papers on band structure calculations for polytypes. These are followed by reviews of both photo- and cathodo-luminescence of polytypes.

The last two parts are devoted to non-electronic and electronic applications. The first group utilize the high tensile strength and moduli of SiC and include armour plating and the use of fibres with strengths as high as 4700 MN m^{-2}. Other papers relate to the corrosion resistance of SiC when used as resistive heating elements. The last part deals with electronic applications, particularly as light-emitting diodes with brightnesses between 10 and 100 nits and with spectral emission in the blue to red. SiC cold cathodes with emissions of 200 μA cm^{-2} are also fully discussed. Further papers discuss materials such as Be_3P_2, Be_3C and Si_3N_4 which might develop into more useful materials than SiC.

Solid-state physicists with an interest in new materials with diverse applications will find this collection of papers of considerable interest. The book has been offset without reduction in size and is therefore a tome of massive dimensions, but one which should be read.

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Interatomic potentials and simulation of lattice defects. Edited by PIERRE C. GEHLEN, JOE R. BEELER JR and ROBERT I. JAFFEE. Pp.xx+782. New York: Plenum, 1972. Price $46.00.

This report of a Batelle Institute Colloquium provides good insight into the relation of interatomic potentials to crystal defect properties. The participants include many distinguished contributors to the field, and their papers cover the fundamental nature of interatomic forces and applications to point defects, dislocations, stacking faults and surfaces. Reports of the Agenda Discussions on topics such as *Computer Techniques* and *Critical Issues* convey nicely the state of the art in the early 1970's. Pages 761–762 contain impassioned pleas for better X-ray Bragg intensity data on pure metals in order to obtain improved charge distributions, and for further X-ray and electron diffuse scattering intensities in disordered systems. Perhaps the crystallographic community ought to have been more strongly represented at the conference.

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