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Nota di contenuto	Part I History and Materials Fundamentals -- History of development and use of the bioceramics and biocomposites -- Bioactive glass bone grafts: history and clinical applications -- Part II Materials Engineering and Biological Interactions -- Histological features of hard and soft tissues -- Biomimetic strategies to engineer mineralised human tissues -- Part III Clinical performance in bioresorbable and load- bearing applications -- Perspective and trends on bioceramics in hip joint replacement -- Clinical results obtained in chronic osteomyelitis after the use of bioabsorbable and antibiotic-impregnated carrier made by nanocrystalline hydroxyapatite and calcium sulphate. .
Sommario/riassunto	This handbook describes several current trends in the development of bioceramics and biocomposites for clinical use in the repair, remodelling, and regeneration of bone tissue. Comprehensive coverage

of these materials allows fundamental aspects of the science and engineering to be seen in close relation to the clinical performance of dental and orthopaedic implants. Bioceramics and biocomposites appear to be the most dynamic area of materials development for both tissue engineering and implantable medical devices. Almost all medical specialties will continue to benefit from these developments, but especially dentistry and orthopaedics. In this Handbook, leading researchers describe the use of bionanomaterials to create new functionalities when interfaced with biological molecules or structures. Also described are technologies for bioceramics and biocomposites processing in order to fabricate medical devices for clinical use. Another important section of the book is dedicated to tissue regeneration with development of new matrices. A targeted or personalized treatment device reduces drug consumption and treatment expenses, resulting in benefits to the patient and cost reductions for public health systems. This authoritative reference on the state-of-the-art in the development and use of bioceramics and biocomposites can also serve as the basis of instructional course lectures for audiences ranging from advanced undergraduate students to post-graduates in materials science and engineering and biomedical engineering. .
