Raphael O Idem

List of Publications by Year
in descending order

140 papers	6,859 citations	43973 48 h-index	69108 77 g-index
143 all docs	143 docs citations	143 times ranked	3348 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.	1.8	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.	2.3	403
3	The genetic algorithm based back propagation neural network for MMP prediction in CO2-EOR process. Fuel, 2014, 126, 202-212.	3.4	196
4	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.	1.7	181
5	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.	2.3	154
6	A study of structureâ€“activity relationships of commercial tertiary amines for post-combustion CO2 capture. Applied Energy, 2016, 184, 219-229.	5.1	135
7	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.	1.8	131
8	Kinetics of the Absorption of CO2into Mixed Aqueous Loaded Solutions of Monoethanolamine and Methyldiethanolamine. Industrial & Engineering Chemistry Research, 2006, 45, 2608-2616.	1.8	129
9	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.	2.1	122
10	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.	1.8	115
11	Reducing energy consumption of CO2 desorption in CO2-loaded aqueous amine solution using Al2O3/HZSM-5 bifunctional catalysts. Applied Energy, 2018, 229, 562-576.	5.1	110
12	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.	1.9	108
13	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.	2.3	105
14	Influence of the Catalyst Preparation Method, Surfactant Amount, and Steam on CO₂Reforming of CH₄over 5Ni/Ce_{0.6}Zr_{0.4}O₂Catalysts. Energy & Fuels, 2011, 25, 864-877.	2.5	98
15	Mass Transfer Performance of CO₂ Absorption into Aqueous Solutions of 4-Diethylamino-2-butanol, Monoethanolamine, and <i>N</i>-Methyldiethanolamine. Industrial & Engineering Chemistry Research, 2012, 51, 6470-6479.	1.8	98
16	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.	1.9	96
17	Synthesis, solubilities, and cyclic capacities of amino alcohols for CO2 capture from flue gas streams. Energy Procedia, 2009, 1, 1327-1334.	1.8	94
18	Kinetics, experimental and reactor modeling studies of the carbon dioxide reforming of methane (CDRM) over a newNi/CeO2â€“ZrO2catalyst in a packed bed tubular reactor. Chemical Engineering Science, 2007, 62, 4012-4024.	1.9	92

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19	NMR Studies of Amine Species in MEAâˆ’CO₂âˆ’H₂O System: Modification of the Model of Vaporâˆ’Liquid Equilibrium (VLE). Industrial & Engineering Chemistry Research, 2009, 48, 2717-2720.	1.8	90
20	Comparative Study of Ni-based Mixed Oxide Catalyst for Carbon Dioxide Reforming of Methane. Energy & Fuels, 2008, 22, 3575-3582.	2.5	89
21	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.	2.3	88
22	Investigation of Mass-Transfer Performance for CO₂ Absorption into Diethylenetriamine (DETA) in a Randomly Packed Column. Industrial & Engineering Chemistry Research, 2012, 51, 12058-12064.	1.8	83
23	Solubility, absorption heat and mass transfer studies of CO2 absorption into aqueous solution of 1-dimethylamino-2-propanol. Fuel, 2015, 144, 121-129.	3.4	82
24	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.	3.9	82
25	Experimental study on mass transfer and prediction using artificial neural network for CO2 absorption into aqueous DETA. Chemical Engineering Science, 2013, 100, 195-202.	1.9	81
26	Comprehensive Study of the Kinetics of the Oxidative Degradation of CO2Loaded and Concentrated Aqueous Monoethanolamine (MEA) with and without Sodium Metavanadate during CO2Absorption from Flue Gases. Industrial & Engineering Chemistry Research, 2006, 45, 2569-2579.	1.8	78
27	Evaluation of the heat duty of catalyst-aided amine-based post combustion CO 2 capture. Chemical Engineering Science, 2017, 170, 48-57.	1.9	78
28	Determination of Water-in-Oil Emulsion Viscosity in Porous Media. Industrial & Engineering Chemistry Research, 2009, 48, 7092-7102.	1.8	75
29	Correlations for Equilibrium Solubility of Carbon Dioxide in Aqueous 4-(Diethylamino)-2-butanol Solutions. Industrial & Engineering Chemistry Research, 2011, 50, 14008-14015.	1.8	75
30	Analysis of CO 2 solubility and absorption heat into 1-dimethylamino-2-propanol solution. Chemical Engineering Science, 2017, 170, 3-15.	1.9	75
31	Investigation of CO₂ Regeneration in Single and Blended Amine Solvents with and without Catalyst. Industrial & Engineering Chemistry Research, 2017, 56, 7656-7664.	1.8	75
32	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.	3.4	66
33	Advancement and new perspectives of using formulated reactive amine blends for post-combustion carbon dioxide (CO2) capture technologies. Petroleum, 2017, 3, 10-36.	1.3	66
34	Kinetics of CO₂ absorption into a novel 1â€diethylaminoâ€2â€propanol solvent using stoppedâ€flow technique. AIChE Journal, 2014, 60, 3502-3510.	1.8	64
35	13C NMR Spectroscopy of a Novel Amine Species in the DEABâ€“CO2â€“H2O system: VLE Model. Industrial & Engineering Chemistry Research, 2012, 51, 8608-8615.	1.8	63
36	The Role of Methyl Diethanolamine (MDEA) in Preventing the Oxidative Degradation of CO2 Loaded and Concentrated Aqueous Monoethanolamine (MEA)âˆ’MDEA Blends during CO2 Absorption from Flue Gases. Industrial & Engineering Chemistry Research, 2005, 44, 1874-1896.	1.8	61

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37	Selection of components for formulation of amine blends for post combustion CO 2 capture based on the side chain structure of primary, secondary and tertiary amines. Chemical Engineering Science, 2017, 170, 542-560.	1.9	61
38	Effect of number of amine groups in aqueous polyamine solution on carbon dioxide (CO 2) capture activities. Separation and Purification Technology, 2017, 184, 128-134.	3.9	61
39	Absorption heat, solubility, absorption and desorption rates, cyclic capacity, heat duty, and absorption kinetic modeling of AMPâ€"DETA blend for postâ€"combustion CO2 capture. Separation and Purification Technology, 2018, 194, 89-95.	3.9	61
40	Part 5b: Solvent chemistry: reaction kinetics of CO₂absorption into reactive amine solutions. Carbon Management, 2012, 3, 201-220.	1.2	60
41	Study of Formation of Bicarbonate Ions in CO₂-Loaded Aqueous Single 1DMA2P and MDEA Tertiary Amines and Blended MEAâ€"1DMA2P and MEAâ€"MDEA Amines for Low Heat of Regeneration. Industrial & Engineering Chemistry Research, 2016, 55, 3710-3717.	1.8	60
42	Comparative Mass Transfer Performance Studies of CO₂ Absorption into Aqueous Solutions of DEAB and MEA. Industrial & Engineering Chemistry Research, 2010, 49, 2857-2863.	1.8	57
43	Analysis of CO2 equilibrium solubility of seven tertiary amine solvents using thermodynamic and ANN models. Fuel, 2019, 249, 61-72.	3.4	56
44	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.	2.3	55
45	Synthesis of C-doped TiO2 by sol-microwave method for photocatalytic conversion of glycerol to value-added chemicals under visible light. Applied Catalysis A: General, 2020, 590, 117362.	2.2	55
46	Rigorous Model for Predicting the Behavior of CO2Absorption into AMP in Packed-Bed Absorption Columns. Industrial & Engineering Chemistry Research, 2006, 45, 2553-2557.	1.8	54
47	Evaluating the performance of non-precious metal based catalysts for sulfur-tolerance during the dry reforming of biogas. Fuel, 2014, 120, 202-217.	3.4	53
48	Kinetics of the Oxidative Degradation of Aqueous Monoethanolamine in a Flue Gas Treating Unit. Industrial & Engineering Chemistry Research, 2001, 40, 3445-3450.	1.8	52
49	Interrelationships between Asphaltene Precipitation Inhibitor Effectiveness, Asphaltenes Characteristics, and Precipitation Behavior duringn-Heptane (Light Paraffin Hydrocarbon)-Induced Asphaltene Precipitation. Energy & Fuels, 2004, 18, 1038-1048.	2.5	51
50	ÂA Comparative Study of Copper-Promoted Waterâ˘'Gas-Shift (WGS) Catalysts. Energy & Fuels, 2007, 21, 522-529.	2.5	48
51	Part 5c: Solvent chemistry: solubility of CO₂in reactive solvents for post-combustion CO₂. Carbon Management, 2012, 3, 467-484.	1.2	47
52	Analysis of reaction kinetics of CO2 absorption into a novel reactive 4-diethylamino-2-butanol solvent. Chemical Engineering Science, 2012, 81, 251-259.	1.9	46
53	Part 1: Design, modeling and simulation of post-combustion CO₂capture systems using reactive solvents. Carbon Management, 2011, 2, 265-288.	1.2	45
54	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.	1.8	44

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55	Artificial neural network models for the prediction of CO2 solubility in aqueous amine solutions. International Journal of Greenhouse Gas Control, 2015, 39, 174-184.	2.3	44
56	<scp>AI</scp> models for correlation of physical properties in system of <scp>1DMA2Pâ€CO₂â€H₂O</scp>. AIChE Journal, 2022, 68, .	1.8	43
57	Analysis of solubility, absorption heat and kinetics of CO2 absorption into 1-(2-hydroxyethyl)pyrrolidine solvent. Chemical Engineering Science, 2017, 162, 120-130.	1.9	40
58	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.	6.6	40
59	Solvent Regeneration of a CO₂-Loaded BEAâ€"AMP Bi-Blend Amine Solvent with the Aid of a Solid BrÃ¸nsted Ce(SO₄)₂/ZrO₂ Superacid Catalyst. Energy & Fuels, 2019, 33, 1334-1343.	2.5	40
60	Comparative Kinetic Studies of Solid Absorber Catalyst (K/MgO) and Solid Desorber Catalyst (HZSM-5)-Aided CO₂ Absorption and Desorption from Aqueous Solutions of MEA and Blended Solutions of BEA-AMP and MEA-MDEA. Industrial & Engineering Chemistry Research, 2018, 57, 15824-15839.	1.8	39
61	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.	1.9	38
62	Investigation mechanism of DEA as an activator on aqueous MEA solution for postcombustion CO₂ capture. AIChE Journal, 2018, 64, 2515-2525.	1.8	38
63	Experimental and kinetic study of the catalytic desorption of CO2 from CO2-loaded monoethanolamine (MEA) and blended monoethanolamine â€" Methyl-diethanolamine (MEA-MDEA) solutions. Energy, 2019, 179, 475-489.	4.5	36
64	Thermal degradation of aqueous DEEA solution at stripper conditions for post-combustion CO2 capture. Chemical Engineering Science, 2015, 135, 330-342.	1.9	35
65	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.	1.8	35
66	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.	1.8	34
67	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.	2.3	34
68	Kinetics of the Oxidative Degradation of CO2Loaded and Concentrated Aqueous MEA-MDEA Blends during CO2Absorption from Flue Gas Streams. Industrial & Engineering Chemistry Research, 2006, 45, 2601-2607.	1.8	33
69	Density, Viscosity, and N₂O Solubility of Aqueous 2-(Methylamino)ethanol Solution. Journal of Chemical & Engineering Data, 2017, 62, 129-140.	1.0	33
70	CO2 absorption kinetics of 4-diethylamine-2-butanol solvent using stopped-flow technique. Separation and Purification Technology, 2014, 136, 81-87.	3.9	32
71	Comprehensive reaction kinetics model of <scp>CO₂</scp> absorption into 1â€dimethylaminoâ€2â€propanol solution. AIChE Journal, 2022, 68, .	1.8	32
72	Mass transfer of CO2 absorption in hybrid MEA-methanol solvents in packed column. Energy Procedia, 2013, 37, 883-889.	1.8	31

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73	Screening study for selecting new activators for activating MDEA for natural gas sweetening. Separation and Purification Technology, 2018, 199, 320-330.	3.9	31
74	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.	0.9	30
75	Novel models for correlation of Solubility constant and diffusivity of N2O in aqueous 1-dimethylamino-2-propanol. Chemical Engineering Science, 2019, 203, 86-103.	1.9	30
76	Part 3: Corrosion and prevention in post-combustion CO2capture systems. Carbon Management, 2011, 2, 659-675.	1.2	29
77	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.	3.9	29
78	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.	6.6	28
79	Part 6: Solvent recycling and reclaiming issues. Carbon Management, 2012, 3, 485-509.	1.2	27
80	Evaluation of the Roles of Absorber and Desorber Catalysts in the Heat Duty and Heat of CO₂ Desorption from Butylethanolamineâ€“2-Amino-2-methyl-1-propanol and Monoethanolamineâ€“Methyldiethanolamine Solvent Blends in a Bench-Scale CO₂ Capture Pilot Plant. Energy & Fuels, 2018, 32, 9711-9726.	2.5	27
81	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.	1.8	26
82	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.	2.3	26
83	Part 2: Solvent management: solvent stability and amine degradation in CO₂capture processes. Carbon Management, 2011, 2, 551-566.	1.2	25
84	Evaluating the CO₂ Capture Performance Using a BEA-AMP Biblend Amine Solvent with Novel High-Performing Absorber and Desorber Catalysts in a Bench-Scale CO₂ Capture Pilot Plant. Energy & Fuels, 2019, 33, 3390-3402.	2.5	25
85	Novel Design for the Nozzle of a Laminar Jet Absorber. Industrial & Engineering Chemistry Research, 2004, 43, 2568-2574.	1.8	24
86	Catalytic Activity of Various 5 wtâ€‰% Ni/Ce_{0.5}Zr_{0.33}M_{0.17}O_{2âˆ’Î´} Catalysts for the CO₂ Reforming of CH₄ in the Presence and Absence of Steam. Energy & Fuels, 2012, 26, 365-379.	2.5	24
87	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.	1.8	24
88	A flexible and robust model for low temperature catalytic desorption of CO 2 from CO 2 -loaded amines over solid acid catalysts. Chemical Engineering Science, 2017, 170, 518-529.	1.9	24
89	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.	2.7	23
90	New Analytical Technique for Carbon Dioxide Absorption Solvents. Industrial & Engineering Chemistry Research, 2008, 47, 1268-1276.	1.8	23

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91	Part 5a: Solvent chemistry: NMR analysis and studies for amineâ€“CO₂â€“H₂O systems with vaporâ€“liquid equilibrium modeling for CO₂capture processes. Carbon Management, 2012, 3, 185-200.	1.2	23
92	Kinetic studies of the partial oxidation of isooctane for hydrogen production over a nickelâ€“alumina catalyst. Chemical Engineering Science, 2006, 61, 5912-5918.	1.9	22
93	Density, Viscosity, and Refractive Index of Aqueous CO2-Loaded and -Unloaded Ethylaminoethanol (EAE) Solutions from 293.15 to 323.15 K for Post Combustion CO2 Capture. Journal of Chemical & Engineering Data, 2017, 62, 4205-4214.	1.0	21
94	Recent progress and new development of post-combustion carbon-capture technology using reactive solvents. Carbon Management, 2011, 2, 261-263.	1.2	20
95	Process simulation, parametric sensitivity analysis and ANFIS modeling of CO2 capture from natural gas using aqueous MDEAâ€“PZ blend solution. Journal of Environmental Chemical Engineering, 2017, 5, 5588-5598.	3.3	20
96	Heterogeneous catalysis of CO2-diethanolamine absorption with MgCO3 and CaCO3 and comparing to non-catalytic CO2-monoethanolamine interactions. Reaction Kinetics, Mechanisms and Catalysis, 2017, 122, 539-555.	0.8	20
97	CO₂ desorption tests of blended monoethanolamineâ€“diethanolamine solutions to discover novel energy efficient solvents. Asia-Pacific Journal of Chemical Engineering, 2018, 13, e2186.	0.8	20
98	Adaptive neuro-fuzzy inference system (ANFIS) â€“ based model predictive control (MPC) for carbon dioxide reforming of methane (CDRM) in a plug flow tubular reactor for hydrogen production. Thermal Science and Engineering Progress, 2019, 9, 148-161.	1.3	20
99	CO2 absorption efficiency of various MEA-DEA blend with aid of CaCO3 and MgCO3 in a batch and semi-batch processes. Separation and Purification Technology, 2019, 220, 102-113.	3.9	19
100	Evaluation of the Catalytic Activity of Various 5Ni/Ce_{0.5}Zr_{0.33}M_{0.17}O_{2-Î´} Catalysts for Hydrogen Production by the Steam Reforming of a Mixture of Oxygenated Hydrocarbons. Energy & Fuels, 2012, 26, 816-828.	2.5	18
101	Experimental Study of Regeneration Performance of Aqueous <i>N</i>,<i>N</i>-Diethylethanolamine Solution in a Column Packed with Dixon Ring Random Packing. Industrial & Engineering Chemistry Research, 2016, 55, 8519-8526.	1.8	18
102	Effect of alkanol chain length of primary alkanolamines and alkyl chain length of secondary and tertiary alkanolamines on their CO2 capture activities. Separation and Purification Technology, 2017, 187, 453-467.	3.9	18
103	Investigation of degradation inhibitors on CO2 capture process. Energy Procedia, 2011, 4, 583-590.	1.8	17
104	The development of kinetics model for CO₂ absorption into tertiary amines containing carbonic anhydrase. AICHE Journal, 2017, 63, 4933-4943.	1.8	17
105	Regeneration Energy Analysis of Aqueous Triâ€“Solvent Blends Containing 2â€“Aminoâ€“2â€“Methylâ€“1â€“Propanol (AMP), Methyldiethanolamine (MDEA) and Diethylenetriamine (DETA) for Carbon Dioxide (CO2) Capture. Energy Procedia, 2017, 114, 2039-2046.	1.8	17
106	Artificial Neural Networks for Accurate Prediction of Physical Properties of Aqueous Quaternary Systems of Carbon Dioxide (CO₂)-Loaded 4-(Diethylamino)-2-butanol and Methyldiethanolamine Blended with Monoethanolamine. Industrial & Engineering Chemistry Research, 2016, 55, 11614-11621.	1.8	16
107	Modeling of CO₂ equilibrium solubility in a novel 1â€Diethylaminoâ€2â€Propanol Solvent. AICHE Journal, 2017, 63, 4465-4475.	1.8	15
108	Solvent extraction based reclaiming technique for the removal of heat stable salts (HSS) and neutral degradation products from amines used during the capture of carbon dioxide (CO2) from industrial flue gases. Separation and Purification Technology, 2019, 228, 115744.	3.9	15

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109	Catalytic Solvent Regeneration Using Hot Water During Amine Based CO2 Capture Process. Energy Procedia, 2014, 63, 266-272.	1.8	13
110	Amine regeneration tests on MEA, DEA, and MMEA with respect to cabamate stability analyses. Canadian Journal of Chemical Engineering, 2017, 95, 1471-1479.	0.9	12
111	Kinetics of the Catalytic Desorption of CO2 from Monoethanolamine (MEA) and Monoethanolamine and Methyldiethanolamine (MEA-MDEA). Energy Procedia, 2017, 114, 1495-1505.	1.8	12
112	Mass-transfer studies of solid-base catalyst-aided CO2 absorption and solid-acid catalyst-aided CO2 desorption for CO2 capture in a pilot plant using aqueous solutions of MEA and blends of MEA-MDEA and BEA-AMP. Clean Energy, 2019, 3, 263-277.	1.5	12
113	Metal Oxide-Based Catalysts for the Autothermal Reforming of Glycerol. Industrial & Engineering Chemistry Research, 2018, 57, 2486-2497.	1.8	11
114	Nitrosamine Formation in Amine-Based CO₂ Capture in the Absence of NO₂: Molecular Modeling and Experimental Validation. Environmental Science & Technology, 2017, 51, 7723-7731.	4.6	11
115	Kinetic Study of the Catalytic Partial Oxidation of Synthetic Diesel over 5 wt % Ni/Ce0.5Zr0.33Ca0.085Y0.085O2-Î´ Catalyst for Hydrogen Production. Energy & Fuels, 2012, 26, 5421-5429.	2.5	9
116	Effect of Side Chain Structure and Number of Hydroxyl Groups of Primary, Secondary and Tertiary Amines on their Post-Combustion CO2 Capture Performance. Energy Procedia, 2017, 114, 1811-1827.	1.8	9
117	Catalyst performance and experimental validation of a rigorous desorber model for low temperature catalyst-aided desorption of CO2 in single and blended amine solutions. Journal of Environmental Chemical Engineering, 2017, 5, 3865-3872.	3.3	9
118	The Roles of O2 and SO2 in the Degradation of Monoethanolamine during CO2 Absorption from Industrial Flue Gas Streams. , 2006, , .		8
119	Kinetics and Reactor Modeling of the Steam Reforming of Methanol over a Mnâ€Promoted Cu/Al Catalyst. Chemical Engineering and Technology, 2015, 38, 2305-2315.	0.9	8
120	On the Numerical Modeling of Gas Absorption into Reactive Liquids in a Laminar Jet Absorber. Canadian Journal of Chemical Engineering, 2003, 81, 604-612.	0.9	7
121	Part 8: Post-combustion CO₂capture: pilot plant operation issues. Carbon Management, 2013, 4, 215-231.	1.2	7
122	Catalytic Solvent Regeneration Using Hot Water During Amine Based CO2 Capture Process. Energy Procedia, 2014, 63, 273-278.	1.8	7
123	One-Pot Synthesis of Dialkyl Hexane-1,6-Dicarbamate from 1,6-Hexanediamine, Urea, and Alcohol over Zinc-Incorporated Berlinite (ZnAlPO4) Catalyst. Catalysts, 2016, 6, 28.	1.6	7
124	Catalytic CO₂-MEA absorptions with the aid of CaCO₃, MgCO₃, and BaCO₃ in the batch and semi-batch processes. Chemical Engineering Communications, 2020, 207, 506-522.	1.5	7
125	CO2 Capture Performance Comparisons of Polyamines at Practical Concentrations for Use as Activators for Methyldiethanolamine for Natural Gas Sweetening. Energy & Fuels, 2021, 35, 8081-8094.	2.5	7
126	Kinetic Study of Hydrogen Production by the High Temperature Water Gas Shift Reaction of Reformate Gas in Conventional and Membrane Packed Bed Reactors over Ca-Promoted CeO₂â€“ZrO₂ Supported Niâ€“Cu Catalyst. Industrial & Engineering Chemistry Research, 2015, 54, 612-622.	1.8	5

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127	Ternary oxide-supported bimetallic nickel-copper catalysts for a single step high temperature water gas shift of biogas reformate. Fuel, 2018, 234, 1238-1258.	3.4	5
128	Part 4b: Application of data modeling and analysis techniques to the CO2capture process system. Carbon Management, 2012, 3, 81-94.	1.2	4
129	Nitrosamine Formation Mechanism in Amine-Based CO2 Capture: Experimental Validation. Energy Procedia, 2017, 114, 952-958.	1.8	4
130	Study of Ion Speciation of CO₂ Absorption into Aqueous 1-Dimethylamino-2-propanol Solution Using the NMR Technique. Industrial & Engineering Chemistry Research, 2017, 56, 8697-8704.	1.8	4
131	Effect of Acid Catalysts on CO2 Absorption Process by Mixed Amines. Energy Procedia, 2017, 114, 1514-1522.	1.8	3
132	Post-combustion CO2 Capture Technology. SpringerBriefs in Petroleum Geoscience & Engineering, 2019, , .	0.1	3
133	CO2-capture research and Clean Energy Technologies Research Institute (CETRI) of University of Regina, Canada: history, current status and future development. Clean Energy, 2022, 6, 119-126.	1.5	3
134	Modeling and Simulation of Catalyst-aided Low Temperature CO2 Desorption from Blended Monoethanolamine (MEA) â€" N-Methyl-diethanolamine (MDEA) Solution. Energy Procedia, 2017, 114, 1488-1494.	1.8	2
135	Amine Structure-Foam Behavior Relationship and Its Predictive Foam Model Used for Amine Selection for Design of Amine-based Carbon Dioxide (CO2) Capture Process. Current Chinese Science, 2021, 1, 43-57.	0.2	2
136	The Effects of Mass Transfer Parameters on the Modeling of A PEM Fuel Cell. , 2006, , .		1
137	Simulation Studies of Process Improvement of Threeâ€Tower Lowâ€Temperature Distillation Process to Minimize Energy Consumption for Separation of Produced Gas of CO₂â€Enhanced Oil Recovery (EOR). Canadian Journal of Chemical Engineering, 2015, 93, 1266-1274.	0.9	1
138	Application of carbon nanotubes prepared from CH4/CO2 over Ni/MgO catalysts in CO2 capture using a BEAâ€"AMP bi-solvent blend. Clean Energy, 2019, , .	1.5	1
139	New Analytical Techniques for CO2 Capture Solvents. , 2006, , .		0
140	Solvent Property of Amine Based Solvents. SpringerBriefs in Petroleum Geoscience & Engineering, 2019, , 7-22.	0.1	0