1. Record Nr. UNINA9910483559403321

Autore	Liu Hui
Titolo	Smart Device Recognition : Ubiquitous Electric Internet of Things / / by Hui Liu, Chengming Yu, Haiping Wu
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2021
ISBN	981-334-925-5
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XV, 294 p. 168 illus., 107 illus. in color.)
Disciplina	004.678
Soggetti	Internet of things Artificial intelligence Computational intelligence Internet of Things Artificial Intelligence Computational Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Smart non-intrusive device recognition based on physical methods -- Smart non-intrusive device recognition based on intelligent single-label classification methods.-Smart non-intrusive device recognition based on intelligent multi-label classification methods.
Sommario/riassunto	The book is the first international reference on the field of smart device recognition and Ubiquitous Electric Internet of Things (UEIOT). It presents a range of state-of-the-art key methods and applications for smart device recognition. In future smart environments, obtaining energy consumption information for identifying every device is an effective approach to guarantee the energy efficiency of smart industrial systems. Such as, the Ubiquitous Electric Internet of Things (UEIOT) technology represents one of the most effective measures for electricity and energy management and has attracted considerable attention from scientists and engineers around the world. The realization of smart device recognition in the UEIOT framework has become the core and basis of UEIOT’s success. The device smart recognition can help governments and managers to distribute energy

	and power better, and help device manufacturers to improve their products regarding smart energy conservation. Accordingly, in the future smart industry, implementing smart device recognition is desired and very important. In the book, several methods, strategies, and experiments for achieving smart device recognition are presented in details. As the first monograph in the field of smart device recognition, the book can provide beneficial reference for students, engineers, scientists, and managers in the fields of power, energy, electromechanical devices, smart cities, artificial intelligence, etc. .

2.

Record Nr.	UNINA9910380724503321
Autore	Thangadurai T. Daniel
Titolo	Nanostructured Materials / / by T. Daniel Thangadurai, N. Manjubaashini, Sabu Thomas, Hanna J. Maria
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-26145-X
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XI, 210 p. 88 illus., 32 illus. in color.)
Collana	Engineering Materials, , 1868-1212
Disciplina	620.115
Soggetti	Nanotechnology Microtechnology Microelectromechanical systems Nanoscience Microsystems and MEMS Nanophysics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Nanotechnology and Dimensions -- Nanomaterials, Properties and Applications -- Fundamentals of Nanostructures -- Physics and Chemistry of Nanostructures -- Quantum effects, CNTs, Fullerenes and Dendritic structures -- Semiconductors, Organic and Hybrid Nanostructures -- Properties of Nanostructured Materials -- Synthesis of Nanostructured Materials -- Functionalization of Nanostructures --

Characterization and Technical Analysis of Nanostructured Materials -- (N.A.) -- Nanostructured Materials for Optical and Electronic Applications -- Nanostructured Materials for Bioapplications -- Nanostructured Materials for Photonic Applications -- Nanostructured Materials for Environmental Remediation -- Miscellaneous Applications of Nanostructures -- Nanostructured Materials Life time and Toxicity Analysis -- Nanomaterials Research and Development.

Sommario/riassunto

This book discusses the early stages of the development of nanostructures, including synthesis techniques, growth mechanisms, the physics and chemistry of nanostructured materials, various innovative characterization techniques, the need for functionalization and different functionalization methods as well as the various properties of nanostructured materials. It focuses on the applications of nanostructured materials, such as mechanical applications, nanoelectronics and microelectronic devices, nano-optics, nanophotonics and nano-optoelectronics, as well as piezoelectric, agriculture, biomedical and, environmental remediation applications, and anti-microbial and antibacterial properties. Further, it includes a chapter on nanomaterial research developments, highlighting work on the life-cycle analysis of nanostructured materials and toxicity aspects.