Lang Yuan

List of Publications by Year
in descending order

38 papers	1,323 citations	394421 19 h-index	377865 34 g-index
40 all docs	40 docs citations	40 times ranked	948 citing authors

#	Article	IF	Citations
1	Towards understanding grain nucleation under Additive Manufacturing solidification conditions. Acta Materialia, 2020, 195, 392-403.	7.9	127
2	A new mechanism for freckle initiation based on microstructural level simulation. Acta Materialia, 2012, 60, 4917-4926.	7.9	119
3	Dendritic solidification under natural and forced convection in binary alloys: 2D versus 3D simulation. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 055008.	2.0	113
4	Neutron residual stress measurement and numerical modeling in a curved thin-walled structure by laser powder bed fusion additive manufacturing. Materials and Design, 2017, 135, 122-132.	7.0	106
5	3-D microstructural model of freckle formation validated using in situ experiments. Acta Materialia, 2014, 79, 168-180.	7.9	95
6	Machine learning algorithms for defect detection in metal laser-based additive manufacturing: A review. Journal of Manufacturing Processes, 2022, 75, 693-710.	5.9	86
7	In situ synchrotron tomographic quantification of granular and intragranular deformation during semi-solid compression of an equiaxed dendritic Alâ€“Cu alloy. Acta Materialia, 2014, 76, 371-380.	7.9	84
8	Revealing the Mechanisms of Grain Nucleation and Formation During Additive Manufacturing. Jom, 2020, 72, 1065-1073.	1.9	66
9	The Interdependence model of grain nucleation: A numerical analysis of the Nucleation-Free Zone. Acta Materialia, 2013, 61, 5914-5927.	7.9	60
10	Calculation of Physical Properties for Use in Models of Continuous Casting Process-Part 1: Mould Slags. ISIJ International, 2016, 56, 264-273.	1.4	54
11	A Review of the Factors Affecting the Thermophysical Properties of Silicate Slags. High Temperature Materials and Processes, 2012, 31, 301-321.	1.4	46
12	Exploring dendrite coherency with the discrete element method. Acta Materialia, 2012, 60, 1334-1345.	7.9	43
13	In situ monitoring for fused filament fabrication process: A review. Additive Manufacturing, 2021, 38, 101749.	3.0	39
14	A Multiscale 3D Model of the Vacuum Arc Remelting Process. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5365-5376.	2.2	34
15	Simulation of diffusion-limited lateral growth of dendrites during solidification via liquid metal cooling. Acta Materialia, 2014, 69, 47-59.	7.9	28
16	In-process failure analysis of thin-wall structures made by laser powder bed fusion additive manufacturing. Journal of Materials Science and Technology, 2022, 98, 233-243.	10.7	27
17	Numerical simulation of the effect of fluid flow on solute distribution and dendritic morphology. International Journal of Cast Metals Research, 2009, 22, 204-207.	1.0	20
18	MULTISCALE MODELING OF THE VACUUM ARC REMELTING PROCESS FOR THE PREDICTION ON MICROSTRUCTURE FORMATION. International Journal of Modern Physics B, 2009, 23, 1584-1590.	2.0	20

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19	Solidification Defects in Additive Manufactured Materials. Jom, 2019, 71, 3221-3222.	1.9	20
20	Modeling of time dependent localized flow shear stress and its impact on cellular growth within additive manufactured titanium implants. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1689-1699.	3.4	19
21	Microstructural Simulations of the Influence of Solidification Velocity on Freckle Initiation during Directional Solidification. ISIJ International, 2010, 50, 1814-1818.	1.4	16
22	Towards prediction of microstructure during laser based additive manufacturing process of Co-Cr-Mo powder beds. Materials and Design, 2020, 196, 109117.	7.0	15
23	Fluid Dynamics Effects on Microstructure Prediction in Single-Laser Tracks for Additive Manufacturing of IN625. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 1263-1281.	2.1	14
24	Synchrotron Radiography Studies of Shear-Induced Dilation in Semisolid Al Alloys and Steels. Jom, 2014, 66, 1415-1424.	1.9	13
25	Calculation of Physical Properties for Use in Models of Continuous Casting Process-Part 2: Steels. ISIJ International, 2016, 56, 274-281.	1.4	13
26	Grain Structure Prediction for Directionally Solidified Superalloy Castings. Jom, 2020, 72, 1785-1793.	1.9	7
27	An Efficient Track-Scale Model for Laser Powder Bed Fusion Additive Manufacturing: Part 1- Thermal Model. Frontiers in Materials, 2021, 8, .	2.4	7
28	A Numerical Approach to Model Microstructure Evolution for NiTi Shape Memory Alloy in Laser Powder Bed Fusion Additive Manufacturing. Integrating Materials and Manufacturing Innovation, 2022, 11, 121-138.	2.6	7
29	Columnar-to-equiaxed transition in a laser scan for metal additive manufacturing. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012007.	0.6	6
30	An Efficient Track-Scale Model for Laser Powder Bed Fusion Additive Manufacturing: Part 2â€"Mechanical Model. Frontiers in Materials, 2021, 8, .	2.4	6
31	The effect of the melt thermal gradient on the size of the constitutionally supercooled zone. IOP Conference Series: Materials Science and Engineering, 2016, 117, 012001.	0.6	5
32	Improvement of the Interdependence Analytical Model through Selection of Interfacial Growth Rates during the Initial Transient. Materials Science Forum, 0, 765, 77-81.	0.3	2
33	Numerical simulation of wave-like nucleation events. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012043.	0.6	2
34	Effect of Build Height on Micro-cracking of Additively Manufactured Superalloy RENÃ‰ 108 Thin-Wall Components. Minerals, Metals and Materials Series, 2022, , 985-993.	0.4	2
35	Numerical study of dendrite coherency during equiaxed solidification by the Discrete Element Method. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012071.	0.6	1
36	On the Solute Diffusion Length in the Interdependence Model: Dendritic versus Non-Dendritic Interface. Materials Science Forum, 0, 828-829, 461-467.	0.3	0

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37	Solidification Behavior in the Presence of External Fields: Part I. Jom, 2020, 72, 3608-3609.	1.9	0
38	Solidification Behavior in the Presence of External Fields: Part II. Jom, 2020, 72, 4069-4070.	1.9	0