

Mohammad Abu-Zahra

List of Publications by Year in descending order

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81
papers

3,882
citations

270111

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139680

61
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all docs

81
docs citations

81
times ranked

3721
citing authors

#	ARTICLE	IF	CITATIONS
1	Modifying absorption process configurations to improve their performance for Post-Combustion CO ₂ capture â€“ What have we learned and what is still Missing?. Chemical Engineering Journal, 2022, 430, 133096.	6.6	34
2	Reversible Metal Sulfide Transition in a Two-Step Thermochemical H ₂ S Splitting. Industrial & Engineering Chemistry Research, 2022, 61, 6135-6145.	1.8	6
3	Critical assessment of the performance of next-generation carbon-based adsorbents for CO ₂ capture focused on their structural properties. Science of the Total Environment, 2022, 810, 151720.	3.9	17
4	Supercritical Technology-Based Date Sugar Powder Production: Process Modeling and Simulation. Processes, 2022, 10, 257.	1.3	7
5	Hybrid â€“ Slurry/Nanofluid systems as alternative to conventional chemical absorption for carbon dioxide capture: A review. International Journal of Greenhouse Gas Control, 2021, 110, 103415.	2.3	23
6	Activated carbons from biomass-based sources for CO ₂ capture applications. Chemosphere, 2021, 282, 131111.	4.2	135
7	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.	3.9	11
8	Modelling of a recirculating photocatalytic microreactor implementing mesoporous N-TiO ₂ modified with graphene. Chemical Engineering Journal, 2020, 391, 123574.	6.6	19
9	Perspectives and guidelines on thermodynamic modelling of deep eutectic solvents. Journal of Molecular Liquids, 2020, 298, 112183.	2.3	83
10	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.	1.0	40
11	Synthesis and characterization of activated carbon from biomass date seeds for carbon dioxide adsorption. Journal of Environmental Chemical Engineering, 2020, 8, 104257.	3.3	94
12	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.	1.8	25
13	CO ₂ adsorption testing on fly ash derived cancrinite-type zeolite and its amine-functionalized derivatives. Environmental Progress and Sustainable Energy, 2019, 38, 77-88.	1.3	16
14	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.	4.6	21
15	Material screening for two-step thermochemical splitting of H ₂ S using metal sulfide. E3S Web of Conferences, 2019, 83, 01003.	0.2	3
16	Molecular simulations of carbon-based materials for selected CO ₂ separation and water treatment processes. Fluid Phase Equilibria, 2019, 492, 10-25.	1.4	19
17	Ship-based carbon capture onboard of diesel or LNG-fuelled ships. International Journal of Greenhouse Gas Control, 2019, 85, 1-10.	2.3	87
18	The Utilization of CO ₂ , Alkaline Solid Waste, and Desalination Reject Brine in Soda Ash Production. Energy, Environment, and Sustainability, 2019, , 153-184.	0.6	3

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19	Applications of fly ash for CO ₂ capture, utilization, and storage. Journal of CO ₂ Utilization, 2019, 29, 82-102.	3.3	234
20	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.	2.3	71
21	Template-free amine-bridged silsesquioxane with dangling amino groups and its CO ₂ adsorption performance. Journal of Materials Chemistry A, 2018, 6, 23690-23702.	5.2	6
22	Techno-Economic Analysis of a Carbon Capture Chemical Looping Combustion Power Plant. Journal of Energy Resources Technology, Transactions of the ASME, 2018, 140, .	1.4	15
23	A process for combined CO ₂ utilization and treatment of desalination reject brine. Desalination, 2018, 442, 62-74.	4.0	26
24	Techno-economic analysis of a poly-generation solar-assisted chemical looping combustion power plant. Applied Energy, 2018, 228, 724-735.	5.1	14
25	Chemical reaction kinetics measurements for single and blended amines for CO ₂ postcombustion capture applications. International Journal of Chemical Kinetics, 2018, 50, 615-632.	1.0	11
26	Physical synthesis and characterization of activated carbon from date seeds for CO ₂ capture. Journal of Environmental Chemical Engineering, 2018, 6, 4245-4252.	3.3	96
27	Aqueous amine solution characterization for post-combustion CO ₂ capture process. Applied Energy, 2017, 185, 1433-1449.	5.1	290
28	Electrokinetic pretreatment of seawater to decrease the Ca ²⁺ , Mg ²⁺ , SO ₄ ²⁻ and bacteria contents in membrane desalination applications. Desalination, 2017, 403, 107-116.	4.0	13
29	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.	3.2	44
30	CO ₂ -Enhanced Oil Recovery System Optimization for Contract-based versus Integrated Operations. Energy Procedia, 2017, 105, 4357-4362.	1.8	4
31	Experimental Study of the Solubility of CO ₂ in Novel Amine Based Deep Eutectic Solvents. Energy Procedia, 2017, 105, 1394-1400.	1.8	63
32	Amine-Blends Screening and Characterization for CO ₂ Post-combustion Capture. Green Energy and Technology, 2017, , 177-189.	0.4	2
33	Effect of PEI Impregnation on the CO ₂ Capture Performance of Activated Fly Ash. Energy Procedia, 2017, 114, 2243-2251.	1.8	26
34	The Combination of CO ₂ Utilization and Solid Sorbent Preparation in One Step Process. Energy Procedia, 2017, 114, 2460-2466.	1.8	1
35	Study of Novel Solvents and 2MAE Blends for CO ₂ Post-Combustion Capture. Energy Procedia, 2017, 114, 686-692.	1.8	3
36	Potential for Hybrid-Cooling System for the CO ₂ Post-Combustion Capture Technology. Energy Procedia, 2017, 114, 6348-6357.	1.8	2

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37	Novel Green Solvents for CO ₂ Capture. Energy Procedia, 2017, 114, 2552-2560.	1.8	37
38	The Evaluation of Oxy-fuel Combustion Deployment at the Mirfa Plant in UAE. Energy Procedia, 2017, 114, 530-538.	1.8	3
39	The Effect of the Carbon Capture and Storage (CCS) Technology Deployment on the Natural Gas Market in the United Arab Emirates. Energy Procedia, 2017, 114, 6366-6376.	1.8	17
40	Activated Carbon from Date Seeds for CO ₂ Capture Applications. Energy Procedia, 2017, 114, 2313-2321.	1.8	86
41	Understanding and Modelling the Effect of Dissolved Metals on Solvent Degradation in Post Combustion CO ₂ Capture Based on Pilot Plant Experience. Energies, 2017, 10, 629.	1.6	11
42	Precipitating amino acid solutions. , 2016, , 103-119.		0
43	Overview of aerosols in post-combustion CO ₂ capture. , 2016, , 465-485.		10
44	Techno-economics of liquid absorbent-based post-combustion CO ₂ processes. , 2016, , 685-710.		1
45	Commercial liquid absorbent-based PCC processes. , 2016, , 757-778.		7
46	Rheological and physicochemical characterization of UAE crude oil. Petroleum Science and Technology, 2016, 34, 659-664.	0.7	6
47	Investigation of CO ₂ adsorption performance and fluidization behavior of mesoporous silica supported polyethyleneimine. Powder Technology, 2016, 301, 449-462.	2.1	24
48	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.	1.8	49
49	Study of Novel Solvent for CO ₂ Post-combustion Capture. Energy Procedia, 2015, 75, 2268-2286.	1.8	17
50	Outlook for a Power Generation Fuel Transition in the MENA Region. Journal of Energy Engineering - ASCE, 2015, 141, 04014026.	1.0	2
51	Development of Amine-blend Systems for CO ₂ Post-Combustion Capture. , 2015, , 59-68.		2
52	Simultaneous carbon dioxide capture and utilization using thermal desalination reject brine. Applied Energy, 2015, 154, 298-308.	5.1	41
53	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.	2.3	403
54	Preparation of Polyethylenimine Impregnated Mesoporous Precipitated Silica for CO ₂ Capture. , 2015, , 21-37.		4

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55	Real-Time Process Monitoring of CO ₂ Capture by Aqueous AMP-PZ Using Chemometrics: Pilot Plant Demonstration. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 5769-5776.	1.8	21
56	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.	2.3	18
57	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
58	Emissions to the Atmosphere from Amine-Based Post Combustion CO ₂ Capture Plant â€“ Regulatory Aspects. <i>Oil and Gas Science and Technology</i> , 2014, 69, 793-803.	1.4	5
59	Heat of Absorption and Specific Heat of Carbon Dioxide in Aqueous Solutions of Monoethanolamine,3-piperidinemethanol and Their Blends. <i>Energy Procedia</i> , 2014, 63, 2070-2081.	1.8	7
60	Advanced Solid Sorbent-Based CO ₂ Capture Process. <i>Energy Procedia</i> , 2014, 63, 2216-2229.	1.8	14
61	Impregnation of Amines Onto Porous Precipitated Silica for CO ₂ capture. <i>Energy Procedia</i> , 2014, 63, 2122-2128.	1.8	24
62	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
63	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
64	An advanced novel solvent for CO ₂ post-combustion capture application. , 2014, , .		2
65	Reaction Kinetics of Carbon Dioxide (CO ₂) Absorption in Sodium Salts of Taurine and Proline Using a Stopped-Flow Technique. <i>International Journal of Chemical Kinetics</i> , 2014, 46, 730-745.	1.0	28
66	Evaluation of CO ₂ Post Combustion Capture Integration with Combined Cycle Power and Desalination Co-generation Plant. <i>Energy Procedia</i> , 2013, 37, 2595-2601.	1.8	3
67	Life cycle assessment of natural gas combined cycle integrated with CO ₂ post combustion capture using chemical solvent. <i>International Journal of Greenhouse Gas Control</i> , 2013, 19, 441-452.	2.3	28
68	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
69	Techno-economic Evaluation of Processes for Oxygen and Water Removal from the CO ₂ Product Stream. <i>Energy Procedia</i> , 2013, 37, 2462-2469.	1.8	1
70	CO ₂ purification. Part I: Purification requirement review and the selection of impurities deep removal technologies. <i>International Journal of Greenhouse Gas Control</i> , 2013, 16, 324-334.	2.3	35
71	Evaluation of CO ₂ Purification Requirements and the Selection of Processes for Impurities Deep Removal from the CO ₂ Product Stream. <i>Energy Procedia</i> , 2013, 37, 2389-2396.	1.8	26
72	The evaluation of monoethanolamine-based CO ₂ post-combustion capture process waste handling approaches considering the regulations in UAE. <i>Energy Procedia</i> , 2013, 37, 751-758.	1.8	9

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73	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
74	Evaluation of amine-blend solvent systems for CO ₂ post-combustion capture applications. Energy Procedia, 2013, 37, 211-218.	1.8	49
75	Evaluation of Handling and Reuse Approaches for the Waste Generated from MEA-based CO ₂ Capture with the Consideration of Regulations in the UAE. Environmental Science & Technology, 2013, 47, 13644-13651.	4.6	18
76	CO ₂ purification. Part II: Techno-economic evaluation of oxygen and water deep removal processes. International Journal of Greenhouse Gas Control, 2013, 16, 335-341.	2.3	11
77	Guidelines for process development and future cost reduction of CO ₂ post-combustion capture. Energy Procedia, 2011, 4, 1051-1057.	1.8	20
78	Techno-economic assessment of future-proofing coal plants with postcombustion capture against technology developments. Energy Procedia, 2011, 4, 1909-1916.	1.8	9
79	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.	3.8	36
80	CO ₂ capture from power plants. International Journal of Greenhouse Gas Control, 2007, 1, 37-46.	2.3	654
81	CO ₂ capture from power plants. International Journal of Greenhouse Gas Control, 2007, 1, 135-142.	2.3	479