1. Record Nr. UNINA9910688443003321

Titolo	ZnO and TiO2 based nanostructures / / edited by Andrea Lamberti
Pubbl/distr/stampa	Basel, Switzerland : , : MDPI, , 2018
ISBN	3-03897-014-X
Descrizione fisica	1 online resource (380 pages)
Disciplina	660
Soggetti	Chemistry, Technical
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	About the Special Issue Editor -- Andrea Lamberti ZnO- and TiO2-Based Nanostructures Reprinted from: Nanomaterials 2018, 8, 325, doi: 10.3390/nano8050325 -- Simas Rackauskas, Nadia Barbero, Claudia Barolo and Guido Viscardi ZnO Nanowire Application in Chemoresistive Sensing: A Review Reprinted from: Nanomaterials 2017, 7, 381, doi: 10.3390/nano7110381 -- Lili Yang, Yong Yang, Yunfeng Ma, Shuai Li, Yuquan Wei, Zhengren Huang and Nguyen Viet Long Fabrication of Semiconductor ZnO Nanostructures for Versatile SERS Application Reprinted from: Nanomaterials 2017, 7, 398, doi: 10.3390 /nano7110398 -- Xiaoliang Wang, Yanyan Zhao, Kristian Molhave and Hongyu Sun Engineering the Surface/Interface Structures of Titanium Dioxide Micro and Nano Architectures towards Environmental and Electrochemical Applications Reprinted from: Nanomaterials 2017, 7, 382, doi: 10.3390/nano7110382 -- Liqin Xiang and Xiaopeng Zhao Wet-Chemical Preparation of TiO2-Based Composites with Different Morphologies and Photocatalytic Properties Reprinted from: Nanomaterials 2017, 7, 310, doi: 10.3390/nano7100310 -- Ming-Hung Hsu, Sheng-Po Chang, Shoou-Jinn Chang, Wei-Ting Wu and Jyun-Yi Li Oxygen Partial Pressure Impact on Characteristics of Indium Titanium Zinc Oxide Thin Film Transistor Fabricated via RF Sputtering Reprinted from: Nanomaterials 2017, 7, 156, doi: 10.3390 /nano7070156 -- Po-Hsun Shih and Sheng Yun Wu Growth Mechanism Studies of ZnO Nanowires: Experimental Observations and Short-Circuit Diffusion Analysis Reprinted from: Nanomaterials 2017, 7, 188, doi: 10.3390/nano7070188 -- Eloisa Berbel Manaia, Renata Cristina

Kiatkoski Kaminski, Bruno Leonardo Caetano, Marina Magnani, Florian Meneau, Amelie Rochet, Celso Valentim Santilli, Valerie Briois, Claudie Bourgaux and Leila Aparecida Chiavacci The Critical Role of Thioacetamide Concentration in the Formation of ZnO/ZnS Heterostructures by Sol-Gel Process Reprinted from: Nanomaterials 2018, 8, 55, doi: 10.3390/nano8020055 -- Ying Chen, Hao Ding and Sijia Sun Preparation and Characterization of ZnO Nanoparticles Supported on Amorphous SiO2 Reprinted from: Nanomaterials 2017, 7, 217, doi: 10.3390/nano7080217 -- Abu ul Hassan Sarwar Rana, Ji Young Lee, Areej Shahid and Hyun-Seok Kim Growth Method-Dependent and Defect Density-Oriented Structural, Optical, Conductive, and Physical Properties of Solution-Grown ZnO Nanostructures Reprinted from: Nanomaterials 2017, 7, 266, doi: 10.3390/nano7090266 -- Alena Folger, Julian Kalb, Lukas Schmidt-Mende and Christina Scheu Tuning the Electronic Conductivity in Hydrothermally Grown Rutile TiO2 Nanowires: Effect of Heat Treatment in Different Environments Reprinted from: Nanomaterials 2017, 7, 289, doi: 10.3390/nano7100289 -- Saera Jin, Eunhye Shin and Jongin Hong TiO2 Nanowire Networks Prepared by Titanium Corrosion and Their Application to Bendable Dye-Sensitized Solar Cells Reprinted from: Nanomaterials 2017, 7, 315, doi: 10.3390/nano7100315 -- Loic Berthod, Olga Shavdina, Isabelle Verrier, Thomas Kampfe, Olivier Dellea, Francis Vocanson, Maxime Bichotte, Damien Jamon and Yves Jourlin Periodic TiO2 Nanostructures with Improved Aspect and Line/Space Ratio Realized by Colloidal Photolithography Technique Reprinted from: Nanomaterials 2017, 7, 316, doi: 10.3390 /nano7100316 -- Yucang Liang, Susanne Wicker, Xiao Wang, Egil Severin Erichsen and Feng Fu Organozinc Precursor-Derived Crystalline ZnO Nanoparticles: Synthesis, Characterization and Their Spectroscopic Properties Reprinted from: Nanomaterials 2018, 8, 22, doi: 10.3390 /nano8010022 -- Jianling Hu, Jianhai Tu, Xingyang Li, Ziya Wang, Yan Li, Quanshui Li and Fengping Wang Enhanced UV-Visible Light Photocatalytic Activity by Constructing Appropriate Heterostructures between Mesopore TiO2 Nanospheres and SnO4 Nanoparticles Reprinted from: Nanomaterials 2017, 7, 336, doi: 10.3390 /nano7100336 -- Xiaobo Pan, Xinyue Liang, Longfang Yao, Xinyi Wang, Yueyue Jing, Jiong Ma, Yiyan Fei, Li Chen and Lan Mi Study of the Photodynamic Activity of N-Doped TiO2 Nanoparticles Conjugated with Aluminum Phthalocyanine Reprinted from: Nanomaterials 2017, 7, 338, doi: 10.3390/nano7100338 -- Ting Li, Dongyan Ding, Zhenbiao Dong and Congqin Ning Photoelectrochemical Water Splitting Properties of Ti-Ni-Si-O Nanostructures on Ti-Ni-Si Alloy Reprinted from: Nanomaterials 2017, 7, 359, doi: 10.3390/nano7110359 -- Nicolas Crespo-Monteiro, Anthony Cazier, Francis Vocanson, Yaya Lefkir, Stephanie Reynaud, Jean-Yves Michalon, Thomas Kampfe, Nathalie Destouches and Yves Jourlin Microstructuring of Mesoporous Titania Films Loaded with Silver Salts to Enhance the Photocatalytic Degradation of Methyl Blue under Visible Light Reprinted from: Nanomaterials 2017, 7, 334, doi: 10.3390/nano7100334 -- Huimin Hao, Kory Jenkins, Xiaowen Huang, Yiqian Xu, Jiahai Huang and Rusen Yang Piezoelectric Potential in Single-Crystalline ZnO Nanohelices Based on Finite Element Analysis Reprinted from: Nanomaterials 2017, 7, 430, doi: 10.3390/nano7120430 -- Sijia Sun, Tongrong Deng, Hao Ding, Ying Chen and Wanting Chen Preparation of Nano-TiO2-Coated SiO2 Microsphere Composite Material and Evaluation of Its Self-Cleaning Property Reprinted from: Nanomaterials 2017, 7, 367, doi: 10.3390/nano7110367 -- Dirk Oliver Schmidt, Nicolas Raab, Michael Noyong, Venugopal Santhanam, Regina Dittmann and Ulrich Simon

Resistive Switching of Sub-10 nm TiO2 Nanoparticle Self-Assembled Monolayers Reprinted from: Nanomaterials 2017, 7, 370, doi: 10.3390 /nano7110370 -- Mara Bruzzi, Riccardo Mori, Andrea Baldi, Ennio Antonio Carnevale, Alessandro Cavallaro and Monica Scaringella Thermally Stimulated Currents in Nanocrystalline Titania Reprinted from: Nanomaterials 2018, 8, 13, doi: 10.3390/nano8010013 -- Satoshi Yamamoto, Masafumi Ono, Eiji Yuba and Atsushi Harada In Vitro Sonodynamic Therapeutic Effect of Polyion Complex Micelles Incorporating Titanium Dioxide Nanoparticles Reprinted from: Nanomaterials 2017, 7, 268, doi: 10.3390/nano7090268 -- Benjamin Demarco, Dimitra Chatzitheodoridou, Walter Fazzini, Hanna Engelke and Valentina Cauda Andrea Ancona, Bianca Dumontel, Nadia Garino, Lipid-Coated Zinc Oxide Nanoparticles as Innovative ROS-Generators for Photodynamic Therapy in Cancer Cells Reprinted from: Nanomaterials 2018, 8, 143, doi: 10.3390/nano8030143 -- Peng Zhang, Xiaojian Wang, Zhidan Lin, Huaijun Lin, Zhiguo Zhang, Wei Li, Xianfeng Yang and Jie Cui Ti-Based Biomedical Material Modified with TIO/TIN, Duplex Bioactivity Film via Micro-Arc Oxidation and Nitrogen Ion Implantation Reprinted from: Nanomaterials 2017, 7, 343, doi: 10.3390/nano7100343 -- Jayden McCall, Joshua J. Smith, Kelsey N. Marquardt, Katelin R. Knight, Hunter Bane, Alice Barber and Robert K. DeLong ZnO Nanoparticles Protect RNA from Degradation Better than DNA Reprinted from: Nanomaterials 2017, 7, 378, doi: 10.3390 /nano7110378 -- Jin Yu, Hyeon-Jin Kim, Mi-Ran Go, Song-Hwa Bae and Soo-Jin Choi ZnO Interactions with Biomatrices: Effect of Particle Size on ZnO-Protein Corona Reprinted from: Nanomaterials 2017, 7, 377, doi: 10.3390/nano7110377 -- Alberto Casu, Andrea Lamberti, Stefano Stassi and Andrea Falqui Crystallization of TiO2 Nanotubes by In Situ Heating TEM Reprinted from: Nanomaterials 2018, 8, 40, doi: 10.3390/nano8010040.

Sommario/riassunto

Nowadays, transition metal-oxides can be considered the most investigated materials especially in their nanostructured forms thanks to their intrinsic smart properties and to the positive effects induced by scaling their dimension down to the nanoscale. Among them, ZnO and TiO2 have attracted particular interest mainly because of their multi-functionality applicable in an enormous range of research fields. The present Special Issue - composed by twenty-seven papers, both reviews and research articles - covers the most recent advances in ZnO and TiO2 nanostructures, concerning not only their synthesis and characterization, but also reports of the manner(s) in which their functional and smart properties can be applied in working devices. Applications of such nanostructures can range widely, from biomedical and drug delivery devices to piezoelectric and chemical sensors, and energy harvesting, conversion, and storage devices.