Kuan Huang

List of Publications by Year
in descending order

104 papers	5,479 citations	53660 45 h-index	85405 71 g-index
107 all docs	107 docs citations	107 times ranked	3647 citing authors

#	Article	IF	Citations
1	Multiâ€Molar Absorption of CO₂ by the Activation of Carboxylate Groups in Amino Acid Ionic Liquids. Angewandte Chemie - International Edition, 2016, 55, 7166-7170.	7.2	264
2	Hydrophobic Solid Acids and Their Catalytic Applications in Green and Sustainable Chemistry. ACS Catalysis, 2018, 8, 372-391.	5.5	200
3	Synthesis of Porous Polymeric Catalysts for the Conversion of Carbon Dioxide. ACS Catalysis, 2018, 8, 9079-9102.	5.5	196
4	Chemical solvent in chemical solvent: A class of hybrid materials for effective capture of CO₂. AICHE Journal, 2018, 64, 632-639.	1.8	181
5	Solventâ€Free Selfâ€Assembly to the Synthesis of Nitrogenâ€Doped Ordered Mesoporous Polymers for Highly Selective Capture and Conversion of CO₂. Advanced Materials, 2017, 29, 1700445.	11.1	162
6	Chitosan-derived mesoporous carbon with ultrahigh pore volume for amine impregnation and highly efficient CO2 capture. Chemical Engineering Journal, 2019, 359, 1159-1165.	6.6	148
7	Thermodynamic and molecular insights into the absorption of H₂S, CO₂, and CH₄ in choline chloride plus urea mixtures. AICHE Journal, 2019, 65, e16574.	1.8	139
8	Thermodynamic validation of 1â€alkylâ€3â€methylimidazolium carboxylates as taskâ€specific ionic liquids for H₂S absorption. AICHE Journal, 2013, 59, 2227-2235.	1.8	135
9	Protic ionic liquids for the selective absorption of H₂S from CO₂: Thermodynamic analysis. AICHE Journal, 2014, 60, 4232-4240.	1.8	123
10	SO2 absorption in acid salt ionic liquids/sulfolane binary mixtures: Experimental study and thermodynamic analysis. Chemical Engineering Journal, 2014, 237, 478-486.	6.6	121
11	Highly efficient and selective absorption of H2S in phenolic ionic liquids: A cooperative result of anionic strong basicity and cationic hydrogen-bond donation. Chemical Engineering Science, 2017, 173, 253-263.	1.9	109
12	Phenol-Based Ternary Deep Eutectic Solvents for Highly Efficient and Reversible Absorption of NH₃. ACS Sustainable Chemistry and Engineering, 2019, 7, 3258-3266.	3.2	104
13	Hydrophobic protic ionic liquids tethered with tertiary amine group for highly efficient and selective absorption of H₂S from CO₂. AICHE Journal, 2016, 62, 4480-4490.	1.8	102
14	Promoted adsorption of CO₂ on amineâ€impregnated adsorbents by functionalized ionic liquids. AICHE Journal, 2018, 64, 3671-3680.	1.8	98
15	Absorption of SO2 in aqueous solutions of mixed hydroxylammonium dicarboxylate ionic liquids. Chemical Engineering Journal, 2013, 215-216, 36-44.	6.6	92
16	Facilitated separation of CO2 and SO2 through supported liquid membranes using carboxylate-based ionic liquids. Journal of Membrane Science, 2014, 471, 227-236.	4.1	91
17	Designing Low-Viscosity Deep Eutectic Solvents with Multiple Weak-Acidic Groups for Ammonia Separation. ACS Sustainable Chemistry and Engineering, 2021, 9, 7352-7360.	3.2	86
18	Nitrogen-Decorated, Ordered Mesoporous Carbon Spheres as High-Efficient Catalysts for Selective Capture and Oxidation of H₂S. ACS Sustainable Chemistry and Engineering, 2019, 7, 7609-7618.	3.2	84

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19	Highly Efficient Carbon Monoxide Capture by Carbanionâ€Functionalized Ionic Liquids through Câ€Site Interactions. Angewandte Chemie - International Edition, 2017, 56, 6843-6847.	7.2	83
20	Facilely synthesized meso-macroporous polymer as support of poly(ethyleneimine) for highly efficient and selective capture of CO2. Chemical Engineering Journal, 2017, 314, 466-476.	6.6	81
21	Effective and Reversible Capture of NH₃ by Ethylamine Hydrochloride Plus Glycerol Deep Eutectic Solvents. ACS Sustainable Chemistry and Engineering, 2019, 7, 10552-10560.	3.2	80
22	Chemical dual-site capture of NH₃ by unprecedentedly low-viscosity deep eutectic solvents. Chemical Communications, 2020, 56, 2399-2402.	2.2	79
23	Solvothermal synthesis of hierarchically nanoporous organic polymers with tunable nitrogen functionality for highly selective capture of CO₂. Journal of Materials Chemistry A, 2016, 4, 13063-13070.	5.2	78
24	Low-viscous fluorine-substituted phenolic ionic liquids with high performance for capture of CO2. Chemical Engineering Journal, 2015, 274, 30-38.	6.6	73
25	Selective separation of H2S and CO2 from CH4 by supported ionic liquid membranes. Journal of Membrane Science, 2017, 543, 282-287.	4.1	71
26	Manufacturing Acidities of Hydrogen-Bond Donors in Deep Eutectic Solvents for Effective and Reversible NH₃ Capture. ACS Sustainable Chemistry and Engineering, 2020, 8, 13408-13417.	3.2	71
27	Absorption of CO2 in amino acid ionic liquid (AAIL) activated MDEA solutions. International Journal of Greenhouse Gas Control, 2013, 19, 379-386.	2.3	68
28	Comparative Study of the Solubilities of SO₂ in Five Low Volatile Organic Solvents (Sulfolane, Ethylene Glycol, Propylene Carbonate, <i>N</i>-Methylimidazole, and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 377 Td (<i>N</i	1.5	67
29	One-step synthesis of nitrogen-doped graphene-like meso-macroporous carbons as highly efficient and selective adsorbents for CO₂ capture. Journal of Materials Chemistry A, 2016, 4, 14567-14571.	5.2	67
30	Aminopolymer functionalization of boron nitride nanosheets for highly efficient capture of carbon dioxide. Journal of Materials Chemistry A, 2017, 5, 16241-16248.	5.2	67
31	Solubilities of ammonia in choline chloride plus urea at (298.2â€"353.2)â€¯K and (0â€"300)â€¯kPa. Journal of Chemical Thermodynamics, 2019, 129, 5-11.	1.0	65
32	Noncorrosive ionic liquids composed of [HSO4] as esterification catalysts. Chemical Engineering Journal, 2011, 171, 1333-1339.	6.6	64
33	Dicarboxylic acid salts as task-specific ionic liquids for reversible absorption of SO2 with a low enthalpy change. RSC Advances, 2013, 3, 16264.	1.7	64
34	Dual Lewis Base Functionalization of Ionic Liquids for Highly Efficient and Selective Capture of H₂S. ChemPlusChem, 2014, 79, 241-249.	1.3	62
35	Effect of alkalinity on absorption capacity and selectivity of SO2 and H2S over CO2: Substituted benzoate-based ionic liquids as the study platform. Chemical Engineering Journal, 2016, 297, 265-276.	6.6	62
36	Rational Design of Azole-Based Deep Eutectic Solvents for Highly Efficient and Reversible Capture of Ammonia. ACS Sustainable Chemistry and Engineering, 2019, 7, 14170-14179.	3.2	62

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37	Design of Efficient, Hierarchical Porous Polymers Endowed with Tunable Structural Base Sites for Direct Catalytic Elimination of COS and H₂S. ACS Applied Materials & Interfaces, 2019, 11, 29950-29959.	4.0	61
38	Open and Hierarchical Carbon Framework with Ultralarge Pore Volume for Efficient Capture of Carbon Dioxide. ACS Applied Materials & Interfaces, 2018, 10, 36961-36968.	4.0	59
39	The ionic liquid-mediated Claus reaction: a highly efficient capture and conversion of hydrogen sulfide. Green Chemistry, 2016, 18, 1859-1863.	4.6	58
40	Highly efficient and selective separation of ammonia by deep eutectic solvents through cooperative acid-base and strong hydrogen-bond interaction. Journal of Molecular Liquids, 2021, 337, 116463.	2.3	55
41	Ionic liquid electrolytes for aluminium secondary battery: Influence of organic solvents. Journal of Electroanalytical Chemistry, 2015, 757, 167-175.	1.9	54
42	Highly Efficient, Reversible, and Selective Absorption of SO₂ in 1-Ethyl-3-methylimidazolium Chloride Plus Imidazole Deep Eutectic Solvents. Industrial & Engineering Chemistry Research, 2020, 59, 13696-13705.	1.8	51
43	Multiâ€Molar Absorption of CO₂ by the Activation of Carboxylate Groups in Amino Acid Ionic Liquids. Angewandte Chemie, 2016, 128, 7282-7286.	1.6	49
44	An efficient low-temperature route to nitrogen-doping and activation of mesoporous carbons for CO₂ capture. Chemical Communications, 2015, 51, 17261-17264.	2.2	47
45	Significantly increasing porosity of mesoporous carbon by NaNH2 activation for enhanced CO2 adsorption. Microporous and Mesoporous Materials, 2016, 230, 100-108.	2.2	47
46	Effect of metal oxides modification on CO2 adsorption performance over mesoporous carbon. Microporous and Mesoporous Materials, 2017, 249, 34-41.	2.2	47
47	Ionic liquidâ€"formulated hybrid solvents for CO2 capture. Current Opinion in Green and Sustainable Chemistry, 2017, 5, 67-73.	3.2	45
48	<scp>Chelationâ€activated multipleâ€site</scp> reversible chemical absorption of ammonia in ionic liquids. AIChE Journal, 2022, 68, .	1.8	44
49	Remarkable <scp>NH₃</scp> absorption in <scp>metalâ€based</scp> deep eutectic solvents by multiple coordination and <scp>hydrogenâ€bond</scp> interaction. AIChE Journal, 2022, 68, .	1.8	44
50	ROMP for Metalâ€"Organic Frameworks: An Efficient Technique toward Robust and High-Separation Performance Membranes. ACS Applied Materials & Interfaces, 2018, 10, 34640-34645.	4.0	42
51	Deep eutectic solvents with multiple weak acid sites for highly efficient, reversible and selective absorption of ammonia. Separation and Purification Technology, 2021, 269, 118791.	3.9	42
52	Highly Efficient CO₂ Capture by Polyethylenimine Plus 1-Ethyl-3-Methylimidazolium Acetate Mixed Absorbents. ACS Sustainable Chemistry and Engineering, 2019, 7, 9369-9377.	3.2	40
53	Deep Eutectic Solvents Formed by <i>N</i>-Methylacetamide and Heterocyclic Weak Acids for Highly Efficient and Reversible Chemical Absorption of Ammonia. Industrial & Engineering Chemistry Research, 2020, 59, 2060-2067.	1.8	40
54	1-ethyl-3-methylimidazolium chloride plus imidazole deep eutectic solvents as physical solvents for remarkable separation of H2S from CO2. Separation and Purification Technology, 2021, 276, 119313.	3.9	38

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55	NH₃ Solubilities and Physical Properties of Ethylamine Hydrochloride Plus Urea Deep Eutectic Solvents. Journal of Chemical & Engineering Data, 2019, 64, 3821-3830.	1.0	34
56	Densities and viscosities of, and NH3 solubilities in deep eutectic solvents composed of ethylamine hydrochloride and acetamide. Journal of Chemical Thermodynamics, 2019, 139, 105883.	1.0	34
57	Pyridine-Functionalized and Metallized Meso-Macroporous Polymers for Highly Selective Capture and Catalytic Conversion of CO₂ into Cyclic Carbonates. Industrial & Engineering Chemistry Research, 2017, 56, 15008-15016.	1.8	32
58	Solvent-free and one-pot synthesis of ultramicroporous carbons with ultrahigh nitrogen contents for sulfur dioxide capture. Chemical Engineering Journal, 2020, 391, 123579.	6.6	32
59	Enhancing the activity of MoS2/SiO2-Al2O3 bifunctional catalysts for suspended-bed hydrocracking of heavy oils by doping with Zr atoms. Chinese Journal of Chemical Engineering, 2021, 39, 126-134.	1.7	31
60	Amine Functionalization of Microsized and Nanosized Mesoporous Carbons for Carbon Dioxide Capture. Industrial & Engineering Chemistry Research, 2016, 55, 7355-7361.	1.8	30
61	Aqueous and Templateâ€Free Synthesis of Mesoâ€“Macroporous Polymers for Highly Selective Capture and Conversion of Carbon Dioxide. ChemSusChem, 2017, 10, 4144-4149.	3.6	30
62	Sigmoid Correlations for Gas Solubility and Enthalpy Change of Chemical Absorption of CO₂. Industrial & Engineering Chemistry Research, 2015, 54, 10126-10133.	1.8	29
63	Solvothermal and template-free synthesis of N-Functionalized mesoporous polymer for amine impregnation and CO2 adsorption. Microporous and Mesoporous Materials, 2019, 290, 109653.	2.2	28
64	Impact of Î±-d-glucose pentaacetate on the selective separation of CO2 and SO2 in supported ionic liquid membranes. Green Chemistry, 2012, 14, 1440.	4.6	27
65	Ordered Mesoporous Polymers for Biomass Conversions and Crossâ€Coupling Reactions. ChemSusChem, 2016, 9, 2496-2504.	3.6	27
66	Absorption of H₂S and CO₂ in Aqueous Solutions of Tertiary-Amine Functionalized Protic Ionic Liquids. Energy & Fuels, 2017, 31, 14060-14069.	2.5	27
67	Sugar-based natural deep eutectic solvents as potential absorbents for NH3 capture at elevated temperatures and reduced pressures. Journal of Molecular Liquids, 2020, 317, 113992.	2.3	27
68	Highly Efficient Carbon Monoxide Capture by Carbanionâ€Functionalized Ionic Liquids through Câ€Site Interactions. Angewandte Chemie, 2017, 129, 6947-6951.	1.6	26
69	Protic ionic liquid as excellent shuttle of MDEA for fast capture of CO₂. AICHE Journal, 2018, 64, 209-219.	1.8	26
70	Graphitic Carbon Nitride Functionalized with Polyethylenimine for Highly Effective Capture of Carbon Dioxide. Industrial & Engineering Chemistry Research, 2018, 57, 11031-11038.	1.8	26
71	Tuning the acidity of sulfonic functionalized ionic liquids for highly efficient and selective synthesis of terpene esters. Journal of Industrial and Engineering Chemistry, 2016, 41, 122-129.	2.9	25
72	Highly Efficient Indirect Hydration of Olefins to Alcohols Using Superacidic Polyoxometalate-Based Ionic Hybrids Catalysts. Industrial & Engineering Chemistry Research, 2018, 57, 6654-6663.	1.8	25

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73	Highly efficient, selective and reversible capture of sulfur dioxide by methylated-polyethylenimine supported on graphitic carbon nitride. Chemical Engineering Journal, 2021, 409, 127378.	6.6	25
74	Meso-macroporous polymer densely functionalized with tertiary amine groups as effective sorbents for SO2 capture. Chemical Engineering Journal, 2021, 422, 129699.	6.6	23
75	Tunable ionic liquids as oil-soluble precursors of dispersed catalysts for suspended-bed hydrocracking of heavy residues. Fuel, 2022, 313, 122664.	3.4	23
76	Experimental study and thermodynamical modelling of the solubilities of SO 2 , H 2 S and CO 2 in N-dodecylimidazole and 1,1â€²-[oxybis(2,1-ethanediyloxy-2,1-ethanediyl)]bis(imidazole): An evaluation of their potential application in the separation of acidic gases. Fluid Phase Equilibria, 2014, 378, 21-33.	1.4	22
77	Solubilities of Carbon Dioxide in 1-Ethyl-3-methylimidazolium Thiocyanate, 1-Ethyl-3-methylimidazolium Dicyanamide, and 1-Ethyl-3-methylimidazolium Tricyanomethanide at (298.2 to 373.2) K and (0 to 300.0) kPa. Journal of Chemical & Engineering Data, 2017, 62, 4108-4116.	1.0	22
78	Dependence of zeolite topology on alkane diffusion inside <scp> diverse channels</scp>. AIChE Journal, 2020, 66, e16269.	1.8	22
79	Carboxylic functionalized mesoporous polymers for fast, highly efficient, selective and reversible adsorption of ammonia. Chemical Engineering Journal, 2022, 448, 137640.	6.6	21
80	Simultaneous activation and N-doping of hydrothermal carbons by NaNH2: An effective approach to CO2 adsorbents. Journal of CO2 Utilization, 2019, 33, 405-412.	3.3	19
81	Trialkylmethylammonium molybdate ionic liquids as novel oil-soluble precursors of dispersed metal catalysts for slurry-phase hydrocracking of heavy oils. Chemical Engineering Science, 2022, 253, 117516.	1.9	19
82	Co-N-C catalysts synthesized by pyrolysis of Co-based deep eutectic solvents for aerobic oxidation of alcohols. New Journal of Chemistry, 2018, 42, 15871-15878.	1.4	17
83	Ultralow Loading Cobalt-Based Nanocatalyst for Benign and Efficient Aerobic Oxidation of Allylic Alcohols and Biobased Olefins. ACS Sustainable Chemistry and Engineering, 2019, 7, 1901-1908.	3.2	16
84	Physical Properties and NH3 Solubilities of Deep Eutectic Solvents Formed by Choline Chloride and Glycols. Fluid Phase Equilibria, 2021, 529, 112871.	1.4	15
85	New deep eutectic solvents formed by 1-ethyl-3-methylimidazolium chloride and dicyandiamide: Physiochemical properties and SO2 absorption performance. Journal of the Taiwan Institute of Chemical Engineers, 2021, 119, 45-51.	2.7	15
86	Improving conversion of methyl palmitate to diesel-like fuel through catalytic deoxygenation with B2O3-modified ZrO2. Fuel Processing Technology, 2022, 226, 107091.	3.7	15
87	Slurry-Phase Hydrocracking of a Decalinâ€“Phenanthrene Mixture by MoS₂/SiO₂â€“ZrO₂ Bifunctional Catalysts. Industrial & Engineering Chemistry Research, 2021, 60, 230-242.	1.8	14
88	Densities and viscosities of, and solubilities of acidic gases (SO2 and H2S) in natural deep eutectic solvents. Journal of Chemical Thermodynamics, 2022, 167, 106713.	1.0	14
89	Graphene-based mesoporous frameworks with ultrahigh nitrogen contents for highly efficient and selective sulfur dioxide capture. Chemical Engineering Journal, 2021, 412, 128677.	6.6	13
90	Synthesis of Porous Sulfonamide Polymers by Capturing Atmospheric Sulfur Dioxide. ChemSusChem, 2018, 11, 1751-1755.	3.6	11

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91	Systematic Study on the General Preparation of Ionic Liquids with High Purity via Hydroxide Intermediates. Industrial & Engineering Chemistry Research, 2014, 53, 6871-6880.	1.8	7
92	Interfacial Engineering of Supported Liquid Membranes by Vapor Crossâ€Linking for Enhanced Separation of Carbon Dioxide. ChemSusChem, 2018, 11, 185-192.	3.6	7
93	Solubilities of Ammonia in Polyethylene Glycols at 298.2â€“353.2 K and 0â€“200 kPa. Journal of Chemical & Engineering Data, 2020, 65, 97-105.	1.0	7
94	Reversible Chemical Absorption of CO₂ in Polyethylenimine Supported by Low-Viscous Tetrabutylphosphonium 2-Fluorophenolate. Energy & Fuels, 2020, 34, 3493-3500.	2.5	7
95	Interactions of an Imine Polymer with Nanoporous Silica and Carbon in Hybrid Adsorbents for Carbon Capture. Langmuir, 2021, 37, 4622-4631.	1.6	7
96	Dispersing aminopolycarboxylate ionic liquids in mesoporous organic polymer for highly efficient and improved carbon capture from dilute source. Journal of Molecular Liquids, 2021, 338, 116653.	2.3	7
97	Developing porous organic polymers as precursors of nitrogen-decorated micro-mesoporous carbons for efficient capture and conversion of carbon dioxide. Journal of Materials Science, 2021, 56, 9315-9329.	1.7	6
98	Facilely synthesized mesoporous polymer for dispersion of amino acid ionic liquid and effective capture of carbon dioxide from anthropogenic source. Journal of the Taiwan Institute of Chemical Engineers, 2021, 125, 115-121.	2.7	6
99	Amino Acid Modified Macroreticular Anion Exchange Resins for CO₂ Adsorption. Journal of Chemical Engineering of Japan, 2015, 48, 268-275.	0.3	5
100	Remarkably efficient hydrolysis of cinnamaldehyde to natural benzaldehyde in amino acid ionic liquids. Korean Journal of Chemical Engineering, 2016, 33, 3374-3380.	1.2	4
101	Commercial anion exchange resin modified with azolates for remarkable separation of SO2 from CO2. Fuel, 2022, 310, 122468.	3.4	4
102	Effective Capture of Carbon Dioxide by Tetraethylenepentamine Assisted with 1-Ethyl-3-methylimidazolium Acetate: Experimental and Thermodynamic Analysis. Energy & Fuels, 2019, 33, 11399-11407.	2.5	3
103	Chitin-derived fibrous carbon microspheres as support of polyamine for remarkable CO2 capture. Green Chemical Engineering, 2022, 3, 267-279.	3.3	3
104	RÃ¼cktitelbild: Highly Efficient Carbon Monoxide Capture by Carbanionâ€Functionalized Ionic Liquids through Câ€Site Interactions (Angew. Chem. 24/2017). Angewandte Chemie, 2017, 129, 7108-7108.	1.6	0