They are edited by Olga Kennard and David G. Watson at the Crystallographic Data Centre, Cambridge, England and contain classified bibliographic information for over 4000 structures. Literature coverage is comprehensive from 1935 to 1 January 1969 and there are 500 additional references to 1969 publications. Volume 1 deals with general organic crystal structures and Volume 2 with complexes, organo-metals and metalloids. Entries are arranged in chemical classes with extensive cross-references. Individual compounds can be located through the formula or metal index and there is also an author index. The bibliography is the first attempt at bringing together all publications on related structures and provides a survey to the various areas of organic and organometallic chemistry which have been investigated by X-ray and neutron diffraction methods.

The series is published for the Union, in conjunction with the Crystallographic Data Centre, by A. Oosthoek's Uitgevers Mij N.V., Doomstraat 5–13, Utrecht, The Netherlands, from whom the first two volumes may now be obtained. Volume 1 costs 45 Netherlands Guilders (U.S. $ 12.50 or £ 5·25 at the present rates of exchange) and Volume 2 costs 35 Netherlands Guilders (U.S. $ 10.00 or £ 4·20). Copies for the personal use of scientists may be obtained at the reduced prices of 32 Netherlands Guilders (U.S. $ 9.00 or £ 3·75) for Volume 1 and 27 Netherlands Guilders (U.S. $ 7.50 or £ 3·15) for Volume 2. All prices include postal charges. Copies may also be obtained from Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A., or through any bookseller. Standing orders can be placed for future volumes.

Diffusion des Rayons X aux Petits Angles (Bibliography)

The fourth and last bibliography in the recent series prepared under the auspices of the Commission on Crystallographic Apparatus of the International Union of Crystallography, *Diffusion des Rayons X aux Petits Angles*, by A. J. Renouprez, has been published. Copies have been distributed free of charge to all subscribers to *Acta Crystallographica* or the *Journal of Applied Crystallography* in 1970. Additional copies can be obtained from A. Oosthoek's Uitgevers Mij N.V., Doomstraat 5–13, Utrecht, The Netherlands, at the price of 10 Netherlands Guilders (U.S. $ 3.00 or £ 1·25 at the present rates of exchange) per copy, including postage. In the event of foreign exchange difficulties, UNESCO coupons will be accepted. Orders

may also be placed with Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A., or with any bookseller.

American Crystallographic Association *Ad hoc* Committee on Small-Angle X-ray Scattering

A computerized international mailing list is being prepared of all researchers who are active or interested in small-angle X-ray or neutron scattering. This list will be used by the ACA, the IUCr, or other qualified professional organizations exclusively for dissemination of information of interest to the field (*e.g.* announcements of forthcoming small-angle meetings, workshops, *etc.*). The list will be coded both geographically and by field of interest in order that selective mailing lists can be prepared.

All persons who wish to be included in this compilation should send a post card to Robert W. Hendricks, Metals and Ceramics Division, Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, Tennessee 37830, U.S.A. with the following information: (1) name and title; (2) complete mailing address; (3) membership in crystallographic organizations; and (4) field of interest (choose up to 3): (*a*) All areas of SAS. (*b*) Inorganic materials. (*c*) Polymers. (*d*) Biological. (*e*) Liquids and solutions. (*f*) Critical phenomena. (*g*) Neutron SAS. (*h*) Theory. (*i*) Other.

Symposium on X-ray Topography Bristol, England, 29–30 September 1971

An International Symposium on X-ray Topography will be held at the H. H. Wills Physics Laboratory, University of Bristol, England, on 29–30 September 1971. The aims are (*a*) to present invited papers reviewing particular aspects of X-ray topography and its relevance to problems of current academic and industrial interest, (*b*) to offer a forum for reporting recent applications of X-ray topography and development in technique and (*c*) to provide ample opportunity for informal discussion and exchange of ideas through personal contact between those attending the symposium.

For information, including details of residential accommodation available in a University hall of residence nearby, and the procedure for the submission of papers, contact Mr P. J. Duggan, Elliott Brothers (London) Limited, Elstree Way, Borehamwood, Hertfordshire, England.

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.

Magnetic neutron diffraction. By Yu A. IZYUMOR and R. P. OZEROV. Pp. xviii + 598. New York: Plenum Press, 1970. Price $ 37.50, £7·50. DM 150.

This is an essential book for the research worker whose task relates to the study and interpretation of magnetic

structures. It is based, with some corrections and editions, on a Russian edition for which the manuscript was completed in 1965 and its scope is somewhat different from what the title might suggest. As the foreword makes clear, the aim of the book is twofold – not only to describe particular methods of studying the neutron scattering which is due to

magnetic interactions with the atoms of a crystal but also to 'set out all contemporary ideas' on the subject of magnetism in crystals.

In line with this aim, the first two chapters, each of about a hundred pages, are entitled *Modern Views on Atomic Magnetic Ordering* and *Theory of the Scattering of Slow Neutrons in Magnetic Crystals* and reflect the approach of the first-named author who is a theoretical physicist at the Institute of Metal Physics in Sverdlovsk. The succeeding 150 pages are predominantly the work of Dr Ozerov, a practising neutron crystallographer of the Karpov Institute in Moscow, and relate to methods of magnetic structure determination and a review of some results. Two observations seem to be important here. First, although the third chapter does set out 'to describe experimental methods' it is only the final few pages which do exactly this and the chapter is mainly concerned with the more abstract problem of interpreting the experimental data, including the use of symmetry representation, and correlated with an appendix which analyses the systematic extinctions which are associated with all possible elements of symmetry and antisymmetry. This work draws on the conclusions of a section in the opening chapter which gives a very welcome account of the teaching of Koptsik on the Shubnikov groups. Secondly, the chapter which reviews results makes no attempt to be encyclopaedic – a course which has long been outdated by the mass of material available – but concentrates on two classes of material. These are the rare-earth metals and their compounds and the double oxides of various metals, the choice being substantially dictated by the desire of indicating the complexity and novelty of the types of magnetic structure which have been revealed.

The remaining three chapters are aimed more at the specialist practitioner. Chapter V, which is entitled *The Distribution of Magnetic Moment in Crystals*, gives a very valuable account of magnetic form factors, making the most of what is still a rather limited amount of data on this subject, and a review of the Low–Collins technique of studying the spatial spread of magnetic moments in dilute alloys. Chapter VI is devoted to the *Dynamics of the Magnetic Lattice* and deals particularly with experimental methods of examining spin wave scattering and the critical scattering associated with magnetic transitions. Finally comes a chapter devoted to a theoretical discussion of the spin wave excitation in ferromagnetic crystals which contain impurities. This chapter was written after the appearance of the Russian edition of the book and concludes with a short account of the first experimental information, in 1967, on this topic.

The formal chapters are succeeded by the symmetry-extinction data to which we have already referred, diagrams of the 36 Bravais lattices which take into account black-and-white magnetic symmetry, an index of substances whose magnetic structures are discussed, a general index of topics and a list of references to the literature. It seems, almost ungrateful to suggest that the value of the book as

a work of reference would be enhanced if the list of references, which are simply numbered in order of occurrence in the book, was supplemented by a list in which the authors' names appear alphabetically.

The book is a welcome addition to the literature and highly recommended both as a text and as a work of reference.

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Crystal defects and crystalline interfaces. By W. BOLLMANN. Pp. xi + 254. Berlin: Springer Verlag, 1970. Price (cloth cover) DM 98, $ 27.00.

In recent years considerable progress has been made in understanding the nature of high-angle grain boundaries. Whereas the models for low-angle grain boundaries based on arrays of discrete dislocations seem to be well established this is not the case for the models of boundaries with angles of misorientation exceeding such a value that the dislocation cores start to overlap. Recently models based on the concept of the coincidence lattice have been quite successful in explaining many features of high-angle grain boundaries. It is this subject, to which Bollmann has contributed significantly himself, which constitutes the central theme of the book.

The book contains a somewhat unexpected combination of material. The introductory chapters, which occupy roughly half of the book, are quite elementary; they give a very condensed survey of lattice defects mainly from the geometrical point of view. The reasoning is usually qualitative only and very few derivations are given.

The rest of the book is devoted to the subject to which the author himself has contributed, *i.e.* the geometrical theory of crystalline interfaces. In this part the derivations are given in detail; extensive use is made of matrix methods.

The book gives a somewhat unbalanced impression; whereas the material which is taken from the author's papers is treated in detail, the rest of the book is apparently only intended to put the author's own work in the proper framework and therefore treated superficially.

It is not quite clear for which audience the book is intended, but all those interested in solid–solid interfaces should benefit from reading this book, which is well written and well presented.

The reader is greatly aided in understanding some of the derivations by the use of transparencies of two-dimensional lattices, which are provided with the book.

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