1. Record Nr. UNINA9910826325303321

Titolo	Biomaterials science : processing, properties, and applications II / / edited by Roger Narayan, Susmita Bose, Amit Bandyopadhyay
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, Inc., 2012
ISBN	9781118511466 1118511468 9781283835251 1283835258 9781118511527 1118511522
Edizione	[1st ed.]
Descrizione fisica	1 online resource (290 p.)
Collana	Ceramic transactions, , 1042-1122 ; ; v. 237
Altri autori (Persone)	NarayanRoger BoseSusmita <1969-> BandyopadhyayAmit (Computer scientist)
Disciplina	610.28
Soggetti	Biomedical materials Biomedical materials - Surfaces
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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 PipelinesElectrophoretic 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-6AI-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 ApplicationsA 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.