Gandham Phanikumar

List of Publications by Year
in descending order

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85 papers	1,708 citations	279701 23 h-index	330025 37 g-index
85 all docs	85 docs citations	85 times ranked	1054 citing authors

#	Article	IF	Citations
1	Microstructure and tensile properties of friction welded aluminum alloy AA7075-T6. Materials & Design, 2010, 31, 2375-2380.	5.1	107
2	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.	2.6	93
3	Microstructural evolution during friction surfacing of tool steel H13. Materials & Design, 2011, 32, 82-87.	5.1	88
4	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.	2.2	70
5	Dendrite growth velocity in levitated undercooled nickel melts. Journal of Crystal Growth, 2006, 297, 211-222.	0.7	64
6	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.	2.8	64
7	Modelling of transport phenomena in laser surface alloying with distributed species mass source. International Journal of Heat and Fluid Flow, 2002, 23, 298-307.	1.1	59
8	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.	1.1	58
9	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.	1.0	41
10	Solidification of undercooled peritectic Feâ€“Ge alloy. Acta Materialia, 2005, 53, 3591-3600.	3.8	41
11	Experimental and numerical studies on friction welding of thixocast A356 aluminum alloy. Acta Materialia, 2014, 73, 177-185.	3.8	41
12	Effect of Zr additions on microstructure evolution and phase formation of Nbâ^'Si based ultrahigh temperature alloys. Intermetallics, 2018, 101, 123-132.	1.8	38
13	Thermal Profiling Using Infrared Thermography in Friction Surfacing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3425-3429.	1.1	36
14	Design of a Seven-Component Eutectic High-Entropy Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2594-2598.	1.1	35
15	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.	2.6	34
16	Material Flow Visualization during Friction Surfacing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 937-939.	1.1	31
17	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.	1.0	30
18	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.	2.6	30

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19	Microstructural evolution during remelting of laser surface alloyed hyper-monotectic Alâ€“Bi alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 371, 91-102.	2.6	29
20	Rapid solidification behaviour of undercooled levitated Feâ€“Ge alloy droplets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 464-467.	2.6	29
21	Disorder trapping and grain refinement during solidification of undercooled Feâ€“18 at% Ge melts. Philosophical Magazine, 2007, 87, 3817-3837.	0.7	29
22	Development of ultrahigh strength novel Coâ€“Crâ€“Feâ€“Niâ€“Zr quasi-peritectic high entropy alloy by an integrated approach using experiment and simulation. Materialia, 2020, 14, 100896.	1.3	28
23	Dendritic solidification and fragmentation in undercooled Niâ€“Zr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 649-653.	2.6	27
24	Studies on multipass welding with trailing heat sink considering phase transformation. Journal of Materials Processing Technology, 2014, 214, 1228-1235.	3.1	25
25	Improvement of mechanical properties of gas tungsten arc and electron beam welded AA2219 (Alâ€“6) Tj ETQq1 1 0.784314 rgBT /O	1.5	25
26	On the effect of W addition on microstructural evolution and Î³â€² precipitate coarsening in a Coâ€“30Niâ€“10Alâ€“5Moâ€“2Taâ€“2Ti alloy. Materialia, 2020, 10, 100632.	1.3	23
27	Machine learning-enabled identification of new medium to high entropy alloys with solid solution phases. Computational Materials Science, 2021, 197, 110623.	1.4	23
28	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.	1.1	22
29	Hot workability of Coâ€“Feâ€“Mnâ€“Niâ€“Ti eutectic high entropy alloy. Journal of Alloys and Compounds, 2020, 822, 153609.	2.8	22
30	Continuous welding of Cuâ€“Ni dissimilar couple using CO2laser. Science and Technology of Welding and Joining, 2005, 10, 158-166.	1.5	20
31	Nano-sized Cu clusters in deeply undercooled CoCuFeNiTa high entropy alloy. Scripta Materialia, 2020, 177, 58-64.	2.6	20
32	Accelerated Design of Eutectic High Entropy Alloys by ICME Approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1574-1580.	1.1	19
33	Joining of dissimilar metals: Issues and modelling techniques. Science and Technology of Welding and Joining, 2011, 16, 313-317.	1.5	18
34	Corrosion Resistance of Friction Surfaced AISI 304 Stainless Steel Coatings. Journal of Materials Engineering and Performance, 2013, 22, 366-370.	1.2	16
35	Transport phenomena in laser surface alloying. Journal of Materials Science, 2003, 38, 155-164.	1.7	15
36	Microstructure and Mechanical Properties of Gas-Tungsten-Arcâ€“Welded Ti-15-3 Beta Titanium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2685-2693.	1.1	15

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37	Microstructure and Properties of Friction Surfaced Stainless Steel and Tool Steel Coatings. Materials Science Forum, 0, 638-642, 864-869.	0.3	15
38	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.	1.1	15
39	Effect of niobium addition in FeCoNiCuNb_x high-entropy alloys. Journal of Materials Research, 2019, 34, 700-708.	1.2	15
40	Metastable microstructures in the solidification of undercooled high entropy alloys. Journal of Alloys and Compounds, 2020, 821, 153488.	2.8	15
41	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.	2.6	15
42	Fracture toughness (J1C) of electron beam welded AA2219 alloy. Materials & Design, 2010, 31, 4943-4950.	5.1	14
43	Solidification microstructure development. Sadhana - Academy Proceedings in Engineering Sciences, 2001, 26, 25-34.	0.8	13
44	Phase evolution and properties of Ni50Co23Fe2Ga25 Heusler alloy undercooled by electromagnetic levitation. Intermetallics, 2011, 19, 1705-1710.	1.8	13
45	Solidification behaviour of undercooled equiatomic FeCuNi alloy. Journal of Alloys and Compounds, 2020, 815, 152334.	2.8	13
46	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.	2.6	12
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.	1.1	11
48	Microstructural development of dissimilar weldments: case of MIG welding of Cu with Fe filler. Journal of Materials Science, 2002, 37, 2345-2349.	1.7	10
49	Amorphous and nano crystalline phase formation in Ni2MnGa ferromagnetic shape memory alloy synthesized by melt spinning. Journal of Materials Science, 2009, 44, 2553-2559.	1.7	10
50	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.	1.1	10
51	Microstructure and Magnetic Properties of Rapidly Solidified Ni₂(Mn,Fe)Ga Heusler Alloys. Advanced Materials Research, 0, 74, 215-218.	0.3	9
52	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.	1.1	9
53	Premartensite transition in Ni2FeGa Heusler alloy. Materials Characterization, 2015, 102, 24-28.	1.9	9
54	Experimental and modelling studies for solidification of undercooled Niâ€“Feâ€“Si alloys. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180208.	1.6	9

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55	Design and deformation characteristics of single-phase Co-Cr-Fe-Ni-V high entropy alloy. Journal of Alloys and Compounds, 2021, 888, 161579.	2.8	9
56	ICME framework to simulate microstructure evolution during laser powder bed fusion of Haynes 282 nickel-based superalloy. Journal of Materials Science, 2022, 57, 9693-9713.	1.7	9
57	Non-equilibrium solidification of concentrated Feâ€“Ge alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 12-17.	2.6	8
58	Effect of Friction Stir Welding Parameters on Mechanical Properties and Microstructure of AA2195 Alâ€“Li Alloy Welds. Transactions of the Indian Institute of Metals, 2019, 72, 1557-1561.	0.7	8
59	Microstructure and Phase Evolution of Ni₂FeGa Heusler Alloy Extended to Different Degrees of Undercooling. Materials Science Forum, 0, 790-791, 199-204.	0.3	7
60	MPI +ÂOpenCL implementation of a phase-field method incorporating CALPHAD description of Gibbs energies on heterogeneous computing platforms. Computer Physics Communications, 2015, 186, 48-64.	3.0	7
61	Enhanced magnetocaloric effect in undercooled rare earth intermetallic compounds RNi (RÂ=ÂGd, Ho) Tj ETQq1 1 0.784314 rgBT /Ov	1.0	7
62	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.	2.6	7
63	Structure and magnetic properties of Ni2(Mn,Co)Ga Heusler alloys rapidly solidified by melt-spinning. Intermetallics, 2012, 25, 42-47.	1.8	6
64	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.	1.2	6
65	Prediction of growth velocity of undercooled multicomponent metallic alloys using a machine learning approach. Scripta Materialia, 2022, 207, 114309.	2.6	6
66	Effect of Alloying Additions and Heat Treatment on the Microstructure Evolution of Nbâ€16Si Alloy. Materials Today: Proceedings, 2016, 3, 3094-3103.	0.9	5
67	Weld Solidification Cracking Behaviour of AA2195 Alâ€“Cuâ€“Li Alloy. Transactions of the Indian Institute of Metals, 2018, 71, 2667-2670.	0.7	5
68	Phase-Field Modeling of Dendritic Solidification in Undercooled Droplets Processed by Electromagnetic Levitation. Materials Science Forum, 2006, 508, 431-436.	0.3	4
69	Particle incorporation in metallic melts during dendritic solidificationâ€“undercooling experiments under reduced gravity. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 689-692.	2.6	3
70	Martensite and Nanocrystalline Phase Formation in Rapidly Solidified Ni₂MnGa Alloy by Melt-Spinning. Materials Science Forum, 2010, 649, 35-40.	0.3	3
71	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.	1.7	3
72	Crystalâ€“Melt Interface Growth Velocity of Niâ€“Zr Alloys Through Molecular Dynamics Simulations. Transactions of the Indian Institute of Metals, 2015, 68, 1113-1117.	0.7	3

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73	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.	0.3	3
74	Precipitation behavior of cold sprayed Al6061 coatings. Materialia, 2022, 24, 101510.	1.3	3
75	Microstructure engineering of materials. International Journal of Advances in Engineering Sciences and Applied Mathematics, 2010, 2, 125-125.	0.7	2
76	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.	0.7	2
77	Numerical Studies on Effect of Interpass Time on Distortion and Residual Stresses in Multipass Welding. Advanced Materials Research, 2012, 601, 31-36.	0.3	2
78	Investigation of Fusion Weldments of Semi-Solid Aluminium A356 Alloy: Pool Geometry and Microstructure. Materials Science Forum, 2013, 765, 751-755.	0.3	2
79	Phase Evolution in Hypereutectic Al90Cu10â^'xNix (xÂ=Â0, 5) Alloys. Transactions of the Indian Institute of Metals, 2015, 68, 1221-1226.	0.7	2
80	Microstructural, Magnetic and Electrical Properties of Ni2FeGa Heusler Alloys. Transactions of the Indian Institute of Metals, 2016, 69, 1389-1396.	0.7	2
81	Experimental and simulation studies of solidification behaviour in undercooled CuCoNi equiatomic medium entropy alloy. European Physical Journal: Special Topics, 2020, 229, 145-155.	1.2	2
82	Numerical Study of Welding with Trailing Heat Sink Considering Phase Transformation Effects. Advanced Materials Research, 2014, 875-877, 2118-2122.	0.3	1
83	Correlation of Microstructure With HAZ Welding Cycles Simulated in Ti-15-3 Alloy Using GleebleÂ® 3800 and SYSWELDÂ®. Materials Performance and Characterization, 2015, 4, 381-398.	0.2	1
84	Dissimilar metal joint quality measurement using infrared thermography: Experimental and Numerical approach for the application to CMT welding. , 0, , .		0
85	Hot Deformation Behavior and Microstructural Characterization of CoCrFeNiNb0.45 Eutectic High Entropy Alloy. Materials Performance and Characterization, 2019, 8, 1062-1075.	0.2	0