1. Record Nr. UNINA9910829925603321 Autore Sanghera Paul Titolo Quantum physics for scientists and technologists: fundamental principles and applications for biologists, chemists, computer scientists, and nanotechnologists / / Paul Sanghera Hoboken, New Jersey:,: Wiley,, 2011 Pubbl/distr/stampa ©2011 **ISBN** 1-282-25344-1 9786613814098 0-470-91712-1 0-470-91711-3 Descrizione fisica 1 online resource (543 p.) Disciplina 530.12 Soggetti Quantum theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto QUANTUM PHYSICS FOR SCIENTISTS AND TECHNOLOGISTS; Contents; Acknowledgments: About the Author: About the Tech Editor: Periodic Table of the Elements; Fundamental Physical Constantsa; Important Combinations of Physical Constants; Preface Science, Technology, and Quantum Physics: Mind the Gap: 1: FIRST, THERE WAS CLASSICAL PHYSICS; 2: PARTICLE BEHAVIOR OF WAVES; 3: WAVE BEHAVIOR OF PARTICLES; 4: ANATOMY OF AN ATOM; 5: PRINCIPLES AND FORMALISM OF QUANTUM MECHANICS; 6: THE ANATOMY AND PHYSIOLOGY OF AN EQUATION; 7: QUANTUM MECHANICS OF AN ATOM; 8: QUANTUM MECHANICS OF MANY - ELECTRON ATOMS 9: QUANTUM MECHANICS OF MOLECULES 10: STATISTICAL QUANTUM MECHANICS; 11: QUANTUM MECHANICS: A THREAD RUNS THROUGH IT ALL; BIBLIOGRAPHY; INDEX Quantum Physics for Scientists and Technologists is a self-contained. Sommario/riassunto comprehensive review of this complex branch of science. The book demystifies difficult concepts and views the subject through non-

physics fields such as computer science, biology, chemistry, and nanotechnology. It explains key concepts and phenomena in the

language of non-physics majors and with simple math, assuming no prior knowledge of the topic. This cohesive book begins with the wavefunction to develop the basic principles of quantum mechanics such as the uncertainty principle and wave-particle duality. Compreh