Congmin Wang

List of Publications by Year
in descending order

70	5,695	81743 39	79541 73
papers	citations	h-index	g-index

75	75	75	3650
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tuning the Basicity of Ionic Liquids for Equimolar CO₂ Capture. Angewandte Chemie - International Edition, 2011, 50, 4918-4922.	7.2	587
2	Carbon Dioxide Capture by Superbaseâ€Derived Protic Ionic Liquids. Angewandte Chemie - International Edition, 2010, 49, 5978-5981.	7.2	429
3	Highly Efficient and Reversible SO₂ Capture by Tunable Azole-Based Ionic Liquids through Multiple-Site Chemical Absorption. Journal of the American Chemical Society, 2011, 133, 11916-11919.	6.6	345
4	Significant Improvements in CO₂ Capture by Pyridineâ€Containing Anionâ€Functionalized Ionic Liquids through Multipleâ€Site Cooperative Interactions. Angewandte Chemie - International Edition, 2014, 53, 7053-7057.	7.2	272
5	Equimolar CO2 capture by imidazolium-based ionic liquids and superbase systems. Green Chemistry, 2010, 12, 2019.	4.6	217
6	Tuning the Physicochemical Properties of Diverse Phenolic Ionic Liquids for Equimolar CO₂ Capture by the Substituent on the Anion. Chemistry - A European Journal, 2012, 18, 2153-2160.	1.7	201
7	Reversible and robust CO2 capture by equimolar task-specific ionic liquidâ€“superbase mixtures. Green Chemistry, 2010, 12, 870.	4.6	185
8	Highly efficient SO2 capture by dual functionalized ionic liquids through a combination of chemical and physical absorption. Chemical Communications, 2012, 48, 2633.	2.2	168
9	Novel quaternary ammonium ionic liquids and their use as dual solvent-catalysts in the hydrolytic reaction. Green Chemistry, 2006, 8, 96-99.	4.6	159
10	Tuning Anionâ€Functionalized Ionic Liquids for Improved SO₂ Capture. Angewandte Chemie - International Edition, 2013, 52, 10620-10624.	7.2	152
11	Preparation of simple ammonium ionic liquids and their application in the cracking of dialkoxypropanes. Green Chemistry, 2006, 8, 603.	4.6	132
12	The strategies for improving carbon dioxide chemisorption by functionalized ionic liquids. RSC Advances, 2013, 3, 15518.	1.7	127
13	Ionic liquids with metal chelate anions. Chemical Communications, 2012, 48, 2334.	2.2	125
14	Visibleâ€Lightâ€Induced Metalâ€Free Allylic Oxidation Utilizing a Coupled Photocatalytic System of gâ€C₃N₄ and <i>N</i>â€Hydroxy Compounds. Advanced Synthesis and Catalysis, 2011, 353, 1447-1451.	2.1	119
15	Efficient absorption of ammonia with hydroxyl-functionalized ionic liquids. RSC Advances, 2015, 5, 81362-81370.	1.7	119
16	Highly efficient SO₂capture through tuning the interaction between anion-functionalized ionic liquids and SO₂. Chemical Communications, 2013, 49, 1166-1168.	2.2	114
17	Designing of anionâ€functionalized ionic liquids for efficient capture of <scp>SO</scp>₂ from flue gas. AIChE Journal, 2015, 61, 2028-2034.	1.8	109
18	Highly efficient CO2 capture by tunable alkanolamine-based ionic liquids with multidentate cation coordination. Chemical Communications, 2012, 48, 6526.	2.2	101

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19	Highly efficient SO₂capture by phenyl-containing azole-based ionic liquids through multiple-site interactions. Green Chemistry, 2014, 16, 1211-1216.	4.6	95
20	Tuning the basicity of ionic liquids for efficient synthesis of alkylidene carbonates from CO₂ at atmospheric pressure. Chemical Communications, 2016, 52, 7830-7833.	2.2	79
21	Decreasing the Viscosity in CO₂ Capture by Amino-Functionalized Ionic Liquids through the Formation of Intramolecular Hydrogen Bond. Journal of Physical Chemistry B, 2016, 120, 2807-2813.	1.2	79
22	Computer-Assisted Design of Ionic Liquids for Efficient Synthesis of 3(2<i>H</i>)-Furanones: A Domino Reaction Triggered by CO₂. Journal of the American Chemical Society, 2016, 138, 14198-14201.	6.6	76
23	Highly efficient CO₂ capture by carbonyl-containing ionic liquids through Lewis acidâ€“base and cooperative Câ€“Hâ‹¯O hydrogen bonding interaction strengthened by the anion. Chemical Communications, 2014, 50, 15041-15044.	2.2	75
24	Highly Efficient Nitric Oxide Capture by Azoleâ€Based Ionic Liquids through Multipleâ€Site Absorption. Angewandte Chemie - International Edition, 2016, 55, 14364-14368.	7.2	75
25	Efficient and Energy-Saving CO₂ Capture through the Entropic Effect Induced by the Intermolecular Hydrogen Bonding in Anion-Functionalized Ionic Liquids. Journal of Physical Chemistry Letters, 2014, 5, 381-386.	2.1	71
26	Direct UV-spectroscopic measurement of selected ionic-liquid vapors. Physical Chemistry Chemical Physics, 2010, 12, 7246.	1.3	70
27	Density, Viscosity, and Refractive Index Properties for the Binary Mixtures of <i>n</i>-Butylammonium Acetate Ionic Liquid + Alkanols at Several Temperatures. Journal of Chemical & Engineering Data, 2012, 57, 298-308.	1.0	70
28	Bipyridinium-Based Ionic Covalent Triazine Frameworks for CO₂, SO₂, and NO Capture. ACS Applied Materials & Interfaces, 2020, 12, 8614-8621.	4.0	65
29	Solvent-free synthesis of unsaturated ketones by the Saucyâ€“Marbet reaction using simple ammonium ionic liquid as a catalyst. Green Chemistry, 2009, 11, 843.	4.6	64
30	Designing aminoâ€based ionic liquids for improved carbon capture: One amine binds two CO₂. AIChE Journal, 2019, 65, 230-238.	1.8	58
31	Tuning the Basicity of Cyanoâ€Containing Ionic Liquids to Improve SO₂ Capture through Cyanoâ€“Sulfur Interactions. Chemistry - A European Journal, 2015, 21, 5632-5639.	1.7	55
32	Designing an anion-functionalized fluorescent ionic liquid as an efficient and reversible turn-off sensor for detecting SO₂. Chemical Communications, 2017, 53, 3862-3865.	2.2	54
33	Highly Efficient Synthesis of Quinazoline-2,4(1<i>H</i>,3<i>H</i>)-diones from CO₂ by Hydroxyl Functionalized Aprotic Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2018, 6, 5760-5765.	3.2	50
34	Highly Efficient and Reversible SO₂ Capture by Surfactant-Derived Dual Functionalized Ionic Liquids with Metal Chelate Cations. Industrial & Engineering Chemistry Research, 2014, 53, 18568-18574.	1.8	42
35	Iron chloride supported on pyridine-modified mesoporous silica: an efficient and reusable catalyst for the allylic oxidation of olefins with molecular oxygen. Green Chemistry, 2008, 10, 827.	4.6	41
36	Enhanced CO₂ uptake by intramolecular proton transfer reactions in amino-functionalized pyridine-based ILs. Chemical Communications, 2017, 53, 5950-5953.	2.2	31

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37	Highly efficient synthesis of alkylidene cyclic carbonates from low concentration CO₂ using hydroxyl and azolate dual functionalized ionic liquids. Green Chemistry, 2021, 23, 592-596.	4.6	31
38	Reversible Construction of Ionic Networks Through Cooperative Hydrogen Bonds for Efficient Ammonia Absorption. ACS Sustainable Chemistry and Engineering, 2019, 7, 9888-9895.	3.2	30
39	Preparation of dialkoxypropanes in simple ammonium ionic liquids. Green Chemistry, 2006, 8, 1076.	4.6	29
40	Design and prediction for highly efficient SO2 capture from flue gas by imidazolium ionic liquids. Green Energy and Environment, 2022, 7, 130-136.	4.7	28
41	Microscopic structures of ionic liquids 1-ethyl-3-methylimidazolium tetrafluoroborate in water probed by the relative chemical shift. Science China Chemistry, 2010, 53, 1561-1565.	4.2	26
42	Computerâ€Assisted Design of Imidazolateâ€Based Ionic Liquids for Improving Sulfur Dioxide Capture, Carbon Dioxide Capture, and Sulfur Dioxide/Carbon Dioxide Selectivity. Chemistry - an Asian Journal, 2017, 12, 2863-2872.	1.7	26
43	Highly Efficient and Reversible Nitric Oxide Capture by Functionalized Ionic Liquids through Multiple-Site Absorption. ACS Sustainable Chemistry and Engineering, 2020, 8, 2990-2995.	3.2	26
44	Efficient capture of CO₂ from flue gas at high temperature by tunable polyamineâ€based hybrid ionic liquids. AIChE Journal, 2020, 66, e16779.	1.8	25
45	Acetylacetoneâ€"metal catalyst modified by pyridinium salt group applied to the NHPI-catalyzed oxidation of cholesteryl acetate. Catalysis Science and Technology, 2011, 1, 1133.	2.1	24
46	NMR and Excess Volumes Studies in DMFâ€"Alcohol Mixtures. Journal of Solution Chemistry, 2002, 31, 109-117.	0.6	21
47	The capture and simultaneous fixation of CO2 in the simulationÂofÂfuel gas by bifunctionalized ionic liquids. International Journal of Hydrogen Energy, 2016, 41, 9175-9182.	3.8	21
48	Highly Efficient CO₂ Capture by Imidazolium Ionic Liquids through a Reduction in the Formation of the Carbeneâ€"CO₂ Complex. Industrial & Engineering Chemistry Research, 2017, 56, 8066-8072.	1.8	20
49	Design and tuning of ionic liquidâ€"based HNO donor through intramolecular hydrogen bond for efficient inhibition of tumor growth. Science Advances, 2020, 6, .	4.7	20
50	Tuning the Capture of CO2 through Entropic Effect Induced by Reversible Transâ€"Cis Isomerization of Light-Responsive Ionic Liquids. Journal of Physical Chemistry Letters, 2019, 10, 3346-3351.	2.1	19
51	Reversible CO₂ Capture by Conjugated Ionic Liquids through Dynamic Covalent Carbonâ€"Oxygen Bonds. ChemSusChem, 2016, 9, 2351-2357.	3.6	18
52	Prediction of Vaporâ^'Liquid Equilibria of Alcoholâ^'Hydrocarbon Systems by 1H NMR and Activity Coefficients at Infinite Dilution. Industrial & Engineering Chemistry Research, 2005, 44, 408-415.	1.8	15
53	Unexpected oxidation of Î²-isophorone with molecular oxygen promoted by TEMPO. RSC Advances, 2014, 4, 15590.	1.7	14
54	Ultrahigh Nitric Oxide Capture by Tetrakis(azolyl)borate Ionic Liquid through Multiple-Sites Uniform Interaction. ACS Sustainable Chemistry and Engineering, 2021, 9, 3357-3362.	3.2	14

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55	Superhigh and reversible NH3 uptake of cobaltous thiocyanate functionalized porous poly ionic liquids through competitive and cooperative interactions. Chemical Engineering Journal, 2022, 427, 131638.	6.6	14
56	Significantly Enhanced Carbon Dioxide Capture by Anion-Functionalized Liquid Pillar[5]arene through Multiple-Site Interactions. Industrial & Engineering Chemistry Research, 2019, 58, 16894-16900.	1.8	12
57	Prediction of Vaporâ˘"Liquid Equilibria Data from Câ˘"H Band Shifts of Raman Spectra and Activity Coefficients at Infinite Dilution in Some Aqueous Systems. Industrial & Engineering Chemistry Research, 2005, 44, 6883-6887.	1.8	11
58	Design of Betaine Functional Catalyst for Efficient Copolymerization of Oxirane and CO2. Macromolecules, 2018, 51, 6057-6062.	2.2	10
59	A succinct enhanced luminescence strategy for fluorescent ionic liquids and the application for detecting CO2. Green Energy and Environment, 2022, 7, 1093-1101.	4.7	10
60	Highly Efficient Nitric Oxide Capture by Azoleâ€Based Ionic Liquids through Multipleâ€Site Absorption. Angewandte Chemie, 2016, 128, 14576-14580.	1.6	9
61	Anionâ€Functionalized Pillararenes for Efficient Sulfur Dioxide Capture: Significant Effect of the Anion and the Cavity. Chemistry - A European Journal, 2017, 23, 14143-14148.	1.7	9
62	A succinct strategy for construction of nanoporous ionic organic networks from a pyrylium intermediate. Chemical Communications, 2019, 55, 13450-13453.	2.2	9
63	Highly Efficient and Reversible Absorption and Oxidation of Low-Concentration Nitric Oxide by Functionalized Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2021, 9, 7154-7159.	3.2	9
64	Role of Structure in the Ammonia Uptake of Porous Polyionic Liquids. ACS Sustainable Chemistry and Engineering, 2022, 10, 4094-4104.	3.2	9
65	Highly efficient and reversible CO₂ capture by tunable anionâ€functionalized macroâ€porous resins. AIChE Journal, 2017, 63, 3008-3015.	1.8	8
66	Vaporâ˘"Liquid Equilibria for the Binary Mixture Î±-Pinene + Octane. Journal of Chemical & Engineering Data, 2003, 48, 1120-1121.	1.0	6
67	Isothermal and Isobaric Vaporâ˘"Liquid Equilibria of the Ternary System of 2,2-Dimethoxypropane + Acetone + Methanol. Journal of Chemical & Engineering Data, 2005, 50, 1837-1840.	1.0	6
68	Vaporâ˘"Liquid Equilibria for the Binary Mixtures Dehydrolinalool + 1-Propanol and Dehydrolinalool + 1-Butanol. Journal of Chemical & Engineering Data, 2001, 46, 1231-1234.	1.0	5
69	Electronic effect of ionicâ€pair substituents. Journal of Physical Organic Chemistry, 2013, 26, 460-466.	0.9	5
70	Tuning the Basicity for Highly Efficient and Reversible Hydrogen Chloride Absorption to Develop a Green Acid Scavenger. ACS Sustainable Chemistry and Engineering, 0, , .	3.2	3