Ionic-Liquid-Based CO₂ Capture Systems:

Chemical Reviews

117, 9625-9673

DOI: 10.1021/acs.chemrev.7b00072

Citation Report

#	Article	IF	Citations
1	The solubility of gases in ionic liquids. AICHE Journal, 2017, 63, 4722-4737.	3.6	64
2	Introduction: Carbon Capture and Separation. Chemical Reviews, 2017, 117, 9521-9523.	47.7	157
3	Transition Metalâ€Containing Ionic Liquid Crystals with 1â€Decylâ€2,3â€dimethylimidazolium: Facile Syntheses, Crystal Structures, Thermal Properties and NH 3 Detection. ChemistrySelect, 2018, 3, 3731-3736.	1.5	6
4	Unique orientations and rotational dynamics of a 1-butyl-3-methyl-imidazolium hexafluorophosphate ionic liquid at the gasâ€“liquid interface: the effects of the hydrogen bond and hydrophobic interactions. Physical Chemistry Chemical Physics, 2018, 20, 12043-12052.	2.8	13
5	Design and synthesis of a multifunctional porous N-rich polymer containing s-triazine and TrÃ¶ger's base for CO₂ adsorption, catalysis and sensing. Polymer Chemistry, 2018, 9, 2643-2649.	3.9	57
6	Prediction of Henry's law constant of CO2 in ionic liquids based on SEP and SÏƒ-profile molecular descriptors. Journal of Molecular Liquids, 2018, 262, 139-147.	4.9	25
7	Mixing poly(ionic liquid)s and ionic liquids with different cyano anions: Membrane forming ability and CO 2 /N 2 separation properties. Journal of Membrane Science, 2018, 552, 341-348.	8.2	49
8	Ionic liquid syntheses via click chemistry: expeditious routes toward versatile functional materials. Chemical Communications, 2018, 54, 2944-2961.	4.1	52
9	Coordination of Carbon Dioxide to the Lewis Acid Site of a Zincâ€Substituted Polyoxometalate and Formation of an Adduct Using a Polyoxometalateâ€“2,4,6â€Trimethylpyridine Frustrated Lewis Pair. European Journal of Inorganic Chemistry, 2018, 2018, 791-794.	2.0	11
10	High CO₂ absorption by diamino protic ionic liquids using azolide anions. Chemical Communications, 2018, 54, 2106-2109.	4.1	48
11	Molecular Modeling Analysis of CO₂ Absorption by Glymes. Journal of Physical Chemistry B, 2018, 122, 1948-1957.	2.6	4
12	Influence of Water on Carbon Dioxide and Room Temperature Ionic Liquid Dynamics: Supported Ionic Liquid Membrane vs the Bulk Liquid. Journal of Physical Chemistry B, 2018, 122, 2389-2395.	2.6	8
13	Efficient, Selective, and Reversible SO₂ Capture with Highly Crosslinked Ionic Microgels via a Selective Swelling Mechanism. Advanced Functional Materials, 2018, 28, 1704292.	14.9	51
14	Impact of Anions on the Partition Constant, Self-Diffusion, Thermal Stability, and Toxicity of Dicationic Ionic Liquids. ACS Omega, 2018, 3, 734-743.	3.5	14
15	Density, Viscosity, and CO₂ Solubility in the Ionic Liquid Mixtures of [bmim][PF₆] and [bmim][TFSA] at 313.15 K. Journal of Chemical & Engineering Data, 2018, 63, 1036-1043.	1.9	20
16	Aspects of solvent polarity and solvent properties in developing efficient systems for processing biomass with ionic liquid mixtures and supercritical CO2. Journal of Supercritical Fluids, 2018, 134, 12-20.	3.2	15
17	Enterprise Ionic Liquids Database (ILUAM) for Use in Aspen ONE Programs Suite with COSMO-Based Property Methods. Industrial & Engineering Chemistry Research, 2018, 57, 980-989.	3.7	71
18	Inedible saccharides: a platform for CO₂ capturing. Chemical Science, 2018, 9, 1088-1100.	7.4	39

#	Article	IF	Citations
19	Acetylene absorption by ionic liquids: A multiscale analysis based on molecular and process simulation. Separation and Purification Technology, 2018, 204, 38-48.	7.9	22
20	Molecular dynamics simulations of polyethers and a quaternary ammonium ionic liquid as CO2 absorbers. Journal of Chemical Physics, 2018, 148, 134908.	3.0	13
21	Ionic liquids: a brief history. Biophysical Reviews, 2018, 10, 691-706.	3.2	658
22	A theoretical study on mixtures of amino acid-based ionic liquids. Physical Chemistry Chemical Physics, 2018, 20, 10213-10223.	2.8	11
23	Systems Analysis of Physical Absorption of CO₂ in Ionic Liquids for Pre-Combustion Carbon Capture. Environmental Science & Technology, 2018, 52, 4996-5004.	10.0	42
24	Innovative aspects of protein stability in ionic liquid mixtures. Biophysical Reviews, 2018, 10, 841-846.	3.2	35
25	Hypercrosslinked mesoporous poly(ionic liquid)s with high ionic density for efficient CO₂ capture and conversion into cyclic carbonates. Journal of Materials Chemistry A, 2018, 6, 6660-6666.	10.3	116
26	Formation of CO₂ Hydrates within Single-Walled Carbon Nanotubes at Ambient Pressure: CO₂ Capture and Selective Separation of a CO₂/H₂ Mixture in Water. Journal of Physical Chemistry C, 2018, 122, 7951-7958.	3.1	21
27	Experimental Densities and Calculated Fractional Free Volumes of Ionic Liquids with Tri- and Tetra-substituted Imidazolium Cations. Journal of Chemical & Engineering Data, 2018, 63, 2522-2532.	1.9	5
28	Hybridization of metalâ€“organic frameworks and task-specific ionic liquids: fundamentals and challenges. Materials Chemistry Frontiers, 2018, 2, 219-234.	5.9	72
29	Multi-functionalization of GO with multi-cationic ILs as high efficient metal-free catalyst for CO2 cycloaddition under mild conditions. Carbon, 2018, 127, 245-254.	10.3	86
30	CO₂/CH₄ and H₂S/CO₂ Selectivity by Ionic Liquids in Natural Gas Sweetening. Energy & Fuels, 2018, 32, 10-23.	5.1	58
31	Experiment and simulation study of CO2 solubility in dimethyl carbonate, 1-octyl-3-methylimidazolium tetrafluoroborate and their mixtures. Energy, 2018, 143, 35-42.	8.8	19
32	Structural Elucidation of Covalent Organic Polymers (COP) and Their Linker Effect on Gas Adsorption Performance via Density Functional Theory Approach. ChemistrySelect, 2018, 3, 8294-8305.	1.5	6
33	The peculiar effect of water on ionic liquids and deep eutectic solvents. Chemical Society Reviews, 2018, 47, 8685-8720.	38.1	346
34	Functionalized ionic liquid membranes for CO₂ separation. Chemical Communications, 2018, 54, 12671-12685.	4.1	81
35	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.	3.7	10
36	Understanding the Competitive Gas Absorption of CO₂ and SO₂ in Superbase Ionic Liquids. Industrial & Engineering Chemistry Research, 2018, 57, 17033-17042.	3.7	22

#	Article	IF	Citations
37	Basic ionic liquids promoted chemical transformation of CO2 to organic carbonates. Science China Chemistry, 2018, 61, 1486-1493.	8.2	31
38	Enhancing CO2 Adsorption and Separation Properties of Aluminophosphate Zeolites by Isomorphous Heteroatom Substitutions. ACS Applied Materials & Interfaces, 2018, 10, 43570-43577.	8.0	30
39	Reply to the Correspondence on â€œPreorganization and Cooperation for Highly Efficient and Reversible Capture of Lowâ€Concentration CO 2 by Ionic Liquidsâ€• Angewandte Chemie, 2018, 131, 392.	2.0	0
40	Mechanism and Kinetic Study of Carbon Dioxide Absorption into a Methyldiethanolamine/1-Hydroxyethyl-3-methylimidazolium Lysine/Water System. Energy & Fuels, 2018, 32, 10813-10821.	5.1	13
41	Molecular Origins of the Apparent Ideal CO₂ Solubilities in Binary Ionic Liquid Mixtures. Journal of Physical Chemistry B, 2018, 122, 9763-9774.	2.6	16
42	Comparison of ionic liquid and salt effects on the thermodynamics of amphiphile micellization in water. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 559, 159-168.	4.7	25
43	Ionic Liquid/Quaternary Ammonium Salt Integrated Heterogeneous Catalytic System for the Efficient Coupling of Carbon Dioxide with Epoxides. Industrial & Engineering Chemistry Research, 2018, , .	3.7	7
44	Tuning ionic liquids with imide-based anions for highly efficient CO2 capture through enhanced cooperations. Journal of CO2 Utilization, 2018, 28, 299-305.	6.8	43
45	Ionic Liquidâ€“Based Membranes for CO2 Separation. , 2018, , 235-260.		6
46	Recent Developments on Supported Hydrogenâ€bond Organocatalysts. ChemCatChem, 2018, 10, 5554-5572.	3.7	24
47	Carboxylate Ionic Liquids with Large Free Volume and Strong Hydrogen Bonding Basicity for Efficient Separation of Butadiene and n-Butene. Industrial & Engineering Chemistry Research, 2018, 57, 13519-13527.	3.7	14
48	Intermolecular interactions upon carbon dioxide capture in deep-eutectic solvents. Physical Chemistry Chemical Physics, 2018, 20, 24591-24601.	2.8	62
49	Is the formation of N-heterocyclic carbenes (NHCs) a feasible mechanism for the distillation of imidazolium ionic liquids?. Physical Chemistry Chemical Physics, 2018, 20, 24716-24725.	2.8	4
50	The confined [Bmim][BF₄] ionic liquid flow through graphene oxide nanochannels: a molecular dynamics study. Physical Chemistry Chemical Physics, 2018, 20, 17773-17780.	2.8	40
51	NHCs in Main Group Chemistry. Chemical Reviews, 2018, 118, 9678-9842.	47.7	563
52	CO₂ Electroreduction in Ionic Liquids: A Review. Chinese Journal of Chemistry, 2018, 36, 961-970.	4.9	77
53	Computer-Aided Design of Ionic Liquids as Absorbent for Gas Separation Exemplified by CO₂ Capture Cases. ACS Sustainable Chemistry and Engineering, 2018, 6, 12025-12035.	6.7	68
54	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

#	Article	IF	Citations
55	Synthesis of various gold hierarchical architectures assisted by functionalized ionic liquids in aqueous solutions and their efficient SERS responses. Journal of Colloid and Interface Science, 2018, 531, 194-203.	9.4	16
56	Insights into Carbon Dioxide Electroreduction in Ionic Liquids: Carbon Dioxide Activation and Selectivity Tailored by Ionic Microhabitat. ChemSusChem, 2018, 11, 3191-3197.	6.8	50
57	Exploiting the hydrophilic role of natural deep eutectic solvents for greening CO2 capture. Journal of Cleaner Production, 2018, 193, 802-810.	9.3	91
58	From kinetics to equilibrium control in CO2 capture columns using Encapsulated Ionic Liquids (ENILs). Chemical Engineering Journal, 2018, 348, 661-668.	12.7	46
59	Harnessing Filler Materials for Enhancing Biogas Separation Membranes. Chemical Reviews, 2018, 118, 8655-8769.	47.7	239
60	Solvents for Carbon Dioxide Capture. , 0, , .		31
61	Enhanced solubility of carbon dioxide for encapsulated ionic liquids in polymeric materials. Chemical Engineering Journal, 2018, 354, 753-757.	12.7	26
62	Continuous Conversion of Carbon Dioxide to Propylene Carbonate with Supported Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2018, 6, 13131-13139.	6.7	46
63	Structureâ€“Property Relationship in Energetic Cationic Metalâ€“Organic Frameworks: New Insight for Design of Advanced Energetic Materials. Crystal Growth and Design, 2018, 18, 5896-5903.	3.0	30
64	Molecular Insights into Benzimidazoleâ€Linked Polymer Interactions with Carbon Dioxide and Nitrogen. ChemistrySelect, 2018, 3, 3691-3701.	1.5	10
65	Role of solvents in CO2 capture processes: The review of selection and design methods. Renewable and Sustainable Energy Reviews, 2019, 114, 109299.	16.4	201
66	Improving ionic liquid tolerance in Saccharomyces cerevisiae through heterologous expression and directed evolution of an ILT1 homolog from Yarrowia lipolytica. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 1715-1724.	3.0	17
67	Toward Electrochemical Studies on the Nanometer and Atomic Scales: Progress, Challenges, and Opportunities. ACS Nano, 2019, 13, 9735-9780.	14.6	32
68	Fatty acids-derived protic ionic liquids as lubricant additive to synthetic lube base oil for enhancement of tribological properties. Journal of Molecular Liquids, 2019, 293, 111444.	4.9	49
69	Metal-organic framework based carbon capture and purification technologies for clean environment. , 2019, , 5-61.		21
70	Is it Always Chemical When Amino Groups Come Across CO₂? Anionâ€“Anion-Interaction-Induced Inhibition of Chemical Adsorption. Journal of Physical Chemistry B, 2019, 123, 6536-6542.	2.6	17
71	Cyanoborates. European Journal of Inorganic Chemistry, 2019, 2019, 3539-3560.	2.0	32
72	Environmental sustainability of cellulose-supported solid ionic liquids for CO2 capture. Green Chemistry, 2019, 21, 4100-4114.	9.0	19

#	Article	IF	Citations
73	IL-induced formation of dynamic complex iodide anions in IL@MOF composites for efficient iodine capture. Journal of Materials Chemistry A, 2019, 7, 18324-18329.	10.3	91
74	Ionic liquids from a fragmented perspective. Physical Chemistry Chemical Physics, 2019, 21, 16878-16888.	2.8	10
75	In Situ Electrosynthesis of Peroxydicarbonate Anion in Ionic Liquid Media Using Carbon Dioxide/Superoxide System. ACS Applied Materials & Interfaces, 2019, 11, 25928-25939.	8.0	12
76	Study on Short-Circuit Impedance Characteristics in DN Traction Electric Lines. IOP Conference Series: Earth and Environmental Science, 2019, 310, 032053.	0.3	0
77	Development of Highâ€Capacity and Waterâ€Lean CO₂ Absorbents by a Concise Molecular Design Strategy through Viscosity Control. ChemSusChem, 2019, 12, 5164-5171.	6.8	14
78	Temperature field modeling of the plate during hot rolling based on inverse heat conduction problem. Journal of Physics: Conference Series, 2019, 1300, 012017.	0.4	0
79	Low Voltage Power Line Communication Routing Method based on Improved Genetic Algorithm. , 2019, , .		0
80	Pressure Oxidation Dissolution of Antimony Trioxide in KOH Solution for Preparing Sodium Pyroantimonate. Jom, 2019, 71, 4631-4638.	1.9	4
81	Efficient Liâ€“CO₂ Batteries with Molybdenum Disulfide Nanosheets on Carbon Nanotubes as a Catalyst. ACS Applied Energy Materials, 2019, 2, 8685-8694.	5.1	40
82	Sensitivity analysis of ship traffic in restricted two-way waterways considering the impact of LNG carriers. Ocean Engineering, 2019, 192, 106556.	4.3	9
83	Phosphoniumâ€Based Ionic Liquids Used as Reagents or Catalysts. ChemistrySelect, 2019, 4, 9285-9299.	1.5	28
84	Insights on [BMIM][BF4] and [BMIM][PF6] ionic liquids and their binary mixtures with acetone and acetonitrile. Journal of Molecular Liquids, 2019, 294, 111632.	4.9	13
85	Efficient thiazole-based polyimines as selective and reversible chemical absorbents for CO2 capture and separation: Synthesis, characterization and application. Polymer, 2019, 182, 121840.	3.8	5
86	Effect of cluster of protic pyrazolium ionic liquids or epoxides on the cycloaddition of CO2. Journal of Molecular Liquids, 2019, 295, 111652.	4.9	4
87	Polymerizable Ionic Liquids for Solid-State Polymer Electrolytes. Molecules, 2019, 24, 324.	3.8	8
88	Polyurethaneâ€based poly (ionic liquid)s for CO₂ removal from natural gas. Journal of Applied Polymer Science, 2019, 136, 47536.	2.6	16
89	Recent advances of CO2-responsive materials in separations. Journal of CO2 Utilization, 2019, 30, 79-99.	6.8	64
90	Ionic liquids for active photonics components fabrication. Optical Materials, 2019, 89, 106-111.	3.6	9

#	Article	IF	Citations
91	Ionic liquid-decorated COF and its covalent composite aerogel for selective CO₂ adsorption and catalytic conversion. Journal of Materials Chemistry A, 2019, 7, 4689-4698.	10.3	152
92	Molecular Insights into the Regulatable Interfacial Property and Flow Behavior of Confined Ionic Liquids in Graphene Nanochannels. Small, 2019, 15, e1804508.	10.0	44
93	Efficient CO₂ absorption by azolide-based deep eutectic solvents. Chemical Communications, 2019, 55, 1426-1429.	4.1	95
94	Supported Ionic Liquid Membranes with Dual-Site Interaction Mechanism for Efficient Separation of CO₂. ACS Sustainable Chemistry and Engineering, 2019, 7, 10792-10799.	6.7	54
95	Understanding of structures, dynamics, and hydrogen bonds of imidazolium-based ionic liquid mixture from molecular dynamics simulation. Chemical Physics, 2019, 525, 110391.	1.9	10
96	Simulation study of biomethane liquefaction followed by biogas upgrading using an imidazolium-based cationic ionic liquid. Journal of Cleaner Production, 2019, 231, 953-962.	9.3	30
97	Rapid desorption of CO2 from deep eutectic solvents based on polyamines at lower temperatures: an alternative technology with industrial potential. Sustainable Energy and Fuels, 2019, 3, 2125-2134.	4.9	21
98	Laminated mica nanosheets supported ionic liquid membrane for CO₂ separation. Nanotechnology, 2019, 30, 385705.	2.6	25
99	Synthesis of new ionic liquids based on dicationic imidazolium and their anti-corrosion performances. Journal of Molecular Liquids, 2019, 290, 111230.	4.9	70
100	Selectively tuning gas transport through ionic liquid filled graphene oxide nanoslits using an electric field. Journal of Materials Chemistry A, 2019, 7, 15062-15067.	10.3	48
101	Convenient design of porous and heteroatom self-doped carbons for CO2 capture. Microporous and Mesoporous Materials, 2019, 287, 1-8.	4.4	45
103	Study on the desulfurization performance of metal-based low transition temperature mixtures: Removal of hydrogen sulfide and sulfur recovery. Fuel Processing Technology, 2019, 193, 372-377.	7.2	17
104	High-Capacity Amine-Imidazole Solvent Blends for CO2 Capture. Industrial & Engineering Chemistry Research, 2019, 58, 10533-10539.	3.7	8
105	Heating load depreciation in the solvent-regeneration step of absorption-based acid gas removal using an ionic liquid with an imidazolium-based cation. International Journal of Greenhouse Gas Control, 2019, 87, 89-99.	4.6	23
106	Recovery of lithium from alkaline brine by solvent extraction with functionalized ionic liquid. Fluid Phase Equilibria, 2019, 493, 129-136.	2.5	45
107	Ionic Liquid Materials for the Adsorption of Toxic Gases. , 2019, , 1-8.		0
108	Experimental and Mechanistic Study of Stabilized Dry CO₂ Foam Using Polyelectrolyte Complex Nanoparticles Compatible with Produced Water To Improve Hydraulic Fracturing Performance. Industrial & Engineering Chemistry Research, 2019, 58, 9431-9449.	3.7	29
109	Rational design of double salt ionic liquids as extraction solvents: Separation of thiophene/nâ€•octane as example. AICHE Journal, 2019, 65, e16625.	3.6	48

#	Article	IF	Citations
110	Carbon dioxide capture and bioenergy production using biological system â€“ A review. Renewable and Sustainable Energy Reviews, 2019, 110, 143-158.	16.4	152
111	Bisimidazolium PEG-mediated crosslinked 6FDA-durene polyimide membranes for CO2 separation. Separation and Purification Technology, 2019, 224, 180-188.	7.9	41
112	A Reliable Database for Ionic Volume and Surface: Its Application To Predict Molar Volume and Density of Ionic Liquid. Industrial & Engineering Chemistry Research, 2019, 58, 10073-10083.	3.7	8
113	Theoretical study on ionic liquids based on DBUH + : Molecular engineering and hydrogen bond evaluation. International Journal of Quantum Chemistry, 2019, 119, e25966.	2.0	2
114	Reactivity of CO2 with aqueous choline-based ionic liquids probed by solid-state NMR spectroscopy. Journal of Molecular Liquids, 2019, 286, 110918.	4.9	7
115	Improved CO2 separation performance of aqueous choline-glycine solution by partially replacing water with polyethylene glycol. Fluid Phase Equilibria, 2019, 495, 12-20.	2.5	4
116	Fabrication of PEIâ€grafted porous polymer foam for CO₂ capture. Journal of Applied Polymer Science, 2019, 136, 47844.	2.6	12
117	Bimodal detection of carbon dioxide using fluorescent molecular aggregates. Chemical Communications, 2019, 55, 6046-6049.	4.1	17
118	Transition metal-catalyzed hydrogenation of carbon dioxide in ionic liquids. Advances in Organometallic Chemistry, 2019, , 259-274.	1.0	4
119	Electrical field facilitates selective transport of CO₂ through a laminated MoS₂ supported ionic liquid membrane. Journal of Materials Chemistry A, 2019, 7, 10041-10046.	10.3	40
120	Anomalous Solute Diffusivity in Ionic Liquids: Label-Free Visualization and Physical Origins. Physical Review X, 2019, 9, .	8.9	6
121	Efficient adsorption of ammonia by incorporation of metal ionic liquids into silica gels as mesoporous composites. Chemical Engineering Journal, 2019, 370, 81-88.	12.7	45
122	Effect of Ionic Liquid Impregnation in Highly Water-Stable Metalâ€“Organic Frameworks, Covalent Organic Frameworks, and Carbon-Based Adsorbents for Post-combustion Flue Gas Treatment. Energy & Fuels, 2019, 33, 3421-3428.	5.1	27
123	Ionic Liquids: Potential Materials for Carbon Dioxide Capture and Utilization. Frontiers in Materials, 2019, 6, .	2.4	95
124	Aprotic Heterocyclic Anion-Based Dual-Functionalized Ionic Liquid Solutions for Efficient CO₂ Uptake: Quantum Chemistry Calculation and Experimental Research. ACS Sustainable Chemistry and Engineering, 2019, 7, 7312-7323.	6.7	45
125	Separation Efficiency of CO₂ in Ionic Liquids/Poly(vinylidene fluoride) Composite Membrane: A Molecular Dynamics Study. Industrial & Engineering Chemistry Research, 2019, 58, 6887-6898.	3.7	18
126	Strategy Combining Free Volume Theory and Fragment Contribution Corresponding State Method for Predicting Viscosities of Ionic Liquids. Industrial & Engineering Chemistry Research, 2019, 58, 5640-5649.	3.7	6
127	Cross-Linked PEG Membranes of Interpenetrating Networks with Ionic Liquids as Additives for Enhanced CO₂ Separation. Industrial & Engineering Chemistry Research, 2019, 58, 5261-5268.	3.7	29

#	Article	IF	Citations
128	110th Anniversary: Ionic Liquid Promoted CO₂ Hydrogenation to Free Formic Acid over Pd/C. Industrial & Engineering Chemistry Research, 2019, 58, 6333-6339.	3.7	25
129	Solubilities and Thermodynamic Properties of NH₃ in Glycerin and its Derivatives. Journal of Chemical & Engineering Data, 2019, 64, 1131-1139.	1.9	9
130	Numerical modeling for characterization of CO2 bubble formation through submerged orifice in ionic liquids. Chemical Engineering Research and Design, 2019, 146, 104-116.	5.6	8
131	Height-driven structure and thermodynamic properties of confined ionic liquids inside carbon nanochannels from molecular dynamics study. Physical Chemistry Chemical Physics, 2019, 21, 12767-12776.	2.8	22
132	Novel drag coefficient models of ionic liquid â€“ spherical particle system. Chemical Engineering Science, 2019, 204, 177-185.	3.8	5
133	Conversion of CO₂to value-added products mediated by ionic liquids. Green Chemistry, 2019, 21, 2544-2574.	9.0	199
134	Carbon capture and adjustment of water and hydrocarbon dew-points via absorption with ionic liquid [Bmim][NTf2] in offshore processing of CO2-rich natural gas. Journal of Natural Gas Science and Engineering, 2019, 66, 26-41.	4.4	17
135	Recent advances in lithium containing ceramic based sorbents for high-temperature CO₂ capture. Journal of Materials Chemistry A, 2019, 7, 7962-8005.	10.3	106
136	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.	10.1	71
137	Experimental studies of air-blast atomization on the CO2 capture with aqueous alkali solutions. Chinese Journal of Chemical Engineering, 2019, 27, 2390-2396.	3.5	7
138	Thermodynamic and molecular insights into the absorption of H₂S, CO₂, and CH₄ in choline chloride plus urea mixtures. AICHE Journal, 2019, 65, e16574.	3.6	139
139	Surface Structure of Quaternary Ammonium-Based Ionic Liquids Studied Using Molecular Dynamics Simulation: Effect of Switching the Length of Alkyl Chains. Journal of Physical Chemistry C, 2019, 123, 7246-7258.	3.1	14
140	A theoretical study on the adsorption of acid gases by boron nitride-based nanomaterials. Applied Surface Science, 2019, 480, 83-95.	6.1	13
141	Transformation of CO₂ into Î±-Alkylidene Cyclic Carbonates at Room Temperature Cocatalyzed by CuI and Ionic Liquid with Biomass-Derived Levulinate Anion. ACS Sustainable Chemistry and Engineering, 2019, 7, 5614-5619.	6.7	43
142	Unusual temperature-promoted carbon dioxide capture in deep-eutectic solvents: the synergistic interactions. Chemical Communications, 2019, 55, 3939-3942.	4.1	33
143	Porous liquids based on porous cages, metal organic frameworks and metal organic polyhedra. Coordination Chemistry Reviews, 2019, 386, 85-95.	18.8	74
144	Ionic Liquid [Bmim][NTf₂] as Solvent for CO₂ Removal in Offshore Processing of Natural Gas. Materials Science Forum, 0, 965, 21-28.	0.3	2
145	Efficient transformation of CO2 into quinazoline-2,4(1H,3H)-diones at room temperature catalyzed by a ZnI2/NEt3 system. New Journal of Chemistry, 2019, 43, 16164-16168.	2.8	5

#	Article	IF	Citations
146	Study on the Printability through Digital Light Processing Technique of Ionic Liquids for CO2 Capture. Polymers, 2019, 11, 1932.	4.5	7
147	Investigation into the Effective Chemical Structure of Metal-Containing Ionic Liquids for Oxygen Absorption. Industrial & Engineering Chemistry Research, 2019, 58, 23304-23316.	3.7	6
148	Enhanced CO2 capture by binary systems of pyridinium-based ionic liquids and porous ZIF-8 particles. Journal of Chemical Thermodynamics, 2019, 128, 415-423.	2.0	32
149	Molecular analysis of selective gas adsorption within composites of ionic polyimides and ionic liquids as gas separation membranes. Chemical Physics, 2019, 516, 71-83.	1.9	25
150	Insight into the Performance of Acid Gas in Ionic Liquids by Molecular Simulation. Industrial & Engineering Chemistry Research, 2019, 58, 1443-1453.	3.7	23
151	Kaolinite Clay Mineral Reactivity Improvement through Ionic Liquid Functionalization. Israel Journal of Chemistry, 2019, 59, 778-788.	2.3	9
152	Hybrid membranes based on ionic-liquid-functionalized poly(vinyl benzene chloride) beads for CO2 capture. Journal of Membrane Science, 2019, 572, 365-373.	8.2	25
153	Unraveling the CO2 reaction mechanism in bio-based amino-acid ionic liquids by operando ATR-IR spectroscopy. Catalysis Today, 2019, 336, 148-160.	4.4	23
154	Green solvents for sustainable separation processes. Current Opinion in Green and Sustainable Chemistry, 2019, 18, 57-65.	5.9	75
155	A comprehensive review on the rheological behavior of imidazolium based ionic liquids and natural deep eutectic solvents. Journal of Molecular Liquids, 2019, 277, 932-958.	4.9	65
156	Imidazolium-Based Copoly(Ionic Liquid) Membranes for CO₂/N₂ Separation. Industrial & Engineering Chemistry Research, 2019, 58, 2017-2026.	3.7	34
157	Demonstrating the key role of kinetics over thermodynamics in the selection of ionic liquids for CO2 physical absorption. Separation and Purification Technology, 2019, 213, 578-586.	7.9	59
158	Ordered Porous Poly(ionic liquid) Crystallines: Spacing Confined Ionic Surface Enhancing Selective CO₂ Capture and Fixation. ACS Applied Materials & Interfaces, 2019, 11, 6031-6041.	8.0	76
159	Design of ionic liquids as liquid desiccant for an air conditioning system. Green Energy and Environment, 2019, 4, 139-145.	8.7	42
160	Relationship between structure and biodegradability of gemini imidazolium surface active ionic liquids. Journal of Molecular Liquids, 2019, 278, 145-155.	4.9	14
161	Facile and solvent-free fabrication of PEG-based membranes with interpenetrating networks for CO2 separation. Journal of Membrane Science, 2019, 570-571, 455-463.	8.2	38
162	Halloysite nanotubes: Novel and eco-friendly adsorbents for high-pressure CO2 capture. Microporous and Mesoporous Materials, 2019, 277, 229-236.	4.4	44
163	Reply to the Correspondence on â€œPreorganization and Cooperation for Highly Efficient and Reversible Capture of Lowâ€Concentration CO₂ by Ionic Liquidsâ€• Angewandte Chemie - International Edition, 2019, 58, 386-389.	13.8	17

#	Article	IF	Citations
164	Confined Ionic Liquid in an Ionic Porous Aromatic Framework for Gas Separation. ACS Applied Polymer Materials, 2019, 1, 95-102.	4.4	20
165	Metal chloride anion-based ionic liquids for efficient separation of NH3. Journal of Cleaner Production, 2019, 206, 661-669.	9.3	79
166	Mesoscale structures and mechanisms in ionic liquids. Particuology, 2020, 48, 55-64.	3.6	22
167	Preparation of mixed matrix composite membrane for hydrogen purification by incorporating ZIF-8 nanoparticles modified with tannic acid. International Journal of Hydrogen Energy, 2020, 45, 7444-7454.	7.1	33
168	Thermodynamic and kinetic evaluation of ionic liquids + tetraglyme mixtures on CO2 capture. Journal of CO2 Utilization, 2020, 35, 185-193.	6.8	16
169	Solubility of argon, krypton and xenon in ionic liquids. Fluid Phase Equilibria, 2020, 504, 112334.	2.5	20
170	A cleaner and more sustainable decarbonation process via ionic-liquid absorption for natural gas with high carbon dioxide content. Journal of Cleaner Production, 2020, 242, 118421.	9.3	13
171	Morphology Modulationâ€Engineered Flowerlike In₂S₃ via Ionothermal Method for Efficient CO₂ Electroreduction. ChemCatChem, 2020, 12, 926-931.	3.7	37
172	Energy Analysis of Physical Absorption and Chemical Absorption of CO₂ in Ionic Liquids. Energy Technology, 2020, 8, 1900529.	3.8	7
173	New process development and process evaluation for capturing CO2 in flue gas from power plants using ionic liquid [emim][Tf2N]. Chinese Journal of Chemical Engineering, 2020, 28, 721-732.	3.5	15
174	Combining soft-SAFT and COSMO-RS modeling tools to assess the CO2â€“SO2 separation using phosphonium-based ionic liquids. Journal of Molecular Liquids, 2020, 297, 111795.	4.9	12
175	Synthesis and biological evaluation of 1,2,4-triazolidine-3-thiones as potent acetylcholinesterase inhibitors: in vitro and in silico analysis through kinetics, chemoinformatics and computational approaches. Molecular Diversity, 2020, 24, 1185-1203.	3.9	11
176	Sorbenten zur direkten Gewinnung von CO₂ aus der Umgebungsluft. Angewandte Chemie, 2020, 132, 7048-7072.	2.0	18
177	Sorbents for the Direct Capture of CO₂ from Ambient Air. Angewandte Chemie - International Edition, 2020, 59, 6984-7006.	13.8	341
178	Encapsulation of Ionic Liquids for Tailored Applications. ACS Applied Materials & Interfaces, 2020, 12, 5169-5176.	8.0	36
179	Structure optimization of tailored ionic liquids and process simulation for shale gas separation. AICHE Journal, 2020, 66, e16794.	3.6	34
180	Extending the UNIFAC model for ionic liquidâ€“solute systems by combining experimental and computational databases. AICHE Journal, 2020, 66, e16821.	3.6	55
181	CO2 separation using a hybrid choline-2-pyrrolidine-carboxylic acid/polyethylene glycol/water absorbent. Applied Energy, 2020, 257, 113962.	10.1	17

#	Article	IF	Citations
182	The effect of nanoscale friction of mesoporous carbon supported ionic liquids on the mass transfer of CO2 adsorption. Physical Chemistry Chemical Physics, 2020, 22, 1097-1106.	2.8	11
183	Ether-functionalization of monoethanolamine (MEA) for reversible CO₂ capture under solvent-free conditions with high-capacity and low-viscosity. Sustainable Energy and Fuels, 2020, 4, 1276-1284.	4.9	6
184	Microwave-assisted Synthesis of 1-(perfluorohexyl)-3-methylimidazolium iodide. MRS Advances, 2020, 5, 1449-1456.	0.9	4
185	A space-confined strategy toward large-area two-dimensional crystals of ionic liquid. Physical Chemistry Chemical Physics, 2020, 22, 1820-1825.	2.8	15
186	Current status of CO2 chemical absorption research applied to CCS: Towards full deployment at industrial scale. Applied Energy, 2020, 260, 114313.	10.1	215
187	Ionic Liquid-Based Microemulsions with Reversible Microstructures Regulated by CO₂. Langmuir, 2020, 36, 264-272.	3.5	16
188	Is basicity the sole criterion for attaining high carbon dioxide capture in deep-eutectic solvents?. Physical Chemistry Chemical Physics, 2020, 22, 966-970.	2.8	13
189	Mathematical modeling of CO2 membrane absorption system using ionic liquid solutions. Chemical Engineering and Processing: Process Intensification, 2020, 147, 107743.	3.6	14
190	Efficient CO₂ adsorption using mesoporous carbons from biowastes. Materials Research Express, 2020, 7, 015605.	1.6	10
192	Understanding the Interaction of Boric Acid and CO2 with Ionic Liquids in Aqueous Medium by Multinuclear NMR Spectroscopy. ACS Sustainable Chemistry and Engineering, 2020, 8, 552-560.	6.7	5
193	Robust Cationic Calix[4]arene Polymer as an Efficient Catalyst for Cycloaddition of Epoxides with CO₂. Industrial & Engineering Chemistry Research, 2020, 59, 7247-7254.	3.7	30
194	CO₂ Separation by a Series of Aqueous Morpholinium-Based Ionic Liquids with Acetate Anions. ACS Sustainable Chemistry and Engineering, 2020, 8, 415-426.	6.7	28
196	The interactions between polar solvents (methanol, acetonitrile, dimethylsulfoxide) and the ionic liquid 1-ethyl-3-methylimidazolium bis(fluorosulfonyl)imide. Journal of Molecular Liquids, 2020, 299, 112159.	4.9	48
197	Efficient CO2 capture by a novel deep eutectic solvent through facile, one-pot synthesis with low energy consumption and feasible regeneration. Science of the Total Environment, 2020, 705, 135798.	8.0	41
198	Combining Ionic Liquids and Sodium Salts into Metalâ€Organic Framework for Highâ€Performance Ionic Conduction. ChemElectroChem, 2020, 7, 183-190.	3.4	19
199	Effect of ligand structures on oxygen absorbability and viscosity of metal-containing ionic liquids. Journal of Molecular Liquids, 2020, 318, 114365.	4.9	2
200	Different Hydrogen Bond Changes Driven by Surface Segregation Behavior of Imidazolium-Based Ionic Liquid Mixture at the Liquidâ€“Vacuum Interface. Langmuir, 2020, 36, 11798-11808.	3.5	3
202	Efficient Electrochemical Reduction of CO2 to CO in Ionic Liquid/Propylene Carbonate Electrolyte on Ag Electrode. Catalysts, 2020, 10, 1102.	3.5	6

#	Article	IF	Citations
203	Assessment of poly(Lâ€lactide) as an environmentally benign CO 2 capture and storage adsorbent. Journal of Applied Polymer Science, 2020, 137, 49587.	2.6	7
204	High performance CO2-perm-selective SSZ-13 membranes: Elucidation of the link between membrane material and module properties. Journal of Membrane Science, 2020, 611, 118390.	8.2	29
205	Insight into the separation mechanism of acetate anion-based ionic liquids on CO2 and N2: A multi-scale simulation study. Journal of Molecular Liquids, 2020, 320, 114408.	4.9	6
206	Rational design of poly(ethylene oxide) based membranes for sustainable CO₂capture. Journal of Materials Chemistry A, 2020, 8, 24233-24252.	10.3	94
207	Facile Grafting of Imidazolium Salt in Covalent Organic Frameworks with Enhanced Catalytic Activity for CO₂ Fixation and the Knoevenagel Reaction. ACS Sustainable Chemistry and Engineering, 2020, 8, 18413-18419.	6.7	63
208	CO2 absorption by ionic liquids and deep eutectic solvents. , 2020, , 89-105.		6
209	Photothermalâ€Responsive Microporous Nanosheets Confined Ionic Liquid for Efficient CO₂ Separation. Small, 2020, 16, e2002699.	10.0	33
210	What Fluorine Can Do in CO₂ Chemistry: Applications from Homogeneous to Heterogeneous Systems. ChemSusChem, 2020, 13, 6182-6200.	6.8	18
211	CO2 capture by quenched quaternary ammonium ionic liquid-propanol mixtures assessed by Raman spectroscopy. Journal of Molecular Liquids, 2020, 315, 113687.	4.9	5
212	Design of quaternary ammonium type-ionic liquids as desiccants for an air-conditioning system. Green Chemical Engineering, 2020, 1, 109-116.	6.3	10
213	Carboxylate ionic liquid solvent systems from 2006 to 2020: thermal properties and application in cellulose processing. Green Chemistry, 2020, 22, 7622-7664.	9.0	75
214	Electrocatalyst design for aprotic Liâ€“CO₂ batteries. Energy and Environmental Science, 2020, 13, 4717-4737.	30.8	65
215	Molecular insight into the anion effect and free volume effect of CO₂solubility in multivalent ionic liquids. Physical Chemistry Chemical Physics, 2020, 22, 20618-20633.	2.8	27
216	Efficient CO₂ Separation of Multi-Permselective Mixed Matrix Membranes with a Unique Interfacial Structure Regulated by Mesoporous Nanosheets. ACS Applied Materials & Interfaces, 2020, 12, 48067-48076.	8.0	17
217	CO2 Desorption Performance from Imidazolium Ionic Liquids by Membrane Vacuum Regeneration Technology. Membranes, 2020, 10, 234.	3.0	11
218	Toward Combined Carbon Capture and Recycling: Addition of an Amine Alters Product Selectivity from CO to Formic Acid in Manganese Catalyzed Reduction of CO₂. Journal of the American Chemical Society, 2020, 142, 17589-17597.	13.7	43
219	Gas Solubility in Ionic Liquids: UNIFAC-IL Model Extension. Industrial & Engineering Chemistry Research, 2020, 59, 16805-16821.	3.7	30
220	Molecular mechanism of anion size regulating the nanostructure and charging process at ionic liquidâ€“electrode interfaces. Journal of Materials Chemistry A, 2020, 8, 19908-19916.	10.3	31

#	Article	IF	Citations
221	Evidence of Direct Dissolution of CO2 into the Ionic Liquid [C4min] [NTf2] during Their Initial Interaction. Journal of Physical Chemistry B, 2020, 124, 8331-8339.	2.6	1
222	Ionic Liquidâ€Based Stimuliâ€Responsive Functional Materials. Advanced Functional Materials, 2020, 30, 2005522.	14.9	74
223	Reticular Chemistry for Ionic Liquid-Functionalized Metalâ€“Organic Frameworks with High Selectivity for CO₂. ACS Sustainable Chemistry and Engineering, 2020, 8, 18558-18567.	6.7	16
224	Paramagnetic Ionic Liquid/Metal Organic Framework Composites for CO2/CH4 and CO2/N2 Separations. Frontiers in Chemistry, 2020, 8, 590191.	3.6	22
225	Ionic Liquids/Deep Eutectic Solvents-Based Hybrid Solvents for CO2 Capture. Crystals, 2020, 10, 978.	2.2	11
226	Encapsulated liquid sorbents for CO2 capture. , 2020, , 125-150.		4
227	Designing silica xerogels containing RTIL for CO2 capture and CO2/CH4 separation: Influence of ILs anion, cation and cation side alkyl chain length and ramification. Journal of Environmental Management, 2020, 268, 110340.	7.8	11
228	Insights on Betaine + Lactic Acid Deep Eutectic Solvent. Industrial & Engineering Chemistry Research, 2020, 59, 11880-11892.	3.7	21
229	Molecular simulation on the stability and adsorption properties of choline-based ionic liquids/IRMOF-1 hybrid composite for selective H2S/CO2 capture. Journal of Hazardous Materials, 2020, 399, 123008.	12.4	20
230	On competitive gas adsorption and absorption phenomena in thin films of ionic liquids. Journal of Materials Chemistry A, 2020, 8, 11781-11799.	10.3	25
231	Prediction of CO2 solubility in ionic liquids using machine learning methods. Chemical Engineering Science, 2020, 223, 115752.	3.8	124
232	Multilevel screening of ionic liquid absorbents for simultaneous removal of CO2 and H2S from natural gas. Separation and Purification Technology, 2020, 248, 117053.	7.9	66
233	Ionic liquidâ€“based green processes for ammonia separation and recovery. Current Opinion in Green and Sustainable Chemistry, 2020, 25, 100354.	5.9	18
234	Imidazolium-Based Ionic Liquids Introduced into Ï€-Electron Donors: Highly Efficient Toluene Capture. ACS Sustainable Chemistry and Engineering, 2020, 8, 9058-9069.	6.7	48
235	Visible Light-Driven Photoreduction of CO₂ to CH₄ over TiO₂ Using a Multiple-Site Ionic Liquid as an Absorbent and Photosensitizer. ACS Sustainable Chemistry and Engineering, 2020, 8, 9088-9094.	6.7	26
236	Rate-Based Process Optimization and Sensitivity Analysis for Ionic-Liquid-Based Post-Combustion Carbon Capture. ACS Sustainable Chemistry and Engineering, 2020, 8, 10242-10258.	6.7	29
237	Deep Eutectic Solvents Consisting of 1â€Ethylâ€3â€methylimidazolium Chloride and Biobased 2â€Pyrrolidone for Reversible SO₂ Capture. ChemistrySelect, 2020, 5, 7142-7147.	1.5	10
238	NH3 absorption performance and reversible absorption mechanisms of protic ionic liquids with six-membered N-heterocyclic cations. Separation and Purification Technology, 2020, 248, 117087.	7.9	34

#	Article	IF	Citations
239	Dicationic disiloxane ionic liquids. Mendeleev Communications, 2020, 30, 114-116.	1.6	5
240	Heavy Metal Extraction under Environmentally Relevant Conditions Using 3-Hydroxy-2-Naphthoate-Based Ionic Liquids: Extraction Capabilities vs. Acute Algal Toxicity. Applied Sciences (Switzerland), 2020, 10, 3157.	2.5	8
241	Aqueous electrocatalytic CO₂ reduction using metal complexes dispersed in polymer ion gels. Chemical Communications, 2020, 56, 4440-4443.	4.1	21
242	Simultaneous capture of acid gases from natural gas adopting ionic liquids: Challenges, recent developments, and prospects. Renewable and Sustainable Energy Reviews, 2020, 123, 109771.	16.4	70
243	Effective UV-Induced Fluorescence Method for Investigating Interphase Mass Transfer of Single Bubble Rising in the Hele-Shaw Cell. Industrial & Engineering Chemistry Research, 2020, 59, 6729-6740.	3.7	9
244	Hydrophobic Functional Deep Eutectic Solvents Used for Efficient and Reversible Capture of CO₂. ACS Omega, 2020, 5, 6809-6816.	3.5	68
245	MOF-Based Membranes for Gas Separations. Chemical Reviews, 2020, 120, 8161-8266.	47.7	755
246	Structural Anomalies and Electronic Properties of an Ionic Liquid under Nanoscale Confinement. Journal of Physical Chemistry Letters, 2020, 11, 6150-6155.	4.6	5
247	Interactions of CO2 with the homologous series of Đ¡nMIMBF4 ionic liquids studied in situ ATR-FTIR spectroscopy: spectral characteristics, thermodynamic parameters and their correlation. Journal of Molecular Liquids, 2020, 315, 113694.	4.9	12
248	Physical absorption of CO2 in betaine/carboxylic acid-based Natural Deep Eutectic Solvents. Journal of Molecular Liquids, 2020, 315, 113708.	4.9	30
249	An overview of Cu-based heterogeneous electrocatalysts for CO₂reduction. Journal of Materials Chemistry A, 2020, 8, 4700-4734.	10.3	150
250	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.	3.7	28
251	CO2 capture and surface structures of ionic liquid-propanol solutions. Journal of Molecular Liquids, 2020, 301, 112445.	4.9	9
252	Dualâ€functionalized protic ionic liquids for efficient absorption of NH₃ through synergistically physicochemical interaction. Journal of Chemical Technology and Biotechnology, 2020, 95, 1815-1824.	3.2	34
253	Study of the versatility of CuBTC@IL-derived materials for heterogeneous catalysis. CrystEngComm, 2020, 22, 2904-2913.	2.6	6
254	Liquid crystal ionic self-assembly and anion-selective photoluminescence in discotic azatriphenylenes. Journal of Materials Chemistry C, 2020, 8, 4215-4225.	5.5	11
255	Hydrogen bond promoted thermal stability enhancement of acetate based ionic liquid. Chinese Journal of Chemical Engineering, 2020, 28, 1293-1301.	3.5	11
257	Highly selective absorption separation of H₂S and CO₂ from CH₄ by novel azoleâ€based protic ionic liquids. AICHE Journal, 2020, 66, e16936.	3.6	105

#	Article	IF	Citations
258	Design and Remarkable Efficiency of the Robust Sandwich Cluster Composite Nanocatalysts ZIF-8@Au₂₅@ZIF-67. Journal of the American Chemical Society, 2020, 142, 4126-4130.	13.7	141
259	Anion Effect on Gas Absorption in Imidazolium-Based Ionic Liquids. Journal of Chemical Information and Modeling, 2020, 60, 661-666.	5.4	15
260	Reaction Mechanism and Free Energy Barriers for the Chemisorption of CO₂ by Ionic Entities. Journal of Physical Chemistry A, 2020, 124, 836-848.	2.5	14
261	Surpassing Robeson Upper Limit for CO2/N2 Separation with Fluorinated Carbon Molecular Sieve Membranes. CheM, 2020, 6, 631-645.	11.7	73
262	Modification of covalent organic frameworks with dual functions ionic liquids for membrane-based biogas upgrading. Journal of Membrane Science, 2020, 600, 117841.	8.2	53
263	Superbase Ionic Liquid-Based Deep Eutectic Solvents for Improving CO₂ Absorption. ACS Sustainable Chemistry and Engineering, 2020, 8, 2523-2530.	6.7	110
264	Synthesis of crosslinked PEG/IL blend membrane via oneâ€pot thiolâ€“ene/epoxy chemistry. Journal of Polymer Science, 2020, 58, 2575-2585.	3.8	9
265	Preparation of high-performance and pressure-resistant mixed matrix membranes for CO2/H2 separation by modifying COF surfaces with the groups or segments of the polymer matrix. Journal of Membrane Science, 2020, 601, 117882.	8.2	61
266	Polyphenylene networks containing triptycene units: Promising porous materials for CO2, CH4, and H2 adsorption. Microporous and Mesoporous Materials, 2020, 303, 110256.	4.4	13
267	Cobaltâ€Catalyzed Reductive Carboxylation of Aryl Bromides with Carbon Dioxide. Advanced Synthesis and Catalysis, 2020, 362, 2337-2341.	4.3	17
268	Theoretical Strategy for Improving CO2 Absorption of Mixed Ionic Liquids Focusing on the Anion Effect: A Comprehensive COSMO-RS Study. Industrial & Engineering Chemistry Research, 2020, 59, 8848-8854.	3.7	7
269	Understanding CO2 capture kinetics and energetics by ionic liquids with molecular dynamics simulation. RSC Advances, 2020, 10, 13968-13974.	3.6	7
270	Application of functional single-element and double-element oxide nanoparticles for the development of nanocomposite membranes. , 2020, , 113-144.		2
271	Molecular transport in ionic liquid/nanomembrane hybrids. Physical Chemistry Chemical Physics, 2020, 22, 9808-9814.	2.8	9
272	High CO2 absorption capacity of metal-based ionic liquids: A molecular dynamics study. Green Energy and Environment, 2021, 6, 253-260.	8.7	60
273	Ionic liquidâ€based adsorbents in indoor pollutants removal. Current Opinion in Green and Sustainable Chemistry, 2021, 27, 100405.	5.9	4
274	Experimental investigation of hydrodynamic parameters and bubble characteristics in CO2 absorption column using pure ionic liquid and binary mixtures: Effect of porous sparger and operating conditions. Chemical Engineering Science, 2021, 229, 116041.	3.8	12
275	Role of mono- and diamines as kinetic promoters in mixed aqueous amine solution for CO2 capture. Chemical Engineering Science, 2021, 229, 116009.	3.8	23

#	Article	IF	Citations
276	Recent Advances in Electrochemical CO₂ Reduction on Indiumâ€Based Catalysts. ChemCatChem, 2021, 13, 514-531.	3.7	50
277	Thermodynamic modeling and rational design of ionic liquids for pre-combustion carbon capture. Chemical Engineering Science, 2021, 229, 116076.	3.8	55
278	One-step multiple-site integration strategy for CO2 capture and conversion into cyclic carbonates under atmospheric and cocatalyst/metal/solvent-free conditions. Applied Catalysis B: Environmental, 2021, 283, 119620.	20.2	67
279	Nitrogen-rich mesoporous carbon for high temperature reversible CO2 capture. Journal of CO2 Utilization, 2021, 43, 101375.	6.8	6
280	Immobilization of Ionic Liquids with a New Cellulose Ester Containing Imidazolium Cation for Highâ€Performance CO 2 Separation Membranes. Macromolecular Rapid Communications, 2021, 42, 2000494.	3.9	9
281	Ionic liquids: Innovative fluids for sustainable gas separation from industrial waste stream. Journal of Molecular Liquids, 2021, 321, 114916.	4.9	27
282	Ionic liquids/deep eutectic solvents for CO2 capture: Reviewing and evaluating. Green Energy and Environment, 2021, 6, 314-328.	8.7	108
283	Highly selective separation of CO2/N2 using [Emim][Tf2N] supported ionic liquid membranes prepared by supercritical fluid deposition. Journal of Supercritical Fluids, 2021, 170, 105139.	3.2	9
284	Mechanistic insights into carbon dioxide utilization by superoxide ion generated electrochemically in ionic liquid electrolyte. Physical Chemistry Chemical Physics, 2021, 23, 1114-1126.	2.8	7
285	NH3 separation membranes with self-assembled gas highways induced by protic ionic liquids. Chemical Engineering Journal, 2021, 421, 127876.	12.7	23
286	New chemistry for enhanced carbon capture: beyond ammonium carbamates. Chemical Science, 2021, 12, 508-516.	7.4	26
287	Chlorine drying with hygroscopic ionic liquids. Green Energy and Environment, 2021, 6, 350-362.	8.7	17
288	Highly-selective separation of CO2 from N2 or CH4 in task-specific ionic liquid membranes: Facilitated transport and salting-out effect. Separation and Purification Technology, 2021, 254, 117621.	7.9	36
289	Promoted absorption of <scp>CO</scp> at high temperature by cuprousâ€based ternary deep eutectic solvents. AICHE Journal, 2021, 67, e17106.	3.6	52
290	Experimental and thermodynamic analysis of NH3 absorption in dual-functionalized pyridinium-based ionic liquids. Journal of Molecular Liquids, 2021, 323, 114601.	4.9	18
291	Stepped enhancement of <scp>CO₂</scp> adsorption and separation in <scp>ILâ€ZIFâ€IL</scp> composites with shellâ€interlayerâ€core structure. AICHE Journal, 2021, 67, e17112.	3.6	16
292	Molecular thermodynamic understanding of transport behavior of <scp>CO₂</scp> at the ionic liquidsâ€electrode interface. AICHE Journal, 2021, 67, e17060.	3.6	12
293	Carbon dioxide capture using liquid absorption methods: a review. Environmental Chemistry Letters, 2021, 19, 77-109.	16.2	165

#	Article	IF	Citations
294	New aspects of deep eutectic solvents: extraction, pharmaceutical applications, as catalyst and gas capture. Chemical Papers, 2021, 75, 439-453.	2.2	29
295	CO₂-switchable wormlike micelles based on a switchable ionic liquid and tetradecyl trimethyl ammonium bromide. Journal of Dispersion Science and Technology, 2021, 42, 475-484.	2.4	4
296	Neural recommender system for the activity coefficient prediction and<scp>UNIFAC</scp>model extension of ionic<scp>liquidâ€solute</scp>systems. AIChE Journal, 2021, 67, e17171.	3.6	42
297	Basic ionic liquids for catalysis: the road to greater stability. Catalysis Science and Technology, 2021, 11, 726-741.	4.1	48
298	Recent progress in materials development for CO₂conversion: issues and challenges. Materials Advances, 2021, 2, 3161-3187.	5.4	25
299	Unprecedented CO₂ adsorption behaviour by 5A-type zeolite discovered in lower pressure region and at 300 K. Journal of Materials Chemistry A, 2021, 9, 7531-7545.	10.3	12
300	Applications of green solvents in toxic gases removal. , 2021, , 149-201.		4
301	Fast Track to Acetate-Based Ionic Liquids: Preparation, Properties and Application in Energy and Petrochemical Fields. Topics in Current Chemistry, 2021, 379, 2.	5.8	4
302	Carbon Dioxide Capture by Ionic Liquids. Energy, Environment, and Sustainability, 2021, , 147-194.	1.0	2
303	Anti-electrostatic hydrogen bonding between anions of ionic liquids: a density functional theory study. Physical Chemistry Chemical Physics, 2021, 23, 7426-7433.	2.8	8
304	Recent progress in the development of ionic liquidâ€based mixed matrix membrane for <scp> CO ₂ </scp> separation: A review. International Journal of Energy Research, 2021, 45, 9800-9830.	4.5	28
305	Dicationic disiloxane ionic liquids as heat transfer agents in vacuo. Russian Chemical Bulletin, 2021, 70, 301-308.	1.5	2
306	Ionic liquid-based electrolytes for CO2 electroreduction and CO2 electroorganic transformation. National Science Review, 2022, 9, nwab022.	9.5	58
307	Heating Profile of Long Alkyl Chain Ionic Liquid Doped Solvents Under Ultrasound Irradiation. Journal of Solution Chemistry, 2021, 50, 240-256.	1.2	0
308	Desiccant solutions, membrane technologies, and regeneration techniques in liquid desiccant air conditioning system. International Journal of Energy Research, 2021, 45, 8420-8447.	4.5	18
309	Carbon dioxide capture using water-imidazolium ionic liquids-amines ternary systems. International Journal of Greenhouse Gas Control, 2021, 105, 103210.	4.6	13
310	Porous Ionic Liquids: Structure, Stability, and Gas Absorption Mechanisms. Advanced Materials Interfaces, 2021, 8, 2001982.	3.7	32
311	Direct CO 2 Capture and Reduction to Highâ€End Chemicals with Tetraalkylammonium Borohydrides. Angewandte Chemie, 2021, 133, 9666-9675.	2.0	2

#	Article	IF	Citations
312	Recent progress of green sorbents-based technologies for low concentration CO2 capture. Chinese Journal of Chemical Engineering, 2021, 31, 113-125.	3.5	20
313	Molecular understanding of carbon dioxide interactions with ionic liquids. Journal of Molecular Liquids, 2021, 325, 115162.	4.9	15
314	Direct CO₂ Capture and Reduction to Highâ€End Chemicals with Tetraalkylammonium Borohydrides. Angewandte Chemie - International Edition, 2021, 60, 9580-9589.	13.8	28
315	Amine/Carboxylic Acid Ionic Liquid Composite Membranes for CO₂ Separation. Industrial & Engineering Chemistry Research, 2021, 60, 4405-4419.	3.7	7
316	Physical absorption of carbon dioxide in imidazole-PTSA based deep eutectic solvents. Journal of Molecular Liquids, 2021, 326, 115292.	4.9	31
317	Thermodynamic properties and intermolecular interactions of ionic liquids [DEME][BF4] or [DEME][TFSI] and their binary mixture systems with GBL. Journal of Molecular Liquids, 2021, 328, 115373.	4.9	14
318	Toward smart carbon capture with machine learning. Cell Reports Physical Science, 2021, 2, 100396.	5.6	38
319	Solubility Behavior of CO₂ in Ionic Liquids Based on Ionic Polarity Index Analyses. Journal of Physical Chemistry B, 2021, 125, 3665-3676.	2.6	17
320	Synthesis and characterization of physicochemical properties of imidazolium-based ionic liquids and their application for simultaneous determination of sulfur compounds. Journal of Molecular Structure, 2021, 1230, 129917.	3.6	15
321	Selective membrane separation of CO2 using novel epichlorohydrin-amine-based crosslinked protic ionic liquids: Crosslinking mechanism and enhanced salting-out effect. Journal of CO2 Utilization, 2021, 46, 101473.	6.8	18
322	Electrochemical reduction of CO2 in ionic liquid: Mechanistic study of Liâ€“CO2 batteries via in situ ambient pressure X-ray photoelectron spectroscopy. Nano Energy, 2021, 83, 105830.	16.0	27
323	Low viscosity superbase protic ionic liquids for the highly efficient simultaneous removal of H2S and CO2 from CH4. Separation and Purification Technology, 2021, 263, 118417.	7.9	57
324	Structural similarity of an ionic liquid and the mixture of the neutral molecules. Journal of Molecular Liquids, 2021, 329, 115589.	4.9	7
325	One-Pot Multiple-Step Integration Strategy for Efficient Fixation of CO₂ into Chain Carbonates by Azolide Anions Poly(ionic liquid)s. ACS Sustainable Chemistry and Engineering, 2021, 9, 7074-7085.	6.7	29
326	Transformation of CO2 incorporated in adducts of N-heterocyclic carbene into dialkyl carbonates under ambient conditions: An experimental and mechanistic study. Chemical Engineering Journal, 2021, 413, 127469.	12.7	11
327	Efficient Parametrization of Force Field for the Quantitative Prediction of the Physical Properties of Ionic Liquid Electrolytes. Journal of Chemical Theory and Computation, 2021, 17, 4274-4290.	5.3	11
328	Abnormal Enhanced Free Ions of Ionic Liquids Confined in Carbon Nanochannels. Journal of Physical Chemistry Letters, 2021, 12, 6078-6084.	4.6	15
329	COSMO-RS prediction and experimental verification of 1,5-pentanediamine extraction from aqueous solution by ionic liquids. Green Energy and Environment, 2021, 6, 422-431.	8.7	49

#	Article	IF	Citations
330	Ionic liquidâ€based in situ product removal design exemplified for an acetoneâ€“butanolâ€“ethanol fermentation. Biotechnology Progress, 2021, 37, e3183.	2.6	10
331	CO₂ Chemisorption Behavior of Coordinationâ€Derived Phenolate Sorbents. ChemSusChem, 2021, 14, 2854-2859.	6.8	9
332	Polymer-Grafted Porous Silica Nanoparticles with Enhanced CO₂ Permeability and Mechanical Performance. ACS Applied Materials & Interfaces, 2021, 13, 27411-27418.	8.0	14
333	Hydrodynamics numerical simulation of a vertical falling film evaporator for ionic liquid systems. Chemical Engineering Science, 2021, 237, 116563.	3.8	7
334	Process and engineering aspects of carbon capture by ionic liquids. Journal of CO2 Utilization, 2021, 48, 101507.	6.8	14
335	CO2 absorption using a hybrid 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide/titanium dioxide/polyethylene glycol absorbent. Fluid Phase Equilibria, 2021, 538, 113011.	2.5	5
336	Quantification of Ylide Formation in Phosphonium-Based Ionic Liquids Reacted with CO₂. Journal of Physical Chemistry B, 2021, 125, 6649-6657.	2.6	14
337	Phase variety in ionic liquids: Hydrogen bonding and molecular conformations. Journal of Molecular Liquids, 2021, 332, 115189.	4.9	14
338	Understanding Gas Solubility of Pure Component and Binary Mixtures within Multivalent Ionic Liquids from Molecular Simulations. Journal of Physical Chemistry B, 2021, 125, 8165-8174.	2.6	9
339	Molecular thermodynamic and dynamic insights into gas dehydration with imidazoliumâ€based ionic liquids. Chemical Engineering Journal, 2021, 416, 129168.	12.7	27
340	Ionic-Liquid-Catalyzed Approaches under Metal-Free Conditions. Accounts of Chemical Research, 2021, 54, 3172-3190.	15.6	56
341	On the properties of N-methyl-2-pyrrolidonium hydrogen sulfate ionic liquid and alkanol mixtures. Journal of Molecular Liquids, 2021, 333, 115925.	4.9	2
342	CO 2 Chemisorption Behavior of Coordinationâ€Derived Phenolate Sorbents. ChemSusChem, 2021, 14, 2784-2784.	6.8	2
343	Development of a Micro-Double-Network Ion Gel-Based CO₂ Separation Membrane from Nonvolatile Network Precursors. Industrial & Engineering Chemistry Research, 2021, 60, 12640-12649.	3.7	12
344	Sealing functional ionic liquids in conjugated microporous polymer membrane by solvent-assisted micropore tightening. Nano Research, 2022, 15, 2552-2557.	10.4	6
345	Liquid metal with solvents for CO 2 capture. , 2021, 11, 988.		1
346	Prediction of CO2 solubility in deep eutectic solvents using random forest model based on COSMO-RS-derived descriptors. Green Chemical Engineering, 2021, 2, 431-440.	6.3	57
347	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.	5.3	6

#	Article	IF	Citations
348	Ionic Liquid Membrane for Carbon Capture and Separation. Separation and Purification Reviews, 2022, 51, 261-280.	5.5	33
349	Reviewâ€"High-Pressure Carbon Dioxide Separation Using Ionic Liquids: A CO₂-Electrocatalysis Perspective. Journal of the Electrochemical Society, 2021, 168, 086502.	2.9	7
350	Mass-transfer kinetics of CO2 in a hybrid choline-2-pyrrolidine-carboxylic acid/polyethylene glycol/water absorbent. Journal of Molecular Liquids, 2021, 336, 116383.	4.9	3
351	Investigation uncovered the impact of anions on CO2 absorption by low viscous ether functionalized pyridinium ionic liquids. Journal of Molecular Liquids, 2021, 336, 116362.	4.9	16
353	CO2 sorption using encapsulated imidazolium-based fluorinated ionic liquids. Environmental Challenges, 2021, 4, 100109.	4.2	3
354	State of the art and prospects of chemically and thermally aggressive membrane gas separations: Insights from polymer science. Polymer, 2021, 229, 123988.	3.8	18
355	Rosin-based porous heterogeneous catalyst functionalized with hydroxyl groups and triazole groups for CO2 chemical conversion under atmospheric pressure condition. Reactive and Functional Polymers, 2021, 165, 104976.	4.1	3
356	Challenges in engineering the structure of ionic liquids towards direct air capture of CO2. Green Chemical Engineering, 2021, 2, 342-345.	6.3	24
357	The Solubility of Gases in Ionic Liquids: A Chemoinformatic Predictive and Interpretable Approach. ChemPhysChem, 2021, 22, 2190-2200.	2.1	9
358	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.	4.9	7
359	Development and progress of functionalized silica-based adsorbents for CO2 capture. Journal of Molecular Liquids, 2021, 338, 116913.	4.9	27
360	FTIR investigation of the interfacial properties and mechanisms of CO2 sorption in porous ionic liquids. Green Chemical Engineering, 2021, 2, 392-401.	6.3	24
361	Sunlight-controlled CO2 separation resulting from a biomass-based CO2 absorber. Green Energy and Environment, 2022, 7, 566-574.	8.7	7
362	Ionic Liquid Membrane Process for Removal of Volatile Organic Compounds from Lab to Industrial Scale. Chemical Engineering and Technology, 2021, 44, 2159-2163.	1.5	4
363	Mechanisms behind high CO2/CH4 selectivity using ZIF-8 metal organic frameworks with encapsulated ionic liquids: A computational study. Chemical Engineering Journal, 2021, 419, 129638.	12.7	19
364	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.	4.9	55
365	Theoretical insights into CO2/N2 selectivity of the porous ionic liquids constructed by ion-dipole interactions. Journal of Molecular Liquids, 2021, 344, 117676.	4.9	21
366	nâ€Butane, isoâ€Butane and 1â€Butene Adsorption on Imidazoliumâ€Based Ionic Liquids Studied with Molecular Beam Techniques. Chemistry - A European Journal, 2021, 27, 17059-17065.	3.3	3

#	Article	IF	Citations
367	Improved CO2 separation performance and interfacial affinity of composite membranes by incorporating amino acid-based deep eutectic solvents. Separation and Purification Technology, 2021, 272, 118953.	7.9	14
368	Molecular insights into the separation mechanism of imidazole-based ionic liquid supported membranes. Journal of Molecular Liquids, 2021, 340, 117173.	4.9	11
369	Thermodynamic analysis of carbon dioxide hydrogenation to formic acid and methanol. Chemical Engineering Science, 2021, 242, 116731.	3.8	21
370	Enhancement effect of nanofluids on the desulfurization and regeneration performance of ionic liquid-based system. Journal of Hazardous Materials, 2021, 419, 126394.	12.4	15
371	Tuning the structure of pyridinolate-based functional ionic liquids for highly efficient SO2 absorption. Fuel, 2021, 303, 121311.	6.4	21
372	Multiscale analysis and techno-economic comparison between ionic liquids and organic solvent process for cleaner separation of cresol isomers. Journal of Molecular Liquids, 2021, 341, 117322.	4.9	9
373	Selectively constructing nitrogen vacancy in carbon nitrides for efficient syngas production with visible light. Applied Catalysis B: Environmental, 2021, 297, 120496.	20.2	31
374	Fabrication of polyimide mixed matrix membranes with asymmetric confined mass transfer channels for improved CO2 separation. Journal of Membrane Science, 2021, 637, 119653.	8.2	14
375	The optimization and thermodynamic and economic estimation analysis for CO2 compression-liquefaction process of CCUS system using LNG cold energy. Energy, 2021, 236, 121376.	8.8	12
376	Highly efficient absorption and separation of NH3 by simple lithium deep eutectic solvents. Separation and Purification Technology, 2021, 279, 119763.	7.9	22
377	Absorption separation of fluorinated refrigerant gases with ionic liquids: Equilibrium, mass transport, and process design. Separation and Purification Technology, 2021, 276, 119363.	7.9	37
378	Liquid-liquid equilibrium data for the ternary system based on ionic liquidÂ+Âorganic solventsÂ+Âwater at 298ÂK and atmospheric pressure applied in antidepressant partitioning. Separation and Purification Technology, 2021, 278, 119532.	7.9	4
379	Recent advances in non-precious metal electrocatalysts for oxygen reduction in acidic media and PEMFCs: an activity, stability and mechanism study. Green Chemistry, 2021, 23, 6898-6925.	9.0	32
380	Cross-linked, porous imidazolium-based poly(ionic liquid)s for CO₂ capture and utilisation. New Journal of Chemistry, 2021, 45, 16452-16460.	2.8	23
381	When graphene meets ionic liquids: a good match for the design of functional materials. Nanoscale, 2021, 13, 2750-2779.	5.6	34
382	Insight into the reversible behavior of Lewisâ€“BrÃ¸nsted basic poly(ionic liquid)s in one-pot two-step chemical fixation of CO₂ to linear carbonates. Green Chemistry, 2021, 23, 8571-8580.	9.0	23
383	Constructing single Cuâ€“N₃ sites for CO₂ electrochemical reduction over a wide potential range. Green Chemistry, 2021, 23, 5461-5466.	9.0	22
384	Ionic Liquids: Green Solvent for Biomass Pretreatment. Nanotechnology in the Life Sciences, 2020, , 27-36.	0.6	8

#	Article	IF	Citations
385	The Role of Energy Storage and Carbon Capture in Electricity Markets. , 2020, , 1-37.		1
386	Quaternary ammonium salt grafted nanoporous covalent organic polymer for atmospheric CO2 fixation and cyclic carbonate formation. Catalysis Today, 2020, 356, 527-534.	4.4	34
387	Oligoamine ionic liquids supported on mesoporous microspheres for CO2 separation with good sorption kinetics and low cost. Journal of CO2 Utilization, 2020, 39, 101186.	6.8	6
388	Highly efficient and reversible absorption of NH3 by dual functionalised ionic liquids with protic and Lewis acidic sites. Journal of Molecular Liquids, 2020, 312, 113411.	4.9	24
389	Efficient and Reversible Chemisorption of Carbon Dioxide with Dianionic-Functionalized Ionic Liquid-Based Solvents. Energy & Fuels, 2020, 34, 8526-8533.	5.1	12
390	Task-Specific Ionic Liquids Tuning ZIF-67/PIM-1 Mixed Matrix Membranes for Efficient CO₂ Separation. Industrial & Engineering Chemistry Research, 2021, 60, 593-603.	3.7	28
391	Tuning Ionic Liquids with Functional Anions for SO₂ Capture through Simultaneous Cooperation of N and O Chemical Active Sites with SO₂. Industrial & Engineering Chemistry Research, 2020, 59, 21522-21529.	3.7	21
392	Unraveling the mechanism of CO₂ capture and separation by porous liquids. RSC Advances, 2020, 10, 42706-42717.	3.6	22
393	Tetrahedral Tetra-cationic Ionic Liquids. Chemistry Letters, 2020, 49, 14-16.	1.3	3
394	Carbon Capture From Flue Gas and the Atmosphere: A Perspective. Frontiers in Energy Research, 2020, 8, .	2.3	165
395	Multi-Interactions in Ionic Liquids for Natural Product Extraction. Molecules, 2021, 26, 98.	3.8	10
396	Dicationic-Type Quaternary Ammonium Salts as Candidates of Desiccants for an Air-Conditioning System. ACS Sustainable Chemistry and Engineering, 2021, 9, 14502-14514.	6.7	4
397	Optimal Aqueous Biphasic Systems Design for the Recovery of Ionic Liquids. Industrial & Engineering Chemistry Research, 2021, 60, 15730-15740.	3.7	10
398	Gas-phase CO2 activation with single electrons, metal atoms, clusters, and molecules. Journal of Energy Chemistry, 2021, 63, 130-137.	12.9	9
399	Efficient absorption of low partial pressure SO2 by deep eutectic solvents based on pyridine derivatives. Chemical Engineering Research and Design, 2022, 177, 36-44.	5.6	15
400	Electrochemical Properties of 1,3-Dimethylimidazolium Dicyanamide, Bis(trifluoromethanesulfonyl)imide and Dimethylphosphate Ionic Liquids. International Journal of Electrochemical Science, 0, , ArticleID:211138.	1.3	1
401	Invoking chemical principles to predict the anions of dihydrooxazole family as prospective carbon capture moieties. Computational and Theoretical Chemistry, 2021, 1206, 113472.	2.5	0
402	Ionic Liquids. RSC Energy and Environment Series, 2019, , 69-105.	0.5	0

#	Article	IF	Citations
403	Ionic Liquids for Carbon Dioxide Capture. Sustainable Agriculture Reviews, 2019, , 193-219.	1.1	0
404	Dicationic disiloxane liquids. IOP Conference Series: Materials Science and Engineering, 0, 848, 012042.	0.6	0
405	Ionic Liquid based Carbon Dioxide Separation Membrane. Membrane Journal, 2020, 30, 149-157.	0.4	0
406	Unraveling the Origins of Strong and Reversible Chemisorption of Carbon Dioxide in a Green Metalâ€“Organic Framework. Journal of Physical Chemistry C, 2021, 125, 24719-24727.	3.1	9
407	A Simple Computer Tool for Simultaneously Estimating Critical, Transport, Physicochemical, and Phase Change Properties of Ionic Liquids. Industrial & Engineering Chemistry Research, 2021, 60, 16143-16151.	3.7	7
408	Experimental study on hydrodynamics of ionic liquids systems in falling film evaporator. Chemical Engineering and Processing: Process Intensification, 2021, , 108701.	3.6	2
409	Unravelling the chemistry of catalyst surfaces and solvents towards Câ€“C bond formation through activation and electrochemical conversion of CO₂ into hydrocarbons over micro-structured dendritic copper. Sustainable Energy and Fuels, 2021, 6, 128-142.	4.9	7
410	Closing the Anthropogenic Chemical Carbon Cycle toward a Sustainable Future via CO₂ Valorization. Advanced Energy Materials, 2021, 11, 2102767.	19.5	35
411	Ionic Liquid-Modified Porous Organometallic Polymers as Efficient and Selective Photocatalysts for Visible-Light-Driven CO ₂ Reduction. Research, 2020, 2020, 9398285.	5.7	10
412	Understanding gas absorption in multivalent ionic liquids via solute-solvent interaction analyses. Chemical Physics Letters, 2022, 786, 139204.	2.6	7
413	Molecular dynamics studies on separation of CO2/CH4 by the ionic liquids encapsulated ZIF-8. Journal of Membrane Science, 2022, 644, 120117.	8.2	6
414	Molecular dynamics simulations of structures, dynamics, competitive interaction mechanisms for CH4, CO2, and SO2 in ionic liquid mixtures of [Cnmim][Nf2T] and [Cnmim][BF4]. Fluid Phase Equilibria, 2022, 554, 113342.	2.5	5
415	Efficient and reversible CO2 capture in bio-based ionic liquids solutions. Journal of CO2 Utilization, 2022, 55, 101815.	6.8	19
416	Commercial anion exchange resin modified with azolates for remarkable separation of SO2 from CO2. Fuel, 2022, 310, 122468.	6.4	4
417	CO2 capture by 1-ethyl-3-methylimidazolium acetate: Solubility at low pressure and quantification of chemisorption and physisorption. Journal of Molecular Liquids, 2022, 348, 118036.	4.9	11
418	A review on materials and processes for carbon dioxide separation and capture. Energy and Environment, 2023, 34, 3-57.	4.6	9
419	Highly efficient absorption of methyl tert-butyl ether with ionic liquids. Separation and Purification Technology, 2022, 282, 120108.	7.9	8
420	A comprehensive multidisciplinary investigation on CO2 capture from diesel engine. Environmental Science and Pollution Research, 2021, , 1.	5.3	4

#	Article	IF	Citations
421	Newâ€Generation Carbonâ€Capture Ionic Liquids Regulated by Metalâ€Ion Coordination. ChemSusChem, 2022, 15, .	6.8	8
422	An overview of the materials and methodologies for CO₂ capture under humid conditions. Journal of Materials Chemistry A, 2021, 9, 26498-26527.	10.3	29
423	Elucidating the Transition between CO ₂ Physisorption and Chemisorption in 1,2,4-Triazolate Ionic Liquids at a Molecular Level. SSRN Electronic Journal, 0, , .	0.4	0
424	Ionic Liquids in CO Capture and Separation. , 2022, , 1-7.		0
425	Conformational dynamics of polymers in ethylammonium nitrate from advanced sampling methods. Computational Materials Science, 2022, 203, 111072.	3.0	3
426	The effect of ZIF-67 nanoparticles on the desulfurization performance of deep eutectic solvent based nanofluid system. Journal of Hazardous Materials, 2022, 426, 128098.	12.4	13
427	<scp>Chelationâ€activated multipleâ€site</scp> reversible chemical absorption of ammonia in ionic liquids. AICHE Journal, 2022, 68, .	3.6	44
428	Preparation of Butadiene-Bridged Polymethylsiloxane/Ethylcellulose/1-Carboxymethyl-3-methylimidazolium Chloride Ternary Composite Membranes for Gas Separation. ACS Omega, 2022, 7, 3626-3633.	3.5	1
429	Rapid Continuous-Flow Water-Free Synthesis of Ultrapure Ionic Liquids Assisted by Microwaves. Organic Process Research and Development, 2022, 26, 207-214.	2.7	5
430	Spontaneous self-healing ionogels for efficient and reliable carbon dioxide separation. Journal of Materials Chemistry A, 2022, 10, 4695-4702.	10.3	12
431	Sustainability of green solvents â€“ review and perspective. Green Chemistry, 2022, 24, 410-437.	9.0	95
432	Electrochemically Mediated Direct CO₂ Capture by a Stackable Bipolar Cell. ChemSusChem, 2022, 15, .	6.8	20
433	Highly Selective and Tunable CO₂/N₂ Separation Performance in Ammonium-Based Organic Ionic Plastic Crystal Composite Membranes with Self-Healing Properties. ACS Applied Polymer Materials, 2022, 4, 1487-1496.	4.4	5
434	Insights into Ionic Liquids: From Z-Bonds to Quasi-Liquids. Jacs Au, 2022, 2, 543-561.	7.9	42
435	Effects of polyimide sequence and monomer structures on CO2 permeation and mechanical properties of sulfonated polyimide/ionic liquid composite membranes. Polymer, 2022, 241, 124533.	3.8	7
436	Rational Design and Screening of Ionic Liquid Absorbents for Simultaneous and Stepwise Separations of SO₂ and CO₂ from Flue Gas. Industrial & Engineering Chemistry Research, 2022, 61, 2548-2561.	3.7	5
437	Task-specific ionic liquids for carbon dioxide absorption and conversion into value-added products. Current Opinion in Green and Sustainable Chemistry, 2022, 34, 100599.	5.9	11
438	Anomalously high solubility behavior of methanethiol in alkylimidazoliumâ€“based ionic liquids. Journal of Molecular Liquids, 2022, 350, 118529.	4.9	6

#	Article	IF	Citations
439	Elucidating the transition between CO2 physisorption and chemisorption in 1,2,4-triazolate ionic liquids at a molecular level. Chemical Engineering Journal, 2022, 435, 134956.	12.7	7
440	CO2-driven surface reconstruction in quaternary ammonium ionic liquid-propanol solutions. Journal of Ionic Liquids, 2022, 2, 100018.	2.7	2
441	Principles and strategies for green process engineering. Green Chemical Engineering, 2022, 3, 1-4.	6.3	10
442	High-Pressure Carbon Dioxide Solubility in Terpene Based Deep Eutectic Solvents. SSRN Electronic Journal, 0, , .	0.4	1
443	Theory-augmented informatics of ionic liquid electrolytes for co-design with nanoporous electrode materials. Nanoscale, 2022, 14, 4922-4928.	5.6	2
444	Mixed-Matrix Ion Gel Membranes for Gas Separation. ACS Applied Polymer Materials, 2022, 4, 3098-3119.	4.4	10
445	Effectiveness of ionic liquid-supported membranes for carbon dioxide capture: a review. Environmental Science and Pollution Research, 2022, 29, 35723-35745.	5.3	13
446	Viscous behavior of 1-hexyl-methylimidazolium bis(trifluoromethylsulfonyl)imide/titanium dioxide/polyethylene glycol. Chinese Journal of Chemical Engineering, 2023, 54, 280-287.	3.5	0
447	Current status and pillars of direct air capture technologies. IScience, 2022, 25, 103990.	4.1	86
448	Turning deep-eutectic solvents into value-added products for CO2 capture: A desirability-based virtual screening study. Journal of CO2 Utilization, 2022, 58, 101926.	6.8	23
449	Emerging Solvent Regeneration Technologies for CO2 Capture through Offshore Natural Gas Purification Processes. Sustainability, 2022, 14, 4350.	3.2	8
450	Advanced Theory and Simulation to Guide the Development of CO₂ Capture Solvents. ACS Omega, 2022, 7, 12453-12466.	3.5	2
451	Efficient separation of CO2/CH4 by ionic liquids confined in graphene oxide: A molecular dynamics simulation. Separation and Purification Technology, 2022, 289, 120736.	7.9	10
452	[BMIM][OAc] coating layer makes activated carbon almost completely selective for CO2. Chemical Engineering Journal, 2022, 437, 135436.	12.7	14
453	Natural deep eutectic solvent-based gels with multi-site interaction mechanism for selective membrane separation of SO2 from N2 and CO2. Chemical Engineering Journal, 2022, 438, 135626.	12.7	38
454	Entropy driving highly selective CO2 separation in nanoconfined ionic liquids. Chemical Engineering Journal, 2022, 440, 135918.	12.7	13
455	Nanofluid preparation, stability and performance for CO2 absorption and desorption enhancement: A review. Journal of Environmental Management, 2022, 313, 114955.	7.8	32
456	Assembly of ionic liquid molecule layers on metalâ€“organic framework-808 for CO2 capture. Chemical Engineering Journal, 2022, 439, 135650.	12.7	20

#	Article	IF	Citations
457	Cobalt Porphyrin-Cross-Linked Poly(Ionic Liquid)s as Efficient Heterogeneous Catalysts for Carbon Dioxide Conversion under Mild Conditions. Industrial & Engineering Chemistry Research, 2021, 60, 18218-18229.	3.7	9
458	Thermal-plasma-assisted renewable hydrogen and solid carbon production from ionic liquid-based biogas upgrading: A process intensification study. Chemical Engineering and Processing: Process Intensification, 2022, 180, 108777.	3.6	3
459	Impact of Ionic Liquid Structure and Loading on Gas Sorption and Permeation for ZIF-8-Based Composites and Mixed Matrix Membranes. Membranes, 2022, 12, 13.	3.0	9
460	Application of Porous Materials for CO2 Reutilization: A Review. Energies, 2022, 15, 63.	3.1	13
462	Molecular interactions of ionic liquids with SiO₂ surfaces determined from colloid probe atomic force microscopy. Physical Chemistry Chemical Physics, 2022, 24, 12808-12815.	2.8	3
463	Nanoconfined Co2-Philic Ionic Liquid in Laminated G-C3n4 Membrane for the Highly Efficient Separation of Co2. SSRN Electronic Journal, 0, , .	0.4	0
464	Pretreatment of Typha latifolia biomass with imidazolium ionic liquid as a strategy for sugar production. Biomass Conversion and Biorefinery, 2024, 14, 4591-4604.	4.6	1
465	Ionic liquids for carbon capture. MRS Bulletin, 2022, 47, 395-404.	3.5	11
466	Alkoxy-Functionalized Amines as Single-Component Water-Lean CO₂ Absorbents with High Efficiency: The Benefit of Stabilized Carbamic Acid. Industrial & Engineering Chemistry Research, 2022, 61, 7080-7089.	3.7	1
467	A strategy of development and selection of absorbent for efficient CO2 capture: An overview of properties and performance. Chemical Engineering Research and Design, 2022, 163, 244-273.	5.6	22
468	Structural Arrangements of Guanidinium-Based Dicarboxylic Acid Ionic Liquids and Insights into Carbon Dioxide Uptake through Structural Voids. Crystal Growth and Design, 2022, 22, 3646-3655.	3.0	2
469	Greenery-inspired nanoengineering of bamboo-like hierarchical porous nanotubes with spatially organized bifunctionalities for synergistic photothermal catalytic CO₂ fixation. Journal of Materials Chemistry A, 2022, 10, 12418-12428.	10.3	18
470	Thermodynamic analysis of H2O â^' 3-aminopropyl tributyl phosphonium glycinate as a working pair for absorption refrigeration system. Applied Thermal Engineering, 2022, 213, 118658.	6.0	3
471	Capturing low-carbon alcohols from CO2 gas with ionic liquids. Chemical Engineering Science, 2022, 258, 117745.	3.8	6
472	Efficient synthesis of cyclic carbonates under atmospheric CO2 by DMAP-based ionic liquids: the difference of inert hydrogen atom and active hydrogen atom in cation. Green Chemical Engineering, 2023, 4, 285-293.	6.3	4
473	Hydrogen sulfide capture and removal technologies: A comprehensive review of recent developments and emerging trends. Separation and Purification Technology, 2022, 298, 121448.	7.9	70
474	High free volume polymeric membranes for CO2 capture: state-of-the-art. Recent Innovations in Chemical Engineering, 2022, 15, .	0.4	0
475	Porous liquids for gas capture, separation, and conversion: Narrowing the knowing-doing gap. Separation and Purification Technology, 2022, 297, 121456.	7.9	7

#	Article	IF	Citations
476	Nanoconfined CO2-philic ionic liquid in laminated g-C3N4 membrane for the highly efficient separation of CO2. Separation and Purification Technology, 2022, 297, 121513.	7.9	24
477	Zinc oxide nanoparticles coated with benzimidazole based ionic liquid performing as an efficient CO2 capture: Experimental and Theoretical studies. Journal of Molecular Structure, 2022, 1265, 133466.	3.6	3
478	Recent advances in CO₂ capture and reduction. Nanoscale, 2022, 14, 11869-11891.	5.6	30
479	Atomic force microscopy probing interactions and microstructures of ionic liquids at solid surfaces. Nanoscale, 2022, 14, 11098-11128.	5.6	15
480	Synthesis of aprotic ionic liquids. Nature Reviews Methods Primers, 2022, 2, .	21.2	17
481	Combined Superbase Ionic Liquid Approach to Separate CO₂ from Flue Gas. ACS Sustainable Chemistry and Engineering, 2022, 10, 9453-9459.	6.7	2
482	Enabling Sustainable Chemistry with Ionic Liquids and Deep Eutectic Solvents: A Fad or the Future?. Angewandte Chemie - International Edition, 2022, 61, .	13.8	48
483	Selective and simultaneous membrane separation of CO and H2 from N2 by protic chlorocuprate ionic liquids. Renewable Energy, 2022, , .	8.9	5
484	Enabling Sustainable Chemistry with Ionic Liquids and Deep Eutectic Solvents: A Fad or the Future?. Angewandte Chemie, 2022, 134, .	2.0	18
485	Quantifying the anion effect of gas solubility within ionic liquids using the solvation affinity index. Chemical Engineering Science, 2022, 260, 117851.	3.8	2
486	Highly efficient toluene absorption with Ï€-electron donor-based deep eutectic solvents. Separation and Purification Technology, 2022, 298, 121618.	7.9	16
487	Tuning the composition of deep eutectic solvents consisting of tetrabutylammonium chloride and n-decanoic acid for adjustable separation of ethylene and ethane. Separation and Purification Technology, 2022, 298, 121680.	7.9	11
488	High-pressure carbon dioxide solubility in terpene based deep eutectic solvents. Journal of Environmental Chemical Engineering, 2022, 10, 108237.	6.7	14
489	Challenges and opportunities in carbon capture, utilization and storage: A process systems engineering perspective. Computers and Chemical Engineering, 2022, 166, 107925.	3.8	25
490	Crystalline elastomeric block copolymer/ionic liquid membranes with enhanced mechanical strength and gas separation properties. Journal of Membrane Science, 2022, 660, 120837.	8.2	4
491	Investigation of Boron-Based Ionic Liquids for Energy Applications. , 0, , .		1
492	Application of a Single Multilayer Perceptron Model to Predict the Solubility of CO2 in Different Ionic Liquids for Gas Removal Processes. Processes, 2022, 10, 1686.	2.8	2
493	A New Solid Adsorbent for CO₂ Capture Based on an Amine Polycarboxylate Ionic Liquid with Multiple Absorption Sites. Industrial & Engineering Chemistry Research, 2022, 61, 11953-11963.	3.7	5

#	Article	IF	Citations
494	Superbase and Hydrophobic Ionic Liquid Confined within Ni Foams as a Free-Standing Catalyst for CO₂ Electroreduction. ACS Applied Materials & Interfaces, 2022, 14, 38717-38726.	8.0	6
495	Reviewing and screening ionic liquids and deep eutectic solvents for effective CO2 capture. Frontiers in Chemistry, 0, 10, .	3.6	17
496	Insights into the volumetric properties, conductive property, and interaction behaviors of two nitrile functionalized ionic liquids mixture systems with Î³-butyrolactone. Journal of Molecular Liquids, 2022, 364, 120052.	4.9	3
497	Exploiting proton masking to protect amino achieve efficient capture CO2 by amino-acids deep eutectic solvents. Separation and Purification Technology, 2022, 299, 121787.	7.9	9
498	Performance assessment of offshore wind energy integrated monoethanolamine synthesis system for post-combustion and potential direct air capture. Journal of CO2 Utilization, 2022, 64, 102154.	6.8	2
499	A state-of-the-art review on the liquid properties regarding energy and environmental performance in liquid desiccant air-conditioning systems. Applied Energy, 2022, 325, 119853.	10.1	11
500	Ionic Liquids as homogeneous photocatalyst for CO2 reduction in protic solvents. Chemical Engineering Journal Advances, 2022, 12, 100379.	5.2	4
501	Basicity-controlled DBN-based deep eutectic solvents for efficient carbon dioxide capture. Journal of CO2 Utilization, 2022, 65, 102201.	6.8	11
502	Developing hybrid 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide/titanium dioxide/water absorbent for CO2 separation. Applied Energy, 2022, 326, 119972.	10.1	1
503	Understanding CO2 absorption by an ammonium-based ionic liquid confined in porous carbon material under applied voltage. Journal of Molecular Liquids, 2022, 366, 120227.	4.9	2
504	Advancements in carbon capture technologies: A review. Journal of Cleaner Production, 2022, 373, 133932.	9.3	51
505	Construction of ultra-microporous activated carbons derived from waste distiller's grains for efficient CO2 adsorption. Separation and Purification Technology, 2022, 302, 122134.	7.9	14
506	Process Design of Formic Acid and Methanol Production from CO2 Promoted by Ionic Liquid: Techno-Economic Analysis. Computer Aided Chemical Engineering, 2022, , 163-168.	0.5	1
507	Ionic Liquids for Electrochemical CO2 Reduction. , 2022, , 1-22.		0
508	Molecular insight into CO₂/N₂ separation using a 2D-COF supported ionic liquid membrane. Physical Chemistry Chemical Physics, 2022, 24, 23690-23698.	2.8	5
509	Preparation of biacidic tin-based ionic liquid catalysts and their application in catalyzing coupling reaction between ethylene carbonate and dimethyl succinate to synthesize poly(ethylene succinate). New Journal of Chemistry, 2022, 46, 15901-15910.	2.8	4
510	Intramolecular Ternary Active Sites of Imidazole Ionic-Liquid Polymer Immobilized on Magnetic Nanoparticles for Synergistic Catalysis of Co2 Cycloaddition. SSRN Electronic Journal, 0, , .	0.4	0
511	Assembling ionic liquids in MOF â€œMonomerâ€•based membranes to trigger CO₂/CH₄ separation. Materials Chemistry Frontiers, 2022, 6, 3555-3566.	5.9	4

#	Article	IF	Citations
512	Direct Air Capture of CO₂ via Ionic Liquids Derived from â€œWasteâ€•Amino Acids. ACS Sustainable Chemistry and Engineering, 2022, 10, 11885-11890.	6.7	9
513	What It Takes for Imidazolium Cations to Promote Electrochemical Reduction of CO₂. ACS Energy Letters, 2022, 7, 3439-3446.	17.4	12
514	Computational Insights into Malononitrile-Based Carbanions for CO₂ Capture. Journal of Physical Chemistry B, 2022, 126, 6979-6984.	2.6	4
515	Tuning Functionalized Ionic Liquids for CO2 Capture. International Journal of Molecular Sciences, 2022, 23, 11401.	4.1	16
516	Defects in a Metalâ€“Organic Framework Fabricated by Carboxy-Functionalized Ionic Liquids for Enhancing NH₃ Uptake. ACS Sustainable Chemistry and Engineering, 2022, 10, 12457-12465.	6.7	8
517	TETRABUTYLAMMONIUM DODECYL SULFATE: ION EXCHANGE SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL ACTIVITY IN COMPARISON OF SODIUM DODECYL SULFATE. Towards Excellence, 0, , 188-197.	0.0	0
518	Progress and current challenges for CO2 capture materials from ambient air. Advanced Composites and Hybrid Materials, 2022, 5, 2721-2759.	21.1	54
519	Enhanced Carbon Capture Behavior of Carbon Fibers via Ionic Liquid Modification. ChemNanoMat, 0, , .	2.8	1
520	Covalent Organic Frameworks with Ionic Liquid-Moieties (ILCOFs): Structures, Synthesis, and CO2 Conversion. Nanomaterials, 2022, 12, 3615.	4.1	7
521	Reaction Mechanism of CO2 with Choline-Amino Acid Ionic Liquids: A Computational Study. Entropy, 2022, 24, 1572.	2.2	3
522	Ionic Liquidâ€Catalyzed Câˆ’C Bond Formation for the Synthesis of Polysubstituted Olefins. European Journal of Organic Chemistry, 2022, 2022, .	2.4	2
523	Experimental and theoretical heat capacity of mono- and dicationic long alkyl chain imidazolium-based ionic liquids. Journal of Ionic Liquids, 2022, 2, 100048.	2.7	0
524	Kinetics study and performance evaluation of a hybrid choline-glycine/polyethylene glycol/water absorbent for CO2 separation. Separation and Purification Technology, 2023, 304, 122410.	7.9	3
525	Mixed-matrix membranes based on novel hydroxamate metalâ€“organic frameworks with two-dimensional layers for CO2/N2 separation. Separation and Purification Technology, 2023, 305, 122476.	7.9	26
526	Simulation study of carbon dioxide capture in a novel rotating liquid sheet contactor. Fuel, 2023, 333, 126322.	6.4	1
527	CO₂ capture from ambient air via crystallization with tetraalkylammonium hydroxides. Dalton Transactions, 0, , .	3.3	0
528	Synthesis and performance evaluation of copper and magnesium-based metal organic framework supported ionic liquid membrane for CO2/N2 separation. Chemosphere, 2023, 311, 136913.	8.2	14
529	Revisiting the structure, interaction, and dynamical property of ionic liquid from the deep learning force field. Journal of Power Sources, 2023, 555, 232350.	7.8	3

#	Article	IF	Citations
530	CO₂ Chemisorption Behavior in Conjugated Carbanion-Derived Ionic Liquids via Carboxylic Acid Formation. Journal of the American Chemical Society, 2022, 144, 21658-21663.	13.7	21
531	Application of ionic liquids in the mixed matrix membranes for CO2 separation: An overview. International Journal of Greenhouse Gas Control, 2022, 121, 103796.	4.6	2
532	Efficient electrocatalytic reduction of CO2 to CO on highly dispersed Ag nanoparticles confined by Poly(ionic liquid). Chemical Engineering Journal, 2023, 455, 140910.	12.7	2
533	An in situ, reversible fluorescent paper sensor for selective detection of ambient CO₂. Journal of Materials Chemistry C, 2022, 11, 299-306.	5.5	0
534	Diffusivities and solubilities of carbon dioxide in deep eutectic solvents. Separation and Purification Technology, 2023, 307, 122779.	7.9	9
535	Tailored interfacial microenvironment of mixed matrix membranes based on deep eutectic solvents for efficient CO2 separation. Separation and Purification Technology, 2023, 307, 122753.	7.9	6
536	A MOF-based electronic nose for carbon dioxide sensing with enhanced affinity and selectivity by ionic-liquid embedment. Journal of Materials Chemistry A, 2022, 10, 25347-25355.	10.3	10
537	Advanced Formulations Based on Poly(ionic liquid) Materials for Additive Manufacturing. Polymers, 2022, 14, 5121.	4.5	8
538	Recent Advances in the Synthesis, Application and Economic Feasibility of Ionic Liquids and Deep Eutectic Solvents for CO2 Capture: A Review. Energies, 2022, 15, 9098.	3.1	14
539	Biocompatible ammonium-based ionic liquids/ZIF-8 composites for CO2/CH4 and CO2/N2 separations. Sustainable Materials and Technologies, 2023, 35, e00558.	3.3	4
540	Shvo-Catalyzed Hydrogenation of CO₂ in the Presence or Absence of Ionic Liquids for Tandem Reactions. Journal of Organic Chemistry, 2023, 88, 5044-5051.	3.2	3
541	Predicting CO₂ Absorption in Ionic Liquids with Molecular Descriptors and Explainable Graph Neural Networks. ACS Sustainable Chemistry and Engineering, 2022, 10, 16681-16691.	6.7	9
542	A critical review on machine-learning-assisted screening and design of effective sorbents for carbon dioxide (CO2) capture. Frontiers in Energy Research, 0, 10, .	2.3	2
543	A review of encapsulated ionic liquids for CO2 capture. Journal of Molecular Liquids, 2023, 374, 121266.	4.9	16
544	Ionic Microporous Polymer Membranes for Advanced Gas Separations. Industrial & Engineering Chemistry Research, 2023, 62, 1764-1775.	3.7	6
545	Experimental study on CO2 separation using hydrophobic deep eutectic solvent based supported liquid membranes. Separation and Purification Technology, 2023, 310, 123129.	7.9	6
546	Carbon dioxide capture and utilization in ionic liquids. , 2023, , 345-426.		0
547	Application of Ionic Liquids in CO2 Capture. , 2023, , 39-57.		0

#	Article	IF	Citations
548	Integration of carbon capture with heterogeneous catalysis toward methanol production: chemistry, challenges, and opportunities. Catalysis Reviews - Science and Engineering, 0, , 1-40.	12.9	7
549	OAs and CAB capture CO2 and conversion to carbonates and its potential applications in civil engineering. Journal of Building Engineering, 2023, 66, 105904.	3.4	2
550	A novel binary solid-liquid biphasic functionalized ionic liquids for efficient CO2 capture: Reversible polarity and low energy penalty. Separation and Purification Technology, 2023, 313, 123486.	7.9	5
551	Readily regenerable amine-free CO2 sorbent based on a solid-supported carboxylate ionic liquid. Journal of Environmental Management, 2023, 334, 117469.	7.8	2
552	Effect of water content on transport properties and interactions of amino-functionalized ionic liquids. Chemical Physics, 2023, 569, 111852.	1.9	2
553	Carbon materials derived from cyano-based IL@ZIF-8 composites for CO2 sorption separation systems. Materials Today Sustainability, 2023, 22, 100353.	4.1	3
554	Intramolecular synergistic catalysis of ternary active sites of imidazole Ionic-liquid polymers immobilized on nanosized CoFe2O4@polystyrene composites for CO2 cycloaddition. Separation and Purification Technology, 2023, 315, 123758.	7.9	5
555	Dual-functionalized ionic liquid biphasic solvents with aqueous-lean for industrial carbon capture: Energy-saving and high efficiency. Separation and Purification Technology, 2023, 315, 123722.	7.9	5
556	Prominently improved CO2/N2 separation efficiency by ultrathin-ionic-liquid-covered MXene membrane. Separation and Purification Technology, 2023, 311, 123296.	7.9	7
557	Asymmetric anion effects of anions in ionic liquids: Crystal polymorphs and magnetic properties. Chemical Physics, 2023, 570, 111872.	1.9	1
558	Aromatic volatile organic compounds absorption with phenylâ€based deep eutectic solvents: A molecular thermodynamics and dynamics study. AICHE Journal, 2023, 69, .	3.6	11
559	Graph neural networks for temperature-dependent activity coefficient prediction of solutes in ionic liquids. Computers and Chemical Engineering, 2023, 171, 108153.	3.8	16
560	How Does Electronic Polarizability or Scaled-Charge Affect the Interfacial Properties of Room Temperature Ionic Liquids?. Journal of Physical Chemistry B, 2023, 127, 1264-1275.	2.6	6
561	Ionic Liquid Materials for the Adsorption of Toxic Gases. , 2022, , 579-586.		0
562	Ionic Liquids in CO Capture and Separation. , 2022, , 740-746.		0
563	Ionic Liquids for Electrochemical CO2 Reduction. , 2022, , 676-696.		0
564	Novel theoretical insight on CO2 electroreduction mechanism induced by aromatic ester-functionalized ionic liquids: A bulk-phase reaction pathway. Journal of Molecular Liquids, 2023, 375, 121392.	4.9	2
565	Pores on Pores: A novel approach to fabricate super adsorbents from used face masks for large CO2 capture and dye removal. Carbon, 2023, 206, 422-433.	10.3	8

#	Article	IF	Citations
566	A generalizable strategy based on the rule of â€œlike dissolves likeâ€•to construct porous liquids with low viscosity for CO2 capture. Nano Research, 2023, 16, 10369-10380.	10.4	11
567	Multi-layer perceptron's neural network with optimization algorithm for greenhouse gas forecasting systems. Environmental Challenges, 2023, 11, 100708.	4.2	4
568	Perspectives on Taiwanâ€™s Pathway to Net-Zero Emissions. Sustainability, 2023, 15, 5587.	3.2	4
569	A review of imidazolium ionic liquid-based phase change materials for low and medium temperatures thermal energy storage and their applications. , 2023, 1, 100010.		4
570	Chloroplast-inspired microenvironment engineering of inverse opal structured IO-TiO2/Chl/IL for highly efficient CO2 photolytic reduction to CH4. Chemical Engineering Journal, 2023, 464, 142685.	12.7	3
571	Molecular simulation of confined ethalineâ€based deep eutectic solvents for separations of carbon dioxide from methane. AICHE Journal, 0, , .	3.6	0
572	Highly Stable CsPbBr₃ Nanocrystals for Photocatalytic Reduction of CO₂: Ionic Liquid as a Surface Passivation Ligand and Reaction Precursor. ACS Sustainable Chemistry and Engineering, 2023, 11, 5963-5972.	6.7	3
573	Novel Strategy of Machine Learning for Predicting Henryâ€™s Law Constants of CO₂ in Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2023, 11, 6090-6099.	6.7	1
574	Ordered Macroâ€“Microporous Covalent Organic Frameworks as Bifunctional Catalysts for CO₂ Cycloaddition. ACS Sustainable Chemistry and Engineering, 2023, 11, 6183-6190.	6.7	4
575	COSMO-RS Exploration of Highly CO₂-Selective Hydrogen-Bonded Binary Liquid Absorbents under Humid Conditions: Role of Trace Ionic Species. ACS Omega, 2023, 8, 14478-14483.	3.5	2
576	A review of membrane material for biogas and natural gas upgrading. , 2023, 114, 204969.		8
577	Theoretical Study on CO₂/SO₂ Absorption Using <i>N</i>- Alkylethylenediaminium Protic Ionic Liquid. , 0, 5, 49-62.		1
578	Ion Bridging by Carbon Dioxide Facilitates Electrochemical Energy Storage at Charged Carbonâ€“Ionicâ€“Liquid Interfaces. Advanced Energy Materials, 0, , .	19.5	0
579	Electrocatalytic Activation and Conversion of CO2 at Solidâ€“Liquid Model Interfaces: Computational Perspectives. Green Chemistry and Sustainable Technology, 2023, , 329-359.	0.7	0
580	Direct air capture based on ionic liquids: From molecular design to process assessment. Chemical Engineering Journal, 2023, 468, 143630.	12.7	7
581	Efficient SO2 capture and conversion to cyclic sulfites by protic ionic liquid-based deep eutectic solvents under mild conditions. Separation and Purification Technology, 2023, 318, 123981.	7.9	2
582	Comprehensive review on the efficiency of ionic liquid materials for membrane separation and environmental applications. Chemosphere, 2023, 332, 138826.	8.2	3
583	Confining organic cations in metal organic framework allows molecular level regulation of <scp>CO₂</scp> capture. AICHE Journal, 2023, 69, .	3.6	6

#	Article	IF	Citations
584	CO2 capture with green ionic liquid and deep eutectic solvent: A comparative study. Journal of Molecular Liquids, 2023, 383, 122048.	4.9	4
585	CO₂-Philic Imidazolium-Based Poly(Ionic Liquid) Composite Membranes for Enhanced CO₂/N₂ Separation. Industrial & Engineering Chemistry Research, 2023, 62, 8902-8910.	3.7	6
586	Accelerated Oxidative Degradation of Phosphonium-Type Ionic Liquid with <scp>l</scp>-Prolinate Anion: Degradation Mechanism and CO₂ Separation Performance. ACS Omega, 2023, 8, 21154-21161.	3.5	1
587	Acidic protic ionic liquidâ€based deep eutectic solvents capturing <scp>SO₂</scp> with low enthalpy changes. AIChE Journal, 2023, 69, .	3.6	4
588	Liquidâ€inâ€Aerogel Porous Composite Allows Efficient CO₂ Capture and CO₂/N₂ Separation. Small, 2023, 19, .	10.0	3
589	Improving CO2 Absorption Using Artificial Intelligence and Modern Optimization for a Sustainable Environment. Sustainability, 2023, 15, 9512.	3.2	2
590	Harnessing the Hybridization of a Metalâ€Organic Framework and Superbaseâ€Derived Ionic Liquid for Highâ€Performance Direct Air Capture of CO₂. Small, 0, , .	10.0	3
591	Revolutionizing Porous Liquids: Stabilization and Structural Engineering Achieved by a Surface Deposition Strategy. Advanced Materials, 2023, 35, .	21.0	5
592	Structureâ€“Property Relationships of CO₂ Absorbing Coreâ€“Shell Microparticles with Encapsulated Ionic Liquid. ACS Omega, 0, , .	3.5	0
593	Ionic liquids membranes for liquid separation: status and challenges. Green Chemistry, 2023, 25, 5813-5835.	9.0	7
594	Highâ€Performance CO₂ Capture from Air by Harnessing the Power of CaOâ€and Superbaseâ€Ionicâ€Liquidâ€Engineered Sorbents. ChemSusChem, 2023, 16, .	6.8	2
595	The infinite separation principle. Green Energy and Environment, 2023, 8, 1229-1231.	8.7	1
596	Triple role of thiocyanate-containing protic ionic liquids in chemodivergent ring-opening of 1,3-indanedione-derived donorâ€“acceptor cyclopropanes. Journal of Molecular Liquids, 2023, 385, 122401.	4.9	1
598	Sustainable CO2 management through integrated CO2 capture and conversion. Journal of CO2 Utilization, 2023, 72, 102493.	6.8	13
599	Ionic liquids promoted synthesis, enhanced functions, and expanded applications of porous organic frameworks. Coordination Chemistry Reviews, 2023, 493, 215304.	18.8	5
600	Eco-friendly Nature of Ionic Liquids. , 2023, , 16-36.		0
601	Ionic Liquids: Fundamental Properties and Classifications. , 2023, , 1-15.		1
602	Carbon Dioxide Capture and Bioenergy Production by Utilizing the Biological System. , 2023, , 159-194.		0

#	Article	IF	Citations
603	Nanoconfined water in ionic liquid and lyotropic ionic liquid crystals by small- and wide-angle X-ray and neutron scattering: 1-Decyl-3-methylimidazolium nitrate. Journal of Molecular Liquids, 2023, 386, 122551.	4.9	0
604	Impact of nitrile incorporated with hydroxyl, benzyl, and allyl on physicochemical properties of propanenitrile imidazolium-based dual functionalized ionic liquids. Ionics, 0, , .	2.4	0
605	Carbon Capture Using Porous Silica Materials. Nanomaterials, 2023, 13, 2050.	4.1	4
606	Ionic Liquids Functionalized MOFs for Adsorption. Chemical Reviews, 2023, 123, 10432-10467.	47.7	31
607	CO2 Capture Mechanism by Deep Eutectic Solvents Formed by Choline Prolinate and Ethylene Glycol. Molecules, 2023, 28, 5461.	3.8	3
608	Designing deep eutectic solvents for efficient CO2 capture: A data-driven screening approach. Separation and Purification Technology, 2023, 325, 124614.	7.9	3
609	Electrochemically responsive materials for energy-efficient water treatment and carbon capture. Applied Physics Reviews, 2023, 10, .	11.3	0
610	Superior gravimetric CO₂ uptake of aqueous deep-eutectic solvent solutions. Chemical Communications, 2023, 59, 10516-10519.	4.1	0
611	Using halloysite nanotubes modified by tetraethylenepentamine for advanced carbon capture: Experimental and modeling via RSM and ANNs. Chemical Engineering Journal Advances, 2023, 16, 100543.	5.2	3
612	Novel low energy mixed amine biphasic solvent for carbon dioxide capture in biogas upgrading. Separation and Purification Technology, 2023, 326, 124724.	7.9	3
613	Integrated CO₂capture and electrochemical upgradation: the underpinning mechanism and techno-chemical analysis. Chemical Society Reviews, 2023, 52, 5744-5802.	38.1	4
614	Catalytic absorption pathway with kinetically favorable dissolution of nitric oxide in aqueous absorbents. AICHE Journal, 0, , .	3.6	1
615	Condensable Gases Capture with Ionic Liquids. Chemical Reviews, 2023, 123, 10258-10301.	47.7	3
616	Vitamin B12/carbon nanotubes composites for highly efficient CO2 electroreduction with in situ shell-isolated nanoparticle-enhanced Raman spectroscopy. Electrochimica Acta, 2023, 466, 143024.	5.2	0
617	Zwitterionic metalâ€“organic framework with highly dispersed ionic liquid for enhancing CO2 capture. Separation and Purification Technology, 2023, 326, 124828.	7.9	1
618	Poly(ionic liquid)s with unique adsorption-swelling ability toward epoxides for efficient atmospheric CO₂ conversion under cocatalyst-/metal-/solvent-free conditions. Green Chemistry, 2023, 25, 7743-7755.	9.0	1
619	From Lab to Fab: Development and Deployment of Direct Air Capture of CO2. Energies, 2023, 16, 6385.	3.1	1
620	Direct Biocatalytic Processes for CO2 Capture as a Green Tool to Produce Value-Added Chemicals. Molecules, 2023, 28, 5520.	3.8	4

#	Article	IF	Citations
621	Porous Liquids Open New Horizons: Synthesis, Applications, and Prospects. Accounts of Materials Research, 2023, 4, 854-866.	11.7	4
622	Ionic liquids revolutionizing biomedicine: recent advances and emerging opportunities. Chemical Society Reviews, 2023, 52, 7262-7293.	38.1	4
623	In situ XPS of competitive CO₂/H₂O absorption in an ionic liquid. JPhys Materials, 2023, 6, 045012.	4.2	0
624	Structural Properties of HEHN- and HAN-Based Ionic Liquid Mixtures: A Polarizable Molecular Dynamics Study. Journal of Physical Chemistry B, 2023, 127, 8616-8633.	2.6	0
625	Emerging green strategies for biogas upgrading through CO2 capture: From unconventional organic solvents to clathrate and semi-clathrate hydrates. Journal of Molecular Liquids, 2023, 391, 123196.	4.9	2
626	CO2 absorption enhancement of fluorinated ionic liquids on nonaqueous biphasic absorbents: Experimental and theoretical study. Carbon Capture Science & Technology, 2023, 9, 100147.	10.4	3
627	Covalent Immobilization of Quaternary Ammonium Salts on Covalent Organic Framework: Sustainable Intensification Strategy for the Synthesis of Cyclic Carbonates from CO₂. ACS Sustainable Chemistry and Engineering, 2023, 11, 14422-14434.	6.7	0
628	Zwitterionic â€œSolutionsâ€•for Reversible CO₂ Capture. ChemSusChem, 0, , .	6.8	0
629	Application of lysine imprinted polymer as carbon dioxide colorimetric indicators for food packaging. Journal of Food Measurement and Characterization, 0, , .	3.2	0
630	Effect of allyl, benzyl, and hydroxyl groups on the CO2 absorption capacity of propanenitrile imidazoliumâ€“based ionic liquids incorporating dioctylsulfosuccinate anion. Ionics, 0, , .	2.4	0
631	Deep eutectic solvent-based blended membranes for ultra-super selective separation of SO2. Journal of Hazardous Materials, 2023, 460, 132515.	12.4	2
632	Rational design of the double hydrogen-bonds sites in IL@MOF composites for efficient and selective formaldehyde capture. Separation and Purification Technology, 2024, 328, 125116.	7.9	0
633	CO2 Capture With Ionic Liquid Membrane. , 2023, , .		0
634	Exploiting monoterpenoids in type V deep eutectic solvents: A combined high-pressure experiments and theoretical approach for enhanced carbon dioxide and nitrogen absorption. Journal of Molecular Liquids, 2023, 391, 123267.	4.9	0
636	Study on iodine adsorbents preparation and performance for different TEDA ionic liquids. Journal of Radioanalytical and Nuclear Chemistry, 0, , .	1.5	0
637	Research progress on nanoconfined ILs in two-dimensional composite membranes for CO2 capture. Separation and Purification Technology, 2024, 330, 125406.	7.9	2
638	Amine-modified polyionic liquid supports enhance the efficacy of PdNPs for the catalytic hydrogenation of CO₂ to formate. Chemical Communications, 2023, 59, 13470-13473.	4.1	0
639	Polyimide/Ionic Liquids Hybrid Membranes with NH₃-Philic Channels for Ammonia-Based CO₂ Separation Processes. ACS Applied Materials & Interfaces, 2023, 15, 51204-51214.	8.0	2

#	Article	IF	Citations
640	Energy Applications of Ionic Liquids: Recent Developments and Future Prospects. Chemical Reviews, 2023, 123, 12170-12253.	47.7	10
641	Phase Behavior and Structure of Poloxamer Block Copolymers in Protic and Aprotic Ionic Liquids. Molecules, 2023, 28, 7434.	3.8	1
642	CO2 capture and mineral storage: State of the art and future challenges. Renewable and Sustainable Energy Reviews, 2024, 189, 113908.	16.4	2
643	Mass transfer and reaction mechanism of CO2 capture into a novel amino acid ionic liquid phase-change absorbent. Separation and Purification Technology, 2024, 330, 125538.	7.9	2
644	A review of ionic liquids: Recent synthetic advances and oilfield applications. Journal of the Taiwan Institute of Chemical Engineers, 2023, 153, 105195.	5.3	4
645	Transformation from Knudsen diffusion to facilitated diffusion for CO2 in confined mass transfer channels of polyimide mixed matrix membranes. Chemical Engineering Journal, 2023, 477, 147280.	12.7	2
646	Ionic liquids and deep eutectic solvents for NH₃ absorption and separation: a review. New Journal of Chemistry, 2023, 47, 21426-21445.	2.8	0
647	PIM-based mixed matrix membranes containing covalent organic frameworks/ionic liquid composite materials for effective CO2/N2 separation. Separation and Purification Technology, 2024, 330, 125518.	7.9	2
648	Adsorption of Choline Phenylalanilate on Polyaromatic Hydrocarbon-Shaped Graphene and Reaction Mechanism with CO₂: A Computational Study. Journal of Physical Chemistry A, 2023, 127, 9451-9464.	2.5	0
649	Advances in Emerging Catalytic Materials for the Conversion of Carbon Dioxide. Materials, 2023, 16, 7309.	2.9	0
650	Dormancy and doubleâ€activation strategy for construction of highâ€performance mixedâ€matrix membranes. Angewandte Chemie - International Edition, 0, , .	13.8	0
651	Hydroxy-Rich Covalent Organic Framework for the Efficient Catalysis of the Cycloaddition of CO₂. Langmuir, 2023, 39, 16721-16730.	3.5	1
652	Thermodynamic study of choline chloride-based deep eutectic solvents with dimethyl sulfoxide and isopropanol. Journal of Molecular Liquids, 2024, 394, 123731.	4.9	0
653	Dual-functionalized amines as single-component water-lean CO2 absorbents with low-viscosity and high-capacity: The synergistic effect of alkoxy and silyl groups. Separation and Purification Technology, 2024, 333, 125922.	7.9	0
654	Surpassing the Performance of Phenolateâ€derived Ionic Liquids in CO₂ Chemisorption by Harnessing the Robust Nature of Pyrazolonates. ChemSusChem, 0, , .	6.8	1
655	Dormancy and doubleâ€activation strategy for construction of highâ€performance mixedâ€matrix membranes. Angewandte Chemie, 0, , .	2.0	0
656	CO₂ Transformations in Ionic Liquids: In Situ NHC-Cu Formation for Carbonate and Carbamate Production. ACS Sustainable Chemistry and Engineering, 0, , .	6.7	0
657	Recent advances and challenges in ionic materials for post-combustion carbon capture. Carbon Capture Science & Technology, 2024, 11, 100180.	10.4	0

#	Article	IF	Citations
658	A joint strategy for CO2 reduction and CH3OH oxidation at electrode to CO +ÂCH4 and methylal in ionic liquid. Journal of CO2 Utilization, 2024, 79, 102640.	6.8	0
659	Self-Assembled Coreâ€“Shell Structure MgO@TiO₂ as a K₂CO₃ Support with Superior Performance for Direct Air Capture CO₂. ACS Applied Materials & Interfaces, 0, , .	8.0	0
661	Synergy of carbanion siting and hydrogen bonding in superâ€nucleophilic deep eutectic solvents for efficient <scp>CO₂</scp> capture. AICHE Journal, 0, , .	3.6	0
662	Ionic liquid/ metal organic framework composites as a new class of materials for CO2 capture: Present scenario and future perspective. Journal of Molecular Liquids, 2024, 395, 123907.	4.9	1
663	Biphasic solvents based on dual-functionalized ionic liquid for enhanced post-combustion CO2 capture and corrosion inhibition during the absorption process. Chemical Engineering Journal, 2024, 481, 148691.	12.7	0
664	Review of research progress and stability studies of amine-based biphasic absorbents for CO2 capture. Journal of Industrial and Engineering Chemistry, 2024, 134, 28-50.	5.8	0
665	Carbon capture technologies: A review on technology readiness level. Fuel, 2024, 363, 130898.	6.4	0
667	Confinement Effects on Moisture-Swing Direct Air Capture. Environmental Science and Technology Letters, 2024, 11, 89-94.	8.7	0
668	Alkyl-templated cocrystallization of long-chain 1-bromoalkanes by lipid-like ionic liquids. Chemical Communications, 2024, 60, 1723-1726.	4.1	1
669	Interaction study of L-phenylalanine/glycyl-L-phenylalanine in water-soluble 1-decyl-3-methylimidazolium bromide ([C10mim]Br) ionic liquid: thermodynamic/physicochemical approaches. Ionics, 2024, 30, 1653-1667.	2.4	0
670	Solubility of CO2 in ionic liquids: Predictions based on QSPR study with artificial neural network. AIP Conference Proceedings, 2024, , .	0.4	0
672	CO₂ Capture and Conversion into Carbon-Based Tribofilm by In Situ Tribochemical Reaction for Green Lubrication. ACS Sustainable Chemistry and Engineering, 2024, 12, 4070-4080.	6.7	0
673	A critical review on new and efficient adsorbents for CO2 capture. Chemical Engineering Journal, 2024, 485, 149495.	12.7	0
674	Synchronous activation for boosting CO2 cycloaddition over the DABCO-derived ionic liquid confined in MIL-101(Cr) nanocages. Journal of Environmental Chemical Engineering, 2024, 12, 112137.	6.7	0
675	Guanidine-functionalized basic binuclear poly(ionic liquid)s for low partial pressure CO2 fixation into cyclic carbonate. Separation and Purification Technology, 2024, 339, 126682.	7.9	0
676	Process Simulation and Optimization on Ionic Liquids. Chemical Reviews, 2024, 124, 1649-1737.	47.7	0
677	Absorption processes for CO2 removal from CO2-rich natural gas. , 2024, , 207-257.		0
678	Ionic liquid-assisted selective lithium extraction from magnesium-rich brines containing various alkali metals: Experimental and molecular insights. Chemical Engineering Science, 2024, 290, 119810.	3.8	0

#	Article	IF	Citations
679	Supported Ionic Liquid Membrane with Highlyâ€permeable Polyamide Armor by In Situ Interfacial Polymerization for Durable CO₂ Separation. Small, 0, , .	10.0	0
680	Selective CO₂ separation through physicochemical absorption by triazoleâ€functionalized ionic liquid binary absorbents. AICHE Journal, 2024, 70, .	3.6	0
681	Functional ionic liquid as phase separation trigger in biphasic absorption of CO2. Chemical Engineering Journal, 2024, 485, 149648.	12.7	0
682	Deep eutectic solventâ€assisted selective extraction of valuable metals from waste lithiumâ€ion batteries. AICHE Journal, 2024, 70, .	3.6	0
683	Efficient Carbon Capture and Mineralization Using Porous Liquids Comprising Hollow Nanoparticles and Enzymes Dispersed in Fatty Acid-Based Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2024, 12, 5799-5808.	6.7	0
684	Cost-Effective Preparation of Carbonic Anhydrase with Superior Performance for Assisting Amine and Amino Acid Ionic Liquid Blends in CO₂ Absorption and Desorption. ACS Sustainable Chemistry and Engineering, 2024, 12, 4444-4455.	6.7	0
685	Advancements in CO2 capture by absorption and adsorption: A comprehensive review. Journal of CO2 Utilization, 2024, 81, 102727.	6.8	0
686	Highly efficient capture of <scp>CO₂</scp> through the synergy of intramolecular amines within piperazineâ€derived alcoholamines. AICHE Journal, 0, , .	3.6	0
687	Activated porous carbon derived from sawdust for CO2 capture. Materials Chemistry and Physics, 2024, 317, 129177.	4.0	0
688	Advances in Carbon Control Technologies for Flue Gas Cleaning. Separation and Purification Reviews, 0, , 1-30.	5.5	0
689	The Absorption Mechanisms of CO2, H2S and CH4 Molecules in [EMIM][SCN] and [EMIM][DCA] Ionic Liquids: A Computational Insight. Fluid Phase Equilibria, 2024, 581, 114080.	2.5	0
690	Integration of carbon emission reduction policies and technologies: Research progress on carbon capture, utilization and storage technologies. Separation and Purification Technology, 2024, 343, 127153.	7.9	0
691	Carbon dioxide absorption in a gas-liquid membrane contactor: Influence of membrane properties and absorbent chemistry. Chemical Engineering Journal Advances, 2024, 18, 100601.	5.2	0
692	Engineering highly reversible hydrogen bonding interaction in pebax/deep eutectic solvent blended membranes for efficient separation of H2S from CO2 and CH4. Journal of Membrane Science, 2024, 699, 122618.	8.2	0
693	Thermodynamic Study of Ionic Liquids 1-Hexyl-3-methylimidazolium Halide with Methanol Mixtures. Journal of Chemical & Engineering Data, 0, , .	1.9	0
694	Dual hydrogen bond donor functionalized hierarchical porous poly(ionic liquid)s for efficient CO2 fixation into cyclic carbonates. Separation and Purification Technology, 2024, 344, 127174.	7.9	0
695	Surface tension measurement of FAP-based ionic liquid pendant drops in a high vacuum/gas cell. Pure and Applied Chemistry, 2024, .	1.9	0
696	Monomethylated TrÃ¶ger's-base-containing polyimidazolinium salt as an efficient catalyst for cycloaddition of CO2 to epoxides. Polymer, 2024, 299, 126954.	3.8	0