

# Zhipeng Guo

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8569281/publications.pdf>

Version: 2024-02-01

96  
papers

2,320  
citations

159573

30  
h-index

254170

43  
g-index

98  
all docs

98  
docs citations

98  
times ranked

1133  
citing authors

#	ARTICLE	IF	CITATIONS
1	A synchrotron X-ray radiography study of dendrite fragmentation induced by a pulsed electromagnetic field in an Al-15Cu alloy. <i>Acta Materialia</i> , 2014, 70, 228-239.	7.9	174
2	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.	7.9	77
3	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.	5.5	77
4	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.	7.5	72
5	The spatial and temporal distribution of dendrite fragmentation in solidifying Al-Cu alloys under different conditions. <i>Acta Materialia</i> , 2016, 121, 384-395.	7.9	69
6	Effect of different solute additions on dendrite morphology and orientation selection in cast binary magnesium alloys. <i>Acta Materialia</i> , 2016, 112, 261-272.	7.9	66
7	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 &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 633, 35-41.	5.6	62
8	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.	10.7	60
9	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.	7.9	58
10	Morphology evolution of $\text{Al}_2\text{O}_3$ precipitates in a powder metallurgy Ni-base superalloy. <i>Materials Characterization</i> , 2018, 139, 382-389.	4.4	55
11	Improved mechanical properties in vacuum-assist high-pressure die casting of AZ91D alloy. <i>Journal of Materials Processing Technology</i> , 2016, 231, 1-7.	6.3	52
12	Atomistic underpinnings for growth direction and pattern formation of hcp magnesium alloy dendrite. <i>Acta Materialia</i> , 2018, 161, 35-46.	7.9	52
13	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.	2.1	47
14	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.	2.1	47
15	Failure behavior of high pressure die casting AZ91D magnesium alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 672, 216-225.	5.6	45
16	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.	2.1	45
17	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.	7.0	42
18	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.	7.5	42

#	ARTICLE	IF	CITATIONS
19	Bio-inspired design of SiCf-reinforced multi-layered Ti-intermetallic composite. <i>Materials and Design</i> , 2016, 101, 102-108.	7.0	39
20	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.	5.5	39
21	Dendrites fragmentation induced by oscillating cavitation bubbles in ultrasound field. <i>Ultrasonics</i> , 2018, 83, 26-32.	3.9	38
22	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.	4.0	36
23	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.	3.8	35
24	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.	3.8	35
25	Characterization of the morphology of primary silicon particles using synchrotron X-ray tomography. <i>Materials Characterization</i> , 2017, 123, 354-359.	4.4	34
26	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.	2.7	34
27	Atomic cluster structures, phase stability and physicochemical properties of binary Mg-X (X= Ag, Al). <i>Tj ETQq1 1 0.784314 rgBT /Over</i>	3.9	34
28	Phase-field-lattice Boltzmann simulation of dendrite motion using an immersed boundary method. <i>Computational Materials Science</i> , 2020, 184, 109784.	3.0	34
29	Multiphase and multiphysics modeling of dendrite growth and gas porosity evolution during solidification. <i>Acta Materialia</i> , 2021, 214, 117005.	7.9	34
30	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.	4.4	32
31	On the mechanism of dendritic fragmentation by ultrasound induced cavitation. <i>Ultrasonics Sonochemistry</i> , 2019, 51, 160-165.	8.2	32
32	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.	10.7	31
33	Correlation between crystallographic anisotropy and dendritic orientation selection of binary magnesium alloys. <i>Scientific Reports</i> , 2017, 7, 13600.	3.3	29
34	Atomistic Determination of Anisotropic Surface Energy-Associated Growth Patterns of Magnesium Alloy Dendrites. <i>ACS Omega</i> , 2017, 2, 8803-8809.	3.5	27
35	On the tensile failure induced by defect band in high pressure die casting of AM60B magnesium alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 674, 687-695.	5.6	26
36	Quantitative phase-field lattice-Boltzmann study of lamellar eutectic growth under natural convection. <i>Physical Review E</i> , 2018, 97, 053302.	2.1	26

#	ARTICLE	IF	CITATIONS
37	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, .	2.5	25
38	Growth behavior of $\beta$ phase in a powder metallurgy nickel-based superalloy under interrupted cooling process. <i>Journal of Materials Science</i> , 2019, 54, 2680-2689.	3.7	23
39	Mechanism of the growth pattern formation and three-dimensional morphological transition of hcp magnesium alloy dendrite. <i>Physical Review Materials</i> , 2018, 2, .	2.4	23
40	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.	4.4	21
41	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, .	2.1	21
42	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.	2.2	21
43	On the kinetics of dendritic sidebranching: A three dimensional phase field study. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	20
44	On the characterization of microstructure and fracture in a high-pressure die-casting Al-10wt%Si alloy. <i>Progress in Natural Science: Materials International</i> , 2020, 30, 221-228.	4.4	18
45	Microstructure evolution and bonding mechanism of Ti2SnC-Ti6Al4V joint by using Cu pure foil interlayer. <i>Materials Characterization</i> , 2017, 127, 53-59.	4.4	17
46	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.	1.9	17
47	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.	2.1	17
48	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.	18.0	17
49	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.	4.8	16
50	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.	6.3	16
51	Phase-field lattice-Boltzmann investigation of dendritic evolution under different flow modes. <i>Philosophical Magazine</i> , 2019, 99, 2920-2940.	1.6	15
52	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.	5.5	15
53	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.	2.1	14
54	Morphology transition of the primary silicon particles in a hypereutectic A390 alloy in high pressure die casting. <i>Scientific Reports</i> , 2017, 7, 14994.	3.3	14

#	ARTICLE	IF	CITATIONS
55	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.	3.0	14
56	Conservative phase-field method with a parallel and adaptive-mesh-refinement technique for interface tracking. <i>Physical Review E</i> , 2019, 100, 023305.	2.1	14
57	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.	6.3	14
58	Abnormal solute distribution near the eutectic triple point. <i>Scripta Materialia</i> , 2019, 165, 64-67.	5.2	13
59	Characteristics of Fe-rich intermetallics compounds and their influence on the cracking behavior of a newly developed high-pressure die cast Al-4Mg-2Fe alloy. <i>Journal of Alloys and Compounds</i> , 2021, 854, 157121.	5.5	13
60	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.	2.8	13
61	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.	0.6	12
62	On the formation mechanism of the ring-like microstructure of high-pressure die-cast A390 alloy. <i>Materials Characterization</i> , 2018, 140, 179-188.	4.4	12
63	Three-dimensional thermosolutal simulation of dendritic and eutectic growth. <i>Computational Materials Science</i> , 2020, 171, 109274.	3.0	12
64	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.	6.3	11
65	Interface microstructure of the brazed zirconia and Ti-6Al-4V using Ti-based amorphous filler. <i>Science of Sintering</i> , 2013, 45, 313-321.	1.4	10
66	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.	2.9	8
67	On the failure mechanism for high pressure die casting A390 hypereutectic alloy in low cycle and high cycle fatigue. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 723, 48-55.	5.6	8
68	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.	10.7	8
69	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
70	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.	4.8	7
71	Effect of Temperature Gradient on the Grain Size Homogeneity of SEED Produced Semi-Solid Slurries by Phase-Field Simulation. <i>Materials</i> , 2019, 12, 3309.	2.9	7
72	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.	1.0	6

#	ARTICLE	IF	CITATIONS
73	Regulating lamellar eutectic trajectory through external perturbations. <i>Physical Review E</i> , 2020, 101, 061301.	2.1	6
74	Evolution of specific interface area during solidification: A three-dimensional thermosolutal phase-field study. <i>Computer Physics Communications</i> , 2021, 267, 108042.	7.5	6
75	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.	0.4	5
76	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.	0.6	5
77	Microstructure and mechanical properties of high-pressure die cast pure copper. <i>Journal of Materials Processing Technology</i> , 2020, 275, 116377.	6.3	5
78	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.	0.6	4
79	Cancer classification using entropy analysis in fractional Fourier domain of gene expression profile. <i>Biotechnology and Biotechnological Equipment</i> , 2018, 32, 1042-1046.	1.3	4
80	Grain Refinement of a Powder Nickel-Base Superalloy Using Hot Deformation and Slow-Cooling. <i>Materials</i> , 2018, 11, 1978.	2.9	4
81	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.	0.9	3
82	A Study on the Effect of Ultrasonic Treatment on the Microstructure of Sn-30 wt.% Bi Alloy. <i>Materials</i> , 2018, 11, 1870.	2.9	3
83	Effect of laser shock on lamellar eutectic growth: A phase-field study. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122069.	4.8	3
84	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.	0.6	2
85	Multiscale Simulation of $\hat{\pm}$ -Mg Dendrite Growth via 3D Phase Field Modeling and Ab Initio First Principle Calculations. <i>Minerals, Metals and Materials Series</i> , 2017, , 263-272.	0.4	2
86	Multiphase-field modelling of hydrogen pore evolution during alloy solidification. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 861, 012021.	0.6	2
87	3D Phase Field Modeling of Multi-Dendrites Evolution in Solidification and Validation by Synchrotron X-ray Tomography. <i>Materials</i> , 2021, 14, 520.	2.9	2
88	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.	0.3	1
89	Comparisons of fat quantification methods based on MRI segmentation. , 2014, , .		1
90	Experiments and Modeling of Three-Dimensional Dendritic Morphology of Magnesium Alloy. , 2015, , 55-61.		1

#	ARTICLE	IF	CITATIONS
91	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
92	Numerical investigation of eutectic growth dynamics under convection by 3D phase-field method. Computers and Mathematics With Applications, 2022, 114, 83-94.	2.7	1
93	A Study on the Trajectories of Mesoscale Convective Systems and Their Environmental Physical Field Values Using GMS Image. , 2006, , .		0
94	Phase Field Modelling of Dendrite Fragmentation during Thermal Shock. Materials Science Forum, 2010, 654-656, 1524-1527.	0.3	0
95	Study of Coherent Solid Dendritic Precipitate Transformation Using a Phase-Field Model: Implementation of a Parallel Multigrid Scheme. IOP Conference Series: Materials Science and Engineering, 2018, 394, 032089.	0.6	0
96	A Study on Heat Transfer at Metal/Die Interface During High Pressure Die Casting of AM60B Alloy. , 2013, , 3041-3049.		0