Gandham Phanikumar

List of Publications by Citations

83 papers	1,223 citations	19 h-index	31 g-index
85 ext. papers	1,452 ext. citations	3.1 avg, IF	4.87 L-index

#	Paper	IF	Citations
83	Microstructure and tensile properties of friction welded aluminum alloy AA7075-T6. *Materials & Design*, **2010**, 31, 2375-2380		86
82	Microstructural evolution during friction surfacing of tool steel H13. *Materials & Design*, **2011**, 32, 82-87		70
81	Hot deformation behaviour and processing map of Co-Cu-Fe-Ni-Ti eutectic high entropy alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 664, 227-235	5.3	68
80	Friction surfaced tool steel (H13) coatings on low carbon steel: A study on the effects of process parameters on coating characteristics and integrity. *Surface and Coatings Technology*, **2010**, 205, 232-242	2.4	56
79	Modelling of transport phenomena in laser surface alloying with distributed species mass source. *International Journal of Heat and Fluid Flow*, **2002**, 23, 298-307	2.4	52
78	Dendrite growth velocity in levitated undercooled nickel melts. *Journal of Crystal Growth*, **2006**, 297, 211-222	1.6	51
77	Characterization of a continuous CO2 laser-welded Fe-Cu dissimilar couple. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 2137-2147	2.3	45
76	Experimental and finite element simulation studies on hot deformation behaviour of AlCoCrFeNi2.1 eutectic high entropy alloy. *Journal of Alloys and Compounds*, **2018**, 749, 1115-1127	5.7	42
75	Solidification of undercooled peritectic Fe□e alloy. *Acta Materialia*, **2005**, 53, 3591-3600	8.4	39
74	Computational modeling of laser welding of Cu-Ni dissimilar couple. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2004**, 35, 339-350	2.5	33
73	Experimental and numerical studies on friction welding of thixocast A356 aluminum alloy. *Acta Materialia*, **2014**, 73, 177-185	8.4	30
72	Thermal Profiling Using Infrared Thermography in Friction Surfacing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 3425-3429	2.3	28
71	Effect of Planar Flow Melt Spinning Parameters on Ribbon Formation in Soft Magnetic Fe68.5Si18.5B9Nb3Cu1 Alloy. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2011**, 42, 370-379	2.5	28
70	Microstructural evolution during remelting of laser surface alloyed hyper-monotectic Al□i alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 371, 91-102	5.3	28
69	Disorder trapping and grain refinement during solidification of undercooled Fe□18 at% Ge melts. *Philosophical Magazine*, **2007**, 87, 3817-3837	1.6	27
68	Rapid solidification behaviour of undercooled levitated Fe□e alloy droplets. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 375-377, 464-467	5.3	26
67	Material Flow Visualization during Friction Surfacing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 937-939	2.3	25

66	Dendritic solidification and fragmentation in undercooled Ni–Zr alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 649-653	5.3	21
65	Studies on multipass welding with trailing heat sink considering phase transformation. *Journal of Materials Processing Technology*, **2014**, 214, 1228-1235	5.3	20
64	Design of a Seven-Component Eutectic High-Entropy Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2019**, 50, 2594-2598	2.3	19
63	Improvement of mechanical properties of gas tungsten arc and electron beam welded AA2219 (Al–6 wt-%Cu) alloy. *Science and Technology of Welding and Joining*, **2007**, 12, 579-585	3.7	19
62	Effect of Zr addition on the mechanical properties of Nb–Si based alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 754, 224-231	5.3	17
61	Continuous welding of Cu–Ni dissimilar couple using CO2 laser. *Science and Technology of Welding and Joining*, **2005**, 10, 158-166	3.7	17
60	Microstructural Evolution During Friction Surfacing of Austenitic Stainless Steel AISI 304 on Low Carbon Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 345-350	2.3	16
59	Effect of Zr additions on microstructure evolution and phase formation of Nb–Si based ultrahigh temperature alloys. *Intermetallics*, **2018**, 101, 123-132	3.5	15
58	On the effect of W addition on microstructural evolution and γ′ precipitate coarsening in a Co–30Ni–10Al–5Mo–2Ta–2Ti alloy. *Materialia*, **2020**, 10, 100632	3.2	14
57	Influence of Mg on Grain Refinement of Near Eutectic Al-Si Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 2028-2039	2.3	14
56	Nano-sized Cu clusters in deeply undercooled CoCuFeNiTa high entropy alloy. *Scripta Materialia*, **2020**, 177, 58-64	5.6	14
55	Corrosion Resistance of Friction Surfaced AISI 304 Stainless Steel Coatings. *Journal of Materials Engineering and Performance*, **2013**, 22, 366-370	1.6	13
54	Microstructure and Properties of Friction Surfaced Stainless Steel and Tool Steel Coatings. *Materials Science Forum*, **2010**, 638-642, 864-869	0.4	13
53	Microstructure and Mechanical Properties of Gas-Tungsten-Arc Welded Ti-15-3 Beta Titanium Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 2685-2693	2.3	13
52	Fracture toughness (J1C) of electron beam welded AA2219 alloy. *Materials & Design*, **2010**, 31, 4943-4950		13
51	Joining of dissimilar metals: issues and modelling techniques. *Science and Technology of Welding and Joining*, **2011**, 16, 313-317	3.7	12
50	Effect of niobium addition in FeCoNiCuNbx high-entropy alloys. *Journal of Materials Research*, **2019**, 34, 700-708	2.5	11
49	Transport phenomena in laser surface alloying. *Journal of Materials Science*, **2003**, 38, 155-164	4.3	11

48	Influence of post-carburizing heat treatment on the core microstructural evolution and the resulting mechanical properties in case-hardened steel components. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 744, 778-789	5.3	11
47	Martensite Transformation and Magnetic Properties of Ni-Fe-Ga Heusler Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2015**, 46, 4947-4955	2.3	10
46	Phase evolution and properties of Ni50Co23Fe2Ga25 Heusler alloy undercooled by electromagnetic levitation. *Intermetallics*, **2011**, 19, 1705-1710	3.5	10
45	Amorphous and nano crystalline phase formation in Ni2MnGa ferromagnetic shape memory alloy synthesized by melt spinning. *Journal of Materials Science*, **2009**, 44, 2553-2559	4.3	9
44	Hot workability of CoFeMnNiTi eutectic high entropy alloy. *Journal of Alloys and Compounds*, **2020**, 822, 153609	5.7	9
43	Solidification Behavior in Newly Designed Ni-Rich Ni-Ti-Based Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2016**, 47, 6214-6223	2.3	8
42	Non-equilibrium solidification of concentrated FeGe alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 12-17	5.3	8
41	Metastable microstructures in the solidification of undercooled high entropy alloys. *Journal of Alloys and Compounds*, **2020**, 821, 153488	5.7	8
40	Microstructure stability during high temperature deformation of CoCrFeNiTa eutectic high entropy alloy through nano-scale precipitation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2021**, 824, 141793	5.3	8
39	Experimental and modelling studies for solidification of undercooled Ni-Fe-Si alloys. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180208	3	7
38	Growth kinetics, microhardness and microstructure evolution of undercooled FeCoNiCuSn high entropy alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 777, 139022	5.3	7
37	Microstructure and Magnetic Properties of Ni2(Mn,Fe)Ga Heusler Alloys Rapidly Solidified by Melt Spinning. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 2161-2170	2.3	7
36	Microstructure and Magnetic Properties of Rapidly Solidified Ni2(Mn,Fe)Ga Heusler Alloys. *Advanced Materials Research*, **2009**, 74, 215-218	0.5	7
35	Microstructural development of dissimilar weldments: case of MIG welding of Cu with Fe filler. *Journal of Materials Science*, **2002**, 37, 2345-2349	4.3	7
34	Solidification microstructure development. *Sadhana - Academy Proceedings in Engineering Sciences*, **2001**, 26, 25-34	1	7
33	Development of ultrahigh strength novel CoCrFeNiZr quasi-peritectic high entropy alloy by an integrated approach using experiment and simulation. *Materialia*, **2020**, 14, 100896	3.2	7
32	Premartensite transition in Ni2FeGa Heusler alloy. *Materials Characterization*, **2015**, 102, 24-28	3.9	6
31	Microstructure and Phase Evolution of Ni2FeGa Heusler Alloy Extended to Different Degrees of Undercooling. *Materials Science Forum*, **2014**, 790-791, 199-204	0.4	6

30	Accelerated Design of Eutectic High Entropy Alloys by ICME Approach. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2021**, 52, 1574-1580	2.3	6
29	Solidification behaviour of undercooled equiatomic FeCuNi alloy. *Journal of Alloys and Compounds*, **2020**, 815, 152334	5.7	6
28	Effect of Friction Stir Welding Parameters on Mechanical Properties and Microstructure of AA2195 Al–Li Alloy Welds. *Transactions of the Indian Institute of Metals*, **2019**, 72, 1557-1561	1.2	5
27	MPI + OpenCL implementation of a phase-field method incorporating CALPHAD description of Gibbs energies on heterogeneous computing platforms. *Computer Physics Communications*, **2015**, 186, 48-64	4.2	4
26	Structure and magnetic properties of Ni2(Mn,Co)Ga Heusler alloys rapidly solidified by melt-spinning. *Intermetallics*, **2012**, 25, 42-47	3.5	4
25	Phase-Field Modeling of Dendritic Solidification in Undercooled Droplets Processed by Electromagnetic Levitation. *Materials Science Forum*, **2006**, 508, 431-436	0.4	4
24	Machine learning-enabled identification of new medium to high entropy alloys with solid solution phases. *Computational Materials Science*, **2021**, 197, 110623	3.2	4
23	Design and deformation characteristics of single-phase Co-Cr-Fe-Ni-V high entropy alloy. *Journal of Alloys and Compounds*, **2021**, 888, 161579	5.7	4
22	Microstructure based simulations for prediction of flow curves and selection of process parameters for inter-critical annealing in DP steel. *IOP Conference Series: Materials Science and Engineering*, **2017**, 192, 012010	0.4	3
21	Influence of thermomechanical processing parameters on microstructural evolution of a gamma-prime strengthened cobalt based superalloy during high temperature deformation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 791, 139498	5.3	3
20	Effect of Alloying Additions and Heat Treatment on the Microstructure Evolution of Nb-16Si Alloy. *Materials Today: Proceedings*, **2016**, 3, 3094-3103	1.4	3
19	Martensite and Nanocrystalline Phase Formation in Rapidly Solidified Ni2MnGa Alloy by Melt-Spinning. *Materials Science Forum*, **2010**, 649, 35-40	0.4	3
18	Experimental studies and phase field modeling of microstructure evolution during solidification with electromagnetic stirring. *Transactions of Nonferrous Metals Society of China*, **2010**, 20, s774-s780	3.3	3
17	Particle incorporation in metallic melts during dendritic solidification—undercooling experiments under reduced gravity. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 689-692	5.3	3
16	Crystal–Melt Interface Growth Velocity of Ni–Zr Alloys Through Molecular Dynamics Simulations. *Transactions of the Indian Institute of Metals*, **2015**, 68, 1113-1117	1.2	2
15	Investigation of Fusion Weldments of Semi-Solid Aluminium A356 Alloy: Pool Geometry and Microstructure. *Materials Science Forum*, **2013**, 765, 751-755	0.4	2
14	Computational modelling of dendritic to globular transition using an isothermal binary phase-field model. *Transactions of the Indian Institute of Metals*, **2011**, 64, 251-254	1.2	2
13	Numerical Studies on Effect of Interpass Time on Distortion and Residual Stresses in Multipass Welding. *Advanced Materials Research*, **2012**, 601, 31-36	0.5	2

12	ICME Framework for Simulation of Microstructure and Property Evolution During Gas Metal Arc Welding in DP980 Steel. *Integrating Materials and Manufacturing Innovation*, **2020**, 9, 228-239	2.9	2
11	Weld Solidification Cracking Behaviour of AA2195 Al□Cu□i Alloy. *Transactions of the Indian Institute of Metals*, **2018**, 71, 2667-2670	1.2	2
10	Phase Evolution in Hypereutectic Al90Cu10□Nix (x = 0, 5) Alloys. *Transactions of the Indian Institute of Metals*, **2015**, 68, 1221-1226	1.2	1
9	Experimental and simulation studies of solidification behaviour in undercooled CuCoNi equiatomic medium entropy alloy. *European Physical Journal: Special Topics*, **2020**, 229, 145-155	2.3	1
8	Microstructural, Magnetic and Electrical Properties of Ni2FeGa Heusler Alloys. *Transactions of the Indian Institute of Metals*, **2016**, 69, 1389-1396	1.2	1
7	Numerical Study of Welding with Trailing Heat Sink Considering Phase Transformation Effects. *Advanced Materials Research*, **2014**, 875-877, 2118-2122	0.5	1
6	Microstructure engineering of materials. *International Journal of Advances in Engineering Sciences and Applied Mathematics*, **2010**, 2, 125-125	0.6	1
5	Correlation of Microstructure With HAZ Welding Cycles Simulated in Ti-15-3 Alloy Using Gleeble□ 3800 and SYSWELD□ . *Materials Performance and Characterization*, **2015**, 4, MPC20140065	0.5	1
4	Enhanced magnetocaloric effect in undercooled rare earth intermetallic compounds RNi (R = Gd, Ho and Er). *Journal of Magnetism and Magnetic Materials*, **2020**, 499, 166302	2.8	1
3	ICME framework to simulate microstructure evolution during laser powder bed fusion of Haynes 282 nickel-based superalloy. *Journal of Materials Science*,1	4.3	1
2	Prediction of growth velocity of undercooled multicomponent metallic alloys using a machine learning approach. *Scripta Materialia*, **2022**, 207, 114309	5.6	0
1	Hot Deformation Behavior and Microstructural Characterization of CoCrFeNiNb0.45 Eutectic High Entropy Alloy. *Materials Performance and Characterization*, **2019**, 8, 20190014	0.5	