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Nota di contenuto	Introduction -- Definitions and Concepts -- Bio-Recognition Elements -- Immobilization: Fundamentals and Protocols -- Novel Materials for Biosensing -- Bio-Functionalization and Surface Chemistry -- Transducers: Theory and Applications -- Biosensor Technology: Structure, Design, and Fabrication -- Milestones in Biosensor Applications -- Laboratory Protocols.
Sommario/riassunto	This book provides a clear and contemporary understanding of the fundamental concepts, principles, and applications of biosensors. It serves as a cutting-edge resource for readers to gain both theoretical knowledge and practical skills in science and technology. Designed for researchers, students at all levels, and professionals in research and education, it offers valuable introductory material while also exploring

the future prospects of the field. Written by experienced authors, the book systematically covers the principles, techniques, and applications of biosensors, addressing a gap in existing literature that often overlooks practical applications and results-oriented experimental protocols. It delves into current and future trends in applied techniques that are rarely found elsewhere and combines theoretical content with laboratory protocols (accompanied by videos), experimental procedures, and problem sets with solutions. Additionally, it incorporates the latest advancements in biotechnology for a practical, application-driven approach. Introduces the definitions and core concepts of biosensor technology; Compiles recent trends in advanced biosensors and the use of MEMS, Lab-on-a-Chip systems, and multiplexed detection; Provides laboratory protocols and hands-on experience with results and data.