1. Record Nr. UNINA990002869630403321

Autore	Chu, Wenchang
Titolo	Basic almost-poised hypergeometric series / Wenchang Chu
Pubbl/distr/stampa	Milano : CNR, 1995
Descrizione fisica	99 p. ; 30 cm
Collana	Preprint / CNR - IAMI ; 95.3
Disciplina	515
Locazione	MAS
Collocazione	MXXXII-C-62
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910807655503321

Titolo	Functional nanostructured materials and membranes for water treatment / / edited by Mikel Duke, Dongyuan Zhao, and Raphael Semiat
Pubbl/distr/stampa	Weinheim an der Bergstrasse, Germany, : Wiley-VCH Verlag GmbH, c2013
ISBN	9783527668489 3527668489 9783527668502 3527668500 9781299313552 1299313558 9783527668496 3527668497
Edizione	[1st ed.]
Descrizione fisica	1 online resource (349 p.)
Collana	New Materials for Sustainable Energy and Development
Altri autori (Persone)	DukeMikel ZhaoDongyuan SemiatRaphael
Disciplina	628.166
Soggetti	Water - Purification Water - Purification - Membrane filtration Nanotechnology

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Functional Nanostructured Materials and Membranes for Water Treatment; Contents; Foreword; Series Editor Preface; Acknowledgments; About the Series Editor; About the Volume Editors; List of Contributors; 1 Target Areas for Nanotechnology Development for Water Treatment and Desalination; 1.1 The Future of Water Treatment: Where Should We Target Our Efforts?; 1.2 Practical Considerations for Nanotechnology Developers; 1.3 The Water Treatment Market for New Nanotechnology; 1.4 Purpose of This Book; 1.5 Concluding Remarks; References; 2 Destruction of Organics in Water via Iron Nanoparticles 2.1 Introduction2.2 Nanoparticles as Catalysts; 2.2.1 Colloidal Nanoparticles; 2.2.2 Supported Nanoparticles; 2.3 Advanced Oxidation Processes; 2.3.1 Fenton-Like Reactions; 2.3.1.1 Iron Oxide as Heterogeneous Nanocatalyst; 2.3.2 Photo-Fenton Reactions; 2.3.3 Nanocatalytic Wet Oxidation; 2.4 Nano Zero-Valent Iron (nZVI); 2.4.1 Synthesizing Methods; 2.4.1.1 Emulsified Zero-Valent Iron; 2.4.2 Degradation Mechanism; 2.4.3 Field Application of nZVI; 2.5 Bimetallic nZVI Nanoparticles; 2.6 Summary; References; 3 Photocatalysis at Nanostructured Titania for Sensing Applications; 3.1 Background 3.1.1 Photocatalysis at TiO2 Nanomaterials3.1.2 Photoelectrocatalysis at TiO2 Nanomaterials; 3.2 Fabrication of TiO2 Photoanodes; 3.2.1 Common Fabrication Techniques and Substrates for Photoanodes; 3.2.2 TiO2/BDD Photoanode; 3.2.3 TiO2 Mixed-Phase Photoanode; 3.2.4 CNTs/TiO2 Composite Photoanode; 3.3 The Sensing Application of TiO2 Photocatalysis; 3.3.1 Photocatalytic Determination of TOC; 3.3.2 Photocatalytic Determination of COD; 3.4 The Sensing Application of TiO2 Photoelectrocatalysis; 3.4.1 Probe-Type TiO2 Photoanode for Determination of COD 3.4.2 Exhaustive Degradation Mode for Determination of COD3.4.3 Partial Oxidation Mode for Determination of COD; 3.4.4 UV-LED for Miniature Photoelectrochemical Detectors; 3.4.5 Photoelectrochemical Universal Detector for Organic Compounds; 3.5 Photocatalytic Gas Sensing; 3.5.1 The Photoelectrocatalytic Generation of Analytical Signal; 3.5.2 Photocatalytic Surface Self-Cleaning for Enhancement of Analytical Signal; 3.6 Conclusions; References; 4 Mesoporous Materials for Water Treatment; 4.1 Adsorption of Heavy Metal Ions; 4.2 Adsorption of Anions; 4.3 Adsorption of Organic Pollutants 4.4 Multifunctional Modification of Sorbents4.5 Photocatalytic Degradation of Organic Pollutants; 4.6 Conclusions and Outlook; Acknowledgments; References; 5 Membrane Surface Nanostructuring with Terminally Anchored Polymer Chains; 5.1 Introduction; 5.2 Membrane Fouling; 5.3 Strategies for Mitigation of Membrane Fouling and Scaling; 5.4 Membrane Surface Structuring via Graft Polymerization; 5.4.1 Overview; 5.4.2 Reaction Schemes for Graft Polymerization; 5.4.3 Surface Activation with Vinyl Monomers; 5.4.4 Surface Activation with Chemical Initiators 5.4.5 Irradiation-Induced Graft Polymerization
Sommario/riassunto	With its emphasis on the application of nanotechnology to improve water treatment processes, this ready reference and handbook addresses the real needs of scientists and others working in the industry. It thus covers materials ranging from ceramic membranes, to

functional nanoparticles, carbon nanotubes, and biological materials, as well as theoretical aspects.Each chapter is written by leading international experts in the field, examining in detail desalination, adsorption, filtration, the destruction and conversion of pollutants, as well as the monitoring of water quality, while discussi