

1.	Record Nr.	UNICAMPANIASUN0108814
	Autore	Ratcliffe, Colin
	Titolo	Doubt-Free Uncertainty In Measurement : An Introduction for Engineers and Students / Colin Ratcliffe, Bridget Ratcliffe
	Pubbl/distr/stampa	viii, 95 p., : ill. ; 24 cm
	ISBN	8-3-319-12062-1
	Edizione	[Cham : Springer, 2015]
	Descrizione fisica	Pubblicazione in formato elettronico
	Altri autori (Persone)	Ratcliffe, Bridget
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
2.	Record Nr.	UNINA9910350322503321
	Titolo	Biomaterials in Orthopaedics and Bone Regeneration : Design and Synthesis // edited by Preetkanwal Singh Bains, Sarabjeet Singh Sidhu, Marjan Bahraminasab, Chander Prakash
	Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
	ISBN	981-13-9977-8
	Edizione	[1st ed. 2019.]
	Descrizione fisica	1 online resource (X, 256 p. 95 illus., 72 illus. in color.)
	Collana	Materials Horizons: From Nature to Nanomaterials, , 2524-5384
	Disciplina	620.11
	Soggetti	Biomaterials Biomedical engineering Orthopedics Regenerative medicine Tissue engineering Biomedical Engineering and Bioengineering Surgical Orthopedics Regenerative Medicine/Tissue Engineering
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa

Nota di contenuto

1. Alumina-titanium bio-composites for orthopedic applications -- 2. Manufacturing and characterization of nickel filled Co-30Cr-4Mo metal alloy for orthopedic applications -- 3. Development of Porous Hydroxyapatite scaffold for Bone Regeneration Applications -- 4. Current challenges and Blooms in 3D printing of biomedical devices -- 5. Development of Biodegradable Mg-Hydroxyapatite scaffold for Bone Tissue Engineering Applications -- 6. Current Advances and Future Pathways of 3-D Printing in Bone Tissue Engineering -- 7. Neurosurgical Bone Grinding -- 8. Surface Modification of metallic biomaterials for enhanced wear, corrosion, and bio-activity for Orthopedic Applications -- 9. Influence of machining induced surface integrity on corrosion resistance of Mg-alloy -- 10. Influence of spark plasma on corrosion behavior of Co-Cr implants -- 11. Fabrication of medical model/ implants -- 12. Surface Modification Approach to Bio-manufacturing: Enhancing Surface Integrity and Bio-mechanical Performance of Implants -- 13. Bioinformatics & Nanotechnology: Current Challenges and Pathways -- 14. Biomaterials in orthopaedics and bone regeneration: Design and Synthesis -- 15. Zinc Powder Mixed Electro-discharge Machining on Magnesium Alloy for Potential Biodegradable Implants Application -- 16. Smart Nano-Biomaterial in Orthopaedic Applications.

Sommario/riassunto

This book focuses on the recent advances in the field of orthopaedic biomaterials, with a particular emphasis on their design and fabrication. Biomimetic materials, having similar properties and functions to that of the natural tissue, are becoming a popular choice for making customized orthopaedic implants and bone scaffolds. The acceptability of these materials in the human body depends on the right balance between their mechanical and biological properties. This book provides a comprehensive overview of the state-of-the-art research in this rapidly evolving field. The chapters cover different aspects of multi-functional biomaterials design, and cutting-edge methods for the synthesis and processing of these materials. Advanced manufacturing techniques, like additive manufacturing, used for developing new biomimetic materials are highlighted in the book. This book is a valuable reference for students and researchers interested in biomaterials for orthopaedic applications. .