Rui-Biao Lin

List of Publications by Year
in descending order

118 papers	14,050 citations	20817 60 h-index	20358 116 g-index
122 all docs	122 docs citations	122 times ranked	8234 citing authors

#	Article	IF	Citations
1	Ethane/ethylene separation in a metal-organic framework with iron-peroxo sites. Science, 2018, 362, 443-446.	12.6	763
2	Multifunctional porous hydrogen-bonded organic framework materials. Chemical Society Reviews, 2019, 48, 1362-1389.	38.1	751
3	Exploration of porous metalâ€“organic frameworks for gas separation and purification. Coordination Chemistry Reviews, 2019, 378, 87-103.	18.8	538
4	Molecular sieving of ethylene from ethane using a rigid metalâ€“organic framework. Nature Materials, 2018, 17, 1128-1133.	27.5	532
5	Microporous Metal-Organic Framework Materials for Gas Separation. CheM, 2020, 6, 337-363.	11.7	528
6	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, 5678-5684.	13.7	489
7	Hydrogen-Bonded Organic Frameworks as a Tunable Platform for Functional Materials. Journal of the American Chemical Society, 2020, 142, 14399-14416.	13.7	444
8	Porous metal-organic frameworks for gas storage and separation: Status and challenges. EnergyChem, 2019, 1, 100006.	19.1	434
9	Optimized Separation of Acetylene from Carbon Dioxide and Ethylene in a Microporous Material. Journal of the American Chemical Society, 2017, 139, 8022-8028.	13.7	417
10	Single-crystal X-ray diffraction studies on structural transformations of porous coordination polymers. Chemical Society Reviews, 2014, 43, 5789-5814.	38.1	408
11	Pore Space Partition within a Metalâ€“Organic Framework for Highly Efficient C₂H₂/CO₂ Separation. Journal of the American Chemical Society, 2019, 141, 4130-4136.	13.7	338
12	Mixed Metalâ€“Organic Framework with Multiple Binding Sites for Efficient C₂H₂/CO₂Separation. Angewandte Chemie - International Edition, 2020, 59, 4396-4400.	13.8	313
13	An Ideal Molecular Sieve for Acetylene Removal from Ethylene with Record Selectivity and Productivity. Advanced Materials, 2017, 29, 1704210.	21.0	310
14	Boosting Ethane/Ethylene Separation within Isoreticular Ultramicroporous Metalâ€“Organic Frameworks. Journal of the American Chemical Society, 2018, 140, 12940-12946.	13.7	309
15	Strong and Dynamic CO₂ Sorption in a Flexible Porous Framework Possessing Guest Chelating Claws. Journal of the American Chemical Society, 2012, 134, 17380-17383.	13.7	281
16	Photoluminescent Metalâ€“Organic Frameworks for Gas Sensing. Advanced Science, 2016, 3, 1500434.	11.2	271
17	Pore Surface Tailored SODâ€Type Metalâ€Organic Zeolites. Advanced Materials, 2011, 23, 1268-1271.	21.0	268
18	Flexibleâ€“Robust Metalâ€“Organic Framework for Efficient Removal of Propyne from Propylene. Journal of the American Chemical Society, 2017, 139, 7733-7736.	13.7	242

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19	Ethylene/ethane separation in a stable hydrogen-bonded organic framework through a gating mechanism. Nature Chemistry, 2021, 13, 933-939.	13.6	235
20	Metal cluster-based functional porous coordination polymers. Coordination Chemistry Reviews, 2015, 293-294, 263-278.	18.8	234
21	Tunable titanium metalâ€“organic frameworks with infinite 1D Tiâ€“O rods for efficient visible-light-driven photocatalytic H₂ evolution. Journal of Materials Chemistry A, 2019, 7, 11928-11933.	10.3	192
22	An Ultramicroporous Metalâ€“Organic Framework for High Sieving Separation of Propylene from Propane. Journal of the American Chemical Society, 2020, 142, 17795-17801.	13.7	186
23	Molecular Dynamics of Flexible Polar Cations in a Variable Confined Space: Toward Exceptional Twoâ€Step Nonlinear Optical Switches. Advanced Materials, 2016, 28, 5886-5890.	21.0	184
24	Tuning Gateâ€Opening of a Flexible Metalâ€“Organic Framework for Ternary Gas Sieving Separation. Angewandte Chemie - International Edition, 2020, 59, 22756-22762.	13.8	173
25	A Nobleâ€Metalâ€Free Porous Coordination Framework with Exceptional Sensing Efficiency for Oxygen. Angewandte Chemie - International Edition, 2013, 52, 13429-13433.	13.8	170
26	A stable zirconium based metal-organic framework for specific recognition of representative polychlorinated dibenzo-p-dioxin molecules. Nature Communications, 2019, 10, 3861.	12.8	164
27	Turning on the flexibility of isoreticular porous coordination frameworks for drastically tunable framework breathing and thermal expansion. Chemical Science, 2013, 4, 1539.	7.4	163
28	Achieving High Performance Metalâ€“Organic Framework Materials through Pore Engineering. Accounts of Chemical Research, 2021, 54, 3362-3376.	15.6	158
29	Fine pore engineering in a series of isoreticular metal-organic frameworks for efficient C2H2/CO2 separation. Nature Communications, 2022, 13, 200.	12.8	157
30	A Zeolite-Like Zinc Triazolate Framework with High Gas Adsorption and Separation Performance. Inorganic Chemistry, 2012, 51, 9950-9955.	4.0	155
31	Optimizing Pore Space for Flexible-Robust Metalâ€“Organic Framework to Boost Trace Acetylene Removal. Journal of the American Chemical Society, 2020, 142, 9744-9751.	13.7	154
32	Solvent/additive-free synthesis of porous/zeolitic metal azolate frameworks from metal oxide/hydroxide. Chemical Communications, 2011, 47, 9185.	4.1	146
33	Geometry analysis and systematic synthesis of highly porous isoreticular frameworks with a unique topology. Nature Communications, 2012, 3, 642.	12.8	145
34	A Microporous Hydrogenâ€Bonded Organic Framework for the Efficient Capture and Purification of Propylene. Angewandte Chemie - International Edition, 2021, 60, 20400-20406.	13.8	132
35	Our journey of developing multifunctional metal-organic frameworks. Coordination Chemistry Reviews, 2019, 384, 21-36.	18.8	126
36	A Metalâ€“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.	13.8	124

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37	Direct visualization of a guest-triggered crystal deformation based on a flexible ultramicroporous framework. Nature Communications, 2013, 4, 2534.	12.8	120
38	Optimization of the Pore Structures of MOFs for Record High Hydrogen Volumetric Working Capacity. Advanced Materials, 2020, 32, e1907995.	21.0	118
39	A flexible metal azolate framework with drastic luminescence response toward solvent vapors and carbon dioxide. Chemical Science, 2011, 2, 2214.	7.4	117
40	A Metalâ€“Organic Framework with Optimized Porosity and Functional Sites for High Gravimetric and Volumetric Methane Storage Working Capacities. Advanced Materials, 2018, 30, e1704792.	21.0	109
41	Kinetic separation of propylene over propane in a microporous metal-organic framework. Chemical Engineering Journal, 2018, 354, 977-982.	12.7	108
42	Coordination templated [2+2+2] cyclotrimerization in a porous coordination framework. Nature Communications, 2015, 6, 8348.	12.8	101
43	A Metalâ€“Organic Framework with Suitable Pore Size and Specific Functional Sites for the Removal of Trace Propyne from Propylene. Angewandte Chemie, 2018, 130, 15403-15408.	2.0	98
44	Encapsulating Pyrene in a Metalâ€“Organic Zeolite for Optical Sensing of Molecular Oxygen. Chemistry of Materials, 2015, 27, 8255-8260.	6.7	97
45	Two solvent-induced porous hydrogen-bonded organic frameworks: solvent effects on structures and functionalities. Chemical Communications, 2017, 53, 11150-11153.	4.1	93
46	Efficient separation of ethylene from acetylene/ethylene mixtures by a flexible-robust metalâ€“organic framework. Journal of Materials Chemistry A, 2017, 5, 18984-18988.	10.3	88
47	The cation-dependent structural phase transition and dielectric response in a family of cyano-bridged perovskite-like coordination polymers. Dalton Transactions, 2016, 45, 4224-4229.	3.3	85
48	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.	4.4	82
49	How Reproducible are Surface Areas Calculated from the BET Equation?. Advanced Materials, 2022, 34, .	21.0	82
50	Porous Cu(I) Triazolate Framework and Derived Hybrid Membrane with Exceptionally High Sensing Efficiency for Gaseous Oxygen. Advanced Functional Materials, 2014, 24, 5866-5872.	14.9	81
51	Doubly Interpenetrated Metalâ€“Organic Framework for Highly Selective C₂H₂/CH₄ and C₂H₂/CO₂ Separation at Room Temperature. Crystal Growth and Design, 2016, 16, 7194-7197.	3.0	80
52	New Zn-Aminotriazolate-Dicarboxylate Frameworks: Synthesis, Structures, and Adsorption Properties. Crystal Growth and Design, 2013, 13, 2118-2123.	3.0	76
53	A novel mesoporous hydrogen-bonded organic framework with high porosity and stability. Chemical Communications, 2020, 56, 66-69.	4.1	76
54	Fine-tuning of nano-traps in a stable metalâ€“organic framework for highly efficient removal of propyne from propylene. Journal of Materials Chemistry A, 2018, 6, 6931-6937.	10.3	74

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55	Electrostatically Driven Selective Adsorption of Carbon Dioxide over Acetylene in an Ultramicroporous Material. Angewandte Chemie - International Edition, 2021, 60, 9604-9609.	13.8	73
56	Gas Separation via Hybrid Metalâ€“Organic Framework/Polymer Membranes. Trends in Chemistry, 2020, 2, 254-269.	8.5	71
57	Highly-connected, porous coordination polymers based on [M4(Î¼3-OH)2] (M = CoII and NiII) clusters: different networks, adsorption and magnetic properties. Dalton Transactions, 2012, 41, 4199.	3.3	67
58	Highly Selective Adsorption of Carbon Dioxide over Acetylene in an Ultramicroporous Metalâ€“Organic Framework. Advanced Materials, 2021, 33, e2105880.	21.0	66
59	Microporous Metalâ€“Organic Framework with Dual Functionalities for Efficient Separation of Acetylene from Light Hydrocarbon Mixtures. ACS Sustainable Chemistry and Engineering, 2019, 7, 4897-4902.	6.7	65
60	Phosphorescence doping in a flexible ultramicroporous framework for high and tunable oxygen sensing efficiency. Chemical Communications, 2013, 49, 6864.	4.1	63
61	Tuning fluorocarbon adsorption in new isoreticular porous coordination frameworks for heat transformation applications. Chemical Science, 2015, 6, 2516-2521.	7.4	57
62	High-symmetry hydrogen-bonded organic frameworks: air separation and crystal-to-crystal structural transformation. Chemical Communications, 2016, 52, 4991-4994.	4.1	50
63	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.	12.7	49
64	Mixed Metalâ€“Organic Framework with Multiple Binding Sites for Efficient C 2 H 2 /CO 2 Separation. Angewandte Chemie, 2020, 132, 4426-4430.	2.0	46
65	Mesoporous Metalâ€“Organic Frameworks with Exceptionally High Working Capacities for Adsorption Heat Transformation. Advanced Materials, 2018, 30, 1704350.	21.0	43
66	Separation of C2 hydrocarbons from methane in a microporous metal-organic framework. Journal of Solid State Chemistry, 2018, 258, 346-350.	2.9	41
67	Microporous Copper Isophthalate Framework of mot Topology for C₂H₂/CO₂ Separation. Crystal Growth and Design, 2019, 19, 5829-5835.	3.0	40
68	Low-Dimensional Porous Coordination Polymers Based on 1,2-Bis(4-pyridyl)hydrazine: From Structure Diversity to Ultrahigh CO2/CH4Selectivity. Inorganic Chemistry, 2012, 51, 5686-5692.	4.0	38
69	Flexible porous coordination polymers constructed from 1,2-bis(4-pyridyl)hydrazine via solvothermal in situ reduction of 4,4â€²-azopyridine. Dalton Transactions, 2011, 40, 8549.	3.3	36
70	Separation of C2/C1 hydrocarbons through a gate-opening effect in a microporous metalâ€“organic framework. CrystEngComm, 2017, 19, 6896-6901.	2.6	34
71	Construction of a thiourea-based metalâ€“organic framework with open Ag⁺ sites for the separation of propene/propane mixtures. Journal of Materials Chemistry A, 2019, 7, 25567-25572.	10.3	33
72	Isoreticular Microporous Metalâ€“Organic Frameworks for Carbon Dioxide Capture. Inorganic Chemistry, 2020, 59, 17143-17148.	4.0	33

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73	Tuning Gateâ€Opening of a Flexible Metalâ€“Organic Framework for Ternary Gas Sieving Separation. Angewandte Chemie, 2020, 132, 22944-22950.	2.0	33
74	An Ultramicroporous Metalâ€“Organic Framework for Sieving Separation of Carbon Dioxide from Methane. Small Structures, 2020, 1, 2000022.	12.0	33
75	Controlling the flexibility and single-crystal to single-crystal interpenetration reconstitution of metalâ€“organic frameworks. Chemical Communications, 2015, 51, 12665-12668.	4.1	32
76	A microporous metalâ€“organic framework for selective C 2 H 2 and CO 2 separation. Journal of Solid State Chemistry, 2017, 252, 138-141.	2.9	31
77	A microporous metalâ€“organic framework with naphthalene diimide groups for high methane storage. Dalton Transactions, 2020, 49, 3658-3661.	3.3	31
78	Two-dimensional metalâ€“organic frameworks for selective separation of CO₂/CH₄ and CO₂/N₂. Materials Chemistry Frontiers, 2017, 1, 1514-1519.	5.9	30
79	Nickel-4â€²-(3,5-dicarboxyphenyl)-2,2â€²,6â€²,2â€³-terpyridine Framework: Efficient Separation of Ethylene from Acetylene/Ethylene Mixtures with a High Productivity. Inorganic Chemistry, 2018, 57, 9489-9494.	4.0	30
80	Structural, energetic and dynamic insights into the abnormal xylene separation behavior of hierarchical porous crystal. Scientific Reports, 2015, 5, 11537.	3.3	29
81	A microporous metal-organic framework of sql topology for C2H2/CO2 separation. Inorganica Chimica Acta, 2019, 495, 118938.	2.4	28
82	Copper(I) 2-Isopropylimidazolate: Supramolecular Isomerism, Isomerization, and Luminescent Properties. Crystal Growth and Design, 2015, 15, 1735-1739.	3.0	27
83	A two-dimensional microporous metalâ€“organic framework for highly selective adsorption of carbon dioxide and acetylene. Chinese Chemical Letters, 2017, 28, 1653-1658.	9.0	27
84	An Adaptive Hydrogenâ€Bonded Organic Framework for the Exclusive Recognition of <i>p</i>â€Xylene. Chemistry - A European Journal, 2022, 28, .	3.3	27
85	Highly Enhanced Gas Uptake and Selectivity via Incorporating Methoxy Groups into a Microporous Metalâ€“Organic Framework. Crystal Growth and Design, 2017, 17, 2172-2177.	3.0	26
86	Reducing CO2 with Stable Covalent Organic Frameworks. Joule, 2018, 2, 1030-1032.	24.0	26
87	Metalâ€“Organic Framework with Trifluoromethyl Groups for Selective C₂H₂ and CO₂ Adsorption. Crystal Growth and Design, 2018, 18, 4522-4527.	3.0	26
88	New porous coordination polymers based on expanded pyridyl-dicarboxylate ligands and a paddle-wheel cluster. CrystEngComm, 2014, 16, 6325-6330.	2.6	25
89	Reticular Chemistry of Multifunctional Metalâ€Organic Framework Materials. Israel Journal of Chemistry, 2018, 58, 949-961.	2.3	24
90	Old Materials for New Functions: Recent Progress on Metal Cyanide Based Porous Materials. Advanced Science, 2022, 9, e2104234.	11.2	24

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91	Conjugated Microporous Polymers with Rigid Backbones for Organic Solvent Nanofiltration. CheM, 2018, 4, 2269-2271.	11.7	23
92	Doubly Interpenetrated Metalâ€“Organic Framework of pcu Topology for Selective Separation of Propylene from Propane. ACS Applied Materials & Interfaces, 2020, 12, 48712-48717.	8.0	23
93	An ultramicroporous metalâ€“organic framework with dual functionalities for high sieving separation of CO2 from CH4 and N2. Chemical Engineering Journal, 2022, 446, 137101.	12.7	19
94	A Molecular Compound for Highly Selective Purification of Ethylene. Angewandte Chemie - International Edition, 2021, 60, 27184-27188.	13.8	18
95	Efficient Separation of Propylene from Propane in an Ultramicroporous Cyanideâ€Based Compound with Open Metal Sites. Small Structures, 2022, 3, 2100125.	12.0	17
96	Unique (3,9)-connected porous coordination polymers constructed by tripodal ligands with bent arms. CrystEngComm, 2016, 18, 4115-4120.	2.6	16
97	Metal-ion controlled solid-state reactivity and photoluminescence in two isomorphous coordination polymers. Inorganic Chemistry Frontiers, 2014, 1, 172.	6.0	15
98	Electrostatically Driven Selective Adsorption of Carbon Dioxide over Acetylene in an Ultramicroporous Material. Angewandte Chemie, 2021, 133, 9690-9695.	2.0	15
99	Of HOF hosts. Nature Chemistry, 2019, 11, 1078-1080.	13.6	13
100	A microporous metal-organic framework with basic sites for efficient C2H2/CO2 separation. Journal of Solid State Chemistry, 2020, 284, 121209.	2.9	13
101	Realization of Ethylene Production from Its Quaternary Mixture through Metalâ€“Organic Framework Materials. ACS Applied Materials & Interfaces, 2021, 13, 22514-22520.	8.0	13
102	Restraining the motion of a ligand for modulating the structural phase transition in two isomorphic polar coordination polymers. Dalton Transactions, 2014, 43, 9008-9011.	3.3	12
103	Tuning oxygen-sensing behaviour of a porous coordination framework by a guest fluorophore. Inorganic Chemistry Frontiers, 2015, 2, 1085-1090.	6.0	12
104	Two isostructural metalâ€“organic frameworks with unique nickel clusters for C₂H₂/C₂H₆/C₂H₄ mixture separation. Journal of Materials Chemistry A, 2022, 10, 12497-12502.	10.3	12
105	Identifying the Gate-Opening Mechanism in the Flexible Metalâ€“Organic Framework UTSA-300. Inorganic Chemistry, 2022, 61, 5025-5032.	4.0	9
106	Guest-containing supramolecular isomers of silver(<scp>i</scp>) 3,5-dialkyl-1,2,4-triazolates: syntheses, structures, and structural transformation behaviours. CrystEngComm, 2015, 17, 8843-8849.	2.6	8
107	Syntheses, structures and gas sorption properties of two coordination polymers with a unique type of supramolecular isomerism. Inorganic Chemistry Frontiers, 2015, 2, 136-140.	6.0	8
108	Novel route to size-controlled synthesis of MnFe2O4@MOF core-shell nanoparticles. Journal of Solid State Chemistry, 2020, 283, 121127.	2.9	8

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109	Emerging 2D functional metal-organic framework materials. National Science Review, 2020, 7, 3-5.	9.5	7
110	Mechanochemical synthesis of an ethylene sieve UTSA-280. Journal of Solid State Chemistry, 2020, 287, 121321.	2.9	7
111	A dynamic MOF for efficient purification of propylene. Science China Chemistry, 2021, 64, 2053-2054.	8.2	6
112	A Molecular Compound for Highly Selective Purification of Ethylene. Angewandte Chemie, 2021, 133, 27390-27394.	2.0	4
113	Single-crystal superprotonic conductivity in an interpenetrated hydrogen-bonded quadruplex framework. Chemical Communications, 2022, 58, 771-774.	4.1	4
114	Microporous Zinc Formate for Efficient Separation of Acetylene over Carbon Dioxide. Chemical Research in Chinese Universities, 2022, 38, 87-91.	2.6	3
115	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.	14.9	2
116	Collaborative interactions to enhance gas binding energy in porous metalâ€“organic frameworks. IUCrJ, 2017, 4, 106-107.	2.2	1
117	Effect of localized heating on photocurrent of iodine based composites. Materials Express, 2017, 7, 299-304.	0.5	0
118	Single-side and double-side swing behaviours of a flexible porous coordination polymer with a rhombic-lattice structure. CrystEngComm, 2019, 21, 1872-1875.	2.6	0