Sauro Succi

List of Publications by Year
in descending order

504 papers	19,189 citations	17405 63 h-index	18606 119 g-index
523 all docs	523 docs citations	523 times ranked	7681 citing authors

#	Article	IF	Citations
1	The lattice Boltzmann equation: theory and applications. Physics Reports, 1992, 222, 145-197.	10.3	1,789
2	Extended self-similarity in turbulent flows. Physical Review E, 1993, 48, R29-R32.	0.8	846
3	Lattice Gas Dynamics with Enhanced Collisions. Europhysics Letters, 1989, 9, 345-349.	0.7	800
4	Extended Boltzmann Kinetic Equation for Turbulent Flows. Science, 2003, 301, 633-636.	6.0	621
5	MHD-Limits to Plasma Confinement. Plasma Physics and Controlled Fusion, 1984, 26, 209-215.	0.9	557
6	Generalized lattice Boltzmann method with multirange pseudopotential. Physical Review E, 2007, 75, 026702.	0.8	356
7	Three-Dimensional Flows in Complex Geometries with the Lattice Boltzmann Method. Europhysics Letters, 1989, 10, 433-438.	0.7	355
8	Mesoscopic Modeling of Slip Motion at Fluid-Solid Interfaces with Heterogeneous Catalysis. Physical Review Letters, 2002, 89, 064502.	2.9	303
9	Expanded analogy between Boltzmann kinetic theory of fluids and turbulence. Journal of Fluid Mechanics, 2004, 519, 301-314.	1.4	279
10	Ground state of trapped interacting Bose-Einstein condensates by an explicit imaginary-time algorithm. Physical Review E, 2000, 62, 7438-7444.	0.8	270
11	Mesoscopic modeling of a two-phase flow in the presence of boundaries: The contact angle. Physical Review E, 2006, 74, 021509.	0.8	243
12	The lattice Boltzmann equation: A new tool for computational fluid-dynamics. Physica D: Nonlinear Phenomena, 1991, 47, 219-230.	1.3	206
13	RECENT ADVANCES IN LATTICE BOLTZMANN COMPUTING. , 1995, , 195-242.		185
14	Surface Roughness-Hydrophobicity Coupling in Microchannel and Nanochannel Flows. Physical Review Letters, 2006, 97, 204503.	2.9	181
15	Colloquium: Role of theHtheorem in lattice Boltzmann hydrodynamic simulations. Reviews of Modern Physics, 2002, 74, 1203-1220.	16.4	179
16	The lattice Boltzmann equation on irregular lattices. Journal of Statistical Physics, 1992, 68, 401-407.	0.5	175
17	Lattice Boltzmann equation for quantum mechanics. Physica D: Nonlinear Phenomena, 1993, 69, 327-332.	1.3	174
18	Lattice Boltzmann 2038. Europhysics Letters, 2015, 109, 50001.	0.7	169

#	ARTICLE	IF	CITATIONS
19	The permeability of a random medium: Comparison of simulation with theory. Physics of Fluids A, Fluid Dynamics, 1990, 2, 2085-2088.	1.6	168
20	Analytical calculation of slip flow in lattice Boltzmann models with kinetic boundary conditions. Physics of Fluids, 2005, 17, 093602.	1.6	156
21	Lattice Boltzmann Model for Anisotropic Liquid-Solid Phase Transition. Physical Review Letters, 2001, 86, 3578-3581.	2.9	147
22	Maximum Entropy Principle for Lattice Kinetic Equations. Physical Review Letters, 1998, 81, 6-9.	2.9	145
23	Lattice Boltzmann method at finite Knudsen numbers. Europhysics Letters, 2005, 69, 549-555.	0.7	127
24	Numerical methods for atomic quantum gases with applications to Bose–Einstein condensates and to ultracold fermions. Physics Reports, 2004, 395, 223-355.	10.3	125
25	Simulating the Flow Around a Circular Cylinder with a Lattice Boltzmann Equation. Europhysics Letters, 1989, 8, 517-521.	0.7	116
26	Numerical solution of the Gross-Pitaevskii equation using an explicit finite-difference scheme: An application to trapped Bose-Einstein condensates. Physical Review E, 2000, 62, 1382-1389.	0.8	115
27	Discrete Boltzmann modeling of multiphase flows: hydrodynamic and thermodynamic non-equilibrium effects. Soft Matter, 2015, 11, 5336-5345.	1.2	115
28	Fast Lattice Boltzmann Solver for Relativistic Hydrodynamics. Physical Review Letters, 2010, 105, 014502.	2.9	112
29	MUPHY: A parallel MUlti PHYsics/scale code for high performance bio-fluidic simulations. Computer Physics Communications, 2009, 180, 1495-1502.	3.0	109
30	Lattice Boltzmann method on unstructured grids: Further developments. Physical Review E, 2003, 68, 016701.	0.8	95
31	A flexible high-performance Lattice Boltzmann GPU code for the simulations of fluid flows in complex geometries. Concurrency Computation Practice and Experience, 2010, 22, 1-14.	1.4	95
32	A multi-relaxation lattice kinetic method for passive scalar diffusion. Journal of Computational Physics, 2005, 206, 453-462.	1.9	94
33	Simulating two-dimensional thermal channel flows by means of a lattice Boltzmann method with new boundary conditions. Future Generation Computer Systems, 2004, 20, 935-944.	4.9	92
34	Multiscale Coupling of Molecular Dynamics and Hydrodynamics: Application to DNA Translocation through a Nanopore. Multiscale Modeling and Simulation, 2006, 5, 1156-1173.	0.6	88
35	Challenges in lattice Boltzmann computing. Journal of Statistical Physics, 1995, 81, 5-16.	0.5	87
36	Lattice Boltzmann across scales: from turbulence to DNA translocation. European Physical Journal B, 2008, 64, 471-479.	0.6	86

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37	Lattice Boltzmann method with self-consistent thermo-hydrodynamic equilibria. Journal of Fluid Mechanics, 2009, 628, 299-309.	1.4	86
38	A Lattice Boltzmann Model for Anisotropic Crystal Growth from Melt. Journal of Statistical Physics, 2002, 107, 173-186.	0.5	85
39	Intermittency and Structure Functions in Channel Flow Turbulence. Physical Review Letters, 1999, 82, 5044-5047.	2.9	84
40	Lattice Boltzmann simulations of phase-separating flows at large density ratios: the case of doubly-attractive pseudo-potentials. Soft Matter, 2010, 6, 4357.	1.2	84
41	Hydrodynamic correlations in the translocation of a biopolymer through a nanopore: Theory and multiscale simulations. Physical Review E, 2008, 78, 036704.	0.8	83
42	Mesoscopic lattice Boltzmann modeling of soft-glassy systems: Theory and simulations. Journal of Chemical Physics, 2009, 131, .	1.2	83
43	Numerical solution of the Schrödinger equation using discrete kinetic theory. Physical Review E, 1996, 53, 1969-1975.	0.8	82
44	Exponential Tails in Two-Dimensional Rayleigh-Bénard Convection. Europhysics Letters, 1993, 21, 305-310.	0.7	81
45	Galilean-invariant lattice-Boltzmann models withHtheorem. Physical Review E, 2003, 68, 025103.	0.8	80
46	Recent advances of Lattice Boltzmann techniques on unstructured grids. Progress in Computational Fluid Dynamics, 2005, 5, 85.	0.1	79
47	Massively Parallel Lattice-Boltzmann Simulation of Turbulent Channel Flow. International Journal of Modern Physics C, 1997, 08, 869-877.	0.8	78
48	Lattice Boltzmann versus Molecular Dynamics Simulation of Nanoscale Hydrodynamic Flows. Physical Review Letters, 2006, 96, 224503.	2.9	76
49	Multiscale Lattice Boltzmann Schemes with Turbulence Modeling. Journal of Computational Physics, 2001, 170, 812-829.	1.9	75
50	Lattice Boltzmann approach for complex nonequilibrium flows. Physical Review E, 2015, 92, 043308.	0.8	75
51	Nonequilibrium thermohydrodynamic effects on the Rayleigh-Taylor instability in compressible flows. Physical Review E, 2016, 94, 023106.	0.8	75
52	Diffusion and hydrodynamic dispersion with the lattice Boltzmann method. Physical Review A, 1992, 45, 5771-5774.	1.0	74
53	Roughness as a Route to the Ultimate Regime of Thermal Convection. Physical Review Letters, 2017, 118, 074503.	2.9	74
54	Regularized lattice Bhatnagar-Gross-Krook model for two- and three-dimensional cavity flow simulations. Physical Review E, 2014, 89, 053317.	0.8	72

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55	Role of Oxygen Functionalities in Graphene Oxide Architectural Laminate Subnanometer Spacing and Water Transport. Environmental Science & Technology, 2017, 51, 4280-4288.	4.6	72
56	Applying the lattice Boltzmann equation to multiscale fluid problems. Computing in Science and Engineering, 2001, 3, 26-37.	1.2	70
57	Preturbulent Regimes in Graphene Flow. Physical Review Letters, 2011, 106, 156601.	2.9	70
58	Mesoscopic simulation of non-ideal fluids with self-tuning of the equation of state. Soft Matter, 2012, 8, 3798.	1.2	69
59	Mesoscopic modelling of heterogeneous boundary conditions for microchannel flows. Journal of Fluid Mechanics, 2006, 548, 257.	1.4	68
60	Multiple-relaxation-time lattice Boltzmann approach to compressible flows with flexible specific-heat ratio and Prandtl number. Europhysics Letters, 2010, 90, 54003.	0.7	68
61	Lattice Boltzmann Methods for Multiphase Flow Simulations across Scales. Communications in Computational Physics, 2011, 9, 269-296.	0.7	68
62	Big data: the end of the scientific method?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180145.	1.6	68
63	Modeling realistic multiphase flows using a non-orthogonal multiple-relaxation-time lattice Boltzmann method. Physics of Fluids, 2019, 31, .	1.6	67
64	Numerical solution of the nonlinear SchrÃ¶dinger equation using smoothed-particle hydrodynamics. Physical Review E, 2015, 91, 053304.	0.8	66
65	Lattice Boltzmann simulation of open flows with heat transfer. Physics of Fluids, 2003, 15, 2778-2781.	1.6	65
66	Extreme flow simulations reveal skeletal adaptations of deep-sea sponges. Nature, 2021, 595, 537-541.	13.7	64
67	Two-Dimensional Navier-Stokes Simulation of Deformation and Breakup of Liquid Patches. Physical Review Letters, 1995, 75, 244-247.	2.9	63
68	Isotropic discrete Laplacian operators from lattice hydrodynamics. Journal of Computational Physics, 2013, 234, 1-7.	1.9	62
69	Phase-field lattice kinetic scheme for the numerical simulation of dendritic growth. Physical Review E, 2005, 72, 066705.	0.8	61
70	Mesoscopic two-phase model for describing apparent slip in micro-channel flows. Europhysics Letters, 2006, 74, 651-657.	0.7	61
71	Discrete Boltzmann trans-scale modeling of high-speed compressible flows. Physical Review E, 2018, 97, 053312.	0.8	58
72	Mesoscopic Models of Liquid/Solid Phase Transitions. International Journal of Modern Physics C, 1998, 09, 1405-1415.	0.8	57

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73	Hydrokinetic approach to large-scale cardiovascular blood flow. Computer Physics Communications, 2010, 181, 462-472.	3.0	56
74	Statistical regularities in the rank-citation profile of scientists. Scientific Reports, 2011, 1, 181.	1.6	56
75	Numerical simulations of ion temperature gradient–driven turbulence. Physics of Fluids B, 1990, 2, 67-74.	1.7	55
76	Simulation of three dimensional MHD natural convection using double MRT Lattice Boltzmann method. Physica A: Statistical Mechanics and Its Applications, 2019, 515, 474-496.	1.2	55
77	Prediction of coronary artery plaque progression and potential rupture from 320-detector row prospectively ECG-gated single heart beat CT angiography: Lattice Boltzmann evaluation of endothelial shear stress. International Journal of Cardiovascular Imaging, 2009, 25, 289-299.	0.7	54
78	The emergence of supramolecular forces from lattice kinetic models of non-ideal fluids: applications to the rheology of soft glassy materials. Soft Matter, 2012, 8, 10773.	1.2	54
79	On the Scaling of the Velocity and Temperature Structure Functions in Rayleigh-Bénard Convection. Europhysics Letters, 1994, 25, 341-346.	0.7	53
80	Non-Newtonian particulate flow simulation: A direct-forcing immersed boundary–lattice Boltzmann approach. Physica A: Statistical Mechanics and Its Applications, 2016, 447, 1-20.	1.2	53
81	Direct numerical evidence of stress-induced cavitation. Journal of Fluid Mechanics, 2013, 728, 362-375.	1.4	51
82	Hydrodynamic Model for Conductivity in Graphene. Scientific Reports, 2013, 3, 1052.	1.6	51
83	Fluid flow around NACA 0012 airfoil at low-Reynolds numbers with hybrid lattice Boltzmann method. Computers and Fluids, 2018, 166, 200-208.	1.3	51
84	Models of polymer solutions in electrified jets and solution blowing. Reviews of Modern Physics, 2020, 92, .	16.4	51
85	Mesoscopic Lattice Boltzmann Modeling of Flowing Soft Systems. Physical Review Letters, 2009, 102, 026002.	2.9	50
86	Improved Lattice Boltzmann Without Parasitic Currents for Rayleigh-Taylor Instability. Communications in Computational Physics, 2010, 7, 423-444.	0.7	50
87	Lattice Kinetic Theory for Numerical Combustion. Journal of Scientific Computing, 1997, 12, 395-408.	1.1	49
88	Lattice Boltzmann phase-field modelling of binary-alloy solidification. Physica A: Statistical Mechanics and Its Applications, 2006, 362, 78-83.	1.2	49
89	Numerical validation of the quantum lattice Boltzmann scheme in two and three dimensions. Physical Review E, 2007, 75, 066704.	0.8	49
90	Unstructured lattice Boltzmann method in three dimensions. International Journal for Numerical Methods in Fluids, 2005, 49, 619-633.	0.9	48

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91	Mesoscale modelling of near-contact interactions for complex flowing interfaces. Journal of Fluid Mechanics, 2019, 872, 327-347.	1.4	48
92	Lattice Boltzmann scheme for two-dimensional magnetohydrodynamics. Physical Review A, 1991, 43, 4521-4524.	1.0	47
93	Extended self-similarity in the numerical simulation of three-dimensional homogeneous flows. Physical Review E, 1994, 50, R1745-R1747.	0.8	47
94	Quantum lattice Boltzmann simulation of expanding Bose-Einstein condensates in random potentials. Physical Review E, 2008, 77, 066708.	0.8	47
95	Polar-coordinate lattice Boltzmann modeling of compressible flows. Physical Review E, 2014, 89, 013307.	0.8	47
96	A multi-component discrete Boltzmann model for nonequilibrium reactive flows. Scientific Reports, 2017, 7, 14580.	1.6	47
97	Kinetic theory of turbulence modeling: smallness parameter, scaling and microscopic derivation of Smagorinsky model. Physica A: Statistical Mechanics and Its Applications, 2004, 338, 379-394.	1.2	46
98	Translocation of biomolecules through solid–state nanopores: Theory meets experiments. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 985-1011.	2.4	46
99	Mapping reactive flow patterns in monolithic nanoporous catalysts. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	46
100	Capillary filling using lattice Boltzmann equations: The case of multi-phase flows. European Physical Journal: Special Topics, 2009, 166, 111-116.	1.2	45
101	Simulation of turbulent flows with the entropic multirelaxation time lattice Boltzmann method on body-fitted meshes. Journal of Fluid Mechanics, 2018, 849, 35-56.	1.4	45
102	Simulating the Immune Response on a Distributed Parallel Computer. International Journal of Modern Physics C, 1997, 08, 527-545.	0.8	43
103	Capillary Filling in Microchannels with Wall Corrugations: A Comparative Study of the Concus–Finn Criterion by Continuum, Kinetic, and Atomistic Approaches. Langmuir, 2009, 25, 12653-12660.	1.6	43
104	Analysis of subgrid scale turbulence using the Boltzmann Bhatnagar-Gross-Krook kinetic equation. Physical Review E, 1999, 59, R2527-R2530.	0.8	42
105	Electrorheology in nanopores via lattice Boltzmann simulation. Journal of Chemical Physics, 2004, 120, 4492-4497.	1.2	42
106	Fully relativistic lattice Boltzmann algorithm. Physical Review C, 2011, 84, .	1.1	42
107	Superradiance from hydrodynamic vortices: A numerical study. Physical Review A, 2006, 73, .	1.0	41
108	Effects of Knudsen diffusivity on the effective reactivity of nanoporous catalyst media. Journal of Computational Science, 2016, 17, 377-383.	1.5	41

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109	Two-dimensional turbulence with the lattice Boltzmann equation. Journal of Physics A, 1990, 23, L1-L5.	1.6	40
110	Towards Exascale Lattice Boltzmann computing. Computers and Fluids, 2019, 181, 107-115.	1.3	40
111	Ground-state computation of Bose-Einstein condensates by an imaginary-time quantum lattice Boltzmann scheme. Physical Review E, 2007, 76, 036712.	0.8	39
112	Evidence of thin-film precursors formation in hydrokinetic and atomistic simulations of nano-channel capillary filling. Europhysics Letters, 2008, 84, 44003.	0.7	39
113	Lattice Boltzmann models for nonideal fluids with arrested phase-separation. Physical Review E, 2008, 77, 036705.	0.8	39
114	Lattice Boltzmann Analysis of Fluid-Structure Interaction with Moving Boundaries. Communications in Computational Physics, 2013, 13, 823-834.	0.7	39
115	A multispeed Discrete Boltzmann Model for transcritical 2D shallow water flows. Journal of Computational Physics, 2015, 284, 117-132.	1.9	39
116	Bottom-up coarse-graining of a simple graphene model: The blob picture. Journal of Chemical Physics, 2011, 134, 064106.	1.2	37
117	Mesoscopic simulations at the physics-chemistry-biology interface. Reviews of Modern Physics, 2019, 91, .	16.4	36
118	Case report: Fibroma of tendon sheath in the distal forearm with associated median nerve neuropathy: US, CT and MR appearances. Clinical Radiology, 1996, 51, 370-372.	0.5	35
119	A note on the lattice Boltzmann method beyond the Chapman-Enskog limits. Europhysics Letters, 2006, 73, 370-376.	0.7	35
120	Interplay between Shape and Roughness in Early-Stage Microcapillary Imbibition. Langmuir, 2012, 28, 2596-2603.	1.6	35
121	Immersed Boundary â€" Thermal Lattice Boltzmann Methods for Non-Newtonian Flows Over a Heated Cylinder: A Comparative Study. Communications in Computational Physics, 2015, 18, 489-515.	0.7	35
122	Three-Dimensional Lattice Pseudo-Potentials for Multiphase Flow Simulations at High Density Ratios. Journal of Statistical Physics, 2015, 161, 1404-1419.	0.5	35
123	Bridging the gaps at the physicsâ€"chemistryâ€"biology interface. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20160335.	1.6	35
124	Thermohydrodynamic lattice BGK schemes with non-perturbative equilibria. Europhysics Letters, 1998, 41, 279-284.	0.7	34
125	An Integer Lattice Realization of a Lax Scheme for Transport Processes in Multiple Component Fluid Flows. Journal of Computational Physics, 1999, 152, 493-516.	1.9	34
126	Continuum free-energy formulation for a class of lattice Boltzmann multiphase models. Europhysics Letters, 2009, 86, 24005.	0.7	34

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127	Lattice Boltzmann modeling of water entry problems. International Journal of Modern Physics C, 2014, 25, 1441012.	0.8	34
128	Non-Newtonian unconfined flow and heat transfer over a heated cylinder using the direct-forcing immersed boundary–thermal lattice Boltzmann method. Physical Review E, 2014, 89, 053312.	0.8	34
129	Entropic lattice pseudo-potentials for multiphase flow simulations at high Weber and Reynolds numbers. Physics of Fluids, 2017, 29, .	1.6	34
130	Duality in matrix lattice Boltzmann models. Physical Review E, 2008, 78, 066701.	0.8	33
131	Lattice Boltzmann Simulation of Cavitating Flows. Communications in Computational Physics, 2013, 13, 685-695.	0.7	33
132	Heterogeneous catalysis in pulsed-flow reactors with nanoporous gold hollow spheres. Chemical Engineering Science, 2017, 166, 274-282.	1.9	33
133	Regularized lattice Boltzmann multicomponent models for low capillary and Reynolds microfluidics flows. Computers and Fluids, 2018, 167, 33-39.	1.3	33
134	High-Resolution Lattice-Gas Simulation of Two-Dimensional Turbulence. Physical Review Letters, 1988, 60, 2738-2740.	2.9	32
135	Turbulent channel flow simulations using a coarse-grained extension of the lattice Boltzmann method. Fluid Dynamics Research, 1997, 19, 289-302.	0.6	32
136	Lattice Quantum Mechanics: An Application to Bose–Einstein Condensation. International Journal of Modern Physics C, 1998, 09, 1577-1585.	0.8	32
137	Towards a Renormalized Lattice Boltzmann Equation for Fluid Turbulence. Journal of Statistical Physics, 2002, 107, 261-278.	0.5	32
138	Excised acoustic black holes: The scattering problem in the time domain. Physical Review D, 2005, 72, .	1.6	32
139	Lattice Boltzmann spray-like fluids. Europhysics Letters, 2008, 82, 24005.	0.7	32
140	MULTI-RELAXATION TIME LATTICE BOLTZMANN MODEL FOR MULTIPHASE FLOWS. International Journal of Modern Physics C, 2008, 19, 875-902.	0.8	32
141	Hybrid lattice Boltzmann method on overlapping grids. Physical Review E, 2017, 95, 013309.	0.8	32
142	Molecular Dynamics Simulation of Ratchet Motion in an Asymmetric Nanochannel. Physical Review Letters, 2006, 97, 144509.	2.9	31
143	Lattice Boltzmann simulations of capillary filling: Finite vapour density effects. European Physical Journal: Special Topics, 2009, 171, 237-243.	1.2	31
144	Derivation of the lattice Boltzmann model for relativistic hydrodynamics. Physical Review D, 2010, 82, .	1.6	31

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145	Polymer dynamics in wall turbulent flow. Europhysics Letters, 2002, 58, 616-622.	0.7	30
146	Numerical stability of Entropic versus positivity-enforcing Lattice Boltzmann schemes. Mathematics and Computers in Simulation, 2006, 72, 227-231.	2.4	30
147	Quantized Current Blockade and Hydrodynamic Correlations in Biopolymer Translocation through Nanopores: Evidence from Multiscale Simulations. Nano Letters, 2008, 8, 1115-1119.	4.5	30
148	Modern lattice Boltzmann methods for multiphase microflows. IMA Journal of Applied Mathematics, 2011, 76, 712-725.	0.8	30
149	Regularization of the slip length divergence in water nanoflows by inhomogeneities at the Angstrom scale. Soft Matter, 2013, 9, 8526.	1.2	30
150	Modeling pattern formation in soft flowing crystals. Physical Review Fluids, 2019, 4, .	1.0	30
151	Boundary Conditions for Thermal Lattice Boltzmann Simulations. Lecture Notes in Computer Science, 2003, , 977-986.	1.0	29
152	Graphics processing unit implementation of lattice Boltzmann models for flowing soft systems. Physical Review E, 2009, 80, 066707.	0.8	29
153	Finite-volume lattice Boltzmann modeling of thermal transport in nanofluids. Computers and Fluids, 2013, 77, 56-65.	1.3	29
154	Relativistic lattice Boltzmann model with improved dissipation. Physical Review D, 2013, 87, .	1.6	29
155	Hydrodynamics in Porous Media: A Finite Volume Lattice Boltzmann Study. Journal of Scientific Computing, 2014, 59, 80-103.	1.1	29
156	Quantum Simulator for Transport Phenomena in Fluid Flows. Scientific Reports, 2015, 5, 13153.	1.6	29
157	Sub-ms dynamics of the instability onset of electrospinning. Soft Matter, 2015, 11, 3424-3431.	1.2	29
158	Equilibria for discrete kinetic equations. Physical Review E, 1998, 58, R4053-R4056.	0.8	28
159	Accelerated Lattice Boltzmann Schemes for Steady-State Flow Simulations. Journal of Scientific Computing, 2001, 16, 135-144.	1.1	28
160	Solving the Fokker-Planck kinetic equation on a lattice. Physical Review E, 2006, 73, 066707.	0.8	28
161	Quantum lattice Boltzmann is a quantum walk. EPJ Quantum Technology, 2015, 2, .	2.9	28
162	On the Hydrodynamic Behaviour of the Lattice Boltzmann Equation. Europhysics Letters, 1990, 13, 411-416.	0.7	27

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163	Three ways to lattice Boltzmann: A unified time-marching picture. Physical Review E, 2010, 81, 016311.	0.8	27
164	Multiscale Simulation of Cardiovascular flows on the IBM Bluegene/P: Full Heart-Circulation System at Red-Blood Cell Resolution. , 2010, , .		27
165	Petaflop hydrokinetic simulations of complex flows on massive GPU clusters. Computer Physics Communications, 2013, 184, 329-341.	3.0	27
166	DSMCâ€"LBM mapping scheme for rarefied and non-rarefied gas flows. Journal of Computational Science, 2016, 17, 357-369.	1.5	27
167	Entropy production in thermal phase separation: a kinetic-theory approach. Soft Matter, 2019, 15, 2245-2259.	1.2	27
168	Elucidating the mechanism of step emulsification. Physical Review Fluids, 2018, 3, .	1.0	27
169	The vortex-driven dynamics of droplets within droplets. Nature Communications, 2021, 12, 82.	5.8	26
170	Turbulence Modelling by Nonhydrodynamic Variables. Europhysics Letters, 1990, 13, 727-732.	0.7	25
171	Formal Analogy between the Dirac Equation in Its Majorana Form and the Discrete-Velocity Version of the Boltzmann Kinetic Equation. Physical Review Letters, 2013, 111, 160602.	2.9	25
172	Finite volume formulation of thermal lattice Boltzmann method. International Journal of Numerical Methods for Heat and Fluid Flow, 2014, 24, 270-289.	1.6	25
173	Jetting to dripping transition: Critical aspect ratio in step emulsifiers. Physics of Fluids, 2019, 31, .	1.6	25
174	Neural network models for the anisotropic Reynolds stress tensor in turbulent channel flow. Journal of Turbulence, 2020, 21, 525-543.	0.5	25
175	Nonlinear Stability of Compressible Thermal Lattice BGK Models. SIAM Journal of Scientific Computing, 1999, 21, 366-377.	1.3	24
176	Lattice Boltzmann schemes without coordinates. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2004, 362, 1763-1771.	1.6	24
177	Herschel-Bulkley rheology from lattice kinetic theory of soft glassy materials. Europhysics Letters, 2010, 91, 14003.	0.7	24
178	Comment on â€œNumerics of the lattice Boltzmann method: Effects of collision models on the lattice Boltzmann simulationsâ€. Physical Review E, 2011, 84, 068701.	0.8	24
179	Three Routes to the Friction Matrix and Their Application to the Coarseâ€Graining of Atomic Lattices. Macromolecular Theory and Simulations, 2011, 20, 526-540.	0.6	24
180	Lattice differential operators for computational physics. Europhysics Letters, 2013, 101, 50006.	0.7	24

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181	Lattice Boltzmann model for ultrarelativistic flows. Physical Review D, 2013, 87, .	1.6	24
182	Tailoring boundary geometry to optimize heat transport in turbulent convection. Europhysics Letters, 2015, 111, 44005.	0.7	24
183	Effect of nanoscale flows on the surface structure of nanoporous catalysts. Journal of Chemical Physics, 2017, 146, 214703.	1.2	24
184	Relativistic lattice Boltzmann methods: Theory and applications. Physics Reports, 2020, 863, 1-63.	10.3	24
185	Lattice Boltzmann Method for Irregular Grids. Physical Review Letters, 1999, 82, 5245-5248.	2.9	23
186	Dynamics of trapped two-component Fermi gas: Temperature dependence of the transition from collisionless to collisional regime. Physical Review A, 2003, 67, .	1.0	23
187	The unstructured lattice Boltzmann method for non-Newtonian flows. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P06005.	0.9	23
188	Isotropy of three-dimensional quantum lattice Boltzmann schemes. Physical Review E, 2011, 83, 046706.	0.8	23
189	Direct evidence of plastic events and dynamic heterogeneities in soft-glasses. Soft Matter, 2014, 10, 4615.	1.2	23
190	Reassessing the single relaxation time Lattice Boltzmann method for the simulation of Darcy's flows. International Journal of Modern Physics C, 2016, 27, 1650037.	0.8	23
191	Particle-inspired scheme for the Gross–Pitaevski equation: An application to Bose–Einstein condensation. Computer Physics Communications, 2000, 129, 82-90.	3.0	22
192	Particle Shape Influences Settling and Sorting Behavior in Microfluidic Domains. Scientific Reports, 2018, 8, 8583.	1.6	22
193	Lattice Boltzmann Simulation of Reactive Microflows over Catalytic Surfaces. Journal of Statistical Physics, 2002, 107, 343-366.	0.5	21
194	Computational modeling of the immune response to tumor antigens. Journal of Theoretical Biology, 2005, 237, 390-400.	0.8	21
195	A moving-grid approach for fluid–structure interaction problems with hybrid lattice Boltzmann method. Computer Physics Communications, 2019, 234, 137-145.	3.0	21
196	Energy dissipation and permeability in porous media. Europhysics Letters, 2002, 60, 72-78.	0.7	20
197	ACCELERATED LATTICE BOLTZMANN SCHEME FOR STEADY-STATE FLOWS. International Journal of Modern Physics B, 2003, 17, 1-7.	1.0	20
198	Numerical analysis of the averaged flow field in a turbulent lattice Boltzmann simulation. Physica A: Statistical Mechanics and Its Applications, 2006, 362, 6-10.	1.2	20

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199	Effects of orthogonal rotating electric fields on electrospinning process. Physics of Fluids, 2017, 29, .	1.6	20
200	Beyond moments: relativistic lattice Boltzmann methods for radiative transport in computational astrophysics. Monthly Notices of the Royal Astronomical Society, 2020, 498, 3374-3394.	1.6	20
201	Novel nonequilibrium steady states in multiple emulsions. Physics of Fluids, 2020, 32, .	1.6	20
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