Xiao Luo

List of Publications by Year
in descending order

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83	2,136	218381	264894
papers	citations	26	42
		h-index	g-index

83	83	83	1297
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Analysis of the reduction of energy cost by using MEA-MDEA-PZ solvent for post-combustion carbon dioxide capture (PCC). Applied Energy, 2017, 205, 1002-1011.	5.1	123
2	Low-cost DETA impregnation of acid-activated sepiolite for CO2 capture. Chemical Engineering Journal, 2018, 353, 940-948.	6.6	104
3	Reducing Energy Penalty of CO₂ Capture Using Fe Promoted SO₄^{2â€“}/ZrO₂/MCM-41 Catalyst. Environmental Science & Technology, 2019, 53, 6094-6102.	4.6	94
4	Mass transfer and kinetics of carbon dioxide absorption into loaded aqueous monoethanolamine solutions. Chemical Engineering Science, 2015, 123, 57-69.	1.9	74
5	A comparative kinetics study of CO₂ absorption into aqueous DEEA/MEA and DMEA/MEA blended solutions. AICHE Journal, 2018, 64, 1350-1358.	1.8	72
6	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.	5.1	71
7	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.	3.9	64
8	Mass transfer performance and correlations for CO₂ absorption into aqueous blended of DEEA/MEA in a random packed column. AICHE Journal, 2017, 63, 3048-3057.	1.8	61
9	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
10	Premodified Sepiolite Functionalized with Triethylenetetramine as an Effective and Inexpensive Adsorbent for CO₂ Capture. Industrial & Engineering Chemistry Research, 2018, 57, 6189-6200.	1.8	57
11	Mass transfer performance of CO 2 absorption into aqueous DEEA in packed columns. International Journal of Greenhouse Gas Control, 2016, 51, 11-17.	2.3	55
12	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.	6.6	55
13	SO₄^{2â”}/ZrO₂ supported on Î³â€Al₂O₃ as a catalyst for CO₂ desorption from CO₂â€loaded monoethanolamine solutions. AICHE Journal, 2018, 64, 3988-4001.	1.8	54
14	NMR Techniques and Prediction Models for the Analysis of Species Formed in CO₂ Capture Processes with Amine-Based Sorbents: A Critical Review. ACS Sustainable Chemistry and Engineering, 2020, 8, 6173-6193.	3.2	50
15	Experimental Studies on the Effect of Tertiary Amine Promoters in Aqueous Monoethanolamine (MEA) Solutions on the Absorption/Stripping Performances in Post-combustion CO₂ Capture. Energy & Fuels, 2017, 31, 13883-13891.	2.5	48
16	Comparative kinetics of carbon dioxide absorption in unloaded aqueous monoethanolamine solutions using wetted wall and string of discs columns. Chemical Engineering Science, 2012, 82, 31-43.	1.9	46
17	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
18	Hybrid behavior and mass transfer performance for absorption of CO2 into aqueous DEEA/PZ solutions in a hollow fiber membrane contactor. Separation and Purification Technology, 2018, 201, 291-300.	3.9	43

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19	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
20	Investigation mechanism of DEA as an activator on aqueous MEA solution for postcombustion CO₂ capture. AICHE Journal, 2018, 64, 2515-2525.	1.8	38
21	Flow regime identification in gas-solid two-phase fluidization via acoustic emission technique. Chemical Engineering Journal, 2018, 334, 1484-1492.	6.6	36
22	Density, Viscosity, and N₂O Solubility of Aqueous 2-(Methylamino)ethanol Solution. Journal of Chemical & Engineering Data, 2017, 62, 129-140.	1.0	33
23	Amine-functionalized sepiolite: Toward highly efficient palladium nanocatalyst for dehydrogenation of additive-free formic acid. International Journal of Hydrogen Energy, 2019, 44, 16707-16717.	3.8	33
24	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
25	Impact of the Inter- and Intramolecular Tertiary Amino Group on the Primary Amino Group in the CO₂ Absorption Process. Industrial & Engineering Chemistry Research, 2016, 55, 7210-7217.	1.8	28
26	New Approach with Universal Applicability for Evaluating the Heat Requirements in the Solvent Regeneration Process for Postcombustion CO₂ Capture. Industrial & Engineering Chemistry Research, 2020, 59, 3261-3268.	1.8	28
27	Process simulation and thermodynamic evaluation for chemical looping air separation using fluidized bed reactors. Energy Conversion and Management, 2018, 160, 289-301.	4.4	27
28	The comparative kinetics study of CO2 absorption into non-aqueous DEEA/MEA and DMEA/MEA blended systems solution by using stopped-flow technique. Chemical Engineering Journal, 2020, 386, 121295.	6.6	27
29	Optimized process configuration for CO2 recovery from crude synthesis gas via a rectisol wash process. International Journal of Greenhouse Gas Control, 2018, 79, 83-90.	2.3	26
30	Photoreduction of CO2 in the presence of CH4 over g-C3N4 modified with TiO2 nanoparticles at room temperature. Green Energy and Environment, 2021, 6, 938-951.	4.7	26
31	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
32	Thermodynamics and ANN models for predication of the equilibrium CO2 solubility in aqueous 3-dimethylamino-1-propanol solution. International Journal of Greenhouse Gas Control, 2017, 63, 77-85.	2.3	24
33	Thermodynamic analysis of a new chemical looping process for syngas production with simultaneous CO2 capture and utilization. Energy Conversion and Management, 2018, 171, 1685-1696.	4.4	24
34	Comparative kinetics of carbon dioxide (CO2) absorption into EAE, 1DMA2P and their blends in aqueous solution using the stopped-flow technique. International Journal of Greenhouse Gas Control, 2020, 94, 102948.	2.3	24
35	Experiments and modeling of vapor-liquid equilibrium data in DEEA-CO2-H2O system. International Journal of Greenhouse Gas Control, 2016, 53, 160-168.	2.3	23
36	Determination of Vaporâ€“Liquid Equilibrium (VLE) Plots of 1-Dimethylamino-2-propanol Solutions Using the pH Method. Industrial & Engineering Chemistry Research, 2015, 54, 4709-4716.	1.8	21

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37	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
38	Experimental Studies of Reboiler Heat Duty for CO₂ Desorption from Triethylenetetramine (TETA) and Triethylenetetramine (TETA) + N-Methyldiethanolamine (MDEA). Industrial & Engineering Chemistry Research, 2015, 54, 8554-8560.	1.8	20
39	Kinetics and new mechanism study of CO₂ absorption <scp>i</scp>nto water and tertiary amine solutions <scp>b</scp>y stoppedâ€Flow technique. AICHE Journal, 2019, 65, 652-661.	1.8	20
40	Pd Nanoclusters-Based Catalysts with Schiff Base Modifying Carrier for Co₂ Hydrogenation to Formic Acid. Industrial & Engineering Chemistry Research, 2019, 58, 44-52.	1.8	18
41	CO2 Adsorption on Premodified Li/Al Hydrotalcite Impregnated with Polyethylenimine. Industrial & Engineering Chemistry Research, 2019, 58, 1177-1189.	1.8	18
42	New method of kinetic modeling for <scp>CO₂</scp> absorption into blended amine systems: A case of <scp>MEA</scp>/<scp>EAE</scp>/<scp>3DEA1P</scp> trisolvent blends. AICHE Journal, 2022, 68, .	1.8	18
43	The development of kinetics model for CO₂ absorption into tertiary amines containing carbonic anhydrase. AICHE Journal, 2017, 63, 4933-4943.	1.8	17
44	A study of film thickness and hydrodynamic entrance length in liquid laminar film flow along a vertical tube. AICHE Journal, 2018, 64, 2078-2088.	1.8	17
45	Thermodynamic evaluation and experimental investigation of CaO-assisted Fe-based chemical looping reforming process for syngas production. Applied Energy, 2021, 288, 116614.	5.1	17
46	Modeling of CO₂ equilibrium solubility in a novel 1â€Diethylaminoâ€2â€Propanol Solvent. AICHE Journal, 2017, 63, 4465-4475.	1.8	15
47	Analysis for the speciation in CO2 loaded aqueous MEDA and MAPA solution using 13C NMR technology. International Journal of Greenhouse Gas Control, 2018, 71, 1-8.	2.3	15
48	Verification of optimal models for 2D-full loop simulation of circulating fluidized bed. Advanced Powder Technology, 2018, 29, 2765-2774.	2.0	14
49	Control of pressure balance and solids circulation characteristics in DCFB reactors. Powder Technology, 2018, 328, 114-121.	2.1	11
50	The study of kinetics of CO2 absorption into 3-dimethylaminopropylamine and 3-diethylaminopropylamine aqueous solution. International Journal of Greenhouse Gas Control, 2018, 75, 214-223.	2.3	11
51	Highly Efficient Hydrogen Generation from a Formic Acid/Triethanolamine System Using a Pd-Based Catalyst and Correlation for Apparent Activation Energy Estimation. Industrial & Engineering Chemistry Research, 2019, 58, 22984-22995.	1.8	11
52	Study of Equilibrium Solubility, Heat of Absorption, and Speciation of CO₂ Absorption into Aqueous 2-Methylpiperazine (2MPZ) Solution. Industrial & Engineering Chemistry Research, 2018, 57, 17496-17503.	1.8	10
53	Investigation of hydrodynamic performance and effective mass transfer area for Sulzer DX structured packing. AICHE Journal, 2018, 64, 3625-3637.	1.8	10
54	Study of Equilibrium Solubility, NMR Analysis, and Reaction Kinetics of CO2 Absorption into Aqueous N1,N2-Dimethylethane-1,2-diamine Solutions. Energy & Fuels, 2020, 34, 672-682.	2.5	10

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55	Efficient Metalâ€“Organic Framework-Derived Cuâ€“Zr Oxygen Carriers with an Enhanced Reduction Reaction Rate for Chemical Looping Air Separation. ACS Sustainable Chemistry and Engineering, 2020, 8, 14795-14806.	3.2	10
56	Thermodynamic analysis of carbamate formation and carbon dioxide absorption in N-methylaminoethanol solution. Applied Energy, 2021, 281, 116021.	5.1	10
57	A study of kinetics, equilibrium solubility, speciation and thermodynamics of CO2 absorption into benzylamine (BZA) solution. Chemical Engineering Science, 2022, 251, 117452.	1.9	10
58	Experimental and Theoretical Studies of Ultrafine Pd-Based Biochar Catalyst for Dehydrogenation of Formic Acid and Application of In Situ Hydrogenation. ACS Applied Materials & Interfaces, 2022, 14, 17282-17295.	4.0	10
59	Study of Direct Synthesis of DMC from CO₂ and Methanol on CeO₂: Theoretical Calculation and Experiment. Industrial & Engineering Chemistry Research, 2022, 61, 10804-10817.	1.8	10
60	Reaction kinetics of the absorption of carbon dioxide (CO 2) in aqueous solutions of sterically hindered secondary alkanolamines using the stopped-flow technique. Chemical Engineering Science, 2017, 170, 16-25.	1.9	9
61	Multi-scale characteristics and gas-solid interaction among multiple beds in a dual circulating fluidized bed reactor system. Chemical Engineering Journal, 2020, 385, 123715.	6.6	9
62	Monitoring the hydrodynamics and critical variation of separation efficiency of cyclone separator via acoustic emission technique with multiple analysis methods. Powder Technology, 2020, 373, 174-183.	2.1	9
63	CO₂ Adsorption Behavior of 3-Aminopropyltrimethoxysilane-Functionalized Attapulgite with the Grafting Modification Method. Industrial & Engineering Chemistry Research, 2021, 60, 17150-17161.	1.8	9
64	Theoretical and experimental studies of highly efficient all-solid Z-scheme TiO₂â€“TiC/g-C₃N₄for photocatalytic CO₂reductionviadry reforming of methane. Catalysis Science and Technology, 2022, 12, 2804-2818.	2.1	9
65	Study of Non-Noble-Metal-Based Metalâ€“Nitrogenâ€“Carbon Catalysts for Formic Acid Dehydrogenation. ACS Sustainable Chemistry and Engineering, 2022, 10, 4599-4609.	3.2	9
66	Catalytic Performance and Mechanism of Mesoâ€“Microporous Material Î²-SBA-15-Supported FeZr Catalysts for CO₂ Desorption in CO₂-Loaded Aqueous Amine Solution. Industrial & Engineering Chemistry Research, 2021, 60, 2698-2709.	1.8	8
67	Development of Ion Speciation Plots for Three Promising Tertiary Amineâ€“CO₂â€“H₂O Systems Using the pH Method and the ¹³C NMR Method. Energy & Fuels, 2017, 31, 3069-3080.	2.5	7
68	An Improved Fast Screening Method for Blended Amine-based Solvents for Post-Combustion CO2 Capture. Energy Procedia, 2017, 114, 1848-1854.	1.8	7
69	An experimental and modeling study of physical N2O solubility in 2-(ethylamino)ethanol. Journal of Chemical Thermodynamics, 2019, 138, 34-42.	1.0	7
70	Numerical simulations and comparative analysis of two- and three-dimensional circulating fluidized bed reactors for CO2 capture. Chinese Journal of Chemical Engineering, 2020, 28, 2955-2967.	1.7	7
71	Selective preparation and reaction kinetics of dimethyl carbonate from alcoholysis of methyl carbamate with methanol over ZnAl-LDO. Reaction Chemistry and Engineering, 2021, 6, 1854-1868.	1.9	6
72	Improvement of Prandtl mixing length theory and application in modeling of turbulent flow in circular tubes. Central South University, 2008, 15, 774-778.	0.5	4

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73	The study of numerical methods and validation of a heat and mass transfer model in CO2 -MEA system. Energy Procedia, 2011, 4, 1435-1442.	1.8	4
74	The Research on the Coordinative and Competitive Relationship between MEA and DEA Absorbing CO2 into Aqueous Blended Amine Solution. Energy Procedia, 2017, 114, 1883-1889.	1.8	4
75	The Effects of Mass Transfer on the Determination of Gasâ€“Liquid Reaction Kinetics in a Stirred Cell Reactor: In the Case of CO₂ Absorption by Aqueous Alkanolamine Solution. Energy & Fuels, 2019, 33, 11524-11535.	2.5	4
76	Comparative kinetics of homogeneous reaction of CO2 and unloaded/loaded amine using stopped-flow technique: A case study of MDEA solution. Separation and Purification Technology, 2020, 242, 116833.	3.9	4
77	The Comparison of CO2 Absorption Performance between DEAPA (3-Diethylaminopropylamine) and Blends of MEA-MDEA. Energy Procedia, 2017, 114, 1877-1882.	1.8	3
78	An improved CFD model of gas flow and particle interception in a fiber material. Chinese Journal of Chemical Engineering, 2017, 25, 264-273.	1.7	3
79	Nonlinear characteristics analyses of particle motion for predicting flow regimes. Particuology, 2020, 53, 134-141.	2.0	2
80	CO2 solubility and liquid phase ion speciation determined by <mml:math altimg="si2.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/co	2.3	1
81	Dissolved Carbonic Anhydrase for Enhancing Carbon Dioxide Absorption into High CO2-loaded, Aqueous Monoethanolamine Solutions. Energy Procedia, 2017, 114, 1855-1861.	1.8	1
82	Experiments and Modeling of Vapor-liquid Equilibrium in DEEA-CO2-H2O System. Energy Procedia, 2017, 114, 1530-1537.	1.8	1
83	The kinetics modeling and reactor simulation of propylene chlorination reaction process. AICHE Journal, 2021, 67, e17341.	1.8	1