Congmin Wang

List of Publications by Citations

75 papers	4,764 citations	38 h-index	68 g-index
75 ext. papers	5,262 ext. citations	6.9 avg, IF	5.53 L-index

#	Paper	IF	Citations
75	Tuning the basicity of ionic liquids for equimolar CO2 capture. *Angewandte Chemie - International Edition*, **2011**, 50, 4918-22	16.4	517
74	Carbon dioxide capture by superbase-derived protic ionic liquids. *Angewandte Chemie - International Edition*, **2010**, 49, 5978-81	16.4	383
73	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, 11916-9	16.4	306
72	Significant improvements in CO2 capture by pyridine-containing anion-functionalized ionic liquids through multiple-site cooperative interactions. *Angewandte Chemie - International Edition*, **2014**, 53, 7053-7	16.4	224
71	Equimolar CO2 capture by imidazolium-based ionic liquids and superbase systems. *Green Chemistry*, **2010**, 12, 2019	10	190
70	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, 2153-60	4.8	174
69	Reversible and robust CO2 capture by equimolar task-specific ionic liquid–superbase mixtures. *Green Chemistry*, **2010**, 12, 870	10	172
68	Highly efficient SO2 capture by dual functionalized ionic liquids through a combination of chemical and physical absorption. *Chemical Communications*, **2012**, 48, 2633-5	5.8	153
67	Novel quaternary ammonium ionic liquids and their use as dual solvent-catalysts in the hydrolytic reaction. *Green Chemistry*, **2006**, 8, 96-99	10	151
66	Tuning anion-functionalized ionic liquids for improved SO2 capture. *Angewandte Chemie - International Edition*, **2013**, 52, 10620-4	16.4	134
65	Preparation of simple ammonium ionic liquids and their application in the cracking of dialkoxypropanes. *Green Chemistry*, **2006**, 8, 603	10	116
64	Carbon Dioxide Capture by Superbase-Derived Protic Ionic Liquids. *Angewandte Chemie*, **2010**, 122, 6114-6117	16	112
63	Highly efficient SO2 capture through tuning the interaction between anion-functionalized ionic liquids and SO2. *Chemical Communications*, **2013**, 49, 1166-8	5.8	109
62	The strategies for improving carbon dioxide chemisorption by functionalized ionic liquids. *RSC Advances*, **2013**, 3, 15518	3.7	108
61	Ionic liquids with metal chelate anions. *Chemical Communications*, **2012**, 48, 2334-6	5.8	107
60	Visible-Light-Induced Metal-Free Allylic Oxidation Utilizing a Coupled Photocatalytic System of g-C3N4 and N-Hydroxy Compounds. *Advanced Synthesis and Catalysis*, **2011**, 353, 1447-1451	5.6	101
59	Tuning the Basicity of Ionic Liquids for Equimolar CO2 Capture. *Angewandte Chemie*, **2011**, 123, 5020-5024	16	99

58	Designing of anion-functionalized ionic liquids for efficient capture of SO2 from flue gas. *AICHE Journal*, **2015**, 61, 2028-2034	3.6	91
57	Efficient absorption of ammonia with hydroxyl-functionalized ionic liquids. *RSC Advances*, **2015**, 5, 81362-81370	3.7	86
56	Highly efficient CO2 capture by tunable alkanolamine-based ionic liquids with multidentate cation coordination. *Chemical Communications*, **2012**, 48, 6526-8	5.8	86
55	Highly efficient SO2 capture by phenyl-containing azole-based ionic liquids through multiple-site interactions. *Green Chemistry*, **2014**, 16, 1211-1216	10	81
54	Density, Viscosity, and Refractive Index Properties for the Binary Mixtures of n-Butylammonium Acetate Ionic Liquid + Alkanols at Several Temperatures. *Journal of Chemical & Engineering Data*, **2012**, 57, 298-308	2.8	63
53	Direct UV-spectroscopic measurement of selected ionic-liquid vapors. *Physical Chemistry Chemical Physics*, **2010**, 12, 7246-50	3.6	62
52	Highly Efficient Nitric Oxide Capture by Azole-Based Ionic Liquids through Multiple-Site Absorption. *Angewandte Chemie - International Edition*, **2016**, 55, 14364-14368	16.4	61
51	Solvent-free synthesis of unsaturated ketones by the Saucy–Marbet reaction using simple ammonium ionic liquid as a catalyst. *Green Chemistry*, **2009**, 11, 843	10	59
50	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, 381-6	6.4	58
49	Tuning the basicity of ionic liquids for efficient synthesis of alkylidene carbonates from CO2 at atmospheric pressure. *Chemical Communications*, **2016**, 52, 7830-3	5.8	58
48	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, 2807-13	3.4	56
47	Highly efficient CO2 capture by carbonyl-containing ionic liquids through Lewis acid-base and cooperative C-H⋯O hydrogen bonding interaction strengthened by the anion. *Chemical Communications*, **2014**, 50, 15041-4	5.8	56
46	Computer-Assisted Design of Ionic Liquids for Efficient Synthesis of 3(2H)-Furanones: A Domino Reaction Triggered by CO. *Journal of the American Chemical Society*, **2016**, 138, 14198-14201	16.4	52
45	Tuning the basicity of cyano-containing ionic liquids to improve SO2 capture through cyano-sulfur interactions. *Chemistry - A European Journal*, **2015**, 21, 5632-9	4.8	48
44	Significant Improvements in CO2 Capture by Pyridine-Containing Anion-Functionalized Ionic Liquids through Multiple-Site Cooperative Interactions. *Angewandte Chemie*, **2014**, 126, 7173-7177	3.6	46
43	Designing an anion-functionalized fluorescent ionic liquid as an efficient and reversible turn-off sensor for detecting SO. *Chemical Communications*, **2017**, 53, 3862-3865	5.8	45
42	Designing amino-based ionic liquids for improved carbon capture: One amine binds two CO2. *AICHE Journal*, **2019**, 65, 230-238	3.6	43
41	Bipyridinium-Based Ionic Covalent Triazine Frameworks for CO, SO, and NO Capture. *ACS Applied Materials & Interfaces*, **2020**, 12, 8614-8621	9.5	40

40	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	10	39
39	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	3.9	38
38	Tuning Anion-Functionalized Ionic Liquids for Improved SO2 Capture. *Angewandte Chemie*, **2013**, 125, 10814-10818	3.6	38
37	Highly Efficient Synthesis of Quinazoline-2,4(1H,3H)-diones from CO2 by Hydroxyl Functionalized Aprotic Ionic Liquids. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 5760-5765	8.3	34
36	Preparation of dialkoxypropanes in simple ammonium ionic liquids. *Green Chemistry*, **2006**, 8, 1076	10	27
35	Enhanced CO uptake by intramolecular proton transfer reactions in amino-functionalized pyridine-based ILs. *Chemical Communications*, **2017**, 53, 5950-5953	5.8	26
34	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	7.9	24
33	Computer-Assisted Design of Imidazolate-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	4.5	21
32	NMR and Excess Volumes Studies in DMF–Alcohol Mixtures. *Journal of Solution Chemistry*, **2002**, 31, 109-117	1.8	21
31	Acetylacetone–metal catalyst modified by pyridinium salt group applied to the NHPI-catalyzed oxidation of cholesteryl acetate. *Catalysis Science and Technology*, **2011**, 1, 1133	5.5	19
30	The capture and simultaneous fixation of CO2 in the simulation of fuel gas by bifunctionalized ionic liquids. *International Journal of Hydrogen Energy*, **2016**, 41, 9175-9182	6.7	18
29	Reversible Construction of Ionic Networks Through Cooperative Hydrogen Bonds for Efficient Ammonia Absorption. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 9888-9895	8.3	17
28	Reversible CO2 Capture by Conjugated Ionic Liquids through Dynamic Covalent Carbon-Oxygen Bonds. *ChemSusChem*, **2016**, 9, 2351-7	8.3	17
27	Highly Efficient CO2 Capture by Imidazolium Ionic Liquids through a Reduction in the Formation of the Carbene–CO2 Complex. *Industrial & Engineering Chemistry Research*, **2017**, 56, 8066-8072	3.9	14
26	Prediction of Vapor–Liquid Equilibria of Alcohol–Hydrocarbon Systems by 1H NMR and Activity Coefficients at Infinite Dilution. *Industrial & Engineering Chemistry Research*, **2005**, 44, 408-415	3.9	14
25	Highly Efficient and Reversible Nitric Oxide Capture by Functionalized Ionic Liquids through Multiple-Site Absorption. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 2990-2995	8.3	12
24	Design and tuning of ionic liquid-based HNO donor through intramolecular hydrogen bond for efficient inhibition of tumor growth. *Science Advances*, **2020**, 6,	14.3	11
23	Tuning the Capture of CO through Entropic Effect Induced by Reversible Trans-Cis Isomerization of Light-Responsive Ionic Liquids. *Journal of Physical Chemistry Letters*, **2019**, 10, 3346-3351	6.4	9

22	Design of Betaine Functional Catalyst for Efficient Copolymerization of Oxirane and CO2. *Macromolecules*, **2018**, 51, 6057-6062	5.5	9
21	Unexpected oxidation of Isophorone with molecular oxygen promoted by TEMPO. *RSC Advances*, **2014**, 4, 15590	3.7	9
20	Prediction of VaporLiquid Equilibria Data from CH Band Shifts of Raman Spectra and Activity Coefficients at Infinite Dilution in Some Aqueous Systems. *Industrial & Engineering Chemistry Research*, **2005**, 44, 6883-6887	3.9	9
19	Efficient capture of CO2 from flue gas at high temperature by tunable polyamine-based hybrid ionic liquids. *AICHE Journal*, **2020**, 66, e16779	3.6	9
18	Design and prediction for highly efficient SO2 capture from flue gas by imidazolium ionic liquids. *Green Energy and Environment*, **2020**,	5.7	9
17	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	10	8
16	Highly Efficient Nitric Oxide Capture by Azole-Based Ionic Liquids through Multiple-Site Absorption. *Angewandte Chemie*, **2016**, 128, 14576-14580	3.6	7
15	Anion-Functionalized Pillararenes for Efficient Sulfur Dioxide Capture: Significant Effect of the Anion and the Cavity. *Chemistry - A European Journal*, **2017**, 23, 14143-14148	4.8	7
14	Isothermal and Isobaric VaporLiquid Equilibria of the Ternary System of 2,2-Dimethoxypropane + Acetone + Methanol. *Journal of Chemical & Engineering Data*, **2005**, 50, 1837-1840	2.8	6
13	VaporLiquid Equilibria for the Binary Mixture Pinene + Octane. *Journal of Chemical & Engineering Data*, **2003**, 48, 1120-1121	2.8	6
12	Highly efficient and reversible CO2 capture by tunable anion-functionalized macro-porous resins. *AICHE Journal*, **2017**, 63, 3008-3015	3.6	5
11	Significantly Enhanced Carbon Dioxide Capture by Anion-Functionalized Liquid Pillar[5]arene through Multiple-Site Interactions. *Industrial & Engineering Chemistry Research*, **2019**, 58, 16894-16900	3.8	5
10	Ultrahigh Nitric Oxide Capture by Tetrakis(azolyl)borate Ionic Liquid through Multiple-Sites Uniform Interaction. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 3357-3362	8.3	5
9	Electronic effect of ionic-pair substituents. *Journal of Physical Organic Chemistry*, **2013**, 26, 460-466	2.1	4
8	VaporLiquid Equilibria for the Binary Mixtures Dehydrolinalool + 1-Propanol and Dehydrolinalool + 1-Butanol. *Journal of Chemical & Engineering Data*, **2001**, 46, 1231-1234	2.8	4
7	A succinct strategy for construction of nanoporous ionic organic networks from a pyrylium intermediate. *Chemical Communications*, **2019**, 55, 13450-13453	5.8	4
6	A succinct enhanced luminescence strategy for fluorescent ionic liquids and the application for detecting CO2. *Green Energy and Environment*, **2021**,	5.7	4
5	Superhigh and reversible NH3 uptake of cobaltous thiocyanate functionalized porous poly ionic liquids through competitive and cooperative interactions. *Chemical Engineering Journal*, **2022**, 427, 131638	14.7	3

4	Ionic Liquids for Chemisorption of CO2 **2020**, 297-315		2
3	Tuning the Basicity for Highly Efficient and Reversible Hydrogen Chloride Absorption to Develop a Green Acid Scavenger. *ACS Sustainable Chemistry and Engineering*,	8.3	1
2	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	8.3	1
1	Role of Structure in the Ammonia Uptake of Porous Polyionic Liquids. *ACS Sustainable Chemistry and Engineering*, **2022**, 10, 4094-4104	8.3	1