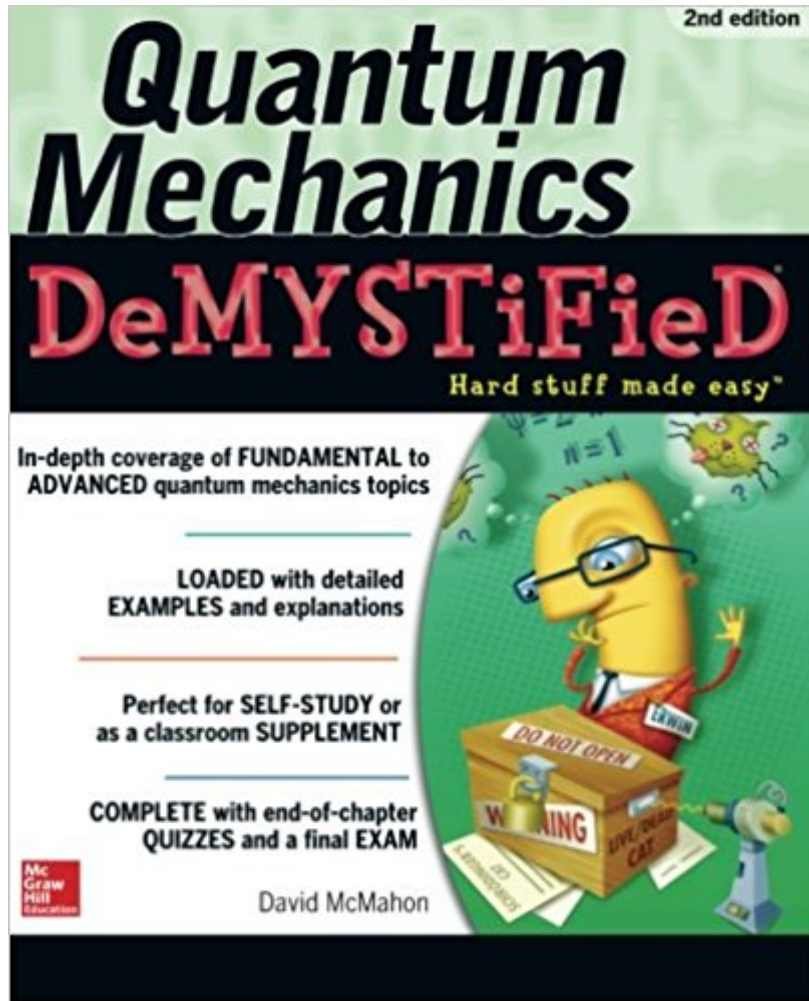The book was found

Quantum Mechanics Demystified, 2nd Edition

Synopsis

If you think projection operators work in the cinema, or learning about spin-1/2 makes your head, well, spin, Quantum Mechanics DeMYSTiFieD will energize your knowledge of this topic's fundamental concepts and theories, and allow you to learn at your own pace. This thoroughly revised and updated guide eases you into the subject, beginning with wave mechanics then introducing you to the mathematical foundations needed to do modern quantum physics. As you progress, you will learn the fundamentals of matrix mechanics, including how to compute the trace of a matrix, find eigenvalues, and use ladder operators. You will understand the difference between time independent perturbation and time dependent perturbation theory and other oncecomplicated concepts. Detailed examples make it easy to understand the material, and end-of-chapter quizzes and a final exam help reinforce key ideas. It's a no-brainer! You'll learn about: State Space Basis Vectors Functions of Operators The Postulates of Quantum Mechanics Angular Momentum Spin and the Pauli Matrices Scattering Theory Simple enough for a beginner, but challenging enough for an advanced student, Quantum Mechanics DeMYSTiFieD, Second Edition is your shortcut to a working knowledge of this engaging science.

Book Information

Series: Demystified

Paperback: 528 pages

Publisher: McGraw-Hill Education; 2 edition (May 14, 2013)

Language: English

ISBN-10: 0071765638

ISBN-13: 978-0071765633

Product Dimensions: 7.4 x 1.2 x 9.1 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: 3.2 out of 5 stars See all reviews (14 customer reviews)

Best Sellers Rank: #523,336 in Books (See Top 100 in Books)   #459 in Books > Science & Math > Physics > Quantum Theory   #1522 in Books > Textbooks > Science & Mathematics > Physics

Customer Reviews

I had been looking forward to this new edition. The previous edition was a nice introduction to the math and theory needed for basic quantum mechanics. The author has extensively revised some chapters and added new material. Unfortunately in the initial chapters I have read the new edition, like the first edition, has multiple errors in the math and printing which would make it difficult for a

beginner. I had hoped the new edition would be more carefully proofed. Chapters 4-7 are an excellent place to start working your way through this text. They review Hilbert space and the mathematical structure required for quantum mechanics. These chapters require a basic knowledge of calculus, linear algebra, differential equations, and complex variables. If you do not know Euler's formulas for cos and sin, you will be mystified on the bottom of page 168. Chapter 6 is a nice review of expectation values, inner products, outer products, eigenvalues, eigenvectors, Hermetian and Unitary Operators, and the Commutator. I carefully read the chapter and found it well laid out and informative but there were numerous either printing errors or math errors that were not caught when the book was proofed. This may be as simple as a missing minus or plus or writing a vector as a ket rather than a bra. Frequently you can catch the errors yourself but what if you are new to the subject. I would strongly recommend that the author and publisher set up a web site containing errata. I would also suggest that all the answers to the problem sets be extensively worked out. If you are learning this material on your own or without a teaching assistant it is a big help. The author, David MacMahon, has made an important contribution in bringing this difficult material to a wider audience.

** ALERT! **** if you're new to QM, you *can not* trust text (see errata below)**** until there's a fix, self-learners will need to avoid **** with careful proofing, this could be a very useful text **The 2nd edition bears signs of hasty cut/paste -- maybe to be ready for academic 2013-14?!warning! -- not a proofing error -- ignore development on p. 284 under "More on the action..." the reasoning is flawed and the value reached for a-dagger|n> is incorrect. For a correct derivation see Zettili p.242. [The deep error on p. 284 -- the author does not normalize the eigenstate a-dagger|n>.]************ alternate text for self-learners *****In the interim...you can substitute the more difficult, but independent learner friendly 2nd edition of Zettili Quantum Mechanics: Concepts and Applications************** useful features QM DeMystified 2nd ed ********Among useful features not seen in other QM texts (of the 8 on my bookcase) --1. Chpt 8. pp. 250-263 "the density operator" -- newly added for topics in quantum computing; for example in Schumacher and Westmoreland [Quantum Processes Systems, and Information]2. despite errors, Chpt 6. beginning with "the representation of an operator" p. 149 presents the clearest exposition I've seen of "translating" an operator from a matrix into two distinct (but superficially similar!) linear forms -- lots of examples.

Quantum Mechanics Demystified, 2nd Edition The Quantum World: Quantum Physics for Everyone Quantum Mechanics! The How's and Why's of Atoms and Molecules - Chemistry for Kids -

Children's Chemistry Books Fundamentals of Physics II: Electromagnetism, Optics, and Quantum Mechanics (The Open Yale Courses Series) Quantum Mechanics: An Experimentalist's Approach Quantum Mechanics of One- And Two-Electron Atoms Quantum Mechanics in a Nutshell Introduction to Quantum Mechanics: in Chemistry, Materials Science, and Biology (Complementary Science) Computational Chemistry: Introduction to the Theory and Applications of Molecular and Quantum Mechanics Quantum Mechanics: The Theoretical Minimum The Feynman Lectures on Physics: Volume 1, Quantum Mechanics The Feynman Lectures on Physics: Volume 2, Advanced Quantum Mechanics The Black Hole War: My Battle to Make the World Safe for Quantum Mechanics Medical Billing & Coding Demystified, 2nd Edition Geometry DeMYSTiFieD, 2nd Edition Lean Six Sigma Demystified, Second Edition Mechanics and Thermodynamics of Propulsion (2nd Edition) HTML & XHTML DeMYSTiFieD Postpartum Depression Demystified: An Essential Guide for Understanding and Overcoming the Most Common Complication after Childbirth English Grammar Demystified: A Self Teaching Guide