

Table of Contents

A Nanoscale Surface Structure Removal Process Using Excimer Irradiation and a Cross-Shaped Electrode Tool P.S. Pa	1
Pulmonary Toxicity of Well-Dispersed Single-Wall Carbon Nanotubes Following Intratracheal Instillation Y. Morimoto, M. Hirohashi, M. Horie, A. Ogami, T. Oyabu, T. Myojo, M. Hashiba, Y. Mizuguchi, T. Kambara, B.W. Lee, E. Kuroda, K. Yamamoto, N. Kobayashi, S. Endoh, K. Uchida, T. Nakazato, K. Fujita, J. Nakanishi and I. Tanaka	9
Effect of Hydrostatic Pressure on Nano Crystalline Materials Behavior R. Jafari Nedoushan and M. Farzin	27
Hydrothermal Synthesis of CuS Nanostructures with Different Morphology M. Saranya and A. Nirmala Grace	43
Study on Vacancy Related Defects of CdS Nanoparticles by Heat Treatment N.S. Roshima, S. Saravana Kumar, A.U. Maheswari and M. Sivakumar	53
Cysteine Interactions in Glutathione Mediated Assembly of Silver Nanoparticles in the Presence of Metal Ions C.S. Keskin, S.Y. Keskin and A. Özdemir	63
Structural, Electronic and Optical Properties of SiC Quantum Dots J.G. Wang and P. Kroll	77
On the Polytypic Transformations in SiC M. Marinova, A. Mantzari, A. Andreadou and E.K. Polychroniadis	89
Platinum Nanoparticles as pH Sensor for Intelligent Packaging A.J. Martins, M. Benelmekki, V. Teixeira and P.J.G. Coutinho	97
Structure and Properties of Silver Clusters Implanted in PET by PVD Sputtering for Active Packaging Applications M. Benelmekki, M. Torrell, E. Xuriguera, F. Vaz and V. Teixeira	105
Molecular Dynamics Simulation of Single-Walled Carbon Nanotube – PMMA Interaction M. Rahmat and P. Hubert	117
ZnO Nano/Microstructures Grown by Laser Assisted Flow Deposition J. Rodrigues, M. Peres, M.R.N. Soares, A.J.S. Fernandes, N. Ferreira, M. Ferro, A.J. Neves, T. Monteiro and F. Costa	129
Modification and Characterization of the Surface of SOI Nanowire Sensors O.V. Naumova, B.I. Fomin, N.F. Malyarenko and V.P. Popov	139
Arsenic Sulphide As₄S₄ Nanoparticles: Physico-Chemical Properties and Anticancer Effects P. Baláz, J. Sedlák, M. Pastorek, D. Cholužová, K. Vignarooban, S. Bhosle, P. Boolchand, Z. Bujňáková, E. Dutková, O. Kartachova and B. Stalder	149
An Easy Methodology for the Incorporation of Carbon Nanotubes on Surfaces of Components Applied as Electronic Devices M. Pérez-Cadenas, A. Maroto-Valiente, I. Rodríguez-Ramos and A. Guerrero-Ruiz	157
Development of Photocatalytic Ceramic Materials through the Deposition of TiO₂ Nanoparticles Layers J.O. Carneiro, V. Teixeira, S. Azevedo, F. Fernandes and J. Neves	165
Surface Plasmon Resonance Effect on the Optical Properties of TiO₂ Doped by Noble Metals Nanoparticles M. Torrell, R.C. Adochite, L. Cunha, N.P. Barradas, E. Alves, M.F. Beaufort, J.P. Rivière, A. Cavaleiro, S. Dosta and F. Vaz	177
Photoluminescence and Photocatalytic Properties of Nanocrystalline TiO₂:Tb Thin Films D. Wojcieszak, J. Domaradzki, D. Kaczmarek, E. Prociow, A.W. Morawski and M. Janus	187
Hardness of Nanocrystalline TiO₂ Thin Films D. Kaczmarek, J. Domaradzki, D. Wojcieszak, E. Prociow, M. Mazur, F. Placido and S. Lapp	195
Si Doped and Un-Doped CrN Thin Films Produced by Magnetron Sputtering: Structural and Mechanical Properties L. Cunha and C. Moura	201

Study of Growth Process for Functionally Gradient Nanocomposite Coating Fabricated by Plasma Electrolytic Carburizing M. Aliofkhazraei and A.S. Rouhaghdam	213
The Use of Solid State NMR to Evaluate EVA/Silica FILMs A.A. Passos, M.I.B. Tavares, R.C.P. Neto and A.G. Ferreira	219
The Deposition of Nanocrystalline Diamond by HFCVD in Different Materials J.A. Santos, V.F. Neto, D. Ruch and J. Grácio	227
Room Temperature Magnetic Response of Sputter Deposited TbDyFe Films as a Function of the Deposition Parameters L. Rebouta, P. Martins, S. Lanceros-Méndez, J.M. Barandiaran, J. Gutiérrez, L.C. Alves and E. Alves	235
Energetic Ion Irradiation as Advanced Process for Functionalization of Silicon Nanocrystals in a SiO₂ Matrix I.V. Antonova, V.A. Skuratov and I. Balberg	241
Mechanochemically Synthesised Zn_xCd_{1-x}S Nanoparticles for Solar Energy Applications E. Dutková, P. Baláz, P. Pourghahramani, V. Balek, A.V. Nguyen, A. Šatka, J. Kováč and J. Ficeriová	247
Photoluminescence of GdVO₄:Eu³⁺, Al³⁺ Phosphors under VUV Excitation K. Park, M.H. Heo, Y. Kim and J.Y. Kim	257
Three Transducers Embedded into a Single SiC Photodetector: LSP Direct Image Sensor, Optical Amplifier and Demux M. Vieira, P. Louro, M.A. Vieira, J. Costa and M. Fernandes	265
Building up Multiwall Carbon Nanotubes Nanostructures inside Millimetric Channels of Ceramic Monoliths M. Pérez-Cadenas, V. Muñoz-Andrés, I. Rodríguez-Ramos, A. Maroto-Valiente and A. Guerrero-Ruiz	271
Improvement in the Oxidation Resistance of β-SiAlON Ceramics Produced from Mechanically Milled Powders O. Eser and S. Kurama	281
Preparation and Characterization of Poly(vinyl Butyral)-Polyaniline-Montmorillonite Nanocomposites P. Anadão, F.R. Valenzuela-Díaz and H. Wiebeck	291
Structural and Electrical Properties of Nanostructured Ba_{0.8}Sr_{0.2}TiO₃ Films Deposited by Pulsed Laser Deposition J.P.B. Silva, S.A.S. Rodrigues, A. Khodorov, J. Martín-Sánchez, M. Pereira, E. Alves, M.J.M. Gomes and P. Colomban	299
Thermal Evolution of Compound Nanoparticles on Moulds Machined by Focused-Ion-Beam for Micro/Nano Lithography Q. Hu	307
Processing of Swnt-Reinforced Yttria Stabilized Zirconia by Spark Plasma Sintering and Microstructure Characterization S. de Bernardi-Martín, R. Poyato, D. Gómez-García and A. Domínguez-Rodríguez	317