Hao Liu

List of Publications by Year in descending order

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106	5,473	81900	85541
papers	citations	39 h-index	71 g-index

106	106	106	5333
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A review of the applications of phase change materials in cooling, heating and power generation in different temperature ranges. Applied Energy, 2018, 220, 242-273.	10.1	434
2	Development of small-scale and micro-scale biomass-fuelled CHP systems â€“ A literature review. Applied Thermal Engineering, 2009, 29, 2119-2126.	6.0	320
3	Comparisons of pulverized coal combustion in air and in mixtures of O/CO. Fuel, 2005, 84, 833-840.	6.4	272
4	Expanders for micro-CHP systems with organic Rankine cycle. Applied Thermal Engineering, 2011, 31, 3301-3307.	6.0	267
5	Experimental investigation of a biomass-fired ORC-based micro-CHP for domestic applications. Fuel, 2012, 96, 374-382.	6.4	202
6	A biomass-fired micro-scale CHP system with organic Rankine cycle (ORC) â€“ Thermodynamic modelling studies. Biomass and Bioenergy, 2011, 35, 3985-3994.	5.7	150
7	Capturing CO2 from ambient air using a polyethyleneimineâ€“silica adsorbent in fluidized beds. Chemical Engineering Science, 2014, 116, 306-316.	3.8	136
8	Parametric study on the regeneration heat requirement of an amine-based solid adsorbent process for post-combustion carbon capture. Applied Energy, 2016, 168, 394-405.	10.1	136
9	Thermal and kinetic analysis of diverse biomass fuels under different reaction environment: A way forward to renewable energy sources. Energy Conversion and Management, 2020, 203, 112266.	9.2	131
10	Industrial polymer effluent treatment by chemical coagulation and flocculation. Journal of Environmental Chemical Engineering, 2013, 1, 684-689.	6.7	129
11	Oxy-fuel combustion study of biomass fuels in a 20â€¯kWth fluidized bed combustor. Fuel, 2018, 215, 778-786.	6.4	124
12	Modelling of NO and N2O emissions from biomass-fired circulating fluidized bed combustors. Fuel, 2002, 81, 271-280.	6.4	103
13	Pulverized coal combustion in air and in O/CO mixtures with NO recycle. Fuel, 2005, 84, 2109-2115.	6.4	103
14	Control of NOx emissions of a domestic/small-scale biomass pellet boiler by air staging. Fuel, 2013, 103, 792-798.	6.4	98
15	An investigation of the heat pump performance and ground temperature of a piled foundation heat exchanger system for a residential building. Energy, 2010, 35, 4932-4940.	8.8	94
16	An overview of CFD modelling of small-scale fixed-bed biomass pellet boilers with preliminary results from a simplified approach. Energy Conversion and Management, 2012, 63, 149-156.	9.2	92
17	Coking and deactivation of a mesoporous Niâ€“CaOâ€“ZrO2 catalyst in dry reforming of methane: A study under different feeding compositions. Fuel, 2015, 143, 527-535.	6.4	90
18	Integrated semi-transparent cadmium telluride photovoltaic glazing into windows: Energy and daylight performance for different architecture designs. Applied Energy, 2018, 231, 972-984.	10.1	86

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19	A novel index for the study of synergistic effects during the co-processing of coal and biomass. Applied Energy, 2017, 188, 215-225.	10.1	80
20	Modeling NH3 and HCN emissions from biomass circulating fluidized bed gasifiersâ˜†. Fuel, 2003, 82, 1591-1604.	6.4	79
21	Performance of polyethyleneimineâ€“silica adsorbent for post-combustion CO2 capture in a bubbling fluidized bed. Chemical Engineering Journal, 2014, 251, 293-303.	12.7	79
22	Developing hierarchically ultra-micro/mesoporous biocarbons for highly selective carbon dioxide adsorption. Chemical Engineering Journal, 2019, 361, 199-208.	12.7	79
23	Combustion of Coal Chars in O₂/CO₂ and O₂/N₂ Mixtures: A Comparative Study with Non-isothermal Thermogravimetric Analyzer (TGA) Tests. Energy & Fuels, 2009, 23, 4278-4285.	5.1	77
24	Predictions of the impurities in the CO2 stream of an oxy-coal combustion plant. Applied Energy, 2010, 87, 3162-3170.	10.1	74
25	Experimental investigation of woody and non-woody biomass combustion in a bubbling fluidised bed combustor focusing on gaseous emissions and temperature profiles. Energy, 2017, 141, 2069-2080.	8.8	74
26	The Properties of Individual Carbon Residuals and Their Influence on The Deactivation of Niâ€“CaOâ€“ZrO₂ Catalysts in CH₄ Dry Reforming. ChemCatChem, 2014, 6, 640-648.	3.7	69
27	Evaluation of the optimal fuel characteristics for efficient NO reduction by coal reburning. Fuel, 1997, 76, 985-993.	6.4	68
28	CO₂ Capture with Activated Carbon Grafted by Nitrogenous Functional Groups. Energy & Fuels, 2013, 27, 4818-4823.	5.1	67
29	CFD and kinetic modelling study of methane MILD combustion in O2/N2, O2/CO2 and O2/H2O atmospheres. Applied Energy, 2019, 240, 1003-1013.	10.1	67
30	Nitrogen-enriched and hierarchically porous carbon macro-spheres â€“ ideal for large-scale CO₂ capture. Journal of Materials Chemistry A, 2014, 2, 5481-5489.	10.3	66
31	Assessment of biomass energy potential for SRC willow woodchips in a pilot scale bubbling fluidized bed gasifier. Fuel, 2019, 258, 116143.	6.4	66
32	Spherical potassium intercalated activated carbon beads for pulverised fuel CO2 post-combustion capture. Carbon, 2015, 94, 243-255.	10.3	65
33	Experimental investigation of tar arresting techniques and their evaluation for product syngas cleaning from bubbling fluidized bed gasifier. Journal of Cleaner Production, 2019, 240, 118239.	9.3	61
34	Analysis of the daylight performance of window integrated photovoltaics systems. Renewable Energy, 2020, 145, 153-163.	8.9	49
35	Comparative performance of â€˜U-tubeâ€™ and â€˜coaxialâ€™ loop designs for use with a ground source heat pump. Applied Thermal Engineering, 2012, 37, 190-195.	6.0	48
36	Synthesis, characterization and evaluation of activated spherical carbon materials for CO2 capture. Fuel, 2013, 113, 854-862.	6.4	47

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37	Surface-modified spherical activated carbon materials for pre-combustion carbon dioxide capture. RSC Advances, 2015, 5, 33681-33690.	3.6	41
38	Experimental investigation on the coal combustion in a pressurized fluidized bed. Energy, 2018, 165, 1119-1128.	8.8	41
39	Gas cleaning strategies for biomass gasification product gas. International Journal of Low-Carbon Technologies, 2012, 7, 69-74.	2.6	40
40	In-situ monitoring of the transformation of ash upon heating and the prediction of ash fusion behaviour of coal/biomass blends. Energy, 2020, 199, 117330.	8.8	40
41	Development of Low-Cost Functional Adsorbents for Control of Mercury (Hg) Emissions from Coal Combustion. Energy & Fuels, 2013, 27, 3875-3882.	5.1	37
42	Potassium and Zeolitic Structure Modified Ultra-microporous Adsorbent Materials from a Renewable Feedstock with Favorable Surface Chemistry for CO₂ Capture. ACS Applied Materials & Interfaces, 2017, 9, 26826-26839.	8.0	36
43	Process simulations of post-combustion CO 2 capture for coal and natural gas-fired power plants using a polyethyleneimine/silica adsorbent. International Journal of Greenhouse Gas Control, 2017, 58, 276-289.	4.6	34
44	Studies on combustion behaviours of single biomass particles using a visualization method. Biomass and Bioenergy, 2018, 109, 54-60.	5.7	33
45	Experimental Evaluation of a Novel 20 kW_{th} in Situ Gasification Chemical Looping Combustion Unit with an Iron Ore as the Oxygen Carrier. Industrial & Engineering Chemistry Research, 2016, 55, 11775-11784.	3.7	32
46	Synthesis and functionalisation of spherical meso-, hybrid meso/macro- and macro-porous cellular silica foam materials with regulated pore sizes for CO₂ capture. Journal of Materials Chemistry A, 2018, 6, 23587-23601.	10.3	32
47	Magnetic Î³-Fe₂O₃-Loaded Attapulgite Sorbent for Hg⁰ Removal in Coal-Fired Flue Gas. Energy & Fuels, 2019, 33, 7522-7533.	5.1	32
48	Three-Dimensional Eulerianâ€“Eulerian Modeling of Gaseous Pollutant Emissions from Circulating Fluidized-Bed Combustors. Energy & Fuels, 2014, 28, 5523-5533.	5.1	30
49	Characterising pulverised fuel ignition in a visual drop tube furnace by use of a high-speed imaging technique. Fuel Processing Technology, 2017, 157, 1-11.	7.2	30
50	High Density and Super Ultraâ€Microporousâ€Activated Carbon Macrospheres with High Volumetric Capacity for CO₂ Capture. Advanced Sustainable Systems, 2018, 2, 1700115.	5.3	30
51	Catalytic and non-catalytic synergistic effects and their individual contributions to improved combustion performance of coal/biomass blends. Applied Energy, 2018, 211, 334-345.	10.1	30
52	Experimental study of SO2 emissions and desulfurization of oxy-coal combustion in a 30 kWth pressurized fluidized bed combustor. Fuel, 2020, 264, 116795.	6.4	30
53	Three-Dimensional Full Loop Modeling and Optimization of an in Situ Gasification Chemical Looping Combustion System. Energy & Fuels, 2017, 31, 13859-13870.	5.1	29
54	Micro-scale ORC-based combined heat and power system using a novel scroll expander. International Journal of Low-Carbon Technologies, 2014, 9, 91-99.	2.6	28

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55	Removal of Toluene as a Biomass Tar Surrogate in a Catalytic Nonthermal Plasma Process. Energy & Fuels, 2018, 32, 10709-10719.	5.1	28
56	Combustion behavior profiling of single pulverized coal particles in a drop tube furnace through high-speed imaging and image analysis. Experimental Thermal and Fluid Science, 2017, 85, 322-330.	2.7	27
57	An investigation of lime addition to fuel as a countermeasure to bed agglomeration for the combustion of non-woody biomass fuels in a 20kWth bubbling fluidised bed combustor. Fuel, 2019, 240, 349-361.	6.4	25
58	COAL PROPERTY EFFECTS ON N2O AND NOxFORMATION FROM CIRCULATING FLUIDIZED BED COMBUSTION OF COAL. Chemical Engineering Communications, 2005, 192, 1482-1489.	2.6	24
59	Experimental Investigation of Oxy-coal Combustion in a 15 kW_{th} Pressurized Fluidized Bed Combustor. Energy & Fuels, 2019, 33, 1694-1703.	5.1	24
60	Energy and daylight performance of a smart window: Window integrated with thermotropic parallel slat-transparent insulation material. Applied Energy, 2021, 293, 116826.	10.1	24
61	Reduction of N2O emissions from a coal-fired circulating fluidised bed combustor by afterburning. Fuel, 1998, 77, 1579-1587.	6.4	23
62	Mesocellular silica foam supported polyamine adsorbents for dry CO2 scrubbing: Performance of single versus blended polyamines for impregnation. Applied Energy, 2019, 255, 113643.	10.1	23
63	Ilmenite as alternative bed material for the combustion of coal and biomass blends in a fluidised bed combustor to improve combustion performance and reduce agglomeration tendency. Energy, 2022, 239, 121913.	8.8	23
64	Optimization of in Situ Gasification Chemical Looping Combustion through Experimental Investigations with a Cold Experimental System. Industrial & Engineering Chemistry Research, 2015, 54, 5749-5758.	3.7	21
65	Experimental study of NOx emissions in a 30 kWth pressurized oxy-coal fluidized bed combustor. Energy, 2020, 194, 116756.	8.8	21
66	Advanced materials for the impeller in an ORC radial microturbine. Energy Procedia, 2017, 129, 1047-1054.	1.8	20
67	Synthesis of functionalized 3D microporous carbon foams for selective CO2 capture. Chemical Engineering Journal, 2020, 402, 125459.	12.7	20
68	Comparative study of the inherent combustion reactivity of sawdust chars produced by TGA and in the drop tube furnace. Fuel Processing Technology, 2020, 201, 106361.	7.2	20
69	GAS-SOLID FLOW BEHAVIOR IN A PRESSURIZED HIGH-FLUX CIRCULATING FLUIDIZED BED RISER. Chemical Engineering Communications, 2014, 201, 352-366.	2.6	19
70	Continuous testing of silica-PEI adsorbents in a lab.-scale twin bubbling fluidized-bed system. International Journal of Greenhouse Gas Control, 2019, 82, 184-191.	4.6	19
71	Coupling detailed radiation model with process simulation in Aspen Plus: A case study on fluidized bed combustor. Applied Energy, 2018, 227, 168-179.	10.1	18
72	Mechanisms of Toluene Removal in Relation to the Main Components of Biosyngas in a Catalytic Nonthermal Plasma Process. Energy & Fuels, 2019, 33, 4287-4301.	5.1	18

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73	Experimental study and modeling of oxy-char combustion in a pressurized fluidized bed combustor. Chemical Engineering Journal, 2021, 418, 129356.	12.7	18
74	Multiple-relaxation-time lattice Boltzmann simulation for flow, mass transfer, and adsorption in porous media. Physical Review E, 2017, 96, 013313.	2.1	17
75	Design and development of 3D hierarchical ultra-microporous CO2-sieving carbon architectures for potential flow-through CO2 capture at typical practical flue gas temperatures. Journal of Materials Chemistry A, 2020, 8, 17025-17035.	10.3	17
76	Determination of creep damage properties from small punch creep tests considering pre-straining effect using an inverse approach. Mechanics of Materials, 2019, 139, 103171.	3.2	16
77	Development of a 1000 W organic Rankine cycle micro-turbine-generator using polymeric structural materials and its performance test with compressed air. Energy Conversion and Management, 2019, 190, 105-120.	9.2	16
78	Enhanced conductivity of reduced graphene oxide decorated with aluminium oxide nanoparticles by oxygen annealing. Nanoscale, 2013, 5, 5725.	5.6	15
79	Total environmental impacts of biofuels from corn stover using a hybrid life cycle assessment model combining process life cycle assessment and economic inputâ€“output life cycle assessment. Integrated Environmental Assessment and Management, 2018, 14, 139-149.	2.9	15
80	Investigation of Elemental Mercury Removal from Coal-Fired Boiler Flue Gas over MIL101-Cr. Energy & Fuels, 2019, 33, 8864-8875.	5.1	15
81	Oxy-coal combustion in a 30ÂkWth pressurized fluidized bed: Effect of combustion pressure on combustion performance, pollutant emissions and desulfurization. Proceedings of the Combustion Institute, 2021, 38, 4121-4129.	3.9	15
82	Experimental Investigation on Flow Behaviors in a Novel In Situ Gasification Chemical Looping Combustion Apparatus. Industrial & Engineering Chemistry Research, 2013, 52, 14208-14218.	3.7	14
83	Experimental investigations on the chlorine-induced corrosion of HVOF thermal sprayed Stellite-6 and NiAl coatings with fluidised bed biomass/anthracite combustion systems. Fuel, 2021, 288, 119607.	6.4	13
84	Factors Affecting NO Reduction during O₂/CO₂ Combustion. Energy & Fuels, 2011, 25, 2487-2492.	5.1	12
85	Modeling of NO conversion during combustion under high CO2 concentration using detailed chemical kinetics. Fuel Processing Technology, 2011, 92, 939-945.	7.2	11
86	Experimental Evaluation of a Chinese Sulfur-Containing Lean Iron Ore as the Oxygen Carrier for Chemical-Looping Combustion. Industrial & Engineering Chemistry Research, 2016, 55, 428-435.	3.7	11
87	Emergy analysis for transportation fuels produced from corn stover in China. Journal of Cleaner Production, 2018, 174, 213-225.	9.3	10
88	Prediction of In-Situ Gasification Chemical Looping Combustion Effects of Operating Conditions. Catalysts, 2018, 8, 526.	3.5	9
89	Dynamic Experimental Investigation on the Volatilization Behavior of Lead and Cadmium in the Simulated Municipal Solid Waste (MSW) Influenced by Sulfur Compounds during Incineration. Energy & Fuels, 2017, 31, 847-853.	5.1	8
90	Investigation of the Optical Performance of a Novel Planar Static PV Concentrator with Lambertian Rear Reflectors. Buildings, 2017, 7, 88.	3.1	8

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91	Performance of a silica-polyethyleneimine adsorbent for post-combustion CO2 capture on a 100Âkg scale in a fluidized bed continuous unit. Chemical Engineering Journal, 2021, 407, 127209.	12.7	7
92	Fluidised bed combustion and ash fusibility behaviour of coal and spent coffee grounds blends: CO and NOx emissions, combustion performance and agglomeration tendency. Fuel, 2022, 326, 125008.	6.4	7
93	Cyclic performance evaluation of a polyethylenimine/silica adsorbent with steam regeneration using simulated NGCC flue gas and actual flue gas of a gas-fired boiler in a bubbling fluidized bed reactor. International Journal of Greenhouse Gas Control, 2020, 95, 102975.	4.6	6
94	Measurement of coal particle combustion behaviors in a drop tube furnace through high-speed imaging and image processing. , 2016, , .		4
95	Synthesis and characterization of advanced bio-carbon materials from Kraft lignin with enhanced CO2 capture properties. Journal of Environmental Chemical Engineering, 2022, 10, 107471.	6.7	4
96	Experimental and modeling study of NO emission under high CO2 concentration. Science China Technological Sciences, 2010, 53, 3275-3283.	4.0	3
97	Further Improvement of Fluidized Bed Models by Incorporating Zone Method with Aspen Plus Interface. Energy Procedia, 2017, 105, 1895-1901.	1.8	3
98	Evaluation of Mixing and Mixing Rate in a Multiple Spouted Bed by Image Processing Technique. International Journal of Chemical Reactor Engineering, 2017, 15, .	1.1	3
99	Coupling the biochemical and thermochemical biorefinery platforms to enhance energy and product recovery from Agave tequilana bagasse. Applied Energy, 2021, 299, 117293.	10.1	3
100	Effectiveness of bed additives in abating agglomeration during biomass air/oxy combustion in a fluidised bed combustor. Renewable Energy, 2022, 185, 945-958.	8.9	3
101	A Comparison of Combustion of Coal Chars in O2/CO2 and O2/N2 Mixtures - Isothermal TGA Studies. International Journal of Chemical Reactor Engineering, 2009, 7, .	1.1	2
102	Chemical Characteristics of Ash Formed from the Combustion of Shoe Manufacturing Waste in a 2.5 MWth Circulating Fluidized Bed Combustor. Waste and Biomass Valorization, 2020, 11, 4551-4560.	3.4	2
103	Characterisation of the combustion behaviours of individual pulverised coal particles entrained by air using image processing techniques. Measurement Science and Technology, 2021, 32, 034005.	2.6	2
104	Modeling of NH3 and HCN Emissions From Biomass CFB Gasifiers. , 2003, , 547.		0
105	Carbon-capture and storage benefits: NO<inf>x</inf> reduction in O<inf>2</inf>/CO<inf>2</inf> pulverized fuel combustion. , 2011, , .		0
106	CO2 Sorption Characteristics of Various Sorbents in the Bubbling Fluidized-Bed. Energy Procedia, 2017, 114, 2336-2340.	1.8	0