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Advances in Bioceramics and Porous Ceramics II; Contents; Preface; Introduction; BIOCERAMICS; One-Step Preparation of Organosiloxane-Derived Silica Particles; Fabrication of Hybrid Thin Films Consisting of Ceramic and Polymer Using a Biomimetic Principle; Structural Investigation of Nano Hydroxyapatites Doped with Mg²⁺ and F⁻ Ions; Novel Bioceramics for Bone Implants; 20 Years of Biphasic Calcium Phosphate Bioceramics Development and Applications; Biocompatibility Aspects of Injectable Chemically Bonded Ceramics of the System CaO-Al₂O₃-P₂O₅-SiO₂ Aspects of Dental Applications Based on Materials of the System CaO-Al₂O₃-P₂O₅-H₂O Synthesis and Characterization of Bioactive-Glass Ceramics; Evaluation of a PDLLA/45S5 Bioglass Composite: Mechanical and Biological Properties; Synthesis and Characterization of Wet Chemically Derived Magnetite-HAP Hybrid Nanoparticles; Low Temperature Consolidation of Nanocrystalline Apatites Toward a New Generation of Calcium Phosphate Ceramics; Sintering Behavior of Hydroxyapatite Ceramics Prepared by Different Routes Vaterite Bioceramics: Monodisperse CaCO₃ Biconvex Micropills Forming at 70°C in Aqueous CaCl₂-Gelatin-Urea Solutions Novel DNA Sensor Based on Carbon Nanotubes Attached to a Piezoelectric Quartz Crystal; Thermal Conductivity of Light-Cured Dental Composites: Importance of Filler Particle Size; POROUS BIOCERAMICS; Manufacturing of Porous PPLA-HA Composite Scaffolds by Sintering for Bone Tissue Engineering; Effect of Zinc on Bioactivity of Nano-Macroporous Soda-Lime Phosphofluorosilicate Glass-Ceramic; Porous Scaffolds Using Nanocrystalline Titania for Bone Graft Applications Porous Biomorphic SiC for Medical Implants Processed From Natural and Artificial Precursors POROUS CERAMICS; Strength and Permeability of Open-Cell Macro-Porous Silicon Carbide as a Function of Structural Morphologies; Design of Silica Networks Using Organic-Inorganic Hybrid Alkoxides for Highly Permeable Hydrogen Separation Membranes; Computer Simulation of Hydrogen Capacity of Nanoporous Carbon; Nanostructured Alumina Coatings Formed by a Dissolution/Precipitation Process Using AlN Powder Hydrolysis; Porous FeCr-ZrO₂(7Y₂O₃) Cermets Produced by EBPVD Use of Ceramic Microfibers to Generate a High Porosity Cross-Linked Microstructure in Extruded Honeycombs Porous -Si₃N₄ Ceramics Prepared with Fugitive Graphite Filler; Data Reliability for Honeycomb Porous Material Flexural Testing; Aluminum Silicate Aerogels with High Temperature Stability; Development of Novel Microporous ZrO₂ Membranes for H₂/CO₂ Separation; Author Index

Sommario/riassunto

Improve your understanding in the most valuable aspects of advances in bioceramics and porous ceramics. This collection of logically organized and carefully selected articles contain the proceedings of the "Porous Ceramics: Novel Developments and Applications" and "Next Generation Bioceramics" symposia, which were held on January 27-February 1, 2008.