

Chapter 1 : Advanced Biomaterials (ebook) by Bikramjit Basu |

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Back cover copy Enables readers to take full advantage of the latest advances in biomaterials and their applications. *Advanced Biomaterials: Fundamentals, Processing, and Applications* reviews the latest biomaterials discoveries, enabling readers to take full advantage of the most recent findings in order to advance the biomaterials research and development. Reflecting the nature of biomaterials research, the book covers a broad range of disciplines, including such emerging topics as nanobiomaterials, interface tissue engineering, the latest manufacturing techniques, and new polymeric materials. The book, a contributed work, features a team of renowned scientists, engineers, and clinicians from around the world whose expertise spans the many disciplines needed for successful biomaterials development. Chapters are grouped into three logical sections: Section One, Fundamentals, explores the basics of structure, processing, and properties as well as viable approaches to develop and design new biomaterials. Section Two, Processing, investigates emerging manufacturing techniques such as laser-engineered net shaping LENS and processes involved in the design of bioactive scaffolds and polymeric drug delivery systems. Section Three, Applications, examines tissue engineering, synthetic heart valves, blood substitutes, and other promising applications. *Advanced Biomaterials* is recommended for material scientists, biotechnologists, chemists, engineers, and medical professionals. With its integrated coverage of fundamentals, processing, and applications, it is also recommended for upper-level undergraduate and graduate students. All readers will gain an improved understanding of the full range of disciplines and design methodologies that are used to develop biomaterials with the physical and biological properties needed for specific clinical applications. *Materials for orthopedic applications* Shekhar Nath and Bikramjit Basu. The micro macroporous biphasic calcium phosphate concept for bone reconstruction and tissue engineering Guy Daculsi, Franck Jegoux and Pierre Layrolle. Injectable hydrogels as biomaterials Lakshmi S. Laurencin and Mayank Tandon. Laser processing of orthopedic biomaterials Rajarshi Banerjee and Soumya Nag. Design of supermacroporous biomaterials via gelation at subzero temperatures-Cryogelation Fatima M. Plieva, Ashok Kumar, Igor Yu. Galaev and Bo Mattiasson. Orthopaedic Interface Tissue Engineering: Moffat and Jeffrey P. Placental umbilical cord blood: A true blood substitute Niranjana Bhattacharya. Supported cell mimetic monolayers and their blood compatibility K. Kaladhar and Chandra P Sharma. His research interests include ceramic and polymer-based biocompatible materials, nanoceramics and nanoceramic composites, and tribology of advanced materials. His research interests include polymeric biomaterials, drug delivery systems, tissue engineering, and nanotechnology. His research interests include the design of supermacroporous polymeric materials and smart polymers for application in tissue engineering, development of cell separation technology, extracorporeal medical devices, and high-throughput analysis. His other research interests include bioprocess engineering, biosensors, and environmental biotechnology.

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ADVANCED BIOMATERIALS Fundamentals, Processing, and Bikramjit Basu and Shekhar Nath 3 MATERIALS FOR ORTHOPEDIC APPLICATIONS 53 Shekhar Nath and Bikramjit Basu.

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Chapter 3 : - NLM Catalog Result

Shekhar Nath, Bikramjit Basu Materials for Orthopedic Applications, section 1, chapter 3, ISBN: In: Advanced Biomaterials: Fundamentals, Processing and Applications Edited by: Bikramjit Basu, Dharendra S. Katti, Ashok Kumar.

Includes bibliographical references and index. Materials for orthopedic applications Shekhar Nath and Bikramjit Basu. The micro macroporous biphasic calcium phosphate concept for bone reconstruction and tissue engineering Guy Daculsi, Franck Jegoux and Pierre Layrolle. Injectable hydrogels as biomaterials Lakshmi S. Laurencin and Mayank Tandon. Laser processing of orthopedic biomaterials Rajarshi Banerjee and Soumya Nag. Design of supermacroporous biomaterials via gelation at subzero temperatures-Cryogelation Fatima M. Plieva, Ashok Kumar, Igor Yu. Galaev and Bo Mattiasson. Orthopaedic Interface Tissue Engineering: Moffat and Jeffrey P. Placental umbilical cord blood: A true blood substitute Niranjana Bhattacharya. Supported cell mimetic monolayers and their blood compatibility K. Kaladhar and Chandra P Sharma. Fundamentals, Processing, and Applications reviews the latest biomaterials discoveries, enabling readers to take full advantage of the most recent findings in order to advance the biomaterials research and development. Reflecting the nature of biomaterials research, the book covers a broad range of disciplines, including such emerging topics as nanobiomaterials, interface tissue engineering, the latest manufacturing techniques, and new polymeric materials. The book, a contributed work, features a team of renowned scientists, engineers, and clinicians from around the world whose expertise spans the many disciplines needed for successful biomaterials development. All readers will gain an improved understanding of the full range of disciplines and design methodologies that are used to develop biomaterials with the physical and biological properties needed for specific clinical applications. Nielsen Book Data Subjects.

Chapter 4 : Advanced Biomaterials : Ashok Kumar :

BIKRAMJIT BASU, PhD, is an Associate Professor in the Department of Materials and Metallurgical Engineering at the Indian Institute of Technology Kanpur. His research interests include ceramic and polymer-based biocompatible materials, nanoceramics and nanoceramic composites, and tribology of advanced materials.

Chapter 5 : Shekhar Nath - Publications List

Reflecting the nature of biomaterials research, the book covers a broad range of disciplines, including such emerging topics as nanobiomaterials, interface tissue engineering, the latest manufacturing techniques, and new polymeric materials.

Chapter 6 : Advanced Biomaterials : Bikramjit Basu :

Request PDF on ResearchGate | On Jul 6, , Shekhar Nath and others published Materials for Orthopedic Applications For full functionality of ResearchGate it is necessary to enable JavaScript.

Chapter 7 : Publications Authored by Bikramjit Basu | PubFacts

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