

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).

Anomalous Scattering

Errata

A list of corrections to errors noted in *Anomalous Scattering* (1975) edited by S. Ramaseshan and S. C. Abrahams and published for the International Union of Crystal-

lography by Munksgaard, Copenhagen has been compiled. As one of the corrections is substantial, readers already possessing a copy are advised to write requesting a list of the errata. Copies are available from Munksgaard International Publishers Ltd., 35 Nørre Søgade, DK-1370 Copenhagen K, Denmark or Polycrystal Book Service, P. O. Box 11567, Pittsburgh, Pa. 15238, U.S.A.

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.

Theory of defects in solids. By A. M. STONEHAM. Pp. xix + 955, Figs. 115. Tables 95. Oxford Univ. Press, 1975. Price £29.25.

This book surveys the theory of the electronic properties of point defects in insulators and semiconductors. In the preface, the author states that the theory of defects has developed through a series of models, approximations, and assertions, that often the basis of these ideas has been forgotten in their evolution, and that he has tried to provide a critical survey of defect theory, stressing assumptions made and attempting to assess their validity. He has succeeded admirably in his objectives, *e.g.*, showing that straightforward applications of the effective mass theory to approximate solutions of the Schrödinger equation of an impurity system may result in poor answers, pointing out those defect types which are badly treated by use of Green's function method, *etc.*

The text is reasonably ambitious in scope, apparently free of errors, well written, although in a very concise style that may not appeal to some readers. This latter quality is compensated for in large part by extensive referencing.

There are four major divisions to the text: I – *The Perfect Solid*, II – *Electronic Structure of Isolated Defects*, III – *Calculation of Observable Properties of Defects*, and IV – *Comparison of Theory and Experiment*. This last division applies the theories to a broad range of very different defects and is extremely informative.

This book is expensive and decidedly not suitable as a classroom text. However, it is recommended for the experimentalist working in the broad area of point defects who desires a critical evaluation of current theories.

WILLIAM J. JAMES

*Graduate Center for Materials Research
University of Missouri-Rolla
Rolla
MO 65401
U.S.A.*

Solid state physics literature guides. Vol. 7. Scattering of thermal neutrons. By ANDRE LAROSE and JAKE VANDERWAL. Pp. 527. New York: Plenum, 1974. Price: \$58.90.

This publication runs to 527 pages of 27 × 20 cm and is a development of an earlier compilation which was circulated in 1974 by Professor B. N. Brockhouse of McMaster University, to which the present authors belong. The reviewer has used, as distinct from tested, the earlier work on a number of occasions and has found it valuable.

The present volume gives 8500 entries, from the discovery of the neutron in 1932 up to 1974. The main body of the work covers the period from 1945–1974 and the older publications, of which there are 81, are listed in a separate section. The book is divided into 25 sections, of which three predominate. Two of the latter are devoted respectively to studies of elastic and inelastic scattering and the publications are ordered on the basis of the chemical formulae of the substance concerned, with the addition of generic terms, such as perovskites and polymers, when papers deal with general categories of substances. The third major section, accounting for 150 pages, is an author index. This is arranged alphabetically, including 4822 names, each with his papers arranged in sequence of time. It is quite remarkable to see what an enormous majority of authors have contributed only one, or two, papers. The remaining sections of the book cover topics, rather than materials, and list the papers under journal names arranged alphabetically and then according to year of publication. Examples of topics are diffraction theory, scattering by molecular systems and neutron sources and, allowing for some subdivisions, there are about 40 different topics, mainly comprising three or four pages. Any such listing of papers gives a good account of the topic concerned. Among other sections there are particularly valuable lists of books, treatises and conferences proceedings, arranged separately for elastic nuclear scattering, inelastic nuclear scattering and magnetic scattering.