Optical properties of solids. Edited by S. NUDELMANN and S. S. MITRA. Pp. xi+641. New York: Plenum Press, 1969. Price $ 35.00.

These proceedings of the NATO Advanced Study Institute at Freiburg in 1966 provide a very readable review of the broad field of optical phenomena in solids. The first part concentrates on the electronic properties of semiconductors varying from narrow to wide gap, while the rest of the book discusses the vibrations of perfect crystals, point defects, their vibrational and electronic spectra, and electron–phonon interactions.

Twenty two lecturers at the Summer School each provide a chapter: though each contribution carries the distinctive stamp of its author, reasonable continuity has been maintained. Group theoretical terminology is developed in the first chapter and widely used: there is a welcome absence of orgies of many-body theory.

Though some of the material is already dated, this is a very valuable account of the field. Alas, at a price of thirty five dollars, most of us will consult a library copy.

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Crystal growth. Edited by F. C. FRANK, J. B. MULLIN and H. S. PEISER. Pp. 841. Amsterdam: North Holland Publishing Company, 1968. Price *f.* 160.

This book contains the proceedings of the second international Conference on Crystal Growth held in Birmingham, England, 15–19 July, 1968.

It is a difficult, if not an impossible task to give a complete survey of all the material contained in this book, which is in fact a special issue of the *Journal of Crystal Growth*. To give an idea of the magnitude of this difficulty, it will be sufficient to mention that 162 papers distributed over 18 sessions were published in this volume.

The first section is of particular interest since it contains nine excellent review papers by experts in their respective fields. The following sections are each of them devoted to a given technique. There are for instance three sections on different types of vapour growth: transport, thin films and epitaxy and chemical deposition; three further sections are devoted to melt growth, subtitled respectively: (i) oxides, sulphides and halides, (ii) encapsulation and pressure pulling, (iii) metal solutions. The following four sections are devoted to growth from non-metallic solutions, hydrothermal and other high pressure growth; electrocrystallization and flux growth. The remaining sections are concerned with particular aspects of growth not specifically related to a given technique: nucleation and equilibrium morphology, morphological stability: dendritic growth, convection, segregation and eutectic growth, assessment of crystal perfection, polymer and organic growth, and finally, new technology.

It is clear that the large amount of material presented reflects the growing importance of crystals in modern technology. It is almost a trivial statement to say that vast areas of modern technology critically depend on the production of high quality single crystals in a reproducible fashion. The time when crystal growth was more of an art than a science belongs definitely to the past.

As for all similar conferences the quality of the papers is somewhat variable, but by and large one can say that the material presented covers, on the whole adequately, the present state of the art. The book is therefore a must for every laboratory involved in growing crystals.

The publishers have done an excellent job; not only was the book published in a very short time but also the presentation is of the same high quality as that of the *Journal of Crystal Growth* published by the same company. In particular the reproduction of the numerous photographs is excellent.

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Books Received

The following books have been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay.

Structure reports for 1960. Vol. 24. Pp. viii+795. Price *f.* 140 ($39.00, £16.8 *s*). **Structure reports for 1951-1960. Index. Vol. 25.** Pp. vii+364. Price *f.* 90 ($25.00, £10.10*s*). **Structure reports for 1961. Vol 26.** Pp. viii+891. Price *f.* 140 ($39.00, £16.8*s*). (15% Price reduction for standing orders). General Editor W. B. PEARSON. Published for the International Union of Crystallography by N. V. A. Oosthoek's Uitgevers Mij, Utrecht.

These *Structure Reports* give brief critical reports on work of crystallographic interest. They are presented in a systematic way under classes of chemical materials – metals, inorganic compounds organic compounds – have good cross references and are well indexed within each volume.

The ten-year index, Vol. 25, is in four parts – subject index, formula index, index of carbon compounds and author index.

The prices stated above are the regular prices for the volumes mentioned when these are purchased singly. Valuable concessions, however, are available to individual subscribers who purchase volumes for their personal use, and to all subscribers who place orders for certain sets of five or more volumes. Details of these concessions are given below.