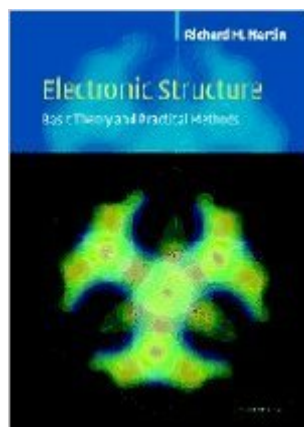


The book was found

Electronic Structure: Basic Theory And Practical Methods (Vol 1)



Synopsis

The study of the electronic structure of materials is at a momentous stage, with the emergence of new computational methods and theoretical approaches. This volume provides an introduction to the field and describes its conceptual framework, the capabilities of present methods, limitations, and challenges for the future. Many properties of materials can now be determined directly from the fundamental equations of quantum mechanics, bringing new insights into critical problems in physics, chemistry, and materials science.

Book Information

Hardcover: 650 pages

Publisher: Cambridge University Press (April 26, 2004)

Language: English

ISBN-10: 0521782856

ISBN-13: 978-0521782852

Product Dimensions: 6.8 x 1.4 x 9.7 inches

Shipping Weight: 3 pounds (View shipping rates and policies)

Average Customer Review: 4.4 out of 5 stars [See all reviews](#) (12 customer reviews)

Best Sellers Rank: #812,851 in Books (See Top 100 in Books) #108 in [Books > Science & Math > Physics > Nanostructures](#) #242 in [Books > Science & Math > Physics > Solid-State Physics](#) #954 in [Books > Engineering & Transportation > Engineering > Chemical](#)

Customer Reviews

This book was recommended to me to help me in my research, and has turned out to be one of the best recommendations I have ever received. This is a great book; by far the best I have come across on the topic of computing the properties of condensed phase materials by quantum mechanical simulations. Here are the reasons why.

1. The chapters are well laid out and one chapter flows neatly to the next.
2. The math is kept to a minimum; the author makes a point of communicating important principles and ideas in concise sentences without resorting to derivations. This is ideal for engineers like me; who by training do not know that much math as compared to physicists who specialize in the solid state.
3. Important ideas are clarified up front. Many texts will lead the reader through long and windy paths of proofs and logic before arriving at the conclusion; thereby losing their reader in the process. Not here; important points are stated clearly at the beginning and at the end of each section.
4. Compare, contrast, and context. There are many ideas, models, approximations, and theorems that have been developed in the past century related to

electronic structure. Many of these are closely related to each other in their inspiration, derivation, practice, and/or applications. This book makes the connections between the different concepts. For a non-expert reading through the electronic structure literature, terms like APW, OPW, PAW, LAPW, LMTO, etc... can be quite confusing if not placed within an overriding context. This book provides that context.⁵ Good use of appendices. Electronic structure is a lot like politics; most practitioners in either field did not receive formal educations in the subject, but instead got into it under the apprenticeship of other people.

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

Electronic Structure: Basic Theory and Practical Methods (Vol 1) How to Start a Electronic Record Label: Never Revealed Secrets of Starting a Electronic Record Label (Electronic Record Label Business Guide): How to ... a Eletr Record Label: Never Revealed Secret Data Structure and Algorithmic Thinking with Python: Data Structure and Algorithmic Puzzles Electronic Document Preparation and Management for CSEC Study Guide: Covers latest CSEC Electronic Document Preparation and Management syllabus. EQing Electronic Music: Essential Tips For Producers (Making Electronic Music Book 2) Typing for Beginners: A Basic Typing Handbook Using the Self-Teaching, Learn-at-Your-Own-Speed Methods of One of New York's Most Successful Business Schools (Practical Handbook (Perigee Book)) Quickbasic and Qbasic Using Modular Structure Alternate Edition With Visual Basic Fundamentals of EEG Technology: Vol. 1: Basic Concepts and Methods Electronic Devices and Circuit Theory (11th Edition) Electronic Devices and Circuit Theory (8th Edition) Alfred's Basic Adult All-in-One Course, Book 1: Learn How to Play Piano with Lesson, Theory and Technic (Alfred's Basic Adult Piano Course) Goals-Based Wealth Management: An Integrated and Practical Approach to Changing the Structure of Wealth Advisory Practices (Wiley Finance) Alfred's Basic Piano Prep Course Theory, Bk A: For the Young Beginner (Alfred's Basic Piano Library) Alfred's Basic Piano Prep Course Theory, Bk B: For the Young Beginner (Alfred's Basic Piano Library) Alfred's Basic Piano Prep Course Theory, Bk C: For the Young Beginner (Alfred's Basic Piano Library) Alfred's Basic Adult All-in-One Course, Bk 3: Lesson * Theory * Solo, Comb Bound Book (Alfred's Basic Adult Piano Course) Methods of Cancer Diagnosis, Therapy and Prognosis: General Methods and Overviews, Lung Carcinoma and Prostate Carcinoma ISO/TR 11146-3:2004, Lasers and laser-related equipment - Test methods for laser beam widths, divergence angles and beam propagation ratios - Part 3: ... propagation and details of test methods Color Theory: An essential guide to color-from basic principles to practical applications (Artist's Library) Forensic Microscopy for Skeletal Tissues: Methods and Protocols (Methods in Molecular Biology)

