Kai H Luo

List of Publications by Year
in descending order

174 papers	6,741 citations	87723 38 h-index	76769 74 g-index
175 all docs	175 docs citations	175 times ranked	4207 citing authors

#	Article	IF	Citations
1	Lattice Boltzmann methods for multiphase flow and phase-change heat transfer. Progress in Energy and Combustion Science, 2016, 52, 62-105.	15.8	689
2	A critical review on VOCs adsorption by different porous materials: Species, mechanisms and modification methods. Journal of Hazardous Materials, 2020, 389, 122102.	6.5	504
3	Lattice Boltzmann modeling of multiphase flows at large density ratio with an improved pseudopotential model. Physical Review E, 2013, 87, 053301.	0.8	376
4	Lattice Boltzmann modeling of boiling heat transfer: The boiling curve and the effects of wettability. International Journal of Heat and Mass Transfer, 2015, 85, 787-796.	2.5	278
5	An overview on fast pyrolysis of the main constituents in lignocellulosic biomass to valued-added chemicals: Structures, pathways and interactions. Renewable and Sustainable Energy Reviews, 2015, 51, 761-774.	8.2	212
6	Forcing scheme in pseudopotential lattice Boltzmann model for multiphase flows. Physical Review E, 2012, 86, 016709.	0.8	209
7	Formation of incipient soot particles from polycyclic aromatic hydrocarbons: A ReaxFF molecular dynamics study. Carbon, 2017, 121, 380-388.	5.4	162
8	Contact angles in the pseudopotential lattice Boltzmann modeling of wetting. Physical Review E, 2014, 90, 053301.	0.8	151
9	The pyrolytic behavior of cellulose in lignocellulosic biomass: a review. RSC Advances, 2011, 1, 1641.	1.7	145
10	Achieving tunable surface tension in the pseudopotential lattice Boltzmann modeling of multiphase flows. Physical Review E, 2013, 88, 053307.	0.8	117
11	Unsteady Heat Transfer Analysis of an Impinging Jet. Journal of Heat Transfer, 2002, 124, 1039-1048.	1.2	109
12	State-of-the-art catalytic hydrogenolysis of lignin for the production of aromatic chemicals. Catalysis Science and Technology, 2018, 8, 6275-6296.	2.1	90
13	Green Synthesis of Tunable Fluorescent Carbon Quantum Dots from Lignin and Their Application in Anti-Counterfeit Printing. ACS Applied Materials & Interfaces, 2021, 13, 56465-56475.	4.0	82
14	Modeling the thermochemical degradation of biomass inside a fast pyrolysis fluidized bed reactor. AICHE Journal, 2012, 58, 3030-3042.	1.8	80
15	Improved forcing scheme in pseudopotential lattice Boltzmann methods for multiphase flow at arbitrarily high density ratios. Physical Review E, 2015, 91, 023305.	0.8	76
16	Catalytic Oxidation of Lignin in Solvent Systems for Production of Renewable Chemicals: A Review. Polymers, 2017, 9, 240.	2.0	72
17	Multiphase cascaded lattice Boltzmann method. Computers and Mathematics With Applications, 2014, 67, 350-362.	1.4	71
18	Direct Numerical Simulation of the Puffing Phenomenon of an Axisymmetric Thermal Plume. Theoretical and Computational Fluid Dynamics, 2000, 14, 55-74.	0.9	70

#	Article	IF	Citations
19	Binary droplet collision simulations by a multiphase cascaded lattice Boltzmann method. Physics of Fluids, 2014, 26, .	1.6	70
20	Modeling realistic multiphase flows using a non-orthogonal multiple-relaxation-time lattice Boltzmann method. Physics of Fluids, 2019, 31, .	1.6	67
21	Mesoscopic simulation of three-dimensional pool boiling based on a phase-change cascaded lattice Boltzmann method. Physics of Fluids, 2020, 32, .	1.6	63
22	Three-dimensional cascaded lattice Boltzmann method: Improved implementation and consistent forcing scheme. Physical Review E, 2018, 97, 053309.	0.8	59
23	Consistent forcing scheme in the cascaded lattice Boltzmann method. Physical Review E, 2017, 96, 053307.	0.8	57
24	Investigation of ethanol oxidation over aluminum nanoparticle using ReaxFF molecular dynamics simulation. Fuel, 2018, 234, 94-100.	3.4	55
25	Effects of Moisture Contents on Shale Gas Recovery and CO₂ Sequestration. Langmuir, 2019, 35, 8716-8725.	1.6	53
26	Three-dimensional non-orthogonal MRT pseudopotential lattice Boltzmann model for multiphase flows. Computers and Fluids, 2019, 186, 128-140.	1.3	53
27	Implementation of contact angles in pseudopotential lattice Boltzmann simulations with curved boundaries. Physical Review E, 2019, 100, 053313.	0.8	53
28	Progress in carbon-based electrocatalyst derived from biomass for the hydrogen evolution reaction. Fuel, 2021, 293, 120440.	3.4	53
29	A molecular dynamics study of fuel droplet evaporation in sub- and supercritical conditions. Proceedings of the Combustion Institute, 2019, 37, 3219-3227.	2.4	49
30	Cascaded lattice Boltzmann method with improved forcing scheme for large-density-ratio multiphase flow at high Reynolds and Weber numbers. Physical Review E, 2016, 94, 053313.	0.8	48
31	A multi-component discrete Boltzmann model for nonequilibrium reactive flows. Scientific Reports, 2017, 7, 14580.	1.6	47
32	Modeling incompressible thermal flows using a central-moments-based lattice Boltzmann method. International Journal of Heat and Mass Transfer, 2018, 120, 624-634.	2.5	47
33	High hydrogen content syngas fuel burning in lean premixed spherical flames at elevated pressures: Effects of preferential diffusion. International Journal of Hydrogen Energy, 2016, 41, 18231-18249.	3.8	46
34	Thermodynamic consistency of the pseudopotential lattice Boltzmann model for simulating liquidâ€“vapor flows. Applied Thermal Engineering, 2014, 72, 56-61.	3.0	45
35	Ignition and Oxidation of Coreâ€“Shell Al/Al₂O₃ Nanoparticles in an Oxygen Atmosphere: Insights from Molecular Dynamics Simulation. Journal of Physical Chemistry C, 2018, 122, 29620-29627.	1.5	43
36	Investigation of methane oxidation by palladium-based catalyst via ReaxFF Molecular Dynamics simulation. Proceedings of the Combustion Institute, 2017, 36, 4339-4346.	2.4	42

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37	Insights into recovery of multi-component shale gas by CO2 injection: A molecular perspective. Fuel, 2020, 267, 117247.	3.4	42
38	Discrete Boltzmann modeling of Rayleigh-Taylor instability in two-component compressible flows. Physical Review E, 2017, 96, 053305.	0.8	41
39	Mesoscopic simulation of nonequilibrium detonation with discrete Boltzmann method. Combustion and Flame, 2018, 198, 356-362.	2.8	40
40	Mechanisms for kerogen wettability transition from water-wet to CO2-wet: Implications for CO2 sequestration. Chemical Engineering Journal, 2022, 428, 132020.	6.6	40
41	Effect of the forcing term in the pseudopotential lattice Boltzmann modeling of thermal flows. Physical Review E, 2014, 89, 053022.	0.8	38
42	A reactive molecular dynamics simulation study of methane oxidation assisted by platinum/graphene-based catalysts. Proceedings of the Combustion Institute, 2019, 37, 5473-5480.	2.4	38
43	Effects of Moisture and Salinity on Methane Adsorption in Kerogen: A Molecular Simulation Study. Energy & Fuels, 2019, 33, 5368-5376.	2.5	37
44	Lattice Boltzmann modeling and simulation of forced-convection boiling on a cylinder. Physics of Fluids, 2021, 33, .	1.6	37
45	Triple-emission nitrogen and boron co-doped carbon quantum dots from lignin: Highly fluorescent sensing platform for detection of hexavalent chromium ions. Journal of Colloid and Interface Science, 2022, 617, 557-567.	5.0	37
46	Spatial Direct Numerical Simulation of the Large Vortical Structures in Forced Plumes. Flow, Turbulence and Combustion, 2000, 64, 43-69.	1.4	36
47	Study of mechanisms for electric field effects on ethanol oxidation via reactive force field molecular dynamics. Proceedings of the Combustion Institute, 2019, 37, 5525-5535.	2.4	36
48	Discrete Boltzmann modeling of unsteady reactive flows with nonequilibrium effects. Physical Review E, 2019, 99, 012142.	0.8	36
49	MRT discrete Boltzmann method for compressible exothermic reactive flows. Computers and Fluids, 2018, 166, 176-183.	1.3	35
50	Direct numerical simulation of turbulent premixed ammonia and ammonia-hydrogen combustion under engine-relevant conditions. International Journal of Hydrogen Energy, 2022, 47, 11083-11100.	3.8	34
51	Phase transitions of multi-component fuel droplets under sub- and supercritical conditions. Fuel, 2021, 287, 119516.	3.4	33
52	Initiation mechanisms of enhanced pyrolysis and oxidation of JP-10 (exo-tetrahydrodicyclopentadiene) on functionalized graphene sheets: Insights from ReaxFF molecular dynamics simulations. Fuel, 2019, 254, 115643.	3.4	32
53	Study of Density Effects in Turbulent Buoyant Jets Using Large-Eddy Simulation. Theoretical and Computational Fluid Dynamics, 2001, 15, 95-120.	0.9	31
54	Heat release rate variations in high hydrogen content premixed syngas flames at elevated pressures: Effect of equivalence ratio. International Journal of Hydrogen Energy, 2017, 42, 7029-7044.	3.8	31

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55	Fundamental Study on Mechanisms of Thermal Decomposition and Oxidation of Aluminum Hydride. Journal of Physical Chemistry C, 2019, 123, 24436-24445.	1.5	31
56	Reaction Mechanism of the Aluminum Nanoparticle: Physicochemical Reaction and Heat/Mass Transfer. Journal of Physical Chemistry C, 2020, 124, 3886-3894.	1.5	31
57	Improved three-dimensional color-gradient lattice Boltzmann model for immiscible two-phase flows. Physical Review E, 2019, 100, 023301.	0.8	29
58	Artificial neural network based chemical mechanisms for computationally efficient modeling of hydrogen/carbon monoxide/kerosene combustion. International Journal of Hydrogen Energy, 2020, 45, 29594-29605.	3.8	28
59	Bounce regime of droplet collisions: A molecular dynamics study. Journal of Computational Science, 2016, 17, 457-462.	1.5	27
60	Dimerization of Polycyclic Aromatic Hydrocarbon Molecules and Radicals under Flame Conditions. Journal of Physical Chemistry A, 2018, 122, 8701-8708.	1.1	27
61	Role of higher-order Hermite polynomials in the central-moments-based lattice Boltzmann framework. Physical Review E, 2019, 99, 013301.	0.8	27
62	Sintering-Induced Phase Transformation of Nanoparticles: A Molecular Dynamics Study. Journal of Physical Chemistry C, 2015, 119, 28631-28639.	1.5	26
63	Dynamics and kinetics of reversible homo-molecular dimerization of polycyclic aromatic hydrocarbons. Journal of Chemical Physics, 2017, 147, 244305.	1.2	26
64	Effects of hysteresis window on contact angle hysteresis behaviour at large Bond number. Journal of Colloid and Interface Science, 2020, 566, 327-337.	5.0	25
65	Pore-scale simulation of miscible viscous fingering with dissolution reaction in porous media. Physics of Fluids, 2021, 33, .	1.6	25
66	Cascaded lattice Boltzmann method for incompressible thermal flows with heat sources and general thermal boundary conditions. Computers and Fluids, 2018, 165, 89-95.	1.3	24
67	Numerical investigation of planar shock wave impinging on spherical gas bubble with different densities. Physics of Fluids, 2019, 31, .	1.6	24
68	Ignition dynamics of DME/methane-air reactive mixing layer under reactivity controlled compression ignition conditions: Effects of cool flames. Applied Energy, 2019, 249, 343-354.	5.1	24
69	Study of pore-scale coke combustion in porous media using lattice Boltzmann method. Combustion and Flame, 2021, 225, 104-119.	2.8	24
70	A Conceptual Study of Cavity Aeroacoustics Control Using Porous Media Inserts. Flow, Turbulence and Combustion, 2008, 80, 375-391.	1.4	23
71	The role of brine in gas adsorption and dissolution in kerogen nanopores for enhanced gas recovery and CO2 sequestration. Chemical Engineering Journal, 2020, 399, 125704.	6.6	23
72	A unified lattice Boltzmann model and application to multiphase flows. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200397.	1.6	23

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73	Numerical Simulation of Particle Dispersion in a Spatially Developing Mixing Layer. Theoretical and Computational Fluid Dynamics, 2002, 15, 403-420.	0.9	22
74	Droplet Collision Simulation by a Multi-Speed Lattice Boltzmann Method. Communications in Computational Physics, 2011, 9, 1219-1234.	0.7	22
75	Large-scale molecular dynamics simulation of coupled dynamics of flow and glycocalyx: towards understanding atomic events on an endothelial cell surface. Journal of the Royal Society Interface, 2017, 14, 20170780.	1.5	22
76	An intelligent control of NH3 injection for optimizing the NOx/NH3 ratio in SCR system. Journal of the Energy Institute, 2019, 92, 1262-1269.	2.7	22
77	Principal mode of Syndecanâ€4 mechanotransduction for the endothelial glycocalyx is a scissorâ€like dimer motion. Acta Physiologica, 2020, 228, e13376.	1.8	22
78	Sprayâ€“turbulenceâ€“chemistry interactions under engine-like conditions. Progress in Energy and Combustion Science, 2021, 86, 100939.	15.8	22
79	Numerical simulation of the collision of two microdroplets with a pseudopotential multiple-relaxation-time lattice Boltzmann model. Microfluidics and Nanofluidics, 2014, 16, 329-346.	1.0	21
80	Direct numerical simulation study of hydrogen/air auto-ignition in turbulent mixing layer at elevated pressures. Computers and Fluids, 2018, 173, 59-72.	1.3	21
81	Trace metal assisted polycyclic aromatic hydrocarbons fragmentation, growth and soot nucleation. Proceedings of the Combustion Institute, 2019, 37, 1023-1030.	2.4	21
82	Investigation of extinction and re-ignition in piloted turbulent non-premixed methaneâ€“air flames using LES and high-speed OH-LIF. Combustion Theory and Modelling, 2013, 17, 483-503.	1.0	20
83	A deep learning framework for hydrogen-fueled turbulent combustion simulation. International Journal of Hydrogen Energy, 2020, 45, 17992-18000.	3.8	20
84	A molecular dynamics study on oxidation of aluminum hydride (AlH3)/hydroxyl-terminated polybutadiene (HTPB) solid fuel. Proceedings of the Combustion Institute, 2021, 38, 4469-4476.	2.4	20
85	Multiple-relaxation-time discrete Boltzmann modeling of multicomponent mixture with nonequilibrium effects. Physical Review E, 2021, 103, 013305.	0.8	20
86	Mesoscopic model for soft flowing systems with tunable viscosity ratio. Physical Review Fluids, 2018, 3, .	1.0	20
87	Droplet impacting a superhydrophobic mesh array: Effect of liquid properties. Physical Review Fluids, 2020, 5, .	1.0	20
88	Large-Eddy Simulation of Interactions Between a Reacting Jet and Evaporating Droplets. Flow, Turbulence and Combustion, 2008, 80, 133-153.	1.4	19
89	Multifluid Modeling of the Desulfurization Process within a Bubbling Fluidized Bed Coal Gasifier. AICHE Journal, 2013, 59, 1952-1963.	1.8	19
90	Response of curved premixed flames to single-frequency and wideband acoustic waves. Combustion and Flame, 2014, 161, 2868-2877.	2.8	19

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91	Large-scale molecular dynamics simulation of flow under complex structure of endothelial glycocalyx. Computers and Fluids, 2018, 173, 140-146.	1.3	19
92	Ethanol oxidation with high water content: A reactive molecular dynamics simulation study. Fuel, 2019, 235, 515-521.	3.4	19
93	Pore-scale study of dissolution-driven density instability with reaction <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>A</mml:mi><mml:mo>+</mml:mo><mml:mi>B</mml:mi> in porous media. Physical Review Fluids, 2019, 4, .	2.0	19
94	Direct Numerical Simulation of Inert Droplet Effects on Scalar Dissipation Rate in Turbulent Reacting and Non-Reacting Shear Layers. Flow, Turbulence and Combustion, 2010, 84, 397-422.	1.4	18
95	Combustion pattern, characteristics, and kinetics of biomass and chars from segmented heating carbonization. Asia-Pacific Journal of Chemical Engineering, 2016, 11, 812-822.	0.8	18
96	Improved pseudopotential lattice Boltzmann model for liquid water transport inside gas diffusion layers. International Journal of Hydrogen Energy, 2021, 46, 15938-15950.	3.8	18
97	Effects of water on pyridine pyrolysis: A reactive force field molecular dynamics study. Energy, 2022, 238, 121798.	4.5	18
98	Cascaded lattice Boltzmann method for thermal flows on standard lattices. International Journal of Thermal Sciences, 2018, 132, 368-377.	2.6	18
99	Droplet evaporation in finite-size systems: Theoretical analysis and mesoscopic modeling. Physical Review E, 2022, 105, 025101.	0.8	18
100	Pressure effects on flame structures and chemical pathways for lean premixed turbulent H2/air flames: Three-dimensional DNS studies. Fuel, 2018, 215, 320-329.	3.4	17
101	Reactive and electron force field molecular dynamics simulations of electric field assisted ethanol oxidation reactions. Proceedings of the Combustion Institute, 2021, 38, 6605-6613.	2.4	17
102	Lattice Boltzmann simulation of a water droplet penetrating a micropillar array in a microchannel. Physics of Fluids, 2021, 33, .	1.6	17
103	Dual Functionalized Interstitial N Atoms in Co₃Mo₃N Enabling CO₂ Activation. ACS Catalysis, 2022, 12, 4696-4706.	5.5	17
104	Atomic-level insights into transition mechanism of dominant mixing modes of multi-component fuel droplets: From evaporation to diffusion. Fuel, 2021, 304, 121464.	3.4	16
105	Stretched Cartesian grids for solution of the incompressible Navier-Stokes equations. International Journal for Numerical Methods in Fluids, 2000, 33, 897-918.	0.9	15
106	Regimes of Head-On Collisions of Equal-Sized Binary Droplets. Langmuir, 2019, 35, 8896-8902.	1.6	15
107	A technical method to improve NOx/NH3 mixing ratio in SCR system and its engineering applications. Journal of the Energy Institute, 2019, 92, 1757-1764.	2.7	15
108	Size-derived reaction mechanism of core-shell aluminum nanoparticle. Applied Physics Letters, 2020, 117, .	1.5	15

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109	DISCRETE ELEMENT METHOD FOR MULTISCALE MODELING. Journal of Multiscale Modeling, 2010, 02, 147-162.	1.0	14
110	Swirling and Impinging Effects in an Annular Nonpremixed Jet Flame. Flow, Turbulence and Combustion, 2011, 86, 63-88.	1.4	14
111	Exploring Complex Reaction Networks Using Neural Network-Based Molecular Dynamics Simulation. Journal of Physical Chemistry Letters, 2022, 13, 4052-4057.	2.1	14
112	Dry Pressure Drop Prediction within Montz-pak B1-250.45 Packing with Varied Inclination Angles and Geometries. Industrial & Engineering Chemistry Research, 2013, 52, 4372-4378.	1.8	13
113	Regimes of Flow over Complex Structures of Endothelial Glycocalyx: A Molecular Dynamics Simulation Study. Scientific Reports, 2018, 8, 5732.	1.6	13
114	Molecular Dynamics Simulation of Sintering Dynamics of Many TiO $$_{2}$$ 2 Nanoparticles. Journal of Statistical Physics, 2015, 160, 1696-1708.	0.5	12
115	Evaluation of the effect of nickel clusters on the formation of incipient soot particles from polycyclic aromatic hydrocarbons via ReaxFF molecular dynamics simulations. Physical Chemistry Chemical Physics, 2019, 21, 9865-9875.	1.3	12
116	Lattice Boltzmann simulation of water droplet impacting a hydrophobic plate with a cylindrical pore. Physical Review Fluids, 2020, 5, .	1.0	12
117	Unified lattice Boltzmann method with improved schemes for multiphase flow simulation: Application to droplet dynamics under realistic conditions. Physical Review E, 2022, 105, 045314.	0.8	12
118	Effects of pressure and Karlovitz number on the turbulence-flame interactions in lean premixed H2/air flames. Fuel, 2018, 234, 1293-1300.	3.4	11
119	Energy transfer in intermolecular collisions of polycyclic aromatic hydrocarbons with bath gases He and Ar. Journal of Chemical Physics, 2019, 151, 044301.	1.2	11
120	Kinetic Simulation of Nonequilibrium Kelvin-Helmholtz Instability. Communications in Theoretical Physics, 2019, 71, 132.	1.1	11
121	Three-dimensional multiple-relaxation-time discrete Boltzmann model of compressible reactive flows with nonequilibrium effects. AIP Advances, 2021, 11, .	0.6	11
122	Cross talk between endothelial and red blood cell glycocalyces via near-field flow. Biophysical Journal, 2021, 120, 3180-3191.	0.2	11
123	Direct Numerical Simulation of Supersonic Jet Flow. Journal of Engineering Mathematics, 1997, 32, 121-142.	0.6	10
124	Compact Chemical Mechanism for Autoignition and Combustion of Methylcyclohexane under Engine Relevant Conditions. Energy & Fuels, 2017, 31, 11337-11347.	2.5	10
125	Atomistic insights into the dynamics of binary collisions between gaseous molecules and polycyclic aromatic hydrocarbon dimers. Physical Chemistry Chemical Physics, 2019, 21, 3849-3856.	1.3	10
126	Experimental and numerical study on soot formation in laminar diffusion flames of biodiesels and methyl esters. Proceedings of the Combustion Institute, 2021, 38, 1335-1344.	2.4	10

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127	Effects of the electric field on soot formation in combustion: A coupled charged particle PBE-CFD framework. Combustion and Flame, 2022, 239, 111796.	2.8	10
128	A three-dimensional discrete Boltzmann model for steady and unsteady detonation. Journal of Computational Physics, 2022, 455, 111002.	1.9	10
129	Atomically Dispersed Znâ€Stabilized Ni^{Î´+} Enabling Tunable Selectivity for CO₂ Hydrogenation. ChemSusChem, 2022, 15, .	3.6	10
130	Effects of pressure on cellular flame structure of high hydrogen content lean premixed syngas spherical flames: A DNS study. International Journal of Hydrogen Energy, 2016, 41, 21516-21531.	3.8	9
131	Microvascular ion transport through endothelial glycocalyx layer: new mechanism and improved Starling principle. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 317, H104-H113.	1.5	9
132	Response of heat release to equivalence ratio variations in high Karlovitz premixed H2/air flamesÂat 20Âatm. International Journal of Hydrogen Energy, 2019, 44, 3195-3207.	3.8	9
133	Discrete fluidization of dense monodisperse emulsions in neutral wetting microchannels. Soft Matter, 2020, 16, 651-658.	1.2	9
134	Coked Ni/Al₂O₃ from the catalytic reforming of volatiles from co-pyrolysis of lignin and polyethylene: preparation, identification and application as a potential adsorbent. Catalysis Science and Technology, 2021, 11, 4162-4171.	2.1	9
135	Differential diffusion effects on density-driven instability of reactive flows in porous media. Physical Review Fluids, 2020, 5, .	1.0	9
136	Mixing and Entrainment of Transitional Non-Circular Buoyant Reactive Plumes. Flow, Turbulence and Combustion, 2001, 67, 57-79.	1.4	8
137	Direct Numerical Simulation of a Non-Premixed Impinging Jet Flame. Journal of Heat Transfer, 2007, 129, 951-957.	1.2	8
138	Reducing Salt Intake and Exercising Regularly: Implications From Molecular Dynamics Simulations of Endothelial Glycocalyx. Frontiers in Physiology, 2018, 9, 1667.	1.3	8
139	Shear dynamics of confined bijels. AIP Advances, 2020, 10, 095304.	0.6	8
140	Effects of Acoustic Excitation on the Combustion Instability of Hydrogenâ€“Methane Lean Premixed Swirling Flames. ACS Omega, 2020, 5, 8744-8753.	1.6	8
141	How sodium chloride extends lifetime of bulk nanobubbles in water. Soft Matter, 2022, 18, 2968-2978.	1.2	8
142	Direct Numerical Simulation of Transitional Noncircular Buoyant Reactive Jets. Theoretical and Computational Fluid Dynamics, 2001, 15, 183-198.	0.9	7
143	Lattice Boltzmann method for relativistic hydrodynamics: Issues on conservation law of particle number and discontinuities. Physical Review D, 2012, 86, .	1.6	7
144	Kinetic Simulation of Unsteady Detonation with Thermodynamic Nonequilibrium Effects. Combustion, Explosion and Shock Waves, 2020, 56, 435-443.	0.3	7

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145	Size effects on dynamics of nanodroplets in binary head-on collisions. Journal of Molecular Liquids, 2021, 341, 117383.	2.3	7
146	Improved three-dimensional thermal multiphase lattice Boltzmann model for liquid-vapor phase change. Physical Review E, 2022, 105, 025308.	0.8	7
147	Conditional statistics of inert droplet effects on turbulent combustion in reacting mixing layers. Combustion Theory and Modelling, 2009, 13, 901-920.	1.0	6
148	Large-eddy simulations of diesel spray with a fine grid in a constant-volume vessel. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2015, 229, 247-260.	1.1	6
149	Specificity Switching Pathways in Thermal and Mass Evaporation of Multicomponent Hydrocarbon Droplets: A Mesoscopic Observation. Scientific Reports, 2017, 7, 5001.	1.6	6
150	Large eddy simulation of impinging flames: Unsteady ignition and flame propagation. Fuel, 2019, 255, 115734.	3.4	6
151	Generalized lattice Boltzmann model for frosting. Physical Review E, 2019, 99, 053301.	0.8	6
152	Dynamic behavior of droplet transport on realistic gas diffusion layer with inertial effect via a unified lattice Boltzmann method. International Journal of Hydrogen Energy, 2021, 46, 33260-33271.	3.8	6
153	A reactive force field molecular dynamics study on the inception mechanism of titanium tetraisopropoxide (TTIP) conversion to titanium clusters. Chemical Engineering Science, 2022, 252, 117496.	1.9	6
154	On the determination of Lennard-Jones parameters for polyatomic molecules. Physical Chemistry Chemical Physics, 2022, 24, 10147-10159.	1.3	6
155	Dynamic Large-Eddy Simulation of Droplet Effects on a Reacting Plume in Countercurrent Configuration. Combustion Science and Technology, 2011, 183, 487-518.	1.2	5
156	Flame evolution in shock-accelerated flow under different reactive gas mixture gradients. Physical Review E, 2019, 100, 013111.	0.8	5
157	Formation and evolution of flame kernels in autoignition of a turbulent hydrogen/air mixing layer at 50â€¯atm. Fuel, 2019, 255, 115735.	3.4	5
158	Understanding endothelial glycocalyx function under flow shear stress from a molecular perspective. Biorheology, 2019, 56, 89-100.	1.2	5
159	Membrane Deformation of Endothelial Surface Layer Interspersed with Syndecan-4: A Molecular Dynamics Study. Annals of Biomedical Engineering, 2020, 48, 357-366.	1.3	5
160	Analysis of Gas-Assisted Pulverized Coal Combustion in Cambridge Coal Burner CCB1 Using FPV-LES. Energy & Fuels, 2020, 34, 7477-7489.	2.5	5
161	Modelling of laminar diffusion flames with biodiesel blends and soot formation. Fuel, 2022, 317, 122897.	3.4	5
162	Thermodynamic Nonequilibrium Features in Binary Diffusion. Communications in Theoretical Physics, 2018, 69, 722.	1.1	4

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163	Simulation of indoor harmful gas dispersion and airflow using three-dimensional lattice Boltzmann method based large-eddy simulation. AIP Advances, 2021, 11, 035235.	0.6	4
164	Lattice Boltzmann Simulation of Multicomponent Porous Media Flows With Chemical Reaction. Frontiers in Physics, 2021, 9, .	1.0	4
165	Understanding the Role of Endothelial Glycocalyx in Mechanotransduction via Computational Simulation: A Mini Review. Frontiers in Cell and Developmental Biology, 2021, 9, 732815.	1.8	4
166	Sodium ion transport across the endothelial glycocalyx layer under electric field conditions: A molecular dynamics study. Journal of Chemical Physics, 2020, 153, 105102.	1.2	3
167	Combustion Mode and Mixing Characteristics of a Reacting Jet in Crossflow. Energy & Fuels, 2021, 35, 13325-13337.	2.5	3
168	Small-scale fluctuation and scaling law of mixing in three-dimensional rotating turbulent Rayleigh-Taylor instability. Physical Review E, 2022, 105, 015103.	0.8	3
169	A molecular dynamics study of evaporation of multicomponent stationary and moving fuel droplets in multicomponent ambient gases under supercritical conditions. Energy, 2022, 258, 124838.	4.5	3
170	Molecular conformational effects in Hâ€¯+â€¯n-heptane reaction rate calculations. Combustion and Flame, 2018, 193, 170-176.	2.8	2
171	Modelling of Sub-Grid Scale Reaction Rate Based on a Novel Series Model: Application to a Premixed Bluff-Body Stabilised Flame. Combustion Science and Technology, 2019, 191, 1043-1058.	1.2	2
172	Large eddy simulation of Cambridge bluff-body coal (CCB2) flames with a flamelet progress variable model. Proceedings of the Combustion Institute, 2021, 38, 5347-5354.	2.4	2
173	Three-dimensional shock-sulfur hexafluoride bubble interaction. AIP Advances, 2019, 9, 115306.	0.6	1
174	Molecular Conformational Manifolds between Gas-Liquid Interface and Multiphasic. Entropy, 2017, 19, 695.	1.1	0