

Advanced Quantum Mechanics. 9783662039298. 2013. Springer Science & Business Media, 2013. 407 pages. Franz Schwabl

The book presents major advances in fundamentals of quantum physics from 1927 to the present. No familiarity with relativistic quantum mechanics or quantum field theory is presupposed; however, the reader is assumed to be familiar with non-relativistic quantum mechanics, classical electrodynamics, and classical mechanics. The author's clear presentation focuses on key concepts, particularly experimental work in the field. Categories: Physics\Quantum Mechanics. Year: 1967. Modern Quantum Mechanics is a classic graduate level textbook, covering the main concepts from quantum mechanics in a clear, organized and engaging manner. The original author, J. J. Sakurai, was a renowned particle theorist. Designing molecules and materials with desired properties is an important prerequisite for advancing technology in our modern societies. This requires both the ability to calculate accurate microscopic properties, such as energies, forces and electrostatic multipoles of specific configurations, as well as efficient sampling of potential energy surfaces to obtain corresponding macroscopic properties. Tools that can provide this are accurate first-principles calculations rooted in quantum mechanics, and statistical mechanics, respectively. ...more. This is a list of notable textbooks on classical mechanics and quantum mechanics arranged according to level and surnames of the authors in alphabetical order. Three volumes. Landau, L. D, and Lifshitz, E. M. Course of Theoretical Physics Volume 3 - Quantum Mechanics: Non-Relativistic Theory. Edited by Pitaevski L. P. Translated by J. B Sykes and J. S Bell, Third edition, revised and enlarged ed., Pergamon Press, 1977. ISBN 0080291406. List of textbooks in thermodynamics and statistical mechanics.