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Titolo	Advances in Metallic Biomaterials : Tissues, Materials and Biological Reactions // edited by Mitsuo Niinomi, Takayuki Narushima, Masaaki Nakai
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part I Biological Tissues and Organs -- Bone Tissue and Biomaterials Design Based on the Anisotropic Microstructure -- Joint: Normal Anatomy, Function, and Pathological Condition -- Metallurgy of Spinal Instrumentation -- Biomechanics of Blood Vessels: Structure, Mechanics, and Adaptation -- Tooth and Tooth-Supporting Structures -- Part II Metallic Biomaterials -- Nickel-free High Nitrogen Stainless Steel -- Co-Cr Alloys as Effective Metallic Biomaterials -- Titanium Alloys for Biomedical Applications -- Zirconium Alloys for Orthopedic Applications -- The Use of Porous Tantalum for Reconstructing Bone Loss in Orthopaedic Surgery -- Niobium Biomaterials -- Part III Reactions of Metals in Human Body.-Corrosion of Metallic Biomaterials -- Pathological Analysis of Metal Allergy to Metallic Materials -- Cytotoxicity of Metallic Biomaterials.
Sommario/riassunto	This book reviews fundamental advances in the use of metallic biomaterials to reconstruct hard tissues and blood vessels. It also

covers the latest advances in representative metallic biomaterials, such as stainless steels, Co-Cr alloys, titanium and its alloys, zirconium, tantalum and niobium based alloys. In addition, the latest findings on corrosion, cytotoxic and allergic problems caused by metallic biomaterials are introduced. The book offers a valuable reference source for researchers, graduate students and clinicians working in the fields of materials, surgery, dentistry, and mechanics. Mitsuo Niinomi, PhD, D.D.Sc., is a Professor at the Institute for Materials Research, Tohoku University, Japan Takayuki Narushima, PhD, is a Professor at the Department of Materials Processing, Tohoku University, Japan Masaaki Nakai, PhD, is an Associate Professor at the Institute for Materials Research, Tohoku University, Japan.
