Kathryn A Mumford

List of Publications by Year
in descending order

97	2,632	236925 25	214800 47
papers	citations	h-index	g-index

99	99	99	2444
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Membrane-based carbon capture from flue gas: a review. Journal of Cleaner Production, 2015, 103, 286-300.	9.3	288
2	Review of solvent based carbon-dioxide capture technologies. Frontiers of Chemical Science and Engineering, 2015, 9, 125-141.	4.4	238
3	Carbon dioxide absorption into promoted potassium carbonate solutions: A review. International Journal of Greenhouse Gas Control, 2016, 53, 28-40.	4.6	123
4	The electrochemical regeneration of granular activated carbons: A review. Journal of Hazardous Materials, 2018, 355, 34-49.	12.4	101
5	Post-combustion Capture of CO₂: Results from the Solvent Absorption Capture Plant at Hazelwood Power Station Using Potassium Carbonate Solvent. Energy & Fuels, 2012, 26, 138-146.	5.1	83
6	A kinetic and process modeling study of CO2 capture with MEA-promoted potassium carbonate solutions. Chemical Engineering Journal, 2012, 210, 271-279.	12.7	82
7	Experiments and Thermodynamic Modeling of the Solubility of Carbon Dioxide in Three Different Deep Eutectic Solvents (DESs). Journal of Chemical & Engineering Data, 2015, 60, 3246-3252.	1.9	81
8	Surface modification of natural zeolite by chitosan and its use for nitrate removal in cold regions. Cold Regions Science and Technology, 2010, 62, 92-97.	3.5	69
9	Catalytic Solvent Regeneration for Energy-Efficient CO₂ Capture. ACS Sustainable Chemistry and Engineering, 2020, 8, 18755-18788.	6.7	68
10	Carbon dioxide capture by solvent absorption using amino acids: A review. Chinese Journal of Chemical Engineering, 2018, 26, 2229-2237.	3.5	67
11	Pre-combustion capture of CO2â€"Results from solvent absorption pilot plant trials using 30wt% potassium carbonate and boric acid promoted potassium carbonate solvent. International Journal of Greenhouse Gas Control, 2012, 10, 64-73.	4.6	62
12	Demonstration of a Concentrated Potassium Carbonate Process for CO₂ Capture. Energy & Fuels, 2014, 28, 299-306.	5.1	58
13	Uranium adsorption and subsequent re-oxidation under aerobic conditions by Leifsonia sp. - Coated biochar as green trapping agent. Environmental Pollution, 2018, 242, 778-787.	7.5	53
14	A permeable reactive barrier (PRB) media sequence for the remediation of heavy metal and hydrocarbon contaminated water: A field assessment at Casey Station, Antarctica. Chemosphere, 2016, 147, 368-375.	8.2	50
15	Pilot plant results for a precipitating potassium carbonate solvent absorption process promoted with glycine for enhanced CO2 capture. Fuel Processing Technology, 2015, 135, 60-65.	7.2	49
16	Porous media transport of iron nanoparticles for site remediation application: A review of lab scale column study, transport modelling and field-scale application. Journal of Hazardous Materials, 2021, 403, 123443.	12.4	48
17	Design, installation and preliminary testing of a permeable reactive barrier for diesel fuel remediation at Casey Station, Antarctica. Cold Regions Science and Technology, 2013, 96, 96-107.	3.5	46
18	Development of aqueous-based phase change amino acid solvents for energy-efficient CO2 capture: The role of antisolvent. Applied Energy, 2019, 256, 113911.	10.1	42

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19	Engineered assembly of water-dispersible nanocatalysts enables low-cost and green CO2 capture. Nature Communications, 2022, 13, 1249.	12.8	42
20	The electro-Fenton regeneration of Granular Activated Carbons: Degradation of organic contaminants and the relationship to the carbon surface. Journal of Hazardous Materials, 2021, 416, 125792.	12.4	41
21	Dispersed-Phase Holdup and Characteristic Velocity in a Pulsed and Nonpulsed Disk-and-Doughnut Solvent Extraction Column. Industrial & Engineering Chemistry Research, 2016, 55, 714-721.	3.7	37
22	Developments in the CO2CRC UNO MK 3 Process: A Multi-component Solvent Process for Large Scale CO2 Capture. Energy Procedia, 2013, 37, 225-232.	1.8	34
23	Modification of naturally abundant resources for remediation of potentially toxic elements: A review. Journal of Hazardous Materials, 2022, 421, 126755.	12.4	32
24	Hydraulic performance of a permeable reactive barrier at Casey Station, Antarctica. Chemosphere, 2014, 117, 223-231.	8.2	28
25	Prediction of drop size in a pulsed and non-pulsed disc and doughnut solvent extraction column. Chemical Engineering Research and Design, 2016, 109, 667-674.	5.6	27
26	Evaluation of a permeable reactive barrier to capture and degrade hydrocarbon contaminants. Environmental Science and Pollution Research, 2015, 22, 12298-12308.	5.3	23
27	A study of the vapourâ€“liquid equilibrium of CO2 in mixed solutions of potassium carbonate and potassium glycinate. International Journal of Greenhouse Gas Control, 2015, 36, 27-33.	4.6	22
28	Comparative assessment of the characteristics and Cr(VI) removal activity of the bimetallic Fe/Cu nanoparticles pre- and post-coated with carboxymethyl cellulose. Chemical Engineering Journal, 2022, 444, 136343.	12.7	22
29	Evaluation of the protic ionic liquid, N,N-dimethyl-aminoethylammonium formate for CO 2 capture. International Journal of Greenhouse Gas Control, 2015, 32, 129-134.	4.6	21
30	The specific reactive surface area of granular zero-valent iron in metal contaminant removal: Column experiments and modelling. Water Research, 2015, 77, 24-34.	11.3	20
31	Performance of an Industrial Pulsed Disc-and-Doughnut Extraction Column. Solvent Extraction and Ion Exchange, 2016, 34, 161-171.	2.0	20
32	Mass transfer in a pulsed and non-pulsed disc and doughnut (PDD) solvent extraction column. Chemical Engineering Science, 2017, 165, 48-54.	3.8	20
33	Preparation of Nanoporous Carbonaceous Promoters for Enhanced CO2 Absorption in Tertiary Amines. Engineering, 2020, 6, 1381-1394.	6.7	20
34	Novel post-combustion capture technologies on a lignite fired power plant - results of the CO2CRC/H3 capture project. Energy Procedia, 2011, 4, 1668-1675.	1.8	19
35	Removal of copper and zinc from ground water by granular zero-valent iron: A dynamic freezeâ€“thaw permeable reactive barrier laboratory experiment. Cold Regions Science and Technology, 2015, 110, 120-128.	3.5	19
36	Understanding the vapourâ€“liquid equilibrium of CO 2 in mixed solutions of potassium carbonate and potassium glycinate. International Journal of Greenhouse Gas Control, 2016, 47, 303-309.	4.6	19

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37	Outcomes from pilot plant trials of precipitating potassium carbonate solvent absorption for CO 2 capture from a brown coal fired power station in Australia. Fuel Processing Technology, 2017, 155, 252-260.	7.2	19
38	The performance of ammonium exchanged zeolite for the biodegradation of petroleum hydrocarbons migrating in soil water. Journal of Hazardous Materials, 2016, 313, 272-282.	12.4	18
39	Improved Eutectic Based Solvents for Capturing Carbon Dioxide (CO2). Energy Procedia, 2017, 114, 827-833.	1.8	18
40	Modelling of a post-combustion carbon dioxide capture absorber using potassium carbonate solvent in Aspen Custom Modeller. Chinese Journal of Chemical Engineering, 2018, 26, 2327-2336.	3.5	18
41	Extraction of Phenol by Toluene in the Presence of Sodium Hydroxide. Separation Science and Technology, 2014, 49, 2913-2920.	2.5	17
42	Prediction of dispersed phase holdup in pulsed disc and doughnut solvent extraction columns under different mass transfer conditions. Chinese Journal of Chemical Engineering, 2016, 24, 226-231.	3.5	17
43	Permeable bio-reactive barriers to address petroleum hydrocarbon contamination at subantarctic Macquarie Island. Chemosphere, 2017, 174, 408-420.	8.2	17
44	Recent Developments in the UNO MK 3 Processâ€“A Low Cost, Environmentally Benign Precipitating Process for CO2 Capture. Energy Procedia, 2014, 63, 1773-1780.	1.8	16
45	Comparison of the Hydrodynamic Performance of Pulsed Solvent Extraction Columns with Tenova Pulsed Column Kinetics Internals and Standard Disc and Doughnut Internals for Copper Extraction Using the LIX 84 System. Solvent Extraction and Ion Exchange, 2017, 35, 303-320.	2.0	16
46	Electrochemical removal of naphthalene from contaminated waters using carbon electrodes, and viability for environmental deployment. Journal of Hazardous Materials, 2020, 383, 121244.	12.4	16
47	Nucleation kinetics of glycine promoted concentrated potassium carbonate solvents for carbon dioxide absorption. Chemical Engineering Journal, 2020, 381, 122712.	12.7	16
48	Precipitating Characteristics of Potassium Bicarbonate Using Concentrated Potassium Carbonate Solvent for Carbon Dioxide Capture. Part 1. Nucleation. Industrial & Engineering Chemistry Research, 2017, 56, 6764-6774.	3.7	14
49	Investigation of green solvents for the extraction of phenol and natural alkaloids: Solvent and extractant selection. Chemical Engineering Journal, 2022, 442, 136054.	12.7	14
50	Application of a Temperature-Dependent Semiempirical Thermodynamic Ion-Exchange Model to a Multicomponent Natural Zeolite System. Industrial & Engineering Chemistry Research, 2008, 47, 8347-8354.	3.7	13
51	Analysis of the Nonrandom Two-Liquid Model for Prediction of Liquidâ€“liquid Equilibria. Journal of Chemical & Engineering Data, 2014, 59, 2485-2489.	1.9	13
52	A bio-reactive barrier sequence for petroleum hydrocarbon capture and degradation in low nutrient environments. International Biodeterioration and Biodegradation, 2017, 116, 26-37.	3.9	13
53	Prediction of holdup and drop size distribution in a disc-doughnut pulsed column with tenova kinetics internals for the water-Alamine 336 system. Hydrometallurgy, 2018, 181, 82-90.	4.3	13
54	Effect of Leifsonia sp. on retardation of uranium in natural soil and its potential mechanisms. Journal of Environmental Radioactivity, 2020, 217, 106202.	1.7	12

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55	Development of a Two Parameter Temperature-Dependent Semi-Empirical Thermodynamic Ion Exchange Model Using Binary Equilibria with Amberlite IRC 748 Resin. Industrial & Engineering Chemistry Research, 2007, 46, 3766-3773.	3.7	11
56	Regression of NRTL parameters from ternary liquidâ€“liquid equilibria using particle swarm optimization and discussions. Fluid Phase Equilibria, 2015, 398, 36-45.	2.5	11
57	Liquid marble formation and solvent vapor treatment of the biodegradable polymers polylactic acid and polycaprolactone. Journal of Colloid and Interface Science, 2018, 514, 349-356.	9.4	11
58	Solvent Impregnated Polymers for Carbon Capture. Industrial & Engineering Chemistry Research, 2019, 58, 6626-6634.	3.7	11
59	Assessment of the electro-Fenton pathway for the removal of naphthalene from contaminated waters in remote regions. Science of the Total Environment, 2021, 762, 143155.	8.0	11
60	Enhancement in specific absorption rate by solvent microencapsulation. AICHE Journal, 2018, 64, 4066-4079.	3.6	10
61	Assembly of Metalâ€“Phenolic Networks on Waterâ€Soluble Substrates in Nonaqueous Media. Advanced Functional Materials, 2022, 32, .	14.9	10
62	Removal of Copper and Zinc from Ground Water by Granular Zero-Valent Iron: A Study of Kinetics. Separation Science and Technology, 2015, 50, 1748-1756.	2.5	9
63	Axial Dispersion in a Pulsed and Nonpulsed Disc and Doughnut Solvent Extraction Column. Industrial & Engineering Chemistry Research, 2017, 56, 4052-4059.	3.7	9
64	Kinetics of CO2 Absorption in an Ethylethanolamine Based Solution. Industrial & Engineering Chemistry Research, 2017, 56, 12305-12315.	3.7	9
65	Review: Room Temperature Ionic Liquids and System Designs for CO2 Capture. Energy Procedia, 2017, 114, 2671-2674.	1.8	9
66	The performance of diphenyldichlorosilane coated ammonium exchange zeolite and its application in the combination of adsorption and biodegradation of hydrocarbon contaminated ground water. Chemical Engineering Journal, 2018, 347, 415-423.	12.7	9
67	Hydrocarbon adsorption performance and regeneration stability of diphenyldichlorosilane coated zeolite and its application in permeable reactive barriers: Column studies. Microporous and Mesoporous Materials, 2020, 294, 109843.	4.4	9
68	Encapsulation of highly viscous CO2 capture solvents for enhanced capture kinetics: Modeling investigation of mass transfer mechanisms. Chemical Engineering Journal, 2022, 428, 131603.	12.7	9
69	Water-Dispersible Nanocatalysts with Engineered Structures: The New Generation of Nanomaterials for Energy-Efficient CO₂ Capture. ACS Applied Materials & Interfaces, 2021, 13, 57294-57305.	8.0	9
70	A solvent loss study for the application of solvent extraction processes in the pharmaceutical industry. Chemical Engineering Science, 2022, 250, 117400.	3.8	9
71	Comparison of Amberlite IRC-748 Resin and Zeolite for Copper and Ammonium Ion Exchange. Journal of Chemical & Engineering Data, 2008, 53, 2012-2017.	1.9	8
72	Solution Structure of Isoactivity Equations for Liquidâ€“Liquid Equilibrium Calculations Using the Nonrandom Two-Liquid Model. Industrial & Engineering Chemistry Research, 2016, 55, 2852-2859.	3.7	8

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73	Application of controlled nutrient release to permeable reactive barriers. Journal of Environmental Management, 2016, 169, 145-154.	7.8	8
74	Effects of phosphorus-rich sawdust biochar sorption on heavy metals. Separation Science and Technology, 2018, 53, 2704-2716.	2.5	8
75	Temporal control of RAFT polymerization via magnetic catalysis. Polymer Chemistry, 2020, 11, 2838-2846.	3.9	8
76	Results from a Pilot Plant Using Un-promoted Potassium Carbonate for Carbon Capture. Energy Procedia, 2013, 37, 448-454.	1.8	7
77	Effect of Plate Wettability on Dispersed-Phase Holdup in a Pulsed Disc-and-Doughnut Solvent Extraction Column. Solvent Extraction and Ion Exchange, 2017, 35, 573-585.	2.0	7
78	The effect of temperature on hydrocarbon adsorption by diphenyldichlorosilane coated zeolite and its application in permeable reactive barriers in cold regions. Cold Regions Science and Technology, 2018, 145, 169-176.	3.5	7
79	Comparison of the Axial Dispersion Performance of Pulsed Solvent Extraction Columns with Tenova Pulsed Columnâ€“Kinetics Internals and Standard Disc and Doughnut Internals. Solvent Extraction and Ion Exchange, 2018, 36, 387-400.	2.0	6
80	Precipitating Characteristics of Potassium Bicarbonate Using Concentrated Potassium Carbonate Solvent for Carbon Dioxide Capture. Part 2: Crystal Growth. Industrial & Engineering Chemistry Research, 2017, 56, 15131-15142.	3.7	5
81	Comparison of mass transfer performance of pulsed columns with Tenova kinetics internals and standard disc and doughnut internals. Hydrometallurgy, 2019, 186, 132-142.	4.3	5
82	On-site and in situ remediation technologies applicable to metal-contaminated sites in Antarctica and the Arctic: a review. Polar Research, 2013, 33, .	1.6	5
83	Effects of Freezeâ€“Thaw Phenomena on Controlled Nutrient Release: Application to Bioremediation. Clean - Soil, Air, Water, 2016, 44, 1739-1749.	1.1	4
84	Learnings from CO2CRC Capture Pilot Plant Testing â€“ Assessing Technology Development. Energy Procedia, 2017, 114, 5855-5868.	1.8	4
85	Intensified solvent extraction and separation of cobalt from Ni-rich leaching solution in impinging stream-rotating packed bed contactor. Geosystem Engineering, 2020, 23, 251-264.	1.4	4
86	Single drop breakage in a reciprocating plate column. Chemical Engineering Journal, 2021, 415, 129049.	12.7	4
87	Long-Term Acid-Generating and Metal Leaching Potential of a Sub-Arctic Oil Shale. Minerals (Basel,) Tj ETQq1 1 0.784314 rgBT /Overlo	2.0	3
88	Precipitation study of CO2-loaded glycinate solution with the introduction of ethanol as an antisolvent. Frontiers of Chemical Science and Engineering, 2020, 14, 415-424.	4.4	3
89	Drop sizes and population balance model for a Karr column. AICHE Journal, 2022, 68, e17413.	3.6	3
90	Phase Change Solvents for CO2 Capture Applications. Green Energy and Technology, 2017, , 99-116.	0.6	2

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91	Biofilm communities and biodegradation within permeable reactive barriers at fuel spill sites in Antarctica. International Biodeterioration and Biodegradation, 2017, 125, 45-53.	3.9	2
92	Data in brief on CO2 absorption-desorption of aqueous-based amino acid solvents with phase change behaviour. Data in Brief, 2019, 27, 104741.	1.0	2
93	Reply to â€œComments on â€˜Analysis of the Nonrandom Two-Liquid Model for Prediction of Liquidâ€“Liquid Equilibriaâ€™â€. Journal of Chemical & Engineering Data, 2015, 60, 1530-1531.	1.9	1
94	Removal of copper and zinc from ground water by granular zero-valent iron: a mechanistic study. Separation Science and Technology, 0, , 150623131830009.	2.5	1
95	From urban municipalities to polar bioremediation: the characterisation and contribution of biogenic minerals for water treatment. Journal of Water and Health, 2017, 15, 385-401.	2.6	1
96	Desilication of concentrated alkali solution by novel desilication reagent calcium hydroferrocarbonate: Part III. Standard thermodynamics investigation of desilication reaction using hydroferrite desilication reagents. Hydrometallurgy, 2019, 187, 212-220.	4.3	1
97	Use of a Two Parameter Temperature Dependant Semi-Empirical Thermodynamic Ion Exchange Model. Journal of Ion Exchange, 2007, 18, 570-573.	0.3	1