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Note generali	"This volume is a collection of twenty-six research papers from the Next Generation Biomaterials and Surface Properties of Biomaterials symposia, which took place during the Materials Science & Technology 2011 Conference & Exhibition (MS&T'11) in Columbus, Ohio on October 16-20, 2011."--Pref.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Biomaterials Science: Processing, Properties and Applications II; Contents; Preface; Mechanical and Microstructural Characterization of 45S5 Bioglass® Scaffolds for Tissue Engineering; Next-Generation Rotary Endodontic Instruments Fabricated from Special Nickel-Titanium Alloy; Preparation of Nanophase Hydroxyapatite via Self Propagating High Temperature Synthesis; Low Temperature Sintering of Ti-6Al-4V for Orthopedic Implant Applications; Cytotoxicity Evaluation of 63S Bioactive Glass Nanoparticles by Microcalorimetry; Biological Aspects of Chemically Bonded Ca-Aluminate Based Biomaterials Titanium Alloys with Changeable Young's Modulus For Preventing Stress Shielding and SpringbackBioactive Glass in Bone Tissue Engineering; Sintering of Hydroxyapatite; In Vivo Evaluation of 13-93 Bioactive Glass Scaffolds Made by Selective Laser Sintering (SLS); Effect

of Sintering Temperature on Microstructural Properties of Bioceramic Bone Scaffolds; Application of Polymer-Based Microfluidic Devices for the Selection and Manipulation of Low-Abundant Biological Cells; Laser Processed Tantalum for Implants
The Role of Bacterial Attachment to Metal Substrate and Its Effects on Microbiologically Influenced Corrosion (MIC) in Transporting Hydrocarbon Pipelines
Electrophoretic Deposition of Soft Coatings for Orthopaedic Applications; Glutamic Acid-Biphasic Calcium Phosphates: In Vitro Bone Cell-Material Interactions; Detonation Spraying of TiO₂-Ag: Controlling the Phase Composition and Microstructure of the Coatings; SiO₂ and SrO Doped -TCP: Influence of Dopants on Mechanical and Biological Properties
Inhibition of Low-Temperature Degradation and Biocompatibility on Surface of Yttria-Stabilized Zirconia by Electric Polarization
Biomaterials for Therapeutic Gene Delivery; Sol-Gel Synthesized Bio-Active Nanoporous Sodium Zirconate Coating on 316L Stainless Steel for Biomedical Application; Influences of Sr, Zn and Mg Dopants on Osteoclast Differentiation and Resorption; A Comparative Study of Cell Behaviors of Hydroxyapatite and Ti-6Al-4V; Comparative Studies of Cold and Thermal Sprayed Hydroxyapatite Coatings for Biomedical Applications-A Review
Injectable Biomimetic Hydrogels with Carbon Nanofibers and Novel Self Assembled Chemistries for Myocardial Applications
A Quantitative Method to Assess Iron Contamination Removal from a Non-Ferrous Metal Surface after Passivation; Author Index

Sommario/riassunto

With contributed papers from the 2011 Materials Science and Technology symposia, this is a useful one-stop resource for understanding the most important issues involved in the processing, properties, and applications of biomaterials science. Logically organized and carefully selected, the articles cover the themes of the symposia: Next Generation Biomaterials: and Surface Properties of Biomaterials. An essential reference for government labs as well as academics in mechanical and chemical engineering, materials and or ceramics, and chemistry.
