

1. Record Nr.	UNINA9910508445503321
Autore	Pasquarelli Alberto
Titolo	Biosensors and Biochips / / by Alberto Pasquarelli
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-76469-9
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (342 pages)
Collana	Learning Materials in Biosciences, , 2509-6133
Disciplina	610.28
Soggetti	Medicine - Research Biology - Research Biophysics Senses and sensation Nanoscience Biotechnology Biomedical Research Sensory Systems Nanophysics Chemical Bioengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Bioreceptors -- Chapter 3. Catalytic Biosensors -- Chapter 4. Affinity Biosensors -- Chapter 5. Affinity Biosensors -- Chapter 6. Label-free Biosensors -- Chapter 7. Bioreceptor Immobilization -- Chapter 8. Biochips. Chapter 9. Genome Sequencing -- Chapter 10. Genome Sequencing -- Chapter 11. Micro Electrode Arrays, Implants and Organs-on-a-Chip -- Appendix.
Sommario/riassunto	This textbook describes the basic principles and mechanism of action of biosensor systems, and introduces readers to the various types of biosensors; from affinity biosensors to catalytic, optical and label-free biosensors, the most common systems are explained in detail. Dedicated advanced sections focus on biochips and genome sequencing methods as well as organs-on-a-chip. The textbook helps readers to understand the elementary components of biosensors, and

to identify and illustrate each function in the biosensor information flow, from recognition to transduction and transmission. Furthermore, readers will receive guidance in critically analyzing published studies on biosensor research, helping them to develop appropriate concepts and independently propose their own solutions. The textbook is intended for master's students in bioengineering, biophysics, biotechnology and pharmacology that need a solid grasp of biosensor system technologies and applications, as well as students in related medical technological fields.
