wordy article on the synthesis of CdI_2 polytypes and measurements of their dielectric constants and the synthesis of PbI_2 polytypes and determination of their band gaps. Polytypes of SnS_2 and TiS_2 are also briefly treated. The article contains qualitative explanations of the observed phenomena and it is commendable that non-periodic polytypes are also discussed.

Growth and characterization of AgI *polytypes* (P. R. Prager). A concise special paper on a relatively new 'relative' of SiC and ZnS (the same structural principle), including transformations of its polytypes and investigation of some physical properties.

The volume contains a fair subject and compound index. A detailed listing of contents would, however, serve the reader better than a mere list of contributions and their authors. An Appendix containing a list of substances recognized to date as polytypic would greatly increase its inspirational value. But the editorial work is otherwise well done and the inevitable overlaps (especially in the preliminaries) are not disturbing. The staff at Pergamon have produced a handsome book – its quick publication outweighs the shortcomings accompanying the photoprint technique used here.

The book is dedicated to Professor A. R. Verma who certainly deserves this for his pioneering work in polytypism. It is a must for everybody interested in this field. But it is also highly recommended to non-specialized crystallographers as well as to solid-state physicists – so that they are aware of what can be encountered and how it should be handled.

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Synthesis, crystal growth and characterisation. Edited by KRISHAN LAL. Pp. 568 + xii. Amsterdam: North Holland, 1982. Dfl 160.00, US $68.00.

This book is based on an International School held in New Delhi for two weeks in October 1981. The principal sponsor was the International Union of Crystallography with help from UNESCO and ten Indian organizations. The 140 participants were clearly given an excellent opportunity to learn about a wide range of subjects.

The volume contains 26 contributions, of which the first (Verma describing his work from 1950) and last (Kothari on the relation of modern physics to the two millenia old Indian concept of Syadvada) could be read with benefit by anyone with a general interest in science. The other 24 contributions are aimed primarily at materials scientists or people with a need to understand some of the problems faced by workers on essentially electronic materials. The authors have, in general, assumed that their audience was composed of graduates with reasonably broad backgrounds but anyone with a degree in physics, chemistry or materials science should be able to follow all the arguments. Many of the contributions could be read with benefit by third year undergraduates. In this respect the contribution by Mooser on physics in microelectronics should be particularly commended. The pair of contributions by Goodenough and Roy on solar power sources taken together give a good account of what can and *cannot* be expected.

The remaining papers give an adequate account of crystal growth and other preparation methods. The paper by Majorowski on growth at high pressures is the best short (26 pages) account that I have read. In 50 pages Paorici says nearly everything that needs to be said about melt growth and in only 16 pages Tolksdorf gives an excellent account of the growth of oxidic materials from high-temperature solutions.

X-ray, electron and neutron diffraction are the topic of 11 papers. The ones by Segmuller (measurement of strains and stresses) and Ranganathan (the structure of grain boundaries) are particularly useful accounts.

Electrical assessment is covered by Nag in perhaps too little detail (14 pages seems scarcely adequate). The book also lacks any account of the now extremely important methods for determining concentrations of individual impurities. Thus perhaps the title should be *Materials Preparation, Physical Assessment and Some Applications of Electronic Materials.* With this restriction the book can be recommended as background reading or as a source of further reading (most contributors give excellent bibliographies). Few people will need individual copies but most technical libraries should have one.

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Crystal symmetry: theory of colour crystallography. By M. A. JASWON and M. A. ROSE. Pp. 190. Chichester: Ellis Horwood, a division of Wiley, 1983. Price £18.50, paper £8.50, US$14.70.

It is well known that the theory of symmetry, which was logically completed in the classic work of Fedorov and Schönflies, is the theoretical fundamental of crystallography. The profound spread of the concept of symmetry into animate and inanimate natural science and into the ongoing process of its various generalizations is typical of the contemporary period of the development of theory.

In mathematical crystallography, the antisymmetry (two-colour) theory, which was mainly worked out by Shubnikov and other Soviet authors, takes a conspicuous place. The theory of symmetry and an introduction to antisymmetry concepts are included in many courses in the natural sciences departments of Universities. However, there is no universal textbook in which symmetry theory is set out in the intuitive-geometric plan with the grounding of group theory and with a logical transition to the antisymmetry concept. This gap is partly filled by the major work, *Symmetry in science, art and nature*, by Shubnikov & Koptsik