Tianxiang Zhao

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1531650/publications.pdf

Version: 2024-02-01

79 papers	1,834 citations	236925 25 h-index	315739 38 g-index
80 all docs	80 docs citations	80 times ranked	1067 citing authors

#	Article	IF	Citations
1	Tandem copper hydrideâ€“Lewis pair catalysed reduction of carbon dioxide into formate with dihydrogen. Nature Catalysis, 2018, 1, 743-747.	34.4	88
2	Direct Synthesis of Dimethyl Carbonate from Carbon Dioxide and Methanol at Room Temperature Using Imidazolium Hydrogen Carbonate Ionic Liquid as a Recyclable Catalyst and Dehydrant. ChemSusChem, 2017, 10, 2046-2052.	6.8	83
3	Unexpectedly efficient SO₂ capture and conversion to sulfur in novel imidazole-based deep eutectic solvents. Chemical Communications, 2018, 54, 8964-8967.	4.1	77
4	Density, viscosity and spectroscopic studies of the binary system of ethylene glycol+dimethyl sulfoxide at T=(298.15 to 323.15) K. Journal of Molecular Liquids, 2015, 207, 315-322.	4.9	73
5	Hydrogenation of CO₂ to Formate with H₂: Transition Metal Free Catalyst Based on a Lewis Pair. Angewandte Chemie - International Edition, 2019, 58, 722-726.	13.8	66
6	Efficient SO₂ Capture and Fixation to Cyclic Sulfites by Dual Ether-Functionalized Protic Ionic Liquids without Any Additives. ACS Sustainable Chemistry and Engineering, 2018, 6, 10886-10895.	6.7	60
7	Bisazole-Based Deep Eutectic Solvents for Efficient SO₂ Absorption and Conversion without Any Additives. ACS Sustainable Chemistry and Engineering, 2020, 8, 2608-2613.	6.7	60
8	Facile preparation of N-doped porous carbon from chitosan and NaNH2 for CO2 adsorption and conversion. Chemical Engineering Journal, 2022, 432, 134347.	12.7	57
9	Density, viscosity, surface tension, and spectroscopic properties for binary system of 1,2-ethanediamine+diethylene glycol. Thermochimica Acta, 2014, 590, 91-99.	2.7	56
10	Deep Eutectic Solvents as Efficient Catalysts for Fixation of CO₂ to Cyclic Carbonates at Ambient Temperature and Pressure through Synergetic Catalysis. ACS Sustainable Chemistry and Engineering, 2021, 9, 10437-10443.	6.7	55
11	Catalyst-free selective N-formylation and N-methylation of amines using CO₂ as a sustainable C1 source. Green Chemistry, 2020, 22, 1134-1138.	9.0	51
12	Morphology Control in the Synthesis of CaCO₃ Microspheres with a Novel CO₂-Storage Material. ACS Applied Materials & Interfaces, 2015, 7, 15918-15927.	8.0	43
13	Deep eutectic solvents consisting of 1-ethyl-3-methylimidazolium chloride and glycerol derivatives for highly efficient and reversible SO2 capture. Journal of Molecular Liquids, 2020, 302, 112538.	4.9	43
14	CO2 hydrogenation to lower olefins over Mn2O3-ZnO/SAPO-34 tandem catalysts. Chemical Engineering Journal, 2021, 421, 129978.	12.7	41
15	CO₂ Fixation into Novel CO₂ Storage Materials Composed of 1,2â€Ethanediamine and Ethylene Glycol Derivatives. ChemPhysChem, 2015, 16, 2106-2109.	2.1	39
16	Deep eutectic solvents consisting of EmimCl and amides: Highly efficient SO2 absorption and conversion. Separation and Purification Technology, 2020, 250, 117273.	7.9	38
17	Controllable Synthesis of Various CaCO₃ Morphologies Based on a CCUS Idea. ACS Sustainable Chemistry and Engineering, 2016, 4, 3032-3044.	6.7	37
18	Synthesis of vaterite CaCO 3 micro-spheres by carbide slag and a novel CO 2 -storage material. Journal of CO2 Utilization, 2017, 18, 23-29.	6.8	37

#	Article	IF	Citations
19	Study on absorption and spectral properties of H2S in carboxylate protic ionic liquids with low viscosity. Journal of Molecular Liquids, 2018, 266, 806-813.	4.9	33
20	Linker functionalized poly(heptazine imide) as charge channel and activation site for enhancing photocatalytic nitrogen fixation in pure water. Applied Catalysis B: Environmental, 2022, 311, 121370.	20.2	33
21	Density, viscosity and spectroscopic studies of the binary system 1,2-ethylenediamine+1,4-butanediol at T=(293.15 to 318.15) K. Journal of Molecular Liquids, 2015, 208, 373-379.	4.9	31
22	Excess properties and spectroscopic studies for the binary system 1,2-ethanediamine+polyethylene glycol 300 at T=(293.15, 298.15, 303.15, 308.15, 313.15, and 318.15) K. Journal of Molecular Liquids, 2014, 198, 21-29.	4.9	30
23	Low-viscous diamino protic ionic liquids with fluorine-substituted phenolic anions for improving CO2 reversible capture. Journal of Molecular Liquids, 2018, 268, 617-624.	4.9	29
24	Deep eutectic solvents formed by EmimCl plus lactams: Effective SO2 capture and conversion into sulphur via DESs-mediated Claus process. Chemical Engineering Journal, 2021, 422, 130033.	12.7	28
25	Excess properties and spectral studies for binary system tri-ethylene glycol + dimethyl sulfoxide. Journal of Molecular Liquids, 2015, 212, 187-195.	4.9	27
26	Effective absorption of <scp>SO₂</scp> by imidazoleâ€based protic ionic liquids with multiple active sites: Thermodynamic and mechanical studies. AICHE Journal, 2022, 68, .	3.6	27
27	Highly Efficient CO₂ Capture to a New-Style CO₂-Storage Material. Energy & Fuels, 2016, 30, 6555-6560.	5.1	26
28	Promoted catalytic behavior over Î³-Al2O3 composited with ZSM-5 for crude methanol conversion to dimethyl ether. International Journal of Hydrogen Energy, 2020, 45, 16500-16508.	7.1	26
29	Imidazolium hydrogen carbonate ionic liquids: Versatile organocatalysts for chemical conversion of CO2 into valuable chemicals. Journal of CO2 Utilization, 2020, 39, 101155.	6.8	26
30	Linkage engineering mediated carriers transfer and surface reaction over carbon nitride for enhanced photocatalytic activity. Journal of Materials Chemistry A, 2021, 9, 21732-21740.	10.3	25
31	Rapid mechanochemical construction of HKUST-1 with enhancing water stability by hybrid ligands assembly strategy for efficient adsorption of SF6. Chemical Engineering Journal, 2022, 437, 135364.	12.7	25
32	Excess properties and viscous flow thermodynamics of the binary system 1,2-ethanediamine+triethylene glycol at T=(298.15, 303.15, 308.15, and 313.15) K for CO2 capture. Korean Journal of Chemical Engineering, 2014, 31, 2245-2250.	2.7	22
33	Imidazolium- and triazine-based ionic polymers as recyclable catalysts for efficient fixation of CO2 into cyclic carbonates. Journal of CO2 Utilization, 2021, 51, 101658.	6.8	22
34	Absorption, desorption and spectroscopic investigation of sulfur dioxide in the binary system ethylene glycol+dimethyl sulfoxide. Fluid Phase Equilibria, 2015, 405, 7-16.	2.5	20
35	Excess properties and spectroscopic studies for binary system of polyethylene glycol 600 + 1,2-ethanediamine at T= (298.15, 303.15, 308.15, 313.15, and 318.15) K. Journal of Molecular Liquids, 2016, 219, 149-157.	4.9	19
36	Highly efficient CO2 fixation into cyclic carbonate by hydroxyl-functionalized protic ionic liquids at atmospheric pressure. Molecular Catalysis, 2021, 511, 111756.	2.0	19

#	Article	IF	Citations
37	Highly Efficient Absorption of CO₂ by Protic Ionic Liquids-Amine Blends at High Temperatures. ACS Omega, 2021, 6, 34027-34034.	3.5	19
38	Control over crystallization of CaCO₃micro-particles by a novel CO₂SM. CrystEngComm, 2015, 17, 7896-7904.	2.6	17
39	Excess properties and spectroscopic studies of binary system 1,4-butanediol + water at T = (293.15, 298.15, 303.15, 308.15, 313.15 and 318.15) K. Physics and Chemistry of Liquids, 2016, 54, 165-181.	1.2	17
40	Straightforward construction of amino-functionalized ILs@SBA-15 catalysts via mechanochemical grafting for one-pot synthesis of cyclic carbonates from aromatic olefins and CO2. Journal of CO2 Utilization, 2022, 59, 101962.	6.8	17
41	Facile preparation of micro and nano-sized CaCO3 particles by a new CO2-storage material. Powder Technology, 2016, 301, 463-471.	4.2	16
42	Microporous triazine-based ionic hyper-crosslinked polymers for efficient and selective separation of H2S/CH4/N2. Separation and Purification Technology, 2022, 285, 120377.	7.9	16
43	Effective synthesis of cyclic carbonates from CO2 and epoxides catalyzed by acetylcholine bromide-based deep eutectic solvents. Journal of CO2 Utilization, 2022, 58, 101936.	6.8	16
44	Rich Ether-Based Protic Ionic Liquids with Low Viscosity for Selective Absorption of SO₂ through Multisite Interaction. Industrial & Engineering Chemistry Research, 2022, 61, 5971-5983.	3.7	16
45	Agile Construction of Porous Organic Frameworks Pending Carboxylic Acids and Imidazolium-Based Ionic Liquids for the Efficient Fixation of CO₂ to Cyclic Carbonates. ACS Sustainable Chemistry and Engineering, 2022, 10, 7990-8001.	6.7	16
46	Hydrogenation of CO₂ to Formate with H₂: Transition Metal Free Catalyst Based on a Lewis Pair. Angewandte Chemie, 2019, 131, 732-736.	2.0	15
47	An indirect CO2 utilization for the crystallization control of CaCO3 using alkylcarbonate. Journal of CO2 Utilization, 2021, 45, 101448.	6.8	14
48	A novel CCU approach of CO2 by the system 1,2-ethylenediamine+1,2-ethylene glycol. Korean Journal of Chemical Engineering, 2016, 33, 1883-1888.	2.7	13
49	Excess Properties and Spectroscopic Studies for Binary System of Polyethylene Glycol 200 (1) + Dimethyl Sulfoxide (2) at T = (298.15 to 318.15) K. Journal of Chemical & Engineering Data, 2015, 60, 2135-2145.	1.9	11
50	Base-assisted transfer hydrogenation of CO2 to formate with ammonia borane in water under mild conditions. International Journal of Hydrogen Energy, 2021, 46, 15716-15723.	7.1	11
51	Unsaturated iron ion-based coordination polymer for highly efficient photocatalytic hydrogen evolution with simultaneous real wastewater degradation: mechanistic insight into multifunctional Feâ€“N sites. Journal of Materials Chemistry A, 2021, 9, 27041-27048.	10.3	11
52	Solvent-free synthesis of Rh/meso-Al2O3 via mechanochemistry for hydrolytic dehydrogenation of ammonia borane. International Journal of Hydrogen Energy, 2022, 47, 5230-5239.	7.1	11
53	Solubility and Spectral Studies for SO₂ in a Binary System of Triethylene Glycol + Dimethyl Sulfoxide at T = (298.15, 303.15, and 308.15) K and p = 123.15 kPa. Journal of Chemical & Engineering Data, 2016, 61, 1597-1607.	1.9	10
54	Reductive amination of ketones/aldehydes with amines using BH3N(C2H5)3 as a reductant. Chemical Communications, 2021, 57, 8588-8591.	4.1	10

#	Article	IF	Citations
55	Catalyst-free hierarchical reduction of CO2 with BH3N(C2H5)3 for selective N-methylation and N-formylation of amines. Journal of CO2 Utilization, 2021, 50, 101590.	6.8	10
56	Solubility and Spectral Investigation of Dilute SO2 in the Binary System Polyethylene Glycol 600 + Water and Systemâ€™s Density, Viscosity, and Surface Tension. Journal of Molecular Liquids, 2016, 223, 224-234.	4.9	9
57	Friedel-Crafts Reaction of N,N-Dimethylaniline with Alkenes Catalyzed by Cyclic Diaminocarbene-Gold(I) Complex. Scientific Reports, 2018, 8, 11449.	3.3	9
58	Synthesis of Mesoporous Pd_xCu_{1â€“x}/Al₂O₃-y Bimetallic Catalysts Via Mechanochemistry for Selective N-Formylation of Amines with CO₂ and H₂. ACS Sustainable Chemistry and Engineering, 2021, 9, 16153-16162.	6.7	9
59	Excess properties and spectroscopic studies of binary system of 1-methoxy-2-propanol + dimethyl sulfoxide atT= (298.15â€“318.15) K. Physics and Chemistry of Liquids, 2016, 54, 411-421.	1.2	8
60	Thiolation behaviors of methanol catalyzed by bifunctional ZSM-5@t-ZrO2 catalyst. Catalysis Today, 2022, 397-399, 379-388.	4.4	8
61	Water behavior of current jet fuel versus operating conditions: Storage time, temperature, relative humidity and anti-icing agent. Fuel, 2022, 309, 122088.	6.4	8
62	Solubility of dilute SO 2 in binary system of polyethylene glycol 200 and dimethyl sulfoxide as a function of liquid composition and system's spectroscopic studies. Journal of Molecular Liquids, 2017, 225, 151-159.	4.9	7
63	Density, viscosity and excess properties for the binary system 2-butoxy ethanol + water at T = (298.15â€“318.15) K and mixtureâ€™s spectroscopic studies. Physics and Chemistry of Liquids, 2017, 55, 589-604.	1.2	6
64	Solubilities of Dilute SO2 in the Binary System of Glycol and Dimethylsulfoxide. Journal of Solution Chemistry, 2017, 46, 1522-1534.	1.2	5
65	Superior ZSM-5@Î³-Al₂O₃ Composite Catalyst for Methanol and Ethanol Coconversion to Light Olefins. ACS Omega, 2021, 6, 19067-19075.	3.5	5
66	Polyethyleneimine-Modified Amorphous Silica for the Selective Adsorption of CO₂/N₂ at High Temperatures. ACS Omega, 2021, 6, 35389-35397.	3.5	5
67	High selectivity in methanethiol synthesis over a coated composite comprising ZSM-5 with t-ZrO2. Microporous and Mesoporous Materials, 2020, 305, 110358.	4.4	4
68	Kinetic Studies of Metalloporphyrins Bonding with Nitric Oxide. Asian Journal of Chemistry, 2014, 26, 5255-5258.	0.3	2
69	Density, Viscosity, and Spectroscopic Nature for the Binary System of Tetraethylene Glycol (1) + Water (2) T = (298.15 to 323.15) K. International Journal of Thermophysics, 2021, 42, 1.	2.1	2
70	Mechanochemical synthesis of carbene copper complexes for CO2 hydrogenation to formate. Journal of CO2 Utilization, 2022, 59, 101963.	6.8	2
71	Deep eutectic solvents with multiple hydroxyl sites for efficient and reversible absorption of SF6. Journal of Molecular Liquids, 2022, 356, 119052.	4.9	2
72	Synthesis and Structural Characterizations of meso-Tetraphenyl Porphyrin. Asian Journal of Chemistry, 2014, 26, 3050-3052.	0.3	1

#	Article	IF	Citations
73	A novel SO2 capture, storage and utilisation to prepare BaSO3 micro-particles. Materials Research Innovations, 2017, 21, 320-324.	2.3	1
74	Binary System of Polyethylene Glycol 200 (1) + 3-Dimethylamino-1-propylamine (2) for CO₂ Absorption: Thermophysical Properties and Spectroscopic Study. ACS Omega, 2021, 6, 9898-9909.	3.5	1
75	Correction to â€œDeep eutectic solvents formed by EmimCl plus lactams: Effective SO2 capture and conversion into sulphur via DESs-mediated Claus processâ€• Chemical Engineering Journal, 2021, 425, 130513.	12.7	1
76	Gasâ€“liquid equilibrium data for mixture gas of carbon dioxide + nitrogen in 1,2-ethanediamine + triethylene glycol aqueous solution. Physics and Chemistry of Liquids, 2016, , 1-8.	1.2	0
77	Rapid Preparation of Ultrafine BaSO₃ by SO₂ Storage Material. Bulletin of the Korean Chemical Society, 2017, 38, 33-37.	1.9	0
78	Hydrogenation of CO 2 to Formate with H 2 : Transition Metal Free Catalyst Based on a Lewis Pair. Angewandte Chemie, 2018, 131, 649.	2.0	0
79	Role of Zirconia in Oxide-Zeolite Composite for Thiolation of Methanol with Hydrogen Sulfide to Methanethiol. Nanomaterials, 2022, 12, 1803.	4.1	0