

# Zhijian Liu

## List of Publications by Year in descending order

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101  
papers

3,395  
citations

159585

30  
h-index

161849

54  
g-index

101  
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101  
docs citations

101  
times ranked

2619  
citing authors

#	ARTICLE	IF	CITATIONS
1	The influence of air supply inlet location on the spatial-temporal distribution of bioaerosol in isolation ward under three mixed ventilation modes. <i>Energy and Built Environment</i> , 2023, 4, 445-457.	5.9	7
2	Quantitative distribution of human exhaled particles in a ventilation room. <i>Building Simulation</i> , 2022, 15, 859-870.	5.6	25
3	Multi-objective optimization design and multi-attribute decision-making method of a distributed energy system based on nearly zero-energy community load forecasting. <i>Energy</i> , 2022, 239, 122124.	8.8	30
4	Combined Rankine Cycle and dew point cooler for energy efficient power generation of the power plants - A review and perspective study. <i>Energy</i> , 2022, 238, 121688.	8.8	12
5	Study on the performance of a novel photovoltaic/thermal system combining photocatalytic and organic photovoltaic cells. <i>Energy Conversion and Management</i> , 2022, 251, 114967.	9.2	12
6	Effect of human thermal plume and ventilation interaction on bacteria-carrying particles diffusion in operating room microenvironment. <i>Energy and Buildings</i> , 2022, 254, 111573.	6.7	18
7	Thermodynamic performance analyses and optimization design method of a novel distributed energy system coupled with hybrid-energy storage. <i>Renewable Energy</i> , 2022, 182, 1182-1200.	8.9	13
8	A novel distributed energy system combining hybrid energy storage and a multi-objective optimization method for nearly zero-energy communities and buildings. <i>Energy</i> , 2022, 239, 122577.	8.8	67
9	Co-optimization of a novel distributed energy system integrated with hybrid energy storage in different nearly zero energy community scenarios. <i>Energy</i> , 2022, 247, 123553.	8.8	26
10	Seasonal dynamics of airborne culturable fungi and its year-round diversity monitoring in Dahuting Han Dynasty Tomb of China. <i>Science of the Total Environment</i> , 2022, 838, 155990.	8.0	4
11	Two-layer co-optimization method for a distributed energy system combining multiple energy storages. <i>Applied Energy</i> , 2022, 322, 119486.	10.1	21
12	Performance Prediction and Optimization of Solar Water Heater via a Knowledge-Based Machine Learning Method. , 2022, , 714-733.		0
13	Bacteria-carrying particles diffusion in the operating room due to the interaction between human thermal plume and ventilation systems: An experimental-numerical simulation study. <i>Energy and Buildings</i> , 2022, 270, 112277.	6.7	7
14	Dust accumulated fungi in air-conditioning system: Findings based on field and laboratory experiments. <i>Building Simulation</i> , 2021, 14, 793-811.	5.6	7
15	Comparative study of optimization method and optimal operation strategy for multi-scenario integrated energy system. <i>Energy</i> , 2021, 217, 119311.	8.8	41
16	Orthogonal optimization design of structural parameters for bioaerosol sampler using computational fluid dynamics simulation and field experiments. <i>Aerosol Science and Technology</i> , 2021, 55, 37-53.	3.1	1
17	Prevention of surgical site infection under different ventilation systems in operating room environment. <i>Frontiers of Environmental Science and Engineering</i> , 2021, 15, 36.	6.0	21
18	Two-phase collaborative optimization and operation strategy for a new distributed energy system that combines multi-energy storage for a nearly zero energy community. <i>Energy Conversion and Management</i> , 2021, 230, 113800.	9.2	63

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19	Performance Evaluation and Optimization of a Novel System Combining a Photovoltaic/Thermal Subsystem & an Organic Rankine Cycle Driven by Solar Parabolic Trough Collector. <i>Journal of Thermal Science</i> , 2021, 30, 1513-1525.	1.9	8
20	A comprehensive study of feasibility and applicability of building integrated photovoltaic (BIPV) systems in regions with high solar irradiance. <i>Journal of Cleaner Production</i> , 2021, 307, 127240.	9.3	39
21	Potential infection risk assessment of improper bioaerosol experiment operation in one BSL-3 laboratory based on the improved Wells-Riley method. <i>Building and Environment</i> , 2021, 201, 107974.	6.9	15
22	A systematic review of operating room ventilation. <i>Journal of Building Engineering</i> , 2021, 40, 102693.	3.4	22
23	Scientific and technological progress and future perspectives of the solar assisted heat pump (SAHP) system. <i>Energy</i> , 2021, 229, 120719.	8.8	41
24	Assessment of spatial concentration variation and deposition of bioaerosol in a dental clinic during oral cleaning. <i>Building and Environment</i> , 2021, 202, 108024.	6.9	12
25	Multi-scenario analysis and collaborative optimization of a novel distributed energy system coupled with hybrid energy storage for a nearly zero-energy community. <i>Journal of Energy Storage</i> , 2021, 41, 102992.	8.1	13
26	Indoor environmental quality and energy consumption real-time assessment: A field measurement of a nearly zero-energy building in cold region of China. <i>Energy and Buildings</i> , 2021, 246, 111093.	6.7	19
27	Influence of air supply velocity and room temperature conditions on bioaerosols distribution in a class I operating room. <i>Building and Environment</i> , 2021, 204, 108116.	6.9	20
28	Effect of local heating on airflow distribution and the concentration of bacteria-carrying particles in the operating room. <i>Energy and Buildings</i> , 2021, 251, 111331.	6.7	2
29	A new collaborative optimization method for a distributed energy system combining hybrid energy storage. <i>Sustainable Cities and Society</i> , 2021, 75, 103330.	10.4	32
30	Influence of the Visitor Walking on Airflow and the Bioaerosol Particles in Typical Open Tomb Chambers: An Experimental and Case Study. <i>Buildings</i> , 2021, 11, 538.	3.1	5
31	Predicting the concentration of indoor culturable fungi using a kernel-based extreme learning machine (K-ELM). <i>International Journal of Environmental Health Research</i> , 2020, 30, 344-356.	2.7	1
32	An experiment and numerical study of resuspension of fungal spore particles from HVAC ducts. <i>Science of the Total Environment</i> , 2020, 708, 134742.	8.0	10
33	Optimization study on a solar-assisted air source heat pump system with energy storage based on the economics method. <i>International Journal of Energy Research</i> , 2020, 44, 2023-2036.	4.5	9
34	Effect of equipment layout on bioaerosol temporal-spatial distribution and deposition in one BSL-3 laboratory. <i>Building and Environment</i> , 2020, 181, 107149.	6.9	15
35	Catalytic oxidation degradation of formaldehyde on FeN <sub>3</sub> -graphene surface: A DFT study. <i>Applied Surface Science</i> , 2020, 534, 147594.	6.1	21
36	Effect of a circulating nurse walking on airflow and bacteria-carrying particles in the operating room: An experimental and numerical study. <i>Building and Environment</i> , 2020, 186, 107315.	6.9	27

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37	Full-scale experimental and numerical study of bioaerosol characteristics against cross-infection in a two-bed hospital ward. <i>Building and Environment</i> , 2020, 186, 107373.	6.9	32
38	Thermodynamic performance analyses and collaborative optimization for a novel integrated energy system coupled with organic Rankine cycle. <i>Energy Conversion and Management</i> , 2020, 225, 113484.	9.2	17
39	Suitability and feasibility study on the application of groundwater source heat pump (GWSHP) system in residential buildings for different climate zones in China. <i>Energy Reports</i> , 2020, 6, 2587-2603.	5.1	23
40	Experimental and numerical study of potential infection risks from exposure to bioaerosols in one BSL-3 laboratory. <i>Building and Environment</i> , 2020, 179, 106991.	6.9	28
41	Developing an equipotential line method for the optimal design of an energy station location in a district heating system. <i>Energy Conversion and Management</i> , 2020, 210, 112708.	9.2	7
42	Operating performance of a solar/air-dual source heat pump system under various refrigerant flow rates and distributions. <i>Applied Thermal Engineering</i> , 2020, 178, 115631.	6.0	31
43	Performance and feasibility study of solar-air source pump systems for low-energy residential buildings in Alpine regions. <i>Journal of Cleaner Production</i> , 2020, 256, 120735.	9.3	25
44	Optimizing Building Envelope Dimensions for Passive Solar Houses in the Qinghai-Tibetan Region: Window to Wall Ratio and Depth of Sunspace. <i>Journal of Thermal Science</i> , 2019, 28, 1115-1128.	1.9	21
45	A comprehensive analysis on definitions, development, and policies of nearly zero energy buildings in China. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 114, 109314.	16.4	123
46	Adsorption characteristics of formaldehyde on nitrogen doped graphene-based single atom adsorbents: A DFT study. <i>Applied Surface Science</i> , 2019, 493, 1260-1267.	6.1	21
47	Performance and feasibility study of low energy building for pleasant indoor comfort: A case study on Qinghai-Tibetan Plateau. <i>Sustainable Cities and Society</i> , 2019, 50, 101691.	10.4	4
48	Special Issue for Building Energy Conservation and Renewable Energy Integration. <i>Journal of Thermal Science</i> , 2019, 28, 1103-1103.	1.9	0
49	Non-Monotonic Trends of Hydrogen Adsorption on Single Atom Doped g-C <sub>3</sub> N <sub>4</sub> . <i>Catalysts</i> , 2019, 9, 84.	3.5	19
50	Thermodynamic analyses and optimization of a novel CCHP system integrated organic Rankine cycle and solar thermal utilization. <i>Energy Conversion and Management</i> , 2019, 196, 453-466.	9.2	65
51	Effect of the fabrication process on the thermophysical properties of Ca(NO <sub>3</sub> ) <sub>2</sub> •NaNO <sub>3</sub> /expanded graphite phase change material composites. <i>Solar Energy Materials and Solar Cells</i> , 2019, 200, 110005.	6.2	20
52	Evaluating potentials of passive solar heating renovation for the energy poverty alleviation of plateau areas in developing countries: A case study in rural Qinghai-Tibet Plateau, China. <i>Solar Energy</i> , 2019, 187, 95-107.	6.1	67
53	Effect of environmental parameters on culturability and viability of dust accumulated fungi in different HVAC segments. <i>Sustainable Cities and Society</i> , 2019, 48, 101538.	10.4	15
54	On-site assessments on variations of PM <sub>2.5</sub> , PM <sub>10</sub> , CO <sub>2</sub> and TVOC concentrations in naturally ventilated underground parking garages with traffic volume. <i>Environmental Pollution</i> , 2019, 247, 626-637.	7.5	25

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55	Study on configuration optimization and economic feasibility analysis for combined cooling, heating and power system. <i>Energy Conversion and Management</i> , 2019, 190, 91-104.	9.2	63
56	Accuracy analyses and model comparison of machine learning adopted in building energy consumption prediction. <i>Energy Exploration and Exploitation</i> , 2019, 37, 1426-1451.	2.3	91
57	Performance and feasibility study of hybrid ground source heat pump system assisted with cooling tower for one office building based on one Shanghai case. <i>Energy</i> , 2019, 173, 28-37.	8.8	60
58	Evaporation and dispersion of exhaled droplets in stratified environment. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 609, 042059.	0.6	19
59	Application and suitability analysis of the key technologies in nearly zero energy buildings in China. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 101, 329-345.	16.4	215
60	Field measurement and numerical simulation of combined solar heating operation modes for domestic buildings based on the Qinghai-Tibetan plateau case. <i>Energy and Buildings</i> , 2018, 167, 312-321.	6.7	76
61	Exploring the potential relationship between indoor air quality and the concentration of airborne culturable fungi: a combined experimental and neural network modeling study. <i>Environmental Science and Pollution Research</i> , 2018, 25, 3510-3517.	5.3	77
62	Big Data Digging of the Public's Cognition about Recycled Water Reuse Based on the BP Neural Network. <i>Complexity</i> , 2018, 2018, 1-11.	1.6	4
63	Research on Big Data Digging of Hot Topics about Recycled Water Use on Micro-Blog Based on Particle Swarm Optimization. <i>Sustainability</i> , 2018, 10, 2488.	3.2	90
64	Using solar house to alleviate energy poverty of rural Qinghai-Tibet region, China: A case study of a novel hybrid heating system. <i>Energy and Buildings</i> , 2018, 178, 294-303.	6.7	55
65	Load Distribution of Semi-Central Evaporative Cooling Air-Conditioning System Based on the TRNSYS Platform. <i>Energies</i> , 2018, 11, 1186.	3.1	2
66	Distribution characteristics, growth, reproduction and transmission modes and control strategies for microbial contamination in HVAC systems: A literature review. <i>Energy and Buildings</i> , 2018, 177, 77-95.	6.7	83
67	Performance Prediction and Optimization of Solar Water Heater via a Knowledge-Based Machine Learning Method. <i>Advances in Computer and Electrical Engineering Book Series</i> , 2018, , 55-74.	0.3	4
68	Feasibility and performance study of the hybrid ground-source heat pump system for one office building in Chinese heating dominated areas. <i>Renewable Energy</i> , 2017, 101, 1131-1140.	8.9	180
69	Design of high-performance water-in-glass evacuated tube solar water heaters by a high-throughput screening based on machine learning: A combined modeling and experimental study. <i>Solar Energy</i> , 2017, 142, 61-67.	6.1	137
70	FeWO <sub>4</sub> nanorods with excellent UV-Visible light photocatalysis. <i>Progress in Natural Science: Materials International</i> , 2017, 27, 556-560.	4.4	42
71	Simulation of Indoor Air Micro-flow Features in Fresh Air Handling Unit in a Typical Residential Building. <i>Procedia Engineering</i> , 2017, 205, 3301-3307.	1.2	2
72	The related problems and development situation of air source heat pump in the cold and serve cold climate areas. <i>Procedia Engineering</i> , 2017, 205, 368-372.	1.2	7

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73	Application of Artificial Neural Networks for Catalysis: A Review. <i>Catalysts</i> , 2017, 7, 306.	3.5	167
74	Field Measurement and Evaluation of the Passive and Active Solar Heating Systems for Residential Building Based on the Qinghai-Tibetan Plateau Case. <i>Energies</i> , 2017, 10, 1706.	3.1	12
75	Quick Estimation Model for the Concentration of Indoor Airborne Culturable Bacteria: An Application of Machine Learning. <i>International Journal of Environmental Research and Public Health</i> , 2017, 14, 857.	2.6	37
76	Predictive Power of Machine Learning for Optimizing Solar Water Heater Performance: The Potential Application of High-Throughput Screening. <i>International Journal of Photoenergy</i> , 2017, 2017, 1-10.	2.5	49
77	Computational Flow Dynamic Simulation of Micro Flow Field Characteristics Drainage Device Used in the Process of Oil-Water Separation. <i>Geofluids</i> , 2017, 2017, 1-9.	0.7	0
78	Comparative Study on Theoretical and Machine Learning Methods for Acquiring Compressed Liquid Densities of 1,1,1,2,3,3,3-Heptafluoropropane (R227ea) via Song and Mason Equation, Support Vector Machine, and Artificial Neural Networks. <i>Applied Sciences (Switzerland)</i> , 2016, 6, 25.	2.5	25
79	Extreme learning machine: a new alternative for measuring heat collection rate and heat loss coefficient of water-in-glass evacuated tube solar water heaters. <i>SpringerPlus</i> , 2016, 5, 626.	1.2	8
80	Pyrolytic synthesis and luminescence of porous lanthanide Eu-MOF. <i>Luminescence</i> , 2016, 31, 190-194.	2.9	11
81	Performance criteria system for passive nearly zero energy buildings in China. <i>Indoor and Built Environment</i> , 2016, 25, 1181-1184.	2.8	17
82	Deposition of NaGd(WO <sub>4</sub> ) <sub>2</sub> :Eu <sup>3+</sup> /Bi <sup>3+</sup> films on glass substrates and potential applications in white light emitting diodes. <i>Energy and Buildings</i> , 2016, 113, 9-14.	6.7	8
83	Synthesis and Upconversion Emission of $\text{Ca}_2\text{SiO}_4$ : ( $\text{Er}^{3+}$ , $\text{Tm}^{3+}$ )	4.7	2
84	Synthesis and luminescence of spherical Y <sub>2</sub> O <sub>3</sub> :Eu <sup>3+</sup> and Y <sub>2</sub> O <sub>3</sub> :Eu <sup>3+</sup> /Bi <sup>3+</sup> particles. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 6188-6192.	2.2	3
85	Synthesis and red emission of Eu <sup>3+</sup> doped LaBWO <sub>6</sub> nanorods. <i>Superlattices and Microstructures</i> , 2016, 89, 259-264.	3.1	10
86	Synthesis and photocatalytic properties of CeO <sub>2</sub> nanocubes. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 2146-2150.	2.2	14
87	Study of the Airflow Patterns and of the Characteristics of Bio-Aerosol Nanoparticle Deposition in Human Upper Respiratory Tracts Based on Computed Tomography Scanning Reconstruction. <i>Science of Advanced Materials</i> , 2016, 8, 987-996.	0.7	2
88	A Study on the Model for Heating Influence on PM <sub>2.5</sub> Emission in Beijing China. <i>Procedia Engineering</i> , 2015, 121, 612-620.	1.2	24
89	Novel Method for Measuring the Heat Collection Rate and Heat Loss Coefficient of Water-in-Glass Evacuated Tube Solar Water Heaters Based on Artificial Neural Networks and Support Vector Machine. <i>Energies</i> , 2015, 8, 8814-8834.	3.1	32
90	Artificial Neural Networks-Based Software for Measuring Heat Collection Rate and Heat Loss Coefficient of Water-in-Glass Evacuated Tube Solar Water Heaters. <i>PLoS ONE</i> , 2015, 10, e0143624.	2.5	13

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91	Synthesis of Sr <sub>4</sub> Al <sub>2</sub> O <sub>7</sub> :Eu <sup>2+</sup> /Dy <sup>3+</sup> phosphors by the solid-state reaction and luminescent properties. Journal of Materials Science: Materials in Electronics, 2015, 26, 6395-6398.	2.2	5
92	Investigation of dust loading and culturable microorganisms of HVAC systems in 24 office buildings in Beijing. Energy and Buildings, 2015, 103, 166-174.	6.7	40
93	Investigation on the feasibility and performance of ground source heat pump (GSHP) in three cities in cold climate zone, China. Renewable Energy, 2015, 84, 89-96.	8.9	116
94	The influence of home environmental factors and life style on children's respiratory health in Xi'an. Science Bulletin, 2014, 59, 2024-2030.	1.7	12
95	Study on the potential relationships between indoor culturable fungi, particle load and children respiratory health in Xi'an, China. Building and Environment, 2014, 80, 105-114.	6.9	52
96	Ten cities cross-sectional questionnaire survey of children asthma and other allergies in China. Science Bulletin, 2013, 58, 4182-4189.	1.7	211
97	Computational Fluid Dynamics Simulation of Airflow Patterns and Particle Deposition Characteristics in Children Upper Respiratory Tracts. Engineering Applications of Computational Fluid Mechanics, 2012, 6, 556-571.	3.1	11
98	Experimental study on microorganism ecological distribution and contamination mechanism in supply air ducts. Energy and Buildings, 2012, 47, 497-505.	6.7	22
99	Reduced-scale model study of ventilation for large space of generatrix floor in HOHHOT underground hydropower station. Energy and Buildings, 2011, 43, 1003-1010.	6.7	23
100	The effect of air-conditioning parameters and deposition dust on microbial growth in supply air ducts. Energy and Buildings, 2010, 42, 449-454.	6.7	33
101	Correlation between Indoor Air Distribution and Pollutants in Natural Ventilation. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	0