1. Record Nr. UNINA9911018756503321

Autore	Petkov Plamen
Titolo	Nanotechnological Advances in Environmental, Cyber and CBRN Security / / edited by Plamen Petkov, Mohamed Essaid Achour, Cyril Popov
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2025
ISBN	94-024-2316-8
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (719 pages)
Collana	NATO Science for Peace and Security Series B: Physics and Biophysics, , 1874-6535
Altri autori (Persone)	AchourMohamed Essaid PopovCyril
Disciplina	620.5
Soggetti	Nanotechnology Materials - Analysis Surfaces (Technology) Thin films Biophysics Nanoscience Physics Characterization and Analytical Technique Surfaces, Interfaces and Thin Film Nanoscale Biophysics Applied and Technical Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	nanocomposite materials with improved sensing properties -- nanomaterials in quantum sensing and technology -- graphene and carbon nanotubes for sensor applications -- nano-based novel chemical and biological sensors -- nanotechnological advances towards remote sensors -- advanced nanotechnological approaches for early detection of CBRN agents -- defence against CBRN agents based on advanced nanotechnological approaches -- quantum approaches towards cyber security.
Sommario/riassunto	This book is based on the lectures and contributions from the NATO Advanced Study Institute on 'Nanotechnological Advances in

Environmental, Cyber, and CBRN Security,' held in Sozopol, Bulgaria, in September 2024. It provides a comprehensive overview of the field, incorporating articles that address the preparation and characterization of various nanoscale materials, including metals, oxides, glasses, polymers, and carbon-based materials. Additionally, the book includes contributions on the applications of these materials in diverse security and safety-related fields. The book adopts an interdisciplinary approach, drawing on the expertise of authors from physics, chemistry, engineering, materials science, and biology. A notable feature is its representation of expert knowledge from over 15 countries, offering both comprehensive papers that provide foundational insights into specific topics and concise contributions that emphasize particular applications in various security domains.