Shiyi Chen

List of Publications by Citations

270 papers	20,170 citations	63 h-index	139 g-index
285 ext. papers	22,422 ext. citations	4.6 avg, IF	6.95 L-index

#	Paper	IF	Citations
270	LATTICE BOLTZMANN METHOD FOR FLUID FLOWS. *Annual Review of Fluid Mechanics*, **1998**, 30, 329-364	22	5264
269	Recovery of the Navier-Stokes equations using a lattice-gas Boltzmann method. *Physical Review A*, **1992**, 45, R5339-R5342	2.6	1062
268	A Novel Thermal Model for the Lattice Boltzmann Method in Incompressible Limit. *Journal of Computational Physics*, **1998**, 146, 282-300	4.1	1005
267	A Lattice Boltzmann Scheme for Incompressible Multiphase Flow and Its Application in Simulation of Rayleigh□Taylor Instability. *Journal of Computational Physics*, **1999**, 152, 642-663	4.1	792
266	Lattice Boltzmann model for simulation of magnetohydrodynamics. *Physical Review Letters*, **1991**, 67, 3776-3779	7.4	498
265	Simulation of Cavity Flow by the Lattice Boltzmann Method. *Journal of Computational Physics*, **1995** , 118, 329-347	4.1	457
264	On boundary conditions in lattice Boltzmann methods. *Physics of Fluids*, **1996**, 8, 2527-2536	4.4	369
263	Mesoscopic predictions of the effective thermal conductivity for microscale random porous media. *Physical Review E*, **2007**, 75, 036702	2.4	303
262	Stability Analysis of Lattice Boltzmann Methods. *Journal of Computational Physics*, **1996**, 123, 196-206	4.1	297
261	A lattice Boltzmann model for multiphase fluid flows. *Physics of Fluids A, Fluid Dynamics*, **1993**, 5, 2557-2562		290
260	Lattice-Boltzmann Simulations of Fluid Flows in MEMS. *Journal of Statistical Physics*, **2002**, 107, 279-289	1.5	282
259	A consistent hydrodynamic boundary condition for the lattice Boltzmann method. *Physics of Fluids*, **1995**, 7, 203-209	4.4	263
258	A public turbulence database cluster and applications to study Lagrangian evolution of velocity increments in turbulence. *Journal of Turbulence*, **2008**, 9, N31	2.1	243
257	Camassa-Holm Equations as a Closure Model for Turbulent Channel and Pipe Flow. *Physical Review Letters*, **1998**, 81, 5338-5341	7.4	230
256	Probability distribution of a stochastically advected scalar field. *Physical Review Letters*, **1989**, 63, 2657-2660	7.4	221
255	Physical symmetry and lattice symmetry in the lattice Boltzmann method. *Physical Review E*, **1997**, 55, R21-R24	2.4	210
254	Lattice Boltzmann computational fluid dynamics in three dimensions. *Journal of Statistical Physics*, **1992**, 68, 379-400	1.5	209

253	Displacement of a two-dimensional immiscible droplet in a channel. *Physics of Fluids*, **2002**, 14, 3203-3214	4.4	204
252	Convective stability analysis of the long-term storage of carbon dioxide in deep saline aquifers. *Advances in Water Resources*, **2006**, 29, 397-407	4.7	200
251	Pore scale study of flow in porous media: Scale dependency, REV, and statistical REV. *Geophysical Research Letters*, **2000**, 27, 1195-1198	4.9	194
250	Lattice Boltzmann simulation of chemical dissolution in porous media. *Physical Review E*, **2002**, 65, 036318	2.4	183
249	The joint cascade of energy and helicity in three-dimensional turbulence. *Physics of Fluids*, **2003**, 15, 361-374	4.4	160
248	On statistical correlations between velocity increments and locally averaged dissipation in homogeneous turbulence. *Physics of Fluids A, Fluid Dynamics*, **1993**, 5, 458-463		160
247	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	3.7	157
246	On the three-dimensional Rayleigh–Taylor instability. *Physics of Fluids*, **1999**, 11, 1143-1152	4.4	149
245	Direct numerical simulations of the Navier–Stokes alpha model. *Physica D: Nonlinear Phenomena*, **1999**, 133, 66-83	3.3	135
244	A improved incompressible lattice Boltzmann model for time-independent flows. *Journal of Statistical Physics*, **1995**, 81, 35-48	1.5	134
243	Simulation of dissolution and precipitation in porous media. *Journal of Geophysical Research*, **2003**, 108,		119
242	Physical mechanism of the two-dimensional inverse energy cascade. *Physical Review Letters*, **2006**, 96, 084502	7.4	116
241	Flow patterns in the sedimentation of an elliptical particle. *Journal of Fluid Mechanics*, **2009**, 625, 249-272	3.7	115
240	Sweeping decorrelation in isotropic turbulence. *Physics of Fluids A, Fluid Dynamics*, **1989**, 1, 2019-2024		106
239	Unified lattice Boltzmann method for flow in multiscale porous media. *Physical Review E*, **2002**, 66, 056307	2.4	105
238	Electroosmosis in homogeneously charged micro- and nanoscale random porous media. *Journal of Colloid and Interface Science*, **2007**, 314, 264-73	9.3	103
237	Lattice gas automata for flow through porous media. *Physica D: Nonlinear Phenomena*, **1991**, 47, 72-84	3.3	102
236	Displacement of a three-dimensional immiscible droplet in a duct. *Journal of Fluid Mechanics*, **2005**, 545, 41	3.7	97

235	Non-modal growth of perturbations in density-driven convection in porous media. *Journal of Fluid Mechanics*, **2008**, 609, 285-303	3.7	95
234	Immiscible displacement in a channel: simulations of fingering in two dimensions. *Advances in Water Resources*, **2004**, 27, 13-22	4.7	93
233	Scaling relations for a randomly advected passive scalar field. *Physical Review Letters*, **1995**, 75, 240-243	7.4	91
232	Refined Similarity Hypothesis for Transverse Structure Functions in Fluid Turbulence. *Physical Review Letters*, **1997**, 79, 2253-2256	7.4	86
231	Kinetic energy transfer in compressible isotropic turbulence. *Journal of Fluid Mechanics*, **2018**, 841, 581-613	3.7	85
230	Constrained large-eddy simulation of separated flow in a channel with streamwise-periodic constrictions. *Journal of Turbulence*, **2013**, 14, 1-21	2.1	85
229	Physical mechanism of the two-dimensional enstrophy cascade. *Physical Review Letters*, **2003**, 91, 214501	7.4	84
228	Reynolds-stress-constrained large-eddy simulation of wall-bounded turbulent flows. *Journal of Fluid Mechanics*, **2012**, 703, 1-28	3.7	83
227	Effect of compressibility on the small-scale structures in isotropic turbulence. *Journal of Fluid Mechanics*, **2012**, 713, 588-631	3.7	82
226	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	6.7	81
225	Is there a statistical mechanics of turbulence?. *Physica D: Nonlinear Phenomena*, **1989**, 37, 160-172	3.3	80
224	Energy transfer, pressure tensor, and heating of kinetic plasma. *Physics of Plasmas*, **2017**, 24, 072306	2.1	79
223	Intermittency in the joint cascade of energy and helicity. *Physical Review Letters*, **2003**, 90, 214503	7.4	77
222	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	10.7	76
221	Dynamics of freely cooling granular gases. *Physical Review Letters*, **2002**, 89, 204301	7.4	75
220	Roughness and cavitations effects on electro-osmotic flows in rough microchannels using the lattice PoissonBoltzmann methods. *Journal of Computational Physics*, **2007**, 226, 836-851	4.1	74
219	Aerodynamic heating in transitional hypersonic boundary layers: Role of second-mode instability. *Physics of Fluids*, **2018**, 30, 011701	4.4	72
218	Interface and surface tension in incompressible lattice Boltzmann multiphase model. *Computer Physics Communications*, **2000**, 129, 121-130	4.2	72

217	A continuum□tomistic simulation of heat transfer in micro- and nano-flows. *Journal of Computational Physics*, **2007**, 227, 279-291	4.1	70
216	Far-dissipation range of turbulence. *Physical Review Letters*, **1993**, 70, 3051-3054	7.4	70
215	Reynolds number dependence of isotropic Navier-Stokes turbulence. *Physical Review Letters*, **1993**, 70, 3251-3254	7.4	70
214	Statistics and structures of pressure in isotropic turbulence. *Physics of Fluids*, **1999**, 11, 2235-2250	4.4	67
213	Lattice Boltzmann magnetohydrodynamics. *Physics of Plasmas*, **1994**, 1, 1850-1867	2.1	67
212	Transition in Hypersonic Boundary Layers: Role of Dilatational Waves. *AIAA Journal*, **2016**, 54, 3039-3049	2.1	66
211	Inertial Range Scalings of Dissipation and Enstrophy in Isotropic Turbulence. *Physical Review Letters* , **1997**, 79, 1253-1256	7.4	66
210	Three-dimensional effect on the effective thermal conductivity of porous media. *Journal Physics D: Applied Physics*, **2007**, 40, 260-265	3	66
209	Momentum-exchange method in lattice Boltzmann simulations of particle-fluid interactions. *Physical Review E*, **2013**, 88, 013303	2.4	64
208	Resonant interactions in rotating homogeneous three-dimensional turbulence. *Journal of Fluid Mechanics*, **2005**, 542, 139	3.7	63
207	Experimental study of freely falling thin disks: Transition from planar zigzag to spiral. *Physics of Fluids*, **2011**, 23, 011702	4.4	62
206	Onset of convection over a transient base-state in anisotropic and layered porous media. *Journal of Fluid Mechanics*, **2009**, 641, 227-244	3.7	61
205	Cascade of kinetic energy in three-dimensional compressible turbulence. *Physical Review Letters*, **2013**, 110, 214505	7.4	60
204	Effect of shocklets on the velocity gradients in highly compressible isotropic turbulence. *Physics of Fluids*, **2011**, 23, 125103	4.4	60
203	Lattice Boltzmann simulation on particle suspensions in a two-dimensional symmetric stenotic artery. *Physical Review E*, **2004**, 69, 031919	2.4	59
202	Mesoscopic simulations of phase distribution effects on the effective thermal conductivity of microgranular porous media. *Journal of Colloid and Interface Science*, **2007**, 311, 562-70	9.3	57
201	Electrokinetic pumping effects of charged porous media in microchannels using the lattice Poisson-Boltzmann method. *Journal of Colloid and Interface Science*, **2006**, 304, 246-53	9.3	57
200	Scalings and relative scalings in the Navier-Stokes turbulence. *Physical Review Letters*, **1996**, 76, 3711-3714	7.4	55

199	Surface tension effects on two-dimensional two-phase Kelvin-Helmholtz instabilities. *Advances in Water Resources*, **2001**, 24, 461-478	4.7	53
198	Winter photochemistry in Beijing: Observation and model simulation of OH and HO radicals at an urban site. *Science of the Total Environment*, **2019**, 685, 85-95	10.2	52
197	Effects of Zr doping on Fe2O3/CeO2 oxygen carrier in chemical looping hydrogen generation. *Chemical Engineering Journal*, **2018**, 346, 712-725	14.7	51
196	Effects of hydrodynamics on phase transition kinetics in two-dimensional binary fluids. *Physical Review Letters*, **1995**, 74, 3852-3855	7.4	51
195	High-resolution turbulent simulations using the Connection Machine-2. *Computers in Physics*, **1992**, 6, 643		51
194	Recent progress in the study of transition in the hypersonic boundary layer. *National Science Review* , **2019**, 6, 155-170	10.8	50
193	Characterising low-cost sensors in highly portable platforms to quantify personal exposure in diverse environments. *Atmospheric Measurement Techniques*, **2019**, 12, 4643-4657	4	49
192	Constrained subgrid-scale stress model for large eddy simulation. *Physics of Fluids*, **2008**, 20, 011701	4.4	49
191	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	3.7	49
190	Spinodal decomposition in fluids: Diffusive, viscous, and inertial regimes. *Physical Review E*, **1996**, 53, 5513-5516	2.4	49
189	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	3.7	48
188	Simulations of a randomly advected passive scalar field. *Physics of Fluids*, **1998**, 10, 2867-2884	4.4	48
187	Newly identified principle for aerodynamic heating in hypersonic flows. *Journal of Fluid Mechanics*, **2018**, 855, 152-180	3.7	47
186	Ignition of methane with hydrogen and dimethyl ether addition. *Fuel*, **2014**, 118, 1-8	7.1	46
185	Effects of CeO2, ZrO2, and Al2O3 Supports on Iron Oxygen Carrier for Chemical Looping Hydrogen Generation. *Energy & Fuels*, **2017**, 31, 8001-8013	4.1	45
184	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	6.7	45
183	Hybrid continuum-atomistic simulation of singular corner flow. *Physics of Fluids*, **2004**, 16, 3579-3591	4.4	45
182	Resolving singular forces in cavity flow: multiscale modeling from atomic to millimeter scales. *Physical Review Letters*, **2006**, 96, 134501	7.4	44

181	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	6.7	41
180	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	3.7	41
179	Uncovering molecular mechanisms of electrowetting and saturation with simulations. *Physical Review Letters*, **2012**, 108, 216101	7.4	40
178	Anomalous Scaling and Structure Instability in Three-Dimensional Passive Scalar Turbulence. *Physical Review Letters*, **1997**, 78, 3459-3462	7.4	39
177	Statistics of Dissipation and Enstrophy Induced by Localized Vortices. *Physical Review Letters*, **1998**, 81, 4636-4639	7.4	39
176	Scaling and statistics in three-dimensional compressible turbulence. *Physical Review Letters*, **2012**, 108, 214505	7.4	38
175	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	14.7	36
174	Transition in hypersonic boundary layers. *AIP Advances*, **2015**, 5, 107137	1.5	36
173	Turbulent bands in plane-Poiseuille flow at moderate Reynolds numbers. *Physics of Fluids*, **2015**, 27, 041702	4.4	35
172	Lattice Boltzmann simulation of the two-dimensional Rayleigh-Taylor instability. *Physical Review E*, **1998**, 58, 6861-6864	2.4	34
171	Peristaltic particle transport using the lattice Boltzmann method. *Physics of Fluids*, **2009**, 21, 053301	4.4	33
170	Experimental investigation of chemical looping hydrogen generation using iron oxides in a batch fluidized bed. *Proceedings of the Combustion Institute*, **2011**, 33, 2691-2699	5.9	33
169	Characterization of Fe 2 O 3 /CeO 2 oxygen carriers for chemical looping hydrogen generation. *International Journal of Hydrogen Energy*, **2018**, 43, 3154-3164	6.7	32
168	Direct numerical simulation of turbulent channel flow with spanwise rotation. *Journal of Fluid Mechanics*, **2016**, 788, 42-56	3.7	32
167	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	6.7	32
166	Scale dependence of energy transfer in turbulent plasma. *Monthly Notices of the Royal Astronomical Society*, **2019**, 482, 4933-4940	4.3	31
165	Finite Size Effect in Lattice-BGK Models. *International Journal of Modern Physics C*, **1997**, 08, 763-771	1.1	30
164	Field Determination of Nitrate Formation Pathway in Winter Beijing. *Environmental Science & Technology*, **2020**, 54, 9243-9253	10.3	29

163	Energy cascade and its locality in compressible magnetohydrodynamic turbulence. *Physical Review E*, **2016**, 93, 061102	2.4	29
162	Vortex reconnection in the late transition in channel flow. *Journal of Fluid Mechanics*, **2016**, 802,	3.7	28
161	Effects of supports on reduction activity and carbon deposition of iron oxide for methane chemical looping hydrogen generation. *Applied Energy*, **2018**, 225, 912-921	10.7	27
160	Compressibility effect on coherent structures, energy transfer, and scaling in magnetohydrodynamic turbulence. *Physics of Fluids*, **2017**, 29, 035105	4.4	26
159	Artificial neural network mixed model for large eddy simulation of compressible isotropic turbulence. *Physics of Fluids*, **2019**, 31, 085112	4.4	26
158	Constrained large-eddy simulation of wall-bounded compressible turbulent flows. *Physics of Fluids*, **2013**, 25, 106102	4.4	26
157	Molecular simulations of electroosmotic flows in rough nanochannels. *Journal of Computational Physics*, **2010**, 229, 7834-7847	4.1	26
156	Is the Kolmogorov refined similarity relation dynamic or kinematic?. *Physical Review Letters*, **1995**, 74, 1755-1758	7.4	25
155	Spectra and Mach number scaling in compressible homogeneous shear turbulence. *Physics of Fluids*, **2018**, 30, 065109	4.4	24
154	Effect of shock waves on the statistics and scaling in compressible isotropic turbulence. *Physical Review E*, **2018**, 97, 043108	2.4	23
153	Slip boundary conditions over curved surfaces. *Physical Review E*, **2016**, 93, 013105	2.4	23
152	Effective volumetric lattice Boltzmann scheme. *Physical Review E*, **2001**, 63, 056705	2.4	23
151	Inertial range scaling in turbulence. *Physical Review E*, **1995**, 52, R5757-R5759	2.4	23
150	Scaling of Low-Order Structure Functions in Homogeneous Turbulence. *Physical Review Letters*, **1996**, 77, 3799-3802	7.4	23
149	Hypersonic aerodynamic heating over a flared cone with wavy wall. *Physics of Fluids*, **2019**, 31, 051702	4.4	22
148	Cascades of temperature and entropy fluctuations in compressible turbulence. *Journal of Fluid Mechanics*, **2019**, 867, 195-215	3.7	22
147	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	3.6	22
146	Generalized hydrodynamic transport in lattice-gas automata. *Physical Review A*, **1991**, 43, 7097-7100	2.6	22

145	Properties of velocity circulation in three-dimensional turbulence. *Physical Review Letters*, **1996**, 76, 616-619	7.4	21
144	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	4.9	21
143	Dissipation-energy flux correlations as evidence for the Lagrangian energy cascade in turbulence. *Physics of Fluids*, **2010**, 22, 061702	4.4	20
142	Multiple states in turbulent plane Couette flow with spanwise rotation. *Journal of Fluid Mechanics*, **2018**, 837, 477-490	3.7	18
141	Is the Kelvin theorem valid for high Reynolds number turbulence?. *Physical Review Letters*, **2006**, 97, 144505	7.4	18
140	Subgrid-scale modeling of helicity and energy dissipation in helical turbulence. *Physical Review E*, **2006**, 74, 026310	2.4	18
139	Subgrid-scale eddy viscosity model for helical turbulence. *Physics of Fluids*, **2013**, 25, 095101	4.4	17
138	Interactions between inertial particles and shocklets in compressible turbulent flow. *Physics of Fluids*, **2014**, 26, 091702	4.4	17
137	Growth kinetics in multicomponent fluids. *Journal of Statistical Physics*, **1995**, 81, 223-235	1.5	17
136	Evolution of material surfaces in the temporal transition in channel flow. *Journal of Fluid Mechanics*, **2016**, 793, 840-876	3.7	17
135	Coupling of high Knudsen number and non-ideal gas effects in microporous media. *Journal of Fluid Mechanics*, **2018**, 840, 56-73	3.7	16
134	Correlations for the ignition delay times of hydrogen/air mixtures. *Science Bulletin*, **2011**, 56, 215-221		16
133	Lattice gas automata for simple and complex fluids. *Journal of Statistical Physics*, **1991**, 64, 1133-1162	1.5	16
132	Effect of compressibility on small scale statistics in homogeneous shear turbulence. *Physics of Fluids*, **2019**, 31, 025107	4.4	16
131	Effects of bulk viscosity on compressible homogeneous turbulence. *Physics of Fluids*, **2019**, 31, 085115	4.4	15
130	Acceleration of passive tracers in compressible turbulent flow. *Physical Review Letters*, **2013**, 110, 064503	7.4	15
129	Inhibition of turbulent cascade by sweep. *Journal of Plasma Physics*, **1997**, 57, 187-193	2.7	15
128	The scaling of pressure in isotropic turbulence. *Physics of Fluids*, **1998**, 10, 2119-2121	4.4	15

127	Effect of flow topology on the kinetic energy flux in compressible isotropic turbulence. *Journal of Fluid Mechanics*, **2020**, 883,	3.7	15
126	Modulation to compressible homogenous turbulence by heavy point particles. I. Effect of particles density. *Physics of Fluids*, **2016**, 28, 016103	4.4	15
125	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	4.1	15
124	A modified optimal LES model for highly compressible isotropic turbulence. *Physics of Fluids*, **2018**, 30, 065108	4.4	15
123	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	4.1	14
122	Constrained large-eddy simulation of laminar-turbulent transition in channel flow. *Physics of Fluids*, **2014**, 26, 095103	4.4	14
121	An intermittency model for passive-scalar turbulence. *Physics of Fluids*, **1997**, 9, 1203-1205	4.4	14
120	Spinodal decomposition in binary fluids under shear flow. *Physica A: Statistical Mechanics and Its Applications*, **1997**, 239, 428-436	3.3	14
119	LATTICE BOLTZMANN METHOD FOR TWO-PHASE FLOWS. *International Journal of Modern Physics B* , **2003**, 17, 169-172	1.1	14
118	Kolmogorov's third hypothesis and turbulent sign statistics. *Physical Review Letters*, **2003**, 90, 254501	7.4	14
117	Turbulent statistics and flow structures in spanwise-rotating turbulent plane Couette flows. *Physical Review Fluids*, **2016**, 1,	2.8	14
116	Sinuous distortion of vortex surfaces in the lateral growth of turbulent spots. *Physical Review Fluids* , **2018**, 3,	2.8	14
115	Simulation of three-dimensional compressible decaying isotropic turbulence using a redesigned discrete unified gas kinetic scheme. *Physics of Fluids*, **2020**, 32, 125104	4.4	14
114	Spatial artificial neural network model for subgrid-scale stress and heat flux of compressible turbulence. *Theoretical and Applied Mechanics Letters*, **2020**, 10, 27-32	1.8	13
113	Effects of compressibility and Atwood number on the single-mode Rayleigh-Taylor instability. *Physics of Fluids*, **2020**, 32, 012110	4.4	13
112	A hybrid scheme for compressible magnetohydrodynamic turbulence. *Journal of Computational Physics*, **2016**, 306, 73-91	4.1	13
111	Constrained Large-Eddy Simulation of Compressible Flow Past a Circular Cylinder. *Communications in Computational Physics*, **2014**, 15, 388-421	2.4	13
110	Statistics and structures of pressure and density in compressible isotropic turbulence. *Journal of Turbulence*, **2013**, 14, 21-37	2.1	13

109	Contact Angle of Glycerol Nanodroplets Under van der Waals Force. *Journal of Physical Chemistry C*, **2009**, 113, 16169-16173	3.8	13
108	Lattice Boltzmann simulation of a single charged particle in a Newtonian fluid. *Physical Review E*, **2003**, 68, 011401	2.4	13
107	Theoretical model of scattering from flow ducts with semi-infinite axial liner splices. *Journal of Fluid Mechanics*, **2016**, 786, 62-83	3.7	13
106	Role of magnetic field curvature in magnetohydrodynamic turbulence. *Physics of Plasmas*, **2019**, 26, 072306	2.2	12
105	Sintering and agglomeration of Fe2O3-MgAl2O4 oxygen carriers with different Fe2O3 loadings in chemical looping processes. *Fuel*, **2020**, 265, 116983	7.1	12
104	Spatially multi-scale artificial neural network model for large eddy simulation of compressible isotropic turbulence. *AIP Advances*, **2020**, 10, 015044	1.5	12
103	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	1.1	12
102	Magnetohydrodynamics computations with lattice gas automata. *Journal of Statistical Physics*, **1992** , 68, 533-556	1.5	12
101	Effective slip boundary conditions for sinusoidally corrugated surfaces. *Physical Review Fluids*, **2016** , 1,	2.8	12
100	Relations between skin friction and other surface quantities in viscous flows. *Physics of Fluids*, **2019**, 31, 107101	4.4	11
99	Effect of compressibility on the local flow topology in homogeneous shear turbulence. *Physics of Fluids*, **2020**, 32, 015118	4.4	10
98	Evolutionary geometry of Lagrangian structures in a transitional boundary layer. *Physics of Fluids*, **2016**, 28, 035110	4.4	10
97	Local Reynolds number and thresholds of transition in shear flows. *Science China: Physics, Mechanics and Astronomy*, **2013**, 56, 263-269	3.6	10
96	Calculations of longitudinal and transverse velocity structure functions using a vortex model of isotropic turbulence. *Physics of Fluids*, **1999**, 11, 3743-3748	4.4	10
95	Lattice gas models for nonideal gas fluids. *Physica D: Nonlinear Phenomena*, **1991**, 47, 97-111	3.3	10
94	A lattice gas model for thermohydrodynamics. *Journal of Statistical Physics*, **1991**, 62, 1121-1151	1.5	10
93	Synergistic Effects of the Zr and Sm Co-doped Fe2O3/CeO2 Oxygen Carrier for Chemical Looping Hydrogen Generation. *Energy & Fuels*, **2020**, 34, 10256-10267	4.1	10
92	Analysis of Reynolds number scaling for viscous vortex reconnection. *Physics of Fluids*, **2012**, 24, 105102	4.4	9

91	Ni, Co and Cu-promoted iron-based oxygen carriers in methane-fueled chemical looping hydrogen generation process. *Fuel Processing Technology*, **2021**, 221, 106917	7.2	9
90	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	10.2	9
89	Dual channels of helicity cascade in turbulent flows. *Journal of Fluid Mechanics*, **2020**, 894,	3.7	8
88	Large eddy simulation of spanwise rotating turbulent channel flow with dynamic variants of eddy viscosity model. *Physics of Fluids*, **2018**, 30, 040909	4.4	8
87	Multiscale Fluid Mechanics and Modeling. *Procedia IUTAM*, **2014**, 10, 100-114		8
86	Kinematic effects on local energy dissipation rate and local enstrophy in fluid turbulence. *Physics of Fluids*, **1998**, 10, 312-314	4.4	8
85	Intermittency caused by compressibility: a Lagrangian study. *Journal of Fluid Mechanics*, **2016**, 786,	3.7	8
84	Interactions between the premixed flame front and the three-dimensional Taylor□Green vortex. *Proceedings of the Combustion Institute*, **2019**, 37, 2461-2468	5.9	8
83	Acoustic-wave-induced cooling in onset of hypersonic turbulence. *Physics of Fluids*, **2020**, 32, 061702	4.4	7
82	Controlling flow reversal in two-dimensional Rayleigh□Bénard convection. *Journal of Fluid Mechanics*, **2020**, 891,	3.7	7
81	Effect of wall temperature on the kinetic energy transfer in a hypersonic turbulent boundary layer. *Journal of Fluid Mechanics*, **2021**, 929,	3.7	7
80	Mach Number Effect of Compressible Flow Around a Circular Cylinder. *AIAA Journal*, **2016**, 54, 2004-2009	2.1	7
79	Spectra and scaling in chemically reacting compressible isotropic turbulence. *Physical Review Fluids*, **2020**, 5,	2.8	6
78	Compressibility effect in hypersonic boundary layer with isothermal wall condition. *Physical Review Fluids*, **2021**, 6,	2.8	6
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