

Table of Contents

INVITED PAPER: Agrifood Nanotechnology: A Tiny Revolution in Food and Agriculture S. Shrivastava and D. Dash	1
Solid State Preparation of TiO₂ Nanoparticles in Optimal NaCl: TiOSO₄ Weight Ratio and Milling Time M. Salari, M. Rezaee and P. Marashi	15
An Advanced LOCOS-Process for the Sub-50 nm-Region Using Low-Stress PECVD-Silicon Nitrides K.T. Kallis, L.O. Keller and H.L. Fiedler	23
Nanoscaled C, Ni, Pt Thin Films W.Y. Wu, C.W. Hsu and J.M. Ting	29
Investigation of Interrelation between Particle Size and Phase Transition in the Al₂O₃-ZrO₂ System D.A. Ivanov-Pavlov, V.G. Konakov, E.N. Solovieva, V.M. Ushakov and N.V. Borisova	35
On the Nanostructure of Cu in Ti_xCu_{1-x} and TiN/Cu Films: A XAFS Study F. Pinakidou, M. Katsikini, P. Patsalas, G. Abadias and E.C. Paloura	43
Fabrication of Copper-Alumina Nanocomposites by Mechanochemical Routes F. Shehata, M. Abdelhameed, A. Fathy and S.F. Moustafa	51
Tuning of Titanium Oxide Morphology at Micro and Nano Scale by Alternating Current Anodising M.V. Diamanti, M. Ormellese and M.P. Pedferri	61
Fabrication of Nanowires from Gold Nanoparticles by AC Dielectrophoresis and Ink-Jet Delivery J. Tang and D. Tsoukalas	67
Precursor to High Purity Carbon Nanotubes: A Step by Step Evaluation of Carbon Yield K.N. Patil and C.S. Solanki	75
Amorphous/Nanocrystalline Films Prepared by Magnetron Sputtering with Additional External Magnetic Field G.V. Kalinnikov, R.A. Andrievski and V.K. Egorov	89
Biological Properties of Ti-Si-C-O-N Thin Films M. Henriques, M. Susano, I. Carvalho, I. Ferreri, S. Carvalho and R. Oliveira	99
Effect of Nano-Al₂O₃ Addition on the Densification of YSZ Electrolytes D. Hotza, A. Leo, J. Sunarso and J.C. Diniz da Costa	115
Miscibility Enhancement in All-Polymer Nanocomposites Composed of Weakly-Charged Flexible Chains and Polar Nanoparticles S. Montes, H. Grande, A. Etxeberria and J.A. Pomposo	123
Exploiting the Sequence of Naturally Occurring Elastin: Construction, Production and Characterization of a Recombinant Thermoplastic Protein-Based Polymer R. Machado, A.J. Ribeiro, J. Padrão, D. Silva, A. Nobre, J.A. Teixeira, F.J. Arias, A.M. Cunha, J.C. Rodríguez-Cabello and M. Casal	133
Silver-Polymer Nanohybrids Prepared by Microemulsion Polymerization D. Donescu, C.L. Nistor, V. Purcar, S. Serban, C. Radovici, V. Raditoiu, C. Petcu and M. Ghiurea	147
Synthesis of ZnO Nanostructures by Hydrothermal Method P. Georgiou, K. Kolokotronis and J. Simitzis	157
Nano-Composites NiCrAl (MCrAl) Ternary Alloy Powder Synthesized by Mechanical Alloying M.S. Hussain and M.A. Ababtain	169
Microstructure Evolution During Mechanical Alloying of Face Centered Cubic Ti₃Si Nanoparticles Q. Wu, C.S. Li, H. Tang, X.H. Yu, K.S. Cao and J.H. Yang	177
Influence of Structural Imperfections and Doping on the Mechanical Properties of Single-Walled Carbon Nanotubes M. Rahmandoust and A. Öchsner	185
Enhancement of Conductivity in Ceria-Carbonate Nanocomposites for LTSOFCs R. Raze, X.D. Wang, Y. Ma, Y.Z. Huang and B. Zhu	197

Effect of Annealing on Dielectric Property in Ni_{1-x}CoxFe₂O₄ Nanoparticles Synthesized Using Albumen (egg white)	
S. Marutha Senthil, R. Jayaprakash, S.R. Murthy, A.R. Phani, V.N. Singh and G. Govindaraj	205
Towards Silicon-Nanowire-Structured Materials by the Intimate Mixing of Patterning the Solid State and Chemical Reactions	
D. Hourlier, B. Legrand, C. Boyaval and P. Perrot	215
Relationship Between Stickiness and Surface Roughness Of Composite Materials: Atomic Force Microscopy and Intermolecular Adhesion Force Measurement	
S.D. Sherman, A. Quist and P. Hansma	225