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Role of Lattice Vibrations in a Nanoscale Electronic DeviceModification of Quartz Fabric with Multi-Walled Carbon Nanotubes for Multifunctional Polymer Composites; Fabrication of Silicon-Based Ceramic Synthesized from Mesoporous Carbon-Silica Nanocomposites; Synthesis and Characterization of Mesoporous Nanostructured TiO2-Al2O3 Photocatalytic System; Monodispersed Ultrafine Zeolite Crystal Particles by Microwave Hydrothermal Synthesis; The Structure of Nanoparticulate Aggregates of Titania as a Function of Shear Hierarchical Assembly of Hybrid Nanoapatites: Implications for Oral Drug Delivery and Implant-Biological InterfacesNi-B Nanolayer Evolution on Boron Carbide Particle Surfaces at High Temperatures; Author Index

Sommario/riassunto

This volume features papers from the Controlled Processing of Nanoparticle Structures and Composites symposia held during the 2008 Materials Science and Technology conference (MS&T08). It provides a useful one-stop resource for understanding the most important issues in controlled processing of nanoparticle structures and composites. Logically organized and carefully selected articles give insight into controlled processing of nanoparticle structures and composites, covering topics such as nanoparticle-based bulk material templating, the structure of nanoparticulate aggregates of titania as a