Guillaume Maurin

List of Publications by Year
in descending order

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355 papers	31,176 citations	4831 87 h-index	6024 165 g-index
375 all docs	375 docs citations	375 times ranked	23153 citing authors

#	Article	IF	Citations
1	Metalâ€“Organic Frameworks in Biomedicine. Chemical Reviews, 2012, 112, 1232-1268.	23.0	3,593
2	Flexible Porous Metal-Organic Frameworks for a Controlled Drug Delivery. Journal of the American Chemical Society, 2008, 130, 6774-6780.	6.6	1,564
3	A New Photoactive Crystalline Highly Porous Titanium(IV) Dicarboxylate. Journal of the American Chemical Society, 2009, 131, 10857-10859.	6.6	1,127
4	Gas/vapour separation using ultra-microporous metalâ€“organic frameworks: insights into the structure/separation relationship. Chemical Society Reviews, 2017, 46, 3402-3430.	18.7	1,033
5	The new age of MOFs and of their porous-related solids. Chemical Society Reviews, 2017, 46, 3104-3107.	18.7	623
6	Why hybrid porous solids capture greenhouse gases?. Chemical Society Reviews, 2011, 40, 550-562.	18.7	603
7	An Explanation for the Very Large Breathing Effect of a Metalâ€“Organic Framework during CO₂ Adsorption. Advanced Materials, 2007, 19, 2246-2251.	11.1	501
8	A pressure-amplifying framework material with negative gas adsorption transitions. Nature, 2016, 532, 348-352.	13.7	490
9	Functionalization in Flexible Porous Solids: Effects on the Pore Opening and the Hostâ‹¯Guest Interactions. Journal of the American Chemical Society, 2010, 132, 1127-1136.	6.6	445
10	Rationale of Drug Encapsulation and Release from Biocompatible Porous Metalâ€“Organic Frameworks. Chemistry of Materials, 2013, 25, 2767-2776.	3.2	412
11	A Series of Isoreticular, Highly Stable, Porous Zirconium Oxide Based Metalâ€“Organic Frameworks. Angewandte Chemie - International Edition, 2012, 51, 9267-9271.	7.2	407
12	Co-adsorption and Separation of CO₂â‹¯CH₄ Mixtures in the Highly Flexible MIL-53(Cr) MOF. Journal of the American Chemical Society, 2009, 131, 17490-17499.	6.6	398
13	How Linkerâ€™s Modification Controls Swelling Properties of Highly Flexible Iron(III) Dicarboxylates MIL-88. Journal of the American Chemical Society, 2011, 133, 17839-17847.	6.6	383
14	Functionalizing porous zirconium terephthalate UiO-66(Zr) for natural gas upgrading: a computational exploration. Chemical Communications, 2011, 47, 9603.	2.2	345
15	A Water Stable Metalâ€“Organic Framework with Optimal Features for CO₂ Capture. Angewandte Chemie - International Edition, 2013, 52, 10316-10320.	7.2	303
16	Molecular Dynamics Simulations of Breathing MOFs: Structural Transformations of MILâ€53(Cr) upon Thermal Activation and CO₂ Adsorption. Angewandte Chemie - International Edition, 2008, 47, 8487-8491.	7.2	302
17	Fluorinated MOF platform for selective removal and sensing of SO2 from flue gas and air. Nature Communications, 2019, 10, 1328.	5.8	292
18	Influence of framework metal ions on the dye capture behavior of MIL-100 (Fe, Cr) MOF type solids. Journal of Materials Chemistry A, 2013, 1, 8534.	5.2	291

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19	Complex Adsorption of Short Linear Alkanes in the Flexible Metal-Organic-Framework MIL-53(Fe). Journal of the American Chemical Society, 2009, 131, 13002-13008.	6.6	281
20	Fast Variability of Tera-Electron Volt Â Rays from the Radio Galaxy M87. Science, 2006, 314, 1424-1427.	6.0	277
21	Hydrolytically stable fluorinated metal-organic frameworks for energy-efficient dehydration. Science, 2017, 356, 731-735.	6.0	275
22	Design of Hydrophilic Metal Organic Framework Water Adsorbents for Heat Reallocation. Advanced Materials, 2015, 27, 4775-4780.	11.1	253
23	Prediction of the Conditions for Breathing of Metal Organic Framework Materials Using a Combination of X-ray Powder Diffraction, Microcalorimetry, and Molecular Simulation. Journal of the American Chemical Society, 2008, 130, 12808-12814.	6.6	246
24	Multistep N₂ Breathing in the Metalâ€'Organic Framework Co(1,4-benzenedipyrazolate). Journal of the American Chemical Society, 2010, 132, 13782-13788.	6.6	220
25	A robust zirconium amino acid metal-organic framework for proton conduction. Nature Communications, 2018, 9, 4937.	5.8	218
26	A robust large-pore zirconium carboxylate metalâ€“organic framework for energy-efficient water-sorption-driven refrigeration. Nature Energy, 2018, 3, 985-993.	19.8	217
27	Natural gas upgrading using a fluorinated MOF with tuned H2S and CO2 adsorption selectivity. Nature Energy, 2018, 3, 1059-1066.	19.8	214
28	The Structure of the Aluminum Fumarate Metalâ€“Organic Framework A520. Angewandte Chemie - International Edition, 2015, 54, 3664-3668.	7.2	206
29	Selective nitrogen capture by porous hybrid materials containing accessible transition metal ion sites. Nature Materials, 2017, 16, 526-531.	13.3	201
30	Structure and Dynamics of the Functionalized MOF Type UiO-66(Zr): NMR and Dielectric Relaxation Spectroscopies Coupled with DFT Calculations. Chemistry of Materials, 2012, 24, 2168-2177.	3.2	200
31	An Evaluation of UiOâ€66 for Gasâ€Based Applications. Chemistry - an Asian Journal, 2011, 6, 3270-3280.	1.7	192
32	Synthesis, Structure, Characterization, and Redox Properties of the Porous MILâ€68(Fe) Solid. European Journal of Inorganic Chemistry, 2010, 2010, 3789-3794.	1.0	191
33	Adsorption Mechanism of Carbon Dioxide in Faujasites: Grand Canonical Monte Carlo Simulations and Microcalorimetry Measurements. Journal of Physical Chemistry B, 2005, 109, 16084-16091.	1.2	185
34	Explanation of the Adsorption of Polar Vapors in the Highly Flexible Metal Organic Framework MIL-53(Cr). Journal of the American Chemical Society, 2010, 132, 9488-9498.	6.6	185
35	CH4 storage and CO2 capture in highly porous zirconium oxide based metalâ€“organic frameworks. Chemical Communications, 2012, 48, 9831.	2.2	180
36	Large breathing of the MOF MIL-47(VIV) under mechanical pressure: a joint experimentalâ€“modelling exploration. Chemical Science, 2012, 3, 1100.	3.7	176

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37	Acid-functionalized UiO-66(Zr) MOFs and their evolution after intra-framework cross-linking: structural features and sorption properties. Journal of Materials Chemistry A, 2015, 3, 3294-3309.	5.2	174
38	Understanding the Thermodynamic and Kinetic Behavior of the CO₂/CH₄ Gas Mixture within the Porous Zirconium Terephthalate UiO-66(Zr): A Joint Experimental and Modeling Approach. Journal of Physical Chemistry C, 2011, 115, 13768-13774.	1.5	166
39	Asymmetric pore windows in MOF membranes for natural gas valorization. Nature, 2022, 606, 706-712.	13.7	163
40	Rational design of mixed-matrix metal-organic framework membranes for molecular separations. Science, 2022, 376, 1080-1087.	6.0	160
41	Electrochemical intercalation of lithium into multiwall carbon nanotubes. Chemical Physics Letters, 1999, 312, 14-18.	1.2	159
42	Molecular Insight into the Adsorption of H₂S in the Flexible MIL-53(Cr) and Rigid MIL-47(V) MOFs: Infrared Spectroscopy Combined to Molecular Simulations. Journal of Physical Chemistry C, 2011, 115, 2047-2056.	1.5	157
43	Quasiâ€Elastic Neutron Scattering and Molecular Dynamics Study of Methane Diffusion in Metal Organic Frameworks MILâ€47(V) and MILâ€53(Cr). Angewandte Chemie - International Edition, 2008, 47, 6611-6615.	7.2	154
44	Understanding the origins of metalâ€“organic framework/polymer compatibility. Chemical Science, 2018, 9, 315-324.	3.7	153
45	Proton Transport in a Highly Conductive Porous Zirconiumâ€Based Metalâ€“Organic Framework: Molecular Insight. Angewandte Chemie - International Edition, 2016, 55, 3919-3924.	7.2	152
46	A metalâ€“organic framework for efficient water-based ultra-low-temperature-driven cooling. Nature Communications, 2019, 10, 3025.	5.8	145
47	On the breathing effect of a metalâ€“organic framework upon CO2 adsorption: Monte Carlo compared to microcalorimetry experiments. Chemical Communications, 2007, , 3261.	2.2	137
48	Probing the Adsorption Sites for CO₂ in Metal Organic Frameworks Materials MIL-53 (Al,) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.5	137
49	Probing the Dynamics of CO₂ and CH₄ within the Porous Zirconium Terephthalate UiOâ€66(Zr): A Synergic Combination of Neutron Scattering Measurements and Molecular Simulations. Chemistry - A European Journal, 2011, 17, 8882-8889.	1.7	137
50	A robust amino-functionalized titanium(iv) based MOF for improved separation of acid gases. Chemical Communications, 2013, 49, 10082.	2.2	135
51	Solventâ€Induced Control over Breathing Behavior in Flexible Metalâ€“Organic Frameworks for Naturalâ€Gas Delivery. Angewandte Chemie - International Edition, 2019, 58, 8073-8077.	7.2	132
52	Towards an Improved antiâ€HIV Activity of NRTI via Metalâ€“Organic Frameworks Nanoparticles. Advanced Healthcare Materials, 2013, 2, 1630-1637.	3.9	130
53	Step-wise dealumination of natural clinoptilolite: Structural and physicochemical characterization. Microporous and Mesoporous Materials, 2010, 135, 187-196.	2.2	129
54	Microscopic Model of the Metalâ€“Organic Framework/Polymer Interface: A First Step toward Understanding the Compatibility in Mixed Matrix Membranes. ACS Applied Materials & Interfaces, 2016, 8, 809-819.	4.0	129

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55	Molecular Insight into the Adsorption and Diffusion of Water in the Versatile Hydrophilic/Hydrophobic Flexible MIL-53(Cr) MOF. Journal of Physical Chemistry C, 2011, 115, 10764-10776.	1.5	128
56	A phase transformable ultrastable titanium-carboxylate framework for photoconduction. Nature Communications, 2018, 9, 1660.	5.8	128
57	Enhanced gas separation performance of 6FDA-DAM based mixed matrix membranes by incorporating MOF UiO-66 and its derivatives. Journal of Membrane Science, 2018, 558, 64-77.	4.1	126
58	Effect of the organic functionalization of flexible MOFs on the adsorption of CO2. Journal of Materials Chemistry, 2012, 22, 10266.	6.7	125
59	Gas adsorption microcalorimetry and modelling to characterise zeolites and related materials. Comptes Rendus Chimie, 2005, 8, 283-302.	0.2	124
60	Probing the adsorption performance of the hybrid porous MIL-68(Al): a synergic combination of experimental and modelling tools. Journal of Materials Chemistry, 2012, 22, 10210.	6.7	124
61	Adsorption of CO2 in metal organic frameworks of different metal centres: Grand Canonical Monte Carlo simulations compared to experiments. Adsorption, 2007, 13, 461-467.	1.4	123
62	Metalâ€“organic frameworks as potential shock absorbers: the case of the highly flexible MIL-53(Al). Chemical Communications, 2014, 50, 9462-9464.	2.2	122
63	Rationalization of the entrapping of bioactive molecules into a series of functionalized porous zirconium terephthalate MOFs. Journal of Materials Chemistry B, 2013, 1, 1101.	2.9	118
64	Charge distribution in metal organic framework materials: transferability to a preliminary molecular simulation study of the CO2adsorption in the MIL-53 (Al) system. Physical Chemistry Chemical Physics, 2007, 9, 1059-1063.	1.3	112
65	Hybrid Monte Carlo Simulations Combined with a Phase Mixture Model to Predict the Structural Transitions of a Porous Metalâ^'Organic Framework Material upon Adsorption of Guest Molecules. Journal of Physical Chemistry C, 2010, 114, 6496-6502.	1.5	112
66	Revealing the Structureâ€“Property Relationships of Metalâ€“Organic Frameworks for CO₂ Capture from Flue Gas. Langmuir, 2012, 28, 12094-12099.	1.6	110
67	Transport Diffusivity of CO₂ in the Highly Flexible Metalâ€“Organic Framework MILâ€53(Cr). Angewandte Chemie - International Edition, 2009, 48, 8335-8339.	7.2	109
68	Self and Transport Diffusivity of CO₂ in the Metalâ^'Organic Framework MIL-47(V) Explored by Quasi-elastic Neutron Scattering Experiments and Molecular Dynamics Simulations. ACS Nano, 2010, 4, 143-152.	7.3	109
69	Thermodynamic insight into stimuli-responsive behaviour of soft porous crystals. Nature Communications, 2018, 9, 204.	5.8	104
70	Mechanical energy storage performance of an aluminum fumarate metalâ€“organic framework. Chemical Science, 2016, 7, 446-450.	3.7	103
71	Achieving Superprotonic Conduction with a 2D Fluorinated Metalâ€“Organic Framework. Journal of the American Chemical Society, 2018, 140, 13156-13160.	6.6	103
72	Electrically Induced Breathing of the MIL-53(Cr) Metalâ€“Organic Framework. ACS Central Science, 2017, 3, 394-398.	5.3	102

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73	Polymer Infiltration into Metalâ€“Organic Frameworks in Mixed-Matrix Membranes Detected in Situ by NMR. Journal of the American Chemical Society, 2019, 141, 7589-7595.	6.6	102
74	Thermoâ€Responsive MOF/Polymer Composites for Temperatureâ€Mediated Water Capture and Release. Angewandte Chemie - International Edition, 2020, 59, 11003-11009.	7.2	101
75	Experimental Evidence Supported by Simulations of a Very High<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Diffusion in Metal Organic Framework Materials. Physical Review Letters, 2008, 100, 245901.	2.9	99
76	A biocompatible porous Mg-gallate metalâ€“organic framework as an antioxidant carrier. Chemical Communications, 2015, 51, 5848-5851.	2.2	98
77	Mixedâ€Linker Hybrid Superpolyhedra for the Production of a Series of Largeâ€Pore Iron(III) Carboxylate Metalâ€“Organic Frameworks. Angewandte Chemie - International Edition, 2013, 52, 5056-5060.	7.2	97
78	Thermodynamic Insight in the High-Pressure Behavior of UiO-66: Effect of Linker Defects and Linker Expansion. Chemistry of Materials, 2016, 28, 5721-5732.	3.2	97
79	Porous metal organic framework nanoparticles to address the challenges related to busulfan encapsulation. Nanomedicine, 2011, 6, 1683-1695.	1.7	95
80	Metalâ€“organic frameworks to satisfy gas upgrading demands: fine-tuning thesoc-MOF platform for the operative removal of H₂S. Journal of Materials Chemistry A, 2017, 5, 3293-3303.	5.2	94
81	Extended and functionalized porous iron(iii) tri- or dicarboxylates with MIL-100/101 topologies. Chemical Communications, 2014, 50, 6872.	2.2	93
82	Toward an Understanding of the Microstructure and Interfacial Properties of PIMs/ZIF-8 Mixed Matrix Membranes. ACS Applied Materials & Interfaces, 2016, 8, 27311-27321.	4.0	93
83	The effect of crystallite size on pressure amplification in switchable porous solids. Nature Communications, 2018, 9, 1573.	5.8	92
84	Comparative Guest, Thermal, and Mechanical Breathing of the Porous Metal Organic Framework MIL-53(Cr): A Computational Exploration Supported by Experiments. Journal of Physical Chemistry C, 2012, 116, 13289-13295.	1.5	90
85	Adsorption and Diffusion of H₂ in the MOF Type Systems MIL-47(V) and MIL-53(Cr): A Combination of Microcalorimetry and QENS Experiments with Molecular Simulations. Journal of Physical Chemistry C, 2009, 113, 7802-7812.	1.5	89
86	Nano-mechanical cutting and opening of single wall carbon nanotubes. Chemical Physics Letters, 2000, 331, 125-131.	1.2	88
87	Tailoring the separation properties of flexible metal-organic frameworks using mechanical pressure. Nature Communications, 2020, 11, 1216.	5.8	88
88	Observations of the Sagittarius dwarf galaxy by the HESS experiment and search for a dark matter signal. Astroparticle Physics, 2008, 29, 55-62.	1.9	87
89	Adsorption of CO2, CH4 and their binary mixture in Faujasite NaY: A combination of molecular simulations with gravimetryâ€“manometry and microcalorimetry measurements. Microporous and Mesoporous Materials, 2009, 119, 117-128.	2.2	86
90	Adsorption and Diffusion of Light Hydrocarbons in UiO-66(Zr): A Combination of Experimental and Modeling Tools. Journal of Physical Chemistry C, 2014, 118, 27470-27482.	1.5	84

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91	Influence of Extra-Framework Cations on the Adsorption Properties of X-Faujasite Systems:Â Microcalorimetry and Molecular Simulations. Journal of Physical Chemistry B, 2005, 109, 125-129.	1.2	83
92	A Comparison of Barostats for the Mechanical Characterization of Metalâ€“Organic Frameworks. Journal of Chemical Theory and Computation, 2015, 11, 5583-5597.	2.3	83
93	A Fine-Tuned MOF for Gas and Vapor Separation: A Multipurpose Adsorbent for Acid Gas Removal, Dehydration, and BTX Sieving. CheM, 2017, 3, 822-833.	5.8	83
94	Segmented and opened multi-walled carbon nanotubes. Carbon, 2001, 39, 1273-1278.	5.4	82
95	Adsorption of light hydrocarbons in the flexible MIL-53(Cr) and rigid MIL-47(V) metalâ€“organic frameworks: a combination of molecular simulations and microcalorimetry/gravimetry measurements. Physical Chemistry Chemical Physics, 2010, 12, 6428.	1.3	82
96	MIL-91(Ti), a small pore metalâ€“organic framework which fulfils several criteria: an upscaled green synthesis, excellent water stability, high CO₂ selectivity and fast CO₂ transport. Journal of Materials Chemistry A, 2016, 4, 1383-1389.	5.2	82
97	A Complete Separation of Hexane Isomers by a Functionalized Flexible Metal Organic Framework. Advanced Functional Materials, 2014, 24, 7666-7673.	7.8	81
98	Highly reversible sorption of H2S and CO2 by an environmentally friendly Mg-based MOF. Journal of Materials Chemistry A, 2018, 6, 16900-16909.	5.2	81
99	Separation of CO2â€“CH4 mixtures in the mesoporous MIL-100(Cr) MOF: experimental and modelling approaches. Dalton Transactions, 2012, 41, 4052.	1.6	78
100	Revisiting the Aluminum Trimesate-Based MOF (MIL-96): From Structure Determination to the Processing of Mixed Matrix Membranes for CO₂ Capture. Chemistry of Materials, 2017, 29, 10326-10338.	3.2	78
101	A promising metalâ€“organic framework (MOF), MIL-96(Al), for CO₂ separation under humid conditions. Journal of Materials Chemistry A, 2018, 6, 2081-2090.	5.2	78
102	A quantitative structure activity relationship approach to probe the influence of the functionalization on the drug encapsulation of porous metal-organic frameworks. Microporous and Mesoporous Materials, 2012, 157, 124-130.	2.2	76
103	Conformation-Controlled Sorption Properties and Breathing of the Aliphatic Al-MOF [Al(OH)(CDC)]. Inorganic Chemistry, 2014, 53, 4610-4620.	1.9	74
104	Electrochemical lithium intercalation into multiwall carbon nanotubes: a micro-Raman study. Solid State Ionics, 2000, 136-137, 1295-1299.	1.3	73
105	Series of Porous 3-D Coordination Polymers Based on Iron(III) and Porphyrin Derivatives. Chemistry of Materials, 2011, 23, 4641-4651.	3.2	73
106	Towards general network architecture design criteria for negative gas adsorption transitions in ultraporous frameworks. Nature Communications, 2019, 10, 3632.	5.8	73
107	Caffeine Confinement into a Series of Functionalized Porous Zirconium MOFs: A Joint Experimental/Modeling Exploration. Journal of Physical Chemistry C, 2013, 117, 11694-11704.	1.5	70
108	High and energy-efficient reversible SO₂ uptake by a robust Sc(<scp>iii</scp>)-based MOF. Journal of Materials Chemistry A, 2019, 7, 15580-15584.	5.2	70

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109	Impact of phosphorylation on the encapsulation of nucleoside analogues within porous iron(iii) metalâ€“organic framework MIL-100(Fe) nanoparticles. Journal of Materials Chemistry B, 2013, 1, 4231.	2.9	69
110	Computational exploration of a Zr-carboxylate based metalâ€“organic framework as a membrane material for CO₂capture. Journal of Materials Chemistry A, 2014, 2, 1657-1661.	5.2	68
111	Rational design of a robust aluminum metal-organic framework for multi-purpose water-sorption-driven heat allocations. Nature Communications, 2020, 11, 5112.	5.8	68
112	A Water Stable Metalâ€“Organic Framework with Optimal Features for CO₂ Capture. Angewandte Chemie, 2013, 125, 10506-10510.	1.6	66
113	Modeling of Gas Transport through Polymer/MOF Interfaces: A Microsecond-Scale Concentration Gradient-Driven Molecular Dynamics Study. Chemistry of Materials, 2020, 32, 1288-1296.	3.2	64
114	Structural Origin of Unusual CO₂ Adsorption Behavior of a Small-Pore Aluminum Bisphosphonate MOF. Journal of Physical Chemistry C, 2015, 119, 4208-4216.	1.5	63
115	Outstanding reversible H₂S capture by an Al(<scp>iii</scp>)-based MOF. Chemical Communications, 2019, 55, 3049-3052.	2.2	63
116	CO2 adsorption in alkali cation exchanged Y faujasites: A quantum chemical study compared to experiments. Chemical Physics Letters, 2006, 426, 387-392.	1.2	62
117	Design of MoS₂/Graphene van der Waals Heterostructure as Highly Efficient and Stable Electrocatalyst for Hydrogen Evolution in Acidic and Alkaline Media. ACS Applied Materials & Interfaces, 2020, 12, 24777-24785.	4.0	62
118	Tuning Cellular Biological Functions Through the Controlled Release of NO from a Porous Tiâ€MOF. Angewandte Chemie - International Edition, 2020, 59, 5135-5143.	7.2	62
119	SPECTRAL ANALYSIS AND INTERPRETATION OF THE Î³-RAY EMISSION FROM THE STARBURST GALAXY NGC 253. Astrophysical Journal, 2012, 757, 158.	1.6	61
120	Impact of the Metal Centre and Functionalization on the Mechanical Behaviour of MILâ€53 Metalâ€“Organic Frameworks. European Journal of Inorganic Chemistry, 2016, 2016, 4424-4429.	1.0	60
121	Covalent and Selective Grafting of Polyethylene Glycol Brushes at the Surface of ZIF-8 for the Processing of Membranes for Pervaporation. ACS Sustainable Chemistry and Engineering, 2019, 7, 6629-6639.	3.2	60
122	Highly Selective Removal of Perfluorinated Contaminants by Adsorption on Allâ€Silica Zeolite Beta. Angewandte Chemie - International Edition, 2020, 59, 14086-14090.	7.2	60
123	Modeling the Effect of Hydration in Zeolite Na+â^'Mordenite. Journal of Physical Chemistry B, 2004, 108, 3739-3745.	1.2	59
124	Physics Behind the Guest-Assisted Structural Transitions of a Porous Metalâ^'Organic Framework Material. Journal of Physical Chemistry Letters, 2010, 1, 2810-2815.	2.1	59
125	Multivariable Sieving and Hierarchical Recognition for Organic Toxics in Nonhomogeneous Channel of MOFs. CheM, 2019, 5, 1337-1350.	5.8	59
126	Molecular Dynamics Simulation of the Cation Motion upon Adsorption of CO2in Faujasite Zeolite Systems. Journal of Physical Chemistry B, 2006, 110, 14372-14378.	1.2	58

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127	Investigation of CO2 adsorption in Faujasite systems: Grand Canonical Monte Carlo and molecular dynamics simulations based on a new derived Na+â€“CO2 force field. Microporous and Mesoporous Materials, 2007, 99, 70-78.	2.2	58
128	A new aluminium-based microporous metalâ€“organic framework: Al(BTB) (BTB =) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702 Td (1,3,5-b	2.2	58
129	Rietveld Refinement of MILâ€160 and Its Structural Flexibility Upon H₂O and N₂ Adsorption. European Journal of Inorganic Chemistry, 2018, 2018, 3626-3632.	1.0	58
130	Toward a Rational Design of Titanium Metal-Organic Frameworks. Matter, 2020, 2, 440-450.	5.0	58
131	Enhanced Polymer Crystallinity in Mixed-Matrix Membranes Induced by Metalâ€“Organic Framework Nanosheets for Efficient CO₂ Capture. ACS Applied Materials & Interfaces, 2018, 10, 43095-43103.	4.0	55
132	Diffusion of Methanol in Zeolite NaY:Â A Molecular Dynamics Study. Journal of Physical Chemistry B, 2007, 111, 2836-2844.	1.2	54
133	Estimation of the breathing energy of flexible MOFs by combining TGA and DSC techniques. Chemical Communications, 2009, , 2733.	2.2	54
134	Structure and properties of Al-MIL-53-ADP, a breathing MOF based on the aliphatic linker molecule adipic acid. Dalton Transactions, 2016, 45, 4179-4186.	1.6	54
135	Engineering Structural Dynamics of Zirconium Metalâ€“Organic Frameworks Based on Natural C4 Linkers. Journal of the American Chemical Society, 2019, 141, 17207-17216.	6.6	54
136	Exploration of the mechanical behavior of metal organic frameworks UiO-66(Zr) and MIL-125(Ti) and their NH₂functionalized versions. Dalton Transactions, 2016, 45, 4283-4288.	1.6	53
137	Adsorption Contraction Mechanics: Understanding Breathing Energetics in Isoreticular Metalâ€“Organic Frameworks. Journal of Physical Chemistry C, 2018, 122, 19171-19179.	1.5	52
138	Diffusion of Binary CO₂/CH₄ Mixtures in the MIL-47(V) and MIL-53(Cr) Metalâ€“Organic Framework Type Solids: A Combination of Neutron Scattering Measurements and Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2013, 117, 11275-11284.	1.5	51
139	Gas Adsorption and Separation by the Al-Based Metalâ€“Organic Framework MIL-160. Journal of Physical Chemistry C, 2017, 121, 26822-26832.	1.5	51
140	Unraveling the Water Adsorption Mechanism in the Mesoporous MIL-100(Fe) Metalâ€“Organic Framework. Journal of Physical Chemistry C, 2019, 123, 23014-23025.	1.5	51
141	Influence of the Organic Ligand Functionalization on the Breathing of the Porous Iron Terephthalate Metal Organic Framework Type Material upon Hydrocarbon Adsorption. Journal of Physical Chemistry C, 2011, 115, 18683-18695.	1.5	50
142	How Interpenetration Ensures Rigidity and Permanent Porosity in a Highly Flexible Hybrid Solid. Chemistry of Materials, 2012, 24, 2486-2492.	3.2	50
143	Exploration of the Long-Chain N-Alkanes Adsorption and Diffusion in the MOF-Type MIL-47 (V) Material by Combining Experimental and Molecular Simulation Tools. Journal of Physical Chemistry C, 2011, 115, 13868-13876.	1.5	49
144	Combining the Monte Carlo Technique with 29SI NMR Spectroscopy:â€‰ Simulations of Cation Locations in Zeolites with Various Si/Al Ratios. Journal of Physical Chemistry B, 2001, 105, 9157-9161.	1.2	48

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145	Disclosing the Role of Defectâ€Engineered Metalâ€“Organic Frameworks in Mixed Matrix Membranes for Efficient CO₂ Separation: A Joint Experimentalâ€Computational Exploration. Advanced Functional Materials, 2021, 31, 2103973.	7.8	47
146	Porous Metalâ€“Organic Framework CUK-1 for Adsorption Heat Allocation toward Green Applications of Natural Refrigerant Water. ACS Applied Materials & Interfaces, 2019, 11, 25778-25789.	4.0	45
147	Lithium Doping of Multiwalled Carbon Nanotubes Produced by Catalytic Decomposition. Nano Letters, 2001, 1, 75-79.	4.5	44
148	Location and de-trapping energy of sodium ions in dehydrated X and Y faujasites determined by dielectric relaxation spectroscopy. Microporous and Mesoporous Materials, 2008, 109, 413-419.	2.2	44
149	Diffusion of Xylene Isomers in the MIL-47(V) MOF Material: A Synergic Combination of Computational and Experimental Tools. Journal of Physical Chemistry C, 2013, 117, 6293-6302.	1.5	44
150	Molecular Insight into Fluorocarbon Adsorption in Pore Expanded Metalâ€“Organic Framework Analogs. Journal of the American Chemical Society, 2020, 142, 3002-3012.	6.6	44
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