

Guodong Xia

List of Publications by Year in descending order

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71
papers

3,418
citations

218381

26
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149479

56
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71
all docs

71
docs citations

71
times ranked

1881
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on battery thermal management in electric vehicle application. <i>Journal of Power Sources</i> , 2017, 367, 90-105.	4.0	415
2	Heat transfer enhancement in microchannel heat sinks with periodic expansion-constriction cross-sections. <i>International Journal of Heat and Mass Transfer</i> , 2013, 62, 741-751.	2.5	206
3	Effects of surfactant on the stability and thermal conductivity of Al ₂ O ₃ /de-ionized water nanofluids. <i>International Journal of Thermal Sciences</i> , 2014, 84, 118-124.	2.6	188
4	Numerical study of laminar flow and heat transfer in microchannel heat sink with offset ribs on sidewalls. <i>Applied Thermal Engineering</i> , 2016, 92, 32-41.	3.0	188
5	Optimum thermal design of microchannel heat sink with triangular reentrant cavities. <i>Applied Thermal Engineering</i> , 2011, 31, 1208-1219.	3.0	182
6	Optimum thermal design of interrupted microchannel heat sink with rectangular ribs in the transverse microchambers. <i>Applied Thermal Engineering</i> , 2013, 51, 880-889.	3.0	178
7	Numerical investigation of thermal enhancement in a micro heat sink with fan-shaped reentrant cavities and internal ribs. <i>Applied Thermal Engineering</i> , 2013, 58, 52-60.	3.0	147
8	Numerical simulation of fluid flow and heat transfer in a microchannel heat sink with offset fan-shaped reentrant cavities in sidewall. <i>International Communications in Heat and Mass Transfer</i> , 2011, 38, 577-584.	2.9	144
9	Experimental and numerical study of fluid flow and heat transfer characteristics in microchannel heat sink with complex structure. <i>Energy Conversion and Management</i> , 2015, 105, 848-857.	4.4	137
10	Fundamental issues, mechanisms and models of flow boiling heat transfer in microscale channels. <i>International Journal of Heat and Mass Transfer</i> , 2017, 108, 97-127.	2.5	136
11	Effects of structural parameters on fluid flow and heat transfer in a microchannel with aligned fan-shaped reentrant cavities. <i>International Journal of Thermal Sciences</i> , 2011, 50, 411-419.	2.6	125
12	Parametric study on thermal and hydraulic characteristics of laminar flow in microchannel heat sink with fan-shaped ribs on sidewalls - Part 1: Heat transfer. <i>International Journal of Heat and Mass Transfer</i> , 2016, 97, 1069-1080.	2.5	109
13	Laminar flow and heat transfer characteristics of interrupted microchannel heat sink with ribs in the transverse microchambers. <i>International Journal of Thermal Sciences</i> , 2016, 110, 1-11.	2.6	94
14	Parametric study on thermal and hydraulic characteristics of laminar flow in microchannel heat sink with fan-shaped ribs on sidewalls - Part 3: Performance evaluation. <i>International Journal of Heat and Mass Transfer</i> , 2016, 97, 1091-1101.	2.5	92
15	Experimental investigation of flow boiling performance in microchannels with and without triangular cavities - A comparative study. <i>International Journal of Heat and Mass Transfer</i> , 2017, 108, 1511-1526.	2.5	76
16	Parametric study on thermal and hydraulic characteristics of laminar flow in microchannel heat sink with fan-shaped ribs on sidewalls - Part 2: Pressure drop. <i>International Journal of Heat and Mass Transfer</i> , 2016, 97, 1081-1090.	2.5	74
17	Numerical and experimental analyses of planar asymmetric split-and-recombine micromixer with dislocation sub-channels. <i>Journal of Chemical Technology and Biotechnology</i> , 2013, 88, 1757-1765.	1.6	72
18	Heat transfer and fluid flow characteristics of combined microchannel with cone-shaped micro pin fins. <i>International Communications in Heat and Mass Transfer</i> , 2018, 92, 78-89.	2.9	72

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19	Effect of geometric configuration on the laminar flow and heat transfer in microchannel heat sinks with cavities and fins. Numerical Heat Transfer; Part A: Applications, 2017, 71, 528-546.	1.2	59
20	Visualization study on the instabilities of phase-change heat transfer in a flat two-phase closed thermosyphon. Applied Thermal Engineering, 2017, 116, 392-405.	3.0	43
21	Experimental investigation and empirical correlations of single and laminar convective heat transfer in microchannel heat sinks. Experimental Thermal and Fluid Science, 2017, 83, 207-214.	1.5	42
22	Experimental study and dynamic simulation of the continuous two-phase instable boiling in multiple parallel microchannels. International Journal of Heat and Mass Transfer, 2019, 138, 961-984.	2.5	40
23	Micro-PIV visualization and numerical simulation of flow and heat transfer in three micro pin-fin heat sinks. International Journal of Thermal Sciences, 2017, 119, 9-23.	2.6	38
24	Analysis of Flow and Mixing Characteristics of Planar Asymmetric Split-and-Recombine (P-SAR) Micromixers with Fan-Shaped Cavities. Industrial & Engineering Chemistry Research, 2012, 51, 7816-7827.	1.8	33
25	Fundamental Issues, Technology Development, and Challenges of Boiling Heat Transfer, Critical Heat Flux, and Two-Phase Flow Phenomena with Nanofluids. Heat Transfer Engineering, 2019, 40, 1301-1336.	1.2	32
26	Experimental study on the pressure drop oscillation characteristics of the flow boiling instability with FC-72 in parallel rectangle microchannels. International Communications in Heat and Mass Transfer, 2019, 108, 104289.	2.9	32
27	Characteristics of entropy generation and heat transfer in a microchannel with fan-shaped reentrant cavities and internal ribs. Science China Technological Sciences, 2013, 56, 1629-1635.	2.0	31
28	Influence of surfactant on friction pressure drop in a manifold microchannel. International Journal of Thermal Sciences, 2008, 47, 1658-1664.	2.6	29
29	Micro-PIV study of flow and the formation of vortex in micro heat sinks with cavities and ribs. International Journal of Heat and Mass Transfer, 2016, 98, 380-389.	2.5	28
30	Flow boiling heat transfer and two-phase flow phenomena of CO ₂ in macro- and micro-channel evaporators: Fundamentals, applications and engineering design. Applied Thermal Engineering, 2021, 195, 117070.	3.0	26
31	Experimental and Numerical Study of Flow and Heat Transfer in Trapezoidal Microchannels. Heat Transfer Engineering, 2012, 33, 972-981.	1.2	24
32	Experimental study and modelling of average void fraction of gas-liquid two-phase flow in a helically coiled rectangular channel. Experimental Thermal and Fluid Science, 2018, 94, 9-22.	1.5	23
33	Analysis of flow and heat transfer characteristics of micro-pin fin heat sink using silver nanofluids. Science China Technological Sciences, 2012, 55, 155-162.	2.0	21
34	A novel flow arrangement of staggered flow in double-layered microchannel heat sinks for microelectronic cooling. International Communications in Heat and Mass Transfer, 2016, 79, 98-104.	2.9	20
35	Experimental study on the nucleate boiling heat transfer characteristics of a water-based multi-walled carbon nanotubes nanofluid in a confined space. International Journal of Heat and Mass Transfer, 2017, 113, 59-69.	2.5	18
36	Enhanced thermal conductivity of nanofluids by introducing Janus particles. Nanoscale, 2021, 14, 99-107.	2.8	18

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37	Heat Transfer Characteristics and Flow Visualization during Flow Boiling of Acetone in Semi-Open Multi-Microchannels. <i>Heat Transfer Engineering</i> , 2019, 40, 1349-1362.	1.2	17
38	Negative differential thermal resistance through nanoscale solidâ€œfluidâ€œsolid sandwiched structures. <i>Nanoscale</i> , 2019, 11, 13051-13057.	2.8	16
39	New Model for Liquid Evaporation and Vapor Transport in Nanopores Covering the Entire Knudsen Regime and Arbitrary Pore Length. <i>Langmuir</i> , 2021, 37, 2227-2235.	1.6	16
40	Experimental investigation into unstable two phase flow phenomena during flow boiling in multi-microchannels. <i>International Journal of Thermal Sciences</i> , 2021, 166, 106985.	2.6	16
41	Experimental investigation of the continuous two-phase instable boiling in microchannels with triangular corrugations and prediction for instable boundaries. <i>Applied Thermal Engineering</i> , 2019, 162, 114251.	3.0	13
42	Lift force on nanoparticles in shear flows of dilute gases: negative or positive?. <i>Journal of Fluid Mechanics</i> , 2016, 795, 443-454.	1.4	12
43	Two-phase flow pattern and pressure drop in silicon multi-microchannel with expansionâ€œconstriction cross-section. <i>Experimental Thermal and Fluid Science</i> , 2015, 60, 241-251.	1.5	11
44	Thermophoretic force on nanocylinders in the free molecule regime. <i>Physical Review E</i> , 2017, 95, 033101.	0.8	11
45	Gasâ€œliquid two-phase flow patterns in microchannels with reentrant cavities in sidewall. <i>Experimental Thermal and Fluid Science</i> , 2014, 53, 86-92.	1.5	10
46	Heat transfer performance of submerged impinging jet using silver nanofluids. <i>Heat and Mass Transfer</i> , 2015, 51, 221-229.	1.2	9
47	Lift forces on axial symmetry particles rotating in a linear shear flow of a rarefied gas. <i>Physics of Fluids</i> , 2018, 30, .	1.6	9
48	CO ₂ Evaporation Process Modeling: Fundamentals and Engineering Applications. <i>Heat Transfer Engineering</i> , 2022, 43, 658-678.	1.2	9
49	Loss of stability of a solitary wave through exciting a cnoidal wave on a Fermi-Pasta-Ulam ring. <i>Physical Review E</i> , 2013, 88, 042901.	0.8	8
50	Thermal characteristics of battery module with trapezoidal structure. <i>Numerical Heat Transfer; Part A: Applications</i> , 2018, 74, 1701-1714.	1.2	8
51	Numerical analysis of the two-phase pressure drop and liquid distribution in single-screw expander prototype. <i>Science Bulletin</i> , 2014, 59, 4388-4396.	1.7	7
52	Thermophoretic force on nonspherical particles in the free-molecule regime. <i>Physical Review E</i> , 2018, 97, 053106.	0.8	7
53	Drag forces on nanoparticles in the free-molecule regime: Effect of the particle temperature. <i>Physical Review E</i> , 2020, 101, 013103.	0.8	7
54	Theoretical and numerical study of nanoporous evaporation with receded liquid surface: effect of Knudsen number. <i>Journal of Fluid Mechanics</i> , 2021, 928, .	1.4	7

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55	Enhanced Effect of Negative Differential Thermal Resistance in Nanoscale Confined Structure with Nanopatterned Surfaces. <i>Journal of Physical Chemistry C</i> , 2020, 124, 92-98.	1.5	6
56	Lift force on spherical nanoparticles in shear flows of rarefied binary gas mixtures. <i>Journal of Fluid Mechanics</i> , 2016, 809, 345-359.	1.4	5
57	Flow Regime Visualization and Identification of Air-Water Two-Phase Flow in a Horizontal Helically Coiled Rectangular Channel. <i>Heat Transfer Engineering</i> , 2022, 43, 720-736.	1.2	5
58	Shear lift forces on nanocylinders in the free molecule regime. <i>Journal of Fluid Mechanics</i> , 2018, 846, 392-410.	1.4	4
59	THERMAL CHARACTERISTICS OF AN ANNULAR WICKLESS HEAT PIPE. <i>Heat Transfer Research</i> , 2017, 48, 1339-1357.	0.9	3
60	Tunable Thermal Rectification and Negative Differential Thermal Resistance in Gas-Filled Nanostructure with Mechanically-Controllable Nanopillars. <i>Journal of Thermal Science</i> , 0, , 1.	0.9	3
61	Numerical simulation and microchannels parameters optimization for thermal management of GaN HEMT devices. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2021, 31, 2841-2861.	1.6	2
62	Self-propulsion of Janus particles in the free molecular regime. <i>Physics of Fluids</i> , 2022, 34, 033311.	1.6	2
63	Transient and isothermal characteristics of a particular heat pipe. <i>International Communications in Heat and Mass Transfer</i> , 2014, 54, 42-47.	2.9	1
64	Boiling Heat Transfer and Critical Heat Flux Phenomena with Nanofluids: Fundamentals, Mechanisms and Challenges. , 2018, , 167-235.		1
65	HEAT TRANSFER CHARACTERISTICS OF THE WICKLESS JACKET-TYPE RADIAL HEAT PIPE. <i>Heat Transfer Research</i> , 2015, 46, 751-763.	0.9	1
66	Experimental Investigations on the Pressure Drop of a Two-cone Hydrocyclone for Separation Fine Particles from Waste Water. , 2010, , .		0
67	A Novel Passive Micromixer Based on Asymmetric Split-and-Recombine With Fan-Shaped Cavity. , 2011, , .		0
68	The heat transfer characteristics of the jacket-type radial heat pipe. , 2013, , .		0
69	Effects of structural parameters on fluid flow and mixing performance in a curved microchannel with gaps and baffles. , 2013, , .		0
70	Thermophoresis of Nanoparticles in Dilute Gases. , 2018, , .		0
71	Interface thermal resistance effect on thermal rectification using bulk materials. <i>Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica</i> , 2016, 46, 175-183.	0.3	0