

PUBLICATIONS FOR THE YEAR - 2012

Sl no	Title	Name of the Author(s)/(if multiple author from different department, include their department name also)	Name of the Journal/ Conference	Vol	Pages	Year of Publication
1.	Deformation-induced thermally activated grain growth in nanocrystalline nickel	Prasad, M. J. N. V. Chokshi, A. H.	SCRIPTA MATERIALIA	67	133-136	2012
2.	Biologically triggered exploding protein based microcapsules for drug delivery	Radhakrishnan, Krishna; Raichur, Ashok M.	CHEMICAL COMMUNICATIONS	48	2307-2309	2012
3.	Comparison of rhodamine B degradation under UV irradiation by two phases of titania nano-photocatalyst	Mahlambi, Mphilisi, Mishra, Ajay K.; Mishra, Shivani B.; Krause, Rui W.; Mamba, Bhekie B.; Raichur, Ashok M.	JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY	110	847-855	2012
4.	Designing carboxymethyl cellulose based layer-by-layer capsules as a carrier for protein delivery	Jasaswini Tripathy, Ashok M. Raichur	COLLOIDS AND SURFACES B: BIOINTERFACES	101	487-492	2012
5.	Detailed investigation of a gamma-cyclodextrin inclusion complex with L-thyroxine for improved pharmaceutical formulations	Lakkakula, Jaya; Krause, Rui Werner Macedo; Ndinteh, Derek Tantoh; Vijaylakshmi, S. P.; Raichur, Ashok M.	JOURNAL OF INCLUSION PHENOMENA AND MACROCYCLIC CHEMISTRY	74	397-405	2012
6.	Dual drug delivery by multi-functional graphene oxide multilayer capsules	Kurapati, Rajendra; Raichur, Ashok M.	CHEMICAL COMMUNICATIONS	48	6013-6015	2012
7.	Layer-by-Layer Self-Assembled Metal-Ion- (Ag-, Co-, Ni-, and Pd-) Doped TiO ₂ Nanoparticles: Synthesis, Characterisation, and Visible Light Degradation of Rhodamine B	Mahlambi, Mphilisi, Mishra, Ajay K.; Mishra, Shivani B.; Raichur, Ashok M.; Mamba, Bhekie B.; Krause, Rui W.	JOURNAL OF NANOMATERIALS		Article ID302046	2012
8.	LbL-coated microcapsules as systems for encapsulation of optical brightening agent	Tripathy, Jasaswini; Raichur, Ashok M.	JOURNAL OF APPLIED POLYMER SCIENCE	127	1609-1614	2012

9.	Photocatalytic degradation of gaseous toluene by using immobilized titania/silica on aluminum sheets	Tasbihi, Minoo; Kete, Marko; Raichur, Ashok M.; Tusar, Natasa Novak Stangar, Urska Lavrencic	ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	19	3735- 3742	2012
10.	Selective colorimetric detection of nanomolar Cr (VI) in aqueous solutions using unmodified silver nanoparticles	Ravindran, Aswathy; Elavarasi, M.; Prathna, T. C.; Raichur, Ashok M.; Chandrasekaran, N.; Mukherjee, Amitava	SENSORS AND ACTUATORS B- CHEMICAL	166	365- 371	2012
11.	Silver nanoparticles modified nanocapsules for ultrasonically activated drug delivery	Anandhakumar, S.; Mahalakshmi, V.; Raichur, Ashok M.	MATERIALS SCIENCE & ENGINEERING C- MATERIALS FOR BIOLOGICAL APPLICATIONS	32	2349- 2355	2012
12.	Substrate independent non-covalent functionalization using lithographically patterned polyelectrolyte multilayers for high-density microarrays	Prashanth, Gurusiddappa R.; Goudar, Venkanagouda S.; Suran, Swathi; Raichur, Ashok M.; Varma, Manoj M.	SENSORS AND ACTUATORS B- CHEMICAL	171	315- 322	2012
13.	Synthesis and characterization of carbon-covered alumina (CCA) supported TiO ₂ nanocatalysts with enhanced visible light photodegradation of Rhodamine B	Mahlambi, Mphilisi, Mishra, Ajay K.; Mishra, Shivani B.; Krause, Rui W.; Mamba, Bhekie B.; Raichur, Ashok M.	JOURNAL OF NANOPARTICLE RESEARCH	14	790	2012
14.	Ag-Ni Nanoparticles: Synthesis and Phase Stability	Mundotiya, Brij Mohan; Srivastava, Chandan	ELECTROCHEMICAL AND SOLID STATE LETTERS	15	K41- 44	2012
15.	Compositionally graded microstructure for Ag-Fe nanoparticles	C. Srivastava ; Sushma K. V. L.	NANO-MICRO LETTERS	4	172	2012
16.	Morphology Dependence of Ag-Ni Solid Solubility	Srivastava, Chandan; Mundotiya, Brij Mohan	ELECTROCHEMICAL AND SOLID STATE LETTERS	15	K10- 15	2012
17.	Nano-Size and Miscibility Gap	Chandan Srivastava	ADVANCED MATERIALS RESEARCH	585	8	2012
18.	Phase separation by nanoparticle splitting	Srivastava, Chandan	MATERIALS LETTERS	70	122- 124	2012
19.	Processing, Structure, Texture	Dipankar Banerjee;	MATERIALS	710	66-84	2012

	and Microtexture in Titanium Alloys	Adam Pilchak;; J.C. Williams,	SCIENCE FORUM			
20.	Exfoliation of copper hydroxysalt in water and the conversion of the exfoliated layers to cupric and cuprous oxide nanoparticles	Nethravathi, C.; Machado, Jyothi; Gautam, U. K.; Avadhani, G. S.; Rajamathi, Michael	NANOSCALE	4	496-501	2012
21.	Size-mediated cytotoxicity of nanocrystalline titanium dioxide, pure and zinc-doped hydroxyapatite nanoparticles in human hepatoma cells	Venkatasubbu, G. Devanand; Ramasamy, S.; Avadhani, G. S.; Palanikumar, L.; Kumar, J.	JOURNAL OF NANOPARTICLE RESEARCH	14	819	2012
22.	Nanocomposites of crosslinked starch phthalate and silane modified nanoclay: Study of mechanical, thermal, morphological, and biodegradable characteristics	A. Ashamol, V. S. Priyambika, G. S. Avadhani, R. R. N. Sailaja	STARCH	1	11	2012
23.	Influence of Bottom Bubbling Rate on Formation of Metal Emulsion in Al-Cu Alloy and Molten Salt System	Song, Duk-Yong; Maruoka, Nobuhiro; Gupta, Govind Sharan; Shibata, Hiroyuki; Kitamura, Shin-ya; Sasaki, Naoto; Ogawa, Yuji; Matsuo, Michitaka	ISIJ INTERNATIONAL	52	468-474	2012
24.	Modeling of Ascending/Descending Velocity of Metal Droplet Emulsified in Pb-Salt System	Song, Duk-Yong; Maruoka, Nobuhiro; Gupta, Govind Sharan; Shibata, Hiroyuki; Kitamura, Shin-Ya; Kamble, Smita	METALLURGICAL AND MATERIALS TRANSACTIONS B- PROCESS METALLURGY AND MATERIALS PROCESSING SCIENCE	43	973-983	2012
25.	Study of Fluid Flow and Mixing Behaviour of a Vacuum Degasser	Mondal, M. K.; Maruoka, N.; Kitamura, S.; Gupta, G. S.; Nogami, H.; Shibata, H.	TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS	65	321-331	2012
26.	Analysis of Strain Rates and Microstructural Evaluation during Metal Forming: Role of Surface Texture and Friction	Menezes, Pradeep; Kishore; Kailas, Satish V.; * Lovell, Michael R. * Dept of Mech Engg	TRIBOLOGY TRANSACTIONS	55	582-589	2012

27.	Biobeneficiation of Iron Ores	H.Sarvamangala, K.A.Natarajan, S.T.Girisha	INTERNATIONAL JOURNAL OF MINING ENGINEERING AND MINERAL PROCESSING	1	21- 30	2012
28.	Microbially induced separation of quartz from hematite using yeast cells and metabolites	Natarajan, K. A.; Padukone, S. Usha	MINERALS & METALLURGICAL PROCESSING	29	45- 50	2012
29.	Effect of addition of aluminum on the evolution of microstructure in HITPERM class Fe ₄₄ Co ₄₄ Zr ₇ B ₄ Cu ₁ alloy	Prabhu, D.; Veerababu, R.; Balamuralikrishnan.; Narayanasamy, A.; Chattopadhyay, K.	MATERIALS SCIENCE AND ENGINEERING B- ADVANCED FUNCTIONAL SOLID-STATE MATERIALS	177	791- 796	2012
30.	Effect of Grain Size on Structural and Magnetic Properties of CuFe ₂ O ₄ Nanograins Synthesized by Chemical Co-Precipitation	Hoque, S. Manjura; Kader, S. S.; Paul, D. P.; Saha, D. K.; Das, H. N.; Rana, M. S.; Chattopadhyay, K.; Hakim, M. A.	IEEE TRANSACTIONS ON MAGNETICS	48	1839- 1843	2012
31.	Effect of length scale on mechanical properties of Al-Cu eutectic alloy	Tiwary, C. S.; Mahapatra, D. Roy; Chattopadhyay, K.	APPLIED PHYSICS LETTERS	17	101	2012
32.	Evolution of Texture during Directional Solidification of Giant Magnetostrictive Tb _{0.3} Dy _{0.7} Fe _{1.95} Alloy	Palit M.; Chelvane J.A.; Basumatary H.; Banumathy S.; Singh A.K.; Pandian S.; Chattopadhyay K.	MATERIAL SCIENCE FORUM	702- 703	876- 879	2012
33.	Mechanical Property Anisotropy of 7010 Aluminum Alloy sheet having Single Rotated Brass texture	Mondal C.; Singh A.K.; Mukhopadhyay A.K; Chattopadhyay K	MATERIAL SCIENCE FORUM	702- 703	303- 306	2012
34.	Phase relationships and magnetic properties of Tb _x Dy _{1-x} Fe _{1.95} alloys	Palit, Mithun; Pandian, S.; Chattopadhyay, K	JOURNAL OF ALLOYS AND COMPOUNDS	541	297- 304	2012
35.	Preparation of Freestanding Zn Nanocrystallites by Combined Milling Cryogenic and Room Temperatures	C.S. Tiwary, A. Verma, S. Kashyp, ; K. Biswas ; K. Chattopadhyay	METALLURGICAL AND MATERIALS TRANSACTIONS A: PHYSICAL METALLURGY AND MATERIALS SCIENCE		1-8	2012
36.	Synthesis of free standing	Barai, K.;	MATERIALS SCIENCE AND	558	52- 58	2012

	nanocrystalline Cu by ball milling at cryogenic temperature	Tiwary, C. S.; Chattopadhyay, P. ; Chattopadhyay, K.	ENGINEERING A- STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING			
37.	Thermal and Mechanical Stability of the Single Component Rotated Brass Texture in a 7010 Aluminum Alloy	Mondal C.; Singh A.K.; Mukhopadhyay A.K.; Chattopadhyay K	MATERIAL SCIENCE FORUM,	702-703	279-282	2012
38.	Thermal and mechanical stability of the single component rotated brass texture in a 7010 aluminium alloy	C. Mondal, A.K. Singh, A.K.Mukhopadhyay K. Chattopadhyay	MATERIALS SCIENCE FORM	702-703	279-28	2012
39.	Gas-foamed scaffold gradients for combinatorial screening in 3D	<u>K. Chatterjee</u> , A.M. Kraigsley, D. Bolikal, J. Kohn, C.G. Simon, Jr.	JOURNAL OF FUNCTIONAL BIOMATERIALS	3	173-182	2012
40.	Single cell viability measurements in 3D scaffolds using in situ label free imaging by optical coherence microscopy	J.P. Dunkers, Y.J. Lee, <u>K. Chatterjee</u>	BIOMATERIALS	33	2119-2126	2012
41.	Time-dependent effects of pre-ageing 3D scaffolds in cell culture medium on cell proliferation	<u>K. Chatterjee</u> , S. Hung, G. Kumar, C.G. Simon, Jr.	JOURNAL OF FUNCTIONAL BIOMATERIALS	3	382-397	2012
42.	A cubic formalism for linking dilute and concentrated regions of ternary and multicomponent solutions	K.T.Jacob, B.Konar, G.N.K.Iyengar	MINERAL PROCESSING AND EXTRACTIVE METALLURGY	121	48-54	2012
43.	Electrical conductivity of Ca-doped YFeO3	Jacob, K. T.; Rajitha, G.; Dasgupta, N.	INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES	19	47-53	2012
44.	Gibbs Energy of Formation of Ca ₃ Ti ₈ Al ₁₂ O ₃₇ and Phase Relations and Chemical Potentials in the System Al ₂ O ₃ -TiO ₂ -CaO	Jacob, K. T.; Rajitha, G.	JOURNAL OF PHASE EQUILIBRIA AND DIFFUSION	33	293-302	2012
45.	Nonstoichiometry, defects and thermodynamic properties of YFeO ₃ , YFe ₂ O ₄ and Y ₃ Fe ₅ O ₁₂	Jacob, K. T.; Rajitha, G.	SOLID STATE IONICS	224	32-40	2012
46.	Phase relations and Gibbs energies of spinel phases and	Jacob, K. T.; Prusty, Debadutta;	JOURNAL OF ALLOYS AND	513	365-372	2012

	solid solutions in the system Mg-Rh-O	Kale, G. M.	COMPOUNDS			
47.	Reactive Interdiffusion: A Method for Making Composition Graded Metal-ceramic Composites	Reddy, S. N. S.; Jacob, K. T.; Rajitha, G.	HIGH TEMPERATURE MATERIALS AND PROCESSES	31	97-103	2012
48.	System Gd-Rh-O: Thermodynamics and phase relations	K.T.Jacob, A.K.Dhiman, Preeti Gupta	JOURNAL OF ALLOYS AND COMPOUNDS	546	185-191	2012
49.	System Ho-Rh-O: Phase Equilibria, Chemical Potentials and Gibbs Energy of Formation of HoRhO ₃	Jacob, K. T.; Sharma, Juhi; Gupta, Preeti	JOURNAL OF PHASE EQUILIBRIA AND DIFFUSION	33	429-436	2012
50.	Thermodynamic behavior of polyvalent solutes in solid silver: System Ag-Sb	Jacob, K. T.; Gupta, Preeti	THERMOCHIMICA ACTA	549	179-185	2012
51.	Thermodynamics of Al _{1-x} Ga _x N solid solution: inclination for phase separation and ordering,	K.T. Jacob, G. Rajitha, L. Rannesh, H. Fukuyama, Y. Waseda,	ACTA MATER	60	59-66	2012
52.	Thermodynamics of Congruent Oxidation	Jacob, K. T.; Adharsh, R.	HIGH TEMPERATURE MATERIALS AND PROCESSES	31	395-403	2012
53.	Thermodynamics of TmRhO ₃ , phase equilibria and chemical potentials in the system Tm-Rh-O,,	K. T. Jacob, K. Agarwal, P. Gupta	J. CHEM. ENGG. DATA	57	3677-3684	2012
54.	Microstructure and compression behavior of chip consolidated magnesium	Anilchandra, Adamane R.; Basu, Ritwik; Samajdar, Indradev; Surappa, Mirle K.	JOURNAL OF MATERIALS RESEARCH	27	709-719	2012
55.	Microstructure and damping behaviour of consolidated magnesium chips	Anilchandra, A. R.; Surappa, M. K.	MATERIALS SCIENCE AND ENGINEERING A- STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	542	94-103	2012
56.	A CMOS Gas Sensor Array Platform With Fourier Transform Based Impedance Spectroscopy	Murali, Pramod; Ranjit, K.; Bhat, Navakanta; * Banerjee, Gaurab; Amrutur, Bharadwaj; Bhat, K. N.;	IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I- REGULAR PAPERS	59	2507-2517	2012

		Ramamurthy, Praveen C. <i>*Dept of ECE</i>				
57.	Dielectric relaxations above room temperature in DMPU derived polyaniline film	Mallya, Ashwini N.; Kumar, G. S. Yashavanth; Ranjan, Rajeev; Ramamurthy, Praveen C.	PHYSICA B- CONDENSED MATTER	407	3828- 3832	2012
58.	Dithienylcyclopentadienone derivative-co-benzothiadiazole: An alternating copolymer for organic photovoltaics	Ranjith, K.; Swathi, S. K.; Kumar, Prajwal; Ramamurthy, Praveen C.	SOLAR ENERGY MATERIALS AND SOLAR CELLS	98	448- 454	2012
59.	'Hybrid nanocomposite films of polyvinyl alcohol and ZnO as interactive gas barrier layers for electronics device passivation	Satyajit Gupta, Sindhu S, K. Arul Varman, Praveen C Ramamurthy, Giridhar Madras * <i>* Dept of Chem Engg</i>	RSC ADVANCES	2	11536- 11543	2012
60.	Nanostructured barbed wire architecturing of organic conducting material blends by electrospinning	Mishra, Sumeet R.; Ranjith, K.; Swathi, S. K.; Ramamurthy, Praveen C.	APPLIED PHYSICS LETTERS	100	013- 302	2012
61.	Novel thiophene derivative hybrid composite solar cells	Swathi, S. K.; Ranjith, K.; Kumar, Prajwal; Ramamurthy, Praveen C.	SOLAR ENERGY MATERIALS AND SOLAR CELLS	96	101- 107	2012
62.	Random copolymers consisting of dithienylcyclopentadienone, thiophene and benzothiadiazole for bulk heterojunction solar cells	Ranjith, K.; Swathi, S. K.; Malavika, A.; Ramamurthy, Praveen C.	SOLAR ENERGY MATERIALS AND SOLAR CELLS	105	263- 271	2012
63.	Synthesis and characterization of high molecular weight polyaniline for organic electronic applications	Ramamurthy, Praveen C.; Mallya, Ashwini N.; Joseph, Alex; Harrell, William R.; Gregory, Richard V.	POLYMER ENGINEERING AND SCIENCE	52	1821- 1830	2012
64.	Imidazole Functionalized Polyaniline: Synthesis, Characterization, and Cu (II) Coordination Studies	Joseph, Alex; Ramamurthy, Praveen C.; S.Subramanian,	JOURNAL OF APPLIED POLYMER SCIENCE	123	526- 534	2012

65.	Lead ion sensor with electrodes modified by imidazole-functionalized polyaniline	Kumar, Prajwal; Joseph, Alex; Ramamurthy, Praveen C.; S.Subramanian,	MICROCHIMICA ACTA	177	317- 323	2012
66.	A Novel Property of DNA - As a Bioflotation Reagent in Mineral Processing	Vasanthakumar, Balasubramanian; Ravishankar, Honnavar; S.Subramanian,	PLOS ONE	7	39316	2012
67.	Fabrication of corrosion resistant, bioactive and antibacterial silver substituted hydroxyapatite/titania composite coating on Cp Ti	Kotharu, Venkateswarlu; Nagumothu, Rameshbabu; Arumugam, Chandra Bose; Veerappan, Muthupandi; S.Subramanian; Davoodbasha, MubarakAli; Nooruddin, Thajuddin	CERAMICS INTERNATIONAL	38	731- 740	2012
68.	Effect of electrolyte chemistry on the structural, morphological and corrosion characteristics of titania films developed on Ti-6Al-4V implant material by plasma electrolytic oxidation , 493-494 (2012) 436-441	K. Venkateswarlu, S. Suresh, N. Rameshbabu, A. C. Bose, S. Subramanian	KEY ENGINEERING MATERIALS	493- 494	436- 441	2012
69.	Role of electrolyte additives on in-vitro electrochemical behavior of micro arc oxidized titania films on Cp Ti	Venkateswarlu, K.; Rameshbabu, N.; Sreekanth, D.; Bose, A. C.; Muthupandi, V; Babu, N. K.; S.Subramanian,	APPLIED SURFACE SCIENCE	258	6853- 6863	2012
70.	Complex structural phase transitions in slightly Ca modified Na _{0.5} Bi _{0.5} TiO ₃	Garg, Rohini; Senyshyn, Anatoliy; Ranjan, Rajeev	JOURNAL OF PHYSICS- CONDENSED MATTER	24	5902	2012
71.	Electric-field-driven monoclinic-to-rhombohedral transformation in Na _{1/2} Bi _{1/2} TiO ₃	Rao, Badari Narayana; Ranjan, Rajeev	PHYSICAL REVIEW B	86	4103	2012
72.	Electrothermal Aging of Epoxy Nanocomposites	Joy Meledath Thomas; *	IEEE TRANSACTIONS ON	19	2081	2012

		Preetha P; * Rajeev Ranjan <i>*Electric Engg.</i>	DIELECTRICS AND ELECTRICAL INSULATION			
73.	Evidence of nanoscale structural phase separation in large bandwidth La _{0.2} Sr _{0.8} MnO ₃	Bindu, R.; Singh, Sanjay; Singh, Navneet; Ranjan, Rajeev; Maiti, Kalobaran; Hill, A. H.; Barman, S. R.	PHYSICAL REVIEW B	86	104	2012
74.	Evolution of structural phase coexistence in half doped manganite Pr _{0.5} Sr _{0.5} MnO ₃ : An evidence of magneto-structural coupling”,	A. K. Pramanik, Rajeev Ranjan, A. Banerjee	J. MAG. MAG. MATER.	325	29	2012
75.	Nucleation-Growth Mode of Cubic-Tetragonal Transition with Coexistence of Phases over a Wide Temperature Interval in the High Temperature Ferroelectric Systems PbTiO ₃ -BiMeO ₃ :Me = Sc , and Zn _{1/2} Ti _{1/2}	Lalitha, K., V; Das, Shamiparna; Kalyani, Ajay Kumar; Garg, Rohini; Ranjan, Rajeev	JOURNAL OF THE AMERICAN CERAMIC SOCIETY	95	2635- 2639	2012
76.	Spin-Valve-Like Magnetoresistance in Mn ₂ NiGa at Room Temperature	Singh, Sanjay; Rawat, R.; Muthu, S. Esakki; D'Souza, S. W.; Suard, E.; Senyshyn, A.; Banik, S.; Rajput, P.; Bhardwaj, S.; Awasthi, A. M.; Ranjan, Rajeev; Arumugam, S.; Schlagel, D. L.; Lograsso, T. A.; Chakrabarti, Aparna; Barman, S. R.	PHYSICAL REVIEW LETTERS	109	246601	2012
77.	Structural,dielectric relaxation and piezoelectric characterization of Sr substituted modified PMS-PZT ceramic	Kumar Brajesh, A.K. Himanshu, Himanshu Sharma, Kiran Kumari, Rajeev Ranjan, S.K.Bandhopadhyay T.P.Sinha	PHYSICA B	407	635	2012

78.	Synthesis of BiFeO ₃ by carbonate precipitation	Kothai, V.; Ranjan, Rajeev	BULLETIN OF MATERIALS SCIENCE	35	157- 161	2012
79.	A study on the formation of crystalline phases during solidification and crystallisation in the bulk metallic glass of Zr ₅₃ Cu ₂₁ Al ₁₀ Ni ₈ Ti ₈ composition	S.Neogy, R. Tewari, G. K. Dey, S. Banerjee, S. Ranganathan.	PHILOSOPHICAL MAGAZINE	92	2136- 2149	2012
80.	Asymmetric and symmetric rolling of magnesium: Evolution of microstructure, texture and mechanical properties	Biswas, Somjeet; Kim, Dong-Ik; Suwas, Satyam	MATERIALS SCIENCE AND ENGINEERING A- STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	550	19- 30	2012
81.	Development of microstructure and texture in Copper during warm accumulative roll bonding	Suresh, K. S.; Sinha, Subhasis; Chaudhary, Abhishek; Suwas, Satyam	MATERIALS CHARACTERIZATI ON	70	74- 82	2012
82.	Effect of equal channel angular extrusion on wear and corrosion behavior of the orthopedic Ti-13Nb-13Zr alloy in simulated body fluid	Suresh, K. S.; Geetha, M.; Richard, C.; Landoulsi, J.; Ramasawmy, H.; Suwas, S.; Asokamani, R.	MATERIALS SCIENCE & ENGINEERING C- MATERIALS FOR BIOLOGICAL APPLICATIONS	32	763- 771	2012
83.	Effect of processing routes on evolution of texture heterogeneity in 2014 aluminium alloy deformed by equal channel angular pressing (ECAP)	Venkatachalam, P.; Roy, Shibayan; Ravisankar, B.; Paul, V. Thamos; Vijayalakshmi, M.; Suwas, S.	MATERIALS SCIENCE AND TECHNOLOGY	28	1445- 1458	2012
84.	Equal channel angular pressing processing routes and associated structure modification: a differential scanning calorimetry and X-ray line profile analysis	Sarkar, A.; Suwas, Satyam; Goran, D.; Fundenberger, J. -J.; Toth, L. S.; Grosdidier, T.	POWDER DIFFRACTION	27	194- 199	2012
85.	Evolution of Crystallographic Texture and Microstructure During Cold Rolling of Twinning-Induced Plasticity (TWIP) Steel: Experiments and Simulations	Gurao, Nilesh P.; Kumar, Pankaj; Bhattacharya, Basudev; Haldar, Arunansu; Suwas, Satyam	METALLURGICAL AND MATERIALS TRANSACTIONS A- PHYSICAL METALLURGY AND MATERIALS SCIENCE	43A	5193- 5201	2012

86.	Evolution of sub-micron grain size and weak texture in magnesium alloy Mg-3Al-0.4Mn by a modified multi-axial forging process	Biswas, Somjeet; Suwas, Satyam	SCRIPTA MATERIALIA	66	89-92	2012
87.	Interrelation of grain boundary microstructure and texture in a hot rolled Ni-rich NiTi alloy	Suresh, K. S.; Kim, Dong-Ik; Bhaumik, S. K.; Suwas, Satyam	SCRIPTA MATERIALIA	66	602-605	2012
88.	Microstructure and texture evolution during beta extrusion of boron modified Ti-6Al-4V alloy	Roy, Shibayan; Suwas, Satyam; Tamirisakandala, S.; Srinivasan, R.; Miracle, D. B.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	540	152-163	2012
89.	Softening and dynamic recrystallization in magnesium single crystals during c-axis compression	Al-Samman, Talal; Molodov, Konstantin D.; Molodov, Dmitri A.; Gottstein, Guenter; Suwas, Satyam	ACTA MATERIALIA	60	537-545	2012
90.	Texture and Microstructural Evolution in Pearlitic Steel During Triaxial Compression	Kumar, Pankaj; Gurao, Nilesh P.; Haldar, Arunansu; Suwas, Satyam	METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE	43A	2043-2055	2012
91.	Texture evolution in high strain rate deformed Cu-10Zn alloy	Gurao, N. P.; Kapoor, Rajeev; Suwas, Satyam	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	558	761-765	2012
92.	The influence of temperature and strain rate on the deformation response and microstructural evolution during hot compression of a titanium alloy Ti-6Al-4V-0.1B	Shibayan Roy, Satyam Suwas	JOURNAL OF ALLOYS AND COMPOUNDS	548	110-125	2012
93.	Accumulative roll bonding of aluminum alloys 2219/5086 laminates: Microstructural evolution and tensile properties	Roy, Shibayan; Nataraj, B. R.; Suwas, Satyam; Kumar, S.; Chattopadhyay, K.	MATERIALS & DESIGN	36	529-539	2012
94.	Microstructure and texture	Roy, Shibayan;	JOURNAL OF	17	6402-	2012

	evolution during accumulative roll bonding of aluminium alloys AA2219/AA5086 composite laminates	Nataraj, B. R.; Suwas, Satyam; Kumar, S.; Chattopadhyay, K.	MATERIALS SCIENCE		6419	
95.	Texture and formability studies on AA7020 Al alloy sheets	Shabadi, R.; Suwas, S.; Kumar, S.; Roven, H. J.; Dwarkadasa, E. S.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	558	439-445	2012
96.	Improving corrosion resistance of MRI 230D Mg alloy by hybrid coating of laser surface alloying and plasma electrolytic oxidation	G. Rapheal, S. Kumar, C. Blawert, N. B. Dahotre	MATERIALS SCIENCE FORUM	706-709	1209-1214	2012
97.	A broad pore size distribution mesoporous SnO ₂ as anode for lithium-ion batteries	Shiva, Konda; Kiran, M. S. R. N.; Ramamurty, U.; Asokan, S.; * Bhattacharyya, Aninda J. * Dept of IAP	JOURNAL OF SOLID STATE ELECTROCHEMISTRY	16	3643-3649	2012
98.	Bioactivity and mechanical properties of nickel-incorporated hydrogenated carbon nanocomposite thin films	Bharathy, P. Vijai; Nataraj, D.; Yang, Q.; Kiran, M. S. R. N.	SURFACE AND INTERFACE ANALYSIS	44	288-295	2012
99.	Effect of dehydration on the mechanical properties of sodium saccharin dihydrate probed with nanoindentation	Kiran, M. S. R. N.; Varughese, Sunil; Ramamurty, U.; Desiraju, Gautam R.	CRYSTENGCOMM	14	2489-2493	2012
100.	Effect of strain rate and temperature on the plastic deformation behaviour of a bulk metallic glass composite	Singh, P. S.; Narayan, R. L.; Sen, Indrani; Hofmann, D. C.; Ramamurty, U.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	534	476-484	2012
101.	Effect of temperature on the plastic zone size and the shear band density in a bulk metallic glass	Prasad, K. Eswar; Ramamurty, U.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	535	48-52	2012
102.	Estimation of the shear	Choi, In-Chul;	SCRIPTA	66	923-	2012

	transformation zone size in a bulk metallic glass through statistical analysis of the first pop-in stresses during spherical nanoindentation	Zhao, Yakai; Yoo, Byung-Gil; Kim, Yong-Jae; Suh, Jin-Yoo; Ramamurty, U ; Jang, Jae-il	MATERIALIA		926	
103.	Further evidence for room temperature, indentation-induced nanocrystallization in a bulk metallic glass	Yoo, Byung-Gil; Choi, In-Chul; Kim, Yong-Jae; Suh, Jin-Yoo; Ramamurty, U; Jang, Jae-il	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	545	225-228	2012
104.	Increased time-dependent room temperature plasticity in metallic glass nanopillars and its size-dependency	Yoo, Byung-Gil; Kim, Ju-Young; Kim, Yong-Jae; Choi, In-Chul; Shim, Sanghoon; Tsui, Ting Y.; Bei, Hongbin; Ramamurty, U; Jang, Jae-il	INTERNATIONAL JOURNAL OF PLASTICITY	37	108-118	2012
105.	Indentation size effect and shear transformation zone size in a bulk metallic glass in two different structural states	In-Chul Choi, Yakai Zhao, Yong-Jae Kim, Byung-Gil Yoo, Jin-Yoo Suh; Ramamurty, U; Jae-il Jang	ACTA MATERIALIA	60	6862-6868	2012
106.	Influence of minor addition of boron on tensile and fatigue properties of wrought Ti-6Al-4V alloy	Singh, Gaurav; Sen, Indrani; Gopinath, K.; Ramamurty, U.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	540	142-151	2012
107.	Manifestation of intermediate phase in mechanical properties: Nano-indentation studies on Ge-Te-Si bulk chalcogenide glasses	Chandasree Das, * M.S.R.N.Kiran, U.Ramamurty, S.Asokan * <i>* Dept of IAP</i>	SOLID STATE COMMUNICATIONS	152	2181-2184	2012
108.	Nanoindentation as a Probe for Mechanically-Induced Molecular Migration in Layered Organic Donor-Acceptor Complexes	Varughese, Sunil; Kiran, M. S. R. N.; Ramamurty, U; Desiraju, Gautam R.	CHEMISTRY-AN ASIAN JOURNAL	7	2118-2125	2012
109.	Nanoindentation response of an ion irradiated Zr-based bulk	Raghavan, R.; Kombaiyah, B.;	MATERIALS SCIENCE AND	532	407-413	2012

	metallic glass	Doebeli, M.; Erni, R.; Ramamurty, U.; Michler, J.	ENGINEERING A- STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING			
110.	On the microstructure-tensile property correlations in bulk metallic glass matrix composites with crystalline dendrites	Narayan, R. L.; Singh, P. S.; Hofmann, D. C.; Hutchinson, N.; Flores, K. M.; Ramamurty, U.	ACTA MATERIALIA	60	5089- 5100	2012
111.	Reactive biased target ion beam deposited W-DLC nanocomposite thin films - Microstructure and its mechanical properties	Bharathy, P. Vijai; Yang, Q.; Kiran, M. S. R. N.; Rha, JongJoo; Nataraj, D.; Mangalaraj, D.	DIAMOND AND RELATED MATERIALS	23	34- 43	2012
112.	Structural and mechanical properties of room temperature sputter deposited CrN coatings	K.H.Thulasi Raman, M.S.R.N.Kiran, U.Ramamurthy, G.Mohan Rao * <i>* Dept of IAP</i>	MATERIALS RESEARCH BULLETIN	47	4463- 4466	2012
113.	Structure and deformation correlation of closed-cell aluminium foam subject to uniaxial compression	Saadatfar, M.; Mukherjee, M.; Madadi, M.; Schroeder-Turk,G.E; Garcia-Moreno, F.; Schaller, F. M.; Hutzler, S.; Sheppard, A. P.; Banhart, J.; Ramamurty, U.	ACTA MATERIALIA	60	3604- 3615	2012
114.	Structure and mechanical properties of Ti-C films deposited using combination of pulsed DC and normal DC magnetron co-sputtering	Raman, K. H. T.; Kiran, M. S. R. N.; Ramamurty, U.; Rao, G. Mohan	APPLIED SURFACE SCIENCE	258	8629- 8635	2012
115.	Thermally reversing window in Ge ₁₅ Te _{85-x} In _x glasses: Nanoindentation and micro-Raman studies	G.Sreevidya Varma, M.S.R.N.Kiran, D.V.S.Muthu, U.Ramamurty, A.K.Sood, * S.Asokan ** <i>* Dept of Physics</i> <i>** Dept of IAP</i>	JOURNAL OF NON- CRYSTALLINE SOLIDS	358	3103- 3108	2012
116.	Thermo-mechanical stability of	Shastry, Vyasa V.;	CARBON	50	4373- 4378	2012

	a cellular assembly of carbon nanotubes in air	Ramamurty, U; Misra, Abha * <i>* Dept of IAP</i>				
117.	Effect of Pt on interdiffusion and mechanical properties of the gamma and gamma ' phases in the Ni-Pt-Al system	Divya, V. D.; Ramamurty, U.; Paul, A.	PHILOSOPHICAL MAGAZINE	92	2187- 2214	2012
118.	Interdiffusion and Growth of the Phases in CoNi/Mo and CoNi/W Systems	Divya, V. D.; Ramamurty, U.; Paul, A.	METALLURGICAL AND MATERIALS TRANSACTIONS A- PHYSICAL METALLURGY AND MATERIALS SCIENCE	43A	1564- 1577	2012
119.	Comments on Effects of current density on the formation and microstructure of Sn-9Zn, Sn-8Zn-3Bi and Sn-3Ag-0.5Cu solder joints	Paul, A.; Laurila, T.	INTERMETALLICS	28	164- 165	2012
120.	Diffusion and growth mechanism of phases in the Pd-Sn system	Ravi, Raju; Paul, Alope	JOURNAL OF MATERIALS SCIENCE- MATERIALS IN ELECTRONICS	23	2306- 2310	2012
121.	Diffusion mechanism in the gold-copper system	Ravi, R.; Paul, A.	JOURNAL OF MATERIALS SCIENCE- MATERIALS IN ELECTRONICS	23	2152- 2156	2012
122.	Effect of Heavy metal and Nutrient Uptake by soils in Indian Cardamom Hills	Muthusamy Murugan, Bijoy K Panigrahy, Paddu Krishnappa Shetty, Alappan Subbiah, Raju Ravi	JOURNAL OF SOIL SCIENCE AND ENVIRONMENTAL MANAGEMENT	3	196- 206	2012
123.	Effect of different pre-aging treatments on the microstructural evolution of solder interconnections during thermal cycling	Laurila, T.; Karppinen, J.; Vuorinen, V.; Li, J.; Paul, A.; Paulasto-Krockel, M.	JOURNAL OF ELECTRONIC MATERIALS	41	3179- 3195	2012
124.	Growth and consumption rates of the phase layers during interdiffusion in a diffusion couple with finite end member	Prasad, S.; Paul, A.	JOURNAL OF MATERIALS SCIENCE- MATERIALS IN ELECTRONICS	23	75- 85	2012
125.	Growth mechanism of tantalum silicides by interdiffusion	S. Roy, A. Paul	PHILOSOPHICAL MAGAZINE	92	4215	2012
126.	Growth mechanism of the	Prasad, S.;	INTERMETALLICS	22	210-	2012

	Nb(X)Si-2 and [Nb(X)](5)Si-3 phases by reactive diffusion in Nb (X = Ti, Mo, or Zr)-Si systems	Paul, A.			217	
127.	Interdiffusion in the Fe-Pt System	Santra, Sangeeta; Mondal, Avik; Paul, Aloke	METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE	43A	791-795	2012
128.	Vacancy wind effect on interdiffusion in a dilute Cu(Sn) solid solution	Santra, Sangeeta; Paul, Aloke	PHILOSOPHICAL MAGAZINE LETTERS	92	373-383	2012
129.	A new method for fracture toughness determination of graded (Pt,Ni)Al bond coats by microbeam bend tests	Jaya, Nagamani B.; Jayaram, Vikram; Biswas, Sanjay Kumar * <i>*Dept of M.E.</i>	PHILOSOPHICAL MAGAZINE	92	3326-3345	2012
130.	Comparative Evaluation of Thermal Conductivity of zirconia Solid and Honeycomb Structures	B. P. Saha, R. Johnson and V. Jayaram	EXPERIMENTAL HEAT TRANSFER	25	267-281	2012
131.	Friction between a Steel Ball and a Steel Flat Lubricated by MoS ₂ Particles Suspended in Hexadecane at 150 degrees C	Praveena, Manimunda; Jayaram, Vikram; Biswas, Sanjay K.* <i>*Dept of M.E.</i>	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH	51	12321-12328	2012
132.	Influence of soft metal(Zr) interlayer on fracture modes in a ZrN-Zr multilayer PVD coating	Nisha Verma; Vikram Jayaram	JOURNAL OF MATERIAL SCIENCE	47	1621-1630	2012
133.	Micromechanisms of damage nucleation during contact deformation of columnar multilayer nitride coatings	Verma, Nisha; Cadambi, Sumanth; Jayaram, Vikram; Biswas, Sanjay Kumar * <i>*Dept of M.E.</i>	ACTA MATERIALIA	60	3063-3073	2012
134.	Residual strength of hot pressed zirconium diboride (ZrB ₂) after exposure to high temperatures	Patel, Manish; Reddy, J. J.; Prasad, V. V.Bhanu; Subrahmanyam, J.; Jayaram, Vikram	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	535	189-196	2012
135.	Strength of hot pressed ZrB ₂ -SiC composite after exposure to high temperatures (1000-1700	Patel, Manish; Reddy, J. Janardhan; Prasad, V. V.Bhanu;	JOURNAL OF THE EUROPEAN CERAMIC SOCIETY	32	4455-4467	2012

	degrees c)	Jayaram, Vikram				
136.	Synthesis and characterization of nickel/barium hexa-aluminate composite coatings	Dinesh Kumar, Sampada Gurav, Vikram Jayaram, Sanjay Biswas * *Dept of M.E.	BULLETIN OF MATERIALS SCIENCE	35	977-988	2012

Conference Proceedings - 2012

Sl No	Title	Name of the Author(s)/(if multiple author from different department, include their department name also)	Name of the Journal/Conference	Vol	Pages	Year
1.	Diffusion mechanism in the mu phase in Nb-X (X = Ni, Co, Fe) systems	Balam, S. S. K.; Ravi, R.; Paul, A.	International Conference on Diffusion in Materials	323-325	497-501	2012
2.	Diffusion mechanism in XSi ₂ and X ₅ Si ₃ (X= Nb, Mo, V) phases	Prasad, Soma; Paul, Alope	International Conference on Diffusion in Materials	323-325	459-464	2012
3.	Interdiffusion in Nb-Mo, Nb-Ti and Nb-Zr systems	Prasad, Soma; Paul, Alope	International Conference on Diffusion in Materials	323-325	491-496	2012
4.	Heat transfer model for metal carbide production (Invited)	G.S. Gupta, R. Kumar, N. Kumar, T.A. Abinandanan, S. Anthonysamy, V. Ganesan P.R. Vasudeva Rao	Symp. on Materials & Processing (MAP-2012), BARC, Mumbai. Oct. 10-12, 2012		54-57	2012
5.	Regenerative energy system using high-temperature electrolyzer and fuel cell equipped with liquid metal electrodes,	K.T. Jacob	Proceedings of the Frey International Symposium on Metals and Materials Processing in a Clean Environment (Plenary Lecture)		81-95	2012
6.	A promising ketone containing alternating copolymer for	Ranjith K, Arun D Rao,	MRS Fall meeting Boston USA		MRSF12-	2012

	organic photovoltaics	Praveen C Ramamurthy		1500-003 19.r1	
7.	Device quality film of poly DTCPA and its random copolymer using excimer laser deposition	Arun D rao, Praveen C Ramamurthy	International conference on electroactive polymers Banaras Hindu University, Varanasi	P-15	2012
8.	Electrospun network structure for organic photovoltaic device	Khadija Kanwal Khanum, Praveen C Ramamurthy	International conference on electroactive polymers Banaras Hindu University, Varanasi	0-35	2012
9.	Fullerene functionalized conjugated molecule containing dithienylcyclopentadienone for organic photovoltaics	Ranjith K, Swathi S K, Praveen C Ramamurthy	International conference on electroactive polymers Banaras Hindu University, Varanasi	0-10	2012
10.	Organic Device Electrode Fabricated by Aluminum in Nanopowder and Bulk Form and Effect on Device Properties	Arul Varman K, Deepak K Mishra, Kirtana M Rajan, Ashwini N Mallya, Praveen C Ramamurthy	International Conference on Emerging Electronics, Bombay	133	2012
11.	Polymer modified carbon paste electrode for mercury detection in aqueous environmental systems	Alex Joseph, S Subramanian, Praveen C Ramamurthy, R Vasant Kumar, C Schwandt	International Mineral Processing Congress New Delhi India	685	2012
12.	Microstructural evolution and some unusual effects during thermo-mechanical cycling of Sn-Ag-Cu alloys	Praveen Kumar, Babak Talenbanpour, Uttara Sahaym, Chein H. Wen, Indranath Dutta	13 th IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems	13 880-887	2012
13.	Semi solid forming of A356 alloy by rapid slurry forming process	S. Sharma, A. Sharma, S. Kumar	13 th Int. Conf. on Aluminum Alloys (ICAA 13), Pittsburgh	1441-1450	2012
14.	Development of Mg-Si based cast alloys	S. S. Joshi, M. S. Mohan, S. Seshan *	9 th Int. Conf. on Magnesium Alloys (Mg 2012),	979-985	2012

		S. Kumar S. Suwas <i>*Dept of M.E.</i>	Vancouver			
15.	Bioremediation of zinc-bearing waters using <i>P. alcaligenes</i>	J. S. S. Allwin Ebinesar, R. J. Deshpande S. Subramanian	Proceedings of the International Mineral Processing Congress (IMPC 2012), New Delhi.		1304-1314	2012
16.	Bioremediation of Pb (II) ions from aqueous solution using <i>Pseudomonas aeruginosa</i>	S. Vimalnath, S. Subramanian, S. Sampath, * R. V. Kumar C. Schwandt <i>*Dept of IPC</i>	Proceedings of the International Mineral Processing Congress (IMPC 2012), New Delhi (2012), 5722-5735.		5722-5735	2012
17.	Polymer modified carbon paste electrode for mercury detection in aqueous environmental systems	Alex Joseph, S. Subramanian, P. C. Ramamurthy, R. Vasant Kumar, C. Schwandt	Proceedings of the International Mineral Processing Congress (IMPC 2012), New Delhi		162-172	2012
18.	Studies on adaptation of <i>Bacillus subtilis</i> to sphalerite and galena minerals to enhance flotation selectivity	B. Vasanthakumar, H. Ravishankar, S. Subramanian	Proceedings of the International Mineral Processing Congress (IMPC 2012), New Delhi		5627-5637	2012
19.	Studies on the bioremediation of Cr (VI) using <i>Serratia marcescens</i> and natural bacterial isolates	M. V. Sowmya, C. P. Divyasree, M. I. Hussain, J. J. Braun, S. Subramanian	Proceedings of the International Mineral Processing Congress (IMPC 2012), New Delhi		5150-5159	2012
20.	Studies on the modeling of bioremediation of Cr (VI) from aqueous solutions	Rajesh G., S. Subramanian, M. S. Mohan Kumar* <i>* Dept of Civil Engg</i>	Proceedings of the International Mineral Processing Congress (IMPC 2012), New Delhi		4365-4376	2012
21.	Deformation and Recrystallization texture evolution in Nano-crystalline Nickel	Madhavan, R.; Gurao, N. P.; Suwas, Satyam	4th International Conference on Recrystallization and Grain Growth (ReX & GG 2010)	715-716	508-517	2012
22.	Deformation behaviour of Titanium in torsion	Gurao, N. P.; Suwas, Satyam	16th International Conference on the Textures of Materials (ICOTOM 16)	702-703	826-829	2012
23.	Microstructure and Texture Evolution in Interstitial-free	Bhowmik, Ayan; Biswas, Somjeet;	16th International Conference on the	702-703	774-777	2012

	(IF) Steel processed by Multi-Axial Forging	Dhinwal, Satyaveer Singh; Sarkar, Apu; Ray, Ranjit Kumar; Bhattacharjee, Debashish; Suwas, Satyam	Textures of Materials (ICOTOM 16)			
24.	Texture and microstructure evolution during cold rolling of Cu-Fe laminates prepared by accumulative roll bonding	Suwas, Satyam; Suresh, K. S.; Rollett, A. D.	4th International Conference on Recrystallization and Grain Growth (ReX & GG 2010)	715-716	170	2012
25.	Modelling of metal-slag emulsion	S. Kamble, D. Y. Song, A. Dhavamani, G. S. Gupta, N. Maruoka, S. Kitamura. H. Shibata	ICS-2012 conf., Dresden, Germany	Article 1371		2012

Popular Articles - 2012

Sl No	Title	Name of the Author(s)	Name of the Journal	Vol	Pages	Year of publication
1	Nuclear riddles: TINA and NIMBY	Chokshi, Atul H.	CURRENT SCIENCE	102	1096-1098	2012
2	What is really real?	Chokshi, Atul H.	CURRENT SCIENCE	102	389-393	2012

Books/Monograph – 2012

Eric A. Lord, Alan L. Mackay, S. Ranganathan
New Geometries for New Materials
Cambridge University Press, Paperback Edition , 2012