

Progress in modelling solidification microstructures in dendrites from 2001 to 2018

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Citation Report

#	ARTICLE	IF	CITATIONS
1	On Directional Dendritic Growth and Primary Spacing—A Review. <i>Crystals</i> , 2020, 10, 627.	2.2	33
2	The Growth Pattern of Co ₃ Sn ₂ in Directional Solidification of Co-Sn Hypereutectic Alloy Melts. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 6346-6354.	2.2	6
3	Phase-field lattice Boltzmann method with two-relaxation-time model for dendrite growth of a binary alloy with melt convection. <i>Computational Materials Science</i> , 2021, 186, 110070.	3.0	17
4	DenMap single crystal solidification structure feature extraction: Automation and application. <i>Materials Characterization</i> , 2021, 171, 110763.	4.4	5
5	Computational modelling of process—structure—property—performance relationships in metal additive manufacturing: a review. <i>International Materials Reviews</i> , 2022, 67, 1-46.	19.3	56
6	GPU-Accelerated Cellular Automaton Model for Grain Growth during Directional Solidification of Nickel-Based Superalloy. <i>Metals</i> , 2021, 11, 298.	2.3	4
7	The formation mechanism of special globular surface grain during the solidification of laser surface remelted near β^2 titanium alloys. <i>Computational Materials Science</i> , 2021, 191, 110353.	3.0	4
8	Modelling of defects in aluminium cast products. <i>Progress in Materials Science</i> , 2022, 123, 100824.	32.8	33
9	Material Databases and Validation in Modelling the Structure of Castings Using the Cellular Automaton Method. <i>Materials</i> , 2021, 14, 3055.	2.9	0
10	The shape of dendritic tips: a test of theory with computations and experiments. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200326.	3.4	22
11	Multi-phase-field lattice Boltzmann model for polycrystalline equiaxed solidification with motion. <i>Computational Materials Science</i> , 2021, 197, 110658.	3.0	14
12	Multiple dendrite tip tracking for in-situ directional solidification: Experiments and comparisons to theory. <i>Materials Today Communications</i> , 2021, 29, 102807.	1.9	2
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14	Single Ice Crystal Growth with Controlled Orientation during Directional Freezing. <i>Journal of Physical Chemistry B</i> , 2021, 125, 970-979.	2.6	22
15	General hierarchical structure to solve transport phenomena with dissimilar time scales: Application in large-scale three-dimensional thermosolutal phase-field problems. <i>Physical Review E</i> , 2020, 102, 043313.	2.1	8
16	Dendritic crystallization from the undercooled melts: effect of tiny amount of impurity. <i>European Physical Journal: Special Topics</i> , 2020, 229, 2885-2890.	2.6	1
17	Microstructural evolution in directional solidification of Nb-doped Co-Sn/Ni—Sn eutectic alloys. <i>Applied Physics A: Materials Science and Processing</i> , 2021, 127, 1.	2.3	3
18	Approximate analytical solution of the integro—differential model of bulk crystallization in a metastable liquid with mass supply (heat dissipation) and crystal withdrawal mechanism. <i>Mathematical Methods in the Applied Sciences</i> , 2022, 45, 8170-8178.	2.3	4

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19	Parallel-GPU-accelerated adaptive mesh refinement for three-dimensional phase-field simulation of dendritic growth during solidification of binary alloy. <i>Materials Theory</i> , 2022, 6, .	4.3	20
20	Effects of Growth and Cooling Rates Via Horizontal Solidification of an AlCuNb Alloy: A Thermal, Microstructural and Mechanical Analysis. <i>Transactions of the Indian Institute of Metals</i> , 2022, 75, 1429-1439.	1.5	3
21	New efficient time-stepping schemes for the anisotropic phase-field dendritic crystal growth model. <i>Computers and Mathematics With Applications</i> , 2022, 109, 204-215.	2.7	5
22	Enhanced mechanical properties of Al-4.5Åwt.% Cu single crystals with seaweed morphology. <i>Journal of Materials Research and Technology</i> , 2022, 17, 2410-2418.	5.8	4
23	Promotion or Suppression of Eutectic and Peri-Eutectic Growth in Containerlessly Processed Fe-Ni-Ti Alloys. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2022, 53, 1351-1363.	2.1	4
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28	Dendrite-resolved, full-melt-pool phase-field simulations to reveal non-steady-state effects and to test an approximate model. <i>Computational Materials Science</i> , 2022, 207, 111262.	3.0	5
29	Inverse analysis of anisotropy of solid-liquid interfacial free energy based on machine learning. <i>Computational Materials Science</i> , 2022, 207, 111294.	3.0	0
30	Equiaxed grain structure formation during directional solidification of a refined Al-20wt.%Cu alloy: In situ analysis of temperature gradient effects. <i>Journal of Crystal Growth</i> , 2022, 587, 126645.	1.5	2
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33	ICME framework to simulate microstructure evolution during laser powder bed fusion of Haynes 282 nickel-based superalloy. <i>Journal of Materials Science</i> , 2022, 57, 9693-9713.	3.7	9
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35	Alloy solidification: Assessment and improvement of an easy-to-apply model. <i>Journal of Materials Science and Technology</i> , 2022, 130, 1-11.	10.7	6
36	Effect of anisotropic interface kinetics on morphological pattern of a particle in an undercooled melt. <i>Chinese Journal of Physics</i> , 2022, 78, 155-168.	3.9	2
37	Determining Alloy Nucleation Core Origin and Grain Refinement Strategy Based on the Dependence Degree of Content Difference. <i>Metals</i> , 2022, 12, 946.	2.3	0

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38	Non-regular dendritic pattern selection induced by interface energy anisotropy in the directional solidification of Al-3 wt% Mg single crystals. <i>Materials Letters</i> , 2022, 324, 132731.	2.6	0
39	Effects of undercooling on atomic crystallization behaviors and growth mechanisms of pure metals. <i>Journal of Applied Physics</i> , 2022, 132, .	2.5	2
40	Theory and <i>In Situ</i> Diagnosis of Growth Kinetics of Dendritic Crystals in Alloy Solidification. <i>Crystal Growth and Design</i> , 0, , .	3.0	0
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42	Establishing reduced-order process-structure linkages from phase field simulations of dendritic grain growth during solidification. <i>Computational Materials Science</i> , 2022, 214, 111694.	3.0	3
43	Acceleration of RBF-FD meshless phase-field modelling of dendritic solidification by space-time adaptive approach. <i>Computers and Mathematics With Applications</i> , 2022, 126, 77-99.	2.7	5
44	Data assimilation with phase-field lattice Boltzmann method for dendrite growth with liquid flow and solid motion. <i>Computational Materials Science</i> , 2022, 215, 111776.	3.0	7
45	The growth direction selection of inclined dendrites induced by solute interaction: A phase-field study. <i>Materials Today Communications</i> , 2022, 33, 104365.	1.9	1
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48	Competitive growth during directional solidification experiments of $\text{Al-11 wt}\% \text{Dendrites}$. <i>Journal of Crystal Growth</i> , 2022, 599, 126893.	1.5	3
49	Frictionless Motion of Diffuse Interfaces by Sharp Phase-Field Modeling. <i>Crystals</i> , 2022, 12, 1496.	2.2	2
50	The Tip of Dendritic Crystal in an Inclined Viscous Flow. <i>Crystals</i> , 2022, 12, 1590.	2.2	4
51	Molecular dynamics simulations of nanoscale solidification in the context of Ni additive manufacturing. <i>Materialia</i> , 2023, 27, 101639.	2.7	3
52	Distinct difference between peri-eutectic and eutectic growth in ternary Fe-Ni-Ti alloy. <i>Scripta Materialia</i> , 2023, 226, 115193.	5.2	2
53	X-ray Tomography and Tomoscopy on Metals: A Review. <i>Advanced Engineering Materials</i> , 2023, 25, .	3.5	4
54	Seaweed pattern formation in the non-axially directional solidification of 2D-like and 3D Al-3 wt.% Mg single crystal. <i>Journal of Materials Science and Technology</i> , 2023, 147, 1-5.	10.7	2
55	Microstructure distribution and orientation-structure topology optimization of metallic materials for laser additive manufacturing. <i>International Journal of Mechanics and Materials in Design</i> , 0, , .	3.0	0

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60	Droplet solidification: Physics and modelling. <i>Applied Thermal Engineering</i> , 2023, 228, 120515.	6.0	6
61	Solidification modes during additive manufacturing of steel revealed by high-speed X-ray diffraction. <i>Acta Materialia</i> , 2023, 246, 118713.	7.9	16
62	The criterion of planar instability in alloy solidification under varying conditions: A viewpoint from free energy. <i>Journal of Applied Physics</i> , 2023, 133, .	2.5	1
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64	Cell invasion during competitive growth of polycrystalline solidification patterns. <i>Nature Communications</i> , 2023, 14, .	12.8	4
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71	Surface Nanorelief of Thin Films of Al–Mn and Al–Ni Alloys in the Case of Ion-Assisted Deposition on Glass. <i>Journal of Surface Investigation</i> , 2023, 17, 338-351.	0.5	0
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80	Validation and application of cellular automaton model for microstructure evolution in IN718 during directed energy deposition. Computational Materials Science, 2023, 230, 112450.	3.0	1
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83	The impact of convection on morphological instability of a planar crystallization front. International Journal of Heat and Mass Transfer, 2023, 217, 124654.	4.8	4
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