

**PUBLICATIONS - 2006**

1.	<b>Bakshi S., Kumar S.</b> Impact and fatigue crack growth behavior of a yield strength graded Al-Zn-Mg alloy <i>Materials Science Forum</i> <b>519-521</b> (2006) 1539-1544
2.	<b>Basu J., Ranganathan S.</b> Glass-forming ability and stability of ternary Ni-early transition metal (Ti/Zr/Hf) alloys <i>Acta Materialia</i> <b>54</b> (2006) 3637-3646
3.	<b>Bhowmick R., Raghavan R., Chattopadhyay K., et al.</b> Plastic flow softening in a bulk metallic glass <i>Acta Materialia</i> <b>54</b> (2006) 4221-4228
4.	<b>Bakshi S., Chattopadhyay K., Kumar S.</b> Novel technique of processing functionally graded material in age-hardenable Al-alloys <i>Transactions Of The Indian Institute Of Metals</i> <b>59</b> (2006) 73-84
5.	<b>Biswas K., Basu B., Suri A.K., et al.</b> A TEM study on TiB <sub>2</sub> -20%MoSi <sub>2</sub> composite: Microstructure development and densification mechanism <i>Scripta Materialia</i> <b>54</b> (2006) 1363-1368
6.	<b>Biswas T. and Ranganathan S.</b> Multicomponent alloys visualized as lower order alloys: Examples of quasicrystals and metallic glasses <i>Ann. Chim. Sci. Mat.</i> <b>31</b> (2006) 649
7.	<b>Biswas K., Das P.K., Chattopadhyay K.</b> Microstructural evolution in laser-ablation-deposited Fe-25 at.% Ge thin film <i>Journal Of Materials Research</i> <b>21</b> (2006) 174-184
8.	<b>Chollacoop N., Ramamurty U.</b> Robustness of the algorithms for extracting plastic properties from the instrumented sharp indentation data <i>Materials Science And Engineering A</i> <b>423</b> (2006) 41-45
9.	<b>Chatterjee S., Abinandanan T.A., Chattopadhyay K.</b> Microstructure development during dissimilar welding: Case of laser welding of Ti with Ni involving intermetallic phase formation <i>Journal Of Materials Science</i> <b>41</b> (2006) 643-652
10.	<b>Chang H.J., Kim D.H., Kim Y.M., et al.</b> On the origin of nanocrystals in the shear band in a quasicrystal forming bulk metallic glass Ti <sub>40</sub> Zr <sub>29</sub> Cu <sub>9</sub> Ni <sub>8</sub> Be <sub>14</sub> <i>Scripta Materialia</i> <b>55</b> (2006) 509-512
11.	<b>Dzwonczyk J., Prasad Y.V.R.K., Hort N., et al.</b> Enhancement of workability in AZ31 alloy-processing maps: Part I, cast material <i>Advanced Engineering Materials</i> <b>8</b> (2006) 966-973
12.	<b>Datta A., Ramamurty U., Ranganathan S., et al.</b> Crystal structures of a Mg-Zn-Y alloy: A first-principles study <i>Computational Materials Science</i> <b>37</b> (2006) 69-73
13.	<b>Gupta G., Rudolph V.</b>

	Comparison of blast furnace raceway size with theory <i>ISIJ International</i> <b>46</b> (2006) 195-201
14.	<b>Gayen A., Baidya T., Biswas K., et al.</b> Synthesis, structure and three way catalytic activity of Ce <sub>1-x</sub> Ptx/2Rh <sub>x</sub> /2O <sub>2</sub> -delta (x=0.01 and 0.02) nano-crystallites: Synergistic effect in bimetal ionic catalysts <i>Applied Catalysis A-General</i> <b>315</b> (2006) 135-146
15.	<b>Jacob K.T., Saji V.S., Waseda Y.</b> Lanthanum oxyfluoride: Structure, stability, and ionic conductivity <i>International Journal Of Applied Ceramic Technology</i> <b>3</b> (2006) 312-321
16.	<b>Jacob K.T., Saji V.S.</b> Interaction between Ni/NiO and PbTiO <sub>3</sub> : Phase reversal with redox switching <i>Journal Of Phase Equilibria And Diffusion</i> <b>27</b> (2006) 456-46
17.	<b>Jayaram V., Bhowmick S., Xie Z.H., et al.</b> Contact deformation of TiN coatings on metallic substrates <i>Materials Science And Engineering A</i> , <b>423</b> (2006) 8-13
18.	<b>Kishore, Kiran T.R.R.</b> Impact response in glass-epoxy system with and without perforated PTFE-bearing material at the mid-thickness <i>Composite Interfaces</i> <b>13</b> (2006) 633-646
19.	<b>Karthikeyan S., Unocic R.R., Sarosi P.M., et al.</b> Modeling microtwinning during creep in Ni-based superalloys <i>Scripta Materialia</i> <b>54</b> (2006) 1157-1162
20.	<b>Kapilashrami A., Gornerup M., Lahiri A.K., et al.</b> Foaming of slags under dynamic conditions <i>Metallurgical And Materials Transactions B</i> <b>37</b> (2006) 109-117
21.	<b>Kapilashrami A., Lahiri A.K., Gornerup M., et al.</b> The fluctuations in slag foam under dynamic conditions <i>Metallurgical And Materials Transactions B</i> <b>37</b> (2006) 145-148
22.	<b>Kavitha R. and Jayaram V.</b> Deposition and characterisation of alumina films produced by combustion flame pyrolysis <i>Surf. Coat. Tech.</i> <b>201</b> (2006) 2491-2499
23.	<b>Kim S.H., Chattopadhyay K., Inkson B.J., et al.</b> Spontaneous formation of the B2 phase from a decagonal quasicrystal under reduced constraint <i>Journal Of Materials Science</i> <b>41</b> (2006) 6081-6086
24.	<b>Kim S.H., Chattopadhyay K., Kim K.B., et al.</b> Orthorhombic approximant phases and their relation to quasicrystals in mechanically alloyed Al-Cu-Fe-Si alloys <i>Philosophical Magazine Letters</i> <b>86</b> (2006) 425-433
25.	<b>Kishore, Shankar R. and Sankaran, S.</b> Short beam three point bend tests in syntactic foams. Part-II : Effect of microballoons content on shear strength <i>J. Applied Polymer Science</i> <b>98</b> (2006) 673-679
26.	<b>Kishore, Shankar R. and Sankaran, S.</b> Short beam three point bend tests in syntactic foams. Part-II : Effect of

	microballoons content on shear strength <i>J. Applied Polymer Science</i> <b>98</b> (2006) 680-686
27.	<b>Kishore, Shankar R. and Sankaran, S.</b> Short beam three point bend tests in syntactic foams. Part-III : Effects of interface modification of strength and fractographic features <i>J. Applied Polymer Science</i> <b>98</b> (2006) 687-603
28.	<b>Lee J.Y., Han K.H., Park J.M., et al.</b> Deformation and evolution of shear bands under compressive loading in bulk metallic glasses <i>Acta Materialia</i> <b>54</b> (2006) 5271-5279
29.	<b>Lord E.A.</b> Coincidence sites for rational lattices <i>Zeitschrift Fur Kristallographie</i> <b>221</b> (2006) 705-715
30.	<b>Lord E.A. and Ranganathan R.</b> Truchet tilings and their generalizations <i>Resonance</i> <b>11</b> (2006) 42
31.	<b>Luef C., Paul A., Vizdal J., et al.</b> Thermodynamic properties and melting behavior of Bi-Sn-Zn alloys <i>Monatshefte Fur Chemie</i> <b>137</b> (2006) 381-395
32.	<b>Math S., Jayaram V., Biswas S.K.</b> Deformation and failure of a film/substrate system subjected to spherical indentation: Part I. Experimental validation of stresses and strains derived using Hankel transform technique in an elastic film/substrate system <i>Journal Of Materials Research</i> <b>21</b> (2006) 774-782
33.	<b>Math S., Jayaram V., Biswas S.K.</b> Deformation and failure of a film/substrate system subjected to spherical indentation: Part II. Prediction of failure modes in a thin TiN film deposited on a compliant elastic substrate <i>Journal Of Materials Research</i> <b>21</b> (2006) 783-790
34.	<b>Mathieu S., Suwas S., Eberhardt A., Tóth L.S. and Moll P.</b> A new design for equal channel angular extrusion <i>Journal Of Materials Processing Technology</i> <b>173</b> (2006) 29-33
35.	<b>Math S., Suresha S.J., Jayaram V., et al.</b> Indentation of a hard film on a compliant substrate: film fracture mechanisms to accommodate substrate plasticity <i>Journal Of Materials Science</i> <b>41</b> (2006) 7830-7837
36.	<b>Menezes P.L., Kishore, Kailas S.V.</b> Effect of roughness parameter and grinding angle on coefficient of friction when sliding of Al-Mg alloy over EN8 steel <i>Journal Of Tribology-Transactions Of The Asme</i> <b>128</b> (2006) 697-704
37.	<b>Menezes P.L., Kishore, Kailas S.V.</b> Studies on friction and transfer layer: role of surface texture <i>Tribology Letters</i> <b>24</b> (2006) 265-273
38.	<b>Menezes P.L., Kishore, Kailas S.V.</b> Influence of surface texture on coefficient of friction and transfer layer formation during sliding of pure magnesium pin on 080 M40 (EN8) steel plate

	<i>Wear</i> <b>261</b> (2006) 578-591
39.	<b>Menezes P.L., Kishore, Kailas S.V.</b> Studies on friction and transfer layer using inclined scratch <i>Tribology International</i> <b>39</b> (2006) 175-183
40.	<b>Menezes P.L., Kishore, Kailas S.V.</b> Effect of directionality of unidirectional grinding marks on friction and transfer layer formation of Mg on steel using inclined scratch test <i>Materials Science And Engineering A-Structural Materials Properties Microstructure And Processing</i> <b>429</b> (2006) 149-160
41.	<b>Miracle D.B., Lord E.A., Ranganathan S.</b> Candidate atomic cluster configurations in metallic glass structures <i>Materials Transactions</i> <b>47</b> (2006) 1737-1742
42.	<b>Mukherjee S., Jayaram V., Biswas S.K.</b> Validation of stresses and stress intensity factor in a notched bilayer system under four point bending, as determined by the solution of the Navier's equation <i>International Journal Of Mechanical Sciences</i> <b>48</b> (2006) 1287-1294
43.	<b>Mondal, A.K., Rao, B.S.S.C. and Kumar, S.</b> Wear behaviour of AE42+20% saffil Mg-MMC <i>Tribology International</i> <b>40</b> (2006) 290-296
44.	<b>Moon J.H., Cantonwine P.E., Anderson K.R., Karthikeyan S. and Mills M.J.</b> Characterization and modeling of creep mechanisms in Zircaloy-4 <i>Journal Of Nuclear Materials</i> <b>353</b> (2006) 177-189
45.	<b>Paul A., Kodentsov A.A., van Loo F.J.J.</b> Physico-chemical analysis of compound growth in a diffusion couple with two-phase end-members <i>Intermetallics</i> <b>14</b> (2006) 1428-1432
46.	<b>Pal S., Lahiri A.K.</b> An overview of mathematical model of liquid iron making processes <i>Transactions Of The Indian Institute Of Metals</i> <b>59</b> (2006) 569-581
47.	<b>Pal S., Lahiri A.K.</b> Effect of tuyere blocking on melter gasifier performance <i>ISIJ International</i> <b>46</b> (2006) 58-64
48.	<b>Pawlas-Foryst E., Jacob K.T., Fitzner K.</b> Thermodynamics of GdMnO <sub>3</sub> and GdMn <sub>2</sub> O <sub>5</sub> phases determined by the EMF method <i>Archives Of Metallurgy And Materials</i> <b>51</b> (2006) 481-488
49.	<b>Pawlas-Foryst E., Jacob K.T., Fitzner K.</b> Thermodynamics of SmMnO <sub>3</sub> and SmMn <sub>2</sub> O <sub>5</sub> phases determined by the EMF method <i>Archives Of Metallurgy And Materials</i> <b>51</b> (2006) 253-260
50.	<b>Park B.J., Chang H.J., Kim D.H., et al.</b> Phase separating bulk metallic glass: A hierarchical composite <i>physical review letters</i> <b>96</b> (2006) art. no. 245503
51.	<b>Phaniraj M.P., Behera B.B., Lahiri A.K.</b> Thermo-mechanical modeling of two phase rolling and microstructure evolution in the hot strip mill - Part-II. Microstructure evolution <i>Journal Of Materials Processing Technology</i> <b>178</b> (2006) 388-394
52.	<b>Ponpandian N., Narayanasamy A., Prabhua D., et al.</b>

	Critical phenomena in FINEMET alloy <i>Journal Of Magnetism And Magnetic Materials</i> <b>296</b> (2006) 67-76
53.	<b>Ranganathan S. and Srinivasan S</b> A Tale of Wootz Steel <i>Resonance</i> <b>11</b> (2006) 67
54.	<b>Rao K.N., Kashyap S.</b> Preparation and characterization of indium oxide and indium tin oxide films by activated reactive evaporation <i>Surface Review And Letters</i> <b>13</b> (2006) 221-225
55.	<b>Ranganathan S., Srivastava A.K., Lord E.A.</b> Coincidence-site lattices as rational approximants to irrational twins <i>Journal Of Materials Science</i> <b>41</b> (2006) 7696-7703
56.	<b>Ravi R., Prasad Y.V.R.K., Sarma V.V.S., et al.</b> Artificial neural network model for predicting stable and unstable regions in Cu-Zn alloys <i>Materials And Manufacturing Processes</i> <b>21</b> (2006) 756-760
57.	<b>Ray A.K., Roy N., Dash B., et al.</b> High temperature mechanical properties of thermal barrier coated superalloy applied combustor liner of aero engines <i>High Temperature Materials And Processes</i> <b>25</b> (2006) 109-119
58.	<b>Ranganathan S., Inoue A.</b> An application of Pettifor structure maps for the identification of pseudo-binary quasicrystalline intermetallics <i>Acta Materialia</i> <b>54</b> (2006) 3647-3656
59.	<b>Ray A.K., Goswami B., Singh M.P., et al.</b> Characterization of bond coat in a thermal barrier coated superalloy used in combustor liners of aero engines <i>Materials Characterization</i> <b>57</b> (2006) 199-209
60.	<b>Raghavan R., Basu J., Nishiyama N., et al.</b> Structural relaxation in a Pd <sub>40</sub> Cu <sub>30</sub> Ni <sub>10</sub> P <sub>20</sub> metallic glass <i>Transactions Of The Indian Institute Of Metals</i> <b>59</b> (2006) 295-302
61	<b>Raghavan R., Murali P., Ramamurty U.</b> Ductile to brittle transition in the Zr <sub>41.2</sub> Ti <sub>13.75</sub> Cu <sub>12.5</sub> Ni <sub>10</sub> Be <sub>22.5</sub> bulk metallic glass <i>Intermetallics</i> <b>14</b> (2006) 1051-1054
62.	<b>Rao B.S., Hemambar C., Pathak A.V., et al.</b> Al/SiC carriers for microwave integrated circuits by a new technique of pressureless infiltration <i>IEEE Transactions On Electronics Packaging Manufacturing</i> <b>29</b> (2006) 58-63
63	<b>Sarkar S. and G.S. Gupta:</b> Theoretical study of stress distribution under gas cross flow condition, ICAMMP-2006, (Ed, Chatterjee), 3 <sup>rd</sup> to 5 <sup>th</sup> Feb, 2006, IIT Kharagpur, India, p835-843.
64	<b>Singh V. and G.S. Gupta:</b> Study of Non-Wetting Liquid Flow in a Bed of Monosized Particle Packing under the Influence of Lateral Gas Injection, 2006 TMS Annual Meeting, EPD Congress 2006,

	Eds, S. Howard et al; San Antonio, Texas, USA, March 12-16, p711-720, 2006
65.	<b>Saravanan S., Anantharaman M.R., Venkatachalam S.</b> Structural and electrical studies on tetrameric cobalt phthalocyanine and polyaniline composites <i>Materials Science And Engineering B-Solid State Materials For Advanced Technology</i> <b>135</b> (2006) 113-119
66.	<b>Shankar A., Gornerup M., Lahiri A.K., et al.</b> Sulfide capacity of high alumina blast furnace slags <i>Metallurgical And Materials Transactions B-Process Metallurgy And Materials Processing Science</i> <b>37</b> (2006) 941-947
67.	<b>Srikant G., Chollacoop N., Ramamurty U.</b> Plastic strain distribution underneath a Vickers Indenter: Role of yield strength and work hardening exponent <i>Acta Materialia</i> <b>54</b> (2006) 5171-5178
68.	<b>Singh V., Gupta G.S.</b> A discrete model for non-wetting liquid flow from a point source in a packed bed under the influence of gas flow <i>Chemical Engineering Science</i> <b>61</b> (2006) 6855-6866
69.	<b>Singh V., Gupta G.S., Rajneesh S.</b> Modelling of void initiation and breaking phenomena in a packed bed <i>Ironmaking &amp; Steelmaking</i> <b>33</b> (2006) 101-110
70.	<b>Singh V., Gupta G.S., Rudolph V.</b> Prediction of minimum spouting velocity in two-dimensional flat bottom spouted bed <i>Chemical Engineering Communications</i> <b>193</b> (2006) 338-362
71.	<b>Skrotzki W., Scheerbaum N., Oertel C.-G., Brokmeier H.-G., Suwas S., Tóth L.S.</b> Texture Formation during ECAP of Aluminum Alloy AA 5109 <i>Materials Science Forum</i> , <b>503-504</b> (2006) 99-106
72.	<b>Suwas S., Arruffat-Massion R., Toth L.S., et al.</b> Evolution of crystallographic texture during equal channel angular extrusion of copper The role of material variables <i>Metallurgical And Materials Transactions A</i> <b>37A</b> (2006) 739-753
73.	<b>Suresha S.J., Bhide R., Jayaram V., et al.</b> Processing, microstructure and hardness of TiN/(Ti, Al)N multilayer coatings <i>Materials Science And Engineering A-Structural Materials Properties Microstructure And Processing</i> <b>429</b> (2006) 252-260
74.	<b>Suresh N., Ramarnurty U.</b> Effect of aging on transformation characteristics of Cu-Al-Ni shape memory alloys <i>Transactions Of The Indian Institute Of Metals</i> <b>59</b> (2006) 39-4
75.	<b>Uyyuru R.K., Surappa M.K., Brusethaug S.</b> Effect of reinforcement volume fraction and size distribution on the tribological behavior of Al-composite/brake pad tribo-couple <i>Wear</i> <b>260</b> (2006) 1248-1255
76..	<b>Viswanathan G.B., Karthikeyan S., Sarosi P.M., et al.</b> Microtwinning during intermediate temperature creep of polycrystalline Ni-based superalloys: mechanisms and modelling <i>Philosophical Magazine</i> <b>86</b> (2006) 4823-4840

77.	<b>Vivekchand S.R.C., Ramamurty U., Rao C.N.R.</b> Mechanical properties of inorganic nanowire reinforced polymer-matrix composites <i>Nanotechnology 17 (2006) S344-S350</i>
78.	<b>Gupta, G.S. and Naveen, K.</b> Cold model study of local liquid holdup in the dropping zone using x-ray <i>Proc. Chemeca-2006, , Auckland, New Zealand, September 2006</i>
79.	<b>Jeyakumar, M., Gupta, G.S. and Kumar, S.</b> Gas flow analysis outside the nozzle in spray forming process <i>Proc. The Third Int. Conf. on Spray Deposition and Melt Atomization SDMA2006 and The Sixth Int. Conf. on Spray Forming ICSF VI, September 4, 2006, Bremen, Germany, 2006</i>
80.	<b>Niranjanappa A.C., Dwarkadasa E.S., Kumar S., Kumaran P.S. and Kumar R.K.</b> Effect of environmental aging on the repeated low-velocity impact performance of glass/epoxy composites <i>International Conference on Advances in Materials and Materials Processing ICAMMP 2006, Eds. U. K. Chatterjee and B. K. Dhindaw, India, page 126-132</i>
81.	<b>Pradeep, L.M., Kishore and Kailas, S.V.</b> Effect of surface topography on friction and transfer layer formation during sliding <i>Proc., ASIATRIB 2006 , Kanazawa, Japan, pp.113-114</i>
82..	<b>Ravi R., Prasad Y.V.R.K. and Sarma V.V.S.</b> Artificial Neural Network Models to Predict workability parameters for Dynamic recrystallisation domain and Instability regimes <i>International Workshop on Neural Network and Genetic Algorithm in Material Science and Engineering (NGMS-2006), Bengal Engineering and Science University, Shibpur, Howrah, India, Tata McGraw Hill, pp.257-271 January 11-13, 2006,</i>
83.	Suresh M.R. and Avadhani G.S. <b>Hot Deformation Characteristics of 0.3C-CrMoV(ESR) Steel</b> <i>Proc, Intl. Conf. &amp; Exhibition on Pressure vessels and Piping, OPE-2006, Chennai", 7-9Feb, Chennai, India 2006</i>
84.	<b>Singh, V. and Gupta, G.S.</b> Behaviour of granular material in packed bed under influence of gas injected through a nozzle <i>Proc. CHoPS-05, Sorrento, Italy 2006</i>
85.	<b>Sudarshan and Surappa, M.K.</b> Processing and characterization of fly ash particle reinforced A356 Al composites <i>Solidification Processing of Metal Matrix Composites – Rohatgi Honorary Symposium (Eds.) N. Gupta and W.H. Hunt TMS (The Mineral, Metals &amp; Materials Society) 2006</i>

