

Reference

COCKS, F. H., PREECE, C. M. & KING, H. W. (1966). *Phys. Lett.* **22**, 287–288.

Crystallographers

This section is intended to be a series of short paragraphs dealing with the activities of crystallographers, such as their changes of position, promotions, assumption of significant new duties, honours, etc. Items for inclusion, subject to the approval of the Editorial Board, 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).

The Executive Committee of the International Union of Crystallography elected at the Tenth General Assembly at Amsterdam for the triennium to 1978 is as follows: President – Professor **A. Magnéli**, Vice-President – Professor **B. K. Vainshtein**, General Secretary and Treasurer – Professor **S. E. Rasmussen**, Immediate Past President – Professor **Dorothy Hodgkin**, Ordinary Members Dr **F. R. Ahmed**, Professor **E. F. Bertaut**, Professor **K. Kuchitsu**, Dr **K. Łukaszewicz**, Dr **S. Ramaseshan**, Dr **D. P. Shoemaker**.

Professor **L. H. Jensen** and Professor Dr **D. Mootz** have resigned as Co-editors of *Acta Crystallographica*. Dr **F. R. Ahmed**, Division of Biological Sciences, National Research Council of Canada, Ottawa, Professor Dr **H. Bärnighausen**, Institut für Anorganische Chemie der Universität Karlsruhe, and Professor **E. C. Lingafelter**, Department of Chemistry, University of Washington, have been appointed Coeditors in their places.

Professor **M. M. Woolfson** has resigned as Book Review Editor of *Acta Crystallographica* and *Journal of Applied Crystallography*. Dr **J. H. Robertson**, School of Chemistry, University of Leeds, has been appointed to take his place.

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.

International tables for X-ray crystallography. Vol. IV. Edited by **J. A. Ibers** and **W. C. Hamilton**. Pp. xi + 366, Figs. 10, Tables 39. Birmingham: Kynoch Press, 1974. Price £10.

Volume IV of *International Tables* contains updated values for much of the

numerical information in Volume III and also extra material concerning certain aspects of crystallography which have been extensively developed since the earlier volumes were published. The choice of the latter topics was partly due to the personal preferences of the editors and although important topics have been omitted, crystallographers will welcome the authoritative treatment of important subjects which is presented in the later sections.

Section 1 contains tables of X-ray wavelengths, one collated according to the atomic number of the elements and a second table collated in increasing wavelength. This section gives a much more extensive tabulation than is found in Volume II.

Section 2 begins with tables of X-ray cross sections and attenuation coefficients. These are followed by tables of X-ray scattering factors. New in this volume are a table of coefficients for an analytical approximation to the scattering factors giving maximum and mean errors, and a table of X-ray scattering factors of unfilled orbitals which may be used for aspherical atoms. The table of dispersion corrections for X-ray scattering factors gives what are apparently more accurate values than in Templeton's tabulation in Volume III, but no indication of accuracy or variation with $\sin \theta$ is given. The electron scattering factor tables are much more extensive than in Volume III, occupying more than one hundred pages.

Section 3 is devoted to diffractometer geometry. A series of excellent sub-sections by the late W. C. Hamilton deals with the mathematical aspects of the calculation of setting angles, the determination of an orientation matrix and measurement procedures.

Section 4 by the same author, gives a table for *R*-factor ratio significance tests and tables for analysing least-squares weights for consistency. The accompanying discussion is very valuable.

Section 5 contains mathematical articles by C. K. Johnson and H. A. Levy on the thermal motion of independent atoms and rigid bodies. The correction of interatomic distances and angles for thermal motion is also covered. A final sub-section deals with the site symmetry restrictions on the coefficients of thermal-motion tensors.

In Section 6, J. Karle discusses the solution of the phase problem by direct methods. Tables for assisting origin specification along with examples of choices of phases for the different space-group types are included. The following

two sub-sections include discussions on the normalization of structure factors and phase-determining formulae. The final sub-section discusses the symbolic addition method of application of these formulae in X-ray and neutron diffraction. It is a pity that greater recognition is not given to the computer applications of the formulae that have developed in the last ten years. Although Section 6 contains some very useful material, the clarity of presentation of the textual material is not up to the high standard of the previous sections.

In sum, Volume IV is a fine addition to the other volumes. The earlier volumes of the pre-computer era now look rather dated. One hopes that Volume IV sets a standard that will be followed by future volumes in this series.

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Writing scientific papers in English. By **M. O'CONNOR** and **F. P. WOODFORD**. Pp. vii + 108, Figs. 9. Amsterdam: North-Holland, 1975. Price £21.00 (about US \$7.95).

This book could have quite an important influence upon the standard of presentation of scientific work. It gives advice about all aspects of writing papers for publication; although it is aimed particularly at foreigners writing in English, most English-speaking writers could learn a great deal from it as well. The fact that it is primarily directed at biologists does not in the least detract from its usefulness to physical scientists, and, if the authors of papers presented to this Journal were to accept the instructions given, the task of the Editors of this Journal would be made much easier. (For example, it is stressed that typing should be double-spaced – a request in our *Notes for Authors* that is largely ignored.)

The chapters are all very useful and could hardly be bettered. Instructions are given clearly and concisely and in unpretentious language. Grammar is treated only briefly, but the points made are those that the authors consider particularly important; we should, however, have welcomed a longer discussion of the use of hyphens, which we think could make some scientific writing a great deal less mystifying than it often is. Since English makes much use of nouns