

Zhipeng Guo

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97
papers

1,715
citations

26
h-index

36
g-index

98
ext. papers

1,984
ext. citations

4.2
avg, IF

5.43
L-index

#	Paper	IF	Citations
97	A synchrotron X-ray radiography study of dendrite fragmentation induced by a pulsed electromagnetic field in an Al15Cu alloy. <i>Acta Materialia</i> , 2014 , 70, 228-239	8.4	137
96	Characterisation of the 3-D dendrite morphology of magnesium alloys using synchrotron X-ray tomography and 3-D phase-field modelling. <i>Acta Materialia</i> , 2015 , 92, 8-17	8.4	59
95	On solving the 3-D phase field equations by employing a parallel-adaptive mesh refinement (Para-AMR) algorithm. <i>Computer Physics Communications</i> , 2015 , 190, 89-97	4.2	59
94	Effect of different solute additions on dendrite morphology and orientation selection in cast binary magnesium alloys. <i>Acta Materialia</i> , 2016 , 112, 261-272	8.4	52
93	On the porosity induced by externally solidified crystals in high-pressure die-cast of AM60B alloy and its effect on crack initiation and propagation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 633, 35-41	5.3	51
92	The spatial and temporal distribution of dendrite fragmentation in solidifying Al-Cu alloys under different conditions. <i>Acta Materialia</i> , 2016 , 121, 384-395	8.4	47
91	Microstructure, mechanical properties and fracture mechanism of Ti2AlC reinforced AZ91D composites fabricated by stir casting. <i>Journal of Alloys and Compounds</i> , 2017 , 702, 199-208	5.7	44
90	Correlation between Porosity and Fracture Mechanism in High Pressure Die Casting of AM60B Alloy. <i>Journal of Materials Science and Technology</i> , 2016 , 32, 54-61	9.1	42
89	Phase Field Simulation of Binary Alloy Dendrite Growth Under Thermal- and Forced-Flow Fields: An Implementation of the Parallel-Multigrid Approach. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2013 , 44, 924-937	2.5	41
88	Improved mechanical properties in vacuum-assist high-pressure die casting of AZ91D alloy. <i>Journal of Materials Processing Technology</i> , 2016 , 231, 1-7	5.3	39
87	A Phase-Field Lattice-Boltzmann Study on Dendritic Growth of Al-Cu Alloy Under Convection. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018 , 49, 3603-3615	2.5	39
86	Failure behavior of high pressure die casting AZ91D magnesium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 672, 216-225	5.3	37
85	Atomistic underpinnings for growth direction and pattern formation of hcp magnesium alloy dendrite. <i>Acta Materialia</i> , 2018 , 161, 35-46	8.4	37
84	Development of a Para-AMR algorithm for simulating dendrite growth under convection using a phase-field lattice Boltzmann method. <i>Computer Physics Communications</i> , 2018 , 223, 18-27	4.2	35
83	Bio-inspired design of SiCf-reinforced multi-layered Ti-intermetallic composite. <i>Materials and Design</i> , 2016 , 101, 102-108	8.1	34
82	In situ high speed imaging study and modelling of the fatigue fragmentation of dendritic structures in ultrasonic fields. <i>Acta Materialia</i> , 2019 , 165, 388-397	8.4	33
81	Morphology evolution of η precipitates in a powder metallurgy Ni-base superalloy. <i>Materials Characterization</i> , 2018 , 139, 382-389	3.9	32

80	Dendritic Growth Under Natural and Forced Convection in Al-Cu Alloys: From Equiaxed to Columnar Dendrites and from 2D to 3D Phase-Field Simulations. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 1514-1526	2.5	31
79	On the growth mechanism of the primary silicon particle in a hypereutectic Al-20 wt%Si alloy using synchrotron X-ray tomography. <i>Materials and Design</i> , 2018 , 137, 176-183	8.1	31
78	Phase field study of the tip operating state of a freely growing dendrite against convection using a novel parallel multigrid approach. <i>Journal of Computational Physics</i> , 2014 , 257, 278-297	4.1	30
77	The influence of T6 treatment on fracture behavior of hypereutectic Al-Si HPDC casting alloy. <i>Journal of Alloys and Compounds</i> , 2018 , 731, 444-451	5.7	29
76	Characterization of the morphology of primary silicon particles using synchrotron X-ray tomography. <i>Materials Characterization</i> , 2017 , 123, 354-359	3.9	28
75	Three-dimensional numerical simulation of bubble rising in viscous liquids: A conservative phase-field lattice-Boltzmann study. <i>Physics of Fluids</i> , 2019 , 31, 063106	4.4	28
74	Determination of the interfacial heat transfer coefficient at the metal-sand mold interface in low pressure sand casting. <i>Experimental Thermal and Fluid Science</i> , 2017 , 88, 472-482	3	28
73	An implicit parallel multigrid computing scheme to solve coupled thermal-solute phase-field equations for dendrite evolution. <i>Journal of Computational Physics</i> , 2012 , 231, 1781-1796	4.1	27
72	Dendrites fragmentation induced by oscillating cavitation bubbles in ultrasound field. <i>Ultrasonics</i> , 2018 , 83, 26-32	3.5	27
71	Determination of Interfacial Heat Transfer Behavior at the Metal/Shot Sleeve of High Pressure Die Casting Process of AZ91D Alloy. <i>Journal of Materials Science and Technology</i> , 2017 , 33, 52-58	9.1	26
70	Atomic cluster structures, phase stability and physicochemical properties of binary Mg-X (X= Ag, Al, Ba, Ca, Gd, Sn, Y and Zn) alloys from ab-initio calculations. <i>Intermetallics</i> , 2018 , 95, 119-129	3.5	26
69	Correlation between crystallographic anisotropy and dendritic orientation selection of binary magnesium alloys. <i>Scientific Reports</i> , 2017 , 7, 13600	4.9	25
68	Quantitative phase-field lattice-Boltzmann study of lamellar eutectic growth under natural convection. <i>Physical Review E</i> , 2018 , 97, 053302	2.4	24
67	Atomistic Determination of Anisotropic Surface Energy-Associated Growth Patterns of Magnesium Alloy Dendrites. <i>ACS Omega</i> , 2017 , 2, 8803-8809	3.9	24
66	Eutectic pattern transition under different temperature gradients: A phase field study coupled with the parallel adaptive-mesh-refinement algorithm. <i>Journal of Applied Physics</i> , 2017 , 121, 125101	2.5	23
65	On the tensile failure induced by defect band in high pressure die casting of AM60B magnesium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 674, 687-695	5.3	22
64	Effect of as-cast microstructure heterogeneity on aging behavior of a high-pressure die-cast A380 alloy. <i>Materials Characterization</i> , 2018 , 135, 278-286	3.9	21
63	Phase-field-lattice Boltzmann simulation of dendrite motion using an immersed boundary method. <i>Computational Materials Science</i> , 2020 , 184, 109784	3.2	20

62	Mechanism of the growth pattern formation and three-dimensional morphological transition of hcp magnesium alloy dendrite. <i>Physical Review Materials</i> , 2018 , 2,	3.2	19
61	On the mechanism of dendritic fragmentation by ultrasound induced cavitation. <i>Ultrasonics Sonochemistry</i> , 2019 , 51, 160-165	8.9	19
60	Lamellar eutectic growth under forced convection: A phase-field lattice-Boltzmann study based on a modified Jackson-Hunt theory. <i>Physical Review E</i> , 2018 , 98,	2.4	19
59	Influence of melt flow on the formation of defect band in high pressure die casting of AZ91D magnesium alloy. <i>Materials Characterization</i> , 2017 , 129, 344-352	3.9	17
58	Growth behavior of β phase in a powder metallurgy nickel-based superalloy under interrupted cooling process. <i>Journal of Materials Science</i> , 2019 , 54, 2680-2689	4.3	16
57	Dependence of Lamellar Eutectic Growth with Convection on Boundary Conditions and Geometric Confinement: A Phase-Field Lattice-Boltzmann Study. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 517-530	2.5	15
56	Growth pattern and orientation selection of magnesium alloy dendrite: From 3-D experimental characterization to theoretical atomistic simulation. <i>Materials Today Communications</i> , 2017 , 13, 155-162	2.5	14
55	On the kinetics of dendritic sidebranching: A three dimensional phase field study. <i>Journal of Applied Physics</i> , 2016 , 119, 164305	2.5	13
54	Abnormal solute distribution near the eutectic triple point. <i>Scripta Materialia</i> , 2019 , 165, 64-67	5.6	13
53	Morphology transition of the primary silicon particles in a hypereutectic A390 alloy in high pressure die casting. <i>Scientific Reports</i> , 2017 , 7, 14994	4.9	12
52	Determination of the metal/die interfacial heat transfer coefficient of high pressure die cast B390 alloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012 , 33, 012010	0.4	12
51	Phase-Field Modeling of Microstructure Evolution in the Presence of Bubble During Solidification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020 , 51, 1023-1037	2.3	12
50	Effect of additional solute elements (X= Al, Ca, Y, Ba, Sn, Gd and Zn) on crystallographic anisotropy during the dendritic growth of magnesium alloys. <i>Journal of Alloys and Compounds</i> , 2019 , 775, 322-329	5.7	12
49	Development of a parallel adaptive multigrid algorithm for solving the multi-scale thermal-solute 3D phase-field problems. <i>Computational Materials Science</i> , 2018 , 142, 89-98	3.2	11
48	Phase-field lattice-Boltzmann investigation of dendritic evolution under different flow modes. <i>Philosophical Magazine</i> , 2019 , 99, 2920-2940	1.6	11
47	Effect of the forced flow on the permeability of dendritic networks: A study using phase-field-lattice Boltzmann method. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 131, 196-205	4.9	11
46	Microstructure evolution and bonding mechanism of Ti2SnC-Ti6Al4V joint by using Cu pure foil interlayer. <i>Materials Characterization</i> , 2017 , 127, 53-59	3.9	10
45	Development of a Fluid-Particle Model in Simulating the Motion of External Solidified Crystals and the Evolution of Defect Bands in High-Pressure Die Casting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016 , 47, 939-947	2.5	10

44	Conservative phase-field method with a parallel and adaptive-mesh-refinement technique for interface tracking. <i>Physical Review E</i> , 2019 , 100, 023305	2.4	10
43	Influence of slow-shot speed on PSPs and porosity of AlSi17Cu2.5 alloy during high pressure die casting. <i>Journal of Materials Processing Technology</i> , 2019 , 268, 63-69	5.3	10
42	Three-dimensional thermosolutal simulation of dendritic and eutectic growth. <i>Computational Materials Science</i> , 2020 , 171, 109274	3.2	10
41	On the characterization of microstructure and fracture in a high-pressure die-casting Al-10 wt%Si alloy. <i>Progress in Natural Science: Materials International</i> , 2020 , 30, 221-228	3.6	9
40	Interface microstructure of the brazed zirconia and Ti-6Al-4V using Ti-based amorphous filler. <i>Science of Sintering</i> , 2013 , 45, 313-321	0.7	9
39	Effect of runner design on the externally solidified crystals in vacuum die-cast Mg-3.0Nd-0.3Zn-0.6Zr alloy. <i>Journal of Materials Processing Technology</i> , 2019 , 267, 366-375	5.3	9
38	On the formation mechanism of the ring-like microstructure of high-pressure die-cast A390 alloy. <i>Materials Characterization</i> , 2018 , 140, 179-188	3.9	9
37	Multiphase and multiphysics modeling of dendrite growth and gas porosity evolution during solidification. <i>Acta Materialia</i> , 2021 , 214, 117005	8.4	9
36	Simulation of 3-D lithium dendritic evolution under multiple electrochemical states: A parallel phase field approach. <i>Energy Storage Materials</i> , 2020 , 30, 52-58	19.4	7
35	Microstructural evolution mechanism of semi-solid slurry: a study using Phase-Field-Lattice-Boltzmann scheme. <i>Journal of Materials Processing Technology</i> , 2020 , 280, 116592	5.3	7
34	Solution to Multiscale and Multiphysics Problems: A Phase-Field Study of Fully Coupled Thermal-Solute-Convection Dendrite Growth. <i>Advanced Theory and Simulations</i> , 2021 , 4, 2000251	3.5	7
33	On the failure mechanism for high pressure die casting A390 hypereutectic alloy in low cycle and high cycle fatigue. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 723, 48-55	5.3	6
32	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	2.4	6
31	Skin layer of A380 aluminium alloy die castings and its blistering during solution treatment. <i>Journal of Materials Science and Technology</i> , 2019 , 35, 1906-1916	9.1	5
30	Regulating lamellar eutectic trajectory through external perturbations. <i>Physical Review E</i> , 2020 , 101, 061301	2.4	5
29	Characterization of the Grain Structures in Vacuum-Assist High-Pressure Die Casting AM60B Alloy. <i>Acta Metallurgica Sinica (English Letters)</i> , 2016 , 29, 619-628	2.5	5
28	Phase-field lattice-Boltzmann study on eutectic growth with coupled heat and solute diffusion. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 145, 118778	4.9	5
27	Interfacial heat transfer coefficient between metal and die during high pressure die casting process of aluminum alloy. <i>Frontiers of Mechanical Engineering in China</i> , 2007 , 2, 283-287		5

26	Characteristics of Fe-rich intermetallics compounds and their influence on the cracking behavior of a newly developed high-pressure die cast AlMg ₂ Fe alloy. <i>Journal of Alloys and Compounds</i> , 2021 , 854, 157121	5.7	5
25	Modelling and simulation for die casting mould filling process using Cartesian cut cell approach. <i>International Journal of Cast Metals Research</i> , 2015 , 28, 234-241	1	4
24	Phase field simulation of multi-dendrite growth in a coupled thermal-solute-convective environment. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012 , 33, 012101	0.4	4
23	Grain Refinement of a Powder Nickel-Base Superalloy Using Hot Deformation and Slow-Cooling. <i>Materials</i> , 2018 , 11,	3.5	4
22	Study of dendritic growth and coarsening using a 3-D phase field model: Implementation of the Para-AMR algorithm. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015 , 84, 012067	0.4	3
21	Cancer classification using entropy analysis in fractional Fourier domain of gene expression profile. <i>Biotechnology and Biotechnological Equipment</i> , 2018 , 32, 1042-1046	1.6	3
20	Effect of Temperature Gradient on the Grain Size Homogeneity of SEED Produced Semi-Solid Slurries by Phase-Field Simulation. <i>Materials</i> , 2019 , 12,	3.5	3
19	Understanding of the influence of process parameters on the heat transfer behavior at the metal/die interface in high pressure die casting process. <i>Science in China Series D: Earth Sciences</i> , 2009 , 52, 172-175		3
18	Microstructure and mechanical properties of high-pressure die cast pure copper. <i>Journal of Materials Processing Technology</i> , 2020 , 275, 116377	5.3	3
17	Multiscale Simulation of Mg Dendrite Growth via 3D Phase Field Modeling and Ab Initio First Principle Calculations. <i>Minerals, Metals and Materials Series</i> , 2017 , 263-272	0.3	2
16	Two- and three- dimensional studies of dendritic morphology in magnesium alloy by means of synchrotron X-ray microtomography and cellular automaton modelling. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015 , 84, 012040	0.4	2
15	3D Phase Field Modeling of Multi-Dendrites Evolution in Solidification and Validation by Synchrotron X-ray Tomography. <i>Materials</i> , 2021 , 14,	3.5	2
14	Evolution of specific interface area during solidification: A three-dimensional thermosolutal phase-field study. <i>Computer Physics Communications</i> , 2021 , 267, 108042	4.2	2
13	Experiments and Modeling of Three-Dimensional Dendritic Morphology of Magnesium Alloy 2015 , 55-61		1
12	Comparisons of fat quantification methods based on MRI segmentation 2014 ,		1
11	Modelling and Experiments Concerning Dendrite Re-Melting and Its Role in Microstructural Evolution in Spray Formed Ni Superalloys. <i>Materials Science Forum</i> , 2010 , 654-656, 1363-1366	0.4	1
10	Effect of laser shock on lamellar eutectic growth: A phase-field study. <i>International Journal of Heat and Mass Transfer</i> , 2022 , 183, 122069	4.9	1
9	Experiments and Modeling of Three-Dimensional Dendritic Morphology of Magnesium Alloy 2015 , 55-61		1

8	Dendrite Morphology and Growth Orientation of Magnesium Alloys: Simulation by Phase-Field and 3-D Characterization by Synchrotron X-Ray Tomography 2016 , 35-39		1
7	Dendrite Morphology And Growth Orientation Of Magnesium Alloys: Simulation By Phase-Field And 3-D Characterization By Synchrotron X-Ray Tomography 2016 , 35-39		1
6	A Study on the Effect of Ultrasonic Treatment on the Microstructure of Sn-30 wt.% Bi Alloy. <i>Materials</i> , 2018 , 11,	3.5	1
5	Multiphase-field modelling of hydrogen pore evolution during alloy solidification. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020 , 861, 012021	0.4	0
4	Phase Field Modelling of Dendrite Fragmentation during Thermal Shock. <i>Materials Science Forum</i> , 2010 , 654-656, 1524-1527	0.4	
3	A Study on Heat Transfer at Metal/Die Interface During High Pressure Die Casting of AM60B Alloy 2013 , 3041-3049		
2	Study of Coherent Solid Dendritic Precipitate Transformation Using a Phase-Field Model: Implementation of a Parallel Multigrid Scheme. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018 , 394, 032089	0.4	
1	Numerical investigation of eutectic growth dynamics under convection by 3D phase-field method. <i>Computers and Mathematics With Applications</i> , 2022 , 114, 83-94	2.7	