

Contents

Nanoemulsion as a Carrier for Topical Delivery of Aceclofenac	1
S. Choudhury, S. Dasgupta, D. K. Patel, Y. R. Ramani, S. K. Ghosh and B. Mazumder	
Silver Tip Formation on Colloidal CdSe Nanorods by a Facile Phase Transfer Protocol	21
Tanushree Bala and Kevin M. Ryan	
Comparative Study of Lanthanum Based Perovskites Synthesized by Different Methods	33
Shrikant K. Nikam, Dipti V. Dharmadhikari and Anjali A. Athawale	
Novel, Fast, Bio-Derivatized Sonochemical Synthesis of Gold Nanoparticles by Using <i>Piper betle</i> Leaf Broth as a Reducing and Capping Agent	41
K. Mallikarjuna, N. John Sushma and B. Deva Prasad Raju	
Understanding the Role of Mode of Heating on Phase Formation of Fe–Pt Nanoparticles	51
S. A. Acharya, A. Dani, S. K. Sayyed and V. M. Gaikawad	
Effect of Coordination Agent on the Structure and Morphology of ZnS Nanostructure	65
S. A. Acharya, S. Darulkar and P. Choudhary	
Silver Nanoparticles: Novel Synthesis Technique and Characterizations	77
Shweta Rajawat and M. S. Qureshi	

Synthesis of Core–Shell Quantum Dots and Their Potential Application	85
Udit Soni, Vikas Arora, Gurpal Singh, Manzoor Hussain and Sameer Sapra	
Water Dispersible Semiconductor Nanorod Assemblies Via a Facile Phase Transfer and Their Application as Fluorescent Biomarkers	95
Ambarish Sanyal and Kevin M. Ryan	
Introduction of BiFeO₃ Nanoparticles in 5CB Nematic Liquid Crystal Host: Effect on Texture and the Non Responsive Behaviour of the Sample in a Twisted Nematic Configuration	111
Subhojyoti Sinha, Ayan Mukherjee, Sanat Kumar Chatterjee, Ajit Kumar Meikap and Soumen Basu	
Magnetic Properties in Multiferroic Bi_{1-x}Fe_{1+x}O₃ (x ≤ 0.5) of Nanoparticles	117
T. Karan, S. Ram and R. K. Kotnala	
Study of Photocurrent and Dark Current in ZnS Nano Particles Prepared by Precipitation Method	125
Nitin Pandey, Rajneesh Kumar Srivastava and S. G. Prakash	
Synthesis and Photoluminescence Studies of Ni Substituted ZnO Nanoparticles	133
S. Bobby Singh, K. Nomita Devi, Ibetombi Soibam and H. Nandakumar Sarma	
Synthesis and Characterization of Linoleic Acid Capped Palladium Nanoparticles	139
Ratan Das, Siddhartha S. Nath and Ramendu Bhattacharjee	
Preparation and Gas Sensing Properties of Nanostructured ZnSnO₃ Thin Films	143
I. G. Pathan, D. N. Suryawanshi, A. R. Bari, D. S. Rane and L. A. Patil	
Synthesis and Characterization of Single and Few Layer Graphene for Field Effect Transistor	159
Pawan Kumar Srivastava and Subhasis Ghosh	

Oxygen Partial Pressure Dependent Properties of Nanocrystalline Nickel Oxide Films	165
A. Mallikarjuna Reddy, Y. Ashok Kumar Reddy, Ch. Seshendra Reddy, A. Sivasankar Reddy and P. Sreedhara Reddy	
Observation of Nonlinear Optical Properties of Chemically Synthesized Cu^{2+} Doped ZnS Nanoparticles	169
A. K. Kole and P. Kumbhakar	
Structural and Optical Study of ZnS Nanoparticles Doped with Different Concentration of Co	183
Harish Lakhotiya, Gagandeep, Chetan Saini, Ankit Goyal, K. V. R. Rao and S. L. Kothari	
Trapping Parameters of Thermally Stimulated Luminescence Glow Curves in Y_2O_3: Tb^{3+} Nanophosphor	191
S. Som, S. K. Sharma and S. P. Lochab	
Statistical Characterization of Flicker Noise Fluctuation of a Nano-Scale NMOS Transistor	203
Sarmista Sengupta and Soumya Pandit	
Structural, Dielectric and Magnetic Properties of Nano-Crystalline Ni-Mg Ferrites Prepared by Citrate-Gel Auto Combustion Method	215
Mohd. Hashim, Alimuddin, M. Wasi Khan, Shalendra Kumar, Sagar E. Shirsath and Ravi Kumar	
Acoustical Studies of the Intermolecular Interaction in Copper Oxide-Ethylene Glycol Nanofluid	225
M. Nabeel Rashin and J. Hemalatha	
Fabrication and Characterization of Aluminum Nanostructures Using Femtosecond Ablation Technique	231
G. Krishna Podagatlapalli, Syed Hamad, S. Sreedhar, Surya P. Tewari and S. Venugopal Rao	
Magnetic Resonance Studies of Nano Phase Conducting Polyaniline	241
B. Kavitha, N. Narsimlu, D. Srinivasu, CH. Srinivasm and K. Siva Kumar	

Influence of Co Doping on the Structural and Optical Properties of ZnO Nanostructures	249
S. Chakraborty, A. K. Kole and P. Kumbhakar	
Isoelectronic Centers in Quantum Dots and Photoluminescence Decay	261
Kiran G. Sonawane, Ch. Rajesh and Shailaja Mahamuni	
Structural and Optical Evaluation of Pristine and Partially Iodized Ag Thin Films.	271
D. Rajesh and C. S. Sunandana	
Ground- and Excited-State Dipole Moments of 1, 2-Diazine Nanomaterials Using Solvatochromic Method.	279
S. R. Manohara, V. Udaya Kumar, Shivakumaraiah and L. Gerward	
Effect of Process Parameters and Post Annealing Temperature on Structural and Optical Properties of MgTiO₃ Thin Films Deposited by RF Magnetron Sputtering	291
T. Santhosh Kumar, R. K. Bhuyan, A. Perumal and D. Pamu	
Effect Sulfur and ZnO Nanoparticles on Stress Physiology and Plant (<i>Vigna radiata</i>) Nutrition	301
Prasun Patra, Samrat Roy Choudhury, Subhankar Mandal, Anirban Basu, Arunava Goswami, Robin Gogoi, Chitra Srivastava, Rajesh Kumar and Madhuban Gopal	
The Effects of Nano-Silver on Egg Quality Traits in Laying Japanese Quail	311
Amjad Farzinpour and Naser Karashi	
Evaluation of Electromechanical, Damping and Dynamic Mechanical Properties of Silver Electrode IPMC Actuator	321
Dillip Kumar Biswal, Dibakar Bandopadhyaya and Santosha Kumar Dwivedy	
Stress Transfer Characterization at Fiber Break in Carbon Nanotube-Reinforced Composites	333
Sushen Kirtania and Debabrata Chakraborty	
Microscopic Analysis of Mechanical Properties of Aligned Carbon Nanotube/Epoxy Composite.	347
S. Bal, J. P. Borah and C. Borgohain	

Novel Silicone Rubber/Layered Double Hydroxide Nanocomposite: Preparation and Characterization	367
Bratati Pradhan and Suneel Kumar Srivastava	
Preparation and Characterization of Polymer Films of PMMA and its Composites	377
Basavaraja Sannakki and Anita	
A Comparative Performance of Oleic Acid and MWNT-Coated SmCo₅/Fe Nanocomposites Processed by Magnetic Field-Assisted Milling	387
P. Saravanan	
Novel Porogen Free Porous Hydroxyapatite–Gelatin Nanocomposite: Synthesis and Characterization	399
K. Sangeetha, S. N. Kalkura, Y. Yokogawa, A. Thamizhavel and E. K. Girija	
Effect of γ-Irradiation on Thermal Properties of MWCNTs Reinforced HDPE	409
Nitturi Naresh Kumar, P. S. Rama Sreekanth and S. Kanagaraj	
Evidence of Surface Spin Glass Like Ordering and Exchange Bias Effect in Phase Separated Sm_{0.5}Ca_{0.5}MnO₃ Nanomanganites	421
S. K. Giri and T. K. Nath	
Spin Valve Effect in Mn_{0.05}Ge_{0.95}/p-Si Structure	433
S. Bhaumik, S. K. Ray and A. K. Das	
Herringbone Nanostructure and Composition Dependent Irreversibility in Martensite Transition Parameters in Ni_{39+x}Mn₅₀Sn_{11-x} ($x \leq 2.0$) Heusler Alloys	441
A. A. Prasanna and S. Ram	
Magnetic, Electrical and Optical Properties of Nd_{0.85}K_{0.15}MnO₃ Thin Film	449
Tribedi Bora, A. Nandy, R. K. Bhuyan, D. Pamu and S. Ravi	
Magnetic Properties of Ultra-Thin FePt Films Grown on Oxidized Si Substrates	457
Anabil Gayen, P. Saravanan and A. Perumal	

Substrate Bias Influenced Physical Characteristics of Nanocrystalline Silver Copper Oxide Films	465
A. Sreedhar, M. Hari Prasad Reddy and S. Uthanna	
Doped ZnO Nanostructured Sensor in Electronic Nose for Detection of Ammonia, Hydrogen and Liquefied Petroleum Gas	475
Samir Chandra Das, Bipan Tudu, Nabarun Bhattacharyya, R. Bandyopadhyay and Panchanan Pramanik	
Electron Beam Evaporated Nano-Crystalline V_2O_5 Thin Films for Electrochromic and Electrochemical Applications	485
P. Rosaiah and O. M. Hussain	
Boron Doped Fullerene C_{60} as Catalyst for $NaAlH_4$	499
Deepak Agnihotri and Hitesh Sharma	
Synthesis and Characterization of Photoanode of Nanostructured TiO_2 Sensitized by Natural Dyes for Application in DSSC	503
N. Goswami, D. Saikia and P. K. Gogoi	
First-Principles Study of Adsorption of Alkali Metals (Li, Na, K) on Graphene	515
B. D. Oli, C. Bhattarai, B. Nepal and N. P. Adhikari	
FEM Simulation Study on Mass Loading Sensitivity of High Aspect Ratio Nano-Pillar Sensing Medium in Saw Sensors	531
N. Ramakrishnan, Harshal B. Nemade and Roy Paily Palathinkal	
Quantum Breathers in Nonlinear Metamaterials	539
Bijoy Mandal, Reshmi Basu, Kamal Chowdhury, Arindam Biswas, A. K. Bandyopadhyay, A. K. Bhattacharjee and D. Mandal	
Quantum Breathers in Lithium Tantalate in Klein-Gordon Lattice	545
Arindam Biswas, K. Choudhury, A. K. Bandyopadhyay, A. K. Bhattacharjee and D. Mandal	
Effect on Shell Thickness on Intersubband Transition Energies in $GaAs/Al_xGa_{1-x}As$ Inverted Core-Shell Nanodot	551
Arpan Deyasi, S. Bhattacharyya and N. R. Das	

Spin Transfer Torque Driven Magnetic QCA Cells	561
Nilanjana Pradhan and Debashis De	
Mechanical Properties of Short Monatomic Gold Chain	571
Sumali Bansal, Rajiv Bhandari and Keya Dharamvir	
A DFT Study for the Structural and Electronic Properties of Zn_mSe_n Nanoclusters	579
Phool Singh Yadav and Dheeraj Kumar Pandey	
Novel Waste Water Treatment Strategy Using Titanate Nanofibers in Fixed Bed Reactor	589
A. Arumugam, V. Ponnusami, C. Narendhar and T. S. Bhuvaneshvari	
Structural, Magnetic and Antibacterial Properties of Some Biocompatible Nano-Crystalline Ferrimagnetic Glass/Glass-Ceramics	599
G. P. Kothiyal, K. Sharma and A. Srinivasan	