

International Union of Crystallography

Commission on Neutron Diffraction

The Commission on Neutron Diffraction of the International Union of Crystallography announces the establishment of an information service to provide rapid dissemination of magnetic structure data among neutron diffractionists and other scientists in related fields. The service will take the form of magnetic structure data sheets distributed quarterly to subscribers, starting in the summer of

1972. The data, supplied by neutron diffractionists working in the field, will be edited to provide uniformity of style and will be recorded in summary form on data sheets suitably classified for insertion into a loose-leaf binder according to a scheme similar to that used in Wyckoff's *Crystal Structures*. The data sheets are not intended to substitute for normal publication; information will be accepted for distribution at the time a report of the research is submitted either for publication or presentation at a meeting. The service is to be directed

by David Cox and will be operated on a non-profit basis; a charge of \$15 for individuals and \$25 for libraries will be made to cover operating expenses. Requests for subscriptions should be sent to MSDS, Neutron Diffraction Commission, Brookhaven National Laboratory, Upton, Long Island, New York 11973, U.S.A. Cheques or money orders should be made payable to 'MSDS, Neutron Diffraction Commission'. Local currency will be accepted but payment in dollars will be appreciated for ease of handling.

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).

The Warren Award

The second presentation of the Bertram Eugene Warren Diffraction Physics Award will be made at the meeting of the American Crystallographic Association to be held at Storrs, Connecticut in June 1973.

This award was established by students and friends of Professor Warren on the occasion of his retirement from the Massachusetts Institute of Technology. It is given for an important recent contribution to the physics or liquids

using X-ray, neutron, or electron diffraction techniques. This includes work such as, for example, elastic or inelastic scattering studies of imperfections in crystals, or studies of liquids or amorphous materials, or developments in diffraction theory or techniques appropriate to such problems; it does not include crystal structure determinations. The work for which this second Award will be made must have been published between July 1, 1966 and June 30, 1972. There are no restrictions as to age, experience or nationality of recipients. The award consists of a certificate and

\$1000 and is to be given every three years.

The committee appointed to select the 1973 award recipient [B. W. Batterman, J. M. Cowley (Chairman), A. Guinier, M. Hart with *ex officio* members J. Karle and W. L. Roth] will welcome suggestions of possible recipients from any interested persons. Suggestions may be addressed to Professor J. M. Cowley, Department of Physics, Arizona State University, Tempe, Arizona 85281, U.S.A. and should be sent as soon as possible.

Crystallographers

Professor **George Dawson Preston** died on 22 June 1972 in Scotland at the age of 75. He joined the metallurgy division of the National Physical Laboratory in 1921 as a scientific officer and for over twenty years he pioneered and pursued the study of metals and of metal and alloy structures by the use of electron microscopy and X-ray diffraction. His outstanding experi-

mental work contributed significantly to the foundations of modern metal physics.

His studies of age hardening and precipitation processes in copper-aluminum alloys culminated in the demonstration of the existence of minute copper-rich domains in the aluminum matrix. At the same time this observation was made independently by A. Guinier

and these regions became known as 'Guinier-Preston Zones'.

Dr Dorita A Norton, Research Director of the Medical Foundation of Buffalo, died suddenly on 21 May 1972 at the age of 41. She is known primarily for her work on the crystal and molecular structure of steroid hormones which she initiated in 1959 at Rosewell Park

Memorial Institute and continued at the Medical Foundation of Buffalo from 1967 to the time of her death. From 1969 to 1972 she also served as Research Director of the Medical Foundation where she established a research program in molecular endocrinology.

Dr Robert W. Hendricks, Metals and Ceramics Division, Oak Ridge National Laboratory, will spend the year October 1, 1972 to September 30, 1973, at the Institut für Festkörperforschung der Kernforschungsanlage, Jülich, West Germany, where he will be working with neutron small-angle scattering.

Dr Lawrence B Shaffer, chairman of the Physics Department, Anderson College, Anderson, Indiana, is spending a 15 month sabbatical leave at the Metals and Ceramics Division of Oak Ridge National Laboratory, Oak Ridge, Tennessee working with small-angle X-ray scattering.

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. Group III. Vol. 6. Structure data of elements and intermetallic phases. Editor in chief K-H. HELLWEGE. Pp.xxviii +1019. Berlin, Heidelberg, New York: Springer-Verlag, 1971. Price (cloth) DM 620, U.S. \$179.10

Here is an elegantly produced book of 1019 pages, mostly tables of crystal data on metals and alloys. It is a companion to two other similar Landolt-Börnstein volumes, one giving data on Organic Crystals and the other on Inorganic Compounds. The data seem to cover the literature thoroughly up to the end of 1967, with some entries also being made for 1968.

The structures of the elements are dealt with in a table of 30 pages, those of borides, carbides and hydrides are covered in a table of 116 pages and intermetallic phases, generally, are covered by a table of 756 pages. The omission of nitrides might be considered inconvenient. The introductory part of the book is written both in English and in German. The tables of crystal data give the following information: space group, lattice parameters, number of formula units per cell, structure type, density, melting point (T_s), any transformation temperatures (T_t), the extent of the structure information, composition, range of stability of the phases, method of preparation and references. Data in the tables are arranged alphabetically by chemical symbols except that borides, carbides and hydrides are severally grouped together. The intermetallic phases table includes data for terminal solid solutions, with several lattice parame-

ters corresponding to several compositions. The solvent and solute symbols are enclosed in brackets with the solvent coming first. Nevertheless, indexing is by the symbol occurring first alphabetically. Thus solid solution of Al in Ni is indicated as (Ni, Al), but it is indexed under Al not Ni. The first formula of any alloy system is printed in bold type in the table. Lattice parameters given in column 5 of the table correspond to the alloy compositions given in column 3; the best values of lattice constants have been recorded, having regard not only to the X-ray measurements, but also the purity and characterization of the alloys. The last column of the tables gives coded references for the data, the first reference being that for the lattice parameters. The actual references are grouped together at the end of the tables where they can be located by the coded references given in the tables.

In addition to the crystal data tables, the introductory part of the book gives the usual tables of symmetry elements and classes, and space group symbols as well as nomenclature for structure types (compound names) and *Strukturbericht* types.

It is now necessary to evaluate the impact and usefulness of a book of data such as this: writing the introduction in English as well as German makes the book useful to a wide audience, but its price will restrict its use to those who are prepared to visit the reference sections of libraries. This price immediately removes the book from the place it should occupy as a ready desk-reference – that is for all but the very rich! Apart from the fact that it is more current than the most recent editions of *Crystal Data* and *A Handbook of Lattice Spacings and Structures of Metals and Alloys*, these two books have the advantage to the buyer of considerably lower prices, and

the tables in the latter give atomic parameters as well as lattice parameters, and are therefore of greater potential use.

It seems that what the consumer probably needs is not yet another elegant book of tables of crystal data for metals and alloys, but a better organization of all of the individual efforts to produce a single set of crystal data at much more frequent and regular intervals than is presently the case.

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The Physics of Metals and Metallography. Vol. 28. No. 5. Chief Editor: S.V. VONSOVSKY. Two volumes per annum, pp. 200 (approx.). Oxford: Pergamon Press, 1971. Annual subscriptions. Price £56.00 (\$140.00) libraries *etc.* Members of co-opting and sponsoring societies of *Acta Metallurgica* £10.00 (\$25.00).

Die vorliegende Zeitschrift ist eine vollständige Übersetzung der angesehenen sowjetischen wissenschaftlichen Zeitschrift *Fizika Metallov i Metallovedenie*, von der bereits etwa 30 Bände vorliegen. Sie wird im Auftrag der Akademie der Wissenschaften der Union der Sowjetrepubliken von einem Redaktionskollegium namhafter Wissenschaftler mit Akademiker S.V. Vonsovsky an der Spitze im Verlag Nauka Moskau herausgegeben.

Wie schon der Name der Zeitschrift anzeigt, ist das von ihr behandelte Spektrum ziemlich breit. Es erstreckt sich von theoretisch-physikalischen Untersuchungen metallphysikalischer