.50 or £14·40)
Volume 24	*f*140 ($43.50 or £16·80)
Volume 25	*f* 90 ($28.00 or £10·80)
Volume 26	*f*140 ($43.50 or £16·80)
Volume 27	*f*200 ($62.00 or £24·00)

Orders for *Structure Reports*, or for any of the other publications listed below, may be placed with the publishers, N.V. A. Oosthoek's Uitgevers Mij., Domstraat 5–13, Utrecht, The Netherlands, with Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A. or with any bookseller. Special price reductions are available on *Structure Reports* for standing orders and for ten-year sets, and for private subscribers purchasing copies for their own use. Details may be obtained from the publishers, Oosthoek's, or from Polycrystal Book Service.

(ii) *Other Publications*

Molecular Structures and Dimensions

Volume 1	*f*45 ($14.00 or £5·40)
Volume 2	*f*35 ($11.00 or £4·30)
Volume 3	*f*55 ($17.00 or £6·50)

Private subscribers' prices:

Volume 1	*f*32 ($10.00 or £3·90)
Volume 2	*f*27 ($ 8.50 or £3·30)
Volume 3	*f*39 ($12.50 or £4·70)

Fifty Years of X-ray Diffraction (P. P. Ewald)
*f*40 ($12.50 or £4·80)

Symmetry Aspects of M. C. Escher's Periodic Drawings (C. H. MacGillavry)
*f*24 ($ 7.50 or £2·90)

Early Papers on Diffraction of X-rays by Crystals (first volume – J. M. Bijvoet, W. G. Burgers & G. Hägg)
*f*48 ($15.00 or £5·80)

World Directory of Crystallographers, fourth edition
*f*17 ($ 5.00 or £2·00)

Index of Crystallographic Supplies, third edition
*f*10 ($ 3.50 or £1·35)

Bibliographies on X-ray diffraction at high and low temperatures, on methods of obtaining monochromatic X-rays and neutrons and on small-angle scattering, a *Crystallographic Book List* and a *World List of Crystallographic Computer Programs* (second edition) are all priced *f*10 ($3.50 or £1·35).

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (M. M. Woolfson, Physics Department, University of York, Heslington, York YO1 5DD, England). As far as practicable books will be reviewed in a country different from that of publication.

Landolt–Börnstein. Numerical data and functional relationships in science and technology. Vol. 5. Edited by K.-H. HELLWEGE and A. M. HELLWEGE. Pp.xxi+736. Berlin: Springer, 1971. Price (cloth) DM 960, U.S. $277.20.

This volume of the New Series tabulates data for organic and organometallic compounds whose structures have been completely or partially determined by X-ray, neutron or electron diffraction. The literature is covered from 1922 to 1968 and the material is arranged in two books – part *a* deals with C_1–C_{13} and part *b* with C_{14}–C_{120} compounds. Protein structures are excluded.

The introduction (in both German and English) describes the data presentation and defines the system of abbreviations. Compounds are ordered by molecular formula and for each determination the typical data elements are: molecular formula, compound name, F.W., space group, cell dimensions, Z, D_m, D_x, R value, literature reference, chemical structural formula. One column of the tables is reserved for additional information such as melting point, crystallization solvent, habit, colour, optics, isotypic relationships *etc.* For incomplete determinations the R value may be replaced by an indication of whether a structural model has been proposed. In the case of natural products a cross-reference is provided for the molecular formula of the

parent substance which guides the reader to the appropriate derivative study.

In part *b* three indices are presented – literature reference, compound name and a special name index for coordination and organometallic compounds. The latter provides a dual search facility based on the central atom or the ligand.

One of the key factors in the usefulness of these tables is the presence of structural formulae, which offsets the difficulties of chemical nomenclature. Another important aspect of the compilation is that the data on cell dimensions, solvent, *R* index can be of great value to someone who would like to re-examine an old determination with modern structure-solving techniques. Undoubtedly the price of the publication will restrict circulation to libraries but the editors must be congratulated on the quality of this important contribution to crystallographic data compendia.

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Flavins and flavoproteins. Proceedings of the Third International Symposium of Flavins and Flavoproteins. Edited by H. KAMIN. Pp. xvii+712. Baltimore: University Park Press and London: Butterworths, 1971, Price £12·60.

This book is the third in a series of symposia on flavins and flavoproteins held every three years (for previous volumes, *cf. Flavins and Flavoproteins,* edited by E. C. Slater, Amsterdam, Elsevier, 1965; and *Flavins and Flavoproteins,* edited by K. Yagi, University of Tokyo, 1968) and represents well the spectrum of scientific endeavour designed to elucidate the mechanisms of flavoprotein catalytic function. The book is not a general review of flavin and flavoprotein chemistry, but rather serves as a review of specialized areas of research in the study of flavin-containing systems of biological importance. The areas of scientific endeavour range from purely biochemical studies on flavoprotein purification methods to physical organic studies on reactions of model flavin compounds. Each chapter generally contains a detailed list of pertinent references and a detailed record of the discussion and comments following each presentation. The reading of these comments, despite their occasional limited value, serves to illuminate points of controversy which would not be apparent otherwise to those uninitiated in the lore of flavinology.

The third symposium represents a departure from the previous two in that several chapters pertain to X-ray diffraction studies of flavin derivatives and flavoproteins. Kierkegaard and co-workers present a review of their results of X-ray diffraction studies of ten derivatives of isoalloxazine, the parent flavin compound. There is limited description of experimental details, but bond angles and bond lengths are well tabulated. Ludwig and co-workers present a preliminary crystallographic study of clostridial flavodoxin (which we learn in the book is an unacceptable name for the enzyme) consisting primarily of a comparative study of diffraction patterns of the crystalline enzyme in various oxidation states and heavy atom complexes. Determination of the structure of a hydrogen-bonded complex between riboflavin and 5′-bromo-5′-deoxyadenosine by Voet and Rich is of interest since it suggests a stereochemical model of the structure of flavin adenine dinucleotide, the prosthetic group of numerous flavoproteins which has thus far not been successfully crystallized. Aside from the use of X-ray powder diagrams to help determine the minimum molecular weight and quaternary structure of cytochrome b_2 (Labeyrie and co-workers), there are no other studies reported of direct relevance to X-ray crystallographers. A notable contribution, however, in another area of flavin chemistry for which detailed structural information is of importance is the review by Song of the excited state chemistry and physics of flavin molecules. This represents probably the most comprehensive discussion and theoretical treatment to date of this subject.

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