

# Recent advances in solid sorbents for CO<sub>2</sub> trends

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Citation Report

#	ARTICLE	IF	CITATIONS
2	An Ultrahigh Pore Volume Drives Up the Amine Stability and Cyclic CO <sub>2</sub> Capacity of a Solid@Amine@Carbon Sorbent. <i>Advanced Materials</i> , 2015, 27, 4903-4909.	11.1	81
3	A Cationic MOF with High Uptake and Selectivity for CO <sub>2</sub> due to Multiple CO <sub>2</sub> -philic Sites. <i>Chemistry - A European Journal</i> , 2015, 21, 16525-16531.	1.7	72
4	Effect of Dopants on the Adsorption of Carbon Dioxide on Ceria Surfaces. <i>ChemSusChem</i> , 2015, 8, 3651-3660.	3.6	61
5	CO <sub>2</sub> chemisorption and cyclability analyses in $\text{Li}_5\text{AlO}_4$ : effects of Na <sub>2</sub> CO <sub>3</sub> and K <sub>2</sub> CO <sub>3</sub> addition. , 2015, 5, 802-811.		15
6	How to Overcome the Water-Gas Shift Equilibrium using a Conventional Nickel Reformer Catalyst. <i>Energy Technology</i> , 2015, 3, 1205-1216.	1.8	10
7	Activation Effect of Fullerene C <sub>60</sub> on the Carbon Dioxide Absorption Performance of Amine-Rich Polypropylenimine Dendrimers. <i>ChemSusChem</i> , 2015, 8, 2635-2644.	3.6	14
8	Preparation of triethylenetetramine-modified zirconosilicate molecular sieve for carbon dioxide adsorption. <i>Environmental Progress and Sustainable Energy</i> , 2015, 34, 1814-1821.	1.3	7
9	Synthesis of CaCO <sub>3</sub> @C yolk-shell particles for CO <sub>2</sub> adsorption. <i>RSC Advances</i> , 2015, 5, 24872-24876.	1.7	17
10	Interaction between CO <sub>2</sub> and ionic liquids confined in the nanopores of SAPO-11. <i>RSC Advances</i> , 2015, 5, 48908-48915.	1.7	11
11	Microporous covalent triazine polymers: efficient Friedel-Crafts synthesis and adsorption/storage of CO <sub>2</sub> and CH <sub>4</sub> . <i>Journal of Materials Chemistry A</i> , 2015, 3, 6792-6797.	5.2	160
12	Remarkable oxygen barrier films based on a layered double hydroxide/chitosan hierarchical structure. <i>Journal of Materials Chemistry A</i> , 2015, 3, 12350-12356.	5.2	41
13	Comprehensive study of ultra-microporous nitrogen-doped activated carbon for CO <sub>2</sub> capture. <i>Carbon</i> , 2015, 93, 68-80.	5.4	263
14	Water steam effect during high CO <sub>2</sub> chemisorption in lithium cuprate (Li <sub>2</sub> CuO <sub>2</sub> ) at moderate temperatures: experimental and theoretical evidence. <i>RSC Advances</i> , 2015, 5, 34157-34165.	1.7	29
15	Interaction of pristine hydrotalcite-like layered double hydroxides with CO <sub>2</sub> : a thermogravimetric study. <i>Bulletin of Materials Science</i> , 2015, 38, 1783-1790.	0.8	4
16	K <sub>2</sub> CO <sub>3</sub> -Modified Potassium Feldspar for CO <sub>2</sub> Capture from Post-combustion Flue Gas. <i>Energy &amp; Fuels</i> , 2015, 29, 8151-8156.	2.5	13
17	Designed porous carbon materials for efficient CO <sub>2</sub> adsorption and separation. <i>New Carbon Materials</i> , 2015, 30, 481-501.	2.9	91
18	Flux Response Technology (FRT) Applied in Zero Length Column Diffusivity and Adsorption Measurements. <i>Transport in Porous Media</i> , 2015, 107, 731-744.	1.2	0
19	A stable metal-organic framework with suitable pore sizes and rich uncoordinated nitrogen atoms on the internal surface of micropores for highly efficient CO <sub>2</sub> capture. <i>Journal of Materials Chemistry A</i> , 2015, 3, 7361-7367.	5.2	86

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20	Water vapour adsorption by a coffee-based microporous carbon: effect on CO <sub>2</sub> capture. <i>Journal of Chemical Technology and Biotechnology</i> , 2015, 90, 1592-1600.	1.6	21
21	Dual function materials for CO <sub>2</sub> capture and conversion using renewable H <sub>2</sub> . <i>Applied Catalysis B: Environmental</i> , 2015, 168-169, 370-376.	10.8	227
22	Improving the stability of synthetic CaO-based CO <sub>2</sub> sorbents by structural promoters. <i>Applied Energy</i> , 2015, 156, 331-343.	5.1	116
23	Mesoporous titanium dioxide coating on gold modified silica nanotubes: a tube-in-tube titanium nanostructure for visible-light photocatalysts. <i>RSC Advances</i> , 2015, 5, 69962-69969.	1.7	8
24	High capacity CO <sub>2</sub> sorbents based on zinc-functionalized ionic liquid confined in morphologically diverse porous matrices. <i>RSC Advances</i> , 2015, 5, 65074-65083.	1.7	15
25	Synergistic enhancement of CO <sub>2</sub> uptake in highly ordered mesoporous silica-supported zinc-functionalized ionic liquid sorbents. <i>Chemical Engineering Journal</i> , 2015, 281, 119-125.	6.6	29
26	A MOF platform for incorporation of complementary organic motifs for CO <sub>2</sub> binding. <i>Chemical Communications</i> , 2015, 51, 12478-12481.	2.2	45
27	The impact of water vapor on CO <sub>2</sub> separation performance of mixed matrix membranes. <i>Journal of Membrane Science</i> , 2015, 492, 471-477.	4.1	29
28	Analysis of the CO <sub>2</sub> –H <sub>2</sub> O Chemisorption in Lithium Silicates at Low Temperatures (30–80 °C). <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 6884-6892.	1.8	15
29	Highly optimized CO <sub>2</sub> capture by inexpensive nanoporous covalent organic polymers and their amine composites. <i>Faraday Discussions</i> , 2015, 183, 401-412.	1.6	39
30	Correlating Carbon Dioxide Capture and Chemical Changes in Pyrolyzed Polyethylenimine-C60. <i>Energy &amp; Fuels</i> , 2015, 29, 4479-4487.	2.5	19
31	Synthesis, Pelleting, and Performance Evaluation of a Novel K-Promoted $\gamma$ -Alumina/MgAl-Layered Double Oxide Composite Adsorbent for Warm Gas H <sub>2</sub> /CO <sub>2</sub> Separation. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 7154-7163.	1.8	12
32	Pathways of the Chemical Reaction of Carbon Dioxide with Ionic Liquids and Amines in Ionic Liquid Solution. <i>Energy &amp; Fuels</i> , 2015, 29, 5990-6007.	2.5	20
33	Preparation of cage-like nano-CaCO <sub>3</sub> hollow spheres for enhanced CO <sub>2</sub> sorption. <i>RSC Advances</i> , 2015, 5, 65052-65057.	1.7	20
34	New Kinetic Model That Describes the Reversible Adsorption and Desorption Behavior of CO <sub>2</sub> in a Solid Amine Sorbent. <i>Energy &amp; Fuels</i> , 2015, 29, 4492-4502.	2.5	12
35	A (3,8)-connected metal-organic framework with a unique binuclear [Ni <sub>2</sub> ( $\frac{1}{4}$ -OH)(COO) <sub>2</sub> ] node for high H <sub>2</sub> and CO <sub>2</sub> adsorption capacities. <i>Journal of Materials Chemistry A</i> , 2015, 3, 15399-15402.	5.2	30
36	Thermogravimetric analysis of kinetic characteristics of K <sub>2</sub> CO <sub>3</sub> -impregnated mesoporous silicas in low-concentration CO <sub>2</sub> . <i>Journal of Thermal Analysis and Calorimetry</i> , 2015, 121, 1393-1402.	2.0	7
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38	CO <sub>2</sub> Absorption Studies on Mixed Alkali Orthosilicates Containing Rare-Earth Second-Phase Additives. <i>Journal of Physical Chemistry C</i> , 2015, 119, 5319-5326.	1.5	42
39	Covalent grafting of polyethyleneimine on hydroxylated three-dimensional graphene for superior CO <sub>2</sub> capture. <i>Journal of Materials Chemistry A</i> , 2015, 3, 12252-12258.	5.2	45
40	Magnesium-based systems for carbon dioxide capture, storage and recycling: from leaves to synthetic nanostructured materials. <i>RSC Advances</i> , 2015, 5, 36192-36239.	1.7	61
41	Control over crystallization of CaCO <sub>3</sub> micro-particles by a novel CO <sub>2</sub> SM. <i>CrystEngComm</i> , 2015, 17, 7896-7904.	1.3	17
42	LDH/MgCO <sub>3</sub> hybrid multilayer on an aluminium substrate as a novel high-temperature CO <sub>2</sub> adsorbent. <i>RSC Advances</i> , 2015, 5, 82777-82780.	1.7	10
43	Cation-assisted interactions between N-heterocycles and CO <sub>2</sub> . <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 15725-15731.	1.3	8
44	Direct Carbonization of Cyanopyridinium Crystalline Dicationic Salts into Nitrogen-Enriched Ultra-Microporous Carbons toward Excellent CO <sub>2</sub> Adsorption. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 18508-18518.	4.0	30
45	Development Trends in Porous Adsorbents for Carbon Capture. <i>Environmental Science &amp; Technology</i> , 2015, 49, 12641-12661.	4.6	94
46	A site trial demonstration of CO <sub>2</sub> capture from real flue gas by novel carbon fibre composite monolith adsorbents. <i>International Journal of Greenhouse Gas Control</i> , 2015, 42, 415-423.	2.3	10
47	An Icy-topology amino acid MOF as eco-friendly catalyst for cyclic carbonate synthesis from CO <sub>2</sub> : Structure-DFT corroborated study. <i>Journal of Materials Chemistry A</i> , 2015, 3, 22636-22647.	5.2	106
48	Large-scale synthesis of ZIF-67 and highly efficient carbon capture using a ZIF-67/glycol-2-methylimidazole slurry. <i>Chemical Engineering Science</i> , 2015, 137, 504-514.	1.9	62
49	Regeneration mechanisms of high-lithium content zirconates as CO <sub>2</sub> capture sorbents: experimental measurements and theoretical investigations. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 22543-22547.	1.3	19
50	Carbohydrate based hyper-crosslinked organic polymers with "OH functional groups for CO <sub>2</sub> separation. <i>Journal of Materials Chemistry A</i> , 2015, 3, 20913-20918.	5.2	39
51	Effect of SO <sub>2</sub> on CO <sub>2</sub> Absorption in Flue Gas by Ionic Liquid 1-Ethyl-3-methylimidazolium Acetate. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 8569-8578.	1.8	59
52	Recent Advances in CO <sub>2</sub> Capture by Functionalized Ionic Liquids. <i>ACS Symposium Series</i> , 2015, , 341-369.	0.5	9
53	A triazine-resorcinol based porous polymer with polar pores and exceptional surface hydrophobicity showing CO <sub>2</sub> uptake under humid conditions. <i>Journal of Materials Chemistry A</i> , 2015, 3, 21116-21122.	5.2	39
54	Recent advances and progress in the development of graphene-based adsorbents for CO <sub>2</sub> capture. <i>Journal of Materials Chemistry A</i> , 2015, 3, 21968-21989.	5.2	142
55	Rapidly reversible adsorption of methane with a high storage capacity on the zeolite templated carbons with glucose as carbon precursors. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2015, 485, 11-17.	2.3	26

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56	An investigation of the textural properties of mesostructured silica-based adsorbents for predicting CO <sub>2</sub> adsorption capacity. RSC Advances, 2015, 5, 103147-103154.	1.7	18
57	Colloidal Nanoclusters of MgO Coated with Alkali Metal Nitrates/Nitrites for Rapid, High Capacity CO <sub>2</sub> Capture at Moderate Temperature. Chemistry of Materials, 2015, 27, 8153-8161.	3.2	97
58	Enhancement in CO <sub>2</sub> Adsorption on Hydrotalcite-based Material by Novel Carbon Support Combined with K <sub>2</sub> CO <sub>3</sub> Impregnation. Industrial & Engineering Chemistry Research, 2015, 54, 10876-10884.	1.8	33
59	Potassium-based sorbents using mesostructured $\gamma$ -alumina supports for low temperature CO <sub>2</sub> capture. Ceramics International, 2015, 41, 3036-3044.	2.3	15
60	The effects of high-pressure on the chemisorption process of CO <sub>2</sub> on lithium oxosilicate (Li <sub>8</sub> SiO <sub>6</sub> ). Chemical Engineering Journal, 2015, 264, 10-15.	6.6	25
61	Ongoing Activity on CO <sub>2</sub> Capture in the Power Sector: Review of the Demonstration Projects Worldwide. , 2016, , .		1
62	CO <sub>2</sub> Capture by Carbon Aerogel/Potassium Carbonate Nanocomposites. International Journal of Chemical Engineering, 2016, 2016, 1-8.	1.4	8
63	Review of Recent Developments in CO <sub>2</sub> Capture Using Solid Materials: Metal Organic Frameworks (MOFs). , 0, , .		17
64	Pentaethylenehexamine-Loaded Hierarchically Porous Silica for CO <sub>2</sub> Adsorption. Materials, 2016, 9, 835.	1.3	23
66	CO <sub>2</sub> Adsorption by para-Nitroaniline Sulfuric Acid-Derived Porous Carbon Foam. Journal of Carbon Research, 2016, 2, 25.	1.4	4
67	Preparation of Novel Li <sub>4</sub> SiO <sub>4</sub> Sorbents with Superior Performance at Low CO <sub>2</sub> Concentration. ChemSusChem, 2016, 9, 1607-1613.	3.6	55
68	A novel aerogel sodium-based sorbent for low temperature CO <sub>2</sub> capture. , 2016, 6, 561-573.		13
69	Thermodynamic analysis of sorption-enhanced water-gas shift reaction using syngases. International Journal of Energy Research, 2016, 40, 1688-1703.	2.2	7
70	Tunable Polyaniline-Based Porous Carbon with Ultrahigh Surface Area for CO <sub>2</sub> Capture at Elevated Pressure. Advanced Energy Materials, 2016, 6, 1502491.	10.2	129
71	Poly(ethylenimine)-Functionalized Monolithic Alumina Honeycomb Adsorbents for CO <sub>2</sub> Capture from Air. ChemSusChem, 2016, 9, 1859-1868.	3.6	75
72	Synthesis, characterization, and CO <sub>2</sub> adsorption of three metal-organic frameworks (MOFs): MIL-53, MIL-96, and amino-MIL-53. Polyhedron, 2016, 120, 103-111.	1.0	92
73	High performance CO <sub>2</sub> filtration and sequestration by using bromomethyl benzene linked microporous networks. RSC Advances, 2016, 6, 66324-66335.	1.7	6
74	Investigating CO <sub>2</sub> removal by Ca- and Mg-based sorbents with application to indoor air treatment. Building and Environment, 2016, 110, 161-172.	3.0	18

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75	Crystal-Size Effects on Carbon Dioxide Capture of a Covalently Alkylamine-Tethered Metal-Organic Framework Constructed by a One-Step Self-Assembly. <i>Scientific Reports</i> , 2016, 6, 19337.	1.6	21
76	Porous Covalent Triazine Polymer as a Potential Nanocargo for Cancer Therapy and Imaging. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 8947-8955.	4.0	87
77	Chemical transformation of CO <sub>2</sub> during its capture by waste biomass derived biochars. <i>Environmental Pollution</i> , 2016, 213, 533-540.	3.7	140
78	Facile synthesis of a thermally stable imine and benzimidazole functionalized nanoporous polymer (IBFNP) for CO <sub>2</sub> capture application. , 2016, 6, 150-157.		11
79	CO <sub>2</sub> Sorption Durability of Zr-Modified Nano-CaO Sorbents with Cage-like Hollow Sphere Structure. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 2047-2055.	3.2	49
80	Nitrogen-doped porous carbon nanosheets derived from poly(ionic liquid)s: hierarchical pore structures for efficient CO <sub>2</sub> capture and dye removal. <i>Journal of Materials Chemistry A</i> , 2016, 4, 7313-7321.	5.2	157
81	Effect of pH-controlled synthesis on the physical properties and intermediate-temperature CO <sub>2</sub> sorption behaviors of K <sup>+</sup> Mg double salt-based sorbents. <i>Chemical Engineering Journal</i> , 2016, 294, 439-446.	6.6	32
82	Entrapment of carbon dioxide with chitosan-based core-shell particles containing changeable cores. <i>International Journal of Biological Macromolecules</i> , 2016, 89, 545-549.	3.6	4
83	A comparative study of CO <sub>2</sub> diffusion from adsorption kinetic measurements on microporous materials at low pressures and temperatures. <i>Chemical Engineering Journal</i> , 2016, 302, 278-286.	6.6	30
84	High-Pressure Methane, Carbon Dioxide, and Nitrogen Adsorption on Amine-Impregnated Porous Montmorillonite Nanoclays. <i>Journal of Chemical &amp; Engineering Data</i> , 2016, 61, 2749-2760.	1.0	38
85	Efficient valorization of biomass to biofuels with bifunctional solid catalytic materials. <i>Progress in Energy and Combustion Science</i> , 2016, 55, 98-194.	15.8	234
86	Layered Double Hydroxides/Multiwalled Carbon Nanotubes-Based Composite for High-Temperature CO <sub>2</sub> Adsorption. <i>Energy &amp; Fuels</i> , 2016, 30, 4244-4250.	2.5	30
87	Impact of solvents and surfactants on the self-assembly of nanostructured amine functionalized silica spheres for CO <sub>2</sub> capture. <i>Journal of Energy Chemistry</i> , 2016, 25, 327-335.	7.1	20
88	Theoretical studies on CO <sub>2</sub> capture behavior of quaternary ammonium-based polymeric ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 13084-13091.	1.3	31
89	Superior CO <sub>2</sub> , CH <sub>4</sub> , and H <sub>2</sub> uptakes over ultrahigh-surface-area carbon spheres prepared from sustainable biomass-derived char by CO <sub>2</sub> activation. <i>Carbon</i> , 2016, 105, 454-462.	5.4	111
90	Comparison of the efficiency of carbon dioxide capture by sorption-enhanced water-gas shift and palladium-based membranes for power and hydrogen production. <i>International Journal of Greenhouse Gas Control</i> , 2016, 50, 121-134.	2.3	27
91	Recent advances in aerogels for environmental remediation applications: A review. <i>Chemical Engineering Journal</i> , 2016, 300, 98-118.	6.6	494
92	CO <sub>2</sub> Adsorption in M-IRMOF-10 (M = Mg, Ca, Fe, Cu, Zn, Ge, Sr, Cd, Sn, Ba). <i>Journal of Physical Chemistry C</i> , 2016, 120, 12819-12830.	1.5	21

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93	Controllable Synthesis of Various CaCO <sub>3</sub> Morphologies Based on a CCUS Idea. ACS Sustainable Chemistry and Engineering, 2016, 4, 3032-3044.	3.2	37
94	Investigation of CO <sub>2</sub> capture using solid sorbents in a fluidized bed reactor: Cold flow hydrodynamics. Powder Technology, 2016, 301, 1130-1143.	2.1	19
95	Morphologically and compositionally tuned lithium silicate nanorods as high-performance carbon dioxide sorbents. Journal of Materials Chemistry A, 2016, 4, 16928-16935.	5.2	42
96	Amides Do Not Always Work: Observation of Guest Binding in an Amide-Functionalized Porous Metal-Organic Framework. Journal of the American Chemical Society, 2016, 138, 14828-14831.	6.6	44
97	Synthesis of Efficient CaO Sorbents for CO <sub>2</sub> Capture Using a Simple Organometallic Calcium-Based Carbon Template Route. Energy & Fuels, 2016, 30, 7543-7550.	2.5	33
98	Cyclic Performance of Waste-Derived SiO <sub>2</sub> Stabilized, CaO-Based Sorbents for Fast CO <sub>2</sub> Capture. ACS Sustainable Chemistry and Engineering, 2016, 4, 7004-7012.	3.2	35
99	Evaluation of the Multi-amine Functionalized Ionic Liquid for Efficient Postcombustion CO <sub>2</sub> Capture. Energy & Fuels, 2016, 30, 7489-7495.	2.5	44
100	Production of spherical mesoporous molecularly imprinted polymer particles containing tunable amine decorated nanocavities with CO <sub>2</sub> molecule recognition properties. Chemical Engineering Journal, 2016, 306, 214-225.	6.6	32
101	Steam gasification behavior during coal combustion and CaO regeneration in O <sub>2</sub> /CO <sub>2</sub> /steam atmosphere. Fuel, 2016, 184, 409-417.	3.4	19
102	Effect of Coal Combustion on the Reactivity of a CaO-Based Sorbent for CO <sub>2</sub> Capture. Energy & Fuels, 2016, 30, 7571-7578.	2.5	4
103	CO <sub>2</sub> Capture on Mesocellular Silica Foam Supported Amino Acid-Functionalized Ionic Liquids. Water, Air, and Soil Pollution, 2016, 227, 1.	1.1	10
104	Solid Amine Adsorbent Prepared by Molecular Imprinting and Its Carbon Dioxide Adsorption Properties. Chemistry - an Asian Journal, 2016, 11, 3055-3061.	1.7	12
105	Modelling photophysical properties of metal-organic frameworks: a density functional theory based approach. Physical Chemistry Chemical Physics, 2016, 18, 25176-25182.	1.3	27
106	Alkali-Doped Lithium Orthosilicate Sorbents for Carbon Dioxide Capture. ChemSusChem, 2016, 9, 2480-2487.	3.6	71
107	Effect of H <sub>2</sub> O Vapor on the Adsorption and Desorption Behavior of CO <sub>2</sub> in a Solid Amine Sorbent. Energy & Fuels, 2016, 30, 10653-10660.	2.5	10
108	Enhanced Adsorption Efficiency through Materials Design for Direct Air Capture over Supported Polyethylenimine. ChemSusChem, 2016, 9, 2796-2803.	3.6	82
109	High-temperature CO <sub>2</sub> sorption by Ca-doped Li <sub>4</sub> SiO <sub>4</sub> sorbents. International Journal of Hydrogen Energy, 2016, 41, 13077-13085.	3.8	69
110	Unexpected highly reversible topotactic CO <sub>2</sub> sorption/desorption capacity for potassium dititanate. Journal of Materials Chemistry A, 2016, 4, 12889-12896.	5.2	27

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112	Emerging Multifunctional Metal-Organic Framework Materials. <i>Advanced Materials</i> , 2016, 28, 8819-8860.	11.1	1,227
113	Waste Marble Powders as Promising Inexpensive Natural CaO-Based Sorbents for Post-Combustion CO <sub>2</sub> Capture. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 7860-7872.	1.8	37
114	Preface to the ICCDU-2015 Special Issue. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 7839-7841.	1.8	4
115	Insights into choline chloride-phenylacetic acid deep eutectic solvent for CO <sub>2</sub> absorption. <i>RSC Advances</i> , 2016, 6, 109201-109210.	1.7	31
116	Holey graphene frameworks for highly selective post-combustion carbon capture. <i>Scientific Reports</i> , 2016, 6, 21537.	1.6	54
117	Structural and microstructural analysis of different CaO-NiO composites and their application as CO <sub>2</sub> or CO-O <sub>2</sub> captors. <i>Reaction Kinetics, Mechanisms and Catalysis</i> , 2016, 119, 445-455.	0.8	8
118	Layered Double Hydroxide Nanotransporter for Molecule Delivery to Intact Plant Cells. <i>Scientific Reports</i> , 2016, 6, 26738.	1.6	77
119	Synthesis of amine-modified solid Fe-Zr adsorbents for CO <sub>2</sub> adsorption. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 2340-2348.	1.6	12
120	Adsorption and Methanation of Flue Gas CO <sub>2</sub> with Dual Functional Catalytic Materials: A Parametric Study. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 6768-6776.	1.8	102
121	Moisture-Stable Zn(II) Metal-Organic Framework as a Multifunctional Platform for Highly Efficient CO <sub>2</sub> Capture and Nitro Pollutant Vapor Detection. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 18043-18050.	4.0	84
122	Effect of dolomite decomposition under CO <sub>2</sub> on its multicycle CO <sub>2</sub> capture behaviour under calcium looping conditions. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16325-16336.	1.3	22
123	Alterations of S-doped porous carbon-rGO composites surface features upon CO <sub>2</sub> adsorption at ambient conditions. <i>Carbon</i> , 2016, 107, 501-509.	5.4	33
124	Polyaniline films photoelectrochemically reduce CO <sub>2</sub> to alcohols. <i>Chemical Communications</i> , 2016, 52, 8858-8861.	2.2	53
125	Carbon-Based Adsorbents for Postcombustion CO <sub>2</sub> Capture: A Critical Review. <i>Environmental Science &amp; Technology</i> , 2016, 50, 7276-7289.	4.6	430
126	High-Temperature Capture of CO <sub>2</sub> by Strontium Oxide Sorbents. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 6696-6707.	1.8	21
127	Preparation of MgO-coated nano CaO using adsorption phase reaction technique for CO <sub>2</sub> sorption. <i>RSC Advances</i> , 2016, 6, 41239-41246.	1.7	15
128	CO <sub>2</sub> chemisorption in Li <sub>2</sub> CuO <sub>2</sub> microstructurally modified by ball milling: study performed with different physicochemical CO <sub>2</sub> capture conditions. <i>RSC Advances</i> , 2016, 6, 57880-57888.	1.7	26



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129	A novel CCU approach of CO <sub>2</sub> by the system 1,2-ethylenediamine+1,2-ethylene glycol. Korean Journal of Chemical Engineering, 2016, 33, 1883-1888.	1.2	13
130	Design of Stable Cage-like CaO/CaZrO <sub>3</sub> Hollow Spheres for CO <sub>2</sub> Capture. Energy & Fuels, 0, , .	2.5	10
131	Operando Raman spectroscopic studies of lithium zirconates during CO <sub>2</sub> capture at high temperature. RSC Advances, 2016, 6, 8222-8231.	1.7	37
132	Plasmon-free SERS detection of environmental CO <sub>2</sub> on TiO <sub>2</sub> surfaces. Nanoscale, 2016, 8, 3226-3231.	2.8	71
133	Enhanced CO <sub>2</sub> Chemisorption Properties of Li <sub>4</sub> SO <sub>4</sub> , Using a Water Hydrationâ€“Calcination Technique. Industrial & Engineering Chemistry Research, 2016, 55, 1142-1146.	1.8	27
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274	Characteristics of Spray-Dried K <sub>2</sub> CO <sub>3</sub> -MgO Solid Sorbent for CO <sub>2</sub> Capture from Power Plant Flue Gas. <i>Journal of Chemical Engineering of Japan</i> , 2017, 50, 213-220.	0.3	4
275	Recent Advances in Heterogeneous Catalytic Hydrogenation of CO <sub>2</sub> to Methane. , 0, , .		6
276	Facile synthesis of diamine-functionalized hollow mesoporous silica sphere with self-templating method. <i>Journal of Porous Materials</i> , 2018, 25, 1715-1721.	1.3	8
277	Oxidation-stable amine-containing adsorbents for carbon dioxide capture. <i>Nature Communications</i> , 2018, 9, 726.	5.8	137
278	Adsorption of pure and predicted binary (CO <sub>2</sub> :CH <sub>4</sub> ) mixtures on 13X-Zeolite: Equilibrium and kinetic properties at offshore conditions. <i>Microporous and Mesoporous Materials</i> , 2018, 267, 221-234.	2.2	37
279	Germanium-incorporated lithium silicate composites as highly efficient low-temperature sorbents for CO <sub>2</sub> capture. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7913-7921.	5.2	30
280	Recent Progress in the Theoretical Investigation of Electrocatalytic Reduction of CO <sub>2</sub> . <i>Advanced Theory and Simulations</i> , 2018, 1, 1800004.	1.3	50
281	Naphthyl Substitution-Induced Fine Tuning of Porosity and Gas Uptake Capacity in Microporous Hyper-Cross-Linked Amine Polymers. <i>Macromolecules</i> , 2018, 51, 2923-2931.	2.2	54
282	Silanol-rich platelet silica modified with branched amine for efficient CO <sub>2</sub> capture. <i>Chemical Engineering Science</i> , 2018, 181, 315-325.	1.9	35
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284	Novel MgO/hollow carbon sphere composites for CO <sub>2</sub> adsorption. <i>New Journal of Chemistry</i> , 2018, 42, 5674-5679.	1.4	11
285	Chemical looping combustion using geopolymers-based oxygen carriers. <i>Chemical Engineering Journal</i> , 2018, 341, 187-197.	6.6	11
286	Calcium cobaltate: a phase-change catalyst for stable hydrogen production from bio-glycerol. <i>Energy and Environmental Science</i> , 2018, 11, 660-668.	15.6	38
287	High Density and Super Ultra-Microporous Activated Carbon Macrospheres with High Volumetric Capacity for CO <sub>2</sub> Capture. <i>Advanced Sustainable Systems</i> , 2018, 2, 1700115.	2.7	30
288	Controlled synthesis of MgO with diverse basic sites and its CO <sub>2</sub> capture mechanism under different adsorption conditions. <i>Chemical Engineering Journal</i> , 2018, 336, 710-720.	6.6	93
289	Enhanced CO <sub>2</sub> Adsorption on Nitrogen-Doped Porous Carbons Derived from Commercial Phenolic Resin. <i>Energy &amp; Fuels</i> , 2018, 32, 2081-2088.	2.5	40
290	Textural properties determined CO <sub>2</sub> capture of tetraethylenepentamine loaded SiO <sub>2</sub> nanowires from $\pm$ -sepiolite. <i>Chemical Engineering Journal</i> , 2018, 337, 342-350.	6.6	50

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292	Techno-economic feasibility assessment of CO <sub>2</sub> capture from coal-fired power plants using molecularly imprinted polymer. <i>Fuel</i> , 2018, 214, 512-520.	3.4	26
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294	Carbon dioxide adsorption properties and adsorption/desorption kinetics of amine-functionalized KIT-6. <i>Applied Energy</i> , 2018, 211, 1080-1088.	5.1	93
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298	Highly efficient CO <sub>2</sub> adsorption by nitrogen-doped porous carbons synthesized with low-temperature sodium amide activation. <i>Carbon</i> , 2018, 130, 31-40.	5.4	133
299	Nitrogen-rich hyper-crosslinked polymers for low-pressure CO <sub>2</sub> capture. <i>Chemical Engineering Journal</i> , 2018, 334, 2004-2013.	6.6	53
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302	CO <sub>2</sub> Capacity and Heat of Sorption on a Polyethylenimine-Impregnated Silica under Equilibrium and Transient Sorption Conditions. <i>Journal of Physical Chemistry C</i> , 2018, 122, 11442-11449.	1.5	6
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304	Catalytic reduction of low-concentration CO <sub>2</sub> with water by Pt/Co@NC. <i>Journal of Materials Science and Technology</i> , 2018, 34, 2337-2341.	5.6	6
305	Calcium precursor from stirring processes at room temperature for controllable preparation of nano-structure CaO sorbents for high-temperature CO <sub>2</sub> adsorption. <i>Journal of CO<sub>2</sub> Utilization</i> , 2018, 25, 315-322.	3.3	19
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310	Knitting polycyclic aromatic hydrocarbon-based microporous organic polymers for efficient CO <sub>2</sub> capture. <i>RSC Advances</i> , 2018, 8, 10347-10354.	1.7	24
311	Adsorption performance of 5A molecular sieve zeolite in water vaporâ€“binary gas environment: Experimental and modeling evaluation. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 64, 173-187.	2.9	37
312	Adsorption of CO <sub>2</sub> on MgAl-CO <sub>3</sub> LDHs-Derived Sorbents with 3D Nanoflower-like Structure. <i>Energy &amp; Fuels</i> , 2018, 32, 5313-5320.	2.5	27
313	Sequestration of CO <sub>2</sub> using Cu nanoparticles supported on spherical and rod-shape mesoporous silica. <i>Journal of Saudi Chemical Society</i> , 2018, 22, 343-351.	2.4	28
314	Hierarchical porous carbon activated by CaCO <sub>3</sub> from pigskin collagen for CO <sub>2</sub> and H <sub>2</sub> adsorption. <i>Microporous and Mesoporous Materials</i> , 2018, 260, 172-179.	2.2	36
315	Alternative pathways for efficient CO <sub>2</sub> capture by hybrid processesâ€“A review. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 82, 215-231.	8.2	236
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348	Molecular Modeling of Carbon Dioxide Adsorption in Metal-Organic Frameworks. , 2018, , 99-149.		6
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