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Sommario/riassunto

BIOINSPIRED AND GREEN SYNTHESIS OF NANOSTRUCTURES This unique book details various ways to synthesize advanced nanostructures using green methods, explores the design and development of sustainable advanced nanostructures, and discusses the antimicrobial and antiviral applications. The future of the world depends on immediately investing our time and effort in advancing ideas on ways to restrict the use of hazardous chemicals, thereby arresting further environmental degradation. To achieve this goal, nanotechnology has been an indispensable arena that has extended its wings into every aspect of modernization. For example, green synthetic protocols are being extensively researched to inhibit the harmful effects of chemical residues and reduce chemical wastes. This involves the study of nanotechnology for artful engineering at the molecular level across multiple disciplines. In recent years, nanotechnology has ventured away from the confines of the laboratory and has been able to conquer new domains to help us live better lives. Bioinspired and Green Synthesis of Nanostructures focuses on the recent developments and novel applications of bioinspired and biomimetic nanostructures as functionally advanced biomolecules with huge prospects for research, development, and engineering industries. It provides detailed coverage of the chemistry of each major class of synthesis of bioinspired nanostructures and their multiple functionalities. In addition, it reviews the new research results currently being introduced and analyzes the various green synthetic approaches for developing nanostructures, their distinctive characteristics, and their applications. The book provides readers with an understanding of the recent data, as well as various strategies for designing and developing advanced nanostructures using a greener approach. Audience The core audience of this book include materials scientists, nanoscientists, nanotechnologists, chemical and biological engineers, biochemists and biotechnologists. Industry process engineers and scientists working in nanomaterial synthesis will find this book extremely valuable.
