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Titolo	Advances in Surfactant Biosensor and Sensor Technologies // edited by J. G. Manjunatha
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ISBN	9783031608322 9783031608315
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (230 pages)
Disciplina	681.2
Soggetti	Analytical chemistry Chemical detectors Electrochemistry Surface chemistry Analytical Chemistry Sensors Surface Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	An overview of Surfactants, properties, types and role in chemistry -- Recent advances in Surfactant based electrochemical sensing devices -- Surfactant based electrodes for determination of heavy metal ions -- Surfactant incorporated electrochemical sensors for dyes -- Surfactant materials based electrochemical devices for determination of pesticides -- Electro-analysis of hormones at Surfactant modified electrochemical sensor -- Surfactant modified composite electrodes for electrochemical determination of drugs -- Surfactant based electrodes for determination of neurotransmitters -- Surfactant modified electrodes for detection of vitamins -- Application of graphene-based electrodes for water pollutants -- Biomedical applications of surfactant modified graphene based electrochemical sensing devices -- Non-ionic surfactant-based sensors -- Surfactant electrochemical sensor based on carbon nanotubes for the analysis of fungicides -- Surfactant sensors for toxic chemicals analysis -- Food quality assessment through surfactant sensors.

This book presents an overview of the development and applications of surfactant biosensor technologies. The progress in this field is fueled by a need for efficient, low cost, stable sensors that utilize harmless materials; this book illustrates how surfactant sensors represent a timely solution to this issue. Readers will learn how to utilize surfactants to make green electrochemical sensors with high stability, sensitivity, selectivity, and a robust, fast response, with special emphasis given to the most recent advances in this field. The book additionally details how to apply these sensors in routine analyses authored by experts in their respective fields. Contributing authors pay close attention to the use of surfactant-based electrochemical sensors in electrodes and devices, examining their applications towards a variety of medicinal, industrial, and environmental applications. This book is an important resource for scientific researchers both specifically in the electrochemistry field, and also for those in interdisciplinary chemistry, biology, physics, and electronics fields. It invites scientists from all areas to participate, with the goal of producing more researchers developing innovative sensor technologies. It will also be beneficial for students and future scientists working on sustainable sensors. .
