

## JOURNAL PUBLICATIONS – 2009

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

No.	TITLE	AUTHOR/S	JOURNAL	VOL	YEAR	PAGE
1.	Evolution of multivariant microstructures with anisotropic misfit: A phase field study	Saswata Bhattacharyya* TA Abinandanan*	<i>Acta Materialia</i>	57	2009	646
2.	A phase field study of morphological instabilities in multilayer thin films	BG Chirranjeevi TA Abinandanan* MP Gururajan*	<i>Acta Materialia</i>	57	2009	1060
3.	Phase field study of precipitate growth: Effect of misfit strain and interface curvature	R Mukherjee* TA Abinandanan* MP Gururajan*	<i>Acta Materialia</i>	57	2009	3947
4.	Comments on Room temperature interfacial reactions in electrodeposited Au/Sn couples	A Paul*	<i>Scripta Materialia</i>	61	2009	561
5.	Diffusion parameters in the Nb-Mo system: Revisited	S Prasad* A Paul*	<i>Metallurgical and Materials Transactions A</i>	40	2009	1512
6.	Interdiffusion and activation energy in Ti <sub>3</sub> Au phase with A15 crystal structure	AK Kumar* A Paul*	<i>Intermetallics</i>	17	2009	962
7.	Interdiffusion and Growth of the Superconductor Nb <sub>3</sub> Sn in Nb/Cu(Sn) Diffusion Couples	AK Kumar* A Paul*	<i>Journal of Electronic Materials</i>	38	2009	700
8.	Determination of diffusion parameters and activation energy of diffusion in V <sub>3</sub> Si phase with A15 crystal structure	AK Kumar* T Laurila V Vuorinen A Paul*	<i>Scripta Materialia</i>	60	2009	377
9.	Different phenomenological theories and their efficiency to describe the interdiffusion process in a binary system during multiphase growth	C Ghosh* A Paul*	<i>Acta Materialia</i>	57	2009	493
10.	Evolution of Grain Boundary Microstructure and Texture in Interstitial-free Steel processed by Equal Channel Angular Extrusion	A Bhaumik* Somjeet Biswas* Satyam Suwas* RK Ray D Bhattacharjee	<i>Metallurgical and Materials Transactions A</i>	40A	2009	2729

11.	Texture evolution during cold rolling of nanocrystalline Nickel	NP Gurao* Satyam Suwas*	<i>Applied Physics Letters</i>	94	2009	1902
12.	Microstructural characterization of ultrafine-grain interstitial-free steel by X-ray diffraction line profile analysis	A Sarkar* A Bhowmik* Satyam Suwas*	<i>Applied Physics A: Materials Science and Processing</i>	94	2009	943
13.	Study of texture evolution in metastable $\beta$ -Ti alloy as a function of strain path and its effect on $\alpha$ transformation texture	NP Gurao* Ashkar Ali A* Satyam Suwas*	<i>Materials Science and Engineering A</i>	504	2009	24
14.	Analysis of microstructure and texture evolution in pure magnesium during symmetric and asymmetric rolling	B Beausir* S Biswas* D-I Kim LS Tóth Satyam Suwas*	<i>Acta Materialia</i>	57	2009	5061
15.	Spatial correlation in grain misorientation distribution	B Beausir* C Fressengeas NP Gurao* LS Tóth Satyam Suwas*	<i>Acta Materialia</i>	57	2009	5382
16.	Evolution of Texture during Equal Channel Angular Extrusion of Commercially Pure Aluminium: Experiments and Simulations	Satyam Suwas* R Arruffat-Massion LS Tóth J-J Fundenberger B Beausir	<i>Materials Science and Engineering A</i>	520	2009	134
17.	Microstructural evolution and mechanical characteristics in nanocrystalline nickel with a bimodal grain size distribution	MJNV Prasad* S Suwas* AH Chokshi*	<i>Materials Science and Engineering: A</i>	503	2009	86
18.	Evolution of crystallographic texture and microstructure in the orthorhombic phase of a two-phase alloy Ti-22Al-25Nb	SR Dey Satyam Suwas* J-J Fundenberger RK Ray	<i>Intermetallics</i>	17	2009	622
19.	Fatigue behaviour of carbon fibre reinforced plastic under spectrum loading	J Sudha* S Kumar* P Srinivasan K Vijayaraju	<i>Materials Science and Engineering A</i>	501	2009	44
20.	Core temperature measurement in	M P L N Rao* G S Gupta*	<i>Thermochimica Acta</i>	482	2009	66

	carbothermal reduction processes	P Manjunath* S Kumar* A K Suri N Krishnamurthy C Subramanian				
21.	Effect of ion nitriding on the microstructure and properties of maraging steel (250 grade)	K Shetty* S Kumar* P R Rao	<i>Surface &amp; Coatings Technology</i>	203	2009	1530
22.	The influence of processing parameters on characteristics of an aluminum alloy spray deposition	M Jeyakumar* S Kumar* G S Gupta*	<i>Materials and Manufacturing Processes</i>	24	2009	693
23.	Temperature measurements in the boron carbide manufacturing process – a hot model study	M P L N Rao* G S Gupta* P Manjunath* S Kumar* A K Suri N Krishnamurthy C Subramanian	<i>International Journal of Refractory Metals and Hard Materials</i>	27	2009	621
24.	Laser surface cladding of MRI 153M magnesium alloy with (Al+Al <sub>2</sub> O <sub>3</sub> )	M Hazra* A K Mondal* S Kumar* C Blawert N B Dahotre	<i>Surface &amp; Coatings Technology</i>	203	2009	2292
25.	Dry sliding wear behaviour of magnesium alloy based hybrid composites in the longitudinal direction	A K Mondal* S Kumar*	<i>Wear</i>	267	2009	458
26.	Pulsed laser surface treatment of magnesium alloy: correlation between thermal model and experimental observations	A N Samant B Du S R Paital S Kumar* N B Dahotre	<i>Journal of Materials Processing Technology</i>	209	2009	5060
27.	Impression creep behaviour of magnesium alloy based hybrid composites in the transverse direction	A K Mondal* S Kumar*	<i>Composites Science and Technology</i>	69	2009	1592
28.	Implantation induced hardening of nanocrystalline Ti films	T Krishnan* S Amrithapandian G Mangamma T Tamaseshan S Dash A K Tyagi V Jayaram* Baldev Raj	<i>J Nanoscience &amp; Nanotech</i>	9	2009	1

29.	Low- temperature Densification of Reactively Hot Pressed TiN-TiB <sub>2</sub> Composites through excess Ti additions	Lingappa Rangaraj* Canchi Divakar Vikram Jayaram*	<i>J Am Ceram Soc</i>	92	2009	311
30.	Processing of Refractory metal Borides Carbides and Nitrides	Lingappa Rangaraj* Canchi Divakar Vikram Jayaram*	<i>Key Engineering Materials</i>	395	2009	69
31.	Internal nitide formation during gas phase thermal nitridation of titanium	PKAjikumar MKamruddin PShankar RGunda AKBalamurugan RNithya AKTyagi Baldev Raj VJayaram* SKBiswas** **M.E., IISc	<i>Scripta Materialia</i>	61	2009	403
32.	Deposition of ZnO Films by Combustion Flame Pyrolysis of Solution Precursors	Ranganathan Kavitha* Vikram Jayaram*	<i>Int J App Ceram Tech</i>		Publis hed Online : Mar 9 2009	DOI: 101111/j 1744- 7402200 902357x
33.	Application of polyelectrolyte/TiO <sub>2</sub> multilayer films for degradation of organics	D Neela Priya* J M Modak** A M Raichur*  **Chem Engg., IISc	<i>ACS Applied Materials and Interfaces</i>	1	2009	2684
34.	Encapsulation and release of rifampicin using poly(vinyl pyrrolidone) and poly(methacrylic acid) polyelectrolyte capsules	K N Anil Kumar* Soumik Basuray* V Nagaraja** A M Raichur*  **MCBL, IISc	<i>Materials Science and Engineering C</i>	29	2009	2508
35.	Antibacterial applications of silver nanoparticles synthesized by aqueous extract of Azadirachta indica (Neem) leaves	A Tripathi* N Chandrasekaran A M Raichur* A Mukherjee	<i>Journal of Biomedical Nanotechnology</i>	5	2009	93
36.	Synthesis of spherical NiO nanoparticles through a novel biosurfactant mediated emulsion technique	P Prakash* A M Raichur*	<i>Materials Science and Engineering: C</i>	29	2009	199
37.	Computational fluid dynamics study of a new	M Mondal* GS Gupta*	<i>Chemical Process and</i>	4	2009	issue 3 Article

	vacuum degassing process	S Kitamura N Maruoka	<i>Product Modelling (Web Journal)</i>			no 4
38.	Utility of Eucalyptus tereticornis (Smith) bark and Desulfotomaculum nigrificans for the remediation of acid mine drainage	Evvie Chockalingam* S Subramanian*	<i>Bioresource Technology</i>	100	2009	615
39.	Regolith mass balance inferred from combined mineralogical geochemical and geophysical studies: Mule Hole gneissic watershed South India	Jean-Jacques Braun Marc Descloitres Jean Riotte Simon Fleury Laurent Barbiéro Jean-Loup Boeglin Aurélie Violette Eva Lacarce Laurent Ruiz M Sekhar** MS Mohan Kumar** S Subramanian* Bernard Dupre  **Civil Engg., IISc	<i>Geochemica et Cosmochemica Acta</i>	73	2009	935
40.	Phase relations in the system (chromium + rhodium + oxygen) and thermodynamic properties of CrRhO <sub>3</sub>	K T Jacob* C Shekhar* Y Waseda	<i>J Chem Thermodyn</i>	41	2009	56
41.	Activities in the FeTiO <sub>3</sub> -NiTiO <sub>3</sub> solid solution from alloy-oxide equilibria at 1273 K	K T Jacob* S Raj* S N S Reddy*	<i>J Phase Equilib Diffus</i>	30	2009	127
42.	An update on the thermodynamics of Ta <sub>2</sub> O <sub>5</sub>	K T Jacob* C Shekhar* Y Waseda	<i>J Chem Thermodyn</i>	41	2009	748
43.	Phase relations in the system Ta-Rh-O and thermodynamic properties of TaRhO <sub>4</sub>	K T Jacob* C Shekhar* Y Waseda	<i>Mater Chem Phys</i>	116	2009	289-293
44.	Phase Diagram of the System Ca-Ti-O at 1200 K	K T Jacob* S Gupta*	<i>Bull Mater Sci</i>	32	2009	611
45.	Thermodynamic properties of calcium titanates: CaTiO <sub>3</sub> Ca <sub>4</sub> Ti <sub>3</sub> O <sub>10</sub> and Ca <sub>3</sub> Ti <sub>2</sub> O <sub>7</sub>	K T Jacob* K P Abraham*	<i>J Chem Thermodyn</i>	41	2009	816
46.	Calciothermic reduction of TiO <sub>2</sub> : a diagrammatic	K T Jacob* S Gupta*	<i>Journal of Metals</i>	61	2009	506

	assessment of the thermodynamic limit of deoxidation					
47.	Discussion of enthalpy entropy and free energy of formation of GaN	KT Jacob* G Rajitha*	<i>J Cryst Growth</i>	311	2009	3806
48.	Thermodynamic properties of Pb <sub>2</sub> PtO <sub>4</sub> and PbPt <sub>2</sub> O <sub>4</sub> and phase equilibria in the system Pb-Pt-O	K T Jacob* G Rajitha* G M Kale	<i>J Alloys Compds</i>	481	2009	228
49.	Compatibility of RuO <sub>2</sub> electrodes with PZT ceramics	K T Jacob* G Rajitha* V S Saji*	<i>Bull Mater Sci</i>	32	2009	313
50.	<u>The effects of manganese content and mould size on abrasion and slurry erosion behaviour of chromium-manganese iron systems investigated by positron lifetime spectroscopy</u>	Sampathkumaran P, Ranganathaiah C, Seetharamu S, Kishore *	Wear	267	SEP 9 2009	1558- 1565
51.	<u>Influence of roughness parameters and surface texture on friction during sliding of pure lead over 080 M40 steel</u>	Menezes PL * Kishore * Kailas SV	International Journal of Advanced Manufacturing Technology	43	AUG 2009	731-743
52.	<u>Study of Friction and Transfer Layer Formation in Copper-Steel Tribo-System: Role of Surface Texture and Roughness Parameters</u>	Menezes PL * Kishore * Kailas SV	Tribology Transactions	52	2009	611-622
53.	<u>Studies on Friction and Formation of Transfer Layer in HCP Metals</u>	Menezes PL * Kishore * Kailas SV	Journal of Tribology-Transactions of The Asme	131	JUL 2009	
54.	<u>Influence of friction during forming processes-a study using a numerical simulation technique</u>	Menezes PL * Kumar K, Kishore *	International Journal of Advanced Manufacturing Technology	40	FEB 2009	1067- 1076
55.	Investigations on the influence of graphite filler on dry sliding wear and abrasive wear behaviour of carbon fabric reinforced epoxy composites.	B.Suresha, Siddaramaiah Kishore * S.Seetharamu P. Sampath Kumaran	Wear	267	2009	1405- 1414

56.	Influence of Surface texture and roughness parameters on friction and transfer layer formation during sliding of aluminium pin on steel plate	Menezes PL * Kishore * Kailas SV	Wear	267	2009	1534-1549
57.	Role of surface texture of harder surface on subsurface deformation	Menezes PL * Kishore * Kailas SV	Wear	266	2009	103-109
58.	The Evolution of Tribomaterial during Sliding - a Brief Introduction	DA Rigney S Karthikeyan*	<i>Tribology Lett</i>		2009	DOI: 101007/ s11249- 009- 9498-3
59.	A simulation study of the mixing atomic flow and velocity profiles of crystalline materials during sliding	HJ Kim S Karthikeyan* DA Rigney	<i>Wear</i>	267	2009	1130
60.	Molecular dynamics simulations of sliding in an Fe-Cu tribopair system	S Karthikeyan* A Agrawal* DA Rigney	<i>Wear</i>	267	2009	1166
61.	High-temperature creep behavior and microstructure analysis of binary Ti-6Al alloys with trace amounts of Ni	JH Moon S Karthikeyan* BM Morrow SP Fox MJ Mills	<i>Mater Sci Eng A</i>	510-511	2009	35
62.	The effects of sliding velocity and sliding time on the nanocrystalline tribolayer development and properties in copper	A Emge S Karthikeyan* DA Rigney	<i>Wear</i>	267	2009	56255
63.	Synthesis of wurtzite-phase ZnS nanocrystal and its optical properties	C S Tiwary* P Kumbhakar P A K Mitra K Chattopadhyay*	<i>JOURNAL OF LUMINESCENCE</i>	129	2009	1366
64.	High-strength bulk Al-based bimodal ultrafine eutectic composite with enhanced plasticity	J M Park N Mattern U Kuhn J Eckert K B Kim W T Kim K Chattopadhyay* D H Kim	<i>JOURNAL OF MATERIALS RESEARCH</i>	24	2009	2605
65.	Size effect on the lattice parameter of KCl during mechanical milling	P Sharma K Biswas A K Mondal K Chattopadhyay*	<i>SCRIPTA MATERIALIA</i>	61	2009	600
66.	The effect of ball milling	B Reddy	<i>JOURNAL OF</i>	44	2009	2257

	on the melting behavior of Sn-Cu-Ag eutectic alloy	P Bhattacharya B Singh K Chattopadhyay*	<i>MATERIALS SCIENCE</i>			
67.	Soft-particle model analysis of effect of LPS on electrophoretic softness of <i>Acidithiobacillus ferrooxidans</i> grown in presence of different metal ions	MN Chandraprabha* JM Modak** KA Natarajan*  ** Chem Engg., IISc	<i>Colloids and Surfaces B: Biointerfaces</i>	69	2009	1
68.	Microbially-induced separation of arsenopyrite and bioremediation of arsenic	MN Chandraprabha* KA Natarajan*	<i>Minerals &amp; Metallurgical Processing</i>	26	2009	217
69.	Densification and High Temperature Deformation in Oxide Ceramics	AH Chokshi*	<i>Key Engineering Materials</i>	395	2009	39
70.	Synthesis Microstructural Stability and Mechanical Behavior of Nano-Nickel	MJNV Prasad* P Ghosh* AH Chokshi*	<i>Journal of the Indian Institute of Science</i>	89	2009	43
71.	Unusual Stress and Grain Size Dependence for Creep in Nanocrystals	AH Chokshi*	<i>Scripta Materialia</i>	61	2009	96
72.	A Huge Effect of Weak DC Electrical Fields on Grain Growth in Zirconia	S Ghosh* AH Chokshi* RRaj	<i>Journal of the American Ceramic Society</i>	92	2009	1856
73.	Microstructural Evolution and Grain Boundary Sliding in a Superplastic Magnesium AZ31 Alloy	R Panicker* AH Chokshi* RK Misra R Verma PE Krajewski	<i>Acta Materialia</i>	57	2009	3683
74.	Deformation Characteristics of Superplastic AA7475 Alloy	P Mukhopadhyay* S Biswas* AH Chokshi	<i>Transactions of the Indian Institute of Metals</i>	62	2009	149
75.	Influence of Silica Addition on Creep and Diffusion in Tetragonal Zirconia	S Ghosh* M Kilo G Borchardt AH Chokshi*	<i>Journal of the American Ceramic Society</i>	92	2009	3004
76.	Density Functional Theory Study on Stacking Faults and Twinning in Nano-Ni	Aditi Datta* U V Waghmare U Ramamurty*	<i>Scripta Materialia</i>	60	2009	124
77.	Dynamic strain ageing in Ni-based superalloy 720Li	K Gopinath* A K Gogia SV Kamat U Ramamurty*	<i>Acta Materialia</i>	57	2009	1243
78.	Micropillar compression	A Dubach	<i>Scripta</i>	60	2009	567



	studies on a bulk metallic glass in different structural states	R Raghavan* J F Löffler J Michler U Ramamurty*	<i>Materialia</i>			
79.	Pressure sensitive flow and constraint factor in amorphous materials below glass transition	K Eswar Prasad* V Keryvin U Ramamurty*	<i>Journal of Materials Research</i>	24	2009	890
80.	Indentation strength of a piezoelectric ceramic: experiments and simulations	S N Kamble* D V Kubair ** U Ramamurty*  ** AE, IISc	<i>Journal of Materials Research</i>	24	2009	926
81.	Nano-indentation studies on polymer matrix composites reinforced by few- layer grapheme	Barun Das K Eswar Prasad* U Ramamurty* C N R Rao**	<i>Nanotechnology</i>	20	2009	125705
82.	Role of free volume in strain softening of as-cast and annealed bulk metallic glass	B G Yoo K W Park J C Lee U Ramamurty* J I Jang	<i>Journal of Materials Research</i>	24	2009	1405
83.	On factors influencing the ductile to brittle transition in a bulk metallic glass	R Raghavan* P Murali* U Ramamurty*	<i>Acta Materialia</i>	57	2009	3332
84.	Low Cycle Fatigue Behavior of a Low Interstitial Ni-base Superalloy	K Gopinath* A K Gogia SV Kamat R Balamuralikrishnan U Ramamurty*	<i>Acta Materialia</i>	57	2009	3450
85.	Toughness of as-cast and partially crystallized Zr-based bulk metallic glass	R Raghavan* V V Shastry* A Kumar T Jayakumar U Ramamurty*	<i>Intermetallics</i>	17	2009	835
86.	Free-volume dependent pressure sensitivity of Zr-based bulk metallic glass	A Dubach K Eswar Prasad* R Raghavan* J F Löffler J Michler U Ramamurty*	<i>Journal of Materials Research</i>	24	2009	2697
87.	Micromechanisms of Damage in a Hypereutectic Ti-6Al-4V-B Alloy	Indrani Sen* L Maheshwari* S Tamirisakandala DB Miracle U Ramamurty*	<i>Materials Science and Engineering A</i>	518	2009	162
88.	Strain hardening during	M Mukherjee*	<i>Scripta</i>	61	2009	752

	constrained deformation of metal foams – effect of shear displacement	M Kolluri* F Garcia-Moreno J Banhart U Ramamurty*	<i>Materialia</i>			
89.	Direct evidence for the structural origin of the photosensitivity in germania doped silica glass performs	R Aashia** K V Madhav** U Ramamurty* S Asokan**  ** Instrumentation, IISc	<i>Optics Letters</i>	34	2009	2414
90.	Extraordinary synergy in the mechanical properties of polymer matrix composites reinforced with two nanocarbons of different dimensionalities	K Eswar Prasad* Barun Das Urmimala Maitra U Ramamurty* CNR Rao**	<i>Proceedings of the National Academy of Science</i>	106	2009	13186
91.	Mechanical properties of nanodiamond-reinforced polymer-matrix composites	Urmimala Maitra K Eswar Prasad* U Ramamurty* C N R Rao**	<i>Solid State Communications</i>	149	2009	1693
92.	Effect of Mechanical Cycling on Martensitic Nitinol Shape Memory Alloy	Niraj Nayan* V Buravalla U Ramamurty*	<i>Materials Science and Engineering A</i>	525	2009	60–67
93.	On the hardness of shear bands in amorphous alloys	BG Yoo YJ Kim J H Oh U Ramamurty* JI Jang	<i>Scripta Materialia</i>	61	2009	951
94.	Mixed mode (I and II) crack tip fields in bulk metallic glasses	P Tandaiya** U Ramamurty* R Narasimhan**  ** ME, IISc	<i>Journal of Mechanics and Physics of Solids</i>	57	2009	1880
95.	Direct Physical Evidence for the Back Transformation of Stress-induced Martensite in the Vicinity of Cracks in pseudoelastic NiTi Shape Memory Alloys	S Gollerthan ML Young K Neuking U Ramamurty* G Eggeler	<i>Acta Materialia</i>	57	2009	5892
96.	Stationary Crack Tip Fields in Elastic-Plastic Solids: An Overview of Recent Numerical Simulations review article to be published in the Cluster	R Narasimhan** H Y Subramanya** S D Patil** P Tandaiya** U Ramamurty*	<i>Journal of Physics D: Applied Physics</i>	42	2009	214005

	issue on Fracture: from the Atomic to the Geophysics Scale	** ME, IISc				
97.	Near-threshold fatigue crack growth in bulk metallic glass composites	K Boopathy* DH Hofmann WL Johnson U Ramamurty*	Journal of Materials Research	24	2009	3611
98.	Tendency to promote ferroelectric distortion in Pr-modified PbTiO <sub>3</sub>	Ajay Kumar Kalyani* Rohini Garg* Rajeev Ranjan*	<i>Appl Phys Lett</i>	95	2009	222904
99.	Structural phase transition study of the morphotropic phase boundary compositions of Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> -PbTiO <sub>3</sub>	Sarab Preet Singh Rajeev Ranjan* Anatoliy Senyshyn Dmytro Trots Hans Boysen	<i>J Phys Condens Matter</i>	21	2009	375902
100.	Structure and phase transition of the (1-x)PbTiO <sub>3</sub> -(x)BiAlO <sub>3</sub> system	Rajeev Ranjan* Ajay Kumar Kalyani* Rohini Garg* P S R Krishna	<i>Solid State Communications</i>	149	2009	2098
101.	Degenerate rhombohedral and orthorhombic states in Ca-substituted Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub>	Rajeev Ranjan* V Kothai * Rohini Garg* Anupriya Agrawal* Anatoliy Senyshyn Hans Boysen	<i>Appl Phys Lett</i>	95	2009	042904
102.	Competing tetragonal and monoclinic phases in Ni <sub>22</sub> Mn <sub>0.80</sub> Ga	Rajeev Ranjan* Sanjay Singh Hans Boysen Dmytro Trots S Banik A M Awasthi P K Mukhopadhyay S R Barman	<i>J Appl Phys</i>	106	2009	033510
103.	Magneto-structural study of a Cr-doped CaRuO <sub>3</sub>	Rajeev Ranjan* Rohini Garg* Anatoliy Senyshyn M S Hegde Helmut Ehrenberg Hans Boysen	<i>J Phys Condens Matter</i>	21	2009	326001
104.	Competing A-site and B-site driven ferroelectric instabilities in the (1-x)PbTiO <sub>3</sub> -(x)BiAlO <sub>3</sub> system	Ajay Kumar Kalyani* Rohini Garg* Rajeev Ranjan*	<i>Appl Phys Lett</i>	94	2009	202903
105.	Structure of the noncubic	Rohini Garg*	<i>Phys Rev B</i>	79	2009	144122

	phase in the ferroelectric state of Pr-substituted SrTiO <sub>3</sub>	Anatoliy Senyshyn Hans Boysen Rajeev Ranjan*				
106.	First principles study of magnetism in divalent Eu perovskites	Rajeev Ranjan* Hasan Sadat Nabi Rossitza Pentcheva	<i>J Appl Phys</i>	105	2009	053905
107.	Processing and compressive strength of Al-Li-SiCp composites fabricated by a compound billet technique	R Bauri* M K Surappa*	J Mater Process Tech	209	2009	2077

### (b) Conference Proceedings in 2009

1. S. Roy, Satyam Suwas, S. Tamirisakandala, R. Srinivasan, D.B. Miracle Processing Response of Boron Modified Ti-6Al-4V Alloy In (alpha plus beta) Working Regime”, published in TMS 2009: 138th Annual Meeting & Exhibition - Supplemental Proceedings, Vol 3, pp. 63-70 (2009).
2. Satyam Suwas, S. Biswas and A. Bhowmick, Ultra-fine Grain Materials by Severe Plastic Deformation: Application to Steels (*invited paper*) in “*Texture and Microstructure of Steels and Some Other Materials*” eds. A. Haldar, Satyam Suwas and D. Bhattacharjee, Springer-Verlag, London. Pp. 325-344 (2009)
3. S. Biswas, Satyaveer Singh D. and Satyam Suwas “Grain growth in pure Magnesium”, in “*Texture and Microstructure of Steels and Some Other Materials*” eds. A. Haldar, Satyam Suwas and D. Bhattacharjee, Springer-Verlag, London pp.465-474 (2009)
4. Segolene de Waziers, S. Roy, Satyam Suwas, S. Tamirisakandala, R. Srinivasan and D.B. Miracle, “Solidification Microstructure and Texture in Grain-refined Titanium alloys” in “*Texture and Microstructure of Steels and Some Other Materials*” eds. A. Haldar, Satyam Suwas and D. Bhattacharjee, Springer-Verlag, London pp. 475-482 (2009).
5. Satyaveer Singh D., A. Bhowmik, S. Biswas, Satyam Suwas and K. Chattopadhyay, “Evolution of crystallographic texture during Equal Channel Angular Extrusion (ECAE) of ( $\alpha+\beta$ ) brass” in “*Texture and Microstructure of Steels and Some Other Materials*” eds. A. Haldar, Satyam Suwas and D. Bhattacharjee, Springer-Verlag, London pp.457-464 (2009).
6. E. Montoneri, V. Buffa, P. Savarino, D. G. Perrona, L. Garlasco, M. Ghazzi, S. A. Gundersen and A. M. Raichur, "Biobased products from residual biomasses," Proceedings of the 24th International Conference on Solid Waste Technology and Management, Philadelphia, USA, March 15-18, 2009, pp. 20-35, Publishers: Widener University School of Engineering, Chester, PA, USA.

7. V. Gunjal, M.R. Lollchund and G.S. Gupta: Numerical study of gas fines flow characteristics in presence of cohesive zone in a packed bed, ATIS 2009, 9-11 Dec, IISc, Bangalore, India, p125-133, 2009.
8. M.R. Lollchund, G.S. Gupta and N.K. Mulley “Study of gas-fines in decreasing gas velocity in a packed bed” CHEMECA 2009, Perth, Australia, Sept. 27-30, 2009.
9. K.A. Natarajan, “Microbial aspects of environmentally benign iron ore beneficiation”, Australian Institute of Mining and Metallurgy (AUSIMM), (Iron ore 2009 Conference) pp 27-34, Perth, Australia.

### **(c) Books/Monographs**

Microstructure and Texture in Steels and Other Materials

A. Haldar, Satyam Suwas, D. Bhattacharjee, (Eds.), , Springer, UK (2009).  
ISBN: 978-1-84882-453-9

### **(d) Reports published**

Professor Subramanian published a half –yearly report for the UKIERI project entitled “Sustainable materials processing of strategic metals”.

### **(e) Popular Science Articles**

A. M. Raichur, Nanoscale water treatment needs innovative engineering, Opinion Article published online on SciDev.net, May 2009