

# Sumanth Shankar

## List of Publications by Year in descending order

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Version: 2024-02-01

29  
papers

763  
citations

623734

14  
h-index

610901

24  
g-index

32  
all docs

32  
docs citations

32  
times ranked

570  
citing authors

#	ARTICLE	IF	CITATIONS
1	Solidification Simulation of Al-Si Alloys with Dendrite Tip Undercooling. <i>Metals</i> , 2022, 12, 608.	2.3	0
2	Microstructure, Intermetallic Phases, and Fractography of the Cast Al-5.8Zn-2.2Mg-2.5Cu Alloy by Controlled Diffusion Solidification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 4711-4726.	2.2	7
3	Mechanism of Anomalous Grain Formation During Controlled Diffusion Solidification. <i>Jom</i> , 2020, 72, 3733-3743.	1.9	6
4	Effect of Alloy Composition on Microstructure and Tensile Properties of Net-Shaped Castings of Al-Zn-Mg-Cu Alloys. <i>International Journal of Metalcasting</i> , 2019, 13, 300-310.	1.9	14
5	High-Resolution Electron Microscopy and Kinetic Studies of Precipitation Hardening Reactions in Cast Al-5.8Zn-2.2Mg-2.5Cu. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 4630-4646.	2.5	5
6	Workability Characteristics and Deformation Mechanisms of Die-Cast AM60 and AZ91 Magnesium Alloys: Correlation with Processing Maps. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 123-139.	2.5	7
7	Interaction between primary dendrite arm spacing and velocity of fluid flow during solidification of Al-Si binary alloys. <i>Journal of Materials Science</i> , 2018, 53, 9771-9789.	3.7	4
8	Effect of Titanium Levels on the Hot Tearing Sensitivity and Abnormal Grain Growth After T4 Heat Treatment of Al-Zn-Mg-Cu Alloys. <i>International Journal of Metalcasting</i> , 2018, 12, 457-468.	1.9	5
9	Structure-property models in Al-Zn-Mg-Cu alloys: A critical experimental assessment of shape castings. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 733, 235-245.	5.6	27
10	Quantitative metallography of precipitating and secondary phases after strengthening treatment of net shaped casting of Al-Zn-Mg-Cu (7000) alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 698, 206-217.	5.6	62
11	Controlled Diffusion Solidification (CDS) of Al-Zn-Mg-Cu (7050): Microstructure, heat treatment and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 594, 260-277.	5.6	57
12	X-ray nano-diffraction study of Sr intermetallic phase during solidification of Al-Si hypoeutectic alloy. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	16
13	Control Diffusion Solidification (CDS): An Overview of Mechanism and Application. , 2014, , 89-97.		3
14	Effect of mixing rate on the morphology of primary Al phase in the controlled diffusion solidification (CDS) process. <i>Journal of Materials Science</i> , 2012, 47, 8153-8166.	3.7	16
15	Near Net Shaped Casting of 7050 Al Wrought Alloy by CDS Process: Microstructure and Mechanical Properties. , 2012, , 313-318.		0
16	Effect of Shrinkage on Primary Dendrite Arm Spacing during Binary Al-Si Alloy Solidification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 2331-2345.	2.2	2
17	Sensitivity of Thermophysical Material Properties on Solidification Simulation of Al-Si Binary Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 2346-2357.	2.2	0
18	Favorable Environment for a Nondendritic Morphology in Controlled Diffusion Solidification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 2456-2465.	2.2	27

#	ARTICLE	IF	CITATIONS
19	Rheology of liquid metals and alloys. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 831-838.	2.4	44
20	Partial pair correlation functions and viscosity of liquid Al-Si hypoeutectic alloys via high-energy X-ray diffraction experiments. <i>Philosophical Magazine</i> , 2011, 91, 3867-3904.	1.6	10
21	Rotational rheometry of liquid metal systems: Measurement geometry selection and flow curve analysis. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 733-742.	2.4	22
22	Formation of Nondendritic Primary Aluminum Phase in Hypoeutectic Alloys in Controlled Diffusion Solidification (CDS): A Hypothesis. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2009, 40, 843-849.	2.1	26
23	Eutectic solidification of aluminum-silicon alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 3038-3043.	2.2	53
24	Nucleation mechanism of the eutectic phases in aluminum-silicon hypoeutectic alloys. <i>Acta Materialia</i> , 2004, 52, 4447-4460.	7.9	160
25	Casting of aluminum-based wrought alloys using controlled diffusion solidification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 2174-2180.	2.2	24
26	Die soldering: Effect of process parameters and alloy characteristics on soldering in the pressure die casting process. <i>International Journal of Cast Metals Research</i> , 2002, 15, 103-116.	1.0	10
27	Mechanism and preventive measures for die soldering during Al casting in a ferrous mold. <i>Jom</i> , 2002, 54, 47-54.	1.9	26
28	Die soldering: Mechanism of the interface reaction between molten aluminum alloy and tool steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2002, 33, 465-476.	2.1	119
29	Rheology of Liquid Al, Zn and Zn-7wt%Al Systems. <i>Materials Science Forum</i> , 0, 690, 226-229.	0.3	6