Shiyi Chen

List of Publications by Year
in descending order

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		12322	7340
284	24,933	69	152
papers	citations	h-index	g-index

285	285	285	10311
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	LATTICE BOLTZMANN METHOD FOR FLUID FLOWS. Annual Review of Fluid Mechanics, 1998, 30, 329-364.	10.8	6,195
2	Recovery of the Navier-Stokes equations using a lattice-gas Boltzmann method. Physical Review A, 1992, 45, R5339-R5342.	1.0	1,289
3	A Novel Thermal Model for the Lattice Boltzmann Method in Incompressible Limit. Journal of Computational Physics, 1998, 146, 282-300.	1.9	1,194
4	A Lattice Boltzmann Scheme for Incompressible Multiphase Flow and Its Application in Simulation of Rayleighâ€“Taylor Instability. Journal of Computational Physics, 1999, 152, 642-663.	1.9	945
5	Lattice Boltzmann model for simulation of magnetohydrodynamics. Physical Review Letters, 1991, 67, 3776-3779.	2.9	591
6	Simulation of Cavity Flow by the Lattice Boltzmann Method. Journal of Computational Physics, 1995, 118, 329-347.	1.9	521
7	On boundary conditions in lattice Boltzmann methods. Physics of Fluids, 1996, 8, 2527-2536.	1.6	432
8	Mesoscopic predictions of the effective thermal conductivity for microscale random porous media. Physical Review E, 2007, 75, 036702.	0.8	394
9	A public turbulence database cluster and applications to study Lagrangian evolution of velocity increments in turbulence. Journal of Turbulence, 2008, 9, N31.	0.5	373
10	A lattice Boltzmann model for multiphase fluid flows. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2557-2562.	1.6	348
11	Stability Analysis of Lattice Boltzmann Methods. Journal of Computational Physics, 1996, 123, 196-206.	1.9	346
12	Lattice-Boltzmann Simulations of Fluid Flows in MEMS. Journal of Statistical Physics, 2002, 107, 279-289.	0.5	330
13	A consistent hydrodynamic boundary condition for the lattice Boltzmann method. Physics of Fluids, 1995, 7, 203-209.	1.6	301
14	Camassa-Holm Equations as a Closure Model for Turbulent Channel and Pipe Flow. Physical Review Letters, 1998, 81, 5338-5341.	2.9	272
15	Probability distribution of a stochastically advected scalar field. Physical Review Letters, 1989, 63, 2657-2660.	2.9	250
16	Pore scale study of flow in porous media: Scale dependency, REV, and statistical REV. Geophysical Research Letters, 2000, 27, 1195-1198.	1.5	242
17	Lattice Boltzmann computational fluid dynamics in three dimensions. Journal of Statistical Physics, 1992, 68, 379-400.	0.5	240
18	Physical symmetry and lattice symmetry in the lattice Boltzmann method. Physical Review E, 1997, 55, R21-R24.	0.8	237

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19	Displacement of a two-dimensional immiscible droplet in a channel. Physics of Fluids, 2002, 14, 3203-3214.	1.6	233
20	Convective stability analysis of the long-term storage of carbon dioxide in deep saline aquifers. Advances in Water Resources, 2006, 29, 397-407.	1.7	222
21	Lattice Boltzmann simulation of chemical dissolution in porous media. Physical Review E, 2002, 65, 036318.	0.8	214
22	The joint cascade of energy and helicity in three-dimensional turbulence. Physics of Fluids, 2003, 15, 361-374.	1.6	185
23	On statistical correlations between velocity increments and locally averaged dissipation in homogeneous turbulence. Physics of Fluids A, Fluid Dynamics, 1993, 5, 458-463.	1.6	182
24	Examination of hypotheses in the Kolmogorov refined turbulence theory through high-resolution simulations. Part 1. Velocity field. Journal of Fluid Mechanics, 1996, 309, 113-156.	1.4	182
25	On the three-dimensional Rayleighâ€“Taylor instability. Physics of Fluids, 1999, 11, 1143-1152.	1.6	177
26	Direct numerical simulations of the Navierâ€“Stokes alpha model. Physica D: Nonlinear Phenomena, 1999, 133, 66-83.	1.3	150
27	A improved incompressible lattice Boltzmann model for time-independent flows. Journal of Statistical Physics, 1995, 81, 35-48.	0.5	148
28	Simulation of dissolution and precipitation in porous media. Journal of Geophysical Research, 2003, 108, .	3.3	140
29	Flow patterns in the sedimentation of an elliptical particle. Journal of Fluid Mechanics, 2009, 625, 249-272.	1.4	137
30	Physical Mechanism of the Two-Dimensional Inverse Energy Cascade. Physical Review Letters, 2006, 96, 084502.	2.9	134
31	Unified lattice Boltzmann method for flow in multiscale porous media. Physical Review E, 2002, 66, 056307.	0.8	124
32	Sweeping decorrelation in isotropic turbulence. Physics of Fluids A, Fluid Dynamics, 1989, 1, 2019-2024.	1.6	121
33	Electroosmosis in homogeneously charged micro- and nanoscale random porous media. Journal of Colloid and Interface Science, 2007, 314, 264-273.	5.0	119
34	Ca2Fe2O5: A promising oxygen carrier for CO/CH4 conversion and almost-pure H2 production with inherent CO2 capture over a two-step chemical looping hydrogen generation process. Applied Energy, 2018, 211, 431-442.	5.1	119
35	Energy transfer, pressure tensor, and heating of kinetic plasma. Physics of Plasmas, 2017, 24, .	0.7	115
36	Lattice gas automata for flow through porous media. Physica D: Nonlinear Phenomena, 1991, 47, 72-84.	1.3	114

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37	Displacement of a three-dimensional immiscible droplet in a duct. Journal of Fluid Mechanics, 2005, 545, 41.	1.4	112
38	Reynolds-stress-constrained large-eddy simulation of wall-bounded turbulent flows. Journal of Fluid Mechanics, 2012, 703, 1-28.	1.4	112
39	Kinetic energy transfer in compressible isotropic turbulence. Journal of Fluid Mechanics, 2018, 841, 581-613.	1.4	112
40	Immiscible displacement in a channel: simulations of fingering in two dimensions. Advances in Water Resources, 2004, 27, 13-22.	1.7	106
41	Effect of compressibility on the small-scale structures in isotropic turbulence. Journal of Fluid Mechanics, 2012, 713, 588-631.	1.4	105
42	Non-modal growth of perturbations in density-driven convection in porous media. Journal of Fluid Mechanics, 2008, 609, 285-303.	1.4	104
43	Constrained large-eddy simulation of separated flow in a channel with streamwise-periodic constrictions. Journal of Turbulence, 2013, 14, 1-21.	0.5	103
44	Aerodynamic heating in transitional hypersonic boundary layers: Role of second-mode instability. Physics of Fluids, 2018, 30, .	1.6	103
45	Experimental investigation of chemical-looping hydrogen generation using Al 2 O 3 or TiO 2 -supported iron oxides in a batch fluidized bed. International Journal of Hydrogen Energy, 2011, 36, 8915-8926.	3.8	101
46	Physical Mechanism of the Two-Dimensional Enstrophy Cascade. Physical Review Letters, 2003, 91, 214501.	2.9	100
47	Scaling Relations for a Randomly Advected Passive Scalar Field. Physical Review Letters, 1995, 75, 240-243.	2.9	99
48	Dynamics of Freely Cooling Granular Gases. Physical Review Letters, 2002, 89, 204301.	2.9	95
49	Refined Similarity Hypothesis for Transverse Structure Functions in Fluid Turbulence. Physical Review Letters, 1997, 79, 2253-2256.	2.9	94
50	Intermittency in the Joint Cascade of Energy and Helicity. Physical Review Letters, 2003, 90, 214503.	2.9	91
51	Winter photochemistry in Beijing: Observation and model simulation of OH and HO2 radicals at an urban site. Science of the Total Environment, 2019, 685, 85-95.	3.9	91
52	A continuumâ€“atomistic simulation of heat transfer in micro- and nano-flows. Journal of Computational Physics, 2007, 227, 279-291.	1.9	89
53	Is there a statistical mechanics of turbulence?. Physica D: Nonlinear Phenomena, 1989, 37, 160-172.	1.3	88
54	Far-dissipation range of turbulence. Physical Review Letters, 1993, 70, 3051-3054.	2.9	87

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55	Transition in Hypersonic Boundary Layers: Role of Dilatational Waves. AIAA Journal, 2016, 54, 3039-3049.	1.5	85
56	Lattice Boltzmann magnetohydrodynamics. Physics of Plasmas, 1994, 1, 1850-1867.	0.7	83
57	Roughness and cavitations effects on electro-osmotic flows in rough microchannels using the lattice Poissonâ€“Boltzmann methods. Journal of Computational Physics, 2007, 226, 836-851.	1.9	82
58	Momentum-exchange method in lattice Boltzmann simulations of particle-fluid interactions. Physical Review E, 2013, 88, 013303.	0.8	82
59	Recent progress in the study of transition in the hypersonic boundary layer. National Science Review, 2019, 6, 155-170.	4.6	82
60	Experimental study of freely falling thin disks: Transition from planar zigzag to spiral. Physics of Fluids, 2011, 23, .	1.6	80
61	Interface and surface tension in incompressible lattice Boltzmann multiphase model. Computer Physics Communications, 2000, 129, 121-130.	3.0	79
62	Cascade of Kinetic Energy in Three-Dimensional Compressible Turbulence. Physical Review Letters, 2013, 110, 214505.	2.9	78
63	Mesoscopic simulations of phase distribution effects on the effective thermal conductivity of microgranular porous media. Journal of Colloid and Interface Science, 2007, 311, 562-570.	5.0	77
64	Reynolds number dependence of isotropic Navier-Stokes turbulence. Physical Review Letters, 1993, 70, 3251-3254.	2.9	75
65	Three-dimensional effect on the effective thermal conductivity of porous media. Journal Physics D: Applied Physics, 2007, 40, 260-265.	1.3	75
66	Improved aerosol correction for OMI tropospheric NO₂ retrieval over East Asia: constraint from CALIOP aerosol vertical profile. Atmospheric Measurement Techniques, 2019, 12, 1-21.	1.2	75
67	Inertial Range Scalings of Dissipation and Enstrophy in Isotropic Turbulence. Physical Review Letters, 1997, 79, 1253-1256.	2.9	74
68	Statistics and structures of pressure in isotropic turbulence. Physics of Fluids, 1999, 11, 2235-2250.	1.6	74
69	Resonant interactions in rotating homogeneous three-dimensional turbulence. Journal of Fluid Mechanics, 2005, 542, 139.	1.4	71
70	Effects of Zr doping on Fe2O3/CeO2 oxygen carrier in chemical looping hydrogen generation. Chemical Engineering Journal, 2018, 346, 712-725.	6.6	71
71	Effect of shocklets on the velocity gradients in highly compressible isotropic turbulence. Physics of Fluids, 2011, 23, .	1.6	70
72	Field Determination of Nitrate Formation Pathway in Winter Beijing. Environmental Science & Technology, 2020, 54, 9243-9253.	4.6	69

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73	Electrokinetic pumping effects of charged porous media in microchannels using the lattice Poissonâ€“Boltzmann method. Journal of Colloid and Interface Science, 2006, 304, 246-253.	5.0	67
74	Newly identified principle for aerodynamic heating in hypersonic flows. Journal of Fluid Mechanics, 2018, 855, 152-180.	1.4	66
75	Artificial neural network mixed model for large eddy simulation of compressible isotropic turbulence. Physics of Fluids, 2019, 31, .	1.6	66
76	Onset of convection over a transient base-state in anisotropic and layered porous media. Journal of Fluid Mechanics, 2009, 641, 227-244.	1.4	65
77	Constrained subgrid-scale stress model for large eddy simulation. Physics of Fluids, 2008, 20, .	1.6	63
78	Effects of CeO₂, ZrO₂, and Al₂O₃ Supports on Iron Oxygen Carrier for Chemical Looping Hydrogen Generation. Energy & Fuels, 2017, 31, 8001-8013.	2.5	63
79	Lattice Boltzmann simulation on particle suspensions in a two-dimensional symmetric stenotic artery. Physical Review E, 2004, 69, 031919.	0.8	62
80	Experimental investigation of freely falling thin disks. Part 1. The flow structures and Reynolds number effects on the zigzag motion. Journal of Fluid Mechanics, 2013, 716, 228-250.	1.4	62
81	Scalings and Relative Scalings in the Navier-Stokes Turbulence. Physical Review Letters, 1996, 76, 3711-3714.	2.9	60
82	Surface tension effects on two-dimensional two-phase Kelvinâ€“Helmholtz instabilities. Advances in Water Resources, 2001, 24, 461-478.	1.7	60
83	Effects of supports on hydrogen production and carbon deposition of Fe-based oxygen carriers in chemical looping hydrogen generation. International Journal of Hydrogen Energy, 2017, 42, 11006-11016.	3.8	60
84	A model for the laminar flame speed of binary fuel blends and its application to methane/hydrogen mixtures. International Journal of Hydrogen Energy, 2012, 37, 10390-10396.	3.8	59
85	Carbon formation on iron-based oxygen carriers during CH 4 reduction period in Chemical Looping Hydrogen Generation process. Chemical Engineering Journal, 2017, 325, 322-331.	6.6	59
86	Experimental investigation of freely falling thin disks. Part 2. Transition of three-dimensional motion from zigzag to spiral. Journal of Fluid Mechanics, 2013, 732, 77-104.	1.4	57
87	High-resolution turbulent simulations using the Connection Machine-2. Computers in Physics, 1992, 6, 643.	0.6	54
88	Hybrid continuum-atomistic simulation of singular corner flow. Physics of Fluids, 2004, 16, 3579-3591.	1.6	54
89	Effects of Hydrodynamics on Phase Transition Kinetics in Two-Dimensional Binary Fluids. Physical Review Letters, 1995, 74, 3852-3855.	2.9	53
90	Simulations of a randomly advected passive scalar field. Physics of Fluids, 1998, 10, 2867-2884.	1.6	53

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91	Enhanced sintering resistance of Fe2O3/CeO2 oxygen carrier for chemical looping hydrogen generation using core-shell structure. International Journal of Hydrogen Energy, 2019, 44, 6491-6504.	3.8	53
92	Examination of hypotheses in the Kolmogorov refined turbulence theory through high-resolution simulations. Part 2. Passive scalar field. Journal of Fluid Mechanics, 1999, 400, 163-197.	1.4	52
93	Spinodal decomposition in fluids: Diffusive, viscous, and inertial regimes. Physical Review E, 1996, 53, 5513-5516.	0.8	51
94	Ignition of methane with hydrogen and dimethyl ether addition. Fuel, 2014, 118, 1-8.	3.4	51
95	Resolving Singular Forces in Cavity Flow: Multiscale Modeling from Atomic to Millimeter Scales. Physical Review Letters, 2006, 96, 134501.	2.9	50
96	Transition in hypersonic boundary layers. AIP Advances, 2015, 5, .	0.6	50
97	Scaling and Statistics in Three-Dimensional Compressible Turbulence. Physical Review Letters, 2012, 108, 214505.	2.9	48
98	Uncovering Molecular Mechanisms of Electrowetting and Saturation with Simulations. Physical Review Letters, 2012, 108, 216101.	2.9	47
99	Anomalous Scaling and Structure Instability in Three-Dimensional Passive Scalar Turbulence. Physical Review Letters, 1997, 78, 3459-3462.	2.9	45
100	Turbulent bands in plane-Poiseuille flow at moderate Reynolds numbers. Physics of Fluids, 2015, 27, .	1.6	45
101	Characterization of Fe 2 O 3 /CeO 2 oxygen carriers for chemical looping hydrogen generation. International Journal of Hydrogen Energy, 2018, 43, 3154-3164.	3.8	44
102	Statistics of Dissipation and Enstrophy Induced by Localized Vortices. Physical Review Letters, 1998, 81, 4636-4639.	2.9	43
103	Peristaltic particle transport using the lattice Boltzmann method. Physics of Fluids, 2009, 21, .	1.6	43
104	Effects of supports on reduction activity and carbon deposition of iron oxide for methane chemical looping hydrogen generation. Applied Energy, 2018, 225, 912-921.	5.1	43
105	Finite Size Effect in Lattice-BGK Models. International Journal of Modern Physics C, 1997, 08, 763-771.	0.8	41
106	Scale dependence of energy transfer in turbulent plasma. Monthly Notices of the Royal Astronomical Society, 2019, 482, 4933-4940.	1.6	41
107	Ni, Co and Cu-promoted iron-based oxygen carriers in methane-fueled chemical looping hydrogen generation process. Fuel Processing Technology, 2021, 221, 106917.	3.7	40
108	Experimental investigation of chemical looping hydrogen generation using iron oxides in a batch fluidized bed. Proceedings of the Combustion Institute, 2011, 33, 2691-2699.	2.4	39

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109	Constrained large-eddy simulation of wall-bounded compressible turbulent flows. Physics of Fluids, 2013, 25, .	1.6	39
110	Direct numerical simulation of turbulent channel flow with spanwise rotation. Journal of Fluid Mechanics, 2016, 788, 42-56.	1.4	39
111	Lattice Boltzmann simulation of the two-dimensional Rayleigh-Taylor instability. Physical Review E, 1998, 58, 6861-6864.	0.8	37
112	Energy cascade and its locality in compressible magnetohydrodynamic turbulence. Physical Review E, 2016, 93, 061102.	0.8	37
113	Hypersonic aerodynamic heating over a flared cone with wavy wall. Physics of Fluids, 2019, 31, .	1.6	37
114	Vortex reconnection in the late transition in channel flow. Journal of Fluid Mechanics, 2016, 802, .	1.4	36
115	Compressibility effect on coherent structures, energy transfer, and scaling in magnetohydrodynamic turbulence. Physics of Fluids, 2017, 29, .	1.6	32
116	Sintering and agglomeration of Fe2O3-MgAl2O4 oxygen carriers with different Fe2O3 loadings in chemical looping processes. Fuel, 2020, 265, 116983.	3.4	32
117	Molecular simulations of electroosmotic flows in rough nanochannels. Journal of Computational Physics, 2010, 229, 7834-7847.	1.9	31
118	Spectra and Mach number scaling in compressible homogeneous shear turbulence. Physics of Fluids, 2018, 30, .	1.6	31
119	Relations between skin friction and other surface quantities in viscous flows. Physics of Fluids, 2019, 31, .	1.6	30
120	Cascades of temperature and entropy fluctuations in compressible turbulence. Journal of Fluid Mechanics, 2019, 867, 195-215.	1.4	30
121	Effect of flow topology on the kinetic energy flux in compressible isotropic turbulence. Journal of Fluid Mechanics, 2020, 883, .	1.4	30
122	Subgrid-scale eddy viscosity model for helical turbulence. Physics of Fluids, 2013, 25, .	1.6	29
123	Effect of shock waves on the statistics and scaling in compressible isotropic turbulence. Physical Review E, 2018, 97, 043108.	0.8	29
124	Effects of compressibility and Atwood number on the single-mode Rayleigh-Taylor instability. Physics of Fluids, 2020, 32, 012110.	1.6	29
125	Simulation of three-dimensional compressible decaying isotropic turbulence using a redesigned discrete unified gas kinetic scheme. Physics of Fluids, 2020, 32, .	1.6	29
126	Coupling of high Knudsen number and non-ideal gas effects in microporous media. Journal of Fluid Mechanics, 2018, 840, 56-73.	1.4	28

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127	Multiple states in turbulent plane Couette flow with spanwise rotation. Journal of Fluid Mechanics, 2018, 837, 477-490.	1.4	28
128	Observations and modeling of OH and HO2 radicals in Chengdu, China in summer 2019. Science of the Total Environment, 2021, 772, 144829.	3.9	28
129	Precursors and Pathways Leading to Enhanced Secondary Organic Aerosol Formation during Severe Haze Episodes. Environmental Science & Technology, 2021, 55, 15680-15693.	4.6	28
130	Generalized hydrodynamic transport in lattice-gas automata. Physical Review A, 1991, 43, 7097-7100.	1.0	27
131	Properties of Velocity Circulation in Three-Dimensional Turbulence. Physical Review Letters, 1996, 76, 616-619.	2.9	27
132	Effective volumetric lattice Boltzmann scheme. Physical Review E, 2001, 63, 056705.	0.8	27
133	Effects of approaching main flow boundary layer on flow and cooling performance of an inclined jet in cross flow. International Journal of Heat and Mass Transfer, 2016, 103, 572-581.	2.5	27
134	Slip boundary conditions over curved surfaces. Physical Review E, 2016, 93, 013105.	0.8	27
135	Assessing the Ratios of Formaldehyde and Glyoxal to NO₂ as Indicators of O₃â€“NO_xâ€“VOC Sensitivity. Environmental Science & Technology, 2021, 55, 10935-10945.	4.6	27
136	Inertial range scaling in turbulence. Physical Review E, 1995, 52, R5757-R5759.	0.8	26
137	Is the Kolmogorov Refined Similarity Relation Dynamic or Kinematic?. Physical Review Letters, 1995, 74, 1755-1758.	2.9	26
138	Constrained large-eddy simulation and detached eddy simulation of flow past a commercial aircraft at 14 degrees angle of attack. Science China: Physics, Mechanics and Astronomy, 2013, 56, 270-276.	2.0	26
139	Effect of wall temperature on the kinetic energy transfer in a hypersonic turbulent boundary layer. Journal of Fluid Mechanics, 2021, 929, .	1.4	26
140	Scaling of Low-Order Structure Functions in Homogeneous Turbulence. Physical Review Letters, 1996, 77, 3799-3802.	2.9	25
141	Evolution of material surfaces in the temporal transition in channel flow. Journal of Fluid Mechanics, 2016, 793, 840-876.	1.4	25
142	Dissipation-energy flux correlations as evidence for the Lagrangian energy cascade in turbulence. Physics of Fluids, 2010, 22, .	1.6	24
143	A modified optimal LES model for highly compressible isotropic turbulence. Physics of Fluids, 2018, 30, 065108.	1.6	24
144	Effects of bulk viscosity on compressible homogeneous turbulence. Physics of Fluids, 2019, 31, .	1.6	24

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145	Spatially multi-scale artificial neural network model for large eddy simulation of compressible isotropic turbulence. AIP Advances, 2020, 10, .	0.6	24
146	Compressibility effect in hypersonic boundary layer with isothermal wall condition. Physical Review Fluids, 2021, 6, .	1.0	24
147	Characteristics and sources of volatile organic compounds during pollution episodes and clean periods in the Beijing-Tianjin-Hebei region. Science of the Total Environment, 2021, 799, 149491.	3.9	24
148	Constrained Large-Eddy Simulation of Compressible Flow Past a Circular Cylinder. Communications in Computational Physics, 2014, 15, 388-421.	0.7	23
149	Mach Number Effect of Compressible Flow Around a Circular Cylinder. AIAA Journal, 2016, 54, 2004-2009.	1.5	23
150	Effect of compressibility on small scale statistics in homogeneous shear turbulence. Physics of Fluids, 2019, 31, 025107.	1.6	23
151	Elucidating the effect of HONO on O3 pollution by a case study in southwest China. Science of the Total Environment, 2021, 756, 144127.	3.9	23
152	Subgrid-scale modeling of helicity and energy dissipation in helical turbulence. Physical Review E, 2006, 74, 026310.	0.8	22
153	Correlations for the ignition delay times of hydrogen/air mixtures. Science Bulletin, 2011, 56, 215-221.	1.7	22
154	Enhanced Hydrogen Generation for Fe₂O₃/CeO₂ Oxygen Carrier via Rare-Earth (Y, Sm, and La) Doping in Chemical Looping Process. Energy & Fuels, 2018, 32, 11362-11374.	2.5	22
155	Spatial artificial neural network model for subgrid-scale stress and heat flux of compressible turbulence. Theoretical and Applied Mechanics Letters, 2020, 10, 27-32.	1.3	22
156	Near-wall flow structures and related surface quantities in wall-bounded turbulence. Physics of Fluids, 2021, 33, .	1.6	22
157	Interactions between inertial particles and shocklets in compressible turbulent flow. Physics of Fluids, 2014, 26, .	1.6	21
158	Constrained large-eddy simulation of laminar-turbulent transition in channel flow. Physics of Fluids, 2014, 26, .	1.6	21
159	Modulation to compressible homogenous turbulence by heavy point particles. I. Effect of particlesâ€™ density. Physics of Fluids, 2016, 28, .	1.6	21
160	Synergistic Effects of the Zr and Sm Co-doped Fe₂O₃/CeO₂ Oxygen Carrier for Chemical Looping Hydrogen Generation. Energy & Fuels, 2020, 34, 10256-10267.	2.5	21
161	Turbulent statistics and flow structures in spanwise-rotating turbulent plane Couette flows. Physical Review Fluids, 2016, 1, .	1.0	21
162	Is the Kelvin Theorem Valid for High Reynolds Number Turbulence?. Physical Review Letters, 2006, 97, 144505.	2.9	20

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163	Theoretical model of scattering from flow ducts with semi-infinite axial liner splices. Journal of Fluid Mechanics, 2016, 786, 62-83.	1.4	20
164	Role of magnetic field curvature in magnetohydrodynamic turbulence. Physics of Plasmas, 2019, 26, .	0.7	20
165	Skin-friction and heat-transfer decompositions in hypersonic transitional and turbulent boundary layers. Journal of Fluid Mechanics, 2022, 941, .	1.4	20
166	Dual channels of helicity cascade in turbulent flows. Journal of Fluid Mechanics, 2020, 894, .	1.4	19
167	Growth kinetics in multicomponent fluids. Journal of Statistical Physics, 1995, 81, 223-235.	0.5	18
168	LATTICE BOLTZMANN METHOD FOR TWO-PHASE FLOWS. International Journal of Modern Physics B, 2003, 17, 169-172.	1.0	18
169	Kolmogorovâ€™s Third Hypothesis and Turbulent Sign Statistics. Physical Review Letters, 2003, 90, 254501.	2.9	18
170	Acceleration of Passive Tracers in Compressible Turbulent Flow. Physical Review Letters, 2013, 110, 064503.	2.9	18
171	Sinuous distortion of vortex surfaces in the lateral growth of turbulent spots. Physical Review Fluids, 2018, 3, .	1.0	18
172	Lattice gas automata for simple and complex fluids. Journal of Statistical Physics, 1991, 64, 1133-1162.	0.5	17
173	Effect of compressibility on the local flow topology in homogeneous shear turbulence. Physics of Fluids, 2020, 32, 015118.	1.6	17
174	Characterizing nitrate radical budget trends in Beijing during 2013â€“2019. Science of the Total Environment, 2021, 795, 148869.	3.9	17
175	Dilatational-wave-induced aerodynamic cooling in transitional hypersonic boundary layers. Journal of Fluid Mechanics, 2021, 911, .	1.4	17
176	Anthropogenic monoterpenes aggravating ozone pollution. National Science Review, 2022, 9, .	4.6	17
177	AMADEUS Project and Microscopic Simulation of Boiling Two-Phase Flow by the Lattice-Boltzmann Method. International Journal of Modern Physics C, 1997, 08, 843-858.	0.8	16
178	The scaling of pressure in isotropic turbulence. Physics of Fluids, 1998, 10, 2119-2121.	1.6	16
179	Statistics and structures of pressure and density in compressible isotropic turbulence. Journal of Turbulence, 2013, 14, 21-37.	0.5	16
180	Links between the optical properties and chemical compositions of brown carbon chromophores in different environments: Contributions and formation of functionalized aromatic compounds. Science of the Total Environment, 2021, 786, 147418.	3.9	16

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181	Effective slip boundary conditions for sinusoidally corrugated surfaces. Physical Review Fluids, 2016, 1, .	1.0	16
182	Flow structures and kinetic-potential exchange in forced rotating stratified turbulence. Physical Review Fluids, 2020, 5, .	1.0	16
183	Reduced Aerosol Uptake of Hydroperoxyl Radical May Increase the Sensitivity of Ozone Production to Volatile Organic Compounds. Environmental Science and Technology Letters, 2022, 9, 22-29.	3.9	16
184	Inhibition of turbulent cascade by sweep. Journal of Plasma Physics, 1997, 57, 187-193.	0.7	15
185	Spinodal decomposition in binary fluids under shear flow. Physica A: Statistical Mechanics and Its Applications, 1997, 239, 428-436.	1.2	15
186	Multiscale Fluid Mechanics and Modeling. Procedia IUTAM, 2014, 10, 100-114.	1.2	15
187	Evolutionary geometry of Lagrangian structures in a transitional boundary layer. Physics of Fluids, 2016, 28, 035110.	1.6	15
188	Interactions between the premixed flame front and the three-dimensional Taylorâ€“Green vortex. Proceedings of the Combustion Institute, 2019, 37, 2461-2468.	2.4	15
189	A new idea to predict reshocked Richtmyerâ€“Meshkov mixing: constrained large-eddy simulation. Journal of Fluid Mechanics, 2021, 918, .	1.4	15
190	An intermittency model for passive-scalar turbulence. Physics of Fluids, 1997, 9, 1203-1205.	1.6	14
191	Lattice Boltzmann simulation of a single charged particle in a Newtonian fluid. Physical Review E, 2003, 68, 011401.	0.8	14
192	Contact Angle of Glycerol Nanodroplets Under van der Waals Force. Journal of Physical Chemistry C, 2009, 113, 16169-16173.	1.5	14
193	Simulation of self-assemblies of colloidal particles on the substrate using a lattice Boltzmann pseudo-solid model. Journal of Computational Physics, 2013, 248, 323-338.	1.9	14
194	A hybrid scheme for compressible magnetohydrodynamic turbulence. Journal of Computational Physics, 2016, 306, 73-91.	1.9	14
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