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Note generali	A Science Publishers book.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	1. Immunochips for personal toxicity testing / Zhixian Gao, Nan Liu and Rajkumar Rajendram -- 2. Detection of pesticide residues using biosensors / Javier Ramon-Azcon, Tomoyuki Yasukawa and Fumio Mizutani -- 3. Biosensors for ecotoxicity of xenobiotics : a focus on soil and risk assessment / Edoardo Puglisi. [et al.] -- 4. Biosensor-controlled degradation of organophosphate insecticides in water / Georges Istamboulie. [et al.] -- 5. Biosensors for endocrine disruptors : the case of bisphenol A and catechol / Marianna Portaccio. [et al.] -- 6. Biosensors for detection of heavy metals / Pavlina Sobrova. [et al.] -- 7. Whole cell biosensors : applications to environmental health / S. Buchinger and G. Reifferscheid -- 8. Bacterial whole cell bioreporters in environmental health / Yizhi Song. [et al.] -- 9. Environmental toxicology monitoring with polyazetidine-based enzymatic electrochemical biosensors / Franco Mazzei and Gabriele Favero -- 10. Polycyclic aromatic hydrocarbon (PAH) sensitive bacterial biosensors in environmental health / Mona Wells -- 11. Quorum sensing in microbial biosensors / Swati Choudhary and Claudia Schmidt-Dannert -- 12.

Biosensors based on immobilization of proteins in supramolecular assemblies for the detection of environmental relevant analytes / Rosa Pilolli. [et al.] -- 13. Nanogravimetric and voltammetric DNA-biosensors for screening of herbicides and pesticides / Maria Hepel, Magdalena Stobiecka and Anna Nowicka -- 14. Nitrate determination by amperometric biosensors : applications to environmental health / Erol Akyilmaz and Victor R. Preedy -- 15. Antibody-based biosensors for small environmental pollutants : focusing on PAHs / Candace R. Spier, Michael A. Unger and Stephen L. Kaattari -- 16. Exoelectrogens-based electrochemical biosensor for environmental monitoring / Liu Deng, Li Shang and Shaojun Dong -- 17. Detecting waterborne parasites using piezoelectric cantilever biosensors / Sen Xu and Raj Mutharasan -- 18. Bioluminescence-based biosensor for food contamination / Jinping Luo. [et al.].

Sommario/riassunto

Biosensors have a biological component within them and can be used to detect, monitor or quantify environmental substances. Chapters have an abstract, key facts, applications to other areas of health and disease and a mini-dictionary of key terms and summary points. Coverage includes personal toxicity testing, soil and risk assessment, pesticide, insecticides, parasites, nitrate, endocrine disruptors, heavy metals, food contamination, whole cell bioreporters, bacterial biosensors, antibody-based biosensors, enzymatic, amperometric and electrochemical aspects, quorum sensing, DNA-biosensors, cantilever biosensors, bioluminescence and other methods and applications. Contributors are leading authorities and the book is essential reading for environmental scientists, toxicologists, medical doctors, health care professionals, pathologists, biologists, biochemists, chemists and physicists, general practitioners as well as those interested in disease and sciences in general. --
