Peyman Moghadam

List of Publications by Year
in descending order

48 papers	5,024 citations	159585 30 h-index	214800 47 g-index
53 all docs	53 docs citations	53 times ranked	6530 citing authors

#	Article	IF	Citations
1	Development of a Cambridge Structural Database Subset: A Collection of Metalâ€“Organic Frameworks for Past, Present, and Future. Chemistry of Materials, 2017, 29, 2618-2625.	6.7	718
2	A solâ€“gel monolithic metalâ€“organic framework with enhanced methane uptake. Nature Materials, 2018, 17, 174-179.	27.5	386
3	Ultrahigh Surface Area Zirconium MOFs and Insights into the Applicability of the BET Theory. Journal of the American Chemical Society, 2015, 137, 3585-3591.	13.7	329
4	Toward Design Rules for Enzyme Immobilization in Hierarchical Mesoporous Metal-Organic Frameworks. CheM, 2016, 1, 154-169.	11.7	286
5	CD-MOF: A Versatile Separation Medium. Journal of the American Chemical Society, 2016, 138, 2292-2301.	13.7	269
6	Temperature Treatment of Highly Porous Zirconium-Containing Metalâ€“Organic Frameworks Extends Drug Delivery Release. Journal of the American Chemical Society, 2017, 139, 7522-7532.	13.7	269
7	Metalâ€“Organic Nanosheets Formed via Defect-Mediated Transformation of a Hafnium Metalâ€“Organic Framework. Journal of the American Chemical Society, 2017, 139, 5397-5404.	13.7	224
8	Application of Consistency Criteria To Calculate BET Areas of Micro- And Mesoporous Metalâ€“Organic Frameworks. Journal of the American Chemical Society, 2016, 138, 215-224.	13.7	201
9	Tuning porosity in macroscopic monolithic metal-organic frameworks for exceptional natural gas storage. Nature Communications, 2019, 10, 2345.	12.8	180
10	Structure-Mechanical Stability Relations of Metal-Organic Frameworks via Machine Learning. Matter, 2019, 1, 219-234.	10.0	170
11	<i>p</i>-Xylene-Selective Metalâ€“Organic Frameworks: A Case of Topology-Directed Selectivity. Journal of the American Chemical Society, 2011, 133, 18526-18529.	13.7	159
12	Metal-organic frameworks as biosensors for luminescence-based detection and imaging. Interface Focus, 2016, 6, 20160027.	3.0	142
13	Computer-aided discovery of a metalâ€“organic framework with superior oxygen uptake. Nature Communications, 2018, 9, 1378.	12.8	136
14	Coreâ€“Shell Gold Nanorod@Zirconium-Based Metalâ€“Organic Framework Composites as <i>in Situ</i> Size-Selective Raman Probes. Journal of the American Chemical Society, 2019, 141, 3893-3900.	13.7	119
15	Targeted classification of metalâ€“organic frameworks in the Cambridge structural database (CSD). Chemical Science, 2020, 11, 8373-8387.	7.4	119
16	A Redox-Active Bistable Molecular Switch Mounted inside a Metalâ€“Organic Framework. Journal of the American Chemical Society, 2016, 138, 14242-14245.	13.7	114
17	Carbohydrate-Mediated Purification of Petrochemicals. Journal of the American Chemical Society, 2015, 137, 5706-5719.	13.7	112
18	High volumetric uptake of ammonia using Cu-MOF-74/Cu-CPO-27. Dalton Transactions, 2016, 45, 4150-4153.	3.3	102

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19	Efficient identification of hydrophobic MOFs: application in the capture of toxic industrial chemicals. Journal of Materials Chemistry A, 2016, 4, 529-536.	10.3	93
20	Electrochemically addressable trisradical rotaxanes organized within a metalâ€“organic framework. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11161-11168.	7.1	83
21	How Reproducible are Surface Areas Calculated from the BET Equation?. Advanced Materials, 2022, 34, .	21.0	82
22	A Highly Porous Metal-Organic Framework System to Deliver Payloads for Gene Knockdown. CheM, 2019, 5, 2926-2941.	11.7	66
23	Discovery of an Optimal Porous Crystalline Material for the Capture of Chemical Warfare Agents. Chemistry of Materials, 2018, 30, 4571-4579.	6.7	62
24	Adsorption and molecular siting of CO₂, water, and other gases in the superhydrophobic, flexible pores of FMOF-1 from experiment and simulation. Chemical Science, 2017, 8, 3989-4000.	7.4	60
25	Functionalized Defects through Solvent-Assisted Linker Exchange: Synthesis, Characterization, and Partial Postsynthesis Elaboration of a Metalâ€“Organic Framework Containing Free Carboxylic Acid Moieties. Inorganic Chemistry, 2015, 54, 1785-1790.	4.0	58
26	Engineering new defective phases of UiO family metalâ€“organic frameworks with water. Journal of Materials Chemistry A, 2019, 7, 7459-7469.	10.3	58
27	Calix[4]arene-based metalâ€“organic frameworks: towards hierarchically porous materials. Chemical Communications, 2012, 48, 4824.	4.1	40
28	Pore Size Dependence of Adsorption and Separation of Thiophene/Benzene Mixtures in Zeolites. Journal of Physical Chemistry C, 2015, 119, 15263-15273.	3.1	39
29	Probing the Mechanochemistry of Metalâ€“Organic Frameworks with Low-Frequency Vibrational Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 27442-27450.	3.1	37
30	From synthesis to applications: Metalâ€“organic frameworks for an environmentally sustainable future. Current Opinion in Green and Sustainable Chemistry, 2018, 12, 47-56.	5.9	33
31	Nitroâ€Functionalized Bis(pyrazolate) Metalâ€“Organic Frameworks as Carbon Dioxide Capture Materials under Ambient Conditions. Chemistry - A European Journal, 2018, 24, 13170-13180.	3.3	29
32	Origin of Enantioselectivity in a Chiral Metalâ€“Organic Framework: A Molecular Simulation Study. Journal of Physical Chemistry C, 2012, 116, 20874-20881.	3.1	27
33	Computational Screening of Metal Catecholates for Ammonia Capture in Metalâ€“Organic Frameworks. Industrial & Engineering Chemistry Research, 2015, 54, 3257-3267.	3.7	27
34	Pt(II)-Decorated Covalent Organic Framework for Photocatalytic Difluoroalkylation and Oxidative Cyclization Reactions. ACS Applied Materials & Interfaces, 2021, 13, 6349-6358.	8.0	27
35	â€œExplosiveâ€•synthesis of metal-formate frameworks for methane capture: an experimental and computational study. Chemical Communications, 2017, 53, 11437-11440.	4.1	25
36	Understanding the Effects of Preadsorbed Perfluoroalkanes on the Adsorption of Water and Ammonia in MOFs. Journal of Physical Chemistry C, 2015, 119, 3163-3170.	3.1	20

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37	(Thio)urea-Based Covalent Organic Framework as a Hydrogen-Bond-Donating Catalyst. ACS Applied Materials & Interfaces, 2020, 12, 29212-29217.	8.0	19
38	Computational techniques for characterisation of electrically conductive MOFs: quantum calculations and machine learning approaches. Journal of Materials Chemistry C, 2021, 9, 13584-13599.	5.5	14
39	Modulation of pore shape and adsorption selectivity by ligand functionalization in a series of â€œrobâ€•like flexible metalâ€“organic frameworks. Journal of Materials Chemistry A, 2018, 6, 17409-17416.	10.3	13
40	Reverse Hierarchy of Alkane Adsorption in Metalâ€“Organic Frameworks (MOFs) Revealed by Immersion Calorimetry. Journal of Physical Chemistry C, 2019, 123, 11699-11706.	3.1	12
41	Screening adsorbentâ€“water adsorption heat pumps based on an experimental water adsorption isotherm database. Sustainable Energy and Fuels, 2021, 5, 1075-1084.	4.9	12
42	Catalyst-Enabled <i>In Situ</i> Linkage Reduction in Imine Covalent Organic Frameworks. ACS Applied Materials & Interfaces, 2021, 13, 21740-21747.	8.0	12
43	Data visualization for Industry 4.0: A stepping-stone toward a digital future, bridging the gap between academia and industry. Patterns, 2021, 2, 100266.	5.9	10
44	Wiz: A Web-Based Tool for Interactive Visualization of Big Data. Patterns, 2020, 1, 100107.	5.9	8
45	The development of a comprehensive toolbox based on multi-level, high-throughput screening of MOFs for CO/N₂ separations. Chemical Science, 2021, 12, 12068-12081.	7.4	8
46	Monte Carlo simulations of phase behavior and microscopic structure for supercritical CO2 and thiophene mixtures. Journal of Supercritical Fluids, 2014, 95, 214-221.	3.2	5
47	Hydrogen storage in MOFs: Machine learning for finding a needle in a haystack. Patterns, 2021, 2, 100305.	5.9	4
48	Active subsets as a tool for structural characterisation and selection of metal-organic frameworks. Chemical Engineering Research and Design, 2022, 179, 424-434.	5.6	0