Sheng Chen

List of Publications by Year
in descending order

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111 papers	3,096 citations	126907 33 h-index	214800 47 g-index
111 all docs	111 docs citations	111 times ranked	2078 citing authors

#	Article	IF	Citations
1	Progress and recent trend in MILD combustion. Science China Technological Sciences, 2011, 54, 255-269.	4.0	133
2	Global, regional and national burden of low back pain 1990â€“2019: A systematic analysis of the Global Burden of Disease study 2019. Journal of Orthopaedic Translation, 2022, 32, 49-58.	3.9	127
3	Numerical investigation of double-diffusive (natural) convection in vertical annuluses with opposing temperature and concentration gradients. International Journal of Heat and Fluid Flow, 2010, 31, 217-226.	2.4	101
4	HIF1A Alleviates compression-induced apoptosis of nucleus pulposus derived stem cells via upregulating autophagy. Autophagy, 2021, 17, 3338-3360.	9.1	82
5	Counterflow diffusion flame of hydrogen-enriched biogas under MILD oxy-fuel condition. International Journal of Hydrogen Energy, 2011, 36, 15403-15413.	7.1	75
6	Lattice Boltzmann model for incompressible axisymmetric flows. Physical Review E, 2008, 78, 046703.	2.1	71
7	Effects of furnace chamber shape on the MILD combustion of natural gas. Applied Thermal Engineering, 2015, 76, 64-75.	6.0	65
8	Roles of mechanosensitive channel Piezo1/2 proteins in skeleton and other tissues. Bone Research, 2021, 9, 44.	11.4	63
9	Physical and Chemical Effects of CO₂ and H₂O Additives on Counterflow Diffusion Flame Burning Methane. Energy & Fuels, 2013, 27, 7602-7611.	5.1	62
10	Numerical study of combustion characteristics for pulverized coal under oxy-MILD operation. Fuel Processing Technology, 2015, 135, 80-90.	7.2	62
11	Entropy generation in turbulent natural convection due to internal heat generation. International Journal of Thermal Sciences, 2009, 48, 1978-1987.	4.9	61
12	Simulation of thermal micro-flow using lattice Boltzmann method with Langmuir slip model. International Journal of Heat and Fluid Flow, 2010, 31, 227-235.	2.4	61
13	Comparison of Different Global Combustion Mechanisms Under Hot and Diluted Oxidation Conditions. Combustion Science and Technology, 2012, 184, 259-276.	2.3	61
14	Numerical study of H 2 O addition effects on pulverized coal oxy-MILD combustion. Fuel Processing Technology, 2015, 138, 252-262.	7.2	61
15	A novel coupled lattice Boltzmann model for low Mach number combustion simulation. Applied Mathematics and Computation, 2007, 193, 266-284.	2.2	60
16	Simulation of microchannel flow using the lattice Boltzmann method. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4803-4810.	2.6	57
17	A large-eddy-based lattice Boltzmann model for turbulent flow simulation. Applied Mathematics and Computation, 2009, 215, 591-598.	2.2	55
18	Simulation of buoyancy-driven flows in a vertical cylinder using a simple lattice Boltzmann model. Physical Review E, 2009, 79, 016704.	2.1	51

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19	Effects of hydrogen addition on entropy generation in ultra-lean counter-flow methane-air premixed combustion. International Journal of Hydrogen Energy, 2010, 35, 3891-3902.	7.1	49
20	Kindlin-2 inhibits Nlrp3 inflammasome activation in nucleus pulposus to maintain homeostasis of the intervertebral disc. Bone Research, 2022, 10, 5.	11.4	48
21	Entropy generation of turbulent double-diffusive natural convection in a rectangle cavity. Energy, 2011, 36, 1721-1734.	8.8	47
22	An experimental study on turbulence modification in the near-wall boundary layer of a dilute gas-particle channel flow. Experiments in Fluids, 2012, 53, 1385-1403.	2.4	47
23	Analysis of entropy generation in counter-flow premixed hydrogenâ€“air combustion. International Journal of Hydrogen Energy, 2010, 35, 1401-1411.	7.1	45
24	Metformin in aging and aging-related diseases: clinical applications and relevant mechanisms. Theranostics, 2022, 12, 2722-2740.	10.0	45
25	First and second thermodynamic-law analyses of hydrogen-air counter-flow diffusion combustion in various combustion modes. International Journal of Hydrogen Energy, 2012, 37, 5234-5245.	7.1	41
26	First and second thermodynamic-law comparison of biogas MILD oxy-fuel combustion moderated by CO2 or H2O. Energy Conversion and Management, 2015, 106, 625-634.	9.2	41
27	Mesenchymal Stem Cells Protect Nucleus Pulposus Cells from Compression-Induced Apoptosis by Inhibiting the Mitochondrial Pathway. Stem Cells International, 2017, 2017, 1-10.	2.5	40
28	A simple lattice Boltzmann scheme for combustion simulation. Computers and Mathematics With Applications, 2008, 55, 1424-1432.	2.7	38
29	Simulation of double diffusive convection in fluid-saturated porous media by lattice Boltzmann method. International Journal of Heat and Mass Transfer, 2017, 108, 1501-1510.	4.8	38
30	A new method for the numerical solution of vorticityâ€“streamfunction formulations. Computer Methods in Applied Mechanics and Engineering, 2008, 198, 367-376.	6.6	37
31	Analysis of entropy generation in double-diffusive natural convection of nanofluid. International Journal of Heat and Mass Transfer, 2015, 87, 447-463.	4.8	37
32	Double diffusion natural convection in a square cavity filled with nanofluid. International Journal of Heat and Mass Transfer, 2016, 95, 1070-1083.	4.8	37
33	Thermoeconomic diagnosis of a coal fired power plant. Energy Conversion and Management, 2007, 48, 405-419.	9.2	36
34	Wetting transition energy curves for a droplet on a square-post patterned surface. Science Bulletin, 2017, 62, 136-142.	9.0	35
35	Analysis of entropy generation in non-premixed hydrogen versus heated air counter-flow combustion. International Journal of Hydrogen Energy, 2010, 35, 4736-4746.	7.1	34
36	Analysis of entropy generation in hydrogen-enriched ultra-lean counter-flow methaneâ€“air non-premixed combustion. International Journal of Hydrogen Energy, 2010, 35, 12491-12501.	7.1	34

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37	Numerical study of turbulent double-diffusive natural convection in a square cavity by LES-based lattice Boltzmann model. International Journal of Heat and Mass Transfer, 2012, 55, 4862-4870.	4.8	34
38	Conjugate natural convection heat transfer in an open-ended square cavity partially filled with porous media. International Journal of Heat and Mass Transfer, 2018, 124, 368-380.	4.8	33
39	Hydrogen peroxide induces programmed necrosis in rat nucleus pulposus cells through the RIP1/RIP3â€PARPâ€AIF pathway. Journal of Orthopaedic Research, 2018, 36, 1269-1282.	2.3	31
40	Kindlin-2 regulates skeletal homeostasis by modulating PTH1R in mice. Signal Transduction and Targeted Therapy, 2020, 5, 297.	17.1	31
41	Entropy generation analysis of thermal micro-Couette flows in slip regime. International Journal of Thermal Sciences, 2010, 49, 2211-2221.	4.9	30
42	Lattice Boltzmann simulation of two cold particles settling in Newtonian fluid with thermal convection. International Journal of Heat and Mass Transfer, 2016, 93, 477-490.	4.8	30
43	A lattice Boltzmann model for heat transfer in heterogeneous media. International Journal of Heat and Mass Transfer, 2016, 102, 637-644.	4.8	28
44	Expression and implication of toll-like receptors TLR2, TLR4 and TLR9 in colonic mucosa of patients with ulcerative colitis. Journal of Huazhong University of Science and Technology [Medical Sciences], 2014, 34, 785-790.	1.0	27
45	Mathematical Modeling of Airâ€“ and Oxyâ€“Coal Confined Swirling Flames on Two Extended Eddy-Dissipation Models. Industrial & Engineering Chemistry Research, 2012, 51, 691-703.	3.7	26
46	Compressionâ€induced senescence of nucleus pulposus cells by promoting mitophagy activation via the PINK1/PARKIN pathway. Journal of Cellular and Molecular Medicine, 2020, 24, 5850-5864.	3.6	26
47	Methane combustion in MILD oxyfuel regime: Influences of dilution atmosphere in co-flow configuration. Energy, 2017, 121, 159-175.	8.8	25
48	TIGAR impedes compressionâ€induced intervertebral disc degeneration by suppressing nucleus pulposus cell apoptosis and autophagy. Journal of Cellular Physiology, 2020, 235, 1780-1794.	4.1	25
49	Simple lattice Boltzmann subgrid-scale model for convectional flows with high Rayleigh numbers within an enclosed circular annular cavity. Physical Review E, 2009, 80, 026702.	2.1	24
50	Simulating the interactions of two freely settling spherical particles in Newtonian fluid using lattice-Boltzmann method. Applied Mathematics and Computation, 2015, 250, 533-551.	2.2	24
51	Effect of Compression Loading on Human Nucleus Pulposus-Derived Mesenchymal Stem Cells. Stem Cells International, 2018, 2018, 1-10.	2.5	23
52	Simulation of interaction between a freely moving solid particle and a freely moving liquid droplet by lattice Boltzmann method. International Journal of Heat and Mass Transfer, 2018, 127, 474-484.	4.8	23
53	A NEW NUMERICAL APPROACH FOR FIRE SIMULATION. International Journal of Modern Physics C, 2007, 18, 187-202.	1.7	22
54	Natural convection and entropy generation in a vertically concentric annular space. International Journal of Thermal Sciences, 2010, 49, 2439-2452.	4.9	21

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55	Moderate activation of Wnt/Î²â€catenin signaling promotes the survival of rat nucleus pulposus cells via regulating apoptosis, autophagy, and senescence. Journal of Cellular Biochemistry, 2019, 120, 12519-12533.	2.6	21
56	Reactive Oxygen Species Regulate Endoplasmic Reticulum Stress and ER-Mitochondrial Ca2+ Crosstalk to Promote Programmed Necrosis of Rat Nucleus Pulposus Cells under Compression. Oxidative Medicine and Cellular Longevity, 2021, 2021, 1-20.	4.0	21
57	Effects of mechanical vibration on melting behaviour of phase change material during charging process. Applied Thermal Engineering, 2021, 192, 116914.	6.0	21
58	Kindlin-2 preserves integrity of the articular cartilage to protect against osteoarthritis. Nature Aging, 2022, 2, 332-347.	11.6	21
59	Entropy generation in impinging flow confined by planar opposing jets. International Journal of Thermal Sciences, 2010, 49, 2067-2075.	4.9	19
60	Moderate Fluid Shear Stress Regulates Heme Oxygenase-1 Expression to Promote Autophagy and ECM Homeostasis in the Nucleus Pulposus Cells. Frontiers in Cell and Developmental Biology, 2020, 8, 127.	3.7	18
61	A novel incompressible finite-difference lattice Boltzmann equation for particle-laden flow. Acta Mechanica Sinica/Lixue Xuebao, 2005, 21, 574-581.	3.4	17
62	Numerical simulation of fluid flow and heat transfer inside a rotating disk-cylinder configuration by a lattice Boltzmann model. Physical Review E, 2009, 80, 016702.	2.1	17
63	Lattice Boltzmann method for slip flow heat transfer in circular microtubes: Extended Graetz problem. Applied Mathematics and Computation, 2010, 217, 3314-3320.	2.2	17
64	Icariin Improves the Viability and Function of Cryopreserved Human Nucleus Pulposus-Derived Mesenchymal Stem Cells. Oxidative Medicine and Cellular Longevity, 2018, 2018, 1-12.	4.0	17
65	A lattice Boltzmann model for heat transfer in porous media. International Journal of Heat and Mass Transfer, 2017, 111, 1019-1022.	4.8	16
66	Expression of the 60 kDa and 71 kDa heat shock proteins and presence of antibodies against the 71 kDa heat shock protein in pediatric patients with immune thrombocytopenic purpura. BMC Hematology, 2004, 4, 1.	2.6	15
67	A simple enthalpy-based lattice Boltzmann scheme for complicated thermal systems. Journal of Computational Physics, 2012, 231, 8278-8294.	3.8	15
68	Numerical study of wetting transitions on biomimetic surfaces using a lattice Boltzmann approach with large density ratio. Journal of Bionic Engineering, 2017, 14, 486-496.	5.0	15
69	Effect of inclination angle on melting process of phase change materials in a square cavity under mechanical vibration. Journal of Energy Storage, 2021, 36, 102392.	8.1	15
70	Comparison of different methods for the isolation and purification of rat nucleus pulposus-derived mesenchymal stem cells. Connective Tissue Research, 2020, 61, 426-434.	2.3	14
71	Simulation of the flow around an upstream transversely oscillating cylinder and a stationary cylinder in tandem. Physics of Fluids, 2012, 24, .	4.0	13
72	Simulation of conjugate heat transfer between fluid-saturated porous media and solid wall. International Journal of Thermal Sciences, 2018, 124, 477-483.	4.9	13

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73	Particle behavior in homogeneous isotropic turbulence. Acta Mechanica Sinica/Lixue Xuebao, 2005, 21, 112-120.	3.4	12
74	Computation of gasâ€“solid flows by finite difference Boltzmann equation. Applied Mathematics and Computation, 2006, 173, 33-49.	2.2	12
75	Lattice Boltzmann simulation of the convective heat transfer from a stream-wise oscillating circular cylinder. International Journal of Heat and Fluid Flow, 2012, 37, 147-153.	2.4	12
76	A numerical investigation on flame stability of oxy-coal combustion: Effects of blockage ratio, swirl number, recycle ratio and partial pressure ratio of oxygen. International Journal of Greenhouse Gas Control, 2017, 57, 63-72.	4.6	11
77	Heat transfer of large Prandtl number fluids in porous media by a new lattice Boltzmann model. International Communications in Heat and Mass Transfer, 2021, 122, 105129.	5.6	11
78	Simulating the collision of a moving droplet against a moving particle: Impact of Bond number, wettability, size ratio, and eccentricity. Physics of Fluids, 2021, 33, .	4.0	11
79	Kindlin-2 loss in condylar chondrocytes causes spontaneous osteoarthritic lesions in the temporomandibular joint in mice. International Journal of Oral Science, 2022, 14, .	8.6	11
80	Simulating compositional convection in the presence of rotation by lattice Boltzmann model. International Journal of Thermal Sciences, 2010, 49, 2093-2107.	4.9	10
81	LATTICE BOLTZMANN SIMULATION OF GASEOUS FINITE-KNUDSEN MICROFLOWS. International Journal of Modern Physics C, 2010, 21, 769-783.	1.7	10
82	A thermal immiscible multiphase flow simulation by lattice Boltzmann method. International Communications in Heat and Mass Transfer, 2017, 88, 136-138.	5.6	10
83	Icariin Prevents H2O2-Induced Apoptosis via the PI3K/Akt Pathway in Rat Nucleus Pulposus Intervertebral Disc Cells. Evidence-based Complementary and Alternative Medicine, 2017, 2017, 1-10.	1.2	10
84	Entropy generation inside disk driven rotating convectional flow. International Journal of Thermal Sciences, 2011, 50, 626-638.	4.9	9
85	Methane combustion in various regimes: First and second thermodynamic-law comparison between air-firing and oxyfuel condition. Energy, 2016, 115, 26-37.	8.8	9
86	Physical and Chemical Effects of CO2Addition on CH4/H2Flames on a Jet in Hot Coflow (JHC) Burner. Energy & Fuels, 2016, , .	5.1	9
87	Utilize mechanical vibration energy for fast thermal responsive PCMs-based energy storage systems: Prototype research by numerical simulation. Renewable Energy, 2022, 187, 974-986.	8.9	9
88	Simulation on a three-dimensional collision of a moving droplet against a moving super-hydrophobic particle. Powder Technology, 2022, 405, 117558.	4.2	9
89	Entropy generation of double-diffusive convection in the presence of rotation. Applied Mathematics and Computation, 2011, 217, 8575-8597.	2.2	8
90	Direct numerical simulations of particle sedimentation with heat transfer using the Lattice Boltzmann method. International Journal of Heat and Mass Transfer, 2017, 104, 419-437.	4.8	8

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91	Thermal performance analysis of a porous solar cavity receiver. Renewable Energy, 2020, 156, 558-569.	8.9	8
92	Comparison of droplet-particle interaction on a stationary and a moving particle. Chemical Engineering Science, 2022, 253, 117552.	3.8	8
93	Natural convection of SiO2-water nanofluid in square cavity with thermal square column. Applied Mathematics and Mechanics (English Edition), 2017, 38, 585-602.	3.6	7
94	A study on the unphysical mass transfer of SCMP pseudopotential LBM. International Journal of Heat and Mass Transfer, 2018, 123, 815-820.	4.8	7
95	Fundamentals of Oxy-fuel Combustion. , 2018, , 13-30.		7
96	Effect of particle inertia on temperature statistics in particle-laden homogeneous isotropic turbulence. Science in China Series D: Earth Sciences, 2006, 49, 210-221.	0.9	6
97	Association of COL9A3 trp3 polymorphism with intervertebral disk degeneration: a meta-analysis. BMC Musculoskeletal Disorders, 2018, 19, 381.	1.9	6
98	Heme Oxygenase-1-Mediated Autophagy Protects against Oxidative Damage in Rat Nucleus Pulposus-Derived Mesenchymal Stem Cells. Oxidative Medicine and Cellular Longevity, 2020, 2020, 1-14.	4.0	6
99	A hybrid of B and T lymphoblastic cell line could potentially substitute dendritic cells to efficiently expand out Her-2/neu-specific cytotoxic T lymphocytes from advanced breast cancer patients in vitro. Journal of Hematology and Oncology, 2017, 10, 63.	17.0	5
100	A new lattice Boltzmann method for melting processes of high Prandtl number phase change materials. Journal of Energy Storage, 2021, 41, 103006.	8.1	5
101	A heuristic curved-boundary treatment in lattice Boltzmann method. Europhysics Letters, 2010, 92, 54003.	2.0	4
102	A NUMERICAL STUDY ON PREMIXED MICROCOMBUSTION BY LATTICE BOLTZMANN METHOD. International Journal of Modern Physics C, 2012, 23, 1250037.	1.7	4
103	Prognostic value of Kindlin-2 expression in patients with solid tumors: a meta-analysis. Cancer Cell International, 2018, 18, 166.	4.1	4
104	Size and thermal effects on sedimentation behaviors of two spheres. International Journal of Heat and Mass Transfer, 2017, 114, 198-206.	4.8	3
105	A simple lattice Boltzmann scheme for low Mach number reactive flows. Science in China Series D: Earth Sciences, 2006, 49, 714-726.	0.9	2
106	Effect of Richardson number on entropy generation over backward facing step. Applied Mathematics and Mechanics (English Edition), 2012, 33, 1431-1440.	3.6	2
107	Simple lattice Boltzmann approach for turbulent buoyant flow simulation. Applied Mathematics and Mechanics (English Edition), 2013, 34, 1339-1348.	3.6	2
108	Simulation of conjugate mass transfer in multiphase flow: A new unified approach based on the phase field method. International Communications in Heat and Mass Transfer, 2022, 133, 105965.	5.6	2

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109	Numerical Calculation on Steel Coil during Annealing Process. Advanced Materials Research, 0, 402, 472-475.	0.3	1
110	Simulating Turbulent Buoyant Flow by a Simple LES-Based Thermal Lattice Boltzmann Model. ISRN Thermodynamics, 2012, 2012, 1-9.	0.6	1
111	Numerical Simulation on Temperature History during Cooling Process of Wire Rod. Advanced Materials Research, 0, 337, 188-191.	0.3	0