Shiyi Chen

List of Publications by Year in Descending Order

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	Simulation of three-dimensional forced compressible isotropic turbulence by a redesigned discrete unified gas kinetic scheme. *Physics of Fluids*, **2022**, 34, 025106	4.4	1
269	Perturbation analysis of baroclinic torque in low-Mach-number flows. *Journal of Fluid Mechanics*, **2022**, 930,	3.7	1
268	Reduced aerodynamic heating in a hypersonic boundary layer by a wavy wall. *Science Bulletin*, **2022**, 67, 988-988	10.6	0
267	Contribution of flow topology to the kinetic energy flux in hypersonic turbulent boundary layer. *Physics of Fluids*, **2022**, 34, 046103	4.4	3
266	Historically understanding the spatial distributions of particle surface area concentrations over China estimated using a non-parametric machine learning method.. *Science of the Total Environment*, **2022**, 153849	10.2	0
265	Personal exposure to electrophilic compounds of fine particulate matter and the inflammatory response: The role of atmospheric transformation.. *Journal of Hazardous Materials*, **2022**, 432, 128559	12.8	0
264	Variations in source contributions of particle number concentration under long-term emission control in winter of urban Beijing.. *Environmental Pollution*, **2022**, 119072	9.3	2
263	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	11	1
262	Skin-friction and heat-transfer decompositions in hypersonic transitional and turbulent boundary layers. *Journal of Fluid Mechanics*, **2022**, 941,	3.7	3
261	Effect of compressibility on the small-scale structures in hypersonic turbulent boundary layer. *Physics of Fluids*, **2022**, 34, 055121	4.4	1
260	Precursors and Pathways Leading to Enhanced Secondary Organic Aerosol Formation during Severe Haze Episodes. *Environmental Science & Technology*, **2021**, 55, 15680-15693	10.3	4
259	Field observations and quantifications of atmospheric formaldehyde partitioning in gaseous and particulate phases. *Science of the Total Environment*, **2021**, 808, 152122	10.2	0
258	Effect of wall temperature on the kinetic energy transfer in a hypersonic turbulent boundary layer. *Journal of Fluid Mechanics*, **2021**, 929,	3.7	7
257	Humidity-Dependent Phase State of Gasoline Vehicle Emission-Related Aerosols. *Environmental Science & Technology*, **2021**, 55, 832-841	10.3	0
256	Stabilizing/destabilizing the large-scale circulation in turbulent Rayleigh–Bénard convection with sidewall temperature control. *Journal of Fluid Mechanics*, **2021**, 915,	3.7	4
255	Energy budget in decaying compressible MHD turbulence. *Journal of Fluid Mechanics*, **2021**, 916,	3.7	2
254	Compressibility effect in hypersonic boundary layer with isothermal wall condition. *Physical Review Fluids*, **2021**, 6,	2.8	6

253	Transfer of internal energy fluctuation in compressible isotropic turbulence with vibrational non-equilibrium. *Journal of Fluid Mechanics*, **2021**, 919,	3.7	4
252	A new idea to predict reshocked RichtmyerMeshkov mixing: constrained large-eddy simulation. *Journal of Fluid Mechanics*, **2021**, 918,	3.7	6
251	Kinetic energy transfer in compressible homogeneous anisotropic turbulence. *Physical Review Fluids*, **2021**, 6,	2.8	1
250	Near-wall flow structures and related surface quantities in wall-bounded turbulence. *Physics of Fluids*, **2021**, 33, 065116	4.4	5
249	Observations and modeling of OH and HO radicals in Chengdu, China in summer 2019. *Science of the Total Environment*, **2021**, 772, 144829	10.2	5
248	A novel algorithm to determine the scattering coefficient of ambient organic aerosols. *Environmental Pollution*, **2021**, 270, 116209	9.3	3
247	Interfacial settling mode and tail dynamics of spherical-particle motion through immiscible fluids interfaces. *Chemical Engineering Science*, **2021**, 229, 116091	4.4	
246	Hysteresis behaviour in spanwise rotating plane Couette flow at Rew = 2600. *Journal of Turbulence*, **2021**, 22, 254-266	2.1	1
245	Elucidating the effect of HONO on O pollution by a case study in southwest China. *Science of the Total Environment*, **2021**, 756, 144127	10.2	3
244	Inverse design of mesoscopic models for compressible flow using the Chapman-Enskog analysis. *Advances in Aerodynamics*, **2021**, 3,	2.2	4
243	Interscale kinetic energy transfer in chemically reacting compressible isotropic turbulence. *Journal of Fluid Mechanics*, **2021**, 912,	3.7	5
242	Computing mean fields with known Reynolds stresses at steady state. *Theoretical and Applied Mechanics Letters*, **2021**, 11, 100244	1.8	5
241	Assessing the Ratios of Formaldehyde and Glyoxal to NO as Indicators of O-NO-VOC Sensitivity. *Environmental Science & Technology*, **2021**,	10.3	6
240	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	10.2	4
239	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
238	The particle phase state during the biomass burning events. *Science of the Total Environment*, **2021**, 792, 148035	10.2	2
237	Characterizing nitrate radical budget trends in Beijing during 2013-2019. *Science of the Total Environment*, **2021**, 795, 148869	10.2	2
236	Secondary aerosol formation from a Chinese gasoline vehicle: Impacts of fuel (E10, gasoline) and driving conditions (idling, cruising). *Science of the Total Environment*, **2021**, 795, 148809	10.2	5

235	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
234	Dilatational-wave-induced aerodynamic cooling in transitional hypersonic boundary layers. *Journal of Fluid Mechanics*, **2021**, 911,	3.7	4
233	Organic Iodine Compounds in Fine Particulate Matter from a Continental Urban Region: Insights into Secondary Formation in the Atmosphere. *Environmental Science & Technology*, **2021**, 55, 1508-1514	10.3	4
232	Constrained large-eddy simulation of turbulent flow over inhomogeneous rough surfaces. *Theoretical and Applied Mechanics Letters*, **2021**, 11, 100229	1.8	2
231	Constrained large-eddy simulation of a spatially evolving supersonic turbulent boundary layer at M = 2.25. *Physics of Fluids*, **2021**, 33, 125116	4.4	0
230	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
229	Significant Contribution of Primary Sources to Water-Soluble Organic Carbon During Spring in Beijing, China. *Atmosphere*, **2020**, 11, 395	2.7	2
228	Acoustic-wave-induced cooling in onset of hypersonic turbulence. *Physics of Fluids*, **2020**, 32, 061702	4.4	7
227	Controlling flow reversal in two-dimensional Rayleigh–Bénard convection. *Journal of Fluid Mechanics*, **2020**, 891,	3.7	7
226	Simultaneous Measurements of Chemical Compositions of Fine Particles during Winter Haze Period in Urban Sites in China and Korea. *Atmosphere*, **2020**, 11, 292	2.7	2
225	Sintering and agglomeration of Fe2O3-MgAl2O4 oxygen carriers with different Fe2O3 loadings in chemical looping processes. *Fuel*, **2020**, 265, 116983	7.1	12
224	Field Determination of Nitrate Formation Pathway in Winter Beijing. *Environmental Science & Technology*, **2020**, 54, 9243-9253	10.3	29
223	Spatially multi-scale artificial neural network model for large eddy simulation of compressible isotropic turbulence. *AIP Advances*, **2020**, 10, 015044	1.5	12
222	Effects of compressibility and Atwood number on the single-mode Rayleigh-Taylor instability. *Physics of Fluids*, **2020**, 32, 012110	4.4	13
221	Effect of compressibility on the local flow topology in homogeneous shear turbulence. *Physics of Fluids*, **2020**, 32, 015118	4.4	10
220	Dual channels of helicity cascade in turbulent flows. *Journal of Fluid Mechanics*, **2020**, 894,	3.7	8
219	Vibrational relaxation in compressible isotropic turbulence with thermal nonequilibrium. *Physical Review Fluids*, **2020**, 5,	2.8	4
218	Spectra and scaling in chemically reacting compressible isotropic turbulence. *Physical Review Fluids*, **2020**, 5,	2.8	6

217	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
216	Effect of flow topology on the kinetic energy flux in compressible isotropic turbulence. *Journal of Fluid Mechanics*, **2020**, 883,	3.7	15
215	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
214	Large Eddy Simulation of Secondary Flows in an Ultra-High Lift Low Pressure Turbine Cascade at Various Inlet Incidences. *International Journal of Turbo and Jet Engines*, **2020**, 37, 195-207	0.8	0
213	Role of magnetic field curvature in magnetohydrodynamic turbulence. *Physics of Plasmas*, **2019**, 26, 072306	2.2	12
212	Identifying the pattern of breakdown in a laminar-turbulent transition via binary sequence statistics and cellular-automaton simulations. *Physical Review E*, **2019**, 100, 023110	2.4	1
211	Subgrid-scale structure and fluxes of turbulence underneath a surface wave. *Journal of Fluid Mechanics*, **2019**, 878, 768-795	3.7	0
210	Relations between skin friction and other surface quantities in viscous flows. *Physics of Fluids*, **2019**, 31, 107101	4.4	11
209	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
208	Characterising low-cost sensors in highly portable platforms to quantify personal exposure in diverse environments. *Atmospheric Measurement Techniques*, **2019**, 12, 4643-4657	4	49
207	Hypersonic aerodynamic heating over a flared cone with wavy wall. *Physics of Fluids*, **2019**, 31, 051702	4.4	22
206	Improved iron oxide oxygen carriers for chemical looping hydrogen generation using colloidal crystal templated method. *International Journal of Hydrogen Energy*, **2019**, 44, 13175-13184	6.7	4
205	Cascades of temperature and entropy fluctuations in compressible turbulence. *Journal of Fluid Mechanics*, **2019**, 867, 195-215	3.7	22
204	Recent progress in the study of transition in the hypersonic boundary layer. *National Science Review* , **2019**, 6, 155-170	10.8	50
203	Artificial neural network mixed model for large eddy simulation of compressible isotropic turbulence. *Physics of Fluids*, **2019**, 31, 085112	4.4	26
202	Effects of bulk viscosity on compressible homogeneous turbulence. *Physics of Fluids*, **2019**, 31, 085115	4.4	15
201	Image-based modelling of the skin-friction coefficient in compressible boundary-layer transition. *Journal of Fluid Mechanics*, **2019**, 875, 1175-1203	3.7	5
200	A two-dimensional-three-component model for spanwise rotating plane Poiseuille flow. *Journal of Fluid Mechanics*, **2019**, 880, 478-496	3.7	2

199	Hysteresis behavior in spanwise rotating plane Couette flow with varying rotation rates. *Physical Review Fluids*, **2019**, 4,	2.8	4
198	Role of the large-scale structures in spanwise rotating plane Couette flow with multiple states. *Physical Review Fluids*, **2019**, 4,	2.8	3
197	A Hybrid Numerical Simulation of Supersonic Isotropic Turbulence. *Communications in Computational Physics*, **2019**, 25,	2.4	3
196	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
195	Effect of compressibility on small scale statistics in homogeneous shear turbulence. *Physics of Fluids*, **2019**, 31, 025107	4.4	16
194	Interactions between the premixed flame front and the three-dimensional Taylor□reen vortex. *Proceedings of the Combustion Institute*, **2019**, 37, 2461-2468	5.9	8
193	Scale dependence of energy transfer in turbulent plasma. *Monthly Notices of the Royal Astronomical Society*, **2019**, 482, 4933-4940	4.3	31
192	Numerical investigation of plane Couette flow with weak spanwise rotation. *Science China: Physics, Mechanics and Astronomy*, **2019**, 62, 1	3.6	3
191	Heat transfer mechanisms of inclined jets in cross flow with different holes. *International Journal of Heat and Mass Transfer*, **2019**, 131, 664-674	4.9	6
190	Kinetic energy transfer in compressible isotropic turbulence. *Journal of Fluid Mechanics*, **2018**, 841, 581-613	3.7	85
189	Effect of shock waves on the statistics and scaling in compressible isotropic turbulence. *Physical Review E*, **2018**, 97, 043108	2.4	23
188	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
187	Coupling of high Knudsen number and non-ideal gas effects in microporous media. *Journal of Fluid Mechanics*, **2018**, 840, 56-73	3.7	16
186	Multiple states in turbulent plane Couette flow with spanwise rotation. *Journal of Fluid Mechanics*, **2018**, 837, 477-490	3.7	18
185	Aerodynamic heating in transitional hypersonic boundary layers: Role of second-mode instability. *Physics of Fluids*, **2018**, 30, 011701	4.4	72
184	Effects of Zr doping on Fe2O3/CeO2 oxygen carrier in chemical looping hydrogen generation. *Chemical Engineering Journal*, **2018**, 346, 712-725	14.7	51
183	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
182	Large Eddy Simulation and CDNS Investigation of T106C Low-Pressure Turbine. *Journal of Fluids Engineering, Transactions of the ASME*, **2018**, 140,	2.1	4

181	Spectra and Mach number scaling in compressible homogeneous shear turbulence. *Physics of Fluids*, **2018**, 30, 065109	4.4	24
180	Large-Eddy Simulations of Inclined Jets in Crossflow with Different Holes. *Journal of Propulsion and Power*, **2018**, 34, 1098-1108	1.8	5
179	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
178	High-order moments of streamwise fluctuations in a turbulent channel flow with spanwise rotation. *Physical Review Fluids*, **2018**, 3,	2.8	2
177	Sinuous distortion of vortex surfaces in the lateral growth of turbulent spots. *Physical Review Fluids* , **2018**, 3,	2.8	14
176	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
175	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
174	Newly identified principle for aerodynamic heating in hypersonic flows. *Journal of Fluid Mechanics*, **2018**, 855, 152-180	3.7	47
173	A modified optimal LES model for highly compressible isotropic turbulence. *Physics of Fluids*, **2018**, 30, 065108	4.4	15
172	Aerodynamic Heating in Hypersonic Boundary Layer: Role of Dilatational Waves **2017**,		1
171	Compressibility effect on coherent structures, energy transfer, and scaling in magnetohydrodynamic turbulence. *Physics of Fluids*, **2017**, 29, 035105	4.4	26
170	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
169	Constrained large-eddy simulation of supersonic turbulent boundary layer over a compression ramp. *Journal of Turbulence*, **2017**, 18, 781-808	2.1	3
168	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
167	Energy transfer, pressure tensor, and heating of kinetic plasma. *Physics of Plasmas*, **2017**, 24, 072306	2.1	79
166	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
165	Slip boundary conditions over curved surfaces. *Physical Review E*, **2016**, 93, 013105	2.4	23
164	Energy cascade and its locality in compressible magnetohydrodynamic turbulence. *Physical Review E*, **2016**, 93, 061102	2.4	29

163	Multi-scale simulation method for electroosmotic flows. *European Physical Journal: Special Topics*, **2016**, 225, 1551-1582	2.3	4
162	Evolutionary geometry of Lagrangian structures in a transitional boundary layer. *Physics of Fluids*, **2016**, 28, 035110	4.4	10
161	Large-eddy simulation of plane channel flow with Vreman's model. *Journal of Turbulence*, **2016**, 17, 807-822	2.2	4
160	Transition in Hypersonic Boundary Layers: Role of Dilatational Waves. *AIAA Journal*, **2016**, 54, 3039-3049	2.1	66
159	A hybrid scheme for compressible magnetohydrodynamic turbulence. *Journal of Computational Physics*, **2016**, 306, 73-91	4.1	13
158	Turbulent statistics and flow structures in spanwise-rotating turbulent plane Couette flows. *Physical Review Fluids*, **2016**, 1,	2.8	14
157	Effective slip boundary conditions for sinusoidally corrugated surfaces. *Physical Review Fluids*, **2016** , 1,	2.8	12
156	Modulation to compressible homogenous turbulence by heavy point particles. I. Effect of particles density. *Physics of Fluids*, **2016**, 28, 016103	4.4	15
155	Large Eddy Simulation of Inclined Jet in Cross Flow With Cylindrical and Fan-Shaped Holes **2016**,		5
154	Effect of Oscillation Structures on Inertial-Range Intermittence and Topology in Turbulent Field. *Communications in Computational Physics*, **2016**, 19, 251-272	2.4	3
153	Vortex reconnection in the late transition in channel flow. *Journal of Fluid Mechanics*, **2016**, 802,	3.7	28
152	A new identification method in sampled quadrant analysis for wall-bounded turbulence. *Physics of Fluids*, **2016**, 28, 061702	4.4	4
151	Theoretical model of scattering from flow ducts with semi-infinite axial liner splices. *Journal of Fluid Mechanics*, **2016**, 786, 62-83	3.7	13
150	Intermittency caused by compressibility: a Lagrangian study. *Journal of Fluid Mechanics*, **2016**, 786,	3.7	8
149	Direct numerical simulation of turbulent channel flow with spanwise rotation. *Journal of Fluid Mechanics*, **2016**, 788, 42-56	3.7	32
148	Evolution of material surfaces in the temporal transition in channel flow. *Journal of Fluid Mechanics*, **2016**, 793, 840-876	3.7	17
147	Constrained large-eddy simulation of turbulent flow and heat transfer in a stationary ribbed duct. *International Journal of Numerical Methods for Heat and Fluid Flow*, **2016**, 26, 1069-1091	4.5	6
146	Mach Number Effect of Compressible Flow Around a Circular Cylinder. *AIAA Journal*, **2016**, 54, 2004-2009	2.1	7

145	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
144	Constrained Large-Eddy Simulation for Aerodynamics. *Notes on Numerical Fluid Mechanics and Multidisciplinary Design*, **2015**, 105-115	0.3	1
143	Turbulent bands in plane-Poiseuille flow at moderate Reynolds numbers. *Physics of Fluids*, **2015**, 27, 041702	4.4	35
142	Comparisons of different implementations of turbulence modelling in lattice Boltzmann method. *Journal of Turbulence*, **2015**, 16, 67-80	2.1	5
141	Transition in hypersonic boundary layers. *AIP Advances*, **2015**, 5, 107137	1.5	36
140	Recent progress in compressible turbulence. *Acta Mechanica Sinica/Lixue Xuebao*, **2015**, 31, 275-291	2	4
139	Multiscale Fluid Mechanics and Modeling. *Procedia IUTAM*, **2014**, 10, 100-114		8
138	Joint-constraint model for large-eddy simulation of helical turbulence. *Physical Review E*, **2014**, 89, 043021	2.4	5
137	Constrained Large-Eddy Simulation of Compressible Flow Past a Circular Cylinder. *Communications in Computational Physics*, **2014**, 15, 388-421	2.4	13
136	Comment on [A hybrid subgrid-scale model constrained by Reynolds stress][Phys. Fluids 25, 110805 (2013)]. *Physics of Fluids*, **2014**, 26, 059101	4.4	3
135	Interactions between inertial particles and shocklets in compressible turbulent flow. *Physics of Fluids*, **2014**, 26, 091702	4.4	17
134	Constrained large-eddy simulation of laminar-turbulent transition in channel flow. *Physics of Fluids*, **2014**, 26, 095103	4.4	14
133	Ignition of methane with hydrogen and dimethyl ether addition. *Fuel*, **2014**, 118, 1-8	7.1	46
132	Momentum-exchange method in lattice Boltzmann simulations of particle-fluid interactions. *Physical Review E*, **2013**, 88, 013303	2.4	64
131	Local Reynolds number and thresholds of transition in shear flows. *Science China: Physics, Mechanics and Astronomy*, **2013**, 56, 263-269	3.6	10
130	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
129	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
128	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

127	Subgrid-scale eddy viscosity model for helical turbulence. *Physics of Fluids*, **2013**, 25, 095101	4.4	17
126	Statistics and structures of pressure and density in compressible isotropic turbulence. *Journal of Turbulence*, **2013**, 14, 21-37	2.1	13
125	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
124	Acceleration of passive tracers in compressible turbulent flow. *Physical Review Letters*, **2013**, 110, 064503	7.4	15
123	Constrained large-eddy simulation of wall-bounded compressible turbulent flows. *Physics of Fluids*, **2013**, 25, 106102	4.4	26
122	Statistics of one-dimensional compressible turbulence with random large-scale force. *Physics of Fluids*, **2013**, 25, 075106	4.4	3
121	Cascade of kinetic energy in three-dimensional compressible turbulence. *Physical Review Letters*, **2013**, 110, 214505	7.4	60
120	Constrained large-eddy simulation of separated flow in a channel with streamwise-periodic constrictions. *Journal of Turbulence*, **2013**, 14, 1-21	2.1	85
119	Effect of compressibility on the small-scale structures in isotropic turbulence. *Journal of Fluid Mechanics*, **2012**, 713, 588-631	3.7	82
118	Analysis of Reynolds number scaling for viscous vortex reconnection. *Physics of Fluids*, **2012**, 24, 105102	4.4	9
117	Numerical Study on the Ignition Process of n-Decane/Toluene Binary Fuel Blends. *Energy & Fuels*, **2012**, 26, 6729-6736	4.1	3
116	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
115	Constrained Large Eddy Simulation of Wall-Bounded Turbulent Flows. *Notes on Numerical Fluid Mechanics and Multidisciplinary Design*, **2012**, 121-130	0.3	1
114	Scaling and statistics in three-dimensional compressible turbulence. *Physical Review Letters*, **2012**, 108, 214505	7.4	38
113	Statistics of active and passive scalars in one-dimensional compressible turbulence. *Physical Review E*, **2012**, 86, 066307	2.4	3
112	Reynolds-stress-constrained large-eddy simulation of wall-bounded turbulent flows. *Journal of Fluid Mechanics*, **2012**, 703, 1-28	3.7	83
111	Uncovering molecular mechanisms of electrowetting and saturation with simulations. *Physical Review Letters*, **2012**, 108, 216101	7.4	40
110	Effect of shocklets on the velocity gradients in highly compressible isotropic turbulence. *Physics of Fluids*, **2011**, 23, 125103	4.4	60

109	A Memory-Saving Algorithm for Spectral Method of Three-Dimensional Homogeneous Isotropic Turbulence. *Communications in Computational Physics*, **2011**, 9, 1152-1164	2.4	1
108	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
107	Correlations for the ignition delay times of hydrogen/air mixtures. *Science Bulletin*, **2011**, 56, 215-221		16
106	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
105	Experimental study of freely falling thin disks: Transition from planar zigzag to spiral. *Physics of Fluids*, **2011**, 23, 011702	4.4	62
104	Dissipation-energy flux correlations as evidence for the Lagrangian energy cascade in turbulence. *Physics of Fluids*, **2010**, 22, 061702	4.4	20
103	Molecular simulations of electroosmotic flows in rough nanochannels. *Journal of Computational Physics*, **2010**, 229, 7834-7847	4.1	26
102	Peristaltic particle transport using the lattice Boltzmann method. *Physics of Fluids*, **2009**, 21, 053301	4.4	33
101	Contact Angle of Glycerol Nanodroplets Under van der Waals Force. *Journal of Physical Chemistry C*, **2009**, 113, 16169-16173	3.8	13
100	Flow patterns in the sedimentation of an elliptical particle. *Journal of Fluid Mechanics*, **2009**, 625, 249-273	3.7	115
99	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
98	Constrained subgrid-scale stress model for large eddy simulation. *Physics of Fluids*, **2008**, 20, 011701	4.4	49
97	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
96	Non-modal growth of perturbations in density-driven convection in porous media. *Journal of Fluid Mechanics*, **2008**, 609, 285-303	3.7	95
95	Reply to comment of Nield. *Advances in Water Resources*, **2007**, 30, 698-699	4.7	2
94	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
93	Electroosmosis in homogeneously charged micro- and nanoscale random porous media. *Journal of Colloid and Interface Science*, **2007**, 314, 264-73	9.3	103
92	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

91	A continuum-atomistic simulation of heat transfer in micro- and nano-flows. *Journal of Computational Physics*, **2007**, 227, 279-291	4.1	70
90	Mesoscopic predictions of the effective thermal conductivity for microscale random porous media. *Physical Review E*, **2007**, 75, 036702	2.4	303
89	Three-dimensional effect on the effective thermal conductivity of porous media. *Journal Physics D: Applied Physics*, **2007**, 40, 260-265	3	66
88	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
87	Is the Kelvin theorem valid for high Reynolds number turbulence?. *Physical Review Letters*, **2006**, 97, 144505	7.4	18
86	Subgrid-scale modeling of helicity and energy dissipation in helical turbulence. *Physical Review E*, **2006**, 74, 026310	2.4	18
85	Physical mechanism of the two-dimensional inverse energy cascade. *Physical Review Letters*, **2006**, 96, 084502	7.4	116
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