# JOURNAL PUBLICATIONS – 2013

| Sl.No. | TITLE | AUTHOR/S | JOURNAL | VOL. | PAGE NOS. | YEAR |
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| 1 | Laser receptive polyelectrolyte films doped with biosynthesized silver nanoparticles for antibacterial coatings and drug delivery applications | J. Sripriya, S. Anandhakumar, A. Shanmugam, J. J. Antony, D. Siva and A. M. Raichur | International Journal of Pharmaceutics | 457 (1) | 206-213 | 2013 |
| 2 | Polyelectrolyte/Silver nanocomposite multilayer films as multifunctional thin film platforms for remote activated protein and drug delivery | S. Anandhakumar and A. M. Raichur | Acta Biomaterialia | 9 (11) | 8864-8874 | 2013 |
| 3 | Enhancing fluorescence signals from aluminum thin films and foils using polyelectrolyte multilayers | G. R. Prashanth, V. S. Goudar, A. M. Raichur and M. K. Varma | Sensors and Actuators B: Chemical | 183 | 496-503 | 2013 |
| 4 | Interaction of silver nanoparticles with serum proteins affects their antimicrobial activity *in vivo* | D. G. Prakash, M. B. Thomas, R. Thomas, A. M. Raichur, and D. Chakravortty | Antimicrobial agents and Chemotherapy | 57 (10) | 4945-4955 | 2013 |
| 5 | particles: supramolecular encapsulation of hydrophobic drugs in cyclodextrin–modified polyelectrolyte capsules | R. Kurapati, and A. Fabrication of cyclodextrin-modified porous $CaCO_3$M. Raichur | Journal of Materials Chemistry: B | 1 | 3175-3184 | 2013 |
| 6 | Dual enzyme responsive microcapsules simulating an "OR" logic gate for biologically triggered drug delivery applications | R. Krishna, J. Tripathy and A. M. Raichur | Chemical Communications | 49 (47) | 5390-5392 | 2013 |
| 7 | Near-Infrared Light-Responsive Graphene Oxide Composite Multilayer Capsules: A Novel Route for Remote Controlled Drug Release | R. Kurapati and A. M. Raichur | Chemical Communications | 49 (7) | 734-736 | 2013 |
| 8 | Designing carboxymethyl cellulose based layer-by-layer capsules as a carrier for protein delivery | J. Tripathy and A. M. Raichur | Colloids and Surfaces B: Biointerfaces | 101 | 487-492 | 2013 |
| 9 | Chitosan-Dextran sulfate nanocapsule drug delivery system as an effective therapeutic against *Salmonella*, an intraphagosomal pathogen | D. G. Prakash, M. B. Thomas, A. M. Raichur, and D. Chakravortty | Journal of Antimicrobial Chemotherapy | 68 (11) | 2576-2586 | 2013 |
| 10 | Intracellular delivery of Doxorubicin encapsulated in novel pH responsive Chitosan/Heparin nanocapsules | M. B. Thomas, R. Krishna, D. G. Prakash, D. Chakravortty and A. M. Raichur | International Journal of Nanomedicine | 8 | 267-273 | 2013 |
| 11 | LbL coated microcapsules as the systems for encapsulation of optical brightening agent | J. Tripathy and A. M. Raichur | Journal of Applied Polymer Science | 127 (3) | 1609-1614 | 2013 |
| 12 | Process development for | T. C. Prathna, | Current | 9 (4) | 479-488 | 2013 |

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| | functionalization of cotton with silver nanoparticles synthesized by bio-based approaches | A. M. Raichur, N. Chandrasekaran, A. Mukherjee | Nanoscience | | | |
| 13 | Heat Mediated synthesis of silver nanoparticles using citrus limon (Lemon) extract | T. C. Prathna, A. M. Raichur, N. Chandrasekaran, A. Mukherjee | Asian Journal of Chemistry | 25 | S305-S307 | 2013 |
| 14 | Cytotoxicity of aluminium oxide nanoparticles towards fresh water algal isolate at low exposure concentrations | S. Pakrashi, S. Dalai, T. C. Prathna, S. Trivedi, R. Myneni, A. M. Raichur, N. Chandrasekaran, A. Mukherjee | Aquatic Toxicology | 132-133 | 34-45 | 2013 |
| 15 | Metal doped nano-size titania used for photocatalytic degradation of rhodamine under visible light | M. M. Mahlambi, A. K. Mishra, S. B. Mishra, R. W. Krause, B. B. Mamba and A. M. Raichur | Journal of Nanoscience and Nanotechnology | 13 (7) | 4934-4942 | 2013 |
| 16 | The effect of metal-ions (Ag, Co, Ni and Pd) on the visible light degradation of Rhodamine B by carbon-covered alumina supported $TiO_2$ in aqueous solutions | M. M. Mahlambi, A. K. Mishra, S. B. Mishra, R. W. Krause, B. B. Mamba and A. M. Raichur | Industrial and Engineering Chemistry Research | 52 (2) | 1783-1794 | 2013 |
| 17 | Approaching theoretical strengths by synergistic internal and external size refinement | Warthi, Nilesh; Ghosh, Pradipta; Chokshi, Atul H. | Scripta Mater. | 68 | 225-228 | 2013 |
| 18 | Evolution of microhardness and microstructure in a cast al-7%si alloy during high-pressure torsion | T Mungole, N Nadammal, K Dawra, P Kumar, M Kawasaki and TG Langdon | Journal of Materials Science | 48 | 4671 | 2013 |
| 19 | Recrystallization and Ag3Sn Particle Redistribution During Thermomechanical Treatment of Bulk Sn-Ag-Cu Solder Alloys | U Sahaym, B Talebanpour, S Seekins, I Dutta, P Kumar and P Borgesen | IEEE Trans CPMT | 3 | 1868 | 2013 |
| 20 | Electromagnetic Jigsaw: Metal-Cutting by Combining Electromagnetic and Mechanical Forces | P Kumar, A Mishra, T Watt, I Dutta, DL Bourell and U Sahaym | Procedia CIRP | 6 | 601 | 2013 |
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| 22 | Effect of Electro-Mechanical Coupling on Actuation Behavior of a Carbon Nanotube Cellular Structure | P Jagtap, P Gowda, B Das and P Kumar | Carbon | 60 | 169 | 2103 |
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| 25 | Periodic Architecture for High Performance Shock Absorbing Composites | A Misra and P Kumar<br>*A Misra is from IAP | Scientific Reports | 3 | 2056 | 2013 |
| 26 | Morphological and Electrochemical Characterization of Electrodeposited Zn-Ag nanoparticle composite coatings | Punith Kumar MK and Chandan Srivastava | Materials Characterization | 85 | 82 | 2013 |
| 27 | Transmission Electron Microscopy Study of Ni-rich, Ag-Ni Nanowires | Chandan Srivastava and R. K. Rai | Chemical Physics Letters | 575 | 91 | 2013 |
| 28 | Electron Microscopy of Microstructural Transformation in Electrodeposited Ni-rich, Ag-Ni film. | C. Srivastava and B. M. Mundotiya | Thin Solid Films | 539 | 102 | 2013 |
| 29 | Exchange-spring mechanism of soft and hard ferrite nanocomposites | S. Manjura Hoque, C. Srivastava, V. Kumar, N. Venkatesh, H. N. Das, D. K. Saha and K. Chattopadhyay | Materials Research Bulletin | 48 | 2871 | 2013 |
| 30 | Two phase microstructure for Ag-Ni nanowires | C. Srivastava and R.K. Rai | Chemical Physics Letters | 561 | 101 | 2013 |
| 31 | Superpamagnetic behaviour and T1. T2 relaxivity of $ZnFe_2O_4$ nanoparticles for magnetic resonance imaging | S. Manjura Hoque, C. Srivastava, N. Venkateshan, A. Kumar and K. Chattopadhyay | Philosophical Magazine | 94(14) | 1771 | 2013 |
| 32 | Synthesis and characterization of Fe and Co based ferrite nanoparticles and study of the T1 and T2 relaxivity of chitogen coated particles | S. M. Hoque, C. Srivastava, N. Srivastava, N. Venkatesha and K. Chattopadhyay | Journal of Materials Science | 48(2) | 812 | 2013 |
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| 34 | The fracture characteristics of a near eutectic Al-Si based alloy under compression | S. Joseph, A. Tewari and S. Kumar | Metallurgical and Materials Transactions A | **44A** | 2358-2368 | 2013 |
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| 36 | Effect of addition of Al & Ca and heat treatment on the cast Mg-6Zn alloy | S. S. Joshi, M.S. Mohan, S. Seshan, S. Kumar and S. Suwas | Materials Science Forum | **765** | 33-37 | 2013 |
| 37 | A systematic investigation of | S. Joseph and | Materials | **588** | 111-124 | 2013 |

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| 38 | Local structure disorder and its influence on the average global structure and polar properties in $Na_{0.5}Bi_{0.5}TiO_3$ | Badari Narayana Rao, Ranjan Datta, S. Selva Chandrashekaran, Dileep K Mishra, Vasant Sathe, Anatoliy Senyshyn and Rajeev Ranjan | Phys. Rev. B | 88 | 224103 | 2013 |
| 39 | X-ray diffraction and Mössbauer spectroscopy studies of cementite dissolution in cold-drawn pearlitic steel | J. Chakraborty, M. Ghosh, Rajeev Ranjan, G. Das, D. Das S. Chandra | Phil Mag | 36 | 4598 | 2013 |
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| 43 | Anomalous piezoelectric response due to stabilization of two ferroelectric phases in Zr-modified $BaTiO_3$ | Ajay Kumar Kalyani and Rajeev Ranjan | J. Phys.Condens. Matter | 25 | 362203 | 2013 |
| 44 | Lead-free piezoelectric system $(Na_{0.5}Bi_{0.5})TiO_3$: Equilibrium structures and irreversible structural transformations driven by electric field and mechanical impact | Rohini Garg, Badari Narayana Rao, Anatoliy senyshyn, P. S. R. Krishna, and Rajeev Ranjan | Phy. Rev. B | 88 | 014103 | 2013 |
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| 94 | Evolution of microstructure and texture in $Ni_{49.4}Ti_{38.6}Hf_{12}$ shape memory alloy during hot rolling | KS Suresh, DI Kim, SK Bhaumik, S Suwas | Intermetallics | 42 | 1-8 | 2013 |
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