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Altri autori (Persone)	NazarpourSoroush
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Introduction -- 2 Biocompatibility of thin films -- 3 Modern porous coatings in orthopaedic applications -- 4 Biofunctional coatings for dental implants -- 5 Nano-bio structures developed via electrophoresis -- 6 Diamond-like carbon (DLC) coated on polymers for biomedical applications -- 7 Surface modification of biodegradable polyesters for soft and hard tissue regeneration -- 8 Thin film biosensors -- 9 Thin film coatings as electrodes in neuroscience -- 10 Scanning electrochemical microscopy applied to cancer realted studies.
Sommario/riassunto	The surface of materials is routinely exposed to various environmental influences. Surface modification presents a technological challenge for material scientists, physicists, and engineers, particularly when those surfaces are subjected to function within human body environment. This book provides a comprehensive coverage of the major issues and topics dealing with interaction of soft living matter with the surface of implants. Fundamental scientific concepts are embedded through experimental data and a broad range of case studies. First chapters cover the basics on biocompatibility of many different thin films of metals, alloys, ceramics, hydrogels, and polymers, following with case studies dealing with orthopedic and dental coatings. Next, a novel and low-cost coating deposition technique capable of production of several types of nanostructures is introduced through simple calculations and several illustrations. Moreover, chapter 6 and 7 present important topics on surface treatment of polymers, which is a subject that has

seen many developments over the past decade. The last chapters target mainly the applications of coatings in biology such as in bio-sensing, neuroscience, and cancer detection. With several illustrations, micrographs, and case studies along with suitable references in each chapter, this book will be essential for graduate students and researchers in the multidisciplinary field of bio-coatings. .