

Mohammad Abu-Zahra

List of Publications by Year in descending order

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81
papers

3,882
citations

236925

25
h-index

123424

61
g-index

81
all docs

81
docs citations

81
times ranked

3274
citing authors

#	ARTICLE	IF	CITATIONS
1	CO ₂ capture from power plants. International Journal of Greenhouse Gas Control, 2007, 1, 37-46.	4.6	654
2	CO ₂ capture from power plants. International Journal of Greenhouse Gas Control, 2007, 1, 135-142.	4.6	479
3	Recent progress and new developments in post-combustion carbon-capture technology with amine based solvents. International Journal of Greenhouse Gas Control, 2015, 40, 26-54.	4.6	403
4	Aqueous amine solution characterization for post-combustion CO ₂ capture process. Applied Energy, 2017, 185, 1433-1449.	10.1	290
5	Applications of fly ash for CO ₂ capture, utilization, and storage. Journal of CO ₂ Utilization, 2019, 29, 82-102.	6.8	234
6	Activated carbons from biomass-based sources for CO ₂ capture applications. Chemosphere, 2021, 282, 131111.	8.2	135
7	Physical synthesis and characterization of activated carbon from date seeds for CO ₂ capture. Journal of Environmental Chemical Engineering, 2018, 6, 4245-4252.	6.7	96
8	Synthesis and characterization of activated carbon from biomass date seeds for carbon dioxide adsorption. Journal of Environmental Chemical Engineering, 2020, 8, 104257.	6.7	94
9	Ship-based carbon capture onboard of diesel or LNG-fuelled ships. International Journal of Greenhouse Gas Control, 2019, 85, 1-10.	4.6	87
10	Activated Carbon from Date Seeds for CO ₂ Capture Applications. Energy Procedia, 2017, 114, 2313-2321.	1.8	86
11	Perspectives and guidelines on thermodynamic modelling of deep eutectic solvents. Journal of Molecular Liquids, 2020, 298, 112183.	4.9	83
12	Physicochemical properties of alkanolamine-choline chloride deep eutectic solvents: Measurements, group contribution and artificial intelligence prediction techniques. Journal of Molecular Liquids, 2018, 256, 581-590.	4.9	71
13	Experimental Study of the Solubility of CO ₂ in Novel Amine Based Deep Eutectic Solvents. Energy Procedia, 2017, 105, 1394-1400.	1.8	63
14	Evaluation of amine-blend solvent systems for CO ₂ post-combustion capture applications. Energy Procedia, 2013, 37, 211-218.	1.8	49
15	Thermally Stable Amine-Grafted Adsorbent Prepared by Impregnating 3-Aminopropyltriethoxysilane on Mesoporous Silica for CO ₂ Capture. Industrial & Engineering Chemistry Research, 2016, 55, 7842-7852.	3.7	49
16	One-Step Process Using CO ₂ for the Preparation of Amino-Functionalized Mesoporous Silica for CO ₂ Capture Application. ACS Sustainable Chemistry and Engineering, 2017, 5, 3170-3178.	6.7	44
17	Simultaneous carbon dioxide capture and utilization using thermal desalination reject brine. Applied Energy, 2015, 154, 298-308.	10.1	41
18	Screening of Ionic Liquids and Deep Eutectic Solvents for Physical CO ₂ Absorption by Soft-SAFT Using Key Performance Indicators. Journal of Chemical & Engineering Data, 2020, 65, 5844-5861.	1.9	40

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19	Effect of moisture on the heat capacity and the regeneration heat required for CO ₂ capture process using PEI impregnated mesoporous precipitated silica. , 2015, 5, 91-101.		39
20	Novel Green Solvents for CO ₂ Capture. Energy Procedia, 2017, 114, 2552-2560.	1.8	37
21	New process concepts for CO ₂ post-combustion capture process integrated with co-production of hydrogen. International Journal of Hydrogen Energy, 2009, 34, 3992-4004.	7.1	36
22	CO ₂ purification. Part I: Purification requirement review and the selection of impurities deep removal technologies. International Journal of Greenhouse Gas Control, 2013, 16, 324-334.	4.6	35
23	Modifying absorption process configurations to improve their performance for Post-Combustion CO ₂ capture " What have we learned and what is still Missing?. Chemical Engineering Journal, 2022, 430, 133096.	12.7	34
24	Life cycle assessment of natural gas combined cycle integrated with CO ₂ post combustion capture using chemical solvent. International Journal of Greenhouse Gas Control, 2013, 19, 441-452.	4.6	28
25	Reaction Kinetics of Carbon Dioxide (CO ₂) Absorption in Sodium Salts of Taurine and Proline Using a Stopped-Flow Technique. International Journal of Chemical Kinetics, 2014, 46, 730-745.	1.6	28
26	Evaluation of CO ₂ Purification Requirements and the Selection of Processes for Impurities Deep Removal from the CO ₂ Product Stream. Energy Procedia, 2013, 37, 2389-2396.	1.8	26
27	Effect of PEI Impregnation on the CO ₂ Capture Performance of Activated Fly Ash. Energy Procedia, 2017, 114, 2243-2251.	1.8	26
28	A process for combined CO ₂ utilization and treatment of desalination reject brine. Desalination, 2018, 442, 62-74.	8.2	26
29	Performance of Activated Carbons Derived from Date Seeds in CO ₂ Swing Adsorption Determined by Combining Experimental and Molecular Simulation Data. Industrial & Engineering Chemistry Research, 2020, 59, 7161-7173.	3.7	25
30	Impregnation of Amines Onto Porous Precipitated Silica for CO ₂ capture. Energy Procedia, 2014, 63, 2122-2128.	1.8	24
31	Investigation of CO ₂ adsorption performance and fluidization behavior of mesoporous silica supported polyethyleneimine. Powder Technology, 2016, 301, 449-462.	4.2	24
32	Hybrid " Slurry/Nanofluid systems as alternative to conventional chemical absorption for carbon dioxide capture: A review. International Journal of Greenhouse Gas Control, 2021, 110, 103415.	4.6	23
33	Real-Time Process Monitoring of CO ₂ Capture by Aqueous AMP-PZ Using Chemometrics: Pilot Plant Demonstration. Industrial & Engineering Chemistry Research, 2015, 54, 5769-5776.	3.7	21
34	CO ₂ utilization from power plant: A comparative techno-economic assessment of soda ash production and scrubbing by monoethanolamine. Journal of Cleaner Production, 2019, 237, 117760.	9.3	21
35	Guidelines for process development and future cost reduction of CO ₂ post-combustion capture. Energy Procedia, 2011, 4, 1051-1057.	1.8	20
36	Techno-economic Evaluation Methodology and Preliminary Comparison of an Amine-based and Advanced Solid Sorbent-based CO ₂ Capture Process for NGCC Power Plants. Energy Procedia, 2013, 37, 2432-2442.	1.8	19

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37	Molecular simulations of carbon-based materials for selected CO ₂ separation and water treatment processes. <i>Fluid Phase Equilibria</i> , 2019, 492, 10-25.	2.5	19
38	Modelling of a recirculating photocatalytic microreactor implementing mesoporous N-TiO ₂ modified with graphene. <i>Chemical Engineering Journal</i> , 2020, 391, 123574.	12.7	19
39	Evaluation of Handling and Reuse Approaches for the Waste Generated from MEA-based CO ₂ Capture with the Consideration of Regulations in the UAE. <i>Environmental Science & Technology</i> , 2013, 47, 13644-13651.	10.0	18
40	Benchmarking of a novel solid sorbent CO ₂ capture process for NGCC power generation. <i>International Journal of Greenhouse Gas Control</i> , 2015, 42, 583-592.	4.6	18
41	Study of Novel Solvent for CO ₂ Post-combustion Capture. <i>Energy Procedia</i> , 2015, 75, 2268-2286.	1.8	17
42	The Effect of the Carbon Capture and Storage (CCS) Technology Deployment on the Natural Gas Market in the United Arab Emirates. <i>Energy Procedia</i> , 2017, 114, 6366-6376.	1.8	17
43	Critical assessment of the performance of next-generation carbon-based adsorbents for CO ₂ capture focused on their structural properties. <i>Science of the Total Environment</i> , 2022, 810, 151720.	8.0	17
44	The Kinetic Effect of Adding Piperazine Activator to Aqueous Tertiary and Sterically-hindered Amines Using Stopped-flow Technique. <i>Energy Procedia</i> , 2014, 63, 1256-1267.	1.8	16
45	CO ₂ adsorption testing on fly ash derived cancrinite type zeolite and its amine functionalized derivatives. <i>Environmental Progress and Sustainable Energy</i> , 2019, 38, 77-88.	2.3	16
46	Potential for the Simultaneous Capture and Utilization of CO ₂ Using Desalination Reject Brine: Amine Solvent Selection and Evaluation. <i>Energy Procedia</i> , 2014, 63, 7947-7953.	1.8	15
47	Techno-Economic Analysis of a Carbon Capture Chemical Looping Combustion Power Plant. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2018, 140, .	2.3	15
48	Advanced Solid Sorbent-Based CO ₂ Capture Process. <i>Energy Procedia</i> , 2014, 63, 2216-2229.	1.8	14
49	Techno-economic analysis of a poly-generation solar-assisted chemical looping combustion power plant. <i>Applied Energy</i> , 2018, 228, 724-735.	10.1	14
50	Electrokinetic pretreatment of seawater to decrease the Ca ²⁺ , Mg ²⁺ , SO ₄ ²⁻ and bacteria contents in membrane desalination applications. <i>Desalination</i> , 2017, 403, 107-116.	8.2	13
51	Screening and Characterization of Advanced Amine Based Solvent Systems for CO ₂ Post-Combustion Capture. <i>Energy Procedia</i> , 2013, 37, 300-305.	1.8	12
52	CO ₂ purification. Part II: Techno-economic evaluation of oxygen and water deep removal processes. <i>International Journal of Greenhouse Gas Control</i> , 2013, 16, 335-341.	4.6	11
53	Understanding and Modelling the Effect of Dissolved Metals on Solvent Degradation in Post Combustion CO ₂ Capture Based on Pilot Plant Experience. <i>Energies</i> , 2017, 10, 629.	3.1	11
54	Chemical reaction kinetics measurements for single and blended amines for CO ₂ postcombustion capture applications. <i>International Journal of Chemical Kinetics</i> , 2018, 50, 615-632.	1.6	11

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55	Sustainability criteria as a game changer in the search for hybrid solvents for CO ₂ and H ₂ S removal. Separation and Purification Technology, 2021, 277, 119516.	7.9	11
56	Overview of aerosols in post-combustion CO ₂ capture. , 2016, , 465-485.		10
57	Techno-economic assessment of future-proofing coal plants with postcombustion capture against technology developments. Energy Procedia, 2011, 4, 1909-1916.	1.8	9
58	The evaluation of monoethanolamine-based CO ₂ post-combustion capture process waste handling approaches considering the regulations in UAE. Energy Procedia, 2013, 37, 751-758.	1.8	9
59	Heat of Absorption and Specific Heat of Carbon Dioxide in Aqueous Solutions of Monoethanolamine,3-piperidinemethanol and Their Blends. Energy Procedia, 2014, 63, 2070-2081.	1.8	7
60	Commercial liquid absorbent-based PCC processes. , 2016, , 757-778.		7
61	Supercritical Technology-Based Date Sugar Powder Production: Process Modeling and Simulation. Processes, 2022, 10, 257.	2.8	7
62	Rheological and physicochemical characterization of UAE crude oil. Petroleum Science and Technology, 2016, 34, 659-664.	1.5	6
63	Template-free amine-bridged silsesquioxane with dangling amino groups and its CO ₂ adsorption performance. Journal of Materials Chemistry A, 2018, 6, 23690-23702.	10.3	6
64	Reversible Metal Sulfide Transition in a Two-Step Thermochemical H ₂ S Splitting. Industrial & Engineering Chemistry Research, 2022, 61, 6135-6145.	3.7	6
65	Emissions to the Atmosphere from Amine-Based Post Combustion CO ₂ Capture Plant â€“ Regulatory Aspects. Oil and Gas Science and Technology, 2014, 69, 793-803.	1.4	5
66	Preparation of Polyethylenimine Impregnated Mesoporous Precipitated Silica for CO ₂ Capture. , 2015, , 21-37.		4
67	CO ₂ -Enhanced Oil Recovery System Optimization for Contract-based versus Integrated Operations. Energy Procedia, 2017, 105, 4357-4362.	1.8	4
68	Evaluation of CO ₂ Post Combustion Capture Integration with Combined Cycle Power and Desalination Co-generation Plant. Energy Procedia, 2013, 37, 2595-2601.	1.8	3
69	Study of Novel Solvents and 2MAE Blends for CO ₂ Post-Combustion Capture. Energy Procedia, 2017, 114, 686-692.	1.8	3
70	The Evaluation of Oxy-fuel Combustion Deployment at the Mirfa Plant in UAE. Energy Procedia, 2017, 114, 530-538.	1.8	3
71	Material screening for two-step thermochemical splitting of H ₂ S using metal sulfide. E3S Web of Conferences, 2019, 83, 01003.	0.5	3
72	The Utilization of CO ₂ , Alkaline Solid Waste, and Desalination Reject Brine in Soda Ash Production. Energy, Environment, and Sustainability, 2019, , 153-184.	1.0	3

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73	An advanced novel solvent for CO ₂ post-combustion capture application. , 2014, , .		2
74	Outlook for a Power Generation Fuel Transition in the MENA Region. Journal of Energy Engineering - ASCE, 2015, 141, 04014026.	1.9	2
75	Development of Amine-blend Systems for CO ₂ Post-Combustion Capture. , 2015, , 59-68.		2
76	Amine-Blends Screening and Characterization for CO ₂ Post-combustion Capture. Green Energy and Technology, 2017,, 177-189.	0.6	2
77	Potential for Hybrid-Cooling System for the CO ₂ Post-Combustion Capture Technology. Energy Procedia, 2017, 114, 6348-6357.	1.8	2
78	Techno-economic Evaluation of Processes for Oxygen and Water Removal from the CO ₂ Product Stream. Energy Procedia, 2013, 37, 2462-2469.	1.8	1
79	Techno-economics of liquid absorbent-based post-combustion CO ₂ processes. , 2016, , 685-710.		1
80	The Combination of CO ₂ Utilization and Solid Sorbent Preparation in One Step Process. Energy Procedia, 2017, 114, 2460-2466.	1.8	1
81	Precipitating amino acid solutions. , 2016, , 103-119.		0