

Dong-Ke Sun

List of Publications by Year in descending order

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64
papers

1,450
citations

361045

20
h-index

344852

36
g-index

65
all docs

65
docs citations

65
times ranked

1205
citing authors

#	ARTICLE	IF	CITATIONS
1	Comprehensive Determination of Kinetic Parameters in Solid-State Phase Transitions: An Extended Johnson-Mehl-Avrami-Kolmogorov Model with Analytical Solutions. <i>Crystal Growth and Design</i> , 2016, 16, 2404-2415.	1.4	206
2	Lattice Boltzmann modeling of dendritic growth in a forced melt convection. <i>Acta Materialia</i> , 2009, 57, 1755-1767.	3.8	134
3	A comparative study of local and nonlocal Allen-Cahn equations with mass conservation. <i>International Journal of Heat and Mass Transfer</i> , 2018, 122, 631-642.	2.5	77
4	Visual detection of mixed organophosphorous pesticide using QD-AChE aerogel based microfluidic arrays sensor. <i>Biosensors and Bioelectronics</i> , 2019, 136, 112-117.	5.3	70
5	Lattice Boltzmann modeling of dendritic growth in forced and natural convection. <i>Computers and Mathematics With Applications</i> , 2011, 61, 3585-3592.	1.4	62
6	Lattice Boltzmann Modeling of Droplet Condensation on Superhydrophobic Nanoarrays. <i>Langmuir</i> , 2014, 30, 12559-12569.	1.6	54
7	Lattice Boltzmann modeling of bubble formation and dendritic growth in solidification of binary alloys. <i>International Journal of Heat and Mass Transfer</i> , 2016, 94, 474-487.	2.5	54
8	An anisotropic lattice Boltzmann Phase field scheme for numerical simulations of dendritic growth with melt convection. <i>International Journal of Heat and Mass Transfer</i> , 2019, 133, 1240-1250.	2.5	48
9	High-throughput inertial particle focusing in a curved microchannel: Insights into the flow-rate regulation mechanism and process model. <i>Biomicrofluidics</i> , 2013, 7, 44116.	1.2	46
10	Interpolation and extrapolation with the CALPHAD method. <i>Journal of Materials Science and Technology</i> , 2019, 35, 2115-2120.	5.6	45
11	Microporosity formation and dendrite growth during solidification of aluminum alloys: Modeling and experiment. <i>International Journal of Heat and Mass Transfer</i> , 2020, 146, 118838.	2.5	43
12	Cobalt functionalized MoS ₂ /carbon nanotubes scaffold for enzyme-free glucose detection with extremely low detection limit. <i>Sensors and Actuators B: Chemical</i> , 2019, 293, 122-128.	4.0	41
13	Quantitative characterization of the focusing process and dynamic behavior of differently sized microparticles in a spiral microchannel. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 89-99.	1.0	35
14	Inertia-induced focusing dynamics of microparticles throughout a curved microfluidic channel. <i>Microfluidics and Nanofluidics</i> , 2015, 18, 29-39.	1.0	35
15	Paper-based graphene oxide biosensor coupled with smartphone for the quantification of glucose in oral fluid. <i>Biomedical Microdevices</i> , 2018, 20, 89.	1.4	33
16	Numerical simulation of hydrodynamic focusing of particles in straight channel flows with the immersed boundary-lattice Boltzmann method. <i>International Journal of Heat and Mass Transfer</i> , 2015, 80, 139-149.	2.5	31
17	A three-dimensional quantitative study on the hydrodynamic focusing of particles with the immersed boundary Lattice Boltzmann method. <i>International Journal of Heat and Mass Transfer</i> , 2016, 94, 306-315.	2.5	30
18	Numerical simulation of dendritic growth in directional solidification of binary alloys using a lattice Boltzmann scheme. <i>International Journal of Heat and Mass Transfer</i> , 2016, 103, 821-831.	2.5	29

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19	Modelling of dendritic growth during alloy solidification under natural convection. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2014, 22, 034006.	0.8	22
20	Numerical analysis on pulverization and self-densification for hydrogen storage performance of a metal hydride tank. <i>Applied Thermal Engineering</i> , 2019, 161, 114129.	3.0	21
21	Numerical Simulation of Microstructure Evolution During Alloy Solidification by Using Cellular Automaton Method. <i>ISIJ International</i> , 2010, 50, 1851-1858.	0.6	18
22	An Immersed Boundary-Lattice Boltzmann Simulation of Particle Hydrodynamic Focusing in a Straight Microchannel. <i>Chinese Physics Letters</i> , 2013, 30, 074702.	1.3	16
23	Multi-relaxation time lattice Boltzmann simulation of inertial secondary flow in a curved microchannel. <i>Chinese Physics B</i> , 2013, 22, 114704.	0.7	16
24	Anisotropic lattice Boltzmann-phase-field modeling of crystal growth with melt convection induced by solid-liquid density change. <i>Journal of Materials Science and Technology</i> , 2020, 57, 26-32.	5.6	15
25	Screen-printed electrochemical biosensor based on a ternary Co@MoS ₂ /rGO functionalized electrode for high-performance non-enzymatic glucose sensing. <i>Biomedical Microdevices</i> , 2020, 22, 17.	1.4	15
26	A discrete kinetic scheme to model anisotropic liquid–solid phase transitions. <i>Applied Mathematics Letters</i> , 2020, 103, 106222.	1.5	14
27	Lattice Boltzmann numerical simulation and experimental research of dynamic flow in an expansion-contraction microchannel. <i>Biomicrofluidics</i> , 2013, 7, 34113.	1.2	13
28	Dynamic self-assembly of particles in an expanding channel flow. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	12
29	Synthesis and characterization of multifunctional magnetic polyvinyl alcohol (PVA) microspheres for embolization of blood vessel. <i>IEEE Transactions on Biomedical Engineering</i> , 2016, 63, 1-1.	2.5	12
30	Modelling of dendritic growth in ternary alloy solidification with melt convection. <i>International Journal of Cast Metals Research</i> , 2011, 24, 177-183.	0.5	11
31	A lattice Boltzmann study on dendritic growth of a binary alloy in the presence of melt convection. <i>International Journal of Heat and Mass Transfer</i> , 2018, 123, 213-226.	2.5	11
32	Visual detection of glucose based on quantum dots aerogel in microfluidic chips. <i>Analytical Methods</i> , 2018, 10, 5749-5754.	1.3	11
33	A cellular automaton model integrated with CALPHAD-based thermodynamic calculations for ferrite-austenite phase transformations in multicomponent alloys. <i>Computational Materials Science</i> , 2019, 166, 210-220.	1.4	11
34	Lattice Boltzmann model for time sub-diffusion equation in Caputo sense. <i>Applied Mathematics and Computation</i> , 2019, 358, 80-90.	1.4	11
35	Lattice Boltzmann study on thermoacoustic onset in a Rijke tube. <i>European Physical Journal Plus</i> , 2015, 130, 1.	1.2	10
36	Numerical modeling of equiaxed crystal growth in solidification of binary alloys using a lattice Boltzmann-finite volume scheme. <i>Computational Materials Science</i> , 2020, 184, 109855.	1.4	10

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37	Numerical modeling of dendrite growth in a steady magnetic field using the two relaxation times lattice Boltzmann-phase field model. <i>Computational Materials Science</i> , 2022, 204, 111149.	1.4	10
38	Numerical modeling of condensate droplet on superhydrophobic nanoarrays using the lattice Boltzmann method. <i>Chinese Physics B</i> , 2016, 25, 066401.	0.7	9
39	NUMERICAL MODELING OF DENDRITIC GROWTH IN ALLOY SOLIDIFICATION WITH FORCED CONVECTION. <i>International Journal of Modern Physics B</i> , 2009, 23, 1609-1614.	1.0	8
40	A multicomponent multiphase lattice Boltzmann model with large liquid-gas density ratios for simulations of wetting phenomena. <i>Chinese Physics B</i> , 2017, 26, 084701.	0.7	8
41	Modeling of microporosity formation and hydrogen concentration evolution during solidification of an Al-Si alloy*. <i>Chinese Physics B</i> , 2020, 29, 078104.	0.7	8
42	Lattice-Boltzmann Simulations of the Convection-Diffusion Equation with Different Reactive Boundary Conditions. <i>Mathematics</i> , 2020, 8, 13.	1.1	8
43	Accurate control of individual metallic nanowires by light-induced dielectrophoresis: Size-based separation and array-spacing regulation. <i>Sensors and Actuators A: Physical</i> , 2015, 225, 139-147.	2.0	7
44	A numerical study on pattern selection in crystal growth by using anisotropic lattice Boltzmann-phase field method*. <i>Chinese Physics B</i> , 2020, 29, 028103.	0.7	7
45	Magnetically Mediated Vortexlike Assembly of Gold Nanoshells. <i>Langmuir</i> , 2012, 28, 6520-6526.	1.6	6
46	A lattice Boltzmann-cellular automaton study on dendrite growth with melt convection in solidification of ternary alloys. <i>Chinese Physics B</i> , 2018, 27, 088105.	0.7	6
47	Predictions of solute mixing in a weld pool and macrosegregation formation during dissimilar-filler welding of aluminum alloys: Modeling and experiments. <i>Journal of Materials Research and Technology</i> , 2020, 9, 12080-12090.	2.6	6
48	Modeling of crystal growth with density change induced flows by the anisotropic lattice Boltzmann scheme. <i>Applied Mathematics Letters</i> , 2021, 120, 107318.	1.5	6
49	Numerical and Experimental Study of the Solo Duck Wave Energy Converter. <i>Energies</i> , 2019, 12, 1941.	1.6	5
50	Developing a versatile electrochemical platform with optimized electrode configuration through screen-printing technology toward glucose detection. <i>Biomedical Microdevices</i> , 2020, 22, 74.	1.4	5
51	Effects of shear flows on columnar dendritic microstructure during rapid solidification of IN718 alloy: A cellular automaton-lattice Boltzmann modeling study. <i>Journal of Crystal Growth</i> , 2022, 585, 126583.	0.7	5
52	Modeling of free dendritic growth in a gravity environment by lattice Boltzmann method. <i>European Physical Journal E</i> , 2020, 43, 30.	0.7	4
53	Directed transport and location-designated rotation of nanowires using ac electric fields. <i>Microfluidics and Nanofluidics</i> , 2014, 16, 237-246.	1.0	3
54	Simulation of Dendritic Growth with Melt Convection in Solidification of Ternary Alloys. <i>Chinese Physics Letters</i> , 2015, 32, 068103.	1.3	3

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55	A Two-Relaxation-Time Lattice Boltzmann Model for Electron Beam Selective Melting Additive Manufacturing. <i>Frontiers in Materials</i> , 2022, 9, .	1.2	3
56	Numerical study on vapor-liquid phase change in an enclosed narrow space. <i>Numerical Heat Transfer; Part A: Applications</i> , 2020, 77, 199-214.	1.2	2
57	Simultaneous melting and solidification of a columnar dendritic microstructure in a temperature gradient: Numerical modeling and experiments. <i>European Physical Journal E</i> , 2020, 43, 5.	0.7	2
58	Numerical modelling of equiaxed dendritic growth with sedimentation in the melt of binary alloys by using an anisotropic lattice Boltzmann-phase field model. <i>International Journal of Thermal Sciences</i> , 2022, 178, 107592.	2.6	2
59	Motion of a Neutrally Buoyant Circular Particle in a Lid-Driven Square Cavity: A Numerical Study. <i>Journal of Computational and Theoretical Transport</i> , 0, , 1-16.	0.3	2
60	CoCrFeNi Multi-principal Element Alloy Prepared Via Self-propagating High-Temperature Synthesis Plus Investment Casting Method. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 32-35.	1.0	1
61	Modeling of Microstructure Evolution During Alloy Solidification. , 2015, , 183-190.		1
62	Three-dimensional lattice Boltzmann modeling of droplet condensation on superhydrophobic nanostructured surfaces. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2019, 68, 030501.	0.2	1
63	An Immersed Boundary-Lattice Boltzmann Prediction for Particle Hydrodynamic Focusing in Annular Microchannels. <i>Chinese Physics Letters</i> , 2018, 35, 108101.	1.3	0
64	Topical Issue on Branching Dynamics at the Mesoscopic Scale. <i>European Physical Journal E</i> , 2020, 43, 60.	0.7	0