Jun Zhang

List of Publications by Year
in descending order

52 papers	1,227 citations	361413 20 h-index	395702 33 g-index
59 all docs	59 docs citations	59 times ranked	1001 citing authors

#	Article	IF	Citations
1	Conjugate solid-liquid phase change heat transfer in heatsink filled with phase change material-metal foam. International Journal of Heat and Mass Transfer, 2020, 146, 118832.	4.8	134
2	Wetting and evaporation of salt-water nanodroplets: A molecular dynamics investigation. Physical Review E, 2015, 92, 052403.	2.1	81
3	Growth and properties of Cu thin film deposited on Si(001) substrate: A molecular dynamics simulation study. Applied Surface Science, 2012, 261, 690-696.	6.1	57
4	Electrowetting Controls the Deposit Patterns of Evaporated Salt Water Nanodroplets. Langmuir, 2016, 32, 1542-1549.	3.5	49
5	A fast spectral method for the Boltzmann equation for monatomic gas mixtures. Journal of Computational Physics, 2015, 298, 602-621.	3.8	46
6	Directional Transportation of Impacting Droplets on Wettability-Controlled Surfaces. Langmuir, 2020, 36, 5855-5862.	3.5	46
7	A critical assessment of the line tension determined by the modified Youngâ€™s equation. Physics of Fluids, 2018, 30, .	4.0	44
8	Multiscale simulation of dynamic wetting. International Journal of Heat and Mass Transfer, 2017, 115, 886-896.	4.8	43
9	Data-driven discovery of governing equations for fluid dynamics based on molecular simulation. Journal of Fluid Mechanics, 2020, 892, .	3.4	43
10	Bubble formation in freezing droplets. Physical Review Fluids, 2019, 4, .	2.5	43
11	A unified stochastic particle Bhatnagar-Gross-Krook method for multiscale gas flows. Journal of Computational Physics, 2020, 400, 108972.	3.8	37
12	A fast iterative scheme for the linearized Boltzmann equation. Journal of Computational Physics, 2017, 338, 431-451.	3.8	35
13	Particle-based hybrid and multiscale methods for nonequilibrium gas flows. Advances in Aerodynamics, 2019, 1, .	2.5	35
14	Droplet jumping induced by coalescence of a moving droplet and a static one: Effect of initial velocity. Chemical Engineering Science, 2020, 211, 115252.	3.8	31
15	A Benchmark Study of Kinetic Models for Shock Waves. AIAA Journal, 2020, 58, 2596-2608.	2.6	29
16	Dynamics of droplet impacting on a cone. Physics of Fluids, 2021, 33, .	4.0	29
17	Negative Knudsen force on heated microbeams. Physical Review E, 2011, 84, 056316.	2.1	27
18	A Particle Fokker-Planck Algorithm with Multiscale Temporal Discretization for Rarefied and Continuum Gas Flows. Communications in Computational Physics, 2017, 22, 338-374.	1.7	25

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19	Nanodroplets impact on surfaces decorated with ridges. Physical Review Fluids, 2020, 5, .	2.5	24
20	The effect of compressibility on the stability of wall-bounded Kolmogorov flow. Journal of Fluid Mechanics, 2012, 694, 29-49.	3.4	22
21	Deposition pattern and tracer particle motion of evaporating multi-component sessile droplets. Journal of Colloid and Interface Science, 2017, 506, 83-92.	9.4	22
22	Comparison of Cu thin films deposited on Si substrates with different surfaces and temperatures. Applied Surface Science, 2013, 276, 417-423.	6.1	21
23	Multiple temperature model for the information preservation method and its application to nonequilibrium gas flows. Journal of Computational Physics, 2011, 230, 7250-7265.	3.8	20
24	A reactive molecular dynamics study of hyperthermal atomic oxygen erosion mechanisms for graphene sheets. Physics of Fluids, 2020, 32, .	4.0	20
25	Analysis of transport properties determined by Langevin dynamics using Greenâ€“Kubo formulae. Physica A: Statistical Mechanics and Its Applications, 2014, 411, 104-112.	2.6	19
26	Competition of natural convection and thermal creep in a square enclosure. Physics of Fluids, 2020, 32, 102001.	4.0	19
27	Effects of convection and solid wall on the diffusion in microscale convection flows. Physics of Fluids, 2010, 22, .	4.0	16
28	A multiscale volume of fluid method with self-consistent boundary conditions derived from molecular dynamics. Physics of Fluids, 2021, 33, .	4.0	16
29	Monte Carlo simulation of thermal fluctuations below the onset of Rayleigh-BÃ©nard convection. Physical Review E, 2009, 79, 056302.	2.1	15
30	mdFoam+: Advanced molecular dynamics in OpenFOAM. Computer Physics Communications, 2018, 224, 1-21.	7.5	15
31	Langevin equation elucidates the mechanism of the Rayleigh-BÃ©nard instability by coupling molecular motions and macroscopic fluctuations. Physical Review E, 2017, 96, 043104.	2.1	13
32	A parallelized hybrid N-S/DSMC-IP approach based on adaptive structured/unstructured overlapping grids for hypersonic transitional flows. Journal of Computational Physics, 2018, 371, 409-433.	3.8	11
33	Hypersonic aerodynamics of a deformed aeroshell in continuum and near-continuum regimes. Aerospace Science and Technology, 2019, 93, 105296.	4.8	11
34	Molecular simulation of Rayleigh-Brillouin scattering in binary gas mixtures and extraction of the rotational relaxation numbers. Physical Review E, 2021, 104, 035109.	2.1	11
35	An accurate treatment of diffuse reflection boundary conditions for a stochastic particle Fokkerâ€“Planck algorithm with large time steps. Physica A: Statistical Mechanics and Its Applications, 2015, 440, 139-146.	2.6	10
36	Multiscale investigation of Kolmogorov flow: From microscopic molecular motions to macroscopic coherent structures. Physics of Fluids, 2019, 31, .	4.0	10

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37	Non-intrusive reduced order modeling for flowfield reconstruction based on residual neural network. Acta Astronautica, 2021, 183, 346-362.	3.2	10
38	A parameter-free physical model for gasâ€“surface interaction. Physics of Fluids, 2021, 33, .	4.0	10
39	Kinetic study of the Rayleigh-BÃ©nard flows. Science Bulletin, 2009, 54, 364-368.	9.0	9
40	Design and implementation of an innovative airborne electric propulsion measure system of fixed-wing UAV. Aerospace Science and Technology, 2021, 109, 106357.	4.8	9
41	Atomistic-scale investigations of hyperthermal oxygenâ€“graphene interactions via reactive molecular dynamics simulation: The gas effect. Physics of Fluids, 2021, 33, 052107.	4.0	9
42	An efficient algorithm of the unified stochastic particle Bhatnagar-Gross-Krook method for the simulation of multi-scale gas flows. Advances in Aerodynamics, 2021, 3, .	2.5	9
43	Theoretical derivation of slip boundary conditions for single-species gas and binary gas mixture. Physical Review E, 2021, 104, 055103.	2.1	9
44	Air film evolution during droplet impact onto a solid surface. Physics of Fluids, 2021, 33, .	4.0	8
45	Molecular dynamics analysis of lattice site dependent oxygen ion diffusion in YBa2Cu3O7â˜Î´: Exposing the origin of anisotropic oxygen diffusivity. Solid State Ionics, 2013, 232, 123-128.	2.7	6
46	Two-step weighting method for constructing fourth-order hybrid central WENO scheme. Computers and Fluids, 2020, 207, 104590.	2.5	5
47	Using gene expression programming to discover macroscopic governing equations hidden in the data of molecular simulations. Physics of Fluids, 2022, 34, 057109.	4.0	5
48	Monte Carlo Simulation of two-dimensional Kolmogorov flow. AIP Conference Proceedings, 2011, , .	0.4	3
49	A multi-scale method for rarefied and continuum gas flows based on Fokker-Planck model. AIP Conference Proceedings, 2016, , .	0.4	3
50	Two critical issues in Langevin simulation of gas flows. AIP Conference Proceedings, 2014, , .	0.4	2
51	Molecular dynamics simulation of deposition and growth of Cu thin film on Si substrate. , 2012, , .		1
52	Size Dependent Orientation of Knudsen Force. , 2012, , .		0