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Autore	Luth H (Hans)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Some Fundamental Experiments -- Particle-Wave Duality -- Quantum States in Hilbert Space -- Angular Momentum, Spin and Particle Categories -- Approximate Solutions for Important Model Systems -- Superposition, Entanglement and other Oddities -- Fields and Quanta -- Synopsis.
Sommario/riassunto	The second edition deals with all essential aspects of non-relativistic quantum physics up to the quantisation of fields. In contrast to common textbooks of quantum mechanics, modern experiments are described both for the purpose of foundation of the theory and in relation to recent applications. Links are made to important research fields and applications such as elementary particle physics, solid state physics and nuclear magnetic resonance in medicine, biology and

material science. Special emphasis is paid to quantum physics in nanoelectronics such as resonant tunnelling, Coulomb blockade and the realisation of quantum bits. This second edition also considers quantum transport through quantum point contacts and its application as charge detectors in nanoelectronic circuits. Also the realization and the study of electronic properties of an artificial quantum dot molecule are presented. Because of its recent interest a brief discussion of Bose-Einstein condensation has been included, as well as the recently detected Higgs particle. Another essential new addition to the present book concerns a detailed discussion of the particle picture in quantum field theory. Counterintuitive aspects of single particle quantum physics such as particle-wave duality and the Einstein-Podolski-Rosen (EPR) paradox appear more acceptable to our understanding if discussed on the background of quantum field theory. The non-locality of quantum fields explains non-local behaviour of particles in classical Schrödinger quantum mechanics. Finally, new problems have been added. The book is suitable as an introduction into quantum physics, not only for physicists but also for chemists, biologists, engineers, computer scientists and even for philosophers as far as they are interested in natural philosophy and epistemology.