Record Nr. UNINA9911019437103321 Ideas in chemistry and molecular sciences Advances in nanotechnology, **Titolo** materials and devices / / edited by Bruno Pignataro Pubbl/distr/stampa Weinheim,: Wiley-VCH, 2010 **ISBN** 9786613140494 9781283140492 1283140497 9783527630530 3527630538 9783527630547 3527630546 Descrizione fisica 1 online resource (434 p.) Altri autori (Persone) PignataroBruno Disciplina 540 Soggetti Chemistry Nanotechnology - Technological innovations Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Ideas in Chemistry and Molecular Sciences: Contents; Preface; List of Contributors; Part I Preparation of New Materials and Nanomaterials; 1 Self-Assembling Cyclic Peptide-Based Nanomaterials; 1.1 Introduction; 1.2 Types of Self-Assembling Cyclic Peptide Nanotubes; 1.2.1 Nanotubular Assemblies from Cyclic D,L--Peptides; 1.2.1.1 Solid-State Ensembles: Microcrystalline Cyclic Peptide Nanotubes; 1.2.1.2 Solution Phase Studies of Dimerization; 1.2.2 Nanotubular Assemblies from Cyclic -Peptides; 1.2.3 Nanotubular Assemblies from Other Cyclic Peptides; 1.3 Applications of Cyclic Peptide Nanotubes 1.3.1 Antimicrobials 1.3.2 Biosensors; 1.3.3 Biomaterials; 1.3.4 Electronic Devices; 1.3.5 Photoswitchable Materials; 1.3.6 Transmembrane Transport Channels; 1.4 Nanotubular Assemblies from Cyclic, -Peptides; 1.4.1 Design; 1.4.2 Homodimers Formation; 1.4.3 Heterodimers Formation; 1.4.4 Applications; 1.4.4.1 Artificial Photosystems: 1.4.4.2 Multicomponent Networks: New Biosensors: 1.4.4.3 Other Applications; 1.5 Summary and Outlook; References; 2

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Sommario/riassunto

Written by some of the most talented young chemists in Europe, this text covers most of the groundbreaking issues in materials science. It provides an account of the latest research results in European materials chemistry based on a selection of leading young scientists participating in the 2008 European Young Chemists Award competition. The contributions range from nanotechnology to catalysis. In addition, the authors provide a current overview of their field of research and a preview of future directions. For materials scientists, as well as organic and analytical chemists.

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