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Titolo	Nanostructured materials, thin films and hard coatings for advanced applications : selected, peer reviewed papers from the 2nd International conference on nanostructured materials, thin films and hard coatings for advanced applications, Sozopol, Bulgaria, May 24-27, 2009 / / edited by Lilyana Kolakieva, Roumen Kakanakov
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Collana	Diffusion and defect data. Pt. B. Solid state phenomena, , 1012-0394 ; ; volume 159
Altri autori (Persone)	KolakievaLilyana KakanakovRoumen
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Nanostructured Materials, Thin Films and Hard Coatings for Advanced Applications; Committees; Preface; Table of Contents; Search for Ultrahard Materials and Recent Progress in the Understanding of Hardness Enhancement and Properties of Nanocomposites; Nanomechanics of Coatings for Electronic and Optical Applications; It's a Long Way to "Superhard" Semiconductors; AlGaN/GaN Based Heterostructures for MEMS and NEMS Applications; Some Recent Results on the 3C-SiC Structural Defects; Ultrananocrystalline Diamond / Amorphous Carbon Composite Films - Deposition, Characterization and Applications Structural and Magnetic Properties of Nanosized Barium Hexaferrite Powders Obtained by Microemulsion TechniqueDeposition and Characterization of Aluminium Nitride (AlN) and Diamond Like Carbon

(DLC) Hard Coatings; Modeling of the Light Emission Spectra of InGaN/GaN Quantum Well with Highly Doped Barriers; Thickness Dependence of Surface and Interface Phonon-Polariton Modes in InN/AlN Nanolayers; Search for a Suitable Ohmic Metallization Scheme to GaN/AlGaN Heterostructures for Sub-Micron Devices; High-Quality GaInAsSb and GaAlAsSb Layers for Thermophotovoltaics Grown by Liquid-Phase Epitaxy
Preparation and Characterization of Al2O3 Thin Films for Catalytic Activity StudiesA High Effective Selective Absorbing Coating for Solar Thermal Collectors; Influence of Thermal Annealing on the Properties of Sputtered Si Rich Silicon Oxide Films; Ferromagnetic Nanomaterials Obtained by Thermal Decomposition of Ferrocene; Investigation of Pulsed Laser Annealing of CdS Layers Designed for Thin-Layer Solar Cells; Investigation of ZrN Hard Coatings Obtained by Cathodic Arc Evaporation; Wetting Ability of Ag Based Molten Alloys on Graphite Substrate
Vacancy Mediated Diffusion at Surface-Confined Atomic IntermixingMathematical Modelling the Power Supply-Load System for Electro-Discharge Polishing Process; The Influence of Quartz Resonator Design and Thin Metal Oxide Layers on QCM Parameters; Characterization and Ethanol Sensing Properties of Pt-Doped Sn-O-Te Thin Films; About the Surface Hardening of Tool Steels by Electrical Discharge Treatment in Electrolyte; Synthesis of "Main - Chain" Type Polyimide Matrix with a Chemically Bound Azo Group; Pressureless Sintering of Boron Carbide-Based Superhard Materials
Characterization of Oblique Deposited Nanostructured SiOx Films by Ellipsometric and IR SpectroscopiesNanosized Silicon Carbide Obtained from Rice Husks; Experimental-Numerical Approach for Characterization of Mechanical Properties of Thin Electrochemically Deposited Chromium and Copper Films; Thickness-Dependent Interface Parameters of Silicon Oxide Films Grown on Plasma Hydrogenated Silicon; Investigations of Plasma-Chemically Produced Nanodispersed Si3N4 for Modification of Tool Steels; Surface Debye Temperatures and Specific Heat of Nanocrystals
Effects of Substitution in Barium Hexaferrites BaFe12-xXxO19 (X=Co,Ti

Sommario/riassunto

This special collection of peer-reviewed papers focuses on the technology, characterization and equipment required for handling nanocomposite films and hard and superhard coatings. It also covers subjects related to the development, properties and methods for the characterization of nanostructured materials for: solid-state electronics and energy technologies; nanocomposite films, hard and superhard coatings, tribological / corrosion-resistant coatings; surfaces and interfaces; nano-sensors, nanodevices and nanosystems, Equipment for deposition and characterization of nanocomposite films and i