



# Semiconductor Physical Electronics

By Sheng S. Li

Springer. Paperback. Book Condition: New. Paperback. 528 pages. Dimensions: 9.2in. x 6.1in. x 1.2in. The purpose of this book is to provide the reader with a self-contained treatment of fundamental solid state and semiconductor device physics. The material presented in the text is based upon the lecture notes of a one-year graduate course sequence taught by this author for many years in the Department of Electrical Engineering of the University of Florida. It is intended as an introductory textbook for graduate students in electrical engineering. However, many students from other disciplines and backgrounds such as chemical engineering, materials science, and physics have also taken this course sequence, and will be interested in the material presented herein. This book may also serve as a general reference for device engineers in the semiconductor industry. The present volume covers a wide variety of topics on basic solid state physics and physical principles of various semiconductor devices. The main subjects covered include crystal structures, lattice dynamics, semiconductor statistics, energy band theory, excess carrier phenomena and recombination mechanisms, carrier transport and scattering mechanisms, optical properties, photoelectric effects, metal-semiconductor devices, the p-n junction diode, bipolar junction transistor, MOS devices, photonic devices, quantum effect devices, and high...



**READ ONLINE**  
[ 7.52 MB ]

## Reviews

*This sort of book is every little thing and made me searching ahead and more. Sure, it is actually play, nonetheless an amazing and interesting literature. You wont feel monotony at whenever you want of the time (that's what catalogs are for relating to in the event you ask me).*

-- **Gavin Bosco IV**

*Most of these ebook is the perfect publication readily available. I really could comprehended almost everything out of this created e pdf. I discovered this pdf from my dad and i recommended this book to find out.*

-- **Vinnie Grant**