

# Jiyun Zhao

## List of Publications by Year in descending order

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91  
papers

5,058  
citations

126907

33  
h-index

88630

70  
g-index

91  
all docs

91  
docs citations

91  
times ranked

3758  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | 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.  | 9.2  | 786       |
| 2  | Thermal investigation of lithium-ion battery module with different cell arrangement structures and forced air-cooling strategies. <i>Applied Energy</i> , 2014, 134, 229-238.                                     | 10.1 | 484       |
| 3  | Recent development of membrane for vanadium redox flow battery applications: A review. <i>Applied Energy</i> , 2019, 238, 202-224.  | 10.1 | 295       |
| 4  | 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.   | 10.1 | 255       |
| 5  | 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.                                      | 6.0  | 190       |
| 6  | Performance improvements of microchannel heat sink using wavy channel and nanofluids. <i>International Journal of Heat and Mass Transfer</i> , 2015, 89, 59-74.   | 4.8  | 183       |
| 7  | Future smart battery and management: Advanced sensing from external to embedded multi-dimensional measurement. <i>Journal of Power Sources</i> , 2021, 489, 229462.   | 7.8  | 178       |
| 8  | A review of nanofluid heat transfer and critical heat flux enhancement—Research gap to engineering application. <i>Progress in Nuclear Energy</i> , 2013, 66, 13-24.  | 2.9  | 169       |
| 9  | Small and Medium sized Reactors (SMR): A review of technology. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 44, 643-656.   | 16.4 | 131       |
| 10 | Parametric study on the performance of double-layered microchannels heat sink. <i>Energy Conversion and Management</i> , 2014, 80, 550-560.   | 9.2  | 119       |
| 11 | 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.  | 7.8  | 112       |
| 12 | Online Estimation of Power Capacity With Noise Effect Attenuation for Lithium-Ion Battery. <i>IEEE Transactions on Industrial Electronics</i> , 2019, 66, 5724-5735.  | 7.9  | 109       |
| 13 | 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.                            | 6.0  | 104       |
| 14 | 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.                                   | 8.8  | 101       |
| 15 | Extended Kalman filter method for state of charge estimation of Vanadium redox flow battery using thermal-dependent electrical model. <i>Journal of Power Sources</i> , 2014, 262, 50-61.                         | 7.8  | 100       |
| 16 | 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. | 8.8  | 95        |
| 17 | Thermal hydraulic behavior and efficiency analysis of an all-vanadium redox flow battery. <i>Journal of Power Sources</i> , 2013, 242, 314-324.   | 7.8  | 92        |
| 18 | Optimization and comparison of double-layer and double-side micro-channel heat sinks with nanofluid for power electronics cooling. <i>Applied Thermal Engineering</i> , 2014, 65, 124-134.                        | 6.0  | 91        |

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|----|---|------|-----------|
| 19 | Extended dynamic model for ion diffusion in all-vanadium redox flow battery including the effects of temperature and bulk electrolyte transfer. <i>Journal of Power Sources</i> , 2014, 270, 576-586.                                 | 7.8  | 85        |
| 20 | Review of critical-heat-flux enhancement methods. <i>International Journal of Heat and Mass Transfer</i> , 2018, 122, 275-289.  | 4.8  | 70        |
| 21 | Dynamic electro-thermal modeling of all-vanadium redox flow battery with forced cooling strategies. <i>Applied Energy</i> , 2014, 135, 1-10.  | 10.1 | 69        |
| 22 | Design of AlN-based micro-channel heat sink in direct bond copper for power electronics packaging. <i>Applied Thermal Engineering</i> , 2013, 52, 120-129.  | 6.0  | 66        |
| 23 | Supercritical water heat transfer for nuclear reactor applications: A review. <i>Annals of Nuclear Energy</i> , 2016, 97, 53-65.  | 1.8  | 66        |
| 24 | Numerical simulation of the thermal hydraulic performance of a plate pin fin heat sink. <i>Applied Thermal Engineering</i> , 2012, 48, 81-88.   | 6.0  | 65        |
| 25 | Dynamic thermal-hydraulic modeling and stack flow pattern analysis for all-vanadium redox flow battery. <i>Journal of Power Sources</i> , 2014, 260, 89-99.   | 7.8  | 63        |
| 26 | Effectiveness of nanofluid on improving the performance of microchannel heat sink. <i>Applied Thermal Engineering</i> , 2016, 101, 402-412.   | 6.0  | 59        |
| 27 | 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.   | 7.8  | 57        |
| 28 | 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.   | 4.8  | 48        |
| 29 | 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.                                       | 9.2  | 47        |
| 30 | 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.  | 7.8  | 46        |
| 31 | Latest progress on nanotechnology aided boiling heat transfer enhancement: A review. <i>Energy</i> , 2021, 215, 119114.   | 8.8  | 44        |
| 32 | Numerical analysis on the thermal behavior of a segmented thermoelectric generator. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 3521-3535.  | 7.1  | 42        |
| 33 | 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. | 5.6  | 42        |
| 34 | 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.                                  | 2.8  | 36        |
| 35 | Design concepts of supercritical water-cooled reactor (SCWR) and nuclear marine vessel: A review. <i>Progress in Nuclear Energy</i> , 2020, 124, 103320.  | 2.9  | 35        |
| 36 | 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.                                       | 4.8  | 32        |

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|----|---|-----|-----------|
| 37 | Hot-Channel Stability of Supercritical Water-Cooled Reactorsâ€™I: Steady-State and Sliding Pressure Startup. Nuclear Technology, 2007, 158, 158-173.  | 1.2 | 31        |
| 38 | Study on the novel suppression of heat transfer deterioration of supercritical water flowing in vertical tube through the suspension of alumina nanoparticles. International Communications in Heat and Mass Transfer, 2022, 132, 105893. | 5.6 | 25        |
| 39 | SCWR single channel stability analysis using a response matrix method. Nuclear Engineering and Design, 2011, 241, 2528-2535.  | 1.7 | 24        |
| 40 | Numerical investigation of supercritical water flow in a vertical pipe under axially non-uniform heat flux. Progress in Nuclear Energy, 2017, 97, 11-25.  | 2.9 | 22        |
| 41 | Large-eddy simulation of thermal fatigue in a mixing tee. International Journal of Heat and Fluid Flow, 2012, 37, 93-108.   | 2.4 | 21        |
| 42 | Justifying the significance of Knudsen diffusion in solid oxide fuel cells. Energy, 2016, 95, 242-246.  | 8.8 | 21        |
| 43 | An experimental investigation on the pool boiling of multi-orientated hierarchical structured surfaces. International Journal of Heat and Mass Transfer, 2021, 164, 120595.   | 4.8 | 21        |
| 44 | Investigation on the Influence of Nanofluids in Wavy Microchannel Heat Sink. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 956-970.   | 2.5 | 19        |
| 45 | 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.   | 1.2 | 18        |
| 46 | Space matters: Li+ conduction versus strain effect at FePO4/LiFePO4 interface. Applied Physics Letters, 2016, 108, .  | 3.3 | 18        |
| 47 | The optimization of state of charge and state of health estimation for lithiumâ€™ions battery using combined deep learning and Kalman filter methods. International Journal of Energy Research, 2021, 45, 11206-11230.                    | 4.5 | 17        |
| 48 | Core-Wide (In-Phase) Stability of Supercritical Water-Cooled Reactorsâ€™I: Sensitivity to Design and Operating Conditions. Nuclear Technology, 2008, 161, 108-123.  | 1.2 | 16        |
| 49 | The effects of surface orientation, heater size, wettability, and subcooling on the critical heat flux enhancement in pool boiling. International Journal of Heat and Mass Transfer, 2020, 149, 119230.                                   | 4.8 | 16        |
| 50 | Investigation of droplet behaviors for spray cooling using level set method. Annals of Nuclear Energy, 2018, 113, 162-170.  | 1.8 | 15        |
| 51 | Numerical study on the heat transfer deterioration and its mitigations for supercritical CO2 flowing in a horizontal miniature tube. Annals of Nuclear Energy, 2021, 151, 107982.   | 1.8 | 15        |
| 52 | Mitigation of heat transfer deterioration in a circular tube with supercritical CO2 using a novel small-scale multiple vortex generator. International Journal of Thermal Sciences, 2020, 156, 106481.                                    | 4.9 | 14        |
| 53 | Space vector pulseâ€™width modulation for singleâ€™phase fullâ€™bridge Zâ€™source inverter. International Journal of Circuit Theory and Applications, 2015, 43, 374-389.  | 2.0 | 13        |
| 54 | A comprehensive study of space vector pulseâ€™width modulation technique for threeâ€™phase Zâ€™source inverters. International Journal of Circuit Theory and Applications, 2016, 44, 364-381.   | 2.0 | 13        |

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|----|---|-----|-----------|
| 55 | Core-Wide (In-Phase) Stability of Supercritical Water-Cooled Reactorsâ€™II: Comparison with Boiling Water Reactors. Nuclear Technology, 2008, 161, 124-139.   | 1.2 | 12        |
| 56 | Coupled Neutronic and Thermal-Hydraulic Out-of-Phase Stability of Supercritical Water-Cooled Reactors. Nuclear Technology, 2008, 164, 20-33.  | 1.2 | 12        |
| 57 | State of charge estimation of an all-vanadium redox flow battery based on a thermal-dependent model. , 2013, , .  |     | 10        |
| 58 | Investigation of the effects of surface wettability and surface roughness on nanoscale boiling process using molecular dynamics simulation. Nuclear Engineering and Design, 2021, 382, 111400.                            | 1.7 | 10        |
| 59 | Dynamic modeling of long-term operations of vanadium/air redox flow battery with different membranes. Journal of Energy Storage, 2022, 50, 104171.  | 8.1 | 10        |
| 60 | Mechanical Analysis of High Power Internally Cooled Annular Fuel. Nuclear Technology, 2004, 146, 164-180.   | 1.2 | 9         |
| 61 | Safety analysis of Super-Critical Water Reactorsâ€™A review. Progress in Nuclear Energy, 2018, 106, 87-101.   | 2.9 | 9         |
| 62 | 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.          | 4.9 | 8         |
| 63 | Nonhomogeneous-Nonequilibrium Two-Phase-Flow Model for Nuclear Reactor Single-Channel Stability Analysis. Nuclear Technology, 2012, 180, 78-88.   | 1.2 | 7         |
| 64 | The synergetic effects of the surface wettability and the patterned nanostructure on boiling heat transfer enhancement. International Journal of Heat and Mass Transfer, 2021, 176, 121475.                               | 4.8 | 7         |
| 65 | Numerical investigation on deteriorated heat transfer of supercritical water flowing upward in tubes with variable cross-sectional geometries. International Communications in Heat and Mass Transfer, 2022, 136, 106203. | 5.6 | 7         |
| 66 | Thermalâ€™hydraulic analysis of wireâ€™wrapped rod bundle in leadâ€™based fast reactor with nonâ€™uniform heat flux. International Journal of Energy Research, 2022, 46, 16538-16549.                                     | 4.5 | 7         |
| 67 | Electro-thermal modeling of SiC power devices for circuit simulation. , 2013, , .   |     | 6         |
| 68 | Heatsink design for high power density converter in aircraft applications: Parameter sensitivity analysis. , 2015, , .  |     | 6         |
| 69 | Innovative model of annular fuel design for lead-cooled fast reactors. Progress in Nuclear Energy, 2015, 83, 270-282.   | 2.9 | 5         |
| 70 | 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.  | 0.9 | 4         |
| 71 | Diameter Effect on the Wall Temperature Behaviors During Supercritical Water Heat Transfer Deterioration in Circular Tubes and Annular Channels. Frontiers in Energy Research, 2019, 7, .                                 | 2.3 | 4         |
| 72 | Mesh size influence on dynamic modeling. International Journal for Blasting and Fragmentation, 2000, 4, 164-174.  | 0.2 | 3         |

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|----|--|------|-----------|
| 73 | Partial-Load Analysis of a Temperature-Controlled Solid-Oxide Fuel Cell-Gas Turbine (SOFC-GT) Hybrid Power Plant. Energy Technology, 2015, 3, 601-617.   | 3.8  | 3         |
| 74 | Investigation into the effect of upstream obstacles and hazardous sources on dispersion in the urban environment with LES model. Journal of Hazardous Materials, 2020, 390, 121953.                | 12.4 | 3         |
| 75 | Crystal-isotropy dependence of ionic conductivity enhancement at strained interfaces. Solid State Ionics, 2016, 289, 168-172.  | 2.7  | 2         |
| 76 | Numerical investigation on the effects of non-gaussian random and regular textured rough surface on critical heat flux. International Communications in Heat and Mass Transfer, 2021, 126, 105485. | 5.6  | 2         |
| 77 | Investigation of VRB-ESS integrated with hybrid power system for building. , 2012, , .   |      | 1         |
| 78 | Optimization of the VRB-ESS integrated hybrid power system for building applications. , 2013, , .  |      | 1         |
| 79 | Thermal-mechanical design of sandwich SiC power module with micro-channel cooling. , 2013, , .   |      | 1         |
| 80 | Investigation of capacity decay due to ion diffusion in Vanadium Redox Flow Batteries. , 2013, , .   |      | 1         |
| 81 | Temperature dependence of capacity decay due to ion diffusion in vanadium redox flow battery. , 2014, , .  |      | 1         |
| 82 | Hydraulic lift-off issues for application of high performance annular fuels in pressurized water reactors. Annals of Nuclear Energy, 2015, 85, 1018-1023.  | 1.8  | 1         |
| 83 | Modeling and performance assessment of pontoon roller wave energy converter in Singapore. , 2016, , .  |      | 1         |
| 84 | Numerical investigation of the thermal fatigue issue in the next generation nuclear power plants. , 2012, , .  |      | 0         |
| 85 | Applying VRB-ESS in the DC micro-grid for green building electricity supply: Constructive suggestions to improve the overall energy efficiency. , 2013, , .  |      | 0         |
| 86 | Nanofluid Boiling Heat Transfer and Critical Heat Flux Enhancement: Mechanism to Be Revealed. , 2013, , .  |      | 0         |
| 87 | Numerical Investigation on Heat Transfer of Supercritical Water in Rod Bundle Under Suddenly Decreased Mass Flux Condition. , 2016, , .  |      | 0         |
| 88 | Numerical Investigation of Supercritical Water Flow in a 2x2 Rod Bundle Under Non-Uniform Heat Flux. , 2016, , .   |      | 0         |
| 89 | Numerical Investigation of Melt Jet Breakup With Different Shapes in Water Pool. , 2017, , .   |      | 0         |
| 90 | Numerical Study on Mitigation of Heat Transfer Deterioration in Supercritical CO2 Heat Exchanger Application. , 2017, , .  |      | 0         |

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|----|--|----|-----------|
| 91 | Hydraulic Lift-Off Issues for Application of High Performance Annular Fuels in Pressurized Water Reactors. , 2014, , . |    | 0         |