

# Meihong Wang

## List of Publications by Year in descending order

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119  
papers

5,514  
citations

81900

39  
h-index

88630

70  
g-index

122  
all docs

122  
docs citations

122  
times ranked

4803  
citing authors

#	ARTICLE	IF	CITATIONS
1	Long-term performance prediction of solid oxide electrolysis cell (SOEC) for CO <sub>2</sub> /H <sub>2</sub> O co-electrolysis considering structural degradation through modelling and simulation. Chemical Engineering Journal, 2022, 429, 132158.	12.7	42
2	Data-driven adaptive robust optimization for energy systems in ethylene plant under demand uncertainty. Applied Energy, 2022, 307, 118148.	10.1	22
3	Simulation, energy and exergy analysis of compressed air energy storage integrated with organic Rankine cycle and single effect absorption refrigeration for trigeneration application. Fuel, 2022, 317, 123291.	6.4	16
4	Robust monitoring of solvent based carbon capture process using deep learning network based moving horizon estimation. Fuel, 2022, 321, 124071.	6.4	5
5	Experimental studies, molecular simulation and process modellingsimulation of adsorption-based post-combustion carbon capture for power plants: A state-of-the-art review. Applied Energy, 2022, 317, 119156.	10.1	32
6	Process improvement analysis of pyrolysis/gasification of biomass and waste plastics with carbon capture and utilisation through process simulation. Fuel, 2022, 324, 124571.	6.4	12
7	Exergy analysis and multi-objective optimisation for energy system: a case study of a separation process in ethylene manufacturing. Journal of Industrial and Engineering Chemistry, 2021, 93, 394-406.	5.8	21
8	Transformation technologies for CO <sub>2</sub> utilisation: Current status, challenges and future prospects. Chemical Engineering Journal, 2021, 409, 128138.	12.7	207
9	Heterojunction-redox catalysts of Fe <sub>x</sub> Co <sub>y</sub> Mg <sub>10</sub> CaO for high-temperature CO <sub>2</sub> capture and <i>in situ</i> conversion in the context of green manufacturing. Energy and Environmental Science, 2021, 14, 2291-2301.	30.8	86
10	Technical and economic performance assessment of post-combustion carbon capture using piperazine for large scale natural gas combined cycle power plants through process simulation. Applied Energy, 2021, 292, 116893.	10.1	31
11	Dynamic modelling based on surface renewal theory, model validation and process analysis of rotating packed bed absorber for carbon capture. Applied Energy, 2021, 301, 117462.	10.1	11
12	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.	30.8	98
13	H <sub>2</sub> production from co-pyrolysis/gasification of waste plastics and biomass under novel catalyst Ni-CaO-C. Chemical Engineering Journal, 2020, 382, 122947.	12.7	145
14	Solvent-based post-combustion CO <sub>2</sub> capture for power plants: A critical review and perspective on dynamic modelling, system identification, process control and flexible operation. Applied Energy, 2020, 257, 113941.	10.1	95
15	A porous ionic polymer bionic carrier in a mixed matrix membrane for facilitating selective CO <sub>2</sub> permeability. Journal of Membrane Science, 2020, 598, 117677.	8.2	15
16	A new method for scale-up of solvent-based post-combustion carbon capture process with packed columns. International Journal of Greenhouse Gas Control, 2020, 93, 102900.	4.6	11
17	Flexible operation of supercritical coal-fired power plant integrated with solvent-based CO <sub>2</sub> capture through collaborative predictive control. Energy, 2020, 206, 118105.	8.8	23
18	Nonlinear model predictive control (NMPC) of the solvent-based post-combustion CO <sub>2</sub> capture process. Energy, 2020, 213, 118840.	8.8	13

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19	Substance transfer behavior controlled by droplet internal circulation. Chemical Engineering Journal, 2020, 393, 124657.	12.7	9
20	Flexible operation of large-scale coal-fired power plant integrated with solvent-based post-combustion CO <sub>2</sub> capture based on neural network inverse control. International Journal of Greenhouse Gas Control, 2020, 95, 102985.	4.6	21
21	Intelligent predictive control of large-scale solvent-based CO <sub>2</sub> capture plant using artificial neural network and particle swarm optimization. Energy, 2020, 196, 117070.	8.8	46
22	Experimental study on pyrolysis/gasification of biomass and plastics for H <sub>2</sub> production under new dual-support catalyst. Chemical Engineering Journal, 2020, 396, 125260.	12.7	91
23	In Situ Electromagnetic Induction Heating for CO <sub>2</sub> Temperature Swing Adsorption on Magnetic Fe <sub>3</sub> O <sub>4</sub> /N-Doped Porous Carbon. Energy & Fuels, 2020, 34, 14439-14446.	5.1	17
24	Role of solvents in CO <sub>2</sub> capture processes: The review of selection and design methods. Renewable and Sustainable Energy Reviews, 2019, 114, 109299.	16.4	201
25	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.	4.6	9
26	Experimental study of CO <sub>2</sub> solubility in high concentration MEA solution for intensified solvent-based carbon capture. MATEC Web of Conferences, 2019, 272, 01004.	0.2	1
27	Flexible operation of coal-fired power plant integrated with post-combustion CO <sub>2</sub> capture. Energy Procedia, 2019, 158, 4810-4815.	1.8	3
28	Assessment of energy saving potential of an industrial ethylene cracking furnace using advanced exergy analysis. Applied Energy, 2019, 254, 113583.	10.1	30
29	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.	8.9	66
30	Flexible operation of coal fired power plant integrated with post combustion CO <sub>2</sub> capture using model predictive control. International Journal of Greenhouse Gas Control, 2019, 82, 138-151.	4.6	23
31	Dynamic modelling and control of supercritical CO <sub>2</sub> power cycle using waste heat from industrial processes. Fuel, 2019, 249, 89-102.	6.4	69
32	Process modelling, validation and analysis of rotating packed bed stripper in the context of intensified CO <sub>2</sub> capture with MEA. Journal of Industrial and Engineering Chemistry, 2019, 75, 285-295.	5.8	30
33	Dynamic behavior investigations and disturbance rejection predictive control of solvent-based post-combustion CO <sub>2</sub> capture process. Fuel, 2019, 242, 624-637.	6.4	16
34	Adsorption-enhanced oxidative desulfurization by a task-specific pyridinium-based porous ionic polymer. Fuel, 2019, 244, 439-446.	6.4	24
35	Reinforced coordinated control of coal-fired power plant retrofitted with solvent based CO <sub>2</sub> capture using model predictive controls. Applied Energy, 2019, 238, 495-515.	10.1	37
36	Study of CO <sub>2</sub> removal in natural gas process using mixture of ionic liquid and MEA through process simulation. Fuel, 2019, 236, 135-146.	6.4	57

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37	CO <sub>2</sub> capture using mesocellular siliceous foam (MCF)-supported CaO. Journal of the Energy Institute, 2019, 92, 1591-1598.	5.3	10
38	Thermodynamic performance evaluation of supercritical CO <sub>2</sub> closed Brayton cycles for coal-fired power generation with solvent-based CO <sub>2</sub> capture. Energy, 2019, 166, 1074-1088.	8.8	51
39	Non-linear system identification of solvent-based post-combustion CO <sub>2</sub> capture process. Fuel, 2019, 239, 1213-1223.	6.4	17
40	Nonlinear dynamic analysis and control design of a solvent-based post-combustion CO <sub>2</sub> capture process. Computers and Chemical Engineering, 2018, 115, 397-406.	3.8	29
41	Process analysis and economic evaluation of mixed aqueous ionic liquid and monoethanolamine (MEA) solvent for CO <sub>2</sub> capture from a coke oven plant. , 2018, 8, 686-700.		18
42	Flexible operation of post-combustion solvent-based carbon capture for coal-fired power plants using multi-model predictive control: A simulation study. Fuel, 2018, 220, 931-941.	6.4	47
43	Study on the integration of fluid catalytic cracking unit in refinery with solvent-based carbon capture through process simulation. Fuel, 2018, 219, 364-374.	6.4	15
44	Technical performance analysis and economic evaluation of a compressed air energy storage system integrated with an organic Rankine cycle. Fuel, 2018, 211, 318-330.	6.4	43
45	Modelling of a post-combustion CO <sub>2</sub> capture process using deep belief network. Applied Thermal Engineering, 2018, 130, 997-1003.	6.0	50
46	Process modelling and analysis of intensified CO <sub>2</sub> capture using monoethanolamine (MEA) in rotating packed bed absorber. Journal of Cleaner Production, 2018, 204, 1124-1142.	9.3	45
47	Techno-economic analysis of wind power integrated with both compressed air energy storage (CAES) and biomass gasification energy storage (BCES) for power generation. RSC Advances, 2018, 8, 22004-22022.	3.6	24
48	Modelling of down-draft gasification of biomass “An integrated pyrolysis, combustion and reduction process. Applied Thermal Engineering, 2018, 142, 444-456.	6.0	44
49	Study of intercooling for rotating packed bed absorbers in intensified solvent-based CO <sub>2</sub> capture process. Applied Energy, 2018, 223, 302-316.	10.1	19
50	Application of piece-wise linear system identification to solvent-based post-combustion carbon capture. Fuel, 2018, 234, 526-537.	6.4	10
51	Model-free adaptive control for MEA-based post-combustion carbon capture processes. Fuel, 2018, 224, 637-643.	6.4	24
52	Optimal Operation of MEA-Based Post-Combustion Carbon Capture Process for Natural Gas Combined Cycle Power Plants. Green Energy and Technology, 2018, , 1377-1391.	0.6	1
53	Technical and Economic Analysis of Ionic Liquid-Based Post-combustion CO <sub>2</sub> Capture Process. Green Energy and Technology, 2018, , 1393-1411.	0.6	1
54	Optimal Operation of MEA-Based Post-combustion Carbon Capture Process for Natural Gas Combined Cycle Power Plants. Green Energy and Technology, 2018, , 299-313.	0.6	1

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55	Modelling of a post-combustion CO <sub>2</sub> capture process using extreme learning machine. International Journal of Coal Science and Technology, 2017, 4, 33-40.	6.0	11
56	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). Applied Energy, 2017, 191, 436-453.	10.1	34
57	Study of solvent-based carbon capture for cargo ships through process modelling and simulation. Applied Energy, 2017, 195, 402-413.	10.1	87
58	Modelling, simulation and analysis of intensified regenerator for solvent based carbon capture using rotating packed bed technology. Applied Energy, 2017, 203, 11-25.	10.1	37
59	Current status and future development of solvent-based carbon capture. International Journal of Coal Science and Technology, 2017, 4, 5-14.	6.0	53
60	Improving Prediction Accuracy of a Rate-Based Model of an MEA-Based Carbon Capture Process for Large-Scale Commercial Deployment. Engineering, 2017, 3, 232-243.	6.7	23
61	Optimal Bidding and Operation of a Power Plant with Solvent-Based Carbon Capture under a CO <sub>2</sub> Allowance Market: A Solution with a Reinforcement Learning-Based Sarsa Temporal-Difference Algorithm. Engineering, 2017, 3, 257-265.	6.7	5
62	Modelling and process analysis of post-combustion carbon capture with the blend of 2-amino-2-methyl-1-propanol and piperazine. International Journal of Greenhouse Gas Control, 2017, 63, 37-46.	4.6	25
63	A comparative study of MEA and DEA for post-combustion CO <sub>2</sub> capture with different process configurations. International Journal of Coal Science and Technology, 2017, 4, 15-24.	6.0	58
64	Process simulation and analysis of carbon capture with an aqueous mixture of ionic liquid and monoethanolamine solvent. International Journal of Coal Science and Technology, 2017, 4, 25-32.	6.0	15
65	Operation and Bidding Strategies of Power Plants with Carbon Capture. IFAC-PapersOnLine, 2017, 50, 3244-3249.	0.9	6
66	Study of Mass Transfer Correlations for Intensified Absorbers in Post-combustion CO <sub>2</sub> Capture Based on Chemical Absorption. Energy Procedia, 2017, 114, 1630-1636.	1.8	5
67	Ultrafast synthesis of 13X@NaA composites through plasma treatment for highly selective carbon capture. Journal of Materials Chemistry A, 2017, 5, 18801-18807.	10.3	12
68	Preliminary Performance Assessment of Intensified Stripper in Post-combustion Carbon Capture through Modelling and Simulation. Energy Procedia, 2017, 114, 1637-1642.	1.8	1
69	Conventional and advanced exergy analysis of post-combustion CO <sub>2</sub> capture based on chemical absorption integrated with supercritical coal-fired power plant. International Journal of Greenhouse Gas Control, 2017, 64, 246-256.	4.6	17
70	Special issue on carbon capture in the context of carbon capture, utilisation and storage (CCUS). International Journal of Coal Science and Technology, 2017, 4, 1-4.	6.0	15
71	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
72	Study of absorber intercooling in solvent-based CO <sub>2</sub> capture based on rotating packed bed technology. Energy Procedia, 2017, 142, 3511-3516.	1.8	7

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73	12 Carbon Capture. Green Chemistry and Chemical Engineering, 2017, , 457-632.	0.0	1
74	Energy storage technologies and real life applications “ A state of the art review. Applied Energy, 2016, 179, 350-377.	10.1	1,154
75	Closed-cycle gas turbine for power generation: A state-of-the-art review. Fuel, 2016, 180, 694-717.	6.4	118
76	Modelling of a post-combustion CO <sub>2</sub> capture process using extreme learning machine. , 2016, ,		2
77	Dynamic Modelling and Analysis of Supercritical Coal-Fired Power Plant Integrated with Post-combustion CO <sub>2</sub> Capture. , 2016, , 359-363.		3
78	Optimal operation of MEA-based post-combustion carbon capture for natural gas combined cycle power plants under different market conditions. International Journal of Greenhouse Gas Control, 2016, 48, 312-320.	4.6	29
79	Modelling of a Post-combustion CO <sub>2</sub> Capture Process Using Bootstrap Aggregated Extreme Learning Machines. Computer Aided Chemical Engineering, 2016, , 2007-2012.	0.5	10
80	Potential for improving the energy efficiency of cryogenic air separation unit (ASU) using binary heat recovery cycles. Applied Thermal Engineering, 2015, 81, 223-231.	6.0	102
81	CO <sub>2</sub> gasification of bio-char derived from conventional and microwave pyrolysis. Applied Energy, 2015, 157, 533-539.	10.1	54
82	Neural network approach for predicting drum pressure and level in coal-fired subcritical power plant. Fuel, 2015, 151, 139-145.	6.4	40
83	Heat integration of natural gas combined cycle power plant integrated with post-combustion CO <sub>2</sub> capture and compression. Fuel, 2015, 151, 110-117.	6.4	61
84	Modelling of a post-combustion CO <sub>2</sub> capture process using neural networks. Fuel, 2015, 151, 156-163.	6.4	57
85	Modelling and process analysis of hybrid hydration“absorption column for ethylene recovery from refinery dry gas. Fuel, 2015, 158, 424-434.	6.4	11
86	Biodiesel from microalgae: The use of multi-criteria decision analysis for strain selection. Fuel, 2015, 159, 241-249.	6.4	53
87	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.	0.5	6
88	Study on heat integration of supercritical coal-fired power plant with post-combustion CO <sub>2</sub> capture process through process simulation. Fuel, 2015, 158, 625-633.	6.4	43
89	Process analysis of pressurized oxy-coal power cycle for carbon capture application integrated with liquid air power generation and binary cycle engines. Applied Energy, 2015, 154, 556-566.	10.1	51
90	Steady state simulation and exergy analysis of supercritical coal-fired power plant with CO <sub>2</sub> capture. Fuel, 2015, 151, 57-72.	6.4	53

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91	Process intensification for post-combustion CO <sub>2</sub> capture with chemical absorption: A critical review. Applied Energy, 2015, 158, 275-291.	10.1	308
92	Simplification of detailed rate-based model of post-combustion CO <sub>2</sub> capture for full chain CCS integration studies. Fuel, 2015, 142, 87-93.	6.4	9
93	Techno-economic analysis of a CO <sub>2</sub> capture plant integrated with a commercial scale combined cycle gas turbine (CCGT) power plant. Applied Thermal Engineering, 2015, 74, 10-19.	6.0	54
94	Modelling and simulation of intensified absorber for post-combustion CO <sub>2</sub> capture using different mass transfer correlations. Applied Thermal Engineering, 2015, 74, 47-53.	6.0	37
95	Process Simulation and Analysis for CO <sub>2</sub> Transport Pipeline Design and Operation – Case Study for the Humber Region in the UK. Computer Aided Chemical Engineering, 2014, , 1633-1638.	0.5	6
96	Technical and Economic Analysis of Chemical Looping Combustion with Humid Air Turbine Power Cycle. Computer Aided Chemical Engineering, 2014, 33, 1123-1128.	0.5	0
97	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.	0.5	6
98	Simulation-based techno-economic evaluation for optimal design of CO <sub>2</sub> transport pipeline network. Applied Energy, 2014, 132, 610-620.	10.1	63
99	Process analysis of intensified absorber for post-combustion CO <sub>2</sub> capture through modelling and simulation. International Journal of Greenhouse Gas Control, 2014, 21, 91-100.	4.6	68
100	Dynamic modelling, validation and analysis of coal-fired subcritical power plant. Fuel, 2014, 135, 292-300.	6.4	63
101	Case study on CO <sub>2</sub> transport pipeline network design for Humber region in the UK. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2014, 228, 210-225.	2.5	11
102	Experimental study, dynamic modelling, validation and analysis of hydrogen production from biomass pyrolysis/gasification of biomass in a two-stage fixed bed reaction system. Fuel, 2014, 137, 364-374.	6.4	35
103	Techno-economic analysis of chemical looping combustion with humid air turbine power cycle. Fuel, 2014, 124, 221-231.	6.4	44
104	Thermodynamic analysis of combined cycle gas turbine power plant with post-combustion CO <sub>2</sub> capture and exhaust gas recirculation. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2013, 227, 89-105.	2.5	44
105	Refinery scheduling of crude oil unloading with tank inventory management. Computers and Chemical Engineering, 2013, 55, 134-147.	3.8	24
106	An improved MILP model for scheduling crude oil unloading, storage and processing. Computer Aided Chemical Engineering, 2013, 32, 631-636.	0.5	1
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.	2.5	2
108	Techno-Economic Analysis of a Natural Gas Combined Cycle Power Plant with CO <sub>2</sub> Capture. Computer Aided Chemical Engineering, 2013, , 187-192.	0.5	10



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109	Heat Exchanger Network Design and Economic Analysis for Coal-fired Power Plant retrofitted with CO2 Capture. Computer Aided Chemical Engineering, 2013, 32, 433-438.	0.5	1
110	Demonstrating full-scale post-combustion CO2 capture for coal-fired power plants through dynamic modelling and simulation. Fuel, 2012, 101, 115-128.	6.4	167
111	Aggregate Model for Refinery Production Planning. Computer Aided Chemical Engineering, 2012, 30, 917-921.	0.5	0
112	Dynamic modelling, validation and analysis of post-combustion chemical absorption CO2 capture plant. International Journal of Greenhouse Gas Control, 2012, 9, 428-445.	4.6	102
113	Comparative Techno-economic Analysis of Biodiesel Production from Microalgae via Transesterification Methods. Computer Aided Chemical Engineering, 2012, 30, 132-136.	0.5	4
114	Dynamic Validation of Model for Post-Combustion Chemical Absorption CO2 Capture Plant. Computer Aided Chemical Engineering, 2012, , 807-811.	0.5	5
115	Integrated Refinery Planning under Product Demand Uncertainty. Computer Aided Chemical Engineering, 2011, , 950-954.	0.5	1
116	Modelling and dynamic optimisation for optimal operation of industrial tubular reactor for propane cracking. Computer Aided Chemical Engineering, 2011, 29, 955-959.	0.5	2
117	Modelling and dynamic optimization of thermal cracking of propane for ethylene manufacturing. Computers and Chemical Engineering, 2011, 35, 2876-2885.	3.8	50
118	Investigating the dynamic response of CO2 chemical absorption process in enhanced- O2 coal power plant with post-combustion CO2 capture. Energy Procedia, 2011, 4, 1035-1042.	1.8	15
119	Dynamic Modeling and Simulation of CO2 Chemical Absorption Process for Coal-Fired Power Plants. Computer Aided Chemical Engineering, 2009, 27, 1725-1730.	0.5	31