Tao Zhang

List of Publications by Year in Descending Order

105 papers	1,556 citations	21 h-index	34 g-index
107 ext. papers	1,927 ext. citations	6.6 avg, IF	5.61 L-index

#	Paper	IF	Citations
105	Performance research and application of the vapor pump boiler equipped with flue gas recirculation system. *Energy Conversion and Management*, **2022**, 254, 115201	10.6	1
104	Outdoor air supply in winter for large-space airport terminals: Air infiltration vs. mechanical ventilation. *Building and Environment*, **2021**, 190, 107545	6.5	1
103	Winter air infiltration induced by combined buoyancy and wind forces in large-space buildings. *Journal of Wind Engineering and Industrial Aerodynamics*, **2021**, 210, 104501	3.7	1
102	Dynamic model and response characteristics of liquid desiccant air-conditioning system driven by heat pump. *Building Simulation*, **2021**, 14, 1773-1784	3.9	
101	Performance analysis and energy saving potential of air conditioning system in semiconductor cleanrooms. *Journal of Building Engineering*, **2021**, 37, 102158	5.2	4
100	Measurement and optimization on the energy consumption of fans in semiconductor cleanrooms. *Building and Environment*, **2021**, 197, 107842	6.5	4
99	A novel pulse width modulation for metal radiant panels to control the condensation risk in a hot and humid environment. *Building and Environment*, **2021**, 196, 107802	6.5	5
98	Investigation of heat and mass transfer characteristics in the ice rink: Ice making, maintaining and resurfacing processes. *Building and Environment*, **2021**, 196, 107779	6.5	3
97	Optimization of NTUm allocation between dehumidifier and regenerator in liquid-desiccant air-conditioning system. *International Journal of Refrigeration*, **2021**, 127, 250-259	3.8	2
96	On-site measurement of thermal environment and heat transfer analysis in a curling arena. *Journal of Building Engineering*, **2021**, 34, 101691	5.2	4
95	Performance comparison of different total heat exchangers applied for waste heat recovery. *Applied Thermal Engineering*, **2021**, 182, 115715	5.8	10
94	Performance analysis and instant/delayed characteristics of a solar heating system used in cold regions. *Journal of Building Engineering*, **2021**, 34, 101767	5.2	4
93	Optimal flow type in internally-cooled liquid-desiccant system driven by heat pump: Component level vs. System level. *Applied Thermal Engineering*, **2021**, 183, 116208	5.8	4
92	Energy performance analysis on segmented liquid desiccant air-conditioning system for bus spray-paint booths. *Journal of Cleaner Production*, **2021**, 278, 123898	10.3	5
91	Energy saving potential for space heating in Chinese airport terminals: The impact of air infiltration. *Energy*, **2021**, 215, 119175	7.9	11
90	Modification of analytical solutions of coupled heat and mass transfer processes in liquid desiccant dehumidifier for deep dehumidification. *International Journal of Heat and Mass Transfer*, **2021**, 165, 120728	4.9	1
89	Investigation of a compact hybrid liquid-desiccant air-conditioning system for return air dehumidification. *Building and Environment*, **2021**, 187, 107420	6.5	7

88	On-site performance investigation of a desiccant wheel deep-dehumidification system applied in lithium battery manufacturing plant. *Energy and Buildings*, **2021**, 232, 110659	7	8
87	Cooling load characteristic and uncertainty analysis of a hub airport terminal. *Energy and Buildings*, **2021**, 231, 110619	7	3
86	On-site measurement and numerical investigation of the airflow characteristics in an aquatics center. *Journal of Building Engineering*, **2021**, 35, 101968	5.2	2
85	On the importance of air-solution flow rate matching in liquid-desiccant deep-dehumidification system. *International Journal of Heat and Mass Transfer*, **2021**, 164, 120614	4.9	2
84	An investigation of the cooling performance of air-conditioning systems in seven Chinese hub airport terminals. *Indoor and Built Environment*, **2021**, 30, 229-244	1.8	8
83	Effect of air parameters on ice sublimation in ice rink. *Building and Environment*, **2021**, 188, 107470	6.5	2
82	On-site performance investigation of liquid-desiccant air-conditioning system applied in laboratory rodent room: A comparative study. *Energy and Buildings*, **2021**, 232, 110664	7	4
81	Exergy analysis on optimal desiccant solution flow rate in heat exchanger for air dehumidification using liquid desiccant. *International Journal of Refrigeration*, **2021**, 128, 129-138	3.8	4
80	Experimental and numerical analysis on heat and moisture recovery performance of enthalpy wheel with condensation. *Energy Conversion and Management*, **2021**, 246, 114683	10.6	1
79	Exergy investigation of three ideal regeneration methods for liquid desiccant: Thermal air, mechanical vapor recompression and electrodialysis regeneration. *Energy and Buildings*, **2021**, 249, 111258	7	1
78	Inverse design of indoor radiant terminal using the particle swarm optimization method with topology concept. *Building and Environment*, **2021**, 204, 108117	6.5	2
77	Feasibility analysis of canceling reheating after condensation dehumidification in semiconductor cleanrooms. *Journal of Building Engineering*, **2021**, 43, 102589	5.2	2
76	Ammonia absorption performance of a liquid desiccant dehumidification system applied in laboratory rodent room. *Applied Thermal Engineering*, **2021**, 199, 117523	5.8	0
75	A review of boiler waste heat recovery technologies in the medium-low temperature range. *Energy*, **2021**, 237, 121560	7.9	5
74	Performance optimization of a heat pump driven liquid desiccant dehumidification system using exergy analysis. *Energy*, **2020**, 204, 117891	7.9	15
73	Analytical solutions of heat and mass transfer process in combined gas-water heat exchanger applied for waste heat recovery. *Energy*, **2020**, 206, 118095	7.9	1
72	Energy consumption index and evaluation method of public traffic buildings in China. *Sustainable Cities and Society*, **2020**, 57, 102132	10.1	17
71	Theoretical model of buoyancy-driven air infiltration during heating/cooling seasons in large space buildings. *Building and Environment*, **2020**, 173, 106735	6.5	8

70	Influence of air-conditioning systems on buoyancy driven air infiltration in large space buildings: A case study of a railway station. *Energy and Buildings*, **2020**, 210, 109781	7	17
69	Performance of a temperature and humidity independent control air-conditioning system based on liquid desiccant for industrial environments. *Energy and Buildings*, **2020**, 214, 109869	7	14
68	Exergy analysis and performance improvement of liquid-desiccant deep-dehumidification system: An engineering case study. *Energy*, **2020**, 196, 117122	7.9	13
67	Performance of heat pump driven internally cooled liquid desiccant dehumidification system. *Energy Conversion and Management*, **2020**, 205, 112447	10.6	11
66	Analytical solutions for the optimal cooling and heating source temperatures in liquid desiccant air-conditioning system based on exergy analysis. *Energy*, **2020**, 203, 117860	7.9	8
65	Performance investigation of heating terminals in a railway depot: On-site measurement and CFD simulation. *Journal of Building Engineering*, **2020**, 32, 101818	5.2	1
64	Experimental study on refrigerant maldistribution in a fin-and-tube evaporator for a direct expansion air-conditioning system. *Energy and Buildings*, **2020**, 208, 109638	7	4
63	Performance investigation of convective and radiant heat removal methods in large spaces. *Energy and Buildings*, **2020**, 208, 109650	7	13
62	Performance of total heat recovery device using liquid desiccant in severe cold climates. *Energy and Buildings*, **2020**, 208, 109645	7	1
61	On the importance of the heat and mass transfer driving force reversal and heat-cold offset in internally-cooled liquid-desiccant system. *Building and Environment*, **2020**, 185, 107296	6.5	1
60	Performance analysis and improvement of air filtration and ventilation process in semiconductor clean air-conditioning system. *Energy and Buildings*, **2020**, 228, 110489	7	8
59	Optimization of solution concentration in liquid desiccant air-conditioning system driven by heat pump. *Energy and Buildings*, **2020**, 225, 110290	7	2
58	A novel approximate harmonic method for the dynamic cooling capacity prediction of radiant slab floors with time variable solar radiation. *Energy and Buildings*, **2020**, 223, 110117	7	5
57	Utilization of displacement ventilation and on-site measurement of thermal environment in an ice arena. *Building and Environment*, **2020**, 186, 107391	6.5	10
56	Comparison of winter air infiltration and its influences between large-space and normal-space buildings. *Building and Environment*, **2020**, 184, 107183	6.5	5
55	Performance and improvement of cleanroom environment control system related to cold-heat offset in clean semiconductor fabs. *Energy and Buildings*, **2020**, 224, 110294	7	7
54	Performance investigation of a heat pump driven, vacuum liquid desiccant regeneration system. *Energy Procedia*, **2019**, 158, 2435-2440	2.3	4
53	Novel flue gas waste heat recovery system equipped with enthalpy wheel. *Energy Conversion and Management*, **2019**, 196, 649-663	10.6	15

52	Experimental and numerical investigation of a novel hybrid deep-dehumidification system using liquid desiccant. *Energy Conversion and Management*, **2019**, 192, 396-411	10.6	24
51	Analysis of passenger flow and its influences on HVAC systems: An agent based simulation in a Chinese hub airport terminal. *Building and Environment*, **2019**, 154, 55-67	6.5	18
50	On-site measurement of winter indoor environment and air infiltration in an airport terminal. *Indoor and Built Environment*, **2019**, 28, 564-578	1.8	12
49	Comparison of internally cooled and adiabatic liquid desiccant dehumidification-regeneration system. *Building and Environment*, **2019**, 163, 106313	6.5	8
48	Analytical solution of heat and mass transfer process in internally cooled liquid desiccant dehumidifiers using refrigerant as cooling medium. *Energy and Buildings*, **2019**, 190, 1-14	7	11
47	Experimental and numerical analysis on total heat recovery performance of an enthalpy wheel under high temperature high humidity working conditions. *Applied Thermal Engineering*, **2019**, 146, 482-494	5.8	10
46	Field investigation on characteristics of passenger flow in a Chinese hub airport terminal. *Building and Environment*, **2018**, 133, 51-61	6.5	25
45	On-site measured performance of a mechanically ventilated double ETFE cushion structure in an aquatics center. *Solar Energy*, **2018**, 162, 289-299	6.8	13
44	Experimental study and analysis of heat and mass transfer ability of counter-flow packing tower and liquid desiccant dehumidification system. *Energy and Buildings*, **2018**, 158, 150-161	7	12
43	Performance investigation of outdoor air supply and indoor environment related to energy consumption in two subway stations. *Sustainable Cities and Society*, **2018**, 41, 513-524	10.1	21
42	Evaluation of air infiltration in a hub airport terminal: On-site measurement and numerical simulation. *Building and Environment*, **2018**, 143, 163-177	6.5	33
41	Model-based investigation of a heat pump driven, internally cooled liquid desiccant dehumidification system. *Building and Environment*, **2018**, 143, 431-442	6.5	21
40	Performance comparison and exergy analysis of different flow types in internally-cooled liquid desiccant dehumidifiers (ICDs). *Applied Thermal Engineering*, **2018**, 142, 278-291	5.8	14
39	Experimental analysis and performance optimization of a counter-flow enthalpy recovery device using liquid desiccant. *Building Services Engineering Research and Technology*, **2018**, 39, 679-697	2.3	3
38	Performance analysis of pulsed flow control method for radiant slab system. *Building and Environment*, **2018**, 127, 107-119	6.5	10
37	Experimental investigation of a counter-flow heat pump driven liquid desiccant dehumidification system. *Energy and Buildings*, **2018**, 179, 223-238	7	17
36	Energy consumption of subway stations in China: Data and influencing factors. *Sustainable Cities and Society*, **2018**, 43, 451-461	10.1	23
35	Novel method for the design of radiant floor cooling systems through homogenizing spatial solar radiation distribution. *Solar Energy*, **2018**, 170, 885-895	6.8	11

34	Exergy and entransy analyses in air-conditioning system part 2：Humid air handling process. *Energy and Buildings*, **2017**, 139, 10-21	7	12
33	Theoretical and experimental study of departure duration of condensate droplets from radiant cooling ceiling surfaces. *Building and Environment*, **2017**, 114, 445-454	6.5	12
32	IEA EBC Annex 59: High temperature cooling and low temperature heating in buildings. *Energy and Buildings*, **2017**, 145, 267-275	7	8
31	Performance investigation of terminal handling process in air-conditioning system from the perspective of entransy dissipation. *Energy and Buildings*, **2017**, 137, 27-37	7	2
30	Formaldehyde removal performance analysis of a liquid desiccant dehumidification system. *Building and Environment*, **2017**, 124, 283-293	6.5	3
29	Performance investigation and exergy analysis of air-handling processes using liquid desiccant and a desiccant wheel. *Science and Technology for the Built Environment*, **2017**, 23, 105-115	1.8	2
28	Study on the pulsed flow control on radiant cooling and heating systems in part load. *Procedia Engineering*, **2017**, 205, 11-18		2
27	Performance investigation and exergy analysis of two-stage desiccant wheel systems. *Renewable Energy*, **2016**, 86, 877-888	8.1	20
26	Performance investigation and exergy analysis of enthalpy recovery device using liquid desiccant. *Applied Thermal Engineering*, **2016**, 106, 76-86	5.8	8
25	Performance investigation of a counter-flow heat pump driven liquid desiccant dehumidification system. *Energy*, **2016**, 115, 446-457	7.9	39
24	Progress of entransy analysis on the air-conditioning system in buildings. *Science China Technological Sciences*, **2016**, 59, 1463-1474	3.5	7
23	Performance comparison of three typical types of internally-cooled liquid desiccant dehumidifiers. *Building and Environment*, **2016**, 103, 134-145	6.5	31
22	Performance comparison of temperature and humidity independent control air-conditioning system with conventional system. *Building Services Engineering Research and Technology*, **2016**, 37, 479-488	2.3	5
21	Exergy and entransy analyses in air-conditioning system part 1：Similarity and distinction. *Energy and Buildings*, **2016**, 128, 876-885	7	16
20	Experimental analysis of an internally-cooled/heated liquid desiccant dehumidifier/regenerator made of thermally conductive plastic. *Energy and Buildings*, **2015**, 99, 75-86	7	75
19	Experimental Study on the Filtration Efficiency of Structured Packing Air Handling Processors. *Procedia Engineering*, **2015**, 121, 2037-2043		8
18	Entransy analysis and application of a novel indoor cooling system in a large space building. *International Journal of Heat and Mass Transfer*, **2015**, 85, 228-238	4.9	24
17	Exergy analysis of parameter unmatched characteristic in coupled heat and mass transfer between humid air and water. *International Journal of Heat and Mass Transfer*, **2015**, 84, 327-338	4.9	8

16	Development of temperature and humidity independent control (THIC) air-conditioning systems in China—A review. *Renewable and Sustainable Energy Reviews*, **2014**, 29, 793-803	16.2	55
15	On-site measurement and performance optimization of the air-conditioning system for a datacenter in Beijing. *Energy and Buildings*, **2014**, 71, 104-114	7	10
14	Exergy calculation and analysis of a dehumidification system using liquid desiccant. *Energy and Buildings*, **2014**, 69, 318-328	7	30
13	Match Properties of Heat and Mass Transfer Processes in the Internally-Cooled Liquid Desiccant System. *Lecture Notes in Electrical Engineering*, **2014**, 609-618	0.2	
12	Application of Liquid Desiccant System **2014**, 249-281		
11	Performance analysis of the air-conditioning system in Xi'an Xianyang International Airport. *Energy and Buildings*, **2013**, 59, 11-20	7	36
10	Application of entransy in the analysis of HVAC systems in buildings. *Energy*, **2013**, 53, 332-342	7.9	35
9	Performance comparison of liquid desiccant air handling processes from the perspective of match properties. *Energy Conversion and Management*, **2013**, 75, 51-60	10.6	26
8	Experimental analysis of an internally-cooled liquid desiccant dehumidifier. *Building and Environment*, **2013**, 63, 1-10	6.5	65
7	Match properties of heat transfer and coupled heat and mass transfer processes in air-conditioning system. *Energy Conversion and Management*, **2012**, 59, 103-113	10.6	39
6	Performance optimization of heat pump driven liquid desiccant dehumidification systems. *Energy and Buildings*, **2012**, 52, 132-144	7	53
5	Performance of temperature and humidity independent control air-conditioning system in an office building. *Energy and Buildings*, **2011**, 43, 1895-1903	7	107
4	An integrated modeling tool for simultaneous analysis of thermal performance and indoor air quality in buildings. *Building and Environment*, **2008**, 43, 287-293	6.5	13
3	Analytical solutions of coupled heat and mass transfer processes in liquid desiccant air dehumidifier/regenerator. *Energy Conversion and Management*, **2007**, 48, 2221-2232	10.6	89
2	Annual performance of liquid desiccant based independent humidity control HVAC system. *Applied Thermal Engineering*, **2006**, 26, 1198-1207	5.8	84
1	New type of fresh air processor with liquid desiccant total heat recovery. *Energy and Buildings*, **2005**, 37, 587-593	7	55