

Guangcai Gong

List of Publications by Year in descending order

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71
papers

1,791
citations

279798

23
h-index

289244

40
g-index

72
all docs

72
docs citations

72
times ranked

1256
citing authors

#	ARTICLE	IF	CITATIONS
1	Review of solar thermoelectric cooling technologies for use in zero energy buildings. Energy and Buildings, 2015, 102, 207-216.	6.7	124
2	Multi-criteria assessment and optimization study on 5kW PEMFC based residential CCHP system. Energy Conversion and Management, 2018, 160, 384-395.	9.2	104
3	Performance evaluation of a novel method of frost prevention and retardation for air source heat pumps using the orthogonal experiment design method. Applied Energy, 2016, 169, 696-708.	10.1	92
4	Human exhalation characterization with the aid of schlieren imaging technique. Building and Environment, 2017, 112, 190-199.	6.9	91
5	Performance analysis of 5kW PEMFC-based residential micro-CCHP with absorption chiller. International Journal of Hydrogen Energy, 2015, 40, 10647-10657.	7.1	84
6	A hybrid deep transfer learning strategy for short term cross-building energy prediction. Energy, 2021, 215, 119208.	8.8	75
7	Experimental evaluation of a solar thermoelectric cooled ceiling combined with displacement ventilation system. Energy Conversion and Management, 2014, 87, 559-565.	9.2	74
8	Performance study of a dual power source residential CCHP system based on PEMFC and PTSC. Energy Conversion and Management, 2016, 119, 163-176.	9.2	70
9	Experimental study and performance analysis of a solar thermoelectric air conditioner with hot water supply. Energy and Buildings, 2015, 86, 619-625.	6.7	65
10	Parametric analysis and optimization of PEMFC system for maximum power and efficiency using MOEA/D. Applied Thermal Engineering, 2017, 121, 400-409.	6.0	64
11	Evaluation of a prototype active solar thermoelectric radiant wall system in winter conditions. Applied Thermal Engineering, 2015, 89, 36-43.	6.0	47
12	Deep reinforcement learning optimal control strategy for temperature setpoint real-time reset in multi-zone building HVAC system. Applied Thermal Engineering, 2022, 212, 118552.	6.0	44
13	Efficacy of integrated photovoltaics-air source heat pump systems for application in Central-south China. Renewable and Sustainable Energy Reviews, 2015, 49, 1190-1197.	16.4	43
14	Research on frost formation in air source heat pump at cold-moist conditions in central-south China. Applied Energy, 2013, 102, 571-581.	10.1	42
15	Optimum design and experimental study of a thermoelectric ventilator. Applied Thermal Engineering, 2014, 67, 529-539.	6.0	42
16	Investigation on thermal comfort of air carrying energy radiant air-conditioning system in south-central China. Energy and Buildings, 2019, 182, 51-60.	6.7	39
17	A general multi-source ensemble transfer learning framework integrate of LSTM-DANN and similarity metric for building energy prediction. Energy and Buildings, 2021, 252, 111435.	6.7	33
18	Exergy analysis of the building heating and cooling system from the power plant to the building envelop with hourly variable reference state. Energy and Buildings, 2013, 56, 94-99.	6.7	31

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19	Influence of Wave Parallel Flow Field Design on the Performance of PEMFC. Journal of Energy Engineering - ASCE, 2021, 147, .	1.9	31
20	Thermodynamic modeling and analysis of a serial composite process for biomass and coal co-gasification. Renewable and Sustainable Energy Reviews, 2018, 82, 2768-2778.	16.4	30
21	Dynamic coupling method between air-source heat pumps and buildings in China's hot-summer/cold-winter zone. Applied Energy, 2019, 254, 113664.	10.1	29
22	Exergy analysis of updraft and downdraft fixed bed gasification of village-level solid waste. International Journal of Hydrogen Energy, 2021, 46, 221-233.	7.1	28
23	Thermodynamic simulation of condensation heat recovery characteristics of a single stage centrifugal chiller in a hotel. Applied Energy, 2012, 91, 326-333.	10.1	27
24	Proposing ultimate moisture buffering value (UMBV) for characterization of composite porous mortars. Construction and Building Materials, 2015, 82, 81-88.	7.2	23
25	Predicting airborne particle deposition by a modified Markov chain model for fast estimation of potential contaminant spread. Atmospheric Environment, 2018, 185, 137-146.	4.1	23
26	Field study and numerical investigation on heating performance of air carrying energy radiant air-conditioning system in an office. Energy and Buildings, 2020, 209, 109712.	6.7	22
27	Meta-learning strategy based on user preferences and a machine recommendation system for real-time cooling load and COP forecasting. Applied Energy, 2020, 270, 115144.	10.1	22
28	Research on thermodynamic performance of a novel building cooling system integrating dew point evaporative cooling, air-carrying energy radiant air conditioning and vacuum membrane-based dehumidification (DAV-cooling system). Energy Conversion and Management, 2021, 245, 114551.	9.2	22
29	Control of exhaled SARS-CoV-2-laden aerosols in the interpersonal breathing microenvironment in a ventilated room with limited space air stability. Journal of Environmental Sciences, 2021, 108, 175-187.	6.1	22
30	A combined, large, multi-faceted bulbous facade glazed curtain with open atrium as a natural ventilation solution for an energy efficient sustainable office building in Southern China. Indoor and Built Environment, 2015, 24, 813-832.	2.8	20
31	Investigation of heat load calculation for air carrying energy radiant air-conditioning system. Energy and Buildings, 2017, 138, 193-205.	6.7	20
32	A clustering-based approach for cross-scale load prediction on building level in HVAC systems. Applied Energy, 2021, 282, 116223.	10.1	19
33	The hygroscopic properties of wood fibre, sepiolite and expanded perlite-based breathable wall for moderating the humidity environment. Indoor and Built Environment, 2014, 23, 299-312.	2.8	15
34	Dimensionless and thermodynamic modelling of integrated photovoltaics-air source heat pump systems. Solar Energy, 2015, 118, 175-185.	6.1	15
35	Research on the Air Stability of Limited Space. International Journal of Green Energy, 2010, 7, 43-64.	3.8	14
36	Thermodynamic investigation of building integrated energy efficiency for building retrofit. Energy and Buildings, 2014, 77, 139-148.	6.7	14

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37	Predicting indoor particle dispersion under dynamic ventilation modes with high-order Markov chain model. <i>Building Simulation</i> , 2022, 15, 1243-1258.	5.6	13
38	Investigations of equilibrium moisture content with Kelvin modification and dimensional analysis method for composite hygroscopic material. <i>Construction and Building Materials</i> , 2017, 139, 101-113.	7.2	12
39	A grid-merging operation to accelerate the Markov chain model in predicting steady-state and transient transmission of airborne particles. <i>Building and Environment</i> , 2017, 122, 82-93.	6.9	12
40	Research on phase equilibrium effect and curve vacuum membrane-based dehumidification device. <i>International Journal of Heat and Mass Transfer</i> , 2020, 156, 119879.	4.8	12
41	A Simplified Calculation Method for Building Envelope Cooling Loads in Central South China. <i>Energies</i> , 2018, 11, 1708.	3.1	11
42	Numerical investigation of air stability in space capsule under low gravity conditions. <i>Acta Astronautica</i> , 2014, 103, 81-91.	3.2	10
43	Predicting thermophoresis induced particle deposition by using a modified Markov chain model. <i>International Journal of Thermal Sciences</i> , 2019, 136, 44-51.	4.9	10
44	Numerical simulation of indoor suspension particles based on v2-f model. <i>Applied Mathematical Modelling</i> , 2012, 36, 2510-2520.	4.2	9
45	Characterizing transport and deposition of particulate pollutants in a two-zone chamber using a Markov chain model combined with computational fluid dynamics. <i>Applied Mathematical Modelling</i> , 2019, 72, 650-662.	4.2	9
46	Effects of indoor air stability on exhaled contaminant flow and thermal plume in the interpersonal breathing microenvironment. <i>International Journal of Thermal Sciences</i> , 2021, 170, 107173.	4.9	9
47	Nature and characteristics of temperature background effect for interactive respiration process. <i>Scientific Reports</i> , 2017, 7, 8549.	3.3	8
48	Computational modeling and prediction of the performance of air source heat pumps under frost prevention and retardation conditions. <i>Energy and Buildings</i> , 2020, 224, 110264.	6.7	8
49	Comparison of Mixing and Displacement Ventilation under Limited Space Air Stability Conditions in a Space Capsule. <i>Microgravity Science and Technology</i> , 2020, 32, 749-759.	1.4	8
50	Experimental investigation on the ventilation performance of diffuse ceiling ventilation in heating conditions. <i>Building and Environment</i> , 2021, 205, 108262.	6.9	8
51	Investigation of a new kind of in-situ measurement method of thermal resistance of building envelope. <i>Energy and Buildings</i> , 2022, 258, 111803.	6.7	8
52	Influence of Indoor Air Stability on Suspended Particle Dispersion and Deposition. <i>Energy Procedia</i> , 2017, 105, 4229-4235.	1.8	7
53	Exergy analysis of building thermal load and related energy flows in buildings. <i>Indoor and Built Environment</i> , 2017, 26, 1257-1273.	2.8	6
54	A thermodynamic method to calculate energy & exergy consumption and CO2 emission of building materials based on economic indicator. <i>Building Simulation</i> , 2018, 11, 235-244.	5.6	6

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55	Investigation of operation performance of air carrying energy radiant air-conditioning system based on CFD and thermodynamic model. <i>Building Simulation</i> , 2018, 11, 1229-1243.	5.6	6
56	A comprehensive mathematical model of a serial composite process for biomass and coal gasification. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 2603-2619.	7.1	6
57	Investigation of exhaled pollutant distribution in the breathing microenvironment in a displacement ventilated room with indoor air stability conditions. <i>Journal of Environmental Sciences</i> , 2021, 99, 336-345.	6.1	6
58	Inversion Method for Optimizing the Condensing Heat Recovery System of an Air-Source Heat Pump. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, 04016069.	1.9	5
59	Research on the Hygroscopicity of a Composite Hygroscopic Material and its Influence on Indoor Thermal and Humidity Environment. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 430.	2.5	5
60	Estimating distributions of airborne contaminants released by sources with dynamic strength and dynamic location by a probabilistic model. <i>Building and Environment</i> , 2019, 153, 17-27.	6.9	5
61	A novel self-adaptive control strategy of frost prevention and retardation for air source heat pumps in winter conditions. <i>Applied Mathematical Modelling</i> , 2020, 83, 284-300.	4.2	5
62	Numerical Study on Accumulative Effect Owing to Heat Storage by Building Envelopes in HVAC Systems. <i>Journal of Energy Engineering - ASCE</i> , 2020, 146, .	1.9	5
63	Combined Natural Convection and Radiation Heat Transfer of Various Absorbing-Emitting-Scattering Media in a Square Cavity. <i>Advances in Mechanical Engineering</i> , 2014, 6, 403690.	1.6	5
64	Exergy analysis combined with LCA for building envelope energy efficiency retrofit. <i>International Journal of Exergy</i> , 2011, 8, 379.	0.4	4
65	Investigation of the ratio of exergy consumption to energy consumption for building energy efficiency. <i>International Journal of Green Energy</i> , 2018, 15, 681-691.	3.8	4
66	Thermodynamic performance assessment of vacuum membrane-based dehumidification and air carrying energy radiant air-conditioning system (VMD-ACERS). <i>Chinese Journal of Chemical Engineering</i> , 2021, 34, 217-227.	3.5	4
67	Predicting indoor deposited particle resuspension with a new probabilistic model based on Markov chain and turbulent burst. <i>Aerosol Science and Technology</i> , 2022, 56, 205-222.	3.1	2
68	Assessment of personal exposure to infectious contaminant under the effect of indoor air stability. <i>Environmental Science and Pollution Research</i> , 2021, 28, 39322-39332.	5.3	1
69	Investigation of physiological and subjective responses under composite air carrying energy radiant air-conditioning system. <i>Journal of Building Engineering</i> , 2021, 43, 103146.	3.4	1
70	Numerical Investigation of the Elastic Lamina Deformation Based on Radial Layout D2Q9 Lattice Boltzmann Model. <i>Journal of Engineering Mechanics - ASCE</i> , 2022, 148, .	2.9	1
71	Thermodynamic Analysis of Hydrogen Production From Coal Char Gasification in Triple-Bed Circulating Fluidized Bed. <i>Journal of Thermal Science and Engineering Applications</i> , 2021, 13, .	1.5	0