

1. Record Nr.	UNINA9910765704903321
Autore	Santos Abel
Titolo	Electrochemically Engineering of Nanoporous Materials / / Abel Santos
Pubbl/distr/stampa	Basel, Switzerland : , : MDPI, , 2018
ISBN	9783038972693 303897269X
Descrizione fisica	1 online resource (158 pages)
Disciplina	671.734
Soggetti	Electrochemical metallizing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	About the Special Issue Editor vii -- Preface to "Electrochemically Engineering of Nanoporous Materials" . ix -- Abel Santos Electrochemical Engineering of Nanoporous Materials Reprinted from: Nanomaterials 2018, 8, 691, doi: 10.3390/nano8090691 1 -- Ali Aldalbahi, Mostafizur Rahaman, Mohammed Almoiqli, Abdelrazig Hamedelniel and Abdulaziz Alrehaili Single-Walled Carbon Nanotube (SWCNT) Loaded Porous Reticulated Vitreous Carbon (RVC) Electrodes Used in a Capacitive Deionization (CDI) Cell for Effective Desalination Reprinted from: Nanomaterials 2018, 8, 527, doi: 10.3390 /nano8070527 3 -- Xian Li, Samantha Pustulka, Scott Pedu, Thomas Close, Yuan Xue, Christiaan Richter and Patricia Taboada-Serrano Titanium Dioxide Nanotubes as Model Systems for Electrosorption Studies Reprinted from: Nanomaterials 2018, 8, 404, doi: 10.3390 /nano8060404 23 -- Abdalla Abdelwahab, Jesica Castelo-Quibén, José F. Vivo-Vilches, María P. Pérez-Cadenas, Francisco J. Maldonado-Hódar, Francisco Carrasco-Marín and Agustín F. Pérez-Cadenas Electrodes Based on Carbon Aerogels Partially Graphitized by Doping with Transition Metals for Oxygen Reduction Reaction Reprinted from: Nanomaterials 2018, 8, 266, doi: 10.3390/nano8040266 36 -- Mohamed Salaheldeen, Victor Vega, Angel Ibabe, Miriam Jaafar, Agustina Asenjo, Agustín Fernández and Victor M. Prida Tailoring of Perpendicular Magnetic Anisotropy in Dy ₁₃ Fe ₈₇ Thin Films with Hexagonal Antidot Lattice Nanostructure Reprinted from: Nanomaterials 2018, 8, 227, doi: 10.3390/nano8040227 51 -- Po-

Hsin Wang, Tzong-Liu Wang, Wen-Churng Lin, Hung-Yin Lin, Mei-Hwa Lee and Chien-Hsin Yang Crosslinked Polymer Ionic Liquid/Ionic Liquid Blends Prepared by Photopolymerization as Solid-State Electrolytes in Supercapacitors Reprinted from: *Nanomaterials* 2018, 8, 225, doi: 10.3390/nano8040225 62 -- Po-Hsin Wang, Tzong-Liu Wang, Wen-Churng Lin, Hung-Yin Lin, Mei-Hwa Lee and Chien-Hsin Yang Enhanced Supercapacitor Performance Using Electropolymerization of Self-Doped Polyaniline on Carbon Film Reprinted from: *Nanomaterials* 2018, 8, 214, doi: 10.3390/nano8040214 79 -- Steven J. P. McInnes, Thomas J. Macdonald, Ivan P. Parkin, Thomas Nann and Nicolas H. Voelcker Electrospun Composites of Polycaprolactone and Porous Silicon Nanoparticles for the Tunable Delivery of Small Therapeutic Molecules Reprinted from: *Nanomaterials* 2018, 8, 205, doi: 10.3390/nano8040205 91 -- v Yang Liu, Jieyu Zhang, Ying Li, Yemin Hu, Wenxian Li, Mingyuan Zhu, Pengfei Hu, Shulei Chou and Guoxiu Wang Solvothermal Synthesis of a Hollow Micro-Sphere LiFePO₄/C Composite with a Porous Interior Structure as a Cathode Material for Lithium Ion Batteries Reprinted from: *Nanomaterials* 2017, 7, 368, doi: 10.3390/nano7110368 103 -- Maria Porta-i-Batalla, Elisabet Xifré-Pérez, Chris Eckstein, Josep Ferré-Borrull and Lluís F. Marsal 3D Nanoporous Anodic Alumina Structures for Sustained Drug Release Reprinted from: *Nanomaterials* 2017, 7, 227, doi: 10.3390/nano7080227 115 -- Wojciech J. Stepniowski and Wojciech Z. Misiołek Review of Fabrication Methods, Physical Properties, and Applications of Nanostructured Copper Oxides Formed via Electrochemical Oxidation Reprinted from: *Nanomaterials* 2018, 8, 379, doi: 10.3390/nano8060379 127.

Sommario/riassunto

Electrochemical engineering of nanoporous materials is a cost-effective and facile synthesis approach that enables the production of a range of nanoscale materials with controllable dimensions and properties. Recent decades have witnessed extensive research activity into the advanced engineering of nanoporous materials, from fundamental studies to applied science. These nanomaterials offer a set of unique and exclusive advantages for a wealth of applications, including catalysis, energy storage and harvesting, electronics, photonics, sensing, templates, and membranes. This Special Issue is dedicated to recent research advances in electrochemical engineering of nanoporous materials and their application across several disciplines and research fields. The broad and interdisciplinary applicability of these nanomaterials will be of profound and immediate interest for a broad audience, ranging from physicists, chemists, engineers, materials scientists, bioengineers, and nanomedicine experts.
