Record Nr. UNINA9910826216003321

Polymeric biomaterials / / editors, Severian Dumitriu and Valentin Popa Titolo

Boca Raton, Fla., : CRC Press, 2013 Pubbl/distr/stampa

Boca Raton, Fla.:,: CRC Press,, 2013

**ISBN** 0-429-14240-4

1-4200-9471-8

Edizione [1st ed.]

Descrizione fisica 1 online resource (922 p.)

Polymeric biomaterials ; ; v. 1 Collana

Altri autori (Persone) DumitriuSeverian <1939->

PopaValentin I

Disciplina 610.28

Soggetti **Polymers** 

> Biomedical materials - Therapeutic use Regenerative medicine - Methodology

Lingua di pubblicazione Inglese

**Formato** Materiale a stampa

Livello bibliografico Monografia

Description based upon print version of record. Note generali

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Front Cover; Contents; Preface; Acknowledgments; Editors;

> Contributors; Chapter 1. Synthesis and Fabrication of Polyesters as Biomaterials; Chapter 2. Hydrogels Formed by Cross-Linked Poly(Vinyl Alcohol); Chapter 3. Development and Evaluation of Poly (Vinyl Alcohol )Hydrogels as a Component of Hybrid Artificial Tissues for Orthopedics Surgery Application: Chapter 4. Polyphosphazenes as Biomaterials: Chapter 5. Biodegradable Polymers as Drug Carrier Systems; Chapter 6. Bioresorbable Hybrid Membranes for Bone Regeneration; Chapter 7.

Mucoadhesive Polymers

Chapter 8. Biodegradable Polymeric/Ceramic Composite Scaffolds to Regenerate Bone TissueChapter 9. Amphiphilic Systems as Biomaterials

Based on Chitin, Chitosan, and Their Derivatives; Chapter 10.

Biomaterials of Natural Origin in Regenerative Medicine; Chapter 11. Natural Polymers as Components of Blends for Biomedical Applications:

Chapter 12. Metal-Polymer Composite Biomaterials; Chapter 13. Evolution of Current and Future Concepts of Biocompatibility Testing: Chapter 14. Biocompatibility of Elastomers; Chapter 15. Preparation and Applications of Modulated Surface Energy Biomaterials

Chapter 16. Electrospinning for Regenerative MedicineChapter 17.

Polymeric Nanoparticles for Targeted Delivery of Bioactive Agents and Drugs; Chapter 18. Polymeric Materials Obtained through Biocatalysis; Chapter 19. Polymer-Based Colloidal Aggregates as a New Class of Drug Delivery Systems; Chapter 20. Photoresponsive Polymers for Control of Cell Bioassay Systems; Chapter 21. Lignin in Biological Systems; Chapter 22. Carbohydrate-Derived Self-Crosslinkable In Situ Gelable Hydrogels for Modulation of Wound Healing; Chapter 23. Dental and Maxillofacial Surgery Applications of Polymers Chapter 24. Biomaterials as Platforms for Topical Administration of Therapeutic Agents in Cutaneous Wound HealingChapter 25. Polymers for Artificial Joints; Index; Back Cover

## Sommario/riassunto

Biomaterials have had a major impact on the practice of contemporary medicine and patient care. Growing into a major interdisciplinary effort involving chemists, biologists, engineers, and physicians, biomaterials development has enabled the creation of high-quality devices, implants, and drug carriers with greater biocompatibility and biofunctionality. The fast-paced research and increasing interest in finding new and improved biocompatible or biodegradable polymers has provided a wealth of new information, transforming this edition of Polymeric Biomaterials into a two-volume set. This volume