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Enhancement of CO<sub>2</sub>/N<sub>2</sub> selectivity in a metal-organic framework by cavity modification

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#	Paper	IF	Citations
360	Porous MetalOrganic Frameworks with Chelating Multiamine Sites for Selective Adsorption and Chemical Conversion of Carbon Dioxide.		
359	MetalOrganic Frameworks of Cu(II) Constructed from Functionalized Ligands for High Capacity H <sub>2</sub> and CO <sub>2</sub> Gas Adsorption and Catalytic Studies.		
358	Porous MOF with Highly Efficient Selectivity and Chemical Conversion for CO <sub>2</sub> .		
357	A Partially Fluorinated, Water-Stable Cu(II)MOF Derived via Transmetalation: Significant Gas Adsorption with High CO <sub>2</sub> Selectivity and Catalysis of Biginelli Reactions.		
356	Multifunctional MetalOrganic Frameworks with Fluorescent Sensing and Selective Adsorption Properties.		
355	Strong CO <sub>2</sub> binding in a water-stable, triazolate-bridged metal-organic framework functionalized with ethylenediamine. <b>2009</b> , 131, 8784-6		963
354	Virtual high throughput screening confirmed experimentally: porous coordination polymer hydration. <b>2009</b> , 131, 15834-42		704
353	Crystal to Crystal Guest Exchange in a Mixed Ligand MetalOrganic Framework. <i>Crystal Growth and Design</i> , <b>2009</b> , 9, 4588-4591	3.5	39
352	An amine-functionalized metal organic framework for preferential CO(2) adsorption at low pressures. <b>2009</b> , 5230-2		363
351	Synthesis and gas sorption properties of a metal-azolium framework (MAF) material. <i>Inorganic Chemistry</i> , <b>2009</b> , 48, 9971-3	5.1	76
350	Studies of capillary phase transitions of methane in metal-organic frameworks by gauge cell Monte Carlo simulation. <b>2010</b> , 26, 5160-6		7
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- 343 A Microporous Metal-Organic Framework with Immobilized OH Functional Groups within the Pore Surfaces for Selective Gas Sorption. **2010**, 2010, 3745-3749 92
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213	Molecular simulation studies of CO <sub>2</sub> adsorption by carbon model compounds for carbon capture and sequestration applications. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 95-101	10.3	157
212	Microporous metal organic framework [M <sub>2</sub> (h <sub>2</sub> fipbb) <sub>2</sub> (ted)] (M=Zn, Co; H <sub>2</sub> h <sub>2</sub> fipbb=4,4-(hexafluoroisopropylidene)-bis(benzoic acid); ted=triethylenediamine): Synthesis, structure analysis, pore characterization, small gas adsorption and CO <sub>2</sub> /N <sub>2</sub> separation properties. <b>2013</b> , 200, 1-11		21
211	Synthesis, Characterization, and Adsorption Studies of Nickel(II), Zinc(II), and Magnesium(II) Coordination Frameworks of BTB. <i>Crystal Growth and Design</i> , <b>2013</b> , 13, 1075-1081	3.5	39
210	Computational screening of functional groups for ammonia capture in metal-organic frameworks. <b>2013</b> , 29, 1446-56		41
209	Mesoporous SAPO-34 with amine-grafting for CO <sub>2</sub> capture. <b>2013</b> , 108, 515-520		49
208	Self-assembly of tetrabromoterephthalic acid with different metal system: Diversity in dimensionalities, structures and gas adsorption. <b>2013</b> , 52, 553-559		4
207	Methane and carbon dioxide adsorption in clay-like slit pores by Monte Carlo simulations. <b>2013</b> , 360, 456-465		125
206	Metal-organic frameworks and self-assembled supramolecular coordination complexes: comparing and contrasting the design, synthesis, and functionality of metal-organic materials. <b>2013</b> , 113, 734-77		2304
205	Systematic modulation and enhancement of CO <sub>2</sub> : N <sub>2</sub> selectivity and water stability in an isorecticular series of bio-MOF-11 analogues. <b>2013</b> , 4, 1746		153
204	A route to drastic increase of CO <sub>2</sub> uptake in Zr metal organic framework UiO-66. <b>2013</b> , 49, 3634-6		162
203	Adsorbents for the post-combustion capture of CO <sub>2</sub> using rapid temperature swing or vacuum swing adsorption. <b>2013</b> , 104, 418-433		287
202	Two-dimensional charge-separated metal-organic framework for hysteretic and modulated sorption. <i>Inorganic Chemistry</i> , <b>2013</b> , 52, 4198-204	5.1	34
201	Adsorption of CO <sub>2</sub> and N <sub>2</sub> on ordered mesoporous carbon: approach for greenhouse gases capture and biogas upgrading. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 5474-80	10.3	234
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199	Post-synthetic structural processing in a metal-organic framework material as a mechanism for exceptional CO <sub>2</sub> /N <sub>2</sub> selectivity. <b>2013</b> , 135, 10441-8		172
198	Superior performance of copper based MOF and aminated graphite oxide composites as CO <sub>2</sub> adsorbents at room temperature. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 4951-9	9.5	82
197	Isostructural metal-organic frameworks assembled from functionalized diisophthalate ligands through a ligand-truncation strategy. <b>2013</b> , 19, 5637-43		105
196	A water stable metal-organic framework with optimal features for CO <sub>2</sub> capture. <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 10316-20	16.4	265
195	Development of computational methodologies for metal-organic frameworks and their application in gas separations. <b>2013</b> , 113, 8261-323		394
194	Adsorptive separation studies of ethane-methane and methane-nitrogen systems using mesoporous carbon. <b>2013</b> , 394, 445-50		35
193	Identifying Selective Host-Guest Interactions Based on Hydrogen Bond Donor-Acceptor Pattern in Functionalized Al-MIL-53 Metal-Organic Frameworks. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 19991-20001	3.8	34
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182	Encapsulation of gases in powder solid matrices and their applications: A review. <b>2014</b> , 259, 87-108		54

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180	1D and 2D Thiazole-Based Copper(II) Coordination Polymers: Synthesis and Applications in Carbon Dioxide Capture. <b>2014</b> , 79, 406-412		14
179	A Microporous Metal-Organic Framework Constructed from a New Tetracarboxylic Acid for Selective Gas Separation. <i>Crystal Growth and Design</i> , <b>2014</b> , 14, 2522-2526	3.5	49
178	Porous Materials for Carbon Dioxide Capture. <i>Green Chemistry and Sustainable Technology</i> , <b>2014</b> ,	1.1	16
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172	A highly stable multifunctional three-dimensional microporous framework: excellent selective sorption and visible photoluminescence. <b>2014</b> , 43, 6811-8		13
171	When long bis(pyrazolates) meet late transition metals: structure, stability and adsorption of metal-organic frameworks featuring large parallel channels. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 12208	13	45
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168	Ordered vacancies and their chemistry in metal-organic frameworks. <b>2014</b> , 136, 14465-71		133
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164	A copper-based metal-organic framework constructed from a new tetracarboxylic acid for selective gas separation. <b>2014</b> , 49, 34-36		10

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162	Adsorption of Phenol and p-Nitrophenol from Aqueous Solutions on Metal-Organic Frameworks: Effect of Hydrogen Bonding. <b>2014</b> , 59, 1476-1482		170
161	Synthesis and Characterization of Two Lanthanide (Gd <sup>3+</sup> and Dy <sup>3+</sup> )-Based Three-Dimensional Metal Organic Frameworks with Squashed Metallomacrocyclic Type Building Blocks and Their Magnetic, Sorption, and Fluorescence Properties Study. <i>Crystal Growth and Design</i> , <b>2014</b> , 14, 1287-1295	3.5	85
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153	A microporous manganese-based metal-organic framework for gas sorption and separation. <b>2014</b> , 1074, 19-21		10
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151	Confinement of Ionic Liquids in Nanocages: Tailoring the Molecular Sieving Properties of ZIF-8 for Membrane-Based CO <sub>2</sub> Capture. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 15483-7	16.4	213
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149	Confinement of Ionic Liquids in Nanocages: Tailoring the Molecular Sieving Properties of ZIF-8 for Membrane-Based CO <sub>2</sub> Capture. <i>Angewandte Chemie</i> , <b>2015</b> , 127, 15703-15707	3.6	47
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134	Polymeric ionic liquids for CO <sub>2</sub> capture and separation: potential, progress and challenges. <b>2015</b> , 6, 6435-6451		139
133	Synthesis, structure and properties of three 1D d <sup>10</sup> metal-organic coordination polymers with 5-amino-2,4,6-triiodoisophthalic acid. <b>2015</b> , 435, 7-15		4
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114	The Utilization of Amide Groups To Expand and Functionalize Metal-Organic Frameworks Simultaneously. <b>2016</b> , 22, 6277-85		70
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111	Carboxylate-Hydrazone Mixed-Linker Metal-Organic Frameworks: Synthesis, Structure, and Selective Gas Adsorption. <b>2016</b> , 2016, 4450-4456		22
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100	A cost-effective synthesis of heteroatom-doped porous carbons as efficient CO <sub>2</sub> sorbents. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 14693-14702	13	69
99	Postextraction Separation, On-Board Storage, and Catalytic Conversion of Methane in Natural Gas: A Review. <b>2016</b> , 116, 11436-11499		104
98	A comparative study of CO <sub>2</sub> and CH <sub>4</sub> adsorption using activated carbon prepared from pine cone by phosphoric acid activation. <b>2016</b> , 33, 2943-2952		30
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85	A Mixed-Cluster Approach for Building a Highly Porous Cobalt(II) Isonicotinic Acid Framework: Gas Sorption Properties and Computational Analyses. <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 2379-2382	5.1	22
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78	Alternative materials in technologies for Biogas upgrading via CO <sub>2</sub> capture. <b>2017</b> , 79, 1414-1441		90
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