Record Nr. UNINA9910139540403321 Nanostructured materials and nanotechnology III [[electronic resource] **Titolo** 1: a collection of papers presented at the 33rd International Conference on Advanced Ceramics and Composites, January 18-23, 2009, Daytona Beach, Florida / / edited by Sanjay Mathur, Mrityunjan Singh; volume editors, Dileep Singh, Jonathan Salem Hoboken, NJ,: Wiley, 2010 Pubbl/distr/stampa ISBN 1-282-46146-X 9786612461460 0-470-58437-8 0-470-58436-X Descrizione fisica 1 online resource (178 p.) Collana Ceramic engineering and science proceedings;; 30/7 Altri autori (Persone) MathurSanjay SinghM (Mrityunjay) SinghDilip SalemJ. A <1960-> (Jonathan A.) Disciplina 620.5 Soggetti Ceramic materials Nanostructured materials Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Nanostructured Materials and Nanotechnology III: Contents: Preface: Introduction; Nanowires as Building Blocks of New Devices: Present State and Prospects; Mechanistic Studies on Chemical Vapor Deposition

Introduction; Nanowires as Building Blocks of New Devices: Present State and Prospects; Mechanistic Studies on Chemical Vapor Deposition Grown Tin Oxide Nanowires; Multifunctional Silicon Nitride Ceramic Nanocomposites Using Single-Walled Carbon Nanotubes; Simulation Based Design of Polymer Clay Nanocomposites Using Multiscale Modeling: An Overview; Preparation and Characteristic Control of Conducting Polymer/ Metal Oxide Nano-Hybrid Films for Solar Energy Conversion

Liquid Phase Morphology Control of Metal Oxides - Phase Transformation of Stand-Alone ZnO Films in Aqueous

Solutions Fabrication of the Finestructured Alumina Porous Materials

with Nanoimprint Method; Structure Control of the Nanotube/Nanoparticle Hydrid Materials with Sonochemical Processing; Efficient Photocatalytic Degradation of Methylene Blue with CuO Loaded Nanocrystalline TiO2; Constituent Phases of Nanosized Alumina Powders Synthesized by Pulsed Wire Discharge; The Formation of Nanostructure Compound Layer during Sulfur Plasma Nitriding and Its Mechanical Properties

Adhesion Improvement of Hard Boron Nitride Films by Insertion of Various InterlayersProduction of Alumina Matrix Nanocomposite by Solid State Precipitation; Nanostructured Alumina Coatings Formed by a Dissolution/ Precipitation Process Using AIN Powder Hydrolysis; Synthesis of Aluminum Nitride Nanosized Powder by Pulsed Wire Discharge without Ammonia; Ductile Deformation in Alumind/Silicon Carbide Nanocomposites; Author Index

Sommario/riassunto

This useful resource will help you understand the most valuable aspects of nanostructured materials and nanotechnology. Containing 16 peer-reviewed papers, this issue covers various aspects and the latest developments related to processing, modeling and manufacturing technologies of nanoscaled materials including CNT and clay-based composites, nanowire-based sensors, new generation photovoltaic cells, plasma processing of functional thin films, ceramic membranes and self-assembled functional nanostructures.