

Junjie Li

List of Publications by Year in descending order

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99
papers

2,834
citations

201575

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197736

49
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99
docs citations

99
times ranked

1810
citing authors

#	ARTICLE	IF	CITATIONS
1	Designing eutectic high entropy alloys of CoCrFeNiNb x. Journal of Alloys and Compounds, 2016, 656, 284-289.	2.8	340
2	Phase separation of metastable CoCrFeNi high entropy alloy at intermediate temperatures. Scripta Materialia, 2017, 126, 15-19.	2.6	212
3	Uncovering the eutectics design by machine learning in the Al-Co-Cr-Fe-Ni high entropy system. Acta Materialia, 2020, 182, 278-286.	3.8	143
4	Phase-field study of competitive dendritic growth of converging grains during directional solidification. Acta Materialia, 2012, 60, 1478-1493.	3.8	131
5	Stability of lamellar structures in CoCrFeNiNb _x eutectic high entropy alloys at elevated temperatures. Materials and Design, 2016, 104, 259-264.	3.3	128
6	A casting eutectic high entropy alloy with superior strength-ductility combination. Materials Letters, 2019, 253, 268-271.	1.3	109
7	Strengthening the CoCrFeNiNb _{0.25} high entropy alloy by FCC precipitate. Journal of Alloys and Compounds, 2016, 667, 53-57.	2.8	106
8	Solid solution island of the Co-Cr-Fe-Ni high entropy alloy system. Scripta Materialia, 2017, 131, 42-46.	2.6	81
9	Finite element analysis and experimental validation of the thermomechanical behavior in laser solid forming of Ti-6Al-4V. Additive Manufacturing, 2018, 21, 30-40.	1.7	81
10	Kinetic Pathways and Mechanisms of Two-Step Nucleation in Crystallization. Journal of Physical Chemistry Letters, 2016, 7, 5008-5014.	2.1	50
11	Phase field modeling the selection mechanism of primary dendritic spacing in directional solidification. Acta Materialia, 2012, 60, 1957-1964.	3.8	48
12	The intrinsic mechanism of corrosion resistance for FCC high entropy alloys. Science China Technological Sciences, 2018, 61, 189-196.	2.0	48
13	Tailoring nanoprecipitates for ultra-strong high-entropy alloys via machine learning and prestrain aging. Journal of Materials Science and Technology, 2021, 69, 156-167.	5.6	48
14	Solid solubility, precipitates, and stacking fault energy of micro-alloyed CoCrFeNi high entropy alloys. Journal of Alloys and Compounds, 2018, 769, 490-502.	2.8	46
15	Direct laser deposited bulk CoCrFeNiNb _x high entropy alloys. Intermetallics, 2019, 114, 106592.	1.8	45
16	Effect of initial particle size distribution on the dynamics of transient Ostwald ripening: A phase field study. Acta Materialia, 2015, 90, 10-26.	3.8	43
17	Abnormal $\hat{\nu}^3$ - $\hat{\mu}$ phase transformation in the CoCrFeNiNb _{0.25} high entropy alloy. Scripta Materialia, 2018, 146, 281-285.	2.6	43
18	Tuning the defects in face centered cubic high entropy alloy via temperature-dependent stacking fault energy. Scripta Materialia, 2018, 155, 134-138.	2.6	41

#	ARTICLE	IF	CITATIONS
19	Remelting induced fully-equiaxed microstructures with anomalous eutectics in the additive manufactured Ni ₃₂ Co ₃₀ Cr ₁₀ Fe ₁₀ Al ₁₈ eutectic high-entropy alloy. Scripta Materialia, 2021, 201, 113952.	2.6	41
20	Substrate design to minimize residual stresses in Directed Energy Deposition AM processes. Materials and Design, 2021, 202, 109525.	3.3	39
21	Phase-field-crystal simulation of nonequilibrium crystal growth. Physical Review E, 2014, 89, 012405.	0.8	38
22	Branching-induced grain boundary evolution during directional solidification of columnar dendritic grains. Acta Materialia, 2017, 136, 148-163.	3.8	37
23	Two-way design of alloys for advanced ultra supercritical plants based on machine learning. Computational Materials Science, 2018, 155, 331-339.	1.4	37
24	Phase-field simulation of microstructure development involving nucleation and crystallographic orientations in alloy solidification. Journal of Crystal Growth, 2007, 309, 65-69.	0.7	34
25	Microstructure and mechanical properties of forging-additive hybrid manufactured Ti-6Al-4V alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 811, 140984.	2.6	34
26	The phase stability of Ni ₂ CrFeMox multi-principal-component alloys with medium configurational entropy. Materials and Design, 2015, 85, 1-6.	3.3	29
27	Kinetic ways of tailoring phases in high entropy alloys. Scientific Reports, 2016, 6, 34628.	1.6	29
28	Molecular dynamics investigation of the local structure in iron melts and its role in crystal nucleation during rapid solidification. Physical Chemistry Chemical Physics, 2019, 21, 4122-4135.	1.3	29
29	Anomalous overgrowth of converging dendrites during directional solidification. Journal of Crystal Growth, 2014, 402, 210-214.	0.7	28
30	Interfacial undercooling in solidification of colloidal suspensions: analyses with quantitative measurements. Scientific Reports, 2016, 6, 28434.	1.6	28
31	Grouping strategy in eutectic multi-principal-component alloys. Materials Chemistry and Physics, 2019, 221, 138-143.	2.0	27
32	Revealing the Selection of $\sqrt{3}$ and $\sqrt{2}$ Phases in CoCrFeNiMox High Entropy Alloys by CALPHAD. Journal of Phase Equilibria and Diffusion, 2018, 39, 446-453.	0.5	25
33	Non-uniplanar competitive growth of columnar dendritic grains during directional solidification in quasi-2D and 3D configurations. Materials and Design, 2018, 151, 141-153.	3.3	23
34	Coupling eutectic nucleation mechanism investigated by phase field crystal model. Acta Materialia, 2018, 145, 175-185.	3.8	22
35	The incredible excess entropy in high entropy alloys. Scripta Materialia, 2019, 168, 19-22.	2.6	22
36	Single Ice Crystal Growth with Controlled Orientation during Directional Freezing. Journal of Physical Chemistry B, 2021, 125, 970-979.	1.2	22

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37	Anomalous effect of lattice misfit on the coarsening behavior of multicomponent L12 phase. <i>Scripta Materialia</i> , 2020, 183, 111-116.	2.6	22
38	<i>In situ</i> observation the interface undercooling of freezing colloidal suspensions with differential visualization method. <i>Review of Scientific Instruments</i> , 2015, 86, 084901.	0.6	21
39	Predicting growth direction of tilted dendritic arrays during directional solidification. <i>Journal of Crystal Growth</i> , 2011, 328, 108-113.	0.7	20
40	Preparation of poly (L-lactic acid) with aligned structures by unidirectional freezing. <i>Polymers for Advanced Technologies</i> , 2015, 26, 606-612.	1.6	20
41	Interfacial free energy adjustable phase field crystal model for homogeneous nucleation. <i>Soft Matter</i> , 2016, 12, 4666-4673.	1.2	20
42	Elemental partitioning as a route to design precipitation-hardened high entropy alloys. <i>Journal of Materials Science and Technology</i> , 2021, 72, 52-60.	5.6	20
43	Rapid alloy design from superior eutectic high-entropy alloys. <i>Scripta Materialia</i> , 2022, 219, 114875.	2.6	20
44	Origins of the mechanical property heterogeneity in a hybrid additive manufactured Hastelloy X. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 823, 141716.	2.6	19
45	Phase selection of BCC/B2 phases for the improvement of tensile behaviors in FeNiCrAl medium entropy alloy. <i>Journal of Alloys and Compounds</i> , 2022, 916, 165382.	2.8	19
46	Eutectic dual-phase microstructure modulated porous high-entropy alloys as high-performance bifunctional electrocatalysts for water splitting. <i>Journal of Materials Chemistry A</i> , 2022, 10, 11110-11120.	5.2	18
47	Atomic-scale dynamic observation reveals temperature-dependent multistep nucleation pathways in crystallization. <i>Nanoscale Horizons</i> , 2019, 4, 1302-1309.	4.1	17
48	Design Fe-based Eutectic Medium-Entropy Alloys Fe ₂ NiCrNbx. <i>Acta Metallurgica Sinica (English)</i> Tj ETQqO 0 0 rgBT /Qverlock 10 Tf 50 30	1.5	17
49	Quantitative investigation of cellular growth in directional solidification by phase-field simulation. <i>Physical Review E</i> , 2011, 84, 041604.	0.8	16
50	Modified phase-field-crystal model for solid-liquid phase transitions. <i>Physical Review E</i> , 2015, 92, 013309.	0.8	16
51	Simulation-assisted investigation on the formation of layer bands and the microstructural evolution in directed energy deposition of Ti6Al4V blocks. <i>Virtual and Physical Prototyping</i> , 2021, 16, 387-403.	5.3	16
52	Dynamic particle packing in freezing colloidal suspensions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017, 531, 93-98.	2.3	15
53	Modeling of the Effect of the Building Strategy on the Thermomechanical Response of Ti-6Al-4V Rectangular Parts Manufactured by Laser Directed Energy Deposition. <i>Metals</i> , 2020, 10, 1643.	1.0	15
54	Dislocation nucleation from Zr-Nb bimetal interfaces cooperating with the dynamic evolution of interfacial dislocations. <i>International Journal of Plasticity</i> , 2020, 135, 102830.	4.1	15

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55	A precipitation-strengthened high-entropy alloy for additive manufacturing. <i>Additive Manufacturing</i> , 2020, 35, 101410.	1.7	15
56	Strain mapping in nanocrystalline grains simulated by phase field crystal model. <i>Philosophical Magazine</i> , 2015, 95, 973-984.	0.7	11
57	Atomistic Mechanism Underlying Nucleation in Al-Cu Alloys with Different Compositions and Cooling Rates. <i>Journal of Physical Chemistry C</i> , 2021, 125, 3480-3494.	1.5	11
58	A microstructure-informatic strategy for Vickers hardness forecast of austenitic steels from experimental data. <i>Materials and Design</i> , 2021, 201, 109497.	3.3	11
59	Heterogeneous microstructure of the bonding zone and its dependence on preheating in hybrid manufactured Ti-6Al-4V. <i>Materials Research Letters</i> , 2021, 9, 422-428.	4.1	10
60	Novel B2-strengthening Ni-Co-Cr-Al medium-entropy alloys with prominent mechanical performance. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 840, 142856.	2.6	10
61	Endless recrystallization of high-entropy alloys at high temperature. <i>Journal of Materials Science and Technology</i> , 2022, 128, 71-81.	5.6	9
62	Investigation into microsegregation during solidification of a binary alloy by phase-field simulations. <i>Journal of Crystal Growth</i> , 2009, 311, 1217-1222.	0.7	8
63	Unique visualization of multiply oriented lattice structures using a continuous wavelet transform. <i>Computer Physics Communications</i> , 2013, 184, 2489-2493.	3.0	8
64	Yielding and jerky plasticity of tilt grain boundaries in high-temperature graphene. <i>Carbon</i> , 2019, 153, 242-256.	5.4	8
65	Phase-field simulation of microstructure evolution in electron beam additive manufacturing. <i>European Physical Journal E</i> , 2020, 43, 35.	0.7	8
66	Phase-field-crystal investigation of the morphology of a steady-state dendrite tip on the atomic scale. <i>Physical Review E</i> , 2017, 95, 062803.	0.8	7
67	In situ observation of the unstable lens growth in freezing colloidal suspensions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018, 553, 681-688.	2.3	7
68	GPU-accelerated phase field simulation of directional solidification. <i>Science China Technological Sciences</i> , 2014, 57, 1191-1197.	2.0	5
69	Uncoupling Growth Mechanisms of Binary Eutectics during Rapid Solidification. <i>Journal of Physical Chemistry C</i> , 2017, 121, 8204-8210.	1.5	5
70	Elastic strain response in the modified phase-field-crystal model. <i>Chinese Physics B</i> , 2017, 26, 090702.	0.7	5
71	Size effects of shear deformation response for nano-single crystals examined by the phase-field-crystal model. <i>Computational Materials Science</i> , 2017, 127, 121-127.	1.4	5
72	Interactions between Nanoparticles and Polymers in the Diffusion Boundary Layer during Freezing Colloidal Suspensions. <i>Langmuir</i> , 2019, 35, 10446-10452.	1.6	5

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73	Distinct Recrystallization Kinetics in Ni-Co-Cr-Fe-Based Single-Phase High-Entropy Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3799-3810.	1.1	5
74	Non-monotonous effect of pre-strain on the precipitates and strengthening mechanisms of high-entropy alloys. Journal of Alloys and Compounds, 2022, 906, 164338.	2.8	5
75	Material microstructures analyzed by using gray level Co-occurrence matrices. Chinese Physics B, 2017, 26, 098104.	0.7	4
76	Speed-dependent ice bandings in freezing colloidal suspensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 543, 126-132.	2.3	4
77	The formation mechanism of special globular surface grain during the solidification of laser surface remelted near β titanium alloys. Computational Materials Science, 2021, 191, 110353.	1.4	4
78	The planar instability during unidirectional freezing of a macromolecular polymer solution: Diffusion-controlled or not?. Physica B: Condensed Matter, 2021, 610, 412923.	1.3	4
79	Global-Oriented Strategy for Searching Ultrastrength Martensitic Stainless Steels. Advanced Theory and Simulations, 0, , 2100411.	1.3	4
80	Deformation Behaviors of an Additive-Manufactured Ni ₃₂ Co ₃₀ Cr ₁₀ Fe ₁₀ Al ₁₈ Eutectic High Entropy Alloy at Ambient and Elevated Temperatures. Acta Metallurgica Sinica (English Letters), 2022, 35, 1607-1616.	1.5	4
81	Understanding sustained coarsening driven by cyclic phase transformation in additively manufactured Ti-6Al-4V. Journal of Alloys and Compounds, 2022, 914, 165322.	2.8	4
82	Effects of a disconnection dipole on the shear-coupled grain boundary migration. Computational Materials Science, 2015, 109, 253-257.	1.4	3
83	Precisely detecting atomic position of atomic intensity images. Ultramicroscopy, 2015, 150, 74-78.	0.8	3
84	Existence and forming mechanism of metastable phase in crystallization. Computational Materials Science, 2016, 122, 167-176.	1.4	3
85	Effect of secondary arm orientation on unusual overgrowth at converging grain boundary during directional solidification in 3D. Computational Materials Science, 2020, 176, 109531.	1.4	3
86	Quantitative determination of tip undercooling of faceted sea ice with in situ experiments. Journal of Physics Condensed Matter, 2021, 33, 36LT01.	0.7	3
87	On Ti6Al4V Microsegregation in Electron Beam Additive Manufacturing with Multiphase-Field Simulation Coupled with Thermodynamic Data. Acta Metallurgica Sinica (English Letters), 0, , 1.	1.5	3
88	Crossover from lamellar to intersected ice morphologies within a single ice crystal during unidirectional freezing of an aqueous solution. Journal of Crystal Growth, 2022, 577, 126398.	0.7	3
89	Competitive growth of diverging columnar grains during directional solidification: A three-dimensional phase-field study. Computational Materials Science, 2022, 210, 111061.	1.4	3
90	Phase field modeling for dendritic morphology transition and micro-segregation in multi-component alloys. Science in China Series D: Earth Sciences, 2009, 52, 344-351.	0.9	2

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91	Tilting Behavior of Lamellar Ice Tip during Unidirectional Freezing of Aqueous Solutions. Langmuir, 2021, 37, 10579-10587.	1.6	2
92	A neural-network based framework of developing cross interaction in alloy embedded-atom method potentials: application to Zr-Nb alloy. Journal of Physics Condensed Matter, 2021, 33, 084004.	0.7	2
93	Connections between structural characteristics and crystal nucleation of Al-Sm glasses near glass transition temperature. Journal of Non-Crystalline Solids, 2022, 588, 121637.	1.5	2
94	Competitive grain growth in directional solidification investigated by phase field simulation. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012098.	0.3	1
95	Atomic investigation of steady-state dendrite tips by using phase-field crystal method. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012070.	0.3	1
96	Phase-field study on the effect of initial particle aggregation on the transient coarsening behaviors. Modelling and Simulation in Materials Science and Engineering, 2020, 28, 075007.	0.8	1
97	Atomistic investigation of homogeneous nucleation in undercooled liquid. Philosophical Magazine, 2017, 97, 2255-2267.	0.7	0
98	Remelting Induced Fully-Equiaxed Microstructures with Anomalous Eutectics in the Additive Manufactured Ni ₃₂ Co ₃₀ Cr ₁₀ Fe ₁₀ Al ₁₈ Eutectic High-Entropy Alloy. SSRN Electronic Journal, 0, , .	0.4	0
99	In-situ comparison of interface instability of basal and edge planes during unidirectional growth of sea ice. Journal of Colloid and Interface Science, 2022, 625, 169-177.	5.0	0