1. Record Nr. UNINA9910254316803321

Autore	Abdullaeva Zhypargul
Titolo	Synthesis of Nanoparticles and Nanomaterials : Biological Approaches / / by Zhypargul Abdullaeva
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-54075-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XI, 211 p. 117 illus., 51 illus. in color.)
Disciplina	610.28
Soggetti	Biomedical engineering Nanotechnology Biomedical Engineering and Bioengineering Biomedical Engineering/Biotechnology Nanotechnology and Microengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to Nanoparticles and Nanomaterials -- Biological Approaches for the Synthesis of Nanoparticles -- Eukaryotic Synthesis of Nanoparticles -- Phyto-synthesis of Nanoparticles -- Zoo-synthesis of Nanoparticles -- Separation of Nanoparticles and Nanomaterials -- Purification Methods -- Characterization Methods.
Sommario/riassunto	This book covers biological synthesis approaches for nanomaterials and nanoparticles, including introductory material on their structure, phase compositions and morphology, nanomaterials chemical, physical, and biological properties. The chapters of this book describe in sequence the synthesis of various nanoparticles by microorganisms, bacteria, yeast, algae, and actynomycetes; plant and plant extract-based synthesis; and green synthesis methods. Each chapter provides basic knowledge on the synthesis of nanomaterials, defines fundamental terms, and aims to build a solid foundation of knowledge, followed by explanations, examples, visual photographs, schemes, tables and illustrations. Each chapter also contains control questions, problem drills, as well as case studies that clarify theory and the explanations given in the text. This book is ideal for researchers and

advanced graduate students in materials engineering, biotechnology, and nanotechnology fields. As a reference book this work is also appropriate for engineers in R&D and product manufacturing.