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Simulation of Carrier Transport in Wide Band Gap Semiconductors 1. Introduction; 2. Transport Model for the Wide Band Gap Semiconductors; 3. Bulk Material Results; 4. Conclusions; Electrical Transport in Organic Semiconductors; 1. Introduction; 2. Time-of-Flight Mobility Measurements; 3. Mobility from Single Carrier SCL Diode I-V Characteristics; 4. Mobility Models; 5. Conclusion

Sommario/riassunto

This book examines some of the charge carrier transport issues encountered in the field of modern semiconductor devices and novel materials. Theoretical approaches to the understanding and modeling of the relevant physical phenomena, seen in devices that have very small spatial dimensions and that operate under high electric field strength, are described in papers written by leading experts and pioneers in this field. In addition, the book examines the transport physics encountered in novel materials such as wide band gap semiconductors (GaN, SiC, etc.) as well as organic semiconductors.
Topic