

International Union of Crystallography

Commission on Journals

The Commission on Journals held an extensive series of meetings in connexion with the Tenth General Assembly of the International Union of Crystallography, and makes the following announcements.

Composition of the Editorial Boards

Professor L. H. Jensen and Professor D. Mootz have retired as co-editors of *Acta Crystallographica*, and Professor M. M. Woolfson as book-review editor. The Commission is deeply grateful to them for their services to the crystallographic community. The Executive Committee has approved the appointments of Dr F. R. Ahmed, Professor G. Allegra, Professor H. Bärnighausen and Professor E. C. Lingafelter as co-editors of *Acta Crystallographica*, and of Dr J. H. Robertson as book-review editor.

Four other co-editors have given notice of their intention to retire as soon as replacements can be found.

Notes for Authors

The Commission has decided to undertake a revision of *Notes for Authors*. Deposition of structure-factor tables will become the normal practice, and publication will take place only when the nature of the paper is such that immediate reference to the tables is necessary. Any suggestions for other changes in *Notes for Authors* would be welcome and should be sent to the Chairman of the Commission, Professor A. J. C. Wilson, Department of Physics, The University of Birmingham, Birmingham B15 2TT, England.

Appointments in the IUCr Office

Mr S. A. Bryant retired on 31 December 1975 from the position of Technical Editor which he had held for thirteen years. Mr Bryant graduated at Oxford in 1930 with first class honours in chemistry and crystallography, having studied the latter under T. V. Barker. After also obtaining the degree of B. Sc. by research he spent two years at Armstrong College (now part of the University of Newcastle-upon-Tyne) as a lecturer in organic chemistry, followed by a further period of research at the University of Bristol. In 1934 he moved to the Forest Products Research Laboratory, Princes Risborough, and from ten years later to Shell, in which he was successively research chemist, technical information officer in the London office, and senior technical editor at the Thornton Research Centre near Chester.

In 1962 the then Technical Editor of *Acta Crystallographica*, Professor R. W. Asmussen, signified his desire to resign as at the end of that year, but it proved impossible to find a successor who could continue the work on the previous part-time basis. The Executive Committee of the IUCr therefore decided to appoint a full-time Technical Editor for Union publications, and Mr Bryant started work in this capacity on 15 November 1962. For some time he worked alone, but because of the continued expansion of *Acta Crystallographica* it soon became necessary to engage first a secretary and then an Editorial Assistant. After the division of the journal into two sections at the beginning of

1968, and the launching of the *Journal of Applied Crystallography* in the same year, an even more rapid increase ensued in the number of journal pages published annually, and the technical editing staff needed to be further enlarged. The normal complement in addition to the Technical Editor is now an Assistant Technical Editor, two Editorial Assistants, and a secretary.

Dr D. W. Penfold, at present Assistant Technical Editor, succeeds Mr Bryant as Technical Editor from 1 January 1976. Dr Penfold studied at Imperial College, London, where he obtained an honours degree in physics, becoming an Associate of the Royal College of Science. Subsequently he carried out research on the relation of superconductivity to structure in β -W type compounds, for which he was awarded the degree of Ph. D. He spent a short period as a research assistant at University College London before joining the full-time editorial staff of the Union on 12 July 1971.

Dr J. E. Derry, who has been a member of the Technical Editor's staff since January 1972, becomes Assistant Technical Editor in succession to Dr Penfold. Dr Derry is an honours chemistry graduate of the University of Birmingham, where he also obtained a Ph. D. in X-ray crystallography for his research on the structures of diquat and related compounds. He is a co-author of a number of recent papers in *Acta Crystallographica*.

Mr R. S. Daykin resigned as Editorial Assistant last year and two new Editorial Assistants were appointed. Mrs S. Wallis, an honours graduate in physical sciences of the University of Surrey, joined the Chester office on 1 September 1975, having previously worked for a year in Karlsruhe with the European Institute for Transuranic Elements. Mr M. H. Dacombe, a first-class honours graduate of the University of Leeds, where he studied chemistry and earth sciences, commenced work in Chester on 1 October 1975. Mr Dacombe was previously on the staff of the BNF Metals Technology Centre, and was editor of the monthly bulletin *BNF Abstracts*.

Structure Reports

Five more volumes of *Structure Reports* have just been published, completing the coverage of the literature on structure determinations for metals and inorganic compounds up to the end of 1973. The volumes in question are:

Volume 32A, covering the literature for metals and inorganic compounds for 1967 (viii + 525 pages). Price: 115 Netherlands guilders.

Volume 34A, covering the literature for metals and inorganic compounds for 1969 (viii + 413 pages). Price: 90 Netherlands guilders.

Volume 37A, covering the literature for metals and inorganic compounds for 1971 (viii + 376 pages). Price: 90 Netherlands guilders.

Volume 38A, covering the literature for metals and inorganic compounds for 1972 (viii + 412 pages). Price: 115 Netherlands guilders.

Volume 39A, covering the literature for metals and inorganic compounds for 1973 (viii + 392 pages). Price: 115 Netherlands guilders.

Orders for these volumes may be placed direct with the publisher (Oosthoek, Scheltema & Holkema, Emmalaan

27, Utrecht, The Netherlands), with Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A., or with any bookseller. Details of price reductions for personal subscriptions and for standing orders may be obtained direct from Oosthoek, Scheltema & Holkema or from Polycrystal Book Service.

Notes and News

Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) 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).

Temperature Factors

A number of recent X-ray and neutron diffraction studies have shown small systematic discrepancies between X-ray and neutron temperature factors which are not readily understood and which do not appear related to errors in experimental measurements. In particular the ratio $(U_{ii})_X / (U_{ii})_N$ seems frequently dependent on the value of i . To gain understanding of the source of such discrepancies and their possible significance the Commission on Neutron Diffraction of the IUCr decided, at the Amsterdam Congress, to gather information on X-ray and neutron diffraction temperature factor of crystals which have been studied accurately by both methods at identical temperatures.

Interested scientists are requested to send U_{ij} values

together with information on the crystal symmetry and cell dimensions, the orientation of the specimen on the diffractometer, scattering factors used in the refinement, experimental temperature and experimental reproducibility as estimated by comparison of symmetry-related reflexions, and (for the neutron experiment only) the type of beam collimation and/or Soller slits, type of analyser crystal used if any, and estimate of second-order contamination of the beam, to either Dr P. Coppens, Chemistry Department, State University of New York at Buffalo, Buffalo, New York 14214, U.S.A., or Dr T. Koetzle, Chemistry Department, Brookhaven National Laboratory, Upton, Long Island, New York 11973, U.S.A. Results will be analysed at regular intervals depending on the available volume of the data and communicated to participating laboratories.

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.

Electron microprobe analysis. By S. J. B. REED. Pp. xvi + 400, Figs. 167, Tables 25, Plates 8. Cambridge Univ. Press, 1975. Price £12.00.

After a decade of intense development in theory, instrumentation and practice, electron-probe microanalysis has now become a routine analytical procedure and, insofar as future events can be predicted, no major developments seem to be around the corner. The appearance of an authoritative, up-to-date and fairly extensive treatise on the subject is therefore well timed.

Reed's book is not the first one on this subject. Among those still of general usefulness are the ones by Birks (1971) and Andersen (1973). Birks's book is a concise and mainly descriptive introduction to the subject, recommendable to the beginner or the scientist or student seeking an overview of electron-probe microanalysis. *Microprobe Analysis*, edited by Andersen, is a compilation of chapters written by various authors who are experts in their respective fields. Such a format provides a selection of topics rather than complete coverage. Other publications (Heinrich, 1968; Salter, 1970; Hall, Echlin & Kaufmann, 1974) deal with partial aspects of electron probe microanalysis.

S. J. B. Reed has apported valuable and widely used contributions to the art of microanalysis. His book reflects his long experience in the field, and it will serve very satisfactorily as a textbook for the analyst performing electron-probe microanalysis or using the lithium-drifted detector in conjunction with scanning electron microscopy. The principles of instrumentation and operation, the theory

of quantification and the analysis of thin films are extensively and rigorously treated. The level of the text is uniformly high and eminently readable. In the application section, the author discusses a small but representative sampling of practical analyses.

The disagreements I may have with the author are mostly of detail – such as to his doubts on the efficacy of the hyperbolic iteration for multielement specimens (p. 294), or concerning the use of an atomic number effect in the absorption correction (p. 252). A more serious objection is that the computer programming, though 'practically essential for matrix corrections . . .' (p. 296) is not discussed in sufficient detail. Manual correction calculations are impractical for all but the most casual users of the micro-analyzer, and the problems arising from the use of a program which is not fully understood by the analyst are obvious.

Overall, Reed's book is a valuable source of information to the microanalyst, and it deserves a place on the shelf of all scientists who make use, directly or indirectly, of electron probe microanalysis.

K. F. J. HEINRICH

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References

ANDERSEN, C. A. (1973). Editor, *Microprobe Analysis*. New York: Wiley-Interscience.