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| Nota di contenuto | An overview of nanomaterial-modified electrodes -- Nanomaterials for electrode fabrication: properties and synthesis -- Modified TiO2 nanomaterial-based electrodes for biosensors -- Modified Graphene-based electrodes for sensing biomolecules and pharmaceutical compounds -- Modified Carbon nanotube-based electrodes for sensing biomolecules and pharmaceutical compounds -- Modified ZnO nanomaterials electrodes for monitoring of environmental contaminants -- Modified nanomaterials-based electrode for the detection of heavy metals in water -- Immobilization techniques in the fabrication of nanomaterial-based electrodes for biosensing -- Polymer nanocomposites-based electrodes for the detection of pharmaceutical compounds -- Gold and silver nanoparticle-based electrodes for sensing biomolecules and pharmaceutical compounds -- |

Nanomaterial-modified electrodes for glucose sensing -- Nanomaterials modified electrodes for nucleic acid biosensing -- Nanomaterials based screen printed electrodes for biosensing and pharmaceutical analysis -- Nanomaterials as ink for paper based flexible electrodes for biosensing, pharmaceutical analysis and environmental monitoring -- Lab-on-chip based electrochemical sensors for biosensing, pharmaceutical analysis and environmental monitoring -- Magnetic nanomaterial-modified electrodes -- 2D layered nanomaterial-modified electrodes for the detection of environmental contaminants -- 1D nanomaterial-modified electrodes for pharmaceutical analysis -- Nanomaterials modified electrodes for the detection of antibiotics in water -- Conclusions.

Sommario/riassunto

This contributed volume overviews the latest developments in the area of nanomaterial-modified electrodes and presents their unique biosensing, pharmaceutical and environmental applications. The book provides a comprehensive introduction on the basics of electrochemical sensors while also presenting overviews of multiple modified electrodes as essential elements for the development of sensors. The principle electrochemical sensors which are transducing the chemical/biochemical reactions to electrical signals are presented, while a special focus on lab-on-chips as well as the design and applications of various flexible electrodes is given. This book is of great benefit to researchers, graduate students and professionals working in the areas of biosensing, materials science, environmental engineering and pharmaceutical analysis.