Damien Tourret

List of Publications by Year in descending order

42 papers	1,729 citations	331259 21 h-index	288905 40 g-index
47 all docs	47 docs citations	47 times ranked	1050 citing authors

#	Article	IF	Citations
1	Modeling of additive manufacturing processes for metals: Challenges and opportunities. Current Opinion in Solid State and Materials Science, 2017, 21, 198-206.	5.6	299
2	Growth competition of columnar dendritic grains: A phase-field study. Acta Materialia, 2015, 82, 64-83.	3.8	191
3	Microstructure selection in thin-sample directional solidification of an Al-Cu alloy: In situ X-ray imaging and phase-field simulations. Acta Materialia, 2017, 129, 203-216.	3.8	131
4	Grain growth competition during thin-sample directional solidification of dendritic microstructures: A phase-field study. Acta Materialia, 2017, 122, 220-235.	3.8	100
5	Atomistic to continuum modeling of solidification microstructures. Current Opinion in Solid State and Materials Science, 2016, 20, 25-36.	5.6	89
6	Spatiotemporal Dynamics of Oscillatory Cellular Patterns in Three-Dimensional Directional Solidification. Physical Review Letters, 2013, 110, 226102.	2.9	72
7	Phase-field modeling of microstructure evolution: Recent applications, perspectives and challenges. Progress in Materials Science, 2022, 123, 100810.	16.0	69
8	Growth competition between columnar dendritic grains â€“ Cellular automaton versus phase field modeling. Acta Materialia, 2018, 155, 286-301.	3.8	61
9	Multiscale dendritic needle network model of alloy solidification. Acta Materialia, 2013, 61, 6474-6491.	3.8	60
10	A generalized segregation model for concurrent dendritic, peritectic and eutectic solidification. Acta Materialia, 2009, 57, 2066-2079.	3.8	58
11	Time-Resolved In Situ Measurements During Rapid Alloy Solidification: Experimental Insight for Additive Manufacturing. Jom, 2016, 68, 985-999.	0.9	53
12	Gas atomization of Alâ€“Ni powders: Solidification modeling and neutron diffraction analysis. Acta Materialia, 2011, 59, 6658-6669.	3.8	48
13	Three-dimensional dendritic needle network model for alloy solidification. Acta Materialia, 2016, 120, 240-254.	3.8	48
14	Initial transient behavior in directional solidification of a bulk transparent model alloy in a cylinder. Acta Materialia, 2015, 85, 362-377.	3.8	40
15	Multiple non-equilibrium phase transformations: Modeling versus electro-magnetic levitation experiment. Acta Materialia, 2011, 59, 4665-4677.	3.8	39
16	Oscillatory cellular patterns in three-dimensional directional solidification. Physical Review E, 2015, 92, 042401.	0.8	39
17	Xâ€ray Imaging and Controlled Solidification of Alâ€Cu Alloys Toward Microstructures by Design. Advanced Engineering Materials, 2015, 17, 454-459.	1.6	34
18	Thermal-field effects on interface dynamics and microstructure selection during alloy directional solidification. Acta Materialia, 2018, 150, 139-152.	3.8	30

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19	Three-Dimensional Multiscale Modeling of Dendritic Spacing Selection During Al-Si Directional Solidification. Jom, 2015, 67, 1776-1785.	0.9	29
20	In Situ X-Ray Observations of Dendritic Fragmentation During Directional Solidification of a Sn-Bi Alloy. Jom, 2016, 68, 170-177.	0.9	24
21	Multiscale prediction of microstructure length scales in metallic alloy casting. Acta Materialia, 2021, 207, 116686.	3.8	22
22	Multiscale simulation of powder-bed fusion processing of metallic alloys. Computational Materials Science, 2022, 209, 111383.	1.4	22
23	Three-dimensional Dendritic Needle Network model with application to Al-Cu directional solidification experiments. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012082.	0.3	20
24	Experimental observation of oscillatory cellular patterns in three-dimensional directional solidification. Physical Review E, 2017, 95, 012803.	0.8	18
25	From Solidification Processing to Microstructure to Mechanical Properties: A Multi-scale X-ray Study of an Al-Cu Alloy Sample. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5529-5546.	1.1	18
26	Multiscale dendritic needle network model of alloy solidification with fluid flow. Computational Materials Science, 2019, 162, 206-227.	1.4	18
27	Demonstration of transmission high energy electron microscopy. Applied Physics Letters, 2018, 112, .	1.5	13
28	Prediction of Solidification Paths for Feâ€“Câ€“Cr Alloys by a Multiphase Segregation Model Coupled to Thermodynamic Equilibrium Calculations. ISIJ International, 2010, 50, 1859-1866.	0.6	11
29	Convective effects on columnar dendritic solidification â€“ A multiscale dendritic needle network study. Acta Materialia, 2022, 234, 118035.	3.8	11
30	Initial dynamics of a solidâ€“liquid interface within a thermal gradient. Scripta Materialia, 2014, 88, 29-32.	2.6	10
31	Columnar-to-Equiaxed Transition in Solidification Processing of AlSi7 Alloys in Microgravity the CETSOL Project. Materials Science Forum, 2014, 790-791, 12-21.	0.3	10
32	Dynamical microstructure formation in 3D directional solidification of transparent model alloys: in situ characterization in DECLIC Directional Solidification Insert under diffusion transport in microgravity. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012077.	0.3	8
33	Multi-scale needle-network model of complex dendritic microstructure formation. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012095.	0.3	7
34	Convection Effects During Bulk Transparent Alloy Solidification in DECLIC-DSI and Phase-Field Simulations in Diffusive Conditions. Jom, 2017, 69, 1280-1288.	0.9	7
35	Comparing mesoscopic models for dendritic growth. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012002.	0.3	7
36	Three-dimensional needle network model for dendritic growth with fluid flow. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012049.	0.3	3

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37	Containerless Solidification and Characterization of Industrial Alloys (NEQUISOL). Journal of Physics: Conference Series, 2011, 327, 012007.	0.3	2
38	Neutron diffraction analysis and solidification modeling of Impulse-Atomized Al-36 wt%Ni. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012060.	0.3	1
39	Imaging the Rapid Solidification of Metallic Alloys in the TEM. Microscopy and Microanalysis, 2015, 21, 469-470.	0.2	0
40	Effect of Thermal Drift on the Initial Transient Behavior in Directional Solidification of a Bulk Transparent Model Alloy. , 0, , 21-30.		0
41	Demonstration of transmission high energy electron microscopy. AIP Conference Proceedings, 2020, , .	0.3	0
42	Integrating In Situ x-Ray Imaging, Energy Dispersive Spectroscopy, and Calculated Phase Diagram Analysis of Solute Segregation During Solidification of an Al-Ag Alloy. Jom, 0, , 1.	0.9	0