

Meihong Wang

List of Publications by Year in descending order

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119
papers

5,514
citations

81743

39
h-index

88477

70
g-index

122
all docs

122
docs citations

122
times ranked

4803
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy storage technologies and real life applications – A state of the art review. Applied Energy, 2016, 179, 350-377.	5.1	1,154
2	Process intensification for post-combustion CO ₂ capture with chemical absorption: A critical review. Applied Energy, 2015, 158, 275-291.	5.1	308
3	Transformation technologies for CO ₂ utilisation: Current status, challenges and future prospects. Chemical Engineering Journal, 2021, 409, 128138.	6.6	207
4	Role of solvents in CO ₂ capture processes: The review of selection and design methods. Renewable and Sustainable Energy Reviews, 2019, 114, 109299.	8.2	201
5	Demonstrating full-scale post-combustion CO ₂ capture for coal-fired power plants through dynamic modelling and simulation. Fuel, 2012, 101, 115-128.	3.4	167
6	H ₂ production from co-pyrolysis/gasification of waste plastics and biomass under novel catalyst Ni-CaO-C. Chemical Engineering Journal, 2020, 382, 122947.	6.6	145
7	Closed-cycle gas turbine for power generation: A state-of-the-art review. Fuel, 2016, 180, 694-717.	3.4	118
8	Dynamic modelling, validation and analysis of post-combustion chemical absorption CO ₂ capture plant. International Journal of Greenhouse Gas Control, 2012, 9, 428-445.	2.3	102
9	Potential for improving the energy efficiency of cryogenic air separation unit (ASU) using binary heat recovery cycles. Applied Thermal Engineering, 2015, 81, 223-231.	3.0	102
10	Harnessing the power of machine learning for carbon capture, utilisation, and storage (CCUS) – a state-of-the-art review. Energy and Environmental Science, 2021, 14, 6122-6157.	15.6	98
11	Solvent-based post-combustion CO ₂ capture for power plants: A critical review and perspective on dynamic modelling, system identification, process control and flexible operation. Applied Energy, 2020, 257, 113941.	5.1	95
12	Experimental study on pyrolysis/gasification of biomass and plastics for H ₂ production under new dual-support catalyst. Chemical Engineering Journal, 2020, 396, 125260.	6.6	91
13	Study of solvent-based carbon capture for cargo ships through process modelling and simulation. Applied Energy, 2017, 195, 402-413.	5.1	87
14	Heterojunction-redox catalysts of Fe _x Co _y Mg ₁₀ CaO for high-temperature CO ₂ capture and <i>in situ</i> conversion in the context of green manufacturing. Energy and Environmental Science, 2021, 14, 2291-2301.	15.6	86
15	Dynamic modelling and control of supercritical CO ₂ power cycle using waste heat from industrial processes. Fuel, 2019, 249, 89-102.	3.4	69
16	Process analysis of intensified absorber for post-combustion CO ₂ capture through modelling and simulation. International Journal of Greenhouse Gas Control, 2014, 21, 91-100.	2.3	68
17	Process design, operation and economic evaluation of compressed air energy storage (CAES) for wind power through modelling and simulation. Renewable Energy, 2019, 136, 923-936.	4.3	66
18	Simulation-based techno-economic evaluation for optimal design of CO ₂ transport pipeline network. Applied Energy, 2014, 132, 610-620.	5.1	63

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19	Dynamic modelling, validation and analysis of coal-fired subcritical power plant. <i>Fuel</i> , 2014, 135, 292-300.	3.4	63
20	Heat integration of natural gas combined cycle power plant integrated with post-combustion CO ₂ capture and compression. <i>Fuel</i> , 2015, 151, 110-117.	3.4	61
21	A comparative study of MEA and DEA for post-combustion CO ₂ capture with different process configurations. <i>International Journal of Coal Science and Technology</i> , 2017, 4, 15-24.	2.7	58
22	Modelling of a post-combustion CO ₂ capture process using neural networks. <i>Fuel</i> , 2015, 151, 156-163.	3.4	57
23	Study of CO ₂ removal in natural gas process using mixture of ionic liquid and MEA through process simulation. <i>Fuel</i> , 2019, 236, 135-146.	3.4	57
24	CO ₂ gasification of bio-char derived from conventional and microwave pyrolysis. <i>Applied Energy</i> , 2015, 157, 533-539.	5.1	54
25	Techno-economic analysis of a CO ₂ capture plant integrated with a commercial scale combined cycle gas turbine (CCGT) power plant. <i>Applied Thermal Engineering</i> , 2015, 74, 10-19.	3.0	54
26	Biodiesel from microalgae: The use of multi-criteria decision analysis for strain selection. <i>Fuel</i> , 2015, 159, 241-249.	3.4	53
27	Steady state simulation and exergy analysis of supercritical coal-fired power plant with CO ₂ capture. <i>Fuel</i> , 2015, 151, 57-72.	3.4	53
28	Current status and future development of solvent-based carbon capture. <i>International Journal of Coal Science and Technology</i> , 2017, 4, 5-14.	2.7	53
29	Process analysis of pressurized oxy-coal power cycle for carbon capture application integrated with liquid air power generation and binary cycle engines. <i>Applied Energy</i> , 2015, 154, 556-566.	5.1	51
30	Thermodynamic performance evaluation of supercritical CO ₂ closed Brayton cycles for coal-fired power generation with solvent-based CO ₂ capture. <i>Energy</i> , 2019, 166, 1074-1088.	4.5	51
31	Modelling and dynamic optimization of thermal cracking of propane for ethylene manufacturing. <i>Computers and Chemical Engineering</i> , 2011, 35, 2876-2885.	2.0	50
32	Modelling of a post-combustion CO ₂ capture process using deep belief network. <i>Applied Thermal Engineering</i> , 2018, 130, 997-1003.	3.0	50
33	Flexible operation of post-combustion solvent-based carbon capture for coal-fired power plants using multi-model predictive control: A simulation study. <i>Fuel</i> , 2018, 220, 931-941.	3.4	47
34	Intelligent predictive control of large-scale solvent-based CO ₂ capture plant using artificial neural network and particle swarm optimization. <i>Energy</i> , 2020, 196, 117070.	4.5	46
35	Process modelling and analysis of intensified CO ₂ capture using monoethanolamine (MEA) in rotating packed bed absorber. <i>Journal of Cleaner Production</i> , 2018, 204, 1124-1142.	4.6	45
36	Thermodynamic analysis of combined cycle gas turbine power plant with post-combustion CO ₂ capture and exhaust gas recirculation. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 2013, 227, 89-105.	1.4	44

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37	Techno-economic analysis of chemical looping combustion with humid air turbine power cycle. <i>Fuel</i> , 2014, 124, 221-231.	3.4	44
38	Modelling of down-draft gasification of biomass – An integrated pyrolysis, combustion and reduction process. <i>Applied Thermal Engineering</i> , 2018, 142, 444-456.	3.0	44
39	Study on heat integration of supercritical coal-fired power plant with post-combustion CO ₂ capture process through process simulation. <i>Fuel</i> , 2015, 158, 625-633.	3.4	43
40	Technical performance analysis and economic evaluation of a compressed air energy storage system integrated with an organic Rankine cycle. <i>Fuel</i> , 2018, 211, 318-330.	3.4	43
41	Long-term performance prediction of solid oxide electrolysis cell (SOEC) for CO ₂ /H ₂ O co-electrolysis considering structural degradation through modelling and simulation. <i>Chemical Engineering Journal</i> , 2022, 429, 132158.	6.6	42
42	Neural network approach for predicting drum pressure and level in coal-fired subcritical power plant. <i>Fuel</i> , 2015, 151, 139-145.	3.4	40
43	Modelling and simulation of intensified absorber for post-combustion CO ₂ capture using different mass transfer correlations. <i>Applied Thermal Engineering</i> , 2015, 74, 47-53.	3.0	37
44	Modelling, simulation and analysis of intensified regenerator for solvent based carbon capture using rotating packed bed technology. <i>Applied Energy</i> , 2017, 203, 11-25.	5.1	37
45	Reinforced coordinated control of coal-fired power plant retrofitted with solvent based CO ₂ capture using model predictive controls. <i>Applied Energy</i> , 2019, 238, 495-515.	5.1	37
46	Experimental study, dynamic modelling, validation and analysis of hydrogen production from biomass pyrolysis/gasification of biomass in a two-stage fixed bed reaction system. <i>Fuel</i> , 2014, 137, 364-374.	3.4	35
47	Thermodynamic analysis and preliminary design of closed Brayton cycle using nitrogen as working fluid and coupled to small modular Sodium-cooled fast reactor (SM-SFR). <i>Applied Energy</i> , 2017, 191, 436-453.	5.1	34
48	Experimental studies, molecular simulation and process modelling simulation of adsorption-based post-combustion carbon capture for power plants: A state-of-the-art review. <i>Applied Energy</i> , 2022, 317, 119156.	5.1	32
49	Dynamic Modeling and Simulation of CO ₂ Chemical Absorption Process for Coal-Fired Power Plants. <i>Computer Aided Chemical Engineering</i> , 2009, 27, 1725-1730.	0.3	31
50	Technical and economic performance assessment of post-combustion carbon capture using piperazine for large scale natural gas combined cycle power plants through process simulation. <i>Applied Energy</i> , 2021, 292, 116893.	5.1	31
51	Assessment of energy saving potential of an industrial ethylene cracking furnace using advanced exergy analysis. <i>Applied Energy</i> , 2019, 254, 113583.	5.1	30
52	Process modelling, validation and analysis of rotating packed bed stripper in the context of intensified CO ₂ capture with MEA. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 75, 285-295.	2.9	30
53	Optimal operation of MEA-based post-combustion carbon capture for natural gas combined cycle power plants under different market conditions. <i>International Journal of Greenhouse Gas Control</i> , 2016, 48, 312-320.	2.3	29
54	Nonlinear dynamic analysis and control design of a solvent-based post-combustion CO ₂ capture process. <i>Computers and Chemical Engineering</i> , 2018, 115, 397-406.	2.0	29

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55	Modelling and process analysis of post-combustion carbon capture with the blend of 2-amino-2-methyl-1-propanol and piperazine. <i>International Journal of Greenhouse Gas Control</i> , 2017, 63, 37-46.	2.3	25
56	Refinery scheduling of crude oil unloading with tank inventory management. <i>Computers and Chemical Engineering</i> , 2013, 55, 134-147.	2.0	24
57	Techno-economic analysis of wind power integrated with both compressed air energy storage (CAES) and biomass gasification energy storage (BGES) for power generation. <i>RSC Advances</i> , 2018, 8, 22004-22022.	1.7	24
58	Model-free adaptive control for MEA-based post-combustion carbon capture processes. <i>Fuel</i> , 2018, 224, 637-643.	3.4	24
59	Adsorption-enhanced oxidative desulfurization by a task-specific pyridinium-based porous ionic polymer. <i>Fuel</i> , 2019, 244, 439-446.	3.4	24
60	Improving Prediction Accuracy of a Rate-Based Model of an MEA-Based Carbon Capture Process for Large-Scale Commercial Deployment. <i>Engineering</i> , 2017, 3, 232-243.	3.2	23
61	Flexible operation of coal fired power plant integrated with post combustion CO ₂ capture using model predictive control. <i>International Journal of Greenhouse Gas Control</i> , 2019, 82, 138-151.	2.3	23
62	Flexible operation of supercritical coal-fired power plant integrated with solvent-based CO ₂ capture through collaborative predictive control. <i>Energy</i> , 2020, 206, 118105.	4.5	23
63	Data-driven adaptive robust optimization for energy systems in ethylene plant under demand uncertainty. <i>Applied Energy</i> , 2022, 307, 118148.	5.1	22
64	Flexible operation of large-scale coal-fired power plant integrated with solvent-based post-combustion CO ₂ capture based on neural network inverse control. <i>International Journal of Greenhouse Gas Control</i> , 2020, 95, 102985.	2.3	21
65	Exergy analysis and multi-objective optimisation for energy system: a case study of a separation process in ethylene manufacturing. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 93, 394-406.	2.9	21
66	Study of intercooling for rotating packed bed absorbers in intensified solvent-based CO ₂ capture process. <i>Applied Energy</i> , 2018, 223, 302-316.	5.1	19
67	Process analysis and economic evaluation of mixed aqueous ionic liquid and monoethanolamine (MEA) solvent for CO ₂ capture from a coke oven plant. , 2018, 8, 686-700.		18
68	Conventional and advanced exergy analysis of post-combustion CO ₂ capture based on chemical absorption integrated with supercritical coal-fired power plant. <i>International Journal of Greenhouse Gas Control</i> , 2017, 64, 246-256.	2.3	17
69	Non-linear system identification of solvent-based post-combustion CO ₂ capture process. <i>Fuel</i> , 2019, 239, 1213-1223.	3.4	17
70	In Situ Electromagnetic Induction Heating for CO ₂ Temperature Swing Adsorption on Magnetic Fe ₃ O ₄ /N-Doped Porous Carbon. <i>Energy & Fuels</i> , 2020, 34, 14439-14446.	2.5	17
71	Dynamic behavior investigations and disturbance rejection predictive control of solvent-based post-combustion CO ₂ capture process. <i>Fuel</i> , 2019, 242, 624-637.	3.4	16
72	Simulation, energy and exergy analysis of compressed air energy storage integrated with organic Rankine cycle and single effect absorption refrigeration for trigeneration application. <i>Fuel</i> , 2022, 317, 123291.	3.4	16

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73	Investigating the dynamic response of CO ₂ chemical absorption process in enhanced- O ₂ coal power plant with post-combustion CO ₂ capture. <i>Energy Procedia</i> , 2011, 4, 1035-1042.	1.8	15
74	Process simulation and analysis of carbon capture with an aqueous mixture of ionic liquid and monoethanolamine solvent. <i>International Journal of Coal Science and Technology</i> , 2017, 4, 25-32.	2.7	15
75	Special issue on carbon capture in the context of carbon capture, utilisation and storage (CCUS). <i>International Journal of Coal Science and Technology</i> , 2017, 4, 1-4.	2.7	15
76	Study on the integration of fluid catalytic cracking unit in refinery with solvent-based carbon capture through process simulation. <i>Fuel</i> , 2018, 219, 364-374.	3.4	15
77	A porous ionic polymer bionic carrier in a mixed matrix membrane for facilitating selective CO ₂ permeability. <i>Journal of Membrane Science</i> , 2020, 598, 117677.	4.1	15
78	Nonlinear model predictive control (NMPC) of the solvent-based post-combustion CO ₂ capture process. <i>Energy</i> , 2020, 213, 118840.	4.5	13
79	Ultrafast synthesis of 13X@NaA composites through plasma treatment for highly selective carbon capture. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18801-18807.	5.2	12
80	Process improvement analysis of pyrolysis/gasification of biomass and waste plastics with carbon capture and utilisation through process simulation. <i>Fuel</i> , 2022, 324, 124571.	3.4	12
81	Case study on CO ₂ transport pipeline network design for Humber region in the UK. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 2014, 228, 210-225.	1.4	11
82	Modelling and process analysis of hybrid hydration- absorption column for ethylene recovery from refinery dry gas. <i>Fuel</i> , 2015, 158, 424-434.	3.4	11
83	Modelling of a post-combustion CO ₂ capture process using extreme learning machine. <i>International Journal of Coal Science and Technology</i> , 2017, 4, 33-40.	2.7	11
84	A new method for scale-up of solvent-based post-combustion carbon capture process with packed columns. <i>International Journal of Greenhouse Gas Control</i> , 2020, 93, 102900.	2.3	11
85	Dynamic modelling based on surface renewal theory, model validation and process analysis of rotating packed bed absorber for carbon capture. <i>Applied Energy</i> , 2021, 301, 117462.	5.1	11
86	Techno-Economic Analysis of a Natural Gas Combined Cycle Power Plant with CO ₂ Capture. <i>Computer Aided Chemical Engineering</i> , 2013, , 187-192.	0.3	10
87	Application of piece-wise linear system identification to solvent-based post-combustion carbon capture. <i>Fuel</i> , 2018, 234, 526-537.	3.4	10
88	CO ₂ capture using mesocellular siliceous foam (MCF)-supported CaO. <i>Journal of the Energy Institute</i> , 2019, 92, 1591-1598.	2.7	10
89	Modelling of a Post-combustion CO ₂ Capture Process Using Bootstrap Aggregated Extreme Learning Machines. <i>Computer Aided Chemical Engineering</i> , 2016, , 2007-2012.	0.3	10
90	Simplification of detailed rate-based model of post-combustion CO ₂ capture for full chain CCS integration studies. <i>Fuel</i> , 2015, 142, 87-93.	3.4	9

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91	Study of mass transfer correlations for rotating packed bed columns in the context of solvent-based carbon capture. International Journal of Greenhouse Gas Control, 2019, 91, 102831.	2.3	9
92	Substance transfer behavior controlled by droplet internal circulation. Chemical Engineering Journal, 2020, 393, 124657.	6.6	9
93	Study of absorber intercooling in solvent-based CO ₂ capture based on rotating packed bed technology. Energy Procedia, 2017, 142, 3511-3516.	1.8	7
94	Process Simulation and Analysis for CO ₂ Transport Pipeline Design and Operation – Case Study for the Humber Region in the UK. Computer Aided Chemical Engineering, 2014, , 1633-1638.	0.3	6
95	Study of Integration of Cryogenic Air Energy Storage and Coal Oxy-fuel Combustion through Modelling and Simulation. Computer Aided Chemical Engineering, 2014, 33, 1537-1542.	0.3	6
96	Improving the Energy Efficiency of Cryogenic Air Separation Units (ASU) through Compressor Waste Heat Recovery using Direct Binary Heat Engine Cycle. Computer Aided Chemical Engineering, 2015, , 2375-2380.	0.3	6
97	Operation and Bidding Strategies of Power Plants with Carbon Capture. IFAC-PapersOnLine, 2017, 50, 3244-3249.	0.5	6
98	Optimal Bidding and Operation of a Power Plant with Solvent-Based Carbon Capture under a CO ₂ Allowance Market: A Solution with a Reinforcement Learning-Based Sarsa Temporal-Difference Algorithm. Engineering, 2017, 3, 257-265.	3.2	5
99	Study of Mass Transfer Correlations for Intensified Absorbers in Post-combustion CO ₂ Capture Based on Chemical Absorption. Energy Procedia, 2017, 114, 1630-1636.	1.8	5
100	Dynamic Validation of Model for Post-Combustion Chemical Absorption CO ₂ Capture Plant. Computer Aided Chemical Engineering, 2012, , 807-811.	0.3	5
101	Robust monitoring of solvent based carbon capture process using deep learning network based moving horizon estimation. Fuel, 2022, 321, 124071.	3.4	5
102	Comparative Techno-economic Analysis of Biodiesel Production from Microalgae via Transesterification Methods. Computer Aided Chemical Engineering, 2012, 30, 132-136.	0.3	4
103	Review of dynamic modelling, system identification and control scheme in solvent-based post-combustion carbon capture process. Energy Procedia, 2017, 142, 3505-3510.	1.8	4
104	Dynamic Modelling and Analysis of Supercritical Coal-Fired Power Plant Integrated with Post-combustion CO ₂ Capture. , 2016, , 359-363.		3
105	Flexible operation of coal-fired power plant integrated with post-combustion CO ₂ capture. Energy Procedia, 2019, 158, 4810-4815.	1.8	3
106	Modelling and dynamic optimisation for optimal operation of industrial tubular reactor for propane cracking. Computer Aided Chemical Engineering, 2011, 29, 955-959.	0.3	2
107	Special issue on process and mechanical engineering for carbon capture and transport. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2013, 227, 87-88.	1.4	2
108	Modelling of a post-combustion CO ₂ capture process using extreme learning machine. , 2016, , .		2

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109	Integrated Refinery Planning under Product Demand Uncertainty. Computer Aided Chemical Engineering, 2011, , 950-954.	0.3	1
110	An improved MILP model for scheduling crude oil unloading, storage and processing. Computer Aided Chemical Engineering, 2013, 32, 631-636.	0.3	1
111	Heat Exchanger Network Design and Economic Analysis for Coal-fired Power Plant retrofitted with CO2 Capture. Computer Aided Chemical Engineering, 2013, 32, 433-438.	0.3	1
112	Preliminary Performance Assessment of Intensified Stripper in Post-combustion Carbon Capture through Modelling and Simulation. Energy Procedia, 2017, 114, 1637-1642.	1.8	1
113	Experimental study of CO2 solubility in high concentration MEA solution for intensified solvent-based carbon capture. MATEC Web of Conferences, 2019, 272, 01004.	0.1	1
114	Optimal Operation of MEA-Based Post-Combustion Carbon Capture Process for Natural Gas Combined Cycle Power Plants. Green Energy and Technology, 2018, , 1377-1391.	0.4	1
115	Technical and Economic Analysis of Ionic Liquid-Based Post-combustion CO2 Capture Process. Green Energy and Technology, 2018, , 1393-1411.	0.4	1
116	12 Carbon Capture. Green Chemistry and Chemical Engineering, 2017, , 457-632.	0.0	1
117	Optimal Operation of MEA-Based Post-combustion Carbon Capture Process for Natural Gas Combined Cycle Power Plants. Green Energy and Technology, 2018, , 299-313.	0.4	1
118	Aggregate Model for Refinery Production Planning. Computer Aided Chemical Engineering, 2012, 30, 917-921.	0.3	0
119	Technical and Economic Analysis of Chemical Looping Combustion with Humid Air Turbine Power Cycle. Computer Aided Chemical Engineering, 2014, 33, 1123-1128.	0.3	0