Rui-Biao Lin

List of Publications by Citations

114 papers	8,774 citations	48 h-index	93 g-index
122 ext. papers	11,366 ext. citations	12 avg, IF	6.66 L-index

#	Paper	IF	Citations
114	Ethane/ethylene separation in a metal-organic framework with iron-peroxo sites. *Science*, **2018**, 362, 443-446	33.3	478
113	Exploration of porous metal–organic frameworks for gas separation and purification. *Coordination Chemistry Reviews*, **2019**, 378, 87-103	23.2	368
112	Multifunctional porous hydrogen-bonded organic framework materials. *Chemical Society Reviews*, **2019**, 48, 1362-1389	58.5	358
111	Single-crystal X-ray diffraction studies on structural transformations of porous coordination polymers. *Chemical Society Reviews*, **2014**, 43, 5789-814	58.5	353
110	UTSA-74: A MOF-74 Isomer with Two Accessible Binding Sites per Metal Center for Highly Selective Gas Separation. *Journal of the American Chemical Society*, **2016**, 138, 5678-84	16.4	351
109	Molecular sieving of ethylene from ethane using a rigid metal-organic framework. *Nature Materials*, **2018**, 17, 1128-1133	27	326
108	Optimized Separation of Acetylene from Carbon Dioxide and Ethylene in a Microporous Material. *Journal of the American Chemical Society*, **2017**, 139, 8022-8028	16.4	263
107	Strong and dynamic CO2 sorption in a flexible porous framework possessing guest chelating claws. *Journal of the American Chemical Society*, **2012**, 134, 17380-3	16.4	239
106	Porous metal-organic frameworks for gas storage and separation: Status and challenges. *EnergyChem*, **2019**, 1, 100006	36.9	235
105	Microporous Metal-Organic Framework Materials for Gas Separation. *CheM*, **2020**, 6, 337-363	16.2	234
104	Pore surface tailored SOD-type metal-organic zeolites. *Advanced Materials*, **2011**, 23, 1268-71	24	228
103	Photoluminescent Metal-Organic Frameworks for Gas Sensing. *Advanced Science*, **2016**, 3, 1500434	13.6	228
102	Metal cluster-based functional porous coordination polymers. *Coordination Chemistry Reviews*, **2015**, 293-294, 263-278	23.2	215
101	An Ideal Molecular Sieve for Acetylene Removal from Ethylene with Record Selectivity and Productivity. *Advanced Materials*, **2017**, 29, 1704210	24	213
100	Pore Space Partition within a Metal-Organic Framework for Highly Efficient CH/CO Separation. *Journal of the American Chemical Society*, **2019**, 141, 4130-4136	16.4	190
99	Boosting Ethane/Ethylene Separation within Isoreticular Ultramicroporous Metal-Organic Frameworks. *Journal of the American Chemical Society*, **2018**, 140, 12940-12946	16.4	186
98	Flexible-Robust Metal-Organic Framework for Efficient Removal of Propyne from Propylene. *Journal of the American Chemical Society*, **2017**, 139, 7733-7736	16.4	177

97	Mixed Metal-Organic Framework with Multiple Binding Sites for Efficient C H /CO Separation. *Angewandte Chemie - International Edition*, **2020**, 59, 4396-4400	16.4	169
96	Tunable titanium metal□organic frameworks with infinite 1D Ti□O rods for efficient visible-light-driven photocatalytic H2 evolution. *Journal of Materials Chemistry A*, **2019**, 7, 11928-11933	13	153
95	A noble-metal-free porous coordination framework with exceptional sensing efficiency for oxygen. *Angewandte Chemie - International Edition*, **2013**, 52, 13429-33	16.4	152
94	Turning on the flexibility of isoreticular porous coordination frameworks for drastically tunable framework breathing and thermal expansion. *Chemical Science*, **2013**, 4, 1539	9.4	144
93	Geometry analysis and systematic synthesis of highly porous isoreticular frameworks with a unique topology. *Nature Communications*, **2012**, 3, 642	17.4	139
92	Molecular Dynamics of Flexible Polar Cations in a Variable Confined Space: Toward Exceptional Two-Step Nonlinear Optical Switches. *Advanced Materials*, **2016**, 28, 5886-90	24	137
91	Hydrogen-Bonded Organic Frameworks as a Tunable Platform for Functional Materials. *Journal of the American Chemical Society*, **2020**, 142, 14399-14416	16.4	132
90	Solvent/additive-free synthesis of porous/zeolitic metal azolate frameworks from metal oxide/hydroxide. *Chemical Communications*, **2011**, 47, 9185-7	5.8	131
89	A zeolite-like zinc triazolate framework with high gas adsorption and separation performance. *Inorganic Chemistry*, **2012**, 51, 9950-5	5.1	124
88	A flexible metal azolate framework with drastic luminescence response toward solvent vapors and carbon dioxide. *Chemical Science*, **2011**, 2, 2214	9.4	109
87	Direct visualization of a guest-triggered crystal deformation based on a flexible ultramicroporous framework. *Nature Communications*, **2013**, 4, 2534	17.4	106
86	A stable zirconium based metal-organic framework for specific recognition of representative polychlorinated dibenzo-p-dioxin molecules. *Nature Communications*, **2019**, 10, 3861	17.4	98
85	Our journey of developing multifunctional metal-organic frameworks. *Coordination Chemistry Reviews*, **2019**, 384, 21-36	23.2	86
84	Coordination templated [2+2+2] cyclotrimerization in a porous coordination framework. *Nature Communications*, **2015**, 6, 8348	17.4	84
83	A Metal-Organic Framework with Suitable Pore Size and Specific Functional Sites for the Removal of Trace Propyne from Propylene. *Angewandte Chemie - International Edition*, **2018**, 57, 15183-15188	16.4	83
82	Encapsulating Pyrene in a Metal□Organic Zeolite for Optical Sensing of Molecular Oxygen. *Chemistry of Materials*, **2015**, 27, 8255-8260	9.6	81
81	A Metal-Organic Framework with Optimized Porosity and Functional Sites for High Gravimetric and Volumetric Methane Storage Working Capacities. *Advanced Materials*, **2018**, 30, e1704792	24	81
80	Tuning Gate-Opening of a Flexible Metal-Organic Framework for Ternary Gas Sieving Separation. *Angewandte Chemie - International Edition*, **2020**, 59, 22756-22762	16.4	73

79	The cation-dependent structural phase transition and dielectric response in a family of cyano-bridged perovskite-like coordination polymers. *Dalton Transactions*, **2016**, 45, 4224-9	4.3	72
78	Porous Cu(I) Triazolate Framework and Derived Hybrid Membrane with Exceptionally High Sensing Efficiency for Gaseous Oxygen. *Advanced Functional Materials*, **2014**, 24, 5866-5872	15.6	72
77	Zeolitic metal azolate frameworks (MAFs) from ZnO/Zn(OH)2 and monoalkyl-substituted imidazoles and 1,2,4-triazoles: Efficient syntheses and properties. *Microporous and Mesoporous Materials*, **2012**, 157, 42-49	5.3	69
76	Efficient separation of ethylene from acetylene/ethylene mixtures by a flexible-robust metal□organic framework. *Journal of Materials Chemistry A*, **2017**, 5, 18984-18988	13	68
75	Kinetic separation of propylene over propane in a microporous metal-organic framework. *Chemical Engineering Journal*, **2018**, 354, 977-982	14.7	67
74	An Ultramicroporous Metal-Organic Framework for High Sieving Separation of Propylene from Propane. *Journal of the American Chemical Society*, **2020**, 142, 17795-17801	16.4	67
73	Optimizing Pore Space for Flexible-Robust Metal-Organic Framework to Boost Trace Acetylene Removal. *Journal of the American Chemical Society*, **2020**, 142, 9744-9751	16.4	66
72	Doubly Interpenetrated Metal□Organic Framework for Highly Selective C2H2/CH4 and C2H2/CO2 Separation at Room Temperature. *Crystal Growth and Design*, **2016**, 16, 7194-7197	3.5	65
71	New Zn-Aminotriazolate-Dicarboxylate Frameworks: Synthesis, Structures, and Adsorption Properties. *Crystal Growth and Design*, **2013**, 13, 2118-2123	3.5	64
70	Highly-connected, porous coordination polymers based on [M4(□-OH)2] (M = Co(II) and Ni(II)) clusters: different networks, adsorption and magnetic properties. *Dalton Transactions*, **2012**, 41, 4199-206	4.3	64
69	Two solvent-induced porous hydrogen-bonded organic frameworks: solvent effects on structures and functionalities. *Chemical Communications*, **2017**, 53, 11150-11153	5.8	58
68	Phosphorescence doping in a flexible ultramicroporous framework for high and tunable oxygen sensing efficiency. *Chemical Communications*, **2013**, 49, 6864-6	5.8	58
67	Fine-tuning of nano-traps in a stable metal□organic framework for highly efficient removal of propyne from propylene. *Journal of Materials Chemistry A*, **2018**, 6, 6931-6937	13	57
66	Optimization of the Pore Structures of MOFs for Record High Hydrogen Volumetric Working Capacity. *Advanced Materials*, **2020**, 32, e1907995	24	48
65	Ethylene/ethane separation in a stable hydrogen-bonded organic framework through a gating mechanism. *Nature Chemistry*, **2021**, 13, 933-939	17.6	45
64	Tuning fluorocarbon adsorption in new isoreticular porous coordination frameworks for heat transformation applications. *Chemical Science*, **2015**, 6, 2516-2521	9.4	44
63	High-symmetry hydrogen-bonded organic frameworks: air separation and crystal-to-crystal structural transformation. *Chemical Communications*, **2016**, 52, 4991-4	5.8	39
62	Microporous Metal-Organic Framework with Dual Functionalities for Efficient Separation of Acetylene from Light Hydrocarbon Mixtures. *ACS Sustainable Chemistry and Engineering*, **2019**, 7,	8.3	39

61	Gas Separation via Hybrid Metal□Organic Framework/Polymer Membranes. *Trends in Chemistry*, **2020**, 2, 254-269	14.8	38
60	Achieving High Performance Metal-Organic Framework Materials through Pore Engineering. *Accounts of Chemical Research*, **2021**, 54, 3362-3376	24.3	37
59	Low-dimensional porous coordination polymers based on 1,2-bis(4-pyridyl)hydrazine: from structure diversity to ultrahigh CO2/CH4 selectivity. *Inorganic Chemistry*, **2012**, 51, 5686-92	5.1	35
58	Flexible porous coordination polymers constructed from 1,2-bis(4-pyridyl)hydrazine via solvothermal in situ reduction of 4,4□azopyridine. *Dalton Transactions*, **2011**, 40, 8549-54	4.3	33
57	A novel mesoporous hydrogen-bonded organic framework with high porosity and stability. *Chemical Communications*, **2019**, 56, 66-69	5.8	33
56	Mixed Metal□Organic Framework with Multiple Binding Sites for Efficient C2H2/CO2 Separation. *Angewandte Chemie*, **2020**, 132, 4426-4430	3.6	32
55	A Metal□Organic Framework with Suitable Pore Size and Specific Functional Sites for the Removal of Trace Propyne from Propylene. *Angewandte Chemie*, **2018**, 130, 15403-15408	3.6	30
54	Controlling the flexibility and single-crystal to single-crystal interpenetration reconstitution of metal-organic frameworks. *Chemical Communications*, **2015**, 51, 12665-8	5.8	29
53	Mesoporous Metal-Organic Frameworks with Exceptionally High Working Capacities for Adsorption Heat Transformation. *Advanced Materials*, **2018**, 30, 1704350	24	29
52	Microporous Copper Isophthalate Framework of mot Topology for C2H2/CO2 Separation. *Crystal Growth and Design*, **2019**, 19, 5829-5835	3.5	27
51	Electrostatically Driven Selective Adsorption of Carbon Dioxide over Acetylene in an Ultramicroporous Material. *Angewandte Chemie - International Edition*, **2021**, 60, 9604-9609	16.4	26
50	A Microporous Hydrogen-Bonded Organic Framework for the Efficient Capture and Purification of Propylene. *Angewandte Chemie - International Edition*, **2021**, 60, 20400-20406	16.4	26
49	Separation of C2 hydrocarbons from methane in a microporous metal-organic framework. *Journal of Solid State Chemistry*, **2018**, 258, 346-350	3.3	25
48	A microporous metal□rganic framework for selective C 2 H 2 and CO 2 separation. *Journal of Solid State Chemistry*, **2017**, 252, 138-141	3.3	24
47	A microporous metal-organic framework of sql topology for C2H2/CO2 separation. *Inorganica Chimica Acta*, **2019**, 495, 118938	2.7	24
46	New porous coordination polymers based on expanded pyridyl-dicarboxylate ligands and a paddle-wheel cluster. *CrystEngComm*, **2014**, 16, 6325-6330	3.3	24
45	Structural, energetic, and dynamic insights into the abnormal xylene separation behavior of hierarchical porous crystal. *Scientific Reports*, **2015**, 5, 11537	4.9	24
44	Two-dimensional metal□rganic frameworks for selective separation of CO2/CH4 and CO2/N2. *Materials Chemistry Frontiers*, **2017**, 1, 1514-1519	7.8	23

43	Copper(I) 2-Isopropylimidazolate: Supramolecular Isomerism, Isomerization, and Luminescent Properties. *Crystal Growth and Design*, **2015**, 15, 1735-1739	3.5	22
42	Nickel-4Q(3,5-dicarboxyphenyl)-2,2Q6Q2?-terpyridine Framework: Efficient Separation of Ethylene from Acetylene/Ethylene Mixtures with a High Productivity. *Inorganic Chemistry*, **2018**, 57, 9489-9494	5.1	22
41	Highly Enhanced Gas Uptake and Selectivity via Incorporating Methoxy Groups into a Microporous Metal□Organic Framework. *Crystal Growth and Design*, **2017**, 17, 2172-2177	3.5	21
40	A two-dimensional microporous metal□rganic framework for highly selective adsorption of carbon dioxide and acetylene. *Chinese Chemical Letters*, **2017**, 28, 1653-1658	8.1	21
39	Separation of C2/C1 hydrocarbons through a gate-opening effect in a microporous metal□rganic framework. *CrystEngComm*, **2017**, 19, 6896-6901	3.3	21
38	Tuning Gate-Opening of a Flexible Metal□Organic Framework for Ternary Gas Sieving Separation. *Angewandte Chemie*, **2020**, 132, 22944-22950	3.6	21
37	A microporous metal-organic framework with naphthalene diimide groups for high methane storage. *Dalton Transactions*, **2020**, 49, 3658-3661	4.3	21
36	A Noble-Metal-Free Porous Coordination Framework with Exceptional Sensing Efficiency for Oxygen. *Angewandte Chemie*, **2013**, 125, 13671-13675	3.6	20
35	Fine pore engineering in a series of isoreticular metal-organic frameworks for efficient CH/CO separation.. *Nature Communications*, **2022**, 13, 200	17.4	20
34	Metal□Organic Framework with Trifluoromethyl Groups for Selective C2H2 and CO2 Adsorption. *Crystal Growth and Design*, **2018**, 18, 4522-4527	3.5	18
33	Construction of a thiourea-based metal□rganic framework with open Ag+ sites for the separation of propene/propane mixtures. *Journal of Materials Chemistry A*, **2019**, 7, 25567-25572	13	17
32	An Ultramicroporous Metal□Organic Framework for Sieving Separation of Carbon Dioxide from Methane. *Small Structures*, **2020**, 1, 2000022	8.7	16
31	Reticular Chemistry of Multifunctional Metal-Organic Framework Materials. *Israel Journal of Chemistry*, **2018**, 58, 949-961	3.4	16
30	Metal-ion controlled solid-state reactivity and photoluminescence in two isomorphous coordination polymers. *Inorganic Chemistry Frontiers*, **2014**, 1, 172	6.8	15
29	Reducing CO2 with Stable Covalent Organic Frameworks. *Joule*, **2018**, 2, 1030-1032	27.8	15
28	Unique (3,9)-connected porous coordination polymers constructed by tripodal ligands with bent arms. *CrystEngComm*, **2016**, 18, 4115-4120	3.3	14
27	Highly Selective Adsorption of Carbon Dioxide over Acetylene in an Ultramicroporous Metal-Organic Framework. *Advanced Materials*, **2021**, 33, e2105880	24	14
26	Restraining the motion of a ligand for modulating the structural phase transition in two isomorphic polar coordination polymers. *Dalton Transactions*, **2014**, 43, 9008-11	4.3	12

25	How Reproducible are Surface Areas Calculated from the BET Equation?. *Advanced Materials*,2201502	24	12
24	Tuning oxygen-sensing behaviour of a porous coordination framework by a guest fluorophore. *Inorganic Chemistry Frontiers*, **2015**, 2, 1085-1090	6.8	11
23	Isoreticular Microporous Metal-Organic Frameworks for Carbon Dioxide Capture. *Inorganic Chemistry*, **2020**, 59, 17143-17148	5.1	11
22	Conjugated Microporous Polymers with Rigid Backbones for Organic Solvent Nanofiltration. *CheM*, **2018**, 4, 2269-2271	16.2	11
21	A microporous metal-organic framework with basic sites for efficient C2H2/CO2 separation. *Journal of Solid State Chemistry*, **2020**, 284, 121209	3.3	10
20	Syntheses, structures and gas sorption properties of two coordination polymers with a unique type of supramolecular isomerism. *Inorganic Chemistry Frontiers*, **2015**, 2, 136-140	6.8	8
19	Guest-containing supramolecular isomers of silver(I) 3,5-dialkyl-1,2,4-triazolates: syntheses, structures, and structural transformation behaviours. *CrystEngComm*, **2015**, 17, 8843-8849	3.3	8
18	Doubly Interpenetrated Metal-Organic Framework of pcu Topology for Selective Separation of Propylene from Propane. *ACS Applied Materials & Interfaces*, **2020**, 12, 48712-48717	9.5	8
17	Realization of Ethylene Production from Its Quaternary Mixture through Metal-Organic Framework Materials. *ACS Applied Materials & Interfaces*, **2021**, 13, 22514-22520	9.5	8
16	Maximizing acetylene packing density for highly efficient C2H2/CO2 separation through immobilization of amine sites within a prototype MOF. *Chemical Engineering Journal*, **2022**, 431, 134184	14.7	7
15	Electrostatically Driven Selective Adsorption of Carbon Dioxide over Acetylene in an Ultramicroporous Material. *Angewandte Chemie*, **2021**, 133, 9690-9695	3.6	7
14	Efficient Separation of Propylene from Propane in an Ultramicroporous Cyanide-Based Compound with Open Metal Sites. *Small Structures*,2100125	8.7	6
13	Of HOF hosts. *Nature Chemistry*, **2019**, 11, 1078-1080	17.6	4
12	A Molecular Compound for Highly Selective Purification of Ethylene. *Angewandte Chemie - International Edition*, **2021**,	16.4	4
11	Old Materials for New Functions: Recent Progress on Metal Cyanide Based Porous Materials. *Advanced Science*, **2021**, e2104234	13.6	4
10	Mechanochemical synthesis of an ethylene sieve UTSA-280. *Journal of Solid State Chemistry*, **2020**, 287, 121321	3.3	3
9	Emerging 2D functional metal-organic framework materials. *National Science Review*, **2020**, 7, 3-5	10.8	3
8	Novel route to size-controlled synthesis of MnFeO@MOF core-shell nanoparticles. *Journal of Solid State Chemistry*, **2020**, 283, 121127-121127	3.3	3

7	Photoluminescence: Porous Cu(I) Triazolate Framework and Derived Hybrid Membrane with Exceptionally High Sensing Efficiency for Gaseous Oxygen (Adv. Funct. Mater. 37/2014). *Advanced Functional Materials*, **2014**, 24, 5928-5928	15.6	2
6	Identifying the Gate-Opening Mechanism in the Flexible Metal-Organic Framework UTSA-300.. *Inorganic Chemistry*, **2022**,	5.1	2
5	An ultramicroporous metal-organic framework with dual functionalities for high sieving separation of CO2 from CH4 and N2. *Chemical Engineering Journal*, **2022**, 446, 137101	14.7	2
4	Collaborative interactions to enhance gas binding energy in porous metal-organic frameworks. *IUCrJ*, **2017**, 4, 106-107	4.7	1
3	Microporous Zinc Formate for Efficient Separation of Acetylene over Carbon Dioxide. *Chemical Research in Chinese Universities*, **2022**, 38, 87-91	2.2	1
2	A dynamic MOF for efficient purification of propylene. *Science China Chemistry*, **2021**, 64, 2053	7.9	0
1	Single-side and double-side swing behaviours of a flexible porous coordination polymer with a rhombic-lattice structure. *CrystEngComm*, **2019**, 21, 1872-1875	3.3	