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Garnet (YAG) Powders; Growth of Tube-Like B-N Compounds by Chemical Vapor Deposition (CVD); Incorporation of Nano Materials in Random Hole Optical Fibers; High Shear Casting of Nanoparticulate TiO2; Preparation of ZrO2 Nanoparticles and Nanostructured Coatings Via Modified Emulsion Precipitation; Dye Senzitised Solar Cells: A Comparative Study Using Different Nanocrystalline-Titania
Synthesis and Densification Studies of Nanocrystalline Titanium Dioxide CeramicsMolecular Routes to One Dimensional Nanostructures; Synthesis of Silicon Carbide Nanowires from A Mixture of CaCO3 and Si Powders; Preliminary Results of Activated Sintering Mechanism and Grain Boundary Prewetting/Premelting in Nickel-Doped Tungsten; Nanostructured Biomaterials; Increased Osteoblast Functions on Nanophase Hydroxyapatite Coatings on Titanium; Complementary Fungus-Derived Micro-Porosity in Nano Materials; Formation of Apatite Coatings on Chemically Bonded Ceramics
Development of Aqueous Sol-Gel Method for Synthesis of Nanostructured SiO2-BaO Powder for use in Dental Composite ResinsInteraction of DNA with Nano-Structured Beta-Gallia-Rutile Surfaces; Chemically Bonded Nano-Size Bioceramics Based on Ca-Aluminate; Biologically Derived Nano and Micro Porous Material; Nanoindentation and Scanning Probe Microscopy; Investigation of Ceramics and Ferroelectric Materials by Atomic Force Acoustic Microscopy; Separation of Lattice Structural Effects and Electronic Contributions to Physical Properties with Nanotechnology
Coupling of Magnetic Order, Ferroelectricity, and Lattice Strain in Multiferroic Rare Earth ManganitesAuthor Index

Sommario/riassunto

Since the beginning of the nanotechnology era, research and development in this field has experienced an explosive growth in academia and industry. Topics covered in this book include synthesis and characterization of nanomaterials, nanoscale phenomena in electronic ceramics, nanostructured bioceramics, industrial development and application, and much more.