Chinnapat Panwisawas

List of Publications by Year
in descending order

49	2,372	394421 19	265206 42
papers	citations	h-index	g-index

52	52	52	1722
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the role of melt flow into the surface structure and porosity development during selective laser melting. Acta Materialia, 2015, 96, 72-79.	7.9	715
2	Alloys-by-design: Application to new superalloys for additive manufacturing. Acta Materialia, 2021, 202, 417-436.	7.9	231
3	Mesoscale modelling of selective laser melting: Thermal fluid dynamics and microstructural evolution. Computational Materials Science, 2017, 126, 479-490.	3.0	227
4	Keyhole formation and thermal fluid flow-induced porosity during laser fusion welding in titanium alloys: Experimental and modelling. Acta Materialia, 2017, 126, 251-263.	7.9	182
5	On the role of thermal fluid dynamics into the evolution of porosity during selective laser melting. Scripta Materialia, 2015, 105, 14-17.	5.2	172
6	Metal 3D printing as a disruptive technology for superalloys. Nature Communications, 2020, 11, 2327.	12.8	159
7	Prediction of recrystallization in investment cast single-crystal superalloys. Acta Materialia, 2013, 61, 51-66.	7.9	67
8	Modelling of thermal fluid dynamics for fusion welding. Journal of Materials Processing Technology, 2018, 252, 176-182.	6.3	45
9	Use of barite concrete for radiation shielding against gamma-rays and neutrons. Construction and Building Materials, 2022, 326, 126838.	7.2	42
10	Solute enrichment induced dendritic fragmentation in directional solidification of nickel-based superalloys. Acta Materialia, 2021, 215, 117043.	7.9	38
11	Nucleation of recrystallisation in castings of single crystal Ni-based superalloys. Acta Materialia, 2017, 129, 112-123.	7.9	37
12	Mean-field modelling of the intermetallic precipitate phases during heat treatment and additive manufacture of Inconel 718. Acta Materialia, 2018, 156, 432-445.	7.9	35
13	Thermal-solutal-fluid flow of channel segregation during directional solidification of single-crystal nickel-based superalloys. Acta Materialia, 2021, 206, 116620.	7.9	34
14	Digital materials design by thermal-fluid science for multi-metal additive manufacturing. Acta Materialia, 2021, 210, 116825.	7.9	29
15	A novel low-modulus titanium alloy for biomedical applications: A comparison between selective laser melting and metal injection moulding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 812, 141081.	5.6	26
16	Spinodal decomposition versus classical Î³â€² nucleation in a nickel-base superalloy powder: An in-situ neutron diffraction and atomic-scale analysis. Acta Materialia, 2020, 200, 959-970.	7.9	25
17	Development, characterisation, and modelling of processability of nitinol stents using laser powder bed fusion. Journal of Alloys and Compounds, 2022, 909, 164681.	5.5	24
18	In-situ neutron diffraction during stress relaxation of a single crystal nickel-base superalloy. Scripta Materialia, 2017, 131, 103-107.	5.2	22

#	Article	IF	Citations
19	Analysis of the mechanical deformation arising from investment casting of directionally solidified nickel-based superalloys. Materials Science and Technology, 2013, 29, 843-853.	1.6	20
20	Ultra-high temperature deformation in a single crystal superalloy: Mesoscale process simulation and micromechanisms. Acta Materialia, 2021, 203, 116468.	7.9	19
21	High Entropy Alloys as Filler Metals for Joining. Entropy, 2021, 23, 78.	2.2	19
22	A computational study on the three-dimensional printability of precipitate-strengthened nickel-based superalloys. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180295.	2.1	18
23	The role of stress relaxation and creep during high temperature deformation in Ni-base single crystal superalloys â€“ Implications to strain build-up during directional solidification. Acta Materialia, 2016, 106, 322-332.	7.9	16
24	On the nature of hexagonality within the solidification structure of single crystal alloys: Mechanisms and applications. Acta Materialia, 2020, 200, 417-431.	7.9	16
25	Prediction of grain structure evolution during rapid solidification of high energy density beam induced re-melting. Materials and Design, 2018, 147, 200-210.	7.0	14
26	Evaluating data-driven algorithms for predicting mechanical properties with small datasets: A case study on gear steel hardenability. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 836-847.	4.9	14
27	Insight into the sensitivities of freckles in the directional solidification of single-crystal turbine blades. Journal of Manufacturing Processes, 2022, 77, 219-228.	5.9	13
28	Relating micro-segregation to site specific high temperature deformation in single crystal nickel-base superalloy castings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 773, 138862.	5.6	12
29	The Effect of Heat Treatment on Tensile Yielding Response of the New Superalloy ABD-900AM for Additive Manufacturing. Minerals, Metals and Materials Series, 2020, , 1055-1065.	0.4	10
30	The contrasting roles of creep and stress relaxation in the time-dependent deformation during in-situ cooling of a nickel-base single crystal superalloy. Scientific Reports, 2017, 7, 11145.	3.3	8
31	An experimental investigation into the stress and strain development of a Ni-base single crystal superalloy during cooling from solidification. Materials and Design, 2017, 114, 475-483.	7.0	8
32	Visco-plasticity during in-situ cooling from solidification of a nickel-base single crystal superalloy using neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 681, 32-40.	5.6	7
33	On the Influence of Alloy Chemistry andÂProcessing Conditions on Additive Manufacturability of Ni-Based Superalloys. Minerals, Metals and Materials Series, 2020, , 153-162.	0.4	7
34	Metallurgical Data Science for Steel Industry: A Case Study on Basic Oxygen Furnace. Steel Research International, 2022, 93, .	1.8	7
35	Î³â€³ variant-sensitive deformation behaviour of Inconel 718 superalloy. Journal of Materials Science and Technology, 2022, 126, 169-181.	10.7	7
36	History Dependence of the Microstructure on Time-Dependent Deformation During In-Situ Cooling of a Nickel-Based Single-Crystal Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3963-3972.	2.2	6

#	Article	IF	Citations
37	Numerical Modelling of Stress and Strain Evolution during Solidification of a Single Crystal Superalloy. Advanced Materials Research, 0, 278, 204-209.	0.3	5
38	Neutron tomography methods applied to a nickel-based superalloy additive manufacture build. Materials Letters, 2018, 230, 109-112.	2.6	5
39	Prediction of recrystallisation in single crystal nickel-based superalloys during investment casting. MATEC Web of Conferences, 2014, 14, 12002.	0.2	4
40	An Improved Method of Capturing the Surface Boundary of a Ti-6Al-4V Fusion Weld Bead for Finite Element Modeling. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 485-494.	2.1	4
41	Additive manufacturability of superalloys: Process-induced porosity, cooling rate and metal vapour. Additive Manufacturing, 2021, 47, 102339.	3.0	3
42	Chemical species mixing during direct energy deposition of bimetallic systems using titanium and dissimilar refractory metals for repair and biomedical applications. Additive Manufacturing, 2022, 51, 102654.	3.0	2
43	An Integrated Modeling Approach for Predicting Process Maps of Residual Stress and Distortion in a Laser Weld: A Combined CFDâ€“FE Methodology. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 2954-2962.	2.1	1
44	Prediction of Plastic Strain for Recrystallization during Investment Casting of Single Crystal Superalloys. , 2012, , .		1
45	Additive Manufacturability of Nickel-Based Superalloys: Composition-Process Induced Vapourization. Minerals, Metals and Materials Series, 2020, , 1024-1032.	0.4	1
46	Digital Materials Design by Thermal-Fluid Science for Multi-Metals Additive Manufacturing. SSRN Electronic Journal, 0, , .	0.4	0
47	A Multi-Scale Multi-Physics Approach to Modelling of Additive Manufacturing in Nickel-Based Superalloys. , 2016, , .		0
48	Spinodal Decomposition Versus Classical Gamma-Prime Nucleation in a Nickel-Base Superalloy Powder: An In-Situ Neutron Diffraction and Atomic-Scale Analysis. SSRN Electronic Journal, 0, , .	0.4	0
49	Ultra High-Temperature Deformation in a Single Crystal Superalloy: Meso-Scale Process Simulation and Micro-Mechanisms. SSRN Electronic Journal, 0, , .	0.4	0