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The Commission on Crystallographic Apparatus of the International Union of Crystallography is preparing a Supplement to the Third Edition (1972) of the *Index of Crystallographic Supplies*. The Commission would appreciate receiving names and addresses of all manufacturers and suppliers not listed in the 1972 Index. *This information should be sent to* Professor Reuben Rudman, Department of Chemistry, Adelphi University, Garden City, New York 11530, 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.

Dynamical properties of solids. Vol. 2. Crystalline solids, applications. Edited by G. K. HORTON AND A. A. MARADUDIN. Pp. ix+536. Amsterdam: North Holland, 1975. Price U.S. $ 83.50, Dfl 210.00.

No one has yet attempted to write a book designed to replace *The Dynamical Theory of Crystal Lattices*, by M. Born and K. Huang, which was published in 1954, and it is unlikely that any individual will be so bold. As the editors of this volume point out, the dynamical properties of solids is an area which has seen tremendous advances in theory and experimental techniques over the past twenty years, and they have set themselves the task of making a coherent presentation of the subject that is 'authoritative, complete and entertaining', in three volumes. While I have some doubts about their entertainment value there is no doubt about the authoritative character and breadth of scope of the two volumes which have appeared so far. The first, in 1974, was sub-titled *Crystalline Solids, Fundamentals*'* and the third, when it appears, will have the sub-title *Crystalline and Non-crystalline Solids*. The ten chapters of the first volume had titles such as *Elements of the Theory of Lattice Dynamics, Phonons in Non-transition Metals, Self-consistent Phonons... Neutron Spectroscopy and Lattice Dynamics*. The emphasis was strongly theoretical, with only the last chapter written by an avowed experimentalist. The pattern is continued in the second volume, in fact no very clear division into 'fundamentals' and 'applications' can be discerned and one suspects that the order was to some extent determined by the order in which the authors completed their contributions. All the chapters of volume two are by theoretical physicists, but they have tried (with different degrees of success) to achieve a balance by including appropriate experimental results.

The seven chapters of this second volume with their authors are *Lattice Dynamics of Quantum Crystals*, T. R. Koehler; *Lattice Dynamics of Ferroelectricity*, N. S. Gillis; *Lattice Dynamics of Molecular Solids*, O. Schnepp and N. Jacobi; *Second Sound and Related Thermal Conduction Phenomena*, H. Beck; *Dynamics of Impurities in Crystals*, D. W. Taylor; *High-Concentration Mixed Crystals and Alloys*, R. J. Elliott and P. L. Leath; *Effects of Surfaces in Lattice Dynamics*, R. F. Wallis.

These two volumes, soon to be three, will be essential reading for anyone with a serious interest in lattice dynamics. Born and Huang, incidentally, was published at £ 2.75. Alas!

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Crystal growth from high-temperature solutions. By D. ELWELL and H. J. SCHEEL. Pp. vii+634, Figs. 179, Tables 54. London: Academic Press, 1975. Price £ 19.80.

This is an excellent book with a misleading title. It sounds as if it is just a book on the methods applied in a narrow field of crystal growth, but it contains much more: not only the question how, but also why to grow crystals from high-

* For a review of Vol. 1 of this book, see *Acta Cryst.* (1975). A31, 527.