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Nota di contenuto	PART 1: Applications in Chemistry and Marine Sciences Foreword (by Gary Martin, Merck Research Laboratories) -- Amyloids -- Kinetics of Amyloid Fibril Formation of Human Calcitonin -- Polymorphism of Alzheimer's A β Amyloid Fibrils -- Chemical Shifts and Spin-Couplings -- ¹³ C, ¹⁵ N, ¹ H, ² H, and ¹⁷ O NMR Chemical Shift NMR for Hydrogen Bonds -- NMR Chemical Shift Map -- NMR Chemical Shifts Based on Band Theory -- Modeling NMR Chemical Shifts -- Ab Initio Calculation of NMR Shielding Constants -- Crystal Structure Refinement Using Chemical Shifts -- The Theory of Nuclear Spin-Spin Couplings -- Fibrous Proteins -- Investigation of Collagen Dynamics by Solid-State NMR Spectroscopy -- Solid-State NMR Studies of Elastin and Elastin

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Sommario/riassunto

This completely revised and updated second edition showcases the considerable progress that has taken place in this field since 2008. The three part reference work contains key developments, scores of contributions, key literature citations and overviews of the important progress achieved in the relevant topics since the publication of the previous edition. Two key differences in this new edition are the replacement of the previous Medical Sciences section with the Biological and Pharmaceutical Science sections and the inclusion of a new part featuring Archaeological applications. Divided into seven comprehensive parts, the work covers: Archaeology, Biological Sciences, Chemistry, Food Science, Marine Science, Materials Science, and Pharmaceutical Science. Section editors from Asia, USA, and Europe have recruited a truly international list of active and eminent contributors who have created a remarkable and unique work. Topics include: Electron Spin Resonance, High resolution solid and liquid state NMR; Low resolution NMR; Solution State NMR; Magnetic Resonance Imaging. The level of scientific coverage of the chosen topics renders the handbook suitable for research workers in the relevant fields as well as final year undergraduate students. .
