

## JOURNAL PUBLICATIONS – 2010

\* Faculty, students and project staff from the Dept. of Materials Engineering

SI No	TITLE	AUTHOR/S	JOURNAL	VOL	PAGE No	YEAR
1.	Diffusion and growth mechanism of Nb <sub>3</sub> Sn superconductor grown by bronze technique	T. Laurila, V. Vuorinen A.K. Kumar and A. Paul *	Applied Physics Letters	96	2319-10	2010
2.	Interdiffusion study in the Fe-Nb system	S.S.K. Balam, and A. Paul *	Metallurgical and Materials Transactions A	41A	2175	2010
3.	Interdiffusion in the Ni-Mo system	V.D. Divya * S.S.K. Balam, U. Ramamurty * A. Paul *	Scripta Materialia	62	621	2010
4.	Interdiffusion studies in bulk Au-Ti system	A.K. Kumar and A. Paul *	Journal of Materials Science: Materials in Electronics	21	1202	2010
5.	Topological close packed $\mu$ phase formation and the determination of diffusion parameters in Co-Mo system,	V.D. Divya, * U. Ramamurty * A. Paul *	Intermetallics	18	259	2010
6.	Study on the growth of Nb <sub>3</sub> Sn superconductor in Cu(Sn)/Nb diffusion couple	A.K. Kumar, T. Laurila V. Vuorinen and A. Paul *	Defects and Diffusion Forum	467	297-301	2010
7.	Diffusion studies in A <sub>3</sub> B compounds with A15 structure	R. Ravi * A.K. Kumar A. Paul *	Defects and Diffusion Forum	477	297-301	2010
8.	Interdiffusion studies in the Co-Mo system	V.D. Divya * U. Ramamurty * A. Paul *	Defects and Diffusion Forum	462	297-301	2010
9.	Reversible polyelectrolyte capsules as carriers for protein delivery	S. Anandhakumar*, V. Nagaraja and A. M. Raichur *	Colloids and Surfaces B: Biointerfaces	78(2)	266-274	2010
10.	Process variables in biomimetic synthesis of silver nanoparticles by aqueous extract of Azadirachta indica (Neem) leaves	A. Tripathi, A. M. Raichur * N. Chandrasekaran, T. C. Prathna and A. Mukherjee	Journal of Nanoparticle Research	12(1)	237-246	2010

11.	Studies on interaction of colloidal Ag nanoparticles with Bovine Serum Albumin (BSA)	A. Ravindran, A. Singh, A. M. Raichur * N. Chandrasekaran, A. Mukherjee	Colloids and Surfaces B: Biointerfaces	76( 1)	32-37	2010
12.	Development of in situ gel formulation containing forskolin nanocrystals for better glaucoma therapy	Saurabh Gupta, M. K. Samata and A. M. Raichur *	AAPS PharmSciTech	11 (1)	322- 335	2010
13.	Effect of manufacturing conditions on physico-chemical characteristics of aceclofenac sodium microbeads for oral modified drug delivery	K. M. Manjanna, B. Shivakumar and A. M. Raichur *	Der Pharmacia Lettre	2 (2).	486- 508	2010
14.	Dispersion of concentrated nano-zirconia suspensions using a commercial dispersant	M. Biswas and A. M. Raichur *	Journal of Dispersion Science and Technology	31 (9)	1173- 1177	2010
15.	Composition distributions in FePt(Au) nanoparticles	C.Srivastava * D.E. Nikles, J.W. Harrell and G.B. Thompson	J. Nanoparticl e Research	12	2051- 2056	2010
16.	Studies on the ignition behaviour of boron powder	Ashish Jain*, S. Anthonysamy, K. Ananthasivan and G.S. Gupta *	Thermochemic a Acta	500	63-68	2010
17.	A parametric study of powder holdups in a packed bed under decreasing gas velocity condition	V.V. Gunjal * M.R. Lollchund and G.S. Gupta *	Univ. of Mauritius Res. Journal	16	299- 312	2010
18.	Numerical study of gas-fines flow characteristics in a packed bed with the presence of internal blocks	V.V. Gunjal, M.R. Lollchund and G.S. Gupta *	Int. J. Engineering Systems Modelling and Simulation	2(4)	204- 210	2010
19.	Effect of bottom bubbling conditions on surface reaction rate in oxygen-water system	N. Marouka, F. Lazuardi, H. Nogami, G.S. Gupta * S. Kitamura	ISIJ Int	50( 1)	89-94	2010
20.	La-doped Ba <sub>2</sub> In <sub>2</sub> O <sub>5</sub> electrolyte: Pechini synthesis, microstructure, electrical	X. Li, K.T. Jacob * G.M. Kale	J. Electrochem. Soc	157	J285- J292	2010

	conductivity, and application for CO gas sensing					
21.	Reactive interdiffusion: deviation from local equilibrium in the Fe-NiTiO <sub>3</sub> couple	K.T. Jacob * G. Rajitha * S.N.S. Reddy	Scripta Mater	63	204-206	2010
22.	Role of entropy in the stability of cobalt titanates	K.T. Jacob * G. Rajitha *	J. Chem. Thermodyn	42	879-885	2010
23.	Thermodynamic properties of RhO <sub>2</sub> ,	K.T. Jacob * D. Prusty	J. Alloys Compds	507	L17-L20	2010
24.	Thermal expansion of doped lanthanum gallates	K.T. Jacob * S. Jain, V.S. Saji and P.V.K. Srikanth	Bull. Mater. Sci	33	407-411	2010
25.	Thermal effusivity of Al <sub>x</sub> Ga <sub>1-x</sub> N alloys: measurement using thermoreflectance with periodic heating,	H. Shibata, H. Ohta, T. Nemoto, S. Nagayama , Y. Waseda, K. Fujii and K.T. Jacob *	High Temp. Mater. Process.	29	515-522	2010
26.	Resolution of conflicting views on the thermodynamics of glass transition,	K.T. Jacob * S. Prabhudev and R. M. Mallya *	Bull. Mater. Sci	33	603-609	2010
27.	Thermodynamic properties of niobium oxides,	K. T. Jacob * C. Shekhar*, M. Vinay and Y. Waseda.	J. Chem. Engg. Data	55	4854-4863	2010
28.	Phase relations in the system CaO-Fe <sub>2</sub> O <sub>3</sub> -Y <sub>2</sub> O <sub>3</sub> at 1273 K and compatibility between Y <sub>1-x</sub> Ca <sub>x</sub> FeO <sub>3-0.5x</sub> and stabilized zirconia,	K. T. Jacob * N. Dasgupta and P. R.Vineeth	J. Phase Equilib. Diffus.	31	518-522	2010
29.	Response of materials as a function of grinding angle on friction and transfer layer formation	Pradeep L.Menezes*, Kishore * Satish V. Kailas ** Michael R. Lovell  ** ME Dept	The International Journal of Advanced Manufacturing Technology	49 (5-8)	485-495	2010
30.	Influence of tilt angle of plate on friction and transfer layer - A study of aluminium pin sliding against steel plate	Pradeep L.Menezes*, Kishore * Satish V. Kailas ** M.S. Bobji **	Tribology International	43, Issues 5-6	897-905	2010

		** ME Dept				
31.	Chromium-manganese iron alloy system design cast in metal and sand moulds for erosion resistance: a positron lifetime study	Sampathkumaran, P., Ranganathaiah, C., Seetharamu, S., Kishore *	International Journal of Advanced Manufacturing Technology		DOI 10.1007/s00170-010-2715-2	2010
32.	Influence of Die Surface Textures during Metal Forming – A Study using Experiments and Simulation	Pradeep L Menezes * Kishore * Satish V. Kailas **  ** ME Dept	Materials and Manufacturing Processes	25	1030-1039	2010
33.	Fabrication of device quality films of high loaded PPY/MWCNT nanocomposites using pulsed laser deposition	Swathi S. K*, Jeevananda T, Praveen C. Ramamurthy *	Organic Electronics	11	1489-1499	2010
34.	Unconventional mechanism of stabilization of a tetragonal phase in the perovskite ferroelectric $(\text{PbTiO}_3)_{1-x}(\text{BiFeO}_3)_x$	Rajeev Ranjan * Appala Raju *	Phys. Rev. B	82	054119	2010
35.	Phase changes in $\text{Na}_{1/2}\text{Pr}_{1/2}\text{TiO}_3$ : A synchrotron X-ray powder diffraction study	Rajeev Ranjan * Hans Boysen	Solid State Comm	150	1128-1131	2010
36.	Structural transformations in $\text{Mn}_2\text{NiGa}$ due to residual stress	Sanjay Singh, M. Maniraj, S. W. D'Souza, R. Ranjan * S. R. Barman	Appl. Phys. Letters	96	81904	2010
37.	Phases in the $(1-x)\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3-(x)\text{CaTiO}_3$ system	Rajeev Ranjan * Rohini Garg, V *. Kothai * Anupriya Agrawal, Anatoliy Senyshyn and Hans Boysen	J. Phys.: Condens. Matter	22	075901	2010
38.	Stress, Texture and Phase Transformation in Titanium Thin Films	J. Chakraborty, Kishor Kumar, R. Ranjan * S.G.Chowdhury and S. R. Singh	Solid State Phenomena	160	109	2010
39.	Ab-initio electronic	Hasan Sadat Nabi,	J. Phys.:	22	0455	2010

	structures of rhombohedral and cubic $\text{HgXO}_3$ (X=Ti, Pb)	Rossitza Pentcheva Rajeev Ranjan *	Condens. Matter		04	
40.	On characterization of deformation microstructure in Boron modified Ti-6Al-4V Alloy	S. Roy*, A. Sarkar* and Satyam Suwas *	Materials Science and Engineering A	A 528	449-458	2010
41.	Effect of Strain rate on evolution of deformation microstructure and texture in polycrystalline copper and nickel	N.P. Gurao * R. Kapoor and Satyam Suwas *	Metallurgical and Materials Transactions A	41	2794 – 2804	2010
42.	Effect of mode of rolling and initial texture on microstructural and textural development in two phase ( $\alpha+\beta$ ) brass	R. Garg * S. Ranganathan * Satyam Suwas *	Materials Science and Engineering A	A 527	4582 – 4592	2010
43.	Room Temperature Equal Channel Angular Extrusion of Magnesium	S. Biswas, S.S. Dhinwal and Satyam Suwas *	Acta Materialia	58	3247-3261	2010
44.	Annealing Response of the Intermetallic alloy Ti-22Al-25Nb	S.R. Dey, S. Roy*, Satyam Suwas * J.-J. Fundenberger R.K. Ray	Intermetallics	18	1122-1131	2010
45.	Texture heterogeneity in ECAP deformed copper	W. Skrotzki, C. Tränkner, R. Chulist, B. Beausir, Satyam Suwas * L.S. Tóth	Solid State Phenomena	160	47-54	2010
46.	Creep behaviour of AE42 magnesium alloy and its composites using impression creep technique:	A. K. Mondal * S. Kumar *	Materials Science Forum	638 - 642	1552-1557	2010
47.	Interrupted creep behaviour of Mg alloys developed for powertrain applications	A. K. Mondal * D. Fechner, S. Kumar * H. Dieringa, P. Maier and K. U. Kainer	Materials Science and Engineering A	527	2289-2296	2010
48.	Microstructure and properties of the spray formed and extruded 7075 Al alloy	M. Jeyakumar*, S. Kumar* and G. S. Gupta *	Materials and Manufacturing Processes	25	777-785	2010

49.	Bioremediation of acid mine water utilizing red mud and <i>Desulfotomaculum nigrificans</i>	Evvie Chockalingam*, S. Subramanian * J. J. Braun	Mineral Processing and Extractive Metallurgy (Trans. Inst. Min Metall. C)	119	153-162	2010
50.	Formation and preservation of pedogenic carbonates in South India, links with paleo-monsoon and pedological conditions: Clues from Sr isotopes, U-Th series and REEs	Aur�lie Violette, Jean Riotte, Jean-Jacques Braun, Priscia Oliva, Jean-Christophe Marechal, Sekhar M., Catherine Jeandel, S. Subramanian * Jonathan Prunier, Laurent Barbiero, Bernard Dupre	Geochemica et Cosmochemica Acta	74	7059-7085	2010
51.	Reactive Hot Pressing of Zirconium diboride-based Ultrahigh Temperature Ceramic Composites	LingappaRangaraj *, Canchi Divakar and Vikram Jayaram *	Journal of the European Ceramic Society	30	129-38	2010
52.	Mechanism of failure in a free standing in a Pt-aluminide bond coat during tensile testing at room temperature	Md. Zafir Alam*, B. Srivathsa, S.V.Kamat, V.Jayaram * N.Hazari and D.K.Das	Materials Science & Engineering: A	527	842-8	2010
53.	Reactive Pulsed Laser Deposition of Titanium Nitride Thin Film: Optimization of Process Parameters Using Secondary Ion Mass Spectrometry	<u>Mathews, T.</u> ; <u>Balamurugan, A.K.</u> ; <u>Dash, S.</u> ; <u>Tyagi, A.K.</u> ; <u>Raj, B.</u> ; <u>Jayaram, V</u> *	Applied Surface Science	256	3077-80	2010
54.	Synthesis and Densification of Monolithic Zirconium Carbide by Reactive Hot Pressing	Chidambaram Nachiappan*, Lingappa Rangaraj*, Canchi Divakar and Vikram Jayaram *	J Am Cer S	93	1341-46	2010
55.	Pressure and thermally induced stages of wear in dry sliding of a steel ball	Anirban Mahato, Thomas A. Perry, Vikram Jayaram *	Wear	268	1080-1090	2010

	against an Al-Si alloy flat	Sanjay K. Biswas **  ** ME dept				
56.	Reactive hot pressing of ZrB <sub>2</sub> -ZrC <sub>x</sub> ultra-high temperature ceramic composites with the addition of SiC particulate	Lingappa Rangaraj*, Canchi Divakar and Vikram Jayaram *	J. Eur. Ceram. Soc	30	3263-3266	2010
57.	Evaluation of Ductile-Brittle-Transition-Temperature (DBTT) of Aluminide Bond Coats by Micro-tensile Test Method	Md. Zafir Alam*, B. Srivathsa, S.V.Kamat, V.Jayaram * N.Hazari and D.K.Das	Materials Science and Engineering A	527	7147 - 7150	2010
58.	Microtensile testing of a free-standing Pt-aluminide bond coat	Md. Zafir Alam*, B. Srivathsa, S.V. Kamat, V. Jayaram * D.K. Das	Materials & Design	32	1242-1252	2010
59.	Elastic modulus of Ti-6Al-4V-xB alloys with B up to 0.55 wt.%	Indrani Sen * U. Ramamurty *	Scripta Materialia	62	37-40	2010
60.	Effect of recrystallization and grain growth on the mechanical properties of an extruded AZ21 Mg alloy	M. A. Azeem * A. Tewari, and U. Ramamurty *	Materials Science & Engineering A	527	898-903	2010
61.	Development of novel grain morphology during hot extrusion of magnesium AZ21 alloy	M. A. Azeem * A. Tewari, S. Mishra, S. Gollapudi, and U. Ramamurty *	Acta materialia	58	1495-1502	2010
62.	Ion irradiation enhances the mechanical performance of metallic glasses	R. Raghavan * K. Boopathy*, R. Ghisleni, M. A. Pouchon, U. Ramamurty * J. Michler	Scripta Materialia	62	462-465	2010
63.	Variable stress ratio in cumulative fatigue damage: experiments and comparison of three models,	D. V. Rambabu, V. R. Ranganath, U. Ramamurty * A. Chatterjee	Journal of Mechanical Engineering Science	224	271-282	2010.
64.	On the fracture toughness of bulk metallic glasses	J. Xu, U. Ramamurty * and E. Ma	Journal of Metals	62	10-18	2010.

65.	Effect of copper addition on the fracture and fatigue crack growth behaviour of solution heat-treated SUS 304H austenitic steel	K. K. Alaneme, S.M. Hong, Indrani Sen * E. Fleury, and U. Ramamurty *	Materials Science & Engineering A	527	4600 – 4604	2010.
66.	Effect of calcium deficiency on the mechanical properties of hydroxyapatite crystals	B. Viswanath, V. Shastry, U. Ramamurty * N. Ravishankar	Acta materialia	58	4841- 48	2010.
67.	The effect of cooling rate on the structure and properties of closed-cell aluminium foams	M. Mukherjee, U. Ramamurty * F. Garcia-Moreno, J. Banhart	Acta Materialia	58	5031- 5042	2010
68.	On the hardness and elastic modulus of bulk metallic glass matrix composites	R. L. Narayan, K. Boopathy*, Indrani Sen * D.C. Hofmann, U. Ramamurty *	Scripta Materialia	63	768- 771	2010.
69.	High temperature deformation processing maps for boron modified Ti-6Al-4V alloys	Indrani Sen * R. S. Kottada*, and U. Ramamurty *	Materials Science & Engineering A	527	6157 – 6165	2010.
70.	High temperature (1023 to 1273 K) plastic deformation behavior of B-modified Ti-6Al-4V alloys: temperature and strain rate effects	Indrani Sen * U. Ramamurty *	Metallurgical and Materials Transactions A	41	2959- 2969	2010.
71.	Mechanical anisotropy in crystalline saccharin: nanoindentation studies	M. S. R. N. Kiran * S. Varughese, C. Malla Reddy, U. Ramamurty * G. R. Desiraju	Crystal Growth & Design	10	4650- 4655	2010.
72.	Room-temperature creep in amorphous alloys: influence of initial strain and free volume	B.G. Yoo, K.S. Kim, J.H. Oh, U. Ramamurty * J.I. Jang	Scripta materialia	63	1205- 1208	2010.
73.	Fatigue in Ti-6Al-4V-B alloys	Indrani Sen * K. Gopinath*, Ranjan Datta, and U. Ramamurty *	Acta materialia	58	6799 – 6809	2010.
74.	Enhancement of fatigue Life of Ni-Ti-Fe shape memory alloys by thermal cycling	Sushil K. Giri, M. Krishnan, and U. Ramamurty *	Materials Science and Engineering A	528	363- 370	2010.

75.	Extraordinary high strain rate superplasticity in electrodeposited nano-nickel and alloys	M.J.N.V. Prasad *	Scripta Materialia	63	136-139	2010
76.	The Influence of Titania on Creep in Superplastic Zirconia	M. Kini * A.H. Chokshi *	J Am Cer S	93	1725-1731	2010
77.	Deformation and Crystallization of Zr-Based Amorphous Alloys in Homogenous Flow Regime	M. Tao, A.H. Chokshi * R.D. Conner, G. Ravichandran and W.D. Johnson	Journal of Materials Research	25	1137-1148	2010
78.	Strain Rate Sensitivity and Microstructural Evolution in a Mg-Al-Zn Alloy	R. Korla * A.H. Chokshi *	<u>Scripta Materialia</u>	63	913-916	2010
79.	Superplasticity in Electro-deposited Nanocrystalline Ni	M.J.N.V. Prasad * A.H. Chokshi *	<u>Acta Materialia</u>	58	5724-5736	2010
80.	Microstructural Stability and Nanoindentation in Electrodeposited Nanocrystalline Ni-1.5 wt% P Alloy	M.J.N.V. Prasad * A.H. Chokshi *	<u>Kovove Materialia</u>	48	1-7	2010
81.	Microbially-induced mineral beneficiation	M.N.Chandraprabha* K.A. Natarajan *	Mineral Processing & Extractive Metall. Rev	31	1-29	2010
82.	Adhesion of Acidithiobacillus ferrooxidans to mineral surfaces	Preston Devasia and K.A. Natarajan *	International Journal of Mineral Processing	94	135-139	2010
83.	Modeling and analysis of nanoscale interaction forces between Acidithiobacillus ferrooxidans and AFM tip	M.N. Chandraprabha * K.A. Natarajan *	Colloids and Surfaces B: Biointerfaces	75	310-318	2010
84.	Microbially induced separation of quartz from hematite using sulfate reducing bacteria	M.R. Sabari Prakasan* K.A. Natarajan *	Colloids and Surfaces B: Biointerfaces	78	163-170	2010
85.	Precipitate growth with composition-dependent diffusivity: Comparison between theory and phase field simulations	R. Mukherjee*, T.A. Abinandanan * M.P. Gururajan *	Scripta Materialia	62(2)	85-88	2010
86.	Synthesis, magnetic and	Thirumal E,	Journal of	502	169-	2010

	electrical properties of Fe-containing SiO <sub>2</sub> nanocomposite	Prabhu D * Chattopadhyay K * Ravichandran V	Alloys and Compounds		175	
87.	Synthesis of FeCu Nanopowder by Levitational Gas Condensation Process	Sivaprahasam D*, Sriramamurthy AM, Vijayakumar M, Chattopadhyay K *	Metallurgical and materials transactions b-process metallurgy and materials processing science	41	841-856	2010
88.	Magnetic, electric, and dielectric properties of FeCo alloy nanoparticles dispersed in amorphous matrix	Thirumal E, Prabhu D * Chattopadhyay K * Ravichandran V	Physica status solidi a-applications and materials science	207	2505-2510	2010
89.	Microstructural Evolution during Laser Resolidification of Fe-18 At. Pct Ge Alloy	Biswas K, Chattopadhyay K *	Metallurgical and materials transactions a-physical metallurgy and materials science	41A	574-582	2010
90.	Combined Cryo and Room temperature Ball milling to produce ultrafine halide crystallites	Akash Varma, Krishanu Biswas * Chandra Sekhar Tiwary * Amit Kumar Mondal, Chattopadhyay K *	The Minerals, Metals & Material Society and ASM International		DOI:10.1007/s11661-010-0490-1	
91.	Influence of tool rake angle on the quality of pure magnesium chip-consolidated product	Anilchandra AR* Surappa MK *	Journal Of Materials Processing Technology	210	423-428	2010

#### b) Conference Proceedings :

1. G. S. Avadhani: "Techniques for Characterization of Nano Materials"; Sixth International Conference on Mathematical Modeling and Computer Simulation of Materials Technologies, MMT-2010, Aug. 23-27, 2010, Ariel University Center of Samaria, Ariel, Israel; pp 211-244
2. G.S.Avadhani: "Optimization of Warm Workability of Armco Iron and Some Binary Alloys: A Study Using Processing Maps" International Conference on

Automotive Materials and Manufacturing, AM&M-2010, Oct 6-8, 2010,,Pune, India; pp 215-220

3. M.R. Lollchund and G.S. Gupta: *Effect of raceway shape and size on gas and fines flow behavior*, (Keynote Lecture), p21-24, Int. symp. on ironmaking for sustainable development, 28-29 Jan., 2010, Osaka, Japan.
4. M.K. Mondal, N. Maruoka, S. Kitamura and G S Gupta: Enhancement in bath mixing and plume area in a new degassing process – A computational fluid dynamic study, p189-198, Int. workshop on utilization of steelmaking slags with by-product recovery, May 10-11, 2010, Krakow, Poland
5. Menezes, P.L., Kishore, Kailas,S.V., Lovell, M.R: Influence of inclination angle and surface texture of the plate on friction and transfer layer formation - Proceedings of the ASME/STLE International Joint Tribology Conference 2009, IJTC2009 , pp. 467-469, 2010
6. Menezes, P.L., Kishore, Kailas, S.V., Lovell, M.R: Influence of alloying element addition on friction and transfer layer formation in al-mg system: Role of surface texture - Proceedings of the ASME/STLE International Joint Tribology Conference 2009, IJTC2009 , pp. 459-461, 2010
7. G. Rapheal, S. Kumar, C. Blawert and N. B. Dahotre, "Laser surface alloying of a creep resistant magnesium alloy MRI 230D with Al and Al<sub>2</sub>O<sub>3</sub>:" Magnesium Technology 2010, Eds. S. Agnew, N. R. Neelamegham, E. A. Nyberg and W. Sillekens, John Wiley Publishers, page 161-166, 2010.
8. S. Mondol, G. Praveen, S. Kumar, K. Chattopadhyay and S. Suwas Effect of addition of Sc and Mg on 2219 Al Alloy:, Proceedings of the 12<sup>th</sup> International Conference on Aluminium Alloys ICAA12, Eds. S. Kumai, O. Umezawa, Y. Takayama, T. Tsuchida and T. Sato, Yokohama, Japan, The Japan Institute of Light Metals, page 447-452, 2010
9. Anamika Prasad, Ming Dao, and U. Ramamurty, "Effect of Dilatation on the Elasto-plastic Response of Bulk Metallic Glasses under Indentation," in *Mechanical Behavior at Small Scales — Experiments and Modeling*, edited by J. Lou, E. Lilleodden, B. Boyce, L. Lu, P.M. Derlet, D. Weygand, J. Li, M.D. Uchic, E. Le Bourhis (Mater. Res. Soc. Symp. Proc. Volume 1224, Warrendale, PA, 2010), 1224-GG04-07.
- 10.V. D. Divya, U. Ramamurty, A. Paul, "Inter-diffusion studies in Co-Mo system," *Defects and Diffusion Forum*, vol. 297-301, pp. 462-466, 2010
- 11.N. Chollocop and U. Ramamurty, "Three dimensional simulation of deformation fields underneath Vickers indenter: effects of power law plasticity," *International Journal of Modern Physics B*, vol. 24, pp. 238-246, 2010

- 12.S. Subramanian, E. Chockalingam and J. J. Braun, *Bioremediation of acid mine water using fly ash and Desulfotomaculum nigrificans*, Proceedings of the XXV International Mineral Processing Congress, Brisbane, Australia, Australasian Institute of Mining and Metallurgy, (2010) 499-511.( Refereed publication)
- 13.S. Subramanian, Evvie Chockalingam and J. J. Braun, *Studies on acid production potential of mine tailings and bioremediation of acid mine water from an abandoned Indian copper mine*, Proceedings of the International Seminar on Mineral Processing Technology (Eds.) R. Singh, A. Das, P. K. Banerjee, K. K. Bhattacharyya and N. G. Goswami, Allied Publishers Pvt. Ltd., Vol.2 (2010) 933-945.
- 14.Soupitak Pal, Vikram Jayaram, Sanjay Kumar Biswas and Yancy.Riddle, "Effect of Phases on the Frictional Properties of Electroless Ni-B Nano-Composite Coating  
Advances in Science and Technology, Vol. 66 (2010) pp 120-125, Proc. CIMTEC 2010, Montecatini, Italy

#### c) Books/Monographs :

A. Paul, T. Laurila and V. Vuorinen, Microstructure, diffusion and growth mechanism of Nb<sub>3</sub>Sn superconductor by bronze technique, Book chapter in book titled "Superconductor", 2010 (ISBN: 978-953-307-107-7)

T. C. Prathna, T. Lazar Mathew, A M. Raichur, N. Chandrasekaran, A. Mukherjee, "Biomimetic synthesis of nanoparticles: Science, Technology & Applicability" in Biomimetics- learning from Nature, Chapter 1, pp. 1-24, Editor: Amitava Mukherjee, IN- TECH Publications, Vienna, Austria, 2010

G.S.Gupta and M.P.L.N. Rao: *Carbide production*, in **Scale-up in Metallurgy**, Ed. M. Lackner, Publ. ProcessEng Engineering GmbH, Austria, ISBN:978-3-902655-10-3, March 2010.

#### d) Reports Published:

G.S. Gupta: Optimisation of boron carbide manufacturing process using physical and mathematical modeling, Reseach report submitted to IGCAR, Kapakkam, 2010.