Paitoon Tontiwachwuthikul

List of Publications by Year
in descending order

283 papers	12,626 citations	17440 63 h-index	34986 98 g-index
290 all docs	290 docs citations	290 times ranked	5828 citing authors

#	Article	IF	Citations
1	Pilot Plant Studies of the CO2Capture Performance of Aqueous MEA and Mixed MEA/MDEA Solvents at the University of Regina CO2Capture Technology Development Plant and the Boundary Dam CO2Capture Demonstration Plant. Industrial & Engineering Chemistry Research, 2006, 45, 2414-2420.	3.7	480
2	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
3	Photocatalytic Process for CO2Emission Reduction from Industrial Flue Gas Streams. Industrial & Engineering Chemistry Research, 2006, 45, 2558-2568.	3.7	311
4	Kinetics of the reactive absorption of carbon dioxide in high CO2-loaded, concentrated aqueous monoethanolamine solutions. Chemical Engineering Science, 2003, 58, 5195-5210.	3.8	308
5	Corrosion Behavior of Carbon Steel in the CO2Absorption Process Using Aqueous Amine Solutions. Industrial & Engineering Chemistry Research, 1999, 38, 3917-3924.	3.7	278
6	Using polypropylene and polytetrafluoroethylene membranes in a membrane contactor for CO2 absorption. Journal of Membrane Science, 2006, 277, 99-107.	8.2	197
7	The genetic algorithm based back propagation neural network for MMP prediction in CO2-EOR process. Fuel, 2014, 126, 202-212.	6.4	196
8	Comparing membrane resistance and absorption performance of three different membranes in a gas absorption membrane contactor. Separation and Purification Technology, 2009, 65, 290-297.	7.9	183
9	Review on current advances, future challenges and consideration issues for post-combustion CO2 capture using amine-based absorbents. Chinese Journal of Chemical Engineering, 2016, 24, 278-288.	3.5	181
10	Interfacial Tensions of the Crude Oil + Reservoir Brine + CO2Systems at Pressures up to 31 MPa and Temperatures of 27 Â°C and 58 Â°C. Journal of Chemical & Engineering Data, 2005, 50, 1242-1249.	1.9	178
11	CO2 absorption by NaOH, monoethanolamine and 2-amino-2-methyl-1-propanol solutions in a packed column. Chemical Engineering Science, 1992, 47, 381-390.	3.8	171
12	Artificial intelligence for monitoring and supervisory control of process systems. Engineering Applications of Artificial Intelligence, 2007, 20, 115-131.	8.1	171
13	Comparing the Absorption Performance of Packed Columns and Membrane Contactors. Industrial & Engineering Chemistry Research, 2005, 44, 5726-5732.	3.7	160
14	Catalytic and non catalytic solvent regeneration during absorption-based CO2 capture with single and blended reactive amine solvents. International Journal of Greenhouse Gas Control, 2014, 26, 39-50.	4.6	154
15	A study of structureâ€“activity relationships of commercial tertiary amines for post-combustion CO2 capture. Applied Energy, 2016, 184, 219-229.	10.1	135
16	Solubility of carbon dioxide in 2-amino-2-methyl-1-propanol solutions. Journal of Chemical & Engineering Data, 1991, 36, 130-133.	1.9	134
17	Reaction Kinetics of CO2in Aqueous Ethylenediamine, Ethyl Ethanolamine, and Diethyl Monoethanolamine Solutions in the Temperature Range of 298â"313 K, Using the Stopped-Flow Technique. Industrial & Engineering Chemistry Research, 2007, 46, 4426-4434.	3.7	134
18	Analysis of Monoethanolamine and Its Oxidative Degradation Products during CO2Absorption from Flue Gases:Â A Comparative Study of GC-MS, HPLC-RID, and CE-DAD Analytical Techniques and Possible Optimum Combinations. Industrial & Engineering Chemistry Research, 2006, 45, 2437-2451.	3.7	131

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19	Kinetics of the Absorption of CO2into Mixed Aqueous Loaded Solutions of Monoethanolamine and Methyldiethanolamine. Industrial & Engineering Chemistry Research, 2006, 45, 2608-2616.	3.7	129
20	Comprehensive mass transfer and reaction kinetics studies of CO2 absorption into aqueous solutions of blended MDEAâ€“MEA. Chemical Engineering Journal, 2012, 209, 501-512.	12.7	125
21	Behavior of the Mass-Transfer Coefficient of Structured Packings in CO2Absorbers with Chemical Reactions. Industrial & Engineering Chemistry Research, 1999, 38, 2044-2050.	3.7	123
22	Integration of post-combustion capture and storage into a pulverized coal-fired power plant. International Journal of Greenhouse Gas Control, 2010, 4, 499-510.	4.6	122
23	Carbon dioxide (CO2) capture: Absorption-desorption capabilities of 2-amino-2-methyl-1-propanol (AMP), piperazine (PZ) and monoethanolamine (MEA) tri-solvent blends. Journal of Natural Gas Science and Engineering, 2016, 33, 742-750.	4.4	122
24	Mass Transfer Coefficients and Correlation for CO2Absorption into 2-Amino-2-methyl-1-propanol (AMP) Using Structured Packing. Industrial & Engineering Chemistry Research, 1998, 37, 569-575.	3.7	117
25	Wettability Determination of the Reservoir Brineâ^'Reservoir Rock System with Dissolution of CO2 at High Pressures and Elevated Temperatures. Energy & Fuels, 2008, 22, 504-509.	5.1	117
26	Experimental study on the solvent regeneration of a CO₂â€loaded MEA solution using single and hybrid solid acid catalysts. AICHE Journal, 2016, 62, 753-765.	3.6	115
27	Reducing energy consumption of CO2 desorption in CO2-loaded aqueous amine solution using Al2O3/HZSM-5 bifunctional catalysts. Applied Energy, 2018, 229, 562-576.	10.1	110
28	Enhanced light oil recovery from tight formations through CO 2 huff â€˜nâ€™ puff processes. Fuel, 2015, 154, 35-44.	6.4	108
29	Screening tests of aqueous alkanolamine solutions based on primary, secondary, and tertiary structure for blended aqueous amine solution selection in post combustion CO 2 capture. Chemical Engineering Science, 2017, 170, 574-582.	3.8	108
30	Kinetics of sulfur dioxide- and oxygen-induced degradation of aqueous monoethanolamine solution during CO2 absorption from power plant flue gas streams. International Journal of Greenhouse Gas Control, 2009, 3, 133-142.	4.6	105
31	CO2 stripping from monoethanolamine using a membrane contactor. Journal of Membrane Science, 2011, 376, 110-118.	8.2	105
32	Practical experience in post-combustion CO2 capture using reactive solvents in large pilot and demonstration plants. International Journal of Greenhouse Gas Control, 2015, 40, 6-25.	4.6	105
33	Mathematical modelling of mass-transfer and hydrodynamics in CO2 absorbers packed with structured packings. Chemical Engineering Science, 2003, 58, 4037-4053.	3.8	102
34	Mass Transfer Performance of CO₂ Absorption into Aqueous Solutions of 4-Diethylamino-2-butanol, Monoethanolamine, and N-Methyldiethanolamine. Industrial & Engineering Chemistry Research, 2012, 51, 6470-6479.	3.7	98
35	Solubilities of Carbon Dioxide in Polyethylene Glycol Ethers. Canadian Journal of Chemical Engineering, 2005, 83, 358-361.	1.7	96
36	Heat duty, heat of absorption, sensible heat and heat of vaporization of 2â€“Aminoâ€“2â€“Methylâ€“1â€“Propanol (AMP), Piperazine (PZ) and Monoethanolamine (MEA) triâ€“solvent blend for carbon dioxide (CO2) capture. Chemical Engineering Science, 2017, 170, 26-35.	3.8	96

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37	Effect of internal coagulant on effectiveness of polyvinylidene fluoride membrane for carbon dioxide separation and absorption. Journal of Membrane Science, 2008, 311, 153-158.	8.2	94
38	Synthesis, solubilities, and cyclic capacities of amino alcohols for CO2 capture from flue gas streams. Energy Procedia, 2009, 1, 1327-1334.	1.8	94
39	Reducing Energy Penalty of CO₂ Capture Using Fe Promoted SO₄^{2â€“}/ZrO₂/MCM-41 Catalyst. Environmental Science & Technology, 2019, 53, 6094-6102.	10.0	94
40	NMR Studies of Amine Species in MEAâ^'CO₂â^'H₂O System: Modification of the Model of Vaporâ^'Liquid Equilibrium (VLE). Industrial & Engineering Chemistry Research, 2009, 48, 2717-2720.	3.7	90
41	Carbon dioxide (CO2) capture performance of aqueous tri-solvent blends containing 2-amino-2-methyl-1-propanol (AMP) and methyldiethanolamine (MDEA) promoted by diethylenetriamine (DETA). International Journal of Greenhouse Gas Control, 2016, 53, 292-304.	4.6	88
42	Reaction Kinetics of CO₂ in Aqueous 1-Amino-2-Propanol, 3-Amino-1-Propanol, and Dimethylmonoethanolamine Solutions in the Temperature Range of 298â^'313 K Using the Stopped-Flow Technique. Industrial & Engineering Chemistry Research, 2008, 47, 2213-2220.	3.7	83
43	Investigation of Mass-Transfer Performance for CO₂ Absorption into Diethylenetriamine (DETA) in a Randomly Packed Column. Industrial & Engineering Chemistry Research, 2012, 51, 12058-12064.	3.7	83
44	Solubility, absorption heat and mass transfer studies of CO2 absorption into aqueous solution of 1-dimethylamino-2-propanol. Fuel, 2015, 144, 121-129.	6.4	82
45	Synthesis of new amines for enhanced carbon dioxide (CO2) capture performance: The effect of chemical structure on equilibrium solubility, cyclic capacity, kinetics of absorption and regeneration, and heats of absorption and regeneration. Separation and Purification Technology, 2016, 167, 97-107.	7.9	82
46	Experimental study on mass transfer and prediction using artificial neural network for CO2 absorption into aqueous DETA. Chemical Engineering Science, 2013, 100, 195-202.	3.8	81
47	Volumetric Properties and Viscosities for AqueousN-Methyl-2-pyrrolidone Solutions from 25 Â°C to 70 Â°C. Journal of Chemical & Engineering Data, 2004, 49, 231-234.	1.9	79
48	Interfacial Interactions between Reservoir Brine and CO2at High Pressures and Elevated Temperatures. Energy & Fuels, 2005, 19, 216-223.	5.1	79
49	Evaluation of the heat duty of catalyst-aided amine-based post combustion CO 2 capture. Chemical Engineering Science, 2017, 170, 48-57.	3.8	78
50	Correlations for Equilibrium Solubility of Carbon Dioxide in Aqueous 4-(Diethylamino)-2-butanol Solutions. Industrial & Engineering Chemistry Research, 2011, 50, 14008-14015.	3.7	75
51	Analysis of CO 2 solubility and absorption heat into 1-dimethylamino-2-propanol solution. Chemical Engineering Science, 2017, 170, 3-15.	3.8	75
52	Investigation of CO₂ Regeneration in Single and Blended Amine Solvents with and without Catalyst. Industrial & Engineering Chemistry Research, 2017, 56, 7656-7664.	3.7	75
53	A comparative kinetics study of CO₂ absorption into aqueous DEEA/MEA and DMEA/MEA blended solutions. AICHE Journal, 2018, 64, 1350-1358.	3.6	72
54	Experimental and Theoretical Determination of Equilibrium Interfacial Tension for the Solvent(s)â€“CO₂â€“Heavy Oil Systems. Energy & Fuels, 2012, 26, 1776-1786.	5.1	71

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55	Zeolite catalyst-aided tri-solvent blend amine regeneration: An alternative pathway to reduce the energy consumption in amine-based CO2 capture process. Applied Energy, 2019, 240, 827-841.	10.1	71
56	Wettability Determination of the Crude Oilâ^'Reservoir Brineâ^'Reservoir Rock System with Dissolution of CO2at High Pressures and Elevated Temperatures. Energy & Fuels, 2008, 22, 2362-2371.	5.1	70
57	A mathematical model for gas absorption membrane contactors that studies the effect of partially wetted membranes. Journal of Membrane Science, 2010, 347, 228-239.	8.2	70
58	Experimental analyses of mass transfer and heat transfer of post-combustion CO2 absorption using hybrid solvent MEAâ€"MeOH in an absorber. Chemical Engineering Journal, 2015, 260, 11-19.	12.7	69
59	Volumetric Properties and Viscosities for Aqueous AMP Solutions from 25 Â°C to 70 Â°C. Journal of Chemical & Engineering Data, 2003, 48, 551-556.	1.9	66
60	Experimental studies of regeneration heat duty for CO2 desorption from diethylenetriamine (DETA) solution in a stripper column packed with Dixon ring random packing. Fuel, 2014, 136, 261-267.	6.4	66
61	Advancement and new perspectives of using formulated reactive amine blends for post-combustion carbon dioxide (CO2) capture technologies. Petroleum, 2017, 3, 10-36.	2.8	66
62	Investigation of Low-Toxic Organic Corrosion Inhibitors for CO2Separation Process Using Aqueous MEA Solvent. Industrial & Engineering Chemistry Research, 2001, 40, 4771-4777.	3.7	65
63	Kinetics of CO₂ absorption into a novel 1â€diethylaminoâ€2â€propanol solvent using stoppedâ€flow technique. AIChE Journal, 2014, 60, 3502-3510.	3.6	64
64	An improved fast screening method for single and blended amine-based solvents for post-combustion CO2 capture. Separation and Purification Technology, 2016, 169, 279-288.	7.9	64
65	13C NMR Spectroscopy of a Novel Amine Species in the DEABâ€"CO2â€"H2O system: VLE Model. Industrial & Engineering Chemistry Research, 2012, 51, 8608-8615.	3.7	63
66	Part 5b: Solvent chemistry: reaction kinetics of CO₂absorption into reactive amine solutions. Carbon Management, 2012, 3, 201-220.	2.4	60
67	Techno-economic analysis of CO2 capture from a 1.2 million MTPA cement plant using AMP-PZ-MEA blend. International Journal of Greenhouse Gas Control, 2018, 78, 400-412.	4.6	59
68	Catalytic performance and mechanism of SO42â^'/ZrO2/SBA-15 catalyst for CO2 desorption in CO2-loaded monoethanolamine solution. Applied Energy, 2020, 259, 114179.	10.1	58
69	Comparative Mass Transfer Performance Studies of CO₂ Absorption into Aqueous Solutions of DEAB and MEA. Industrial & Engineering Chemistry Research, 2010, 49, 2857-2863.	3.7	57
70	Analysis of CO2 equilibrium solubility of seven tertiary amine solvents using thermodynamic and ANN models. Fuel, 2019, 249, 61-72.	6.4	56
71	Comparative studies of heat duty and total equivalent work of a new heat pump distillation with split flow process, conventional split flow process, and conventional baseline process for CO2 capture using monoethanolamine. International Journal of Greenhouse Gas Control, 2014, 24, 87-97.	4.6	55
72	Rheological properties study of foam fracturing fluid using CO 2 and surfactant. Chemical Engineering Science, 2017, 170, 720-730.	3.8	55

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73	Amine-based CO2 capture aided by acid-basic bifunctional catalyst: Advancement of amine regeneration using metal modified MCM-41. Chemical Engineering Journal, 2020, 383, 123077.	12.7	55
74	Rigorous Model for Predicting the Behavior of CO2Absorption into AMP in Packed-Bed Absorption Columns. Industrial & Engineering Chemistry Research, 2006, 45, 2553-2557.	3.7	54
75	SO₄^{2â^'}/ZrO₂ supported on Î³â€Al₂O₃ as a catalyst for CO₂ desorption from CO₂â€loaded monoethanolamine solutions. AICHE Journal, 2018, 64, 3988-4001.	3.6	54
76	Kinetics of the Oxidative Degradation of Aqueous Monoethanolamine in a Flue Gas Treating Unit. Industrial & Engineering Chemistry Research, 2001, 40, 3445-3450.	3.7	52
77	Study of cyclic CO2 injection for low-pressure light oil recovery under reservoir conditions. Fuel, 2016, 174, 296-306.	6.4	52
78	Studies of Corrosion and Corrosion Control in a CO2â^'2-Amino-2-methyl-1-propanol (AMP) Environment. Industrial & Engineering Chemistry Research, 1997, 36, 264-269.	3.7	51
79	Parametric studies of carbon dioxide absorption into highly concentrated monoethanolamine solutions. Canadian Journal of Chemical Engineering, 2001, 79, 137-142.	1.7	51
80	Mechanism of formation of heat stable salts (HSSs) and their roles in further degradation of monoethanolamine during CO2 capture from flue gas streams. Energy Procedia, 2011, 4, 591-598.	1.8	51
81	Corrosion Behavior of Carbon Steel in the Monoethanolamineâ^'H₂Oâ^'CO₂â^'O₂â^'SO₂ System: Products, Reaction Pathways, and Kinetics. Industrial & Engineering Chemistry Research, 2009, 48, 10169-10179.	3.7	50
82	Studies on corrosion and corrosion inhibitors for amine based solvents for CO2 absorption from power plant flue gases containing CO2, O2 and SO2. Energy Procedia, 2011, 4, 1761-1768.	1.8	50
83	Investigation of the effects of operating parameters on the local mass transfer coefficient and membrane wetting in a membrane gas absorption process. Journal of Membrane Science, 2015, 490, 236-246.	8.2	50
84	Simulation of pilot plant and industrial CO2-MEA absorbers. Separation and Purification Technology, 1993, 7, 47-52.	0.3	47
85	Densities and Viscosities for Binary Mixtures ofN-Methyldiethanolamine + Triethylene Glycol Monomethyl Ether from 25 Â°C to 70 Â°C andN-Methyldiethanolamine + Ethanol Mixtures at 40 Â°C. Journal of Chemical & Engineering Data, 2000, 45, 247-253.	1.9	47
86	Part 5c: Solvent chemistry: solubility of CO₂in reactive solvents for post-combustion CO₂. Carbon Management, 2012, 3, 467-484.	2.4	47
87	Analysis of reaction kinetics of CO2 absorption into a novel reactive 4-diethylamino-2-butanol solvent. Chemical Engineering Science, 2012, 81, 251-259.	3.8	46
88	Part 1: Design, modeling and simulation of post-combustion CO₂capture systems using reactive solvents. Carbon Management, 2011, 2, 265-288.	2.4	45
89	Effects of flue gas composition on carbon steel (1020) corrosion in MEA-based CO2 capture process. International Journal of Greenhouse Gas Control, 2013, 19, 340-349.	4.6	45
90	Enhancement factor and kinetics of CO2 capture by MEA-methanol hybrid solvents. Energy Procedia, 2009, 1, 95-102.	1.8	44

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91	Analysis of Mass Transfer Performance of Monoethanolamine-Based CO₂ Absorption in a Packed Column Using Artificial Neural Networks. Industrial & Engineering Chemistry Research, 2014, 53, 4413-4423.	3.7	44
92	Artificial neural network models for the prediction of CO2 solubility in aqueous amine solutions. International Journal of Greenhouse Gas Control, 2015, 39, 174-184.	4.6	44
93	Volumetric Properties, Viscosities, and Refractive Indices for Aqueous 2-(Methylamino)ethanol Solutions from (298.15 to 343.15) K. Journal of Chemical & Engineering Data, 2007, 52, 560-565.	1.9	43
94	<scp>AI</scp> models for correlation of physical properties in system of <scp>1DMA2Pâ€CO₂â€H₂O</scp>. AICHE Journal, 2022, 68, .	3.6	43
95	Mechanistic model for prediction of structured packing mass transfer performance in CO2 absorption with chemical reactions. Chemical Engineering Science, 2000, 55, 3651-3663.	3.8	41
96	Solubility Study of Methane and Ethane in Promising Physical Solvents for Natural Gas Sweetening Operations. Journal of Chemical & Engineering Data, 2006, 51, 64-67.	1.9	41
97	High pressure physical solubility of carbon dioxide (CO₂) in mixed polyethylene glycol dimethyl ethers (Genosorb 1753). Canadian Journal of Chemical Engineering, 2012, 90, 576-583.	1.7	40
98	Analysis of solubility, absorption heat and kinetics of CO2 absorption into 1-(2-hydroxyethyl)pyrrolidine solvent. Chemical Engineering Science, 2017, 162, 120-130.	3.8	40
99	Kinetics and mechanism study of homogeneous reaction of CO2 and blends of diethanolamine and monoethanolamine using the stopped-flow technique. Chemical Engineering Journal, 2017, 316, 592-600.	12.7	40
100	The analysis of solubility, absorption kinetics of CO₂ absorption into aqueous 1â€diethylaminoâ€2â€propanol solution. AICHE Journal, 2017, 63, 2694-2704.	3.6	40
101	Mass transfer studies on catalyst-aided CO2 desorption from CO2-loaded amine solution in a post-combustion CO2 capture plant. Chemical Engineering Science, 2017, 170, 508-517.	3.8	38
102	Investigation mechanism of DEA as an activator on aqueous MEA solution for postcombustion CO₂ capture. AICHE Journal, 2018, 64, 2515-2525.	3.6	38
103	Kinetics and new BrÃ¸nsted correlations study of CO2 absorption into primary and secondary alkanolamine with and without steric-hindrance. Separation and Purification Technology, 2020, 233, 115998.	7.9	38
104	A toolset for construction of hybrid intelligent forecasting systems: application for water demand prediction. Advanced Engineering Informatics, 1999, 13, 21-42.	0.5	37
105	An integrated expert system/operations research approach for the optimization of natural gas pipeline operations. Engineering Applications of Artificial Intelligence, 2000, 13, 465-475.	8.1	37
106	Volumetric Properties and Viscosities for Aqueous Diisopropanolamine Solutions from 25 Â°C to 70 Â°C. Journal of Chemical & Engineering Data, 2003, 48, 1062-1067.	1.9	37
107	Dynamic Interfacial Tension Method for Measuring Gas Diffusion Coefficient and Interface Mass Transfer Coefficient in a Liquid. Industrial & Engineering Chemistry Research, 2006, 45, 4999-5008.	3.7	37
108	Physicochemical properties of {1-methyl piperazine (1) + water (2)} system at T= (298.15 to 343.15) K and atmospheric pressure. Journal of Chemical Thermodynamics, 2011, 43, 1897-1905.	2.0	35

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109	Estimation of Relative Permeability by Assisted History Matching Using the Ensemble Kalman Filter Method. Journal of Canadian Petroleum Technology, 2012, 51, 205-214.	2.3	35
110	Catalytic-CO₂-Desorption Studies of DEA and DEAâ€“MEA Blended Solutions with the Aid of Lewis and BrÃ¸nsted Acids. Industrial & Engineering Chemistry Research, 2018, 57, 11505-11516.	3.7	35
111	1D NMR Analysis of a Quaternary MEAâ€“DEABâ€“CO₂â€“H₂O Amine System: Liquid Phase Speciation and Vaporâ€“Liquid Equilibria at CO₂ Absorption and Solvent Regeneration Conditions. Industrial & Engineering Chemistry Research, 2014, 53, 8577-8591.	3.7	34
112	A new model for correlation and prediction of equilibrium CO₂ solubility in Nâ€methylâ€4â€piperidinol solvent. AICHE Journal, 2017, 63, 3395-3403.	3.6	34
113	CO2 capture efficiency and heat duty of solid acid catalyst-aided CO2 desorption using blends of primary-tertiary amines. International Journal of Greenhouse Gas Control, 2018, 69, 52-59.	4.6	34
114	A comparative study of novel activated AMP using 1,5-diamino-2-methylpentane vs MEA solution for CO2 capture from gas-fired power plant. Fuel, 2018, 234, 1089-1098.	6.4	34
115	Analysis and predictive correlation of mass transfer coefficient <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si11.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mi>K</mml:mi><mml:mi>G</mml:mi></mml:msub><mml:msub><mml:mi>a</mml:mi></mml:msub></mml:mrow></mml:math> of blended MDEA-MEA for use in post-combustion CO2 capture. International Journal of Greenhouse Gas Control, 2013, 19, 3-12.	4.6	33
116	Density, Viscosity, and N₂O Solubility of Aqueous 2-(Methylamino)ethanol Solution. Journal of Chemical & Engineering Data, 2017, 62, 129-140.	1.9	33
117	Influence of Process Parameters on Corrosion Behavior in a Sterically Hindered Amineâ^'CO2 System. Industrial & Engineering Chemistry Research, 1999, 38, 310-315.	3.7	32
118	Life-Cycle Analysis of CO2EOR on EOR and Geological Storage through Economic Optimization and Sensitivity Analysis Using the Weyburn Unit as a Case Studyâ€. Industrial & Engineering Chemistry Research, 2006, 45, 2483-2488.	3.7	32
119	Kinetics of the reaction of carbon dioxide (CO2) with cyclic amines using the stopped-flow technique. Energy Procedia, 2011, 4, 140-147.	1.8	32
120	CO2 absorption kinetics of 4-diethylamine-2-butanol solvent using stopped-flow technique. Separation and Purification Technology, 2014, 136, 81-87.	7.9	32
121	Comprehensive reaction kinetics model of <scp>CO₂</scp> absorption into 1â€dimethylaminoâ€2â€propanol solution. AICHE Journal, 2022, 68, .	3.6	32
122	Mass transfer of CO2 absorption in hybrid MEA-methanol solvents in packed column. Energy Procedia, 2013, 37, 883-889.	1.8	31
123	Modelling the Performance of a CO2Absorber Containing Structured Packing. Industrial & Engineering Chemistry Research, 2006, 45, 2594-2600.	3.7	30
124	Comparison of Overall Gasâ€Phase Mass Transfer Coefficient for CO₂ Absorption between Tertiary Amines in a Randomly Packed Column. Chemical Engineering and Technology, 2015, 38, 1435-1443.	1.5	30
125	Novel models for correlation of Solubility constant and diffusivity of N2O in aqueous 1-dimethylamino-2-propanol. Chemical Engineering Science, 2019, 203, 86-103.	3.8	30
126	Densities and Viscosities of Triethylene Glycol Monomethyl Ether +Water Solutions in the Temperature Interval 25 Â°Câ^'80 Â°C. Journal of Chemical & Engineering Data, 1999, 44, 101-107.	1.9	29

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127	Part 3: Corrosion and prevention in post-combustion CO2capture systems. Carbon Management, 2011, 2, 659-675.	2.4	29
128	Studies of the coordination effect of DEA-MEA blended amines (within 1â€¯+â€¯4 to 2â€¯+â€¯3â€¯M) under heterogeneous catalysis by means of absorption and desorption parameters. Separation and Purification Technology, 2020, 236, 116179.	7.9	29
129	Corrosion Behavior of Carbon Steel in the Monoethanolamineâ^'H₂Oâ^'CO₂â^'O₂â^'SO₂ System. Industrial & Engineering Chemistry Research, 2009, 48, 8913-8919.	3.7	28
130	Ensemble-Based Relative Permeability Estimation Using B-Spline Model. Transport in Porous Media, 2010, 85, 703-721.	2.6	28
131	Experimental study of the kinetics of the homogenous reaction of CO2 into a novel aqueous 3-diethylamino-1,2-propanediol solution using the stopped-flow technique. Chemical Engineering Journal, 2015, 270, 485-495.	12.7	28
132	Modified Heterogeneous Catalyst-Aided Regeneration of CO₂ Capture Amines: A Promising Perspective for a Drastic Reduction in Energy Consumption. ACS Sustainable Chemistry and Engineering, 2020, 8, 9526-9536.	6.7	28
133	Part 6: Solvent recycling and reclaiming issues. Carbon Management, 2012, 3, 485-509.	2.4	27
134	Volumetric Properties and Viscosities for Aqueous Diglycolamine Solutions from 25 Â°C to 70 Â°C. Journal of Chemical & Engineering Data, 2001, 46, 56-62.	1.9	26
135	Densities, Viscosities, and Derived Functions of Binary Mixtures:â€‰ (Triethylene Glycol Dimethyl Ether +) Tj ETQq1 1 0.784314 rgBT /C Engineering Data, 2005, 50, 1038-1042.	1.9	26
136	Solubility and Diffusivity of N₂O in Aqueous 4-(Diethylamino)-2-butanol Solutions for Use in Postcombustion CO₂ Capture. Industrial & Engineering Chemistry Research, 2012, 51, 925-930.	3.7	26
137	Simulation of CO2-Oil Minimum Miscibility Pressure (MMP) for CO2 Enhanced Oil Recovery (EOR) using Neural Networks. Energy Procedia, 2013, 37, 6877-6884.	1.8	26
138	Comprehensive mass transfer and reaction kinetics studies of a novel reactive 4-diethylamino-2-butanol solvent for capturing CO2. Chemical Engineering Science, 2013, 100, 183-194.	3.8	26
139	Process simulation and parametric sensitivity study of CO2 capture from 115â€¯MW coalâ€“fired power plant using MEAâ€“DEA blend. International Journal of Greenhouse Gas Control, 2018, 76, 1-11.	4.6	26
140	Technology development and applications of artificial intelligence for post-combustion carbon dioxide capture: Critical literature review and perspectives. International Journal of Greenhouse Gas Control, 2021, 108, 103307.	4.6	26
141	Part 2: Solvent management: solvent stability and amine degradation in CO₂capture processes. Carbon Management, 2011, 2, 551-566.	2.4	25
142	Modeling of the carbon dioxide capture process system using machine intelligence approaches. Engineering Applications of Artificial Intelligence, 2011, 24, 673-685.	8.1	25
143	From neural network to neuro-fuzzy modeling: Applications to the carbon dioxide capture process. Energy Procedia, 2011, 4, 2066-2073.	1.8	25
144	Novel Design for the Nozzle of a Laminar Jet Absorber. Industrial & Engineering Chemistry Research, 2004, 43, 2568-2574.	3.7	24

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145	Reaction Kinetics of Carbon Dioxide (CO₂) with Diethylenetriamine and 1-Amino-2-propanol in Nonaqueous Solvents Using Stopped-Flow Technique. Industrial & Engineering Chemistry Research, 2016, 55, 7307-7317.	3.7	24
146	Physical and transport properties of aqueous amino alcohol solutions for CO2 capture from flue gas streams. Chemical Engineering Research and Design, 2008, 86, 291-295.	5.6	23
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