Xuan Zhang

List of Publications by Year
in descending order

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86 papers	5,131 citations	81900 39 h-index	91884 69 g-index
93 all docs	93 docs citations	93 times ranked	5266 citing authors

#	Article	IF	Citations
1	Balancing volumetric and gravimetric uptake in highly porous materials for clean energy. Science, 2020, 368, 297-303.	12.6	429
2	A historical overview of the activation and porosity of metalâ€“organic frameworks. Chemical Society Reviews, 2020, 49, 7406-7427.	38.1	367
3	Metalâ€“organic framework (MOF) materials as polymerization catalysts: a review and recent advances. Chemical Communications, 2020, 56, 10409-10418.	4.1	168
4	Integration of Enzymes and Photosensitizers in a Hierarchical Mesoporous Metalâ€“Organic Framework for Light-Driven CO₂ Reduction. Journal of the American Chemical Society, 2020, 142, 1768-1773.	13.7	163
5	A Flexible Metalâ€“Organic Framework with 4-Connected Zr₆ Nodes. Journal of the American Chemical Society, 2018, 140, 11179-11183.	13.7	158
6	Catalytic chemoselective functionalization of methane in a metalâ˜organic framework. Nature Catalysis, 2018, 1, 356-362.	34.4	153
7	Reticular Access to Highly Porous acs-MOFs with Rigid Trigonal Prismatic Linkers for Water Sorption. Journal of the American Chemical Society, 2019, 141, 2900-2905.	13.7	150
8	A historical perspective on porphyrin-based metalâ€“organic frameworks and their applications. Coordination Chemistry Reviews, 2021, 429, 213615.	18.8	140
9	Metalâ€“Organic Frameworks as Platforms for the Controlled Nanostructuring of Single-Molecule Magnets. Journal of the American Chemical Society, 2015, 137, 9254-9257.	13.7	135
10	Topology and porosity control of metalâ€“organic frameworks through linker functionalization. Chemical Science, 2019, 10, 1186-1192.	7.4	129
11	Trigonal antiprismatic Co(ii) single molecule magnets with large uniaxial anisotropies: importance of Raman and tunneling mechanisms. Chemical Science, 2016, 7, 6519-6527.	7.4	112
12	Vanadium Catalyst on Isostructural Transition Metal, Lanthanide, and Actinide Based Metalâ€“Organic Frameworks for Alcohol Oxidation. Journal of the American Chemical Society, 2019, 141, 8306-8314.	13.7	112
13	Ultrastable Mesoporous Hydrogen-Bonded Organic Framework-Based Fiber Composites toward Mustard Gas Detoxification. Cell Reports Physical Science, 2020, 1, 100024.	5.6	107
14	Stabilization of Formate Dehydrogenase in a Metalâ€“Organic Framework for Bioelectrocatalytic Reduction of CO₂. Angewandte Chemie - International Edition, 2019, 58, 7682-7686.	13.8	103
15	Node-Accessible Zirconium MOFs. Journal of the American Chemical Society, 2020, 142, 21110-21121.	13.7	103
16	Structural Diversity of Zirconium Metalâ€“Organic Frameworks and Effect on Adsorption of Toxic Chemicals. Journal of the American Chemical Society, 2020, 142, 21428-21438.	13.7	95
17	Tailoring Pore Aperture and Structural Defects in Zirconium-Based Metalâ€“Organic Frameworks for Krypton/Xenon Separation. Chemistry of Materials, 2020, 32, 3776-3782.	6.7	89
18	Fiber Composites of Metalâ€“Organic Frameworks. Chemistry of Materials, 2020, 32, 7120-7140.	6.7	82

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19	Room Temperature Synthesis of an 8-Connected Zr-Based Metalâ€“Organic Framework for Top-Down Nanoparticle Encapsulation. Chemistry of Materials, 2018, 30, 2193-2197.	6.7	80
20	From Transition Metals to Lanthanides to Actinides: Metal-Mediated Tuning of Electronic Properties of Isostructural Metalâ€“Organic Frameworks. Inorganic Chemistry, 2018, 57, 13246-13251.	4.0	80
21	Exploring the Role of Hexanuclear Clusters as Lewis Acidic Sites in Isostructural Metalâ€“Organic Frameworks. Chemistry of Materials, 2019, 31, 4166-4172.	6.7	80
22	Singleâ€Chain Magnetic Behavior in a Heteroâ€Triâ€Spin Complex Mediated by Supramolecular Interactions with TCNQF^{.â^’} Radicals. Angewandte Chemie - International Edition, 2014, 53, 11567-11570.	13.8	79
23	Fine-Tuning a Robust Metalâ€“Organic Framework toward Enhanced Clean Energy Gas Storage. Journal of the American Chemical Society, 2021, 143, 18838-18843.	13.7	79
24	Insights into the Enhanced Catalytic Activity of Cytochrome c When Encapsulated in a Metalâ€“Organic Framework. Journal of the American Chemical Society, 2020, 142, 18576-18582.	13.7	73
25	The state of the field: from inception to commercialization of metalâ€“organic frameworks. Faraday Discussions, 2021, 225, 9-69.	3.2	70
26	Phase Transitions in Metalâ€“Organic Frameworks Directly Monitored through In Situ Variable Temperature Liquid-Cell Transmission Electron Microscopy and In Situ X-ray Diffraction. Journal of the American Chemical Society, 2020, 142, 4609-4615.	13.7	69
27	Introducing Nonstructural Ligands to Zirconia-like Metalâ€“Organic Framework Nodes To Tune the Activity of Node-Supported Nickel Catalysts for Ethylene Hydrogenation. ACS Catalysis, 2019, 9, 3198-3207.	11.2	68
28	Unexpected â€œSpontaneousâ€•Evolution of Catalytic, MOF-Supported Single Cu(II) Cations to Catalytic, MOF-Supported Cu(0) Nanoparticles. Journal of the American Chemical Society, 2020, 142, 21169-21177.	13.7	68
29	Switching of Adsorption Properties in a Zwitterionic Metalâ€“Organic Framework Triggered by Photogenerated Radical Triplets. Chemistry of Materials, 2016, 28, 7825-7832.	6.7	65
30	Zirconium-Based Metalâ€“Organic Framework with 9-Connected Nodes for Ammonia Capture. ACS Applied Nano Materials, 2019, 2, 6098-6102.	5.0	59
31	Magnetic ordering in TCNQ-based metalâ€“organic frameworks with hostâ€“guest interactions. Inorganic Chemistry Frontiers, 2015, 2, 904-911.	6.0	58
32	A cobalt(<scp>ii</scp>) spin-crossover compound with partially charged TCNQ radicals and an anomalous conducting behavior. Chemical Science, 2016, 7, 1569-1574.	7.4	58
33	Ligand-Directed Reticular Synthesis of Catalytically Active Missing Zirconium-Based Metalâ€“Organic Frameworks. Journal of the American Chemical Society, 2019, 141, 12229-12235.	13.7	58
34	Metalâ€“Organic Framework Supported Single Site Chromium(III) Catalyst for Ethylene Oligomerization at Low Pressure and Temperature. ACS Sustainable Chemistry and Engineering, 2019, 7, 2553-2557.	6.7	56
35	Small Molecules, Big Effects: Tuning Adsorption and Catalytic Properties of Metalâ€“Organic Frameworks. Chemistry of Materials, 2021, 33, 1444-1454.	6.7	56
36	Effect of Redox â€œNon-Innocentâ€•Linker on the Catalytic Activity of Copper-Catecholate-Decorated Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2018, 10, 635-641.	8.0	52

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37	Metalâ€“Organic Framework Nodes as a Supporting Platform for Tailoring the Activity of Metal Catalysts. ACS Catalysis, 2020, 10, 11556-11566.	11.2	52
38	Single-Crystal Polycationic Polymers Obtained by Single-Crystal-to-Single-Crystal Photopolymerization. Journal of the American Chemical Society, 2020, 142, 6180-6187.	13.7	50
39	Near-instantaneous catalytic hydrolysis of organophosphorus nerve agents with zirconium-based MOF/hydrogel composites. Chem Catalysis, 2021, 1, 721-733.	6.1	49
40	Insights into the Structureâ€“Activity Relationship in Aerobic Alcohol Oxidation over a Metalâ€“Organic-Framework-Supported Molybdenum(VI) Catalyst. Journal of the American Chemical Society, 2021, 143, 4302-4310.	13.7	48
41	Enforcing Ising-like magnetic anisotropy via trigonal distortion in the design of a W(<scp>v</scp>)â€“Co(<scp>ii</scp>) cyanide single-chain magnet. Chemical Science, 2018, 9, 119-124.	7.4	40
42	Insights into the Structureâ€“Activity Relationships in Metalâ€“Organic Framework-Supported Nickel Catalysts for Ethylene Hydrogenation. ACS Catalysis, 2020, 10, 8995-9005.	11.2	40
43	Size effect of the active sites in UiO-66-supported nickel catalysts synthesized via atomic layer deposition for ethylene hydrogenation. Inorganic Chemistry Frontiers, 2017, 4, 820-824.	6.0	38
44	A Flexible Interpenetrated Zirconiumâ€Based Metalâ€“Organic Framework with High Affinity toward Ammonia. ChemSusChem, 2020, 13, 1710-1714.	6.8	36
45	Photon Upconversion in a Glowing Metalâ€“Organic Framework. Journal of the American Chemical Society, 2021, 143, 5053-5059.	13.7	34
46	Metalâ€“Organic Frameworks with Metalâ€“Catecholates for O₂/N₂ Separation. Journal of Physical Chemistry C, 2019, 123, 12935-12946.	3.1	33
47	Stabilization of Formate Dehydrogenase in a Metalâ€“Organic Framework for Bioelectrocatalytic Reduction of CO 2. Angewandte Chemie, 2019, 131, 7764-7768.	2.0	31
48	Tuning the Structural Flexibility for Multi-Responsive Gas Sorption in Isonicotinate-Based Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2021, 13, 16820-16827.	8.0	31
49	Catalytic Degradation of Polyethylene Terephthalate Using a Phaseâ€Transitional Zirconiumâ€Based Metalâ€“Organic Framework. Angewandte Chemie - International Edition, 2022, 61, .	13.8	30
50	Systematic Investigation of Controlled Nanostructuring of Mn12 Single-Molecule Magnets Templated by Metalâ€“Organic Frameworks. Inorganic Chemistry, 2017, 56, 6965-6972.	4.0	29
51	Guest-Dependent Single-Crystal-to-Single-Crystal Phase Transitions in a Two-Dimensional Uranyl-Based Metalâ€“Organic Framework. Crystal Growth and Design, 2019, 19, 506-512.	3.0	29
52	Highly Selective Acetylene Semihydrogenation Catalyzed by Cu Nanoparticles Supported in a Metalâ€“Organic Framework. ACS Applied Nano Materials, 2018, 1, 4413-4417.	5.0	27
53	A cadmium TCNQ-based semiconductor with versatile binding modes and non-integer redox states. Chemical Communications, 2014, 50, 1429-1431.	4.1	26
54	Conducting Molecular Nanomagnet of Dy III with Partially Charged TCNQ Radicals. Chemistry - A European Journal, 2017, 23, 7448-7452.	3.3	26

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55	A New Nitronyl Nitroxide Radical as Building Blocks for a Rare S = 13/2 High Spin Ground State 2p-3d Complex and a 2p-3d-4f Chain. Crystal Growth and Design, 2017, 17, 95-99.	3.0	26
56	Stabilization of Photocatalytically Active Uranyl Species in a Uranylâ€“Organic Framework for Heterogeneous Alkane Fluorination Driven by Visible Light. Inorganic Chemistry, 2020, 59, 16795-16798.	4.0	26
57	Structural distortions of the spin-crossover material [Co(pyterpy)₂](TCNQ)₂ mediated by supramolecular interactions. Journal of Materials Chemistry C, 2015, 3, 9292-9298.	5.5	25
58	Reticular exploration of uranium-based metalâ€”organic frameworks with hexacarboxylate building units. Nano Research, 2021, 14, 376-380.	10.4	25
59	Mechanically Enhanced Catalytic Reduction of Carbon Dioxide over Defect Hexagonal Boron Nitride. ACS Sustainable Chemistry and Engineering, 2021, 9, 2447-2455.	6.7	25
60	Modulating Chemical Environments of Metalâ€“Organic Framework-Supported Molybdenum(VI) Catalysts for Insights into the Structureâ€“Activity Relationship in Cyclohexene Epoxidation. Journal of the American Chemical Society, 2022, 144, 3554-3563.	13.7	25
61	Structural diversity and magnetic properties of six cobalt coordination polymers based on 2,2â€²-phosphinico-dibenzoate ligand. Dalton Transactions, 2016, 45, 19500-19510.	3.3	23
62	A Hierarchical Nanoporous Diamondoid Superstructure. CheM, 2019, 5, 2353-2364.	11.7	23
63	Supramolecular Porous Assemblies of Atomically Precise Catalytically Active Cerium-Based Clusters. Chemistry of Materials, 2020, 32, 8522-8529.	6.7	23
64	Nanoporous Water-Stable Zr-Based Metalâ€“Organic Frameworks for Water Adsorption. ACS Applied Nano Materials, 2021, 4, 4346-4350.	5.0	22
65	Single crystal structure and photocatalytic behavior of grafted uranyl on the Zr-node of a pyrene-based metalâ€“organic framework. CrystEngComm, 2020, 22, 2097-2102.	2.6	21
66	Heterometallic Ce^{IV}/ V^V Oxo Clusters with Adjustable Catalytic Reactivities. Journal of the American Chemical Society, 2021, 143, 21056-21065.	13.7	21
67	Mechanistic Insights into Câ€“H Borylation of Arenes with Organoiridium Catalysts Embedded in a Microporous Metalâ€“Organic Framework. Organometallics, 2020, 39, 1123-1133.	2.3	20
68	Modular Synthesis of Highly Porous Zr-MOFs Assembled from Simple Building Blocks for Oxygen Storage. ACS Applied Materials & Interfaces, 2019, 11, 42179-42185.	8.0	17
69	Stabilization of an enzyme cytochrome c in a metal-organic framework against denaturing organic solvents. IScience, 2021, 24, 102641.	4.1	15
70	Air oxidation of sulfur mustard gas simulants using a pyrene-based metalâ€“organic framework photocatalyst. Beilstein Journal of Nanotechnology, 2019, 10, 2422-2427.	2.8	14
71	Singleâ€Site, Singleâ€Metalâ€Atom, Heterogeneous Electrocatalyst: Metalâ€“Organicâ€Framework Supported Molybdenum Sulfide for Redox Mediatorâ€Assisted Hydrogen Evolution Reaction. ChemElectroChem, 2020, 7, 509-516.	3.4	12
72	A contorted nanographene shelter. Nature Communications, 2021, 12, 5191.	12.8	12

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73	Tuning the Atrazine Binding Sites in an Indium-Based Flexible Metalâ€“Organic Framework. ACS Applied Materials & Interfaces, 2020, 12, 44762-44768.	8.0	11
74	Squeezing the box: isoreticular contraction of pyrene-based linker in a Zr-based metalâ€“organic framework for Xe/Kr separation. Dalton Transactions, 2020, 49, 6553-6556.	3.3	11
75	Discovery of spontaneous de-interpenetration through charged point-point repulsions. CheM, 2022, 8, 225-242.	11.7	11
76	From spin-crossover to single molecule magnetism: tuning magnetic properties of Co(<scp>ii</scp>) bis-ferrocenylterpy cations via supramolecular interactions with organocyanide radical anions. Journal of Materials Chemistry C, 2020, 8, 8135-8144.	5.5	8
77	Self-Assembly of Organocyanide Dianions and Metalâ€“Organic Macrocycles into Polymeric Architectures Including an Unprecedented Quadruple Helical Aperiodic Structure. Crystal Growth and Design, 2016, 16, 1805-1811.	3.0	7
78	Single-molecule magnet behavior in a mononuclear dysprosium(<scp>iii</scp>) complex with 1-methylimidazole. RSC Advances, 2017, 7, 2766-2772.	3.6	7
79	Modulation of CO₂ adsorption in novel pillar-layered MOFs based on carboxylateâ€“pyrazole flexible linker. Dalton Transactions, 2021, 50, 2880-2890.	3.3	7
80	Regulation of Catenation in Metalâ€“Organic Frameworks with Tunable Clathrochelate-Based Building Blocks. Crystal Growth and Design, 2021, 21, 6665-6670.	3.0	7
81	Ethylene polymerization with a crystallographically well-defined metalâ€“organic framework supported catalyst. Catalysis Science and Technology, 2022, 12, 1619-1627.	4.1	6
82	Mechanistic Investigation of Enhanced Catalytic Selectivity toward Alcohol Oxidation with Ce Oxysulfate Clusters. Journal of the American Chemical Society, 2022, 144, 12092-12101.	13.7	6
83	Synthesis of acid-functionalized composite via surface deposition of acid-containing amorphous carbon. Applied Surface Science, 2012, 258, 7166-7173.	6.1	5
84	Catalytic Degradation of Polyethylene Terephthalate Using a Phaseâ€Transitional Zirconiumâ€Based Metalâ€“Organic Framework. Angewandte Chemie, 2022, 134, .	2.0	4
85	Coordination Chemistry in the Structural and Functional Exploration of Actinide-Based Metal-Organic Frameworks. Bulletin of Japan Society of Coordination Chemistry, 2020, 75, 3-12.	0.2	1
86	Semiconductors and Aperiodic Structures in Organocyanide-Based Materials. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C1265-C1265.	0.1	0