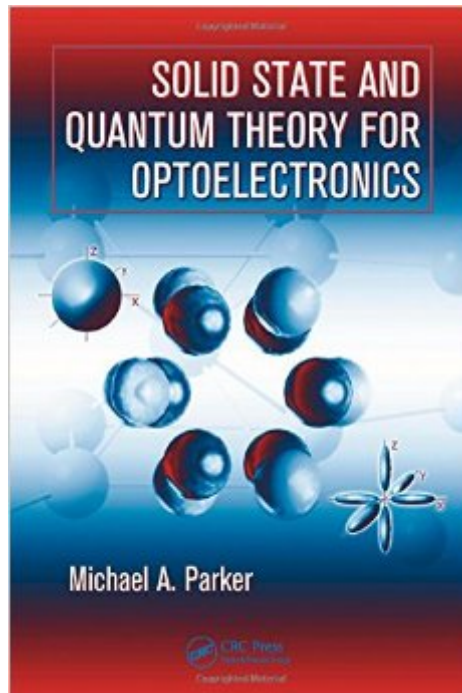


The book was found

# Solid State And Quantum Theory For Optoelectronics



## Synopsis

While applications rapidly change one to the next in our commercialized world, fundamental principles behind those applications remain constant. So if one understands those principles well enough and has ample experience in applying them, he or she will be able to develop a capacity for reaching results via conceptual thinking rather than having to always rely on models to test various conditions. In *Solid State and Quantum Theory for Optoelectronics*, Michael Parker provides a general conceptual framework for matter that leads to the matter-light interaction explored in the author's *Physics of Optoelectronics* (CRC Press). Instead of overburdening readers with the definition "theorem" proof format often expected in mathematics texts, this book instructs readers through the development of conceptual pictures. Employing a proven pedagogic approach, as rigorous as it is intuitive, Professor Parker " Provides several lead-ins to the quantum theory including a brief review of Lagrange and Hamilton's approach to classical mechanics and the fundamental quantum link with Hilbert space Demonstrates the Schrödinger wave equation from the Feynman path integral Discusses standard topics such as the quantum well, harmonic oscillator, representations, perturbation theory, and spin Expands discussion from the density operator and its applications to quantum computing and teleportation Provides the concepts for ensembles and microstates in detail with emphasis on the derivation of particle population distributions across energy levels Professor Parker includes problems to help readers understand and internalize the material. But just as important, the working-through of these problems will help readers develop the sort of approach that, instead of wholly relying on models, enables them to extrapolate solutions guided by informed intuition developed over the course of formal study and laboratory experiment. It is the kind of conceptual thinking that will allow readers to move with deeper understanding from optical applications to more theoretical topics in physics.

## Book Information

Hardcover: 848 pages

Publisher: CRC Press; 1 edition (December 16, 2009)

Language: English

ISBN-10: 084933750X

ISBN-13: 978-0849337505

Product Dimensions: 7.2 x 1.7 x 10.4 inches

Shipping Weight: 3.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #5,205,518 in Books (See Top 100 in Books) #1436 in Books > Science & Math > Physics > Light #2016 in Books > Engineering & Transportation > Engineering > Reference > Architecture > Methods & Materials #3257 in Books > Health, Fitness & Dieting > Safety & First Aid

[Download to continue reading...](#)

Solid State and Quantum Theory for Optoelectronics Mosfet Modeling for VLSI Simulation: Theory And Practice (International Series on Advances in Solid State Electronics) (International Series on Advances in Solid State Electronics and Technology) Fiber Optics and Optoelectronics (Prentice Hall Series in Solid State Physical Electronics) Waves and Fields in Optoelectronics (Prentice-Hall series in solid state physical electronics) High-Power Optically Activated Solid-State Switches (Artech House Optoelectronics Library) Towards Solid-State Quantum Repeaters: Ultrafast, Coherent Optical Control and Spin-Photon Entanglement in Charged InAs Quantum Dots (Springer Theses) The Physics And Modeling of Mosfets (International Series on Advances in Solid State Electronics) (International Series on Advances in Solid State Electronics and Technology (Unnumbered)) Fundamentals of Quantum Mechanics: For Solid State Electronics and Optics Quantum Mechanics and Quantum Field Theory: A Mathematical Primer A Need For Speed ( C ): The Quantum Effects Of An Elastic-Solid Aether Liquid Crystal Devices: Physics and Applications (Artech House Optoelectronics Library) Thin-Film Optical Filters, Fourth Edition (Series in Optics and Optoelectronics) Semiconductors for Solar Cells (Artech House Optoelectronics Library) Optoelectronics & Photonics: Principles & Practices (2nd Edition) Quantum Nanoelectronics: An introduction to electronic nanotechnology and quantum computing Quantum Runes: How to Create Your Perfect Reality Using Quantum Physics and Teutonic Rune Magic (Creating Magick with The Universal Laws of Attraction Book 1) Quantum Computation and Quantum Information: 10th Anniversary Edition QUANTUM SELF HYPNOSIS STOP SMOKING NOW: Hypnosis Script & Inductions Included! (Quantum Self Hypnosis Singles Book 2) Quantum Thermodynamics: Emergence of Thermodynamic Behavior Within Composite Quantum Systems (Lecture Notes in Physics) Logic Non-Volatile Memory:The NVM Solutions from eMemory (International Series on Advances in Solid State Electronics and Technology)

[Dmca](#)