1. Record Nr. UNINA9910743363603321

Titolo	Advances in Nanostructured Materials / / edited by Bibhu Prasad Swain
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-16-8390-5 981-16-8391-3
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (439 pages)
Collana	Materials Horizons: From Nature to Nanomaterials, , 2524-5392
Disciplina	730
Soggetti	Nanotechnology Surfaces (Technology) Thin films Composite materials Surfaces, Interfaces and Thin Film Composites
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Methyl Ammonium Lead Bromide Perovskite Films and their Applications to Optoelectronic Devices -- Silicon Nanowires A Magic Material for Hybrid Solar Cells -- Lead-free Dielectrics: A Start-of-the-art for Green Energy Storage -- Nanostructure Semiconductor Materials for Device Applications -- Reduced Graphene Oxide/Silicon Nanowire Heterojunction- Fabrication and Photovoltaic Application -- Chemical Bath Deposited Zinc Oxide Nanostructured Thin Films and their Applications -- Recent Trends and Research Challenges on Supercapacitor -- Magnetic Nanoparticles in Wastewater Treatment, Supercapacitor and Biomedical Applications -- Effects of Viscosity on the Magnetically Induced Heat Generation -- Morphology-Controlled Synthesis and Morphology-Induce Structures of Different Nanoparticles.
Sommario/riassunto	This book presents recent advances in nanostructured materials. It describes the characterization of nanomaterials, their preparation methods and performance testing techniques; the design and development of nano-scale devices; and the applications of nanomaterials, with examples taken from different industries, such as

energy, bioengineering and medicine. The book is broadly divided into sections such as nanostructure semiconductor materials for device applications, nanostructured ferroelectric and ferromagnetic materials.. The topics covered include experimental approaches of device fabrication, photovoltaics and supercapacitors applications, etc. Given the contents, the book will be useful for students, researchers, and professionals working in the area of nanotechnology and nanomaterials.