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| Record Nr. | UNINA9910999777803321 |
| Titolo | Smart Nanosensors / / edited by Imran Uddin |
| Pubbl/distr/stampa | Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025 |
| ISBN | 981-9638-78-X |
| Edizione | [1st ed. 2025.] |
| Descrizione fisica | 1 online resource (XX, 449 p. 84 illus., 80 illus. in color.) |
| Collana | Smart Nanomaterials Technology, , 3004-8281 |
| Disciplina | 620.19 |
| Soggetti | Materials |
| | Detectors |
| | Chemical detectors |
| | Biophysics |
| | Senses and sensation |
| | Molecular probes |
| | Sensors and biosensors |
| | Sensors |
| | Sensory Systems |
| | Biological Sensors and Probes |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Nanozyme: Enzyme-mimetic smart Nanomaterials for Advanced Biosensing Applications -- Theranostic application of smart nanomaterials in target drug delivery -- Proteins as sensing elements in biosensors -- Cyclodextrin conjugated nanoparticles for early diagnosis of Cancer -- Biosensors in host-microbe interactions -- Smart nanomaterials for sensing applications: Present and future in medicine, packaging, and quality control -- Sensor development for heavy metal ion detection: New insights on translating prevalent analysis to portable smart nanodevices -- Advancements in Silica Nanomaterials for Intelligent Switches and Sensors in Agriculture, Food, and Water Treatment -- Graphene based smart sensors for pollutant detection in water bodies -- Thermochromic-based Sensors: High-Tech Products -- Fluorescence-based Nanosensors for biomarker detection: Advancements and applications in biodiagnostics -- Smart |

nanobiomaterials: enhancing multiplexing and flexibility of electrochemical biosensors -- Nanosensors: Food quality, safety, and authenticity monitoring using nanotechnology -- Rare-earth based nanomaterials for sensor applications -- Fabrication of low-dimensional Bismuth Chalcogenide nanostructures for energy and biomedical sensing applications.

Sommario/riassunto	This book serves as a comprehensive compilation of contemporary research conducted in the domain of nanosensors. The amalgamation of many elements within the emerging field contributes to the development of a useful collection specifically designed for inexperienced researchers in the domain of smart materials and nanosensor technologies. An adequate range of subjects has been incorporated into the present book. It includes enzyme-mimetic use of smart nanomaterials for enhanced biosensing applications, theranostic utilization of smart nanomaterials for targeted drug delivery, sensors for pollutant detection, and the utilization of smart nanomaterials in the development of biosensors for studying host-microbe interactions. Nanosensors have emerged as a promising avenue for various applications, including sensing in the fields of medicine, packaging, and heavy metal ion detection. Recent developments in the field of smart nanomaterials have led to significant advancements in the application of intelligent switches and sensors within the domains of agriculture, food production, and water treatment. The primary emphasis of this book is the study of the synthesis and fabrication processes involved in the production of smart materials, together with their application within the domain of sensor technology. The existing body of literature has two main categories: introductory textbooks that provide fundamental knowledge about the field and specialized publications that focus exclusively on certain subtopics within the domain of sensor technology. The existing material of the book makes it a complete reference resource that is well-suited for researchers in the area. It especially caters to advanced graduate students who are seeking senior graduate, MTech, and MS degrees in the subject of sensor technology. Additionally, this publication would function as an essential resource for researchers across diverse disciplines within the area of materials science who are aiming to propel the development of smart materials.