

# Jiyun Zhao

## List of Publications by Year in descending order

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91  
papers

5,058  
citations

126858

33  
h-index

88593

70  
g-index

91  
all docs

91  
docs citations

91  
times ranked

3758  
citing authors

#	ARTICLE	IF	CITATIONS
1	Study on the novel suppression of heat transfer deterioration of supercritical water flowing in vertical tube through the suspension of alumina nanoparticles. <i>International Communications in Heat and Mass Transfer</i> , 2022, 132, 105893.	2.9	25
2	Dynamic modeling of long-term operations of vanadium/air redox flow battery with different membranes. <i>Journal of Energy Storage</i> , 2022, 50, 104171.	3.9	10
3	Numerical investigation on deteriorated heat transfer of supercritical water flowing upward in tubes with variable cross-sectional geometries. <i>International Communications in Heat and Mass Transfer</i> , 2022, 136, 106203.	2.9	7
4	Design of a new optimized U-shaped lightweight liquid-cooled battery thermal management system for electric vehicles: A machine learning approach. <i>International Communications in Heat and Mass Transfer</i> , 2022, 136, 106209.	2.9	42
5	Thermal-hydraulic analysis of wire-wrapped rod bundle in lead-based fast reactor with non-uniform heat flux. <i>International Journal of Energy Research</i> , 2022, 46, 16538-16549.	2.2	7
6	Numerical study on the heat transfer deterioration and its mitigations for supercritical CO <sub>2</sub> flowing in a horizontal miniature tube. <i>Annals of Nuclear Energy</i> , 2021, 151, 107982.	0.9	15
7	Latest progress on nanotechnology aided boiling heat transfer enhancement: A review. <i>Energy</i> , 2021, 215, 119114.	4.5	44
8	An experimental investigation on the pool boiling of multi-orientated hierarchical structured surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2021, 164, 120595.	2.5	21
9	Future smart battery and management: Advanced sensing from external to embedded multi-dimensional measurement. <i>Journal of Power Sources</i> , 2021, 489, 229462.	4.0	178
10	The optimization of state of charge and state of health estimation for lithium ions battery using combined deep learning and Kalman filter methods. <i>International Journal of Energy Research</i> , 2021, 45, 11206-11230.	2.2	17
11	Optimization of air-cooling technology for LiFePO <sub>4</sub> battery pack based on deep learning. <i>Journal of Power Sources</i> , 2021, 497, 229894.	4.0	46
12	Magnetic Dipole and Thermal Radiation Impacts on Stagnation Point Flow of Micropolar Based Nanofluids over a Vertically Stretching Sheet: Finite Element Approach. <i>Processes</i> , 2021, 9, 1089.	1.3	36
13	Numerical investigation on the effects of non-gaussian random and regular textured rough surface on critical heat flux. <i>International Communications in Heat and Mass Transfer</i> , 2021, 126, 105485.	2.9	2
14	The synergetic effects of the surface wettability and the patterned nanostructure on boiling heat transfer enhancement. <i>International Journal of Heat and Mass Transfer</i> , 2021, 176, 121475.	2.5	7
15	A parametric study of a hybrid battery thermal management system that couples PCM/copper foam composite with helical liquid channel cooling. <i>Energy</i> , 2021, 231, 120869.	4.5	101
16	Investigation of the effects of surface wettability and surface roughness on nanoscale boiling process using molecular dynamics simulation. <i>Nuclear Engineering and Design</i> , 2021, 382, 111400.	0.8	10
17	Investigation into the effect of upstream obstacles and hazardous sources on dispersion in the urban environment with LES model. <i>Journal of Hazardous Materials</i> , 2020, 390, 121953.	6.5	3
18	Mitigation of heat transfer deterioration in a circular tube with supercritical CO <sub>2</sub> using a novel small-scale multiple vortex generator. <i>International Journal of Thermal Sciences</i> , 2020, 156, 106481.	2.6	14

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19	The effects of surface orientation, heater size, wettability, and subcooling on the critical heat flux enhancement in pool boiling. <i>International Journal of Heat and Mass Transfer</i> , 2020, 149, 119230.	2.5	16
20	Design concepts of supercritical water-cooled reactor (SCWR) and nuclear marine vessel: A review. <i>Progress in Nuclear Energy</i> , 2020, 124, 103320.	1.3	35
21	Diameter Effect on the Wall Temperature Behaviors During Supercritical Water Heat Transfer Deterioration in Circular Tubes and Annular Channels. <i>Frontiers in Energy Research</i> , 2019, 7, .	1.2	4
22	Recent development of membrane for vanadium redox flow battery applications: A review. <i>Applied Energy</i> , 2019, 238, 202-224.	5.1	295
23	Numerical study of effects of vortex generators on heat transfer deterioration of supercritical water upward flow. <i>International Journal of Heat and Mass Transfer</i> , 2019, 137, 489-505.	2.5	32
24	Online Estimation of Power Capacity With Noise Effect Attenuation for Lithium-Ion Battery. <i>IEEE Transactions on Industrial Electronics</i> , 2019, 66, 5724-5735.	5.2	109
25	Review of critical-heat-flux enhancement methods. <i>International Journal of Heat and Mass Transfer</i> , 2018, 122, 275-289.	2.5	70
26	Safety analysis of Super-Critical Water Reactorsâ€™A review. <i>Progress in Nuclear Energy</i> , 2018, 106, 87-101.	1.3	9
27	Investigation of droplet behaviors for spray cooling using level set method. <i>Annals of Nuclear Energy</i> , 2018, 113, 162-170.	0.9	15
28	Comparative study of methods for integrated model identification and state of charge estimation of lithium-ion battery. <i>Journal of Power Sources</i> , 2018, 402, 189-197.	4.0	57
29	Investigation into the effectiveness of nanofluids on the mini-channel thermal management for high power lithium ion battery. <i>Applied Thermal Engineering</i> , 2018, 142, 511-523.	3.0	104
30	Thermoelectric generation for waste heat recovery: Application of a system level design optimization approach via Taguchi method. <i>Energy Conversion and Management</i> , 2018, 172, 507-516.	4.4	47
31	Numerical investigation of supercritical water flow in a vertical pipe under axially non-uniform heat flux. <i>Progress in Nuclear Energy</i> , 2017, 97, 11-25.	1.3	22
32	A multi-timescale estimator for battery state of charge and capacity dual estimation based on an online identified model. <i>Applied Energy</i> , 2017, 204, 1264-1274.	5.1	255
33	State of Charge Estimation of Vanadium Redox Flow Battery Based on Sliding Mode Observer and Dynamic Model Including Capacity Fading Factor. <i>IEEE Transactions on Sustainable Energy</i> , 2017, 8, 1658-1667.	5.9	95
34	Study on two wall temperature peaks of supercritical fluid mixed convective heat transfer in circular tubes. <i>International Journal of Heat and Mass Transfer</i> , 2017, 113, 257-267.	2.5	48
35	Numerical Investigation of Melt Jet Breakup With Different Shapes in Water Pool. , 2017, , .		0
36	Numerical Study on Mitigation of Heat Transfer Deterioration in Supercritical CO2 Heat Exchanger Application. , 2017, , .		0

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37	Thermal issues about Li-ion batteries and recent progress in battery thermal management systems: A review. <i>Energy Conversion and Management</i> , 2017, 150, 304-330.	4.4	786
38	Numerical analysis on the thermal behavior of a segmented thermoelectric generator. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 3521-3535.	3.8	42
39	A comprehensive study of space vector pulse-width modulation technique for three-phase source inverters. <i>International Journal of Circuit Theory and Applications</i> , 2016, 44, 364-381.	1.3	13
40	Numerical Investigation on Heat Transfer of Supercritical Water in Rod Bundle Under Suddenly Decreased Mass Flux Condition. , 2016, , .		0
41	Numerical Investigation of Supercritical Water Flow in a 2x2 Rod Bundle Under Non-Uniform Heat Flux. , 2016, , .		0
42	Modeling and performance assessment of pontoon roller wave energy converter in Singapore. , 2016, , .		1
43	Space matters: Li <sup>+</sup> conduction versus strain effect at FePO <sub>4</sub> /LiFePO <sub>4</sub> interface. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	18
44	Crystal-isotropy dependence of ionic conductivity enhancement at strained interfaces. <i>Solid State Ionics</i> , 2016, 289, 168-172.	1.3	2
45	Supercritical water heat transfer for nuclear reactor applications: A review. <i>Annals of Nuclear Energy</i> , 2016, 97, 53-65.	0.9	66
46	Justifying the significance of Knudsen diffusion in solid oxide fuel cells. <i>Energy</i> , 2016, 95, 242-246.	4.5	21
47	Effectiveness of nanofluid on improving the performance of microchannel heat sink. <i>Applied Thermal Engineering</i> , 2016, 101, 402-412.	3.0	59
48	Partial-Load Analysis of a Temperature-Controlled Solid-Oxide Fuel Cell-Gas Turbine (SOFC-GT) Hybrid Power Plant. <i>Energy Technology</i> , 2015, 3, 601-617.	1.8	3
49	A comprehensive equivalent circuit model of all-vanadium redox flow battery for power system analysis. <i>Journal of Power Sources</i> , 2015, 290, 14-24.	4.0	112
50	Performance improvements of microchannel heat sink using wavy channel and nanofluids. <i>International Journal of Heat and Mass Transfer</i> , 2015, 89, 59-74.	2.5	183
51	Small and Medium sized Reactors (SMR): A review of technology. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 44, 643-656.	8.2	131
52	Hydraulic lift-off issues for application of high performance annular fuels in pressurized water reactors. <i>Annals of Nuclear Energy</i> , 2015, 85, 1018-1023.	0.9	1
53	Development of efficient air-cooling strategies for lithium-ion battery module based on empirical heat source model. <i>Applied Thermal Engineering</i> , 2015, 90, 521-529.	3.0	190
54	Innovative model of annular fuel design for lead-cooled fast reactors. <i>Progress in Nuclear Energy</i> , 2015, 83, 270-282.	1.3	5

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55	Investigation on the Influence of Nanofluids in Wavy Microchannel Heat Sink. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 956-970.	1.4	19
56	Heatsink design for high power density converter in aircraft applications: Parameter sensitivity analysis. , 2015, , .		6
57	Space vector pulse-width modulation for single-phase full-bridge Z-source inverter. International Journal of Circuit Theory and Applications, 2015, 43, 374-389.	1.3	13
58	Temperature dependence of capacity decay due to ion diffusion in vanadium redox flow battery. , 2014, , .		1
59	Optimization and comparison of double-layer and double-side micro-channel heat sinks with nanofluid for power electronics cooling. Applied Thermal Engineering, 2014, 65, 124-134.	3.0	91
60	Dynamic thermal-hydraulic modeling and stack flow pattern analysis for all-vanadium redox flow battery. Journal of Power Sources, 2014, 260, 89-99.	4.0	63
61	Parametric study on the performance of double-layered microchannels heat sink. Energy Conversion and Management, 2014, 80, 550-560.	4.4	119
62	Thermal investigation of lithium-ion battery module with different cell arrangement structures and forced air-cooling strategies. Applied Energy, 2014, 134, 229-238.	5.1	484
63	Extended dynamic model for ion diffusion in all-vanadium redox flow battery including the effects of temperature and bulk electrolyte transfer. Journal of Power Sources, 2014, 270, 576-586.	4.0	85
64	Extended Kalman filter method for state of charge estimation of Vanadium redox flow battery using thermal-dependent electrical model. Journal of Power Sources, 2014, 262, 50-61.	4.0	100
65	Dynamic electro-thermal modeling of all-vanadium redox flow battery with forced cooling strategies. Applied Energy, 2014, 135, 1-10.	5.1	69
66	Hydraulic Lift-Off Issues for Application of High Performance Annular Fuels in Pressurized Water Reactors. , 2014, , .		0
67	Applying VRB-ESS in the DC micro-grid for green building electricity supply: Constructive suggestions to improve the overall energy efficiency. , 2013, , .		0
68	Thermal hydraulic behavior and efficiency analysis of an all-vanadium redox flow battery. Journal of Power Sources, 2013, 242, 314-324.	4.0	92
69	Optimization of the VRB-ESS integrated hybrid power system for building applications. , 2013, , .		1
70	Thermal-mechanical design of sandwich SiC power module with micro-channel cooling. , 2013, , .		1
71	Design of AlN-based micro-channel heat sink in direct bond copper for power electronics packaging. Applied Thermal Engineering, 2013, 52, 120-129.	3.0	66
72	Electro-thermal modeling of SiC power devices for circuit simulation. , 2013, , .		6

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73	A review of nanofluid heat transfer and critical heat flux enhancementâ€”Research gap to engineering application. Progress in Nuclear Energy, 2013, 66, 13-24.	1.3	169
74	Nanofluid Boiling Heat Transfer and Critical Heat Flux Enhancement: Mechanism to Be Revealed. , 2013, , .		0
75	State of charge estimation of an all-vanadium redox flow battery based on a thermal-dependent model. , 2013, , .		10
76	Investigation of capacity decay due to ion diffusion in Vanadium Redox Flow Batteries. , 2013, , .		1
77	Investigation of VRB-ESS integrated with hybrid power system for building. , 2012, , .		1
78	Numerical investigation of the thermal fatigue issue in the next generation nuclear power plants. , 2012, , .		0
79	Nonhomogeneous-Nonequilibrium Two-Phase-Flow Model for Nuclear Reactor Single-Channel Stability Analysis. Nuclear Technology, 2012, 180, 78-88.	0.7	7
80	Study on Momentum Interpolation Methods with Curvilinear Collocated Grids in Single-Phase and Two-Phase Flows. Numerical Heat Transfer, Part B: Fundamentals, 2012, 61, 298-310.	0.6	4
81	Numerical simulation of the water bubble rising in a liquid column using the combination of level set and moving mesh methods in the collocated grids. International Journal of Thermal Sciences, 2012, 59, 1-8.	2.6	8
82	Large-eddy simulation of thermal fatigue in a mixing tee. International Journal of Heat and Fluid Flow, 2012, 37, 93-108.	1.1	21
83	Numerical simulation of the thermal hydraulic performance of a plate pin fin heat sink. Applied Thermal Engineering, 2012, 48, 81-88.	3.0	65
84	SCWR single channel stability analysis using a response matrix method. Nuclear Engineering and Design, 2011, 241, 2528-2535.	0.8	24
85	Core-Wide (In-Phase) Stability of Supercritical Water-Cooled Reactorsâ€™I: Sensitivity to Design and Operating Conditions. Nuclear Technology, 2008, 161, 108-123.	0.7	16
86	Core-Wide (In-Phase) Stability of Supercritical Water-Cooled Reactorsâ€™II: Comparison with Boiling Water Reactors. Nuclear Technology, 2008, 161, 124-139.	0.7	12
87	Coupled Neutronic and Thermal-Hydraulic Out-of-Phase Stability of Supercritical Water-Cooled Reactors. Nuclear Technology, 2008, 164, 20-33.	0.7	12
88	Hot-Channel Stability of Supercritical Water-Cooled Reactorsâ€™I: Steady-State and Sliding Pressure Startup. Nuclear Technology, 2007, 158, 158-173.	0.7	31
89	Hot-Channel Stability of Supercritical Water-Cooled Reactorsâ€™II: Effect of Water Rod Heating and Comparison with BWR Stability. Nuclear Technology, 2007, 158, 174-190.	0.7	18
90	Mechanical Analysis of High Power Internally Cooled Annular Fuel. Nuclear Technology, 2004, 146, 164-180.	0.7	9

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91	Mesh size influence on dynamic modeling. International Journal for Blasting and Fragmentation, 2000, 4, 164-174.	0.2	3