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Titolo	Structure of Matter : An Introductory Course with Problems and Solutions / / by Attilio Rigamonti, Pietro Carretta
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Descrizione fisica	1 online resource (XXII, 605 p. 331 illus.)
Collana	UNITEXT for Physics, , 2198-7882
Disciplina	539.1
Soggetti	Condensed matter Atomic structure Molecular structure Optical materials Electronics - Materials Condensed Matter Physics Atomic/Molecular Structure and Spectra Optical and Electronic Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	From the Contents: Atoms: general aspects -- Typical atoms -- The shell vectorial model -- Atoms in electric and magnetic fields -- Nuclear moments and hyperfine interactions -- Spin statistics, magnetic resonance, spin motion and echoes -- Molecules: general aspects.
Sommario/riassunto	This textbook, now in its third edition, provides a formative introduction to the structure of matter that will serve as a sound basis for students proceeding to more complex courses, thus bridging the gap between elementary physics and topics pertaining to research activities. The focus is deliberately limited to key concepts of atoms, molecules and solids, examining the basic structural aspects without paying detailed attention to the related properties. For many topics the aim has been to start from the beginning and to guide the reader to the threshold of advanced research. This edition includes four new chapters dealing with relevant phases of solid matter (magnetic,

electric and superconductive) and the related phase transitions. The book is based on a mixture of theory and solved problems that are integrated into the formal presentation of the arguments. Readers will find it invaluable in enabling them to acquire basic knowledge in the wide and wonderful field of condensed matter and to understand how phenomenological properties originate from the microscopic, quantum features of nature.
