1. Record Nr. UNINA9911034864903321

Autore	Ikhmayies Shadia J
Titolo	Advances in Biomaterials Research / / edited by Shadia J. Ikhmayies
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-97481-6
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (711 pages)
Collana	Advances in Material Research and Technology, , 2662-477X
Disciplina	620.19
Soggetti	Biomaterials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Biomaterials: Fundamentals, processing, and applications -- Biomaterials Today and Tomorrow -- New trends in the design of biomaterials for 3D and 4D printing -- Progress in Multifunctional and Multimodal Biomaterials for Therapeutic Applications -- Application of Biomaterials for Tissue Engineering.-Advancements and Applications of Biomaterials in Medicine, Artificial Organs and Biology -- Recent Advancements in Smart Biomaterials and their Related Applications in Medical Field -- Bioactive glass and glass-ceramics for Bone Healing and Medical Applications -- Therapeutic effects of metallic ions in the physiological environment: A review on recent developments -- Selected VI-element based glasses, glass-ceramics and nanoparticles: Synthesis and antibacterial/bactericidal activity -- Inorganic particles incorporated into electrospun nanofibers: Bioactivity and antibacterial properties -- Advances in Microbial-based Electrochemical Biosensors for Heavy Metal Detection.
Sommario/riassunto	This book offers comprehensive reviews on a wide range of biomaterials, detailing their synthetic and processing methods, properties, and applications. This book is ideal for undergraduate and graduate students in biomaterials and bioengineering, as well as a valuable reference for academics and professionals in the medical field. It covers the fundamentals and recent advances in biomaterials research, including applications in tissue engineering, orthopedics, CNS applications, regenerative medicine, and gene delivery. Key topics include the latest trends in 3D and 4D printing, multifunctional biomaterials, bioactive glass for bone healing, antibacterial activity of

VI-element-based glasses, and advances in microbial biosensors for heavy metal detection.