

Li Zhao

List of Publications by Year in descending order

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Version: 2024-02-01

131
papers

4,300
citations

117625

34
h-index

128289

60
g-index

132
all docs

132
docs citations

132
times ranked

2655
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of working fluid and expander selections for organic Rankine cycle. <i>Renewable and Sustainable Energy Reviews</i> , 2013, 24, 325-342.	16.4	1,061
2	A critical review of the models used to estimate solar radiation. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 70, 314-329.	16.4	192
3	Thermodynamic analysis of organic Rankine cycle using zeotropic mixtures. <i>Applied Energy</i> , 2014, 130, 748-756.	10.1	110
4	Analysis of a novel combined power and ejector-refrigeration cycle. <i>Energy Conversion and Management</i> , 2016, 108, 266-274.	9.2	79
5	Carbon pump: Fundamental theory and applications. <i>Energy</i> , 2017, 119, 1131-1143.	8.8	73
6	Nanoscale Two-Phase Flow of Methane and Water in Shale Inorganic Matrix. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26671-26679.	3.1	67
7	The influence of composition shift on organic Rankine cycle (ORC) with zeotropic mixtures. <i>Energy Conversion and Management</i> , 2014, 83, 203-211.	9.2	64
8	A thermodynamic analysis of an auto-cascade heat pump cycle for heating application in cold regions. <i>Energy and Buildings</i> , 2014, 82, 621-631.	6.7	63
9	A comparative study on CO ₂ capture performance of vacuum-pressure swing adsorption and pressure-temperature swing adsorption based on carbon pump cycle. <i>Energy</i> , 2017, 137, 495-509.	8.8	63
10	Solar driven ORC-based CCHP: Comparative performance analysis between sequential and parallel system configurations. <i>Applied Thermal Engineering</i> , 2018, 131, 696-706.	6.0	59
11	Theoretical analysis of a combined power and ejector refrigeration cycle using zeotropic mixture. <i>Applied Energy</i> , 2015, 160, 912-919.	10.1	57
12	Mathematical modeling and numerical investigation of carbon capture by adsorption: Literature review and case study. <i>Applied Energy</i> , 2018, 221, 437-449.	10.1	56
13	Thermodynamic analysis on the combination of supercritical carbon dioxide power cycle and transcritical carbon dioxide refrigeration cycle for the waste heat recovery of shipboard. <i>Energy Conversion and Management</i> , 2020, 221, 113214.	9.2	56
14	Simultaneous working fluids design and cycle optimization for Organic Rankine cycle using group contribution model. <i>Applied Energy</i> , 2017, 202, 618-627.	10.1	54
15	Thermodynamic analysis and parametric optimization of a novel CO ₂ power cycle for the waste heat recovery of internal combustion engines. <i>Energy</i> , 2020, 209, 118484.	8.8	53
16	How to approach Carnot cycle via zeotropic working fluid: Research methodology and case study. <i>Energy</i> , 2018, 144, 576-586.	8.8	49
17	Thermodynamic performance comparison of Organic Rankine Cycle between zeotropic mixtures and pure fluids under open heat source. <i>Energy Conversion and Management</i> , 2018, 165, 720-737.	9.2	48
18	Application of machine learning into organic Rankine cycle for prediction and optimization of thermal and exergy efficiency. <i>Energy Conversion and Management</i> , 2020, 210, 112700.	9.2	47

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19	A review on biomass-derived CO ₂ adsorption capture: Adsorbent, adsorber, adsorption, and advice. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 152, 111708.	16.4	47
20	Analysis of a solar Rankine cycle powered refrigerator with zeotropic mixtures. <i>Solar Energy</i> , 2018, 162, 57-66.	6.1	45
21	Thermodynamic exploration of temperature vacuum swing adsorption for direct air capture of carbon dioxide in buildings. <i>Energy Conversion and Management</i> , 2019, 183, 418-426.	9.2	44
22	Integrating solar Organic Rankine Cycle into a coal-fired power plant with amine-based chemical absorption for CO ₂ capture. <i>International Journal of Greenhouse Gas Control</i> , 2014, 31, 77-86.	4.6	43
23	A neural network for predicting normal boiling point of pure refrigerants using molecular groups and a topological index. <i>International Journal of Refrigeration</i> , 2016, 63, 63-71.	3.4	42
24	Developing a performance evaluation model of Organic Rankine Cycle for working fluids based on the group contribution method. <i>Energy Conversion and Management</i> , 2017, 132, 307-315.	9.2	41
25	Experimental investigation on heat loss of semi-spherical cavity receiver. <i>Energy Conversion and Management</i> , 2014, 87, 576-583.	9.2	40
26	Techno-economic analysis of carbon capture from a coal-fired power plant integrating solar-assisted pressure-temperature swing adsorption (PTSA). <i>Journal of Cleaner Production</i> , 2019, 214, 440-451.	9.3	40
27	Towards novel low temperature thermodynamic cycle: A critical review originated from organic Rankine cycle. <i>Applied Energy</i> , 2020, 270, 115186.	10.1	40
28	Performance evaluation on solar box cooker with reflector tracking at optimal angle under Bahir Dar climate. <i>Solar Energy</i> , 2019, 180, 664-677.	6.1	39
29	Dynamic performance investigation of organic Rankine cycle driven by solar energy under cloudy condition. <i>Energy</i> , 2018, 147, 122-141.	8.8	38
30	How interlayer twist angles affect in-plane and cross-plane thermal conduction of multilayer graphene: A non-equilibrium molecular dynamics study. <i>International Journal of Heat and Mass Transfer</i> , 2019, 137, 161-173.	4.8	38
31	Overview on artificial intelligence in design of Organic Rankine Cycle. <i>Energy and AI</i> , 2020, 1, 100011.	10.6	37
32	Is zeotropic working fluid a promising option for organic Rankine cycle: A quantitative evaluation based on literature data. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 148, 111267.	16.4	37
33	Performance analysis of the ejector-expansion refrigeration cycle using zeotropic mixtures. <i>International Journal of Refrigeration</i> , 2015, 57, 197-207.	3.4	36
34	Novel experimental research on the compression process in organic Rankine cycle (ORC). <i>Energy Conversion and Management</i> , 2017, 137, 1-11.	9.2	35
35	Energy-saving pathway exploration of CCS integrated with solar energy: Literature research and comparative analysis. <i>Energy Conversion and Management</i> , 2015, 102, 66-80.	9.2	34
36	Effect of Nanobubble Evolution on Hydrate Process: A Review. <i>Journal of Thermal Science</i> , 2019, 28, 948-961.	1.9	34

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37	Energy-saving pathway exploration of CCS integrated with solar energy: A review of innovative concepts. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 77, 652-669.	16.4	33
38	Dynamic performance investigation for two types of ORC system driven by waste heat of automotive internal combustion engine. <i>Energy</i> , 2019, 169, 958-971.	8.8	33
39	Experimental study on two-phase separation performance of impacting T-junction. <i>International Journal of Multiphase Flow</i> , 2016, 83, 172-182.	3.4	31
40	Group contribution methods in thermodynamic cycles: Physical properties estimation of pure working fluids. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 79, 984-1001.	16.4	31
41	Solar-assisted pressure-temperature swing adsorption for CO ₂ capture: Effect of adsorbent materials. <i>Solar Energy Materials and Solar Cells</i> , 2018, 185, 494-504.	6.2	31
42	Experimental investigation on separation and energy-efficiency performance of temperature swing adsorption system for CO ₂ capture. <i>Separation and Purification Technology</i> , 2019, 227, 115670.	7.9	30
43	Molecular dynamics study on transport properties of supercritical working fluids: Literature review and case study. <i>Applied Energy</i> , 2019, 250, 63-80.	10.1	29
44	Experimental study on thermal performance of U-type evacuated glass tubular solar collector with low inlet temperature. <i>Solar Energy</i> , 2017, 150, 192-201.	6.1	28
45	Exergy analysis and parameter study on a novel auto-cascade Rankine cycle. <i>Energy</i> , 2012, 48, 539-547.	8.8	27
46	Experimental research on the influence of system parameters on the composition shift for zeotropic mixture (isobutane/pentane) in a system occurring phase change. <i>Energy Conversion and Management</i> , 2016, 113, 1-15.	9.2	27
47	Thermodynamic analysis on carbon dioxide capture by Electric Swing Adsorption (ESA) technology. <i>Journal of CO₂ Utilization</i> , 2018, 26, 388-396.	6.8	27
48	A limiting efficiency of subcritical Organic Rankine cycle under the constraint of working fluids. <i>Energy</i> , 2018, 143, 458-466.	8.8	26
49	State-of-art of branching T-junction: Experiments, modeling, developing prospects and applications. <i>Experimental Thermal and Fluid Science</i> , 2019, 109, 109895.	2.7	26
50	Comparative analysis of calculation method of adsorption isosteric heat: Case study of CO ₂ capture using MOFs. <i>Microporous and Mesoporous Materials</i> , 2020, 298, 110053.	4.4	26
51	Dynamic test and verification of model-guided ORC system. <i>Energy Conversion and Management</i> , 2019, 186, 349-367.	9.2	25
52	Trends in patents for solar thermal utilization in China. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 52, 852-862.	16.4	24
53	A literature research on feasible application of mixed working fluid in flexible distributed energy system. <i>Energy</i> , 2017, 137, 377-390.	8.8	24
54	Simulation of two-phase refrigerant separation in horizontal T-junction. <i>Applied Thermal Engineering</i> , 2018, 134, 333-340.	6.0	24

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55	How to quantitatively describe the role of the pure working fluids in subcritical organic Rankine cycle: A limitation on efficiency. <i>Energy Conversion and Management</i> , 2018, 172, 316-327.	9.2	24
56	Numerical analysis on CO ₂ capture process of temperature swing adsorption (TSA): Optimization of reactor geometry. <i>International Journal of Greenhouse Gas Control</i> , 2019, 85, 187-198.	4.6	24
57	Twist-angle-dependent thermal conduction in single-crystalline bilayer graphene. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	24
58	Experimental study on phase separation of refrigerant at horizontal T-junction. <i>International Journal of Multiphase Flow</i> , 2018, 105, 217-233.	3.4	23
59	Experimental study on flow boiling characteristics of R-245fa in circular tube under non-uniform heat flux. <i>International Journal of Heat and Mass Transfer</i> , 2019, 143, 118570.	4.8	23
60	How to evaluate the performance of sub-critical Organic Rankine Cycle from key properties of working fluids by group contribution methods?. <i>Energy Conversion and Management</i> , 2020, 221, 113204.	9.2	23
61	The feasibility of using vapor expander to recover the expansion work in two-stage heat pumps with a large temperature lift. <i>International Journal of Refrigeration</i> , 2015, 56, 15-27.	3.4	22
62	Performance analysis on novel thermodynamic cycle under the guidance of 3D construction method. <i>Applied Energy</i> , 2019, 250, 478-492.	10.1	22
63	A graphic analysis method of electrochemical systems for low-grade heat harvesting from a perspective of thermodynamic cycles. <i>Energy</i> , 2020, 191, 116547.	8.8	22
64	Transcritical carbon dioxide power cycle for waste heat recovery: A roadmap analysis from ideal cycle to real cycle with case implementation. <i>Energy Conversion and Management</i> , 2020, 226, 113578.	9.2	22
65	Theoretical and experimental investigations on the changing regularity of the extreme point of the temperature difference between zeotropic mixtures and heat transfer fluid. <i>Energy</i> , 2013, 55, 541-552.	8.8	21
66	Experimental study on the distribution of constituents of binary zeotropic mixtures in vertical impacting T-junction. <i>International Journal of Heat and Mass Transfer</i> , 2016, 97, 242-252.	4.8	21
67	Temperature swing adsorption for CO ₂ capture: Thermal design and management on adsorption bed with single-tube/three-tube internal heat exchanger. <i>Applied Thermal Engineering</i> , 2021, 199, 117538.	6.0	21
68	New Knowledge on the Performance of Supercritical Brayton Cycle with CO ₂ -Based Mixtures. <i>Energies</i> , 2020, 13, 1741.	3.1	19
69	Intelligent collaborative attainment of structure configuration and fluid selection for the Organic Rankine cycle. <i>Applied Energy</i> , 2020, 264, 114743.	10.1	19
70	Optimization and multi-time scale modeling of pilot solar driven polygeneration system based on organic Rankine cycle. <i>Applied Energy</i> , 2018, 222, 396-409.	10.1	18
71	Entropy analysis on energy-consumption process and improvement method of temperature/vacuum swing adsorption (TVSA) cycle. <i>Energy</i> , 2019, 179, 876-889.	8.8	18
72	Evolution of bubbles in decomposition and replacement process of methane hydrate. <i>Molecular Simulation</i> , 2017, 43, 1061-1073.	2.0	17

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73	Recent advances in modeling the vapor-liquid equilibrium of mixed working fluids. <i>Fluid Phase Equilibria</i> , 2017, 432, 28-44.	2.5	17
74	A review of molecular simulation applied in vapor-liquid equilibria (VLE) estimation of thermodynamic cycles. <i>Journal of Molecular Liquids</i> , 2018, 264, 652-674.	4.9	17
75	State-of-art of impacting T-junction : Phase separation, constituent separation and applications. <i>International Journal of Heat and Mass Transfer</i> , 2020, 148, 119067.	4.8	17
76	Review on Applications of Zeotropic Mixtures. <i>Journal of Thermal Science</i> , 2022, 31, 285-307.	1.9	17
77	Experimental research on liquid-vapor two-phase flow separation of zeotropic mixtures at an impacting T-junction. <i>Experimental Thermal and Fluid Science</i> , 2017, 89, 140-152.	2.7	16
78	Experimental study on the constituent separation performance of binary zeotropic mixtures in horizontal branch T-junctions. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 76-87.	4.8	15
79	Identification of key affecting parameters of zeotropic working fluid on subcritical organic Rankine cycle according limiting thermodynamic cycle. <i>Energy Conversion and Management</i> , 2019, 197, 111884.	9.2	15
80	Supercritical CO ₂ Brayton cycle: Intelligent construction method and case study. <i>Energy Conversion and Management</i> , 2021, 246, 114662.	9.2	15
81	A numerical analysis on energy-efficiency performance of temperature swing adsorption for CO ₂ capture. <i>Energy Procedia</i> , 2017, 142, 3200-3207.	1.8	14
82	Performance analysis of solar-assisted CO ₂ adsorption capture system based on dynamic simulation. <i>Solar Energy</i> , 2020, 209, 628-645.	6.1	13
83	Exploring a potential application of hydrate separation for composition adjustable combined cooling and power system. <i>Applied Energy</i> , 2020, 268, 115064.	10.1	13
84	New knowledge on the temperature-entropy saturation boundary slope of working fluids. <i>Energy</i> , 2017, 119, 211-217.	8.8	12
85	Analysis of pressure drop in T-junction and its effect on thermodynamic cycle efficiency. <i>Applied Energy</i> , 2018, 231, 468-480.	10.1	12
86	Understanding transport and separation of organic mixed working fluids in T-junction from multi-scale insights: Literature review and case study. <i>International Journal of Heat and Mass Transfer</i> , 2020, 154, 119702.	4.8	12
87	How to give a full play to the advantages of zeotropic working fluids in organic Rankine cycle (ORC). <i>Energy Procedia</i> , 2019, 158, 1591-1597.	1.8	11
88	An Overview of 200 kW Solar Power Plant Based on Organic Rankine Cycle. <i>Energy Procedia</i> , 2016, 88, 356-362.	1.8	10
89	Application of the Thermodynamic Cycle to Assess the Energy Efficiency of Amine-Based Absorption of Carbon Capture. <i>Energies</i> , 2019, 12, 2504.	3.1	10
90	Molecular dynamics study on viscosity coefficient of working fluid in supercritical CO ₂ Brayton cycle: Effect of trace gas. <i>Journal of CO₂ Utilization</i> , 2020, 38, 177-186.	6.8	10

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91	Molecular dynamics investigation on isobaric heat capacity of working fluid in supercritical CO ₂ Brayton cycle: Effect of trace gas. <i>Journal of CO₂ Utilization</i> , 2022, 55, 101790.	6.8	10
92	Tuning lattice thermal conductivity of bilayer and trilayer molybdenum disulfide thermoelectric materials through twist angles. <i>International Journal of Heat and Mass Transfer</i> , 2022, 194, 123005.	4.8	10
93	2D numerical study on flow boiling of zeotropic mixture isobutane/pentane in internal countercurrent flow system. <i>Applied Thermal Engineering</i> , 2017, 114, 1247-1255.	6.0	9
94	How to predict the vapor slope of temperature-entropy saturation boundary of working fluids from molecular groups?. <i>Energy</i> , 2017, 135, 14-22.	8.8	9
95	Understanding the 3D construction method of thermodynamic cycle: Insights from limiting performance of pure working fluid. <i>Energy Conversion and Management</i> , 2020, 224, 113364.	9.2	9
96	Numerical simulation on constituents separation of R134a/R600a in a horizontal T-junction. <i>International Journal of Refrigeration</i> , 2020, 115, 148-157.	3.4	9
97	A cycle research methodology for thermo-chemical engines: From ideal cycle to case study. <i>Energy</i> , 2021, 228, 120599.	8.8	9
98	Non-equilibrium thermodynamic analysis of adsorption carbon capture: Contributors, mechanisms and verification of entropy generation. <i>Energy</i> , 2020, 208, 118348.	8.8	8
99	Hydrate-based gas separation for working fluid mixtures: Application to composition-adjustable organic Rankine cycle. <i>Chemical Engineering Journal</i> , 2022, 434, 134626.	12.7	8
100	Vapor-Liquid Equilibrium Prediction of Refrigerant Mixtures with Peng-Robinson Equation of State and Binary Interaction Parameters Calculated Through Group Contribution Model. <i>International Journal of Thermophysics</i> , 2020, 41, 1.	2.1	7
101	Separation of binary organic mixture in T-shaped carbon nanotube separator: Insights from molecular dynamics simulation. <i>Journal of Molecular Liquids</i> , 2020, 312, 113371.	4.9	7
102	Energy recovery from wastewater in deep-sea mining: Feasibility study on an energy supply solution with cold wastewater. <i>Applied Energy</i> , 2022, 305, 117719.	10.1	7
103	Progress and prospect of flow phenomena and simulation on two-phase separation in branching T-junctions: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 167, 112742.	16.4	7
104	A new energy analysis model of seawater desalination based on thermodynamics. <i>Energy Procedia</i> , 2019, 158, 5472-5478.	1.8	6
105	Error analysis of ORC performance calculation based on the Helmholtz equation with different binary interaction parameters of mixture. <i>Energy</i> , 2019, 166, 414-425.	8.8	6
106	Experimental investigation on phase separation comparison between single and double T-junctions. <i>Experimental Thermal and Fluid Science</i> , 2020, 118, 110171.	2.7	6
107	Clarifying the bifurcation point on Design: A Comparative Analysis between Solar-ORC and ORC-based Solar-CCHP. <i>Energy Procedia</i> , 2017, 142, 1119-1126.	1.8	5
108	Ledinegg instability analysis on direct vapor generation inside solar collectors. <i>Solar Energy</i> , 2020, 196, 530-539.	6.1	5

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109	How interlayer twist angles affect thermal conduction of double-walled nanotubes: A non-equilibrium molecular dynamics study. <i>International Journal of Heat and Mass Transfer</i> , 2020, 160, 120234.	4.8	5
110	From 1 to N: A computer-aided case study of thermodynamic cycle construction based on thermodynamic process combination. <i>Energy</i> , 2020, 210, 118553.	8.8	5
111	Numerical simulation on constituent separation and mass transfer of binary zeotropic mixtures in a branching T-junction. <i>International Journal of Refrigeration</i> , 2022, 135, 198-207.	3.4	5
112	Synthesis of waste heat recovery using solar organic Rankine cycle in the separation of benzene/toluene/p-xylene process. <i>Energy</i> , 2022, 255, 124443.	8.8	5
113	Methodology for determining the design radiation for a PTC heating system based on non-guaranteed days. <i>Solar Energy</i> , 2018, 174, 97-107.	6.1	4
114	Comparative analysis of thermodynamic theoretical models for energy consumption of CO ₂ capture. <i>Journal of Zhejiang University: Science A</i> , 2019, 20, 882-892.	2.4	4
115	How to express the adsorbed CO ₂ with the Gibbs TM thermodynamic graphical method: A preliminary study. <i>Energy</i> , 2020, 193, 116753.	8.8	4
116	Thermodynamic carbon pump 2.0: Elucidating energy efficiency through the thermodynamic cycle. <i>Energy</i> , 2021, 215, 119155.	8.8	4
117	Simulation study on phase separation and pressure distribution of refrigerant in horizontal double T-junctions. <i>International Journal of Refrigeration</i> , 2021, 126, 88-98.	3.4	4
118	The flexible programming of thermodynamic cycles: Application of supercritical carbon dioxide Brayton cycles. <i>Energy Conversion and Management</i> , 2021, 245, 114624.	9.2	4
119	Molecular dynamic study on crossover of equilibrium time of conduction for silicon/silicon and silicon/silicon carbide pairs on nanoscale. <i>International Communications in Heat and Mass Transfer</i> , 2018, 98, 85-95.	5.6	3
120	Performance Analysis on a Power and Ejector-Refrigeration System and the Involved Ejector. <i>Frontiers in Energy Research</i> , 2019, 7, .	2.3	3
121	Vapor-liquid separation of mixtures R134a/R600a at horizontal branch T-junctions. <i>International Journal of Refrigeration</i> , 2020, 114, 71-78.	3.4	3
122	An experimental study on operation characteristics of the organic Rankine cycle system under the single-and multiple-variables regulation. <i>Sustainable Energy Technologies and Assessments</i> , 2020, 41, 100785.	2.7	3
123	A high-throughput computational screening of potential adsorbents for a thermal compression CO ₂ Brayton cycle. <i>Sustainable Energy and Fuels</i> , 2021, 5, 1415-1428.	4.9	3
124	Energy Efficient Considerations on Carbon Dioxide Capture: Solar Thermal Engineering (Part I). <i>Energy Procedia</i> , 2014, 61, 2670-2673.	1.8	2
125	Zeotropic Mixture and Organic Ranking Cycle. <i>Lecture Notes in Energy</i> , 2017, , 133-168.	0.3	2
126	Energy dissipation evaluation of temperature swing adsorption (TSA) cycle based on thermodynamic entropy insights. <i>Scientific Reports</i> , 2019, 9, 16599.	3.3	2

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127	An improved method of intelligence construction for subcritical thermodynamic cycle. Energy Conversion and Management, 2022, 254, 115256.	9.2	2
128	Energy Efficient Considerations on Carbon Dioxide Capture: Solar Thermal Engineering (Part II). Energy Procedia, 2014, 61, 2674-2677.	1.8	1
129	Molecular Simulation Studies on Vapor-Liquid Equilibria and Thermal Decomposition of Working Fluids – A Review. Energy Procedia, 2019, 158, 5263-5268.	1.8	1
130	Molecular dynamics investigation on the composition separation of binary organic mixture in a double-walled T-shaped carbon nanotube separator. Journal of Molecular Liquids, 2021, 321, 114498.	4.9	1
131	Energy quality and energy grade: concepts, applications and prospects. , 2022, 1, .		1