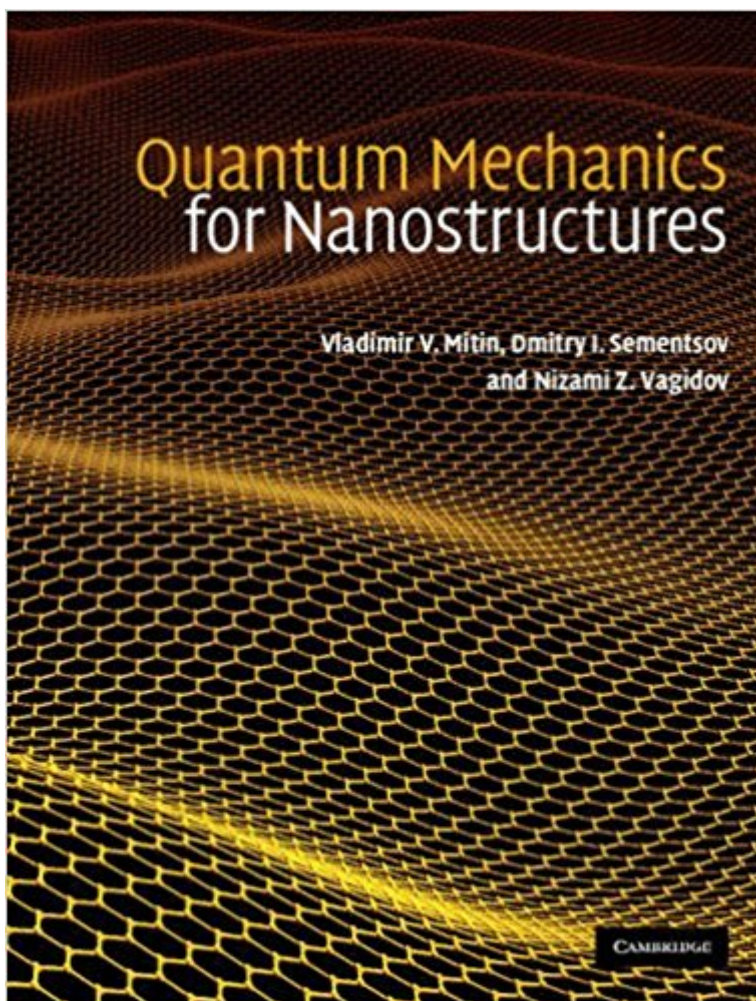


The book was found

Quantum Mechanics For Nanostructures



Synopsis

The properties of new nanoscale materials, their fabrication and applications, as well as the operational principles of nanodevices and systems, are solely determined by quantum-mechanical laws and principles. This textbook introduces engineers to quantum mechanics and the world of nanostructures, enabling them to apply the theories to numerous nanostructure problems. The textbook covers the fundamentals of quantum mechanics, including uncertainty relations, the Schrödinger equation, perturbation theory, and tunneling. These are then applied to a quantum dot, the smallest artificial atom, and compared to hydrogen, the smallest atom in nature. Nanoscale objects with higher dimensionality, such as quantum wires and quantum wells, are introduced, as well as nanoscale materials and nanodevices. Numerous examples throughout the text help students to understand the material.

Book Information

Hardcover: 448 pages

Publisher: Cambridge University Press; 1 edition (June 28, 2010)

Language: English

ISBN-10: 0521763665

ISBN-13: 978-0521763660

Product Dimensions: 7.4 x 1 x 9.7 inches

Shipping Weight: 2.6 pounds

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #658,301 in Books (See Top 100 in Books) #38 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Optoelectronics #97 in Books > Science & Math > Physics > Nanostructures #106 in Books > Science & Math > Technology > Nanotechnology

Customer Reviews

Introducing quantum mechanics and the world of nanostructures, this textbook will enable engineers to apply the theories to numerous nanostructure problems. It covers the fundamentals of quantum mechanics and applies these to nanoscale objects and materials, and nanodevices. Several examples throughout the text help students to understand the material.

Vladimir V. Mitin is SUNY Distinguished Professor at the Department of Electrical Engineering and Adjunct Professor of Physics at the University at Buffalo, The State University of New York. He is

the author of eight textbooks and monographs and more than 490 professional publications and presentations. Dmitry I. Sementsov is Professor of Physics at Ulyanovsk State University, Russia. He is the author of more than 420 papers in peer-reviewed journals. Nizami Z. Vagidov is Research Assistant Professor of Electrical Engineering at the University at Buffalo, The State University of New York. He is the author of about 90 professional publications in the fields of solid-state electronics, nanoelectronics, and nanotechnology.

Good selection of themes, I've just adopted it as the main textbook of a graduate course I am teaching this semester. Mitin is an awesome author, I recommend his books.

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

Advanced Molecular Quantum Mechanics: An Introduction to Relativistic Quantum Mechanics and the Quantum Theory of Radiation (Studies in Chemical Physics) Quantum Mechanics for Nanostructures Quantum Mechanics: Re-engineering Your Life With Quantum Mechanics & Affirmations Quantum Ontology: A Guide to the Metaphysics of Quantum Mechanics The Quantum Mechanics Solver: How to Apply Quantum Theory to Modern Physics Ultraviolet nanoimprint lithography: Fabrication of ordered nanostructures, integrated optics and electronic devices Graphene-based Materials in Health and Environment: New Paradigms (Carbon Nanostructures) Nanostructures & Nanomaterials: Synthesis, Properties & Applications Nanostructures and Nanomaterials: Synthesis, Properties, and Applications (2nd Edition) (World Scientific Series in Nanoscience and Nanotechnology) Nanostructures and Nanotechnology Quantum Nanoelectronics: An introduction to electronic nanotechnology and quantum computing Introduction to Topological Quantum Matter & Quantum Computation 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) Delirious, A Quantum Novel (Quantum Series Book 6) Quantum Thermodynamics: Emergence of Thermodynamic Behavior Within Composite Quantum Systems (Lecture Notes in Physics) Covariant Loop Quantum Gravity: An Elementary Introduction to Quantum Gravity and Spinfoam Theory (Cambridge Monographs on Mathematical Physics) Quantum Space (Quantum Series Book 1) Quantum Incident (Quantum Series Book 0) The Feynman Lectures on Physics: Volume 1, Quantum Mechanics The Feynman Lectures on Physics: Volume 2, Advanced Quantum Mechanics

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)