



## Crystalline Semiconducting Materials and Devices (Paperback)

By -

Springer-Verlag New York Inc., United States, 2013. Paperback. Book Condition: New. 229 x 155 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This book is concerned primarily with the fundamental theory underlying the physical and chemical properties of crystalline semiconductors. After basic introductory material on chemical bonding, electronic band structure, phonons, and electronic transport, some emphasis is placed on surface and interfacial properties, as well as effects of doping with a variety of impurities. Against this background, the use of such materials in device physics is examined and aspects of materials preparation are discussed briefly. The level of presentation is suitable for postgraduate students and research workers in solid-state physics and chemistry, materials science, and electrical and electronic engineering. Finally, it may be of interest to note that this book originated in a College organized at the International Centre for Theoretical Physics, Trieste, in Spring 1984. P. N. Butcher N. H. March M. P. Tosi vii Contents 1. Bonds and Bands in Semiconductors 1 E. Mooser 1. 1. Introduction .1. 2. The Semiconducting Bond .2 1. 3. Bond Approach Versus Band Model.6 1. 4. Construction of the Localized X by Linear Combination of n Atomic Orbitals .13...



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