

# Tao Zhang

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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 of temperature and humidity independent control air-conditioning system in an office building. <i>Energy and Buildings</i> , <b>2011</b> , 43, 1895-1903	7	107
104	Analytical solutions of coupled heat and mass transfer processes in liquid desiccant air dehumidifier/regenerator. <i>Energy Conversion and Management</i> , <b>2007</b> , 48, 2221-2232	10.6	89
103	Annual performance of liquid desiccant based independent humidity control HVAC system. <i>Applied Thermal Engineering</i> , <b>2006</b> , 26, 1198-1207	5.8	84
102	Experimental analysis of an internally-cooled/heated liquid desiccant dehumidifier/regenerator made of thermally conductive plastic. <i>Energy and Buildings</i> , <b>2015</b> , 99, 75-86	7	75
101	Experimental analysis of an internally-cooled liquid desiccant dehumidifier. <i>Building and Environment</i> , <b>2013</b> , 63, 1-10	6.5	65
100	Development of temperature and humidity independent control (THIC) air-conditioning systems in China: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2014</b> , 29, 793-803	16.2	55
99	New type of fresh air processor with liquid desiccant total heat recovery. <i>Energy and Buildings</i> , <b>2005</b> , 37, 587-593	7	55
98	Performance optimization of heat pump driven liquid desiccant dehumidification systems. <i>Energy and Buildings</i> , <b>2012</b> , 52, 132-144	7	53
97	Performance investigation of a counter-flow heat pump driven liquid desiccant dehumidification system. <i>Energy</i> , <b>2016</b> , 115, 446-457	7.9	39
96	Match properties of heat transfer and coupled heat and mass transfer processes in air-conditioning system. <i>Energy Conversion and Management</i> , <b>2012</b> , 59, 103-113	10.6	39
95	Performance analysis of the air-conditioning system in Xi'an Xianyang International Airport. <i>Energy and Buildings</i> , <b>2013</b> , 59, 11-20	7	36
94	Application of entransy in the analysis of HVAC systems in buildings. <i>Energy</i> , <b>2013</b> , 53, 332-342	7.9	35
93	Evaluation of air infiltration in a hub airport terminal: On-site measurement and numerical simulation. <i>Building and Environment</i> , <b>2018</b> , 143, 163-177	6.5	33
92	Performance comparison of three typical types of internally-cooled liquid desiccant dehumidifiers. <i>Building and Environment</i> , <b>2016</b> , 103, 134-145	6.5	31
91	Exergy calculation and analysis of a dehumidification system using liquid desiccant. <i>Energy and Buildings</i> , <b>2014</b> , 69, 318-328	7	30
90	Performance comparison of liquid desiccant air handling processes from the perspective of match properties. <i>Energy Conversion and Management</i> , <b>2013</b> , 75, 51-60	10.6	26
89	Field investigation on characteristics of passenger flow in a Chinese hub airport terminal. <i>Building and Environment</i> , <b>2018</b> , 133, 51-61	6.5	25

88	Experimental and numerical investigation of a novel hybrid deep-dehumidification system using liquid desiccant. <i>Energy Conversion and Management</i> , <b>2019</b> , 192, 396-411	10.6	24
87	Entransy analysis and application of a novel indoor cooling system in a large space building. <i>International Journal of Heat and Mass Transfer</i> , <b>2015</b> , 85, 228-238	4.9	24
86	Energy consumption of subway stations in China: Data and influencing factors. <i>Sustainable Cities and Society</i> , <b>2018</b> , 43, 451-461	10.1	23
85	Performance investigation of outdoor air supply and indoor environment related to energy consumption in two subway stations. <i>Sustainable Cities and Society</i> , <b>2018</b> , 41, 513-524	10.1	21
84	Model-based investigation of a heat pump driven, internally cooled liquid desiccant dehumidification system. <i>Building and Environment</i> , <b>2018</b> , 143, 431-442	6.5	21
83	Performance investigation and exergy analysis of two-stage desiccant wheel systems. <i>Renewable Energy</i> , <b>2016</b> , 86, 877-888	8.1	20
82	Analysis of passenger flow and its influences on HVAC systems: An agent based simulation in a Chinese hub airport terminal. <i>Building and Environment</i> , <b>2019</b> , 154, 55-67	6.5	18
81	Energy consumption index and evaluation method of public traffic buildings in China. <i>Sustainable Cities and Society</i> , <b>2020</b> , 57, 102132	10.1	17
80	Influence of air-conditioning systems on buoyancy driven air infiltration in large space buildings: A case study of a railway station. <i>Energy and Buildings</i> , <b>2020</b> , 210, 109781	7	17
79	Experimental investigation of a counter-flow heat pump driven liquid desiccant dehumidification system. <i>Energy and Buildings</i> , <b>2018</b> , 179, 223-238	7	17
78	Exergy and entransy analyses in air-conditioning system part 1: Similarity and distinction. <i>Energy and Buildings</i> , <b>2016</b> , 128, 876-885	7	16
77	Novel flue gas waste heat recovery system equipped with enthalpy wheel. <i>Energy Conversion and Management</i> , <b>2019</b> , 196, 649-663	10.6	15
76	Performance optimization of a heat pump driven liquid desiccant dehumidification system using exergy analysis. <i>Energy</i> , <b>2020</b> , 204, 117891	7.9	15
75	Performance of a temperature and humidity independent control air-conditioning system based on liquid desiccant for industrial environments. <i>Energy and Buildings</i> , <b>2020</b> , 214, 109869	7	14
74	Performance comparison and exergy analysis of different flow types in internally-cooled liquid desiccant dehumidifiers (ICDs). <i>Applied Thermal Engineering</i> , <b>2018</b> , 142, 278-291	5.8	14
73	Exergy analysis and performance improvement of liquid-desiccant deep-dehumidification system: An engineering case study. <i>Energy</i> , <b>2020</b> , 196, 117122	7.9	13
72	On-site measured performance of a mechanically ventilated double ETFE cushion structure in an aquatics center. <i>Solar Energy</i> , <b>2018</b> , 162, 289-299	6.8	13
71	An integrated modeling tool for simultaneous analysis of thermal performance and indoor air quality in buildings. <i>Building and Environment</i> , <b>2008</b> , 43, 287-293	6.5	13

70	Performance investigation of convective and radiant heat removal methods in large spaces. <i>Energy and Buildings</i> , <b>2020</b> , 208, 109650	7	13
69	Exergy and entransy analyses in air-conditioning system part 2: Humid air handling process. <i>Energy and Buildings</i> , <b>2017</b> , 139, 10-21	7	12
68	Theoretical and experimental study of departure duration of condensate droplets from radiant cooling ceiling surfaces. <i>Building and Environment</i> , <b>2017</b> , 114, 445-454	6.5	12
67	Experimental study and analysis of heat and mass transfer ability of counter-flow packing tower and liquid desiccant dehumidification system. <i>Energy and Buildings</i> , <b>2018</b> , 158, 150-161	7	12
66	On-site measurement of winter indoor environment and air infiltration in an airport terminal. <i>Indoor and Built Environment</i> , <b>2019</b> , 28, 564-578	1.8	12
65	Performance of heat pump driven internally cooled liquid desiccant dehumidification system. <i>Energy Conversion and Management</i> , <b>2020</b> , 205, 112447	10.6	11
64	Analytical solution of heat and mass transfer process in internally cooled liquid desiccant dehumidifiers using refrigerant as cooling medium. <i>Energy and Buildings</i> , <b>2019</b> , 190, 1-14	7	11
63	Energy saving potential for space heating in Chinese airport terminals: The impact of air infiltration. <i>Energy</i> , <b>2021</b> , 215, 119175	7.9	11
62	Novel method for the design of radiant floor cooling systems through homogenizing spatial solar radiation distribution. <i>Solar Energy</i> , <b>2018</b> , 170, 885-895	6.8	11
61	On-site measurement and performance optimization of the air-conditioning system for a datacenter in Beijing. <i>Energy and Buildings</i> , <b>2014</b> , 71, 104-114	7	10
60	Utilization of displacement ventilation and on-site measurement of thermal environment in an ice arena. <i>Building and Environment</i> , <b>2020</b> , 186, 107391	6.5	10
59	Experimental and numerical analysis on total heat recovery performance of an enthalpy wheel under high temperature high humidity working conditions. <i>Applied Thermal Engineering</i> , <b>2019</b> , 146, 482-494	5.8	10
58	Performance comparison of different total heat exchangers applied for waste heat recovery. <i>Applied Thermal Engineering</i> , <b>2021</b> , 182, 115715	5.8	10
57	Performance analysis of pulsed flow control method for radiant slab system. <i>Building and Environment</i> , <b>2018</b> , 127, 107-119	6.5	10
56	IEA EBC Annex 59: High temperature cooling and low temperature heating in buildings. <i>Energy and Buildings</i> , <b>2017</b> , 145, 267-275	7	8
55	Theoretical model of buoyancy-driven air infiltration during heating/cooling seasons in large space buildings. <i>Building and Environment</i> , <b>2020</b> , 173, 106735	6.5	8
54	Performance investigation and exergy analysis of enthalpy recovery device using liquid desiccant. <i>Applied Thermal Engineering</i> , <b>2016</b> , 106, 76-86	5.8	8
53	Comparison of internally cooled and adiabatic liquid desiccant dehumidification-regeneration system. <i>Building and Environment</i> , <b>2019</b> , 163, 106313	6.5	8

52	Experimental Study on the Filtration Efficiency of Structured Packing Air Handling Processors. <i>Procedia Engineering</i> , <b>2015</b> , 121, 2037-2043		8
51	Exergy analysis of parameter unmatched characteristic in coupled heat and mass transfer between humid air and water. <i>International Journal of Heat and Mass Transfer</i> , <b>2015</b> , 84, 327-338	4.9	8
50	Analytical solutions for the optimal cooling and heating source temperatures in liquid desiccant air-conditioning system based on exergy analysis. <i>Energy</i> , <b>2020</b> , 203, 117860	7.9	8
49	Performance analysis and improvement of air filtration and ventilation process in semiconductor clean air-conditioning system. <i>Energy and Buildings</i> , <b>2020</b> , 228, 110489	7	8
48	On-site performance investigation of a desiccant wheel deep-dehumidification system applied in lithium battery manufacturing plant. <i>Energy and Buildings</i> , <b>2021</b> , 232, 110659	7	8
47	An investigation of the cooling performance of air-conditioning systems in seven Chinese hub airport terminals. <i>Indoor and Built Environment</i> , <b>2021</b> , 30, 229-244	1.8	8
46	Progress of entransy analysis on the air-conditioning system in buildings. <i>Science China Technological Sciences</i> , <b>2016</b> , 59, 1463-1474	3.5	7
45	Performance and improvement of cleanroom environment control system related to cold-heat offset in clean semiconductor fabs. <i>Energy and Buildings</i> , <b>2020</b> , 224, 110294	7	7
44	Investigation of a compact hybrid liquid-desiccant air-conditioning system for return air dehumidification. <i>Building and Environment</i> , <b>2021</b> , 187, 107420	6.5	7
43	A novel approximate harmonic method for the dynamic cooling capacity prediction of radiant slab floors with time variable solar radiation. <i>Energy and Buildings</i> , <b>2020</b> , 223, 110117	7	5
42	Comparison of winter air infiltration and its influences between large-space and normal-space buildings. <i>Building and Environment</i> , <b>2020</b> , 184, 107183	6.5	5
41	A novel pulse width modulation for metal radiant panels to control the condensation risk in a hot and humid environment. <i>Building and Environment</i> , <b>2021</b> , 196, 107802	6.5	5
40	Performance comparison of temperature and humidity independent control air-conditioning system with conventional system. <i>Building Services Engineering Research and Technology</i> , <b>2016</b> , 37, 479-488	2.3	5
39	Energy performance analysis on segmented liquid desiccant air-conditioning system for bus spray-paint booths. <i>Journal of Cleaner Production</i> , <b>2021</b> , 278, 123898	10.3	5
38	A review of boiler waste heat recovery technologies in the medium-low temperature range. <i>Energy</i> , <b>2021</b> , 237, 121560	7.9	5
37	Performance investigation of a heat pump driven, vacuum liquid desiccant regeneration system. <i>Energy Procedia</i> , <b>2019</b> , 158, 2435-2440	2.3	4
36	Experimental study on refrigerant maldistribution in a fin-and-tube evaporator for a direct expansion air-conditioning system. <i>Energy and Buildings</i> , <b>2020</b> , 208, 109638	7	4
35	Performance analysis and energy saving potential of air conditioning system in semiconductor cleanrooms. <i>Journal of Building Engineering</i> , <b>2021</b> , 37, 102158	5.2	4

34	Measurement and optimization on the energy consumption of fans in semiconductor cleanrooms. <i>Building and Environment</i> , <b>2021</b> , 197, 107842	6.5	4
33	On-site measurement of thermal environment and heat transfer analysis in a curling arena. <i>Journal of Building Engineering</i> , <b>2021</b> , 34, 101691	5.2	4
32	Performance analysis and instant/delayed characteristics of a solar heating system used in cold regions. <i>Journal of Building Engineering</i> , <b>2021</b> , 34, 101767	5.2	4
31	Optimal flow type in internally-cooled liquid-desiccant system driven by heat pump: Component level vs. System level. <i>Applied Thermal Engineering</i> , <b>2021</b> , 183, 116208	5.8	4
30	On-site performance investigation of liquid-desiccant air-conditioning system applied in laboratory rodent room: A comparative study. <i>Energy and Buildings</i> , <b>2021</b> , 232, 110664	7	4
29	Exergy analysis on optimal desiccant solution flow rate in heat exchanger for air dehumidification using liquid desiccant. <i>International Journal of Refrigeration</i> , <b>2021</b> , 128, 129-138	3.8	4
28	Experimental analysis and performance optimization of a counter-flow enthalpy recovery device using liquid desiccant. <i>Building Services Engineering Research and Technology</i> , <b>2018</b> , 39, 679-697	2.3	3
27	Formaldehyde removal performance analysis of a liquid desiccant dehumidification system. <i>Building and Environment</i> , <b>2017</b> , 124, 283-293	6.5	3
26	Investigation of heat and mass transfer characteristics in the ice rink: Ice making, maintaining and resurfacing processes. <i>Building and Environment</i> , <b>2021</b> , 196, 107779	6.5	3
25	Cooling load characteristic and uncertainty analysis of a hub airport terminal. <i>Energy and Buildings</i> , <b>2021</b> , 231, 110619	7	3
24	Performance investigation of terminal handling process in air-conditioning system from the perspective of entransy dissipation. <i>Energy and Buildings</i> , <b>2017</b> , 137, 27-37	7	2
23	Performance investigation and exergy analysis of air-handling processes using liquid desiccant and a desiccant wheel. <i>Science and Technology for the Built Environment</i> , <b>2017</b> , 23, 105-115	1.8	2
22	Study on the pulsed flow control on radiant cooling and heating systems in part load. <i>Procedia Engineering</i> , <b>2017</b> , 205, 11-18		2
21	Optimization of solution concentration in liquid desiccant air-conditioning system driven by heat pump. <i>Energy and Buildings</i> , <b>2020</b> , 225, 110290	7	2
20	Optimization of NTUm allocation between dehumidifier and regenerator in liquid-desiccant air-conditioning system. <i>International Journal of Refrigeration</i> , <b>2021</b> , 127, 250-259	3.8	2
19	On-site measurement and numerical investigation of the airflow characteristics in an aquatics center. <i>Journal of Building Engineering</i> , <b>2021</b> , 35, 101968	5.2	2
18	On the importance of air-solution flow rate matching in liquid-desiccant deep-dehumidification system. <i>International Journal of Heat and Mass Transfer</i> , <b>2021</b> , 164, 120614	4.9	2
17	Effect of air parameters on ice sublimation in ice rink. <i>Building and Environment</i> , <b>2021</b> , 188, 107470	6.5	2

16	Inverse design of indoor radiant terminal using the particle swarm optimization method with topology concept. <i>Building and Environment</i> , <b>2021</b> , 204, 108117	6.5	2
15	Feasibility analysis of canceling reheating after condensation dehumidification in semiconductor cleanrooms. <i>Journal of Building Engineering</i> , <b>2021</b> , 43, 102589	5.2	2
14	Analytical solutions of heat and mass transfer process in combined gas-water heat exchanger applied for waste heat recovery. <i>Energy</i> , <b>2020</b> , 206, 118095	7.9	1
13	Performance research and application of the vapor pump boiler equipped with flue gas recirculation system. <i>Energy Conversion and Management</i> , <b>2022</b> , 254, 115201	10.6	1
12	Performance investigation of heating terminals in a railway depot: On-site measurement and CFD simulation. <i>Journal of Building Engineering</i> , <b>2020</b> , 32, 101818	5.2	1
11	Performance of total heat recovery device using liquid desiccant in severe cold climates. <i>Energy and Buildings</i> , <b>2020</b> , 208, 109645	7	1
10	On the importance of the heat and mass transfer driving force reversal and heat-cold offset in internally-cooled liquid-desiccant system. <i>Building and Environment</i> , <b>2020</b> , 185, 107296	6.5	1
9	Outdoor air supply in winter for large-space airport terminals: Air infiltration vs. mechanical ventilation. <i>Building and Environment</i> , <b>2021</b> , 190, 107545	6.5	1
8	Winter air infiltration induced by combined buoyancy and wind forces in large-space buildings. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2021</b> , 210, 104501	3.7	1
7	Modification of analytical solutions of coupled heat and mass transfer processes in liquid desiccant dehumidifier for deep dehumidification. <i>International Journal of Heat and Mass Transfer</i> , <b>2021</b> , 165, 120728	4.9	1
6	Experimental and numerical analysis on heat and moisture recovery performance of enthalpy wheel with condensation. <i>Energy Conversion and Management</i> , <b>2021</b> , 246, 114683	10.6	1
5	Exergy investigation of three ideal regeneration methods for liquid desiccant: Thermal air, mechanical vapor recompression and electrodialysis regeneration. <i>Energy and Buildings</i> , <b>2021</b> , 249, 111258	7.5	1
4	Ammonia absorption performance of a liquid desiccant dehumidification system applied in laboratory rodent room. <i>Applied Thermal Engineering</i> , <b>2021</b> , 199, 117523	5.8	0
3	Match Properties of Heat and Mass Transfer Processes in the Internally-Cooled Liquid Desiccant System. <i>Lecture Notes in Electrical Engineering</i> , <b>2014</b> , 609-618	0.2	
2	Application of Liquid Desiccant System <b>2014</b> , 249-281		
1	Dynamic model and response characteristics of liquid desiccant air-conditioning system driven by heat pump. <i>Building Simulation</i> , <b>2021</b> , 14, 1773-1784	3.9	