

Zhijian Liu

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

3,395
citations

159585

30
h-index

161849

54
g-index

101
all docs

101
docs citations

101
times ranked

2619
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Ten cities cross-sectional questionnaire survey of children asthma and other allergies in China. <i>Science Bulletin</i> , 2013, 58, 4182-4189.	1.7	211
3	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
4	Application of Artificial Neural Networks for Catalysis: A Review. <i>Catalysts</i> , 2017, 7, 306.	3.5	167
5	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
6	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
7	Investigation on the feasibility and performance of ground source heat pump (GSHP) in three cities in cold climate zone, China. <i>Renewable Energy</i> , 2015, 84, 89-96.	8.9	116
8	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
9	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
10	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
11	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
12	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
13	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
14	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
15	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
16	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
17	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
18	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

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19	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
20	Study on the potential relationships between indoor culturable fungi, particle load and children respiratory health in Xi'an, China. <i>Building and Environment</i> , 2014, 80, 105-114.	6.9	52
21	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
22	FeWO ₄ nanorods with excellent UV-Visible light photocatalysis. <i>Progress in Natural Science: Materials International</i> , 2017, 27, 556-560.	4.4	42
23	Comparative study of optimization method and optimal operation strategy for multi-scenario integrated energy system. <i>Energy</i> , 2021, 217, 119311.	8.8	41
24	Scientific and technological progress and future perspectives of the solar assisted heat pump (SAHP) system. <i>Energy</i> , 2021, 229, 120719.	8.8	41
25	Investigation of dust loading and culturable microorganisms of HVAC systems in 24 office buildings in Beijing. <i>Energy and Buildings</i> , 2015, 103, 166-174.	6.7	40
26	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
27	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
28	The effect of air-conditioning parameters and deposition dust on microbial growth in supply air ducts. <i>Energy and Buildings</i> , 2010, 42, 449-454.	6.7	33
29	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
30	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
31	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
32	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
33	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
34	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
35	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
36	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

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37	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. Applied Sciences (Switzerland), 2016, 6, 25.	2.5	25
38	On-site assessments on variations of PM2.5, PM10, CO2 and TVOC concentrations in naturally ventilated underground parking garages with traffic volume. Environmental Pollution, 2019, 247, 626-637.	7.5	25
39	Performance and feasibility study of solar-air source pump systems for low-energy residential buildings in Alpine regions. Journal of Cleaner Production, 2020, 256, 120735.	9.3	25
40	Quantitative distribution of human exhaled particles in a ventilation room. Building Simulation, 2022, 15, 859-870.	5.6	25
41	A Study on the Model for Heating Influence on PM2.5 Emission in Beijing China. Procedia Engineering, 2015, 121, 612-620.	1.2	24
42	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
43	Suitability and feasibility study on the application of groundwater source heat pump (GWSHP) system in residential buildings for different climate zones in China. Energy Reports, 2020, 6, 2587-2603.	5.1	23
44	Experimental study on microorganism ecological distribution and contamination mechanism in supply air ducts. Energy and Buildings, 2012, 47, 497-505.	6.7	22
45	A systematic review of operating room ventilation. Journal of Building Engineering, 2021, 40, 102693.	3.4	22
46	Optimizing Building Envelope Dimensions for Passive Solar Houses in the Qinghai-Tibetan Region: Window to Wall Ratio and Depth of Sunspace. Journal of Thermal Science, 2019, 28, 1115-1128.	1.9	21
47	Adsorption characteristics of formaldehyde on nitrogen doped graphene-based single atom adsorbents: A DFT study. Applied Surface Science, 2019, 493, 1260-1267.	6.1	21
48	Catalytic oxidation degradation of formaldehyde on FeN3-graphene surface: A DFT study. Applied Surface Science, 2020, 534, 147594.	6.1	21
49	Prevention of surgical site infection under different ventilation systems in operating room environment. Frontiers of Environmental Science and Engineering, 2021, 15, 36.	6.0	21
50	Two-layer co-optimization method for a distributed energy system combining multiple energy storages. Applied Energy, 2022, 322, 119486.	10.1	21
51	Effect of the fabrication process on the thermophysical properties of Ca(NO3)2@NaNO3/expanded graphite phase change material composites. Solar Energy Materials and Solar Cells, 2019, 200, 110005.	6.2	20
52	Influence of air supply velocity and room temperature conditions on bioaerosols distribution in a class I operating room. Building and Environment, 2021, 204, 108116.	6.9	20
53	Non-Monotonic Trends of Hydrogen Adsorption on Single Atom Doped g-C3N4. Catalysts, 2019, 9, 84.	3.5	19
54	Evaporation and dispersion of exhaled droplets in stratified environment. IOP Conference Series: Materials Science and Engineering, 2019, 609, 042059.	0.6	19

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55	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
56	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
57	Performance criteria system for passive nearly zero energy buildings in China. <i>Indoor and Built Environment</i> , 2016, 25, 1181-1184.	2.8	17
58	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
59	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
60	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
61	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
62	Synthesis and photocatalytic properties of CeO ₂ nanocubes. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 2146-2150.	2.2	14
63	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
64	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
65	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
66	The influence of home environmental factors and life style on children's respiratory health in Xi'an. <i>Science Bulletin</i> , 2014, 59, 2024-2030.	1.7	12
67	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
68	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
69	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
70	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
71	Computational Fluid Dynamics Simulation of Airflow Patterns and Particle Deposition Characteristics in Children Upper Respiratory Tracts. <i>Engineering Applications of Computational Fluid Mechanics</i> , 2012, 6, 556-571.	3.1	11
72	Pyrolytic synthesis and luminescence of porous lanthanide Eu-MOF. <i>Luminescence</i> , 2016, 31, 190-194.	2.9	11

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73	Synthesis and red emission of Eu ³⁺ doped LaBWO ₆ nanorods. Superlattices and Microstructures, 2016, 89, 259-264.	3.1	10
74	An experiment and numerical study of resuspension of fungal spore particles from HVAC ducts. Science of the Total Environment, 2020, 708, 134742.	8.0	10
75	Optimization study on a solar-assisted air source heat pump system with energy storage based on the economics method. International Journal of Energy Research, 2020, 44, 2023-2036.	4.5	9
76	Extreme learning machine: a new alternative for measuring heat collection rate and heat loss coefficient of water-in-glass evacuated tube solar water heaters. SpringerPlus, 2016, 5, 626.	1.2	8
77	Deposition of NaGd(WO ₄) ₂ :Eu ³⁺ /Bi ³⁺ films on glass substrates and potential applications in white light emitting diodes. Energy and Buildings, 2016, 113, 9-14.	6.7	8
78	Performance Evaluation and Optimization of a Novel System Combining a Photovoltaic/Thermal Subsystem & an Organic Rankine Cycle Driven by Solar Parabolic Trough Collector. Journal of Thermal Science, 2021, 30, 1513-1525.	1.9	8
79	The related problems and development situation of air source heat pump in the cold and serve cold climate areas. Procedia Engineering, 2017, 205, 368-372.	1.2	7
80	Developing an equipotential line method for the optimal design of an energy station location in a district heating system. Energy Conversion and Management, 2020, 210, 112708.	9.2	7
81	Dust accumulated fungi in air-conditioning system: Findings based on field and laboratory experiments. Building Simulation, 2021, 14, 793-811.	5.6	7
82	The influence of air supply inlet location on the spatial-temporal distribution of bioaerosol in isolation ward under three mixed ventilation modes. Energy and Built Environment, 2023, 4, 445-457.	5.9	7
83	Bacteria-carrying particles diffusion in the operating room due to the interaction between human thermal plume and ventilation systems: An experimental-numerical simulation study. Energy and Buildings, 2022, 270, 112277.	6.7	7
84	Synthesis of Sr ₄ Al ₂ O ₇ :Eu ²⁺ /Dy ³⁺ phosphors by the solid-state reaction and luminescent properties. Journal of Materials Science: Materials in Electronics, 2015, 26, 6395-6398.	2.2	5
85	Influence of the Visitor Walking on Airflow and the Bioaerosol Particles in Typical Open Tomb Chambers: An Experimental and Case Study. Buildings, 2021, 11, 538.	3.1	5
86	Big Data Digging of the Public's Cognition about Recycled Water Reuse Based on the BP Neural Network. Complexity, 2018, 2018, 1-11.	1.6	4
87	Performance and feasibility study of low energy building for pleasant indoor comfort: A case study on Qinghai-Tibetan Plateau. Sustainable Cities and Society, 2019, 50, 101691.	10.4	4
88	Performance Prediction and Optimization of Solar Water Heater via a Knowledge-Based Machine Learning Method. Advances in Computer and Electrical Engineering Book Series, 2018, , 55-74.	0.3	4
89	Seasonal dynamics of airborne culturable fungi and its year-round diversity monitoring in Dahuting Han Dynasty Tomb of China. Science of the Total Environment, 2022, 838, 155990.	8.0	4
90	Synthesis and luminescence of spherical Y ₂ O ₃ :Eu ³⁺ and Y ₂ O ₃ :Eu ³⁺ /Bi ³⁺ particles. Journal of Materials Science: Materials in Electronics, 2016, 27, 6188-6192.	2.2	3

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91	Synthesis and Upconversion Emission of Ca^{2+} - SiO_4 : (Er^{3+}) Tj ETQq1 1 0.784314 rgBT /Overlap	4.7	2
92	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
93	Load Distribution of Semi-Central Evaporative Cooling Air-Conditioning System Based on the TRNSYS Platform. <i>Energies</i> , 2018, 11, 1186.	3.1	2
94	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
95	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
96	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
97	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
98	Correlation between Indoor Air Distribution and Pollutants in Natural Ventilation. <i>International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering</i> , 2010, , .	0.0	0
99	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
100	Special Issue for Building Energy Conservation and Renewable Energy Integration. <i>Journal of Thermal Science</i> , 2019, 28, 1103-1103.	1.9	0
101	Performance Prediction and Optimization of Solar Water Heater via a Knowledge-Based Machine Learning Method. , 2022, , 714-733.		0