Philip L Llewellyn

List of Publications by Year
in descending order

224 papers	20,999 citations	8172 76 h-index	10152 140 g-index
234 all docs	234 docs citations	234 times ranked	15242 citing authors

#	ARTICLE	IF	CITATIONS
1	High Uptakes of CO₂ and CH₄ in Mesoporous Metalâ€"Organic Frameworks MIL-100 and MIL-101. Langmuir, 2008, 24, 7245-7250.	1.6	1,067
2	Different Adsorption Behaviors of Methane and Carbon Dioxide in the Isotypic Nanoporous Metal Terephthalates MIL-53 and MIL-47. Journal of the American Chemical Society, 2005, 127, 13519-13521.	6.6	1,005
3	Methane storage in flexible metalâ€"organic frameworks with intrinsic thermal management. Nature, 2015, 527, 357-361.	13.7	817
4	Is the bet equation applicable to microporous adsorbents?. Studies in Surface Science and Catalysis, 2007, 160, 49-56.	1.5	759
5	Hydrogen Storage in the Giant-Pore Metalâ€"Organic Frameworks MIL-100 and MIL-101. Angewandte Chemie - International Edition, 2006, 45, 8227-8231.	7.2	716
6	Why hybrid porous solids capture greenhouse gases?. Chemical Society Reviews, 2011, 40, 550-562.	18.7	603
7	Controlled Reducibility of a Metalâ€"Organic Framework with Coordinatively Unsaturated Sites for Preferential Gas Sorption. Angewandte Chemie - International Edition, 2010, 49, 5949-5952.	7.2	526
8	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
9	How Hydration Drastically Improves Adsorption Selectivity for CO2 over CH4 in the Flexible Chromium Terephthalate MIL-53. Angewandte Chemie - International Edition, 2006, 45, 7751-7754.	7.2	412
10	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
11	MIL-96, a Porous Aluminum Trimesate 3D Structure Constructed from a Hexagonal Network of 18-Membered Rings andÎ¼3-Oxo-Centered Trinuclear Units. Journal of the American Chemical Society, 2006, 128, 10223-10230.	6.6	386
12	Functionalizing porous zirconium terephthalate UiO-66(Zr) for natural gas upgrading: a computational exploration. Chemical Communications, 2011, 47, 9603.	2.2	345
13	A Water Stable Metalâ€"Organic Framework with Optimal Features for CO₂ Capture. Angewandte Chemie - International Edition, 2013, 52, 10316-10320.	7.2	303
14	Energyâ€Efficient Dehumidification over Hierachically Porous Metalâ€"Organic Frameworks as Advanced Water Adsorbents. Advanced Materials, 2012, 24, 806-810.	11.1	298
15	Amine-modified MCM-41 mesoporous silica for carbon dioxide capture. Microporous and Mesoporous Materials, 2011, 143, 174-179.	2.2	289
16	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
17	Amine-modified SBA-12 mesoporous silica for carbon dioxide capture: Effect of amine basicity on sorption properties. Microporous and Mesoporous Materials, 2008, 116, 358-364.	2.2	272
18	Effect of NH2 and CF3 functionalization on the hydrogen sorption properties of MOFs. Dalton Transactions, 2011, 40, 4879.	1.6	257

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19	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
20	Hydrocarbon Adsorption in the Flexible Metal Organic Frameworks MIL-53(Al, Cr). Journal of the American Chemical Society, 2008, 130, 16926-16932.	6.6	244
21	Synthesis of MIL-102, a Chromium Carboxylate Metalâˆ’Organic Framework, with Gas Sorption Analysis. Journal of the American Chemical Society, 2006, 128, 14889-14896.	6.6	229
22	Study of Carbon Dioxide Adsorption on Mesoporous Aminopropylsilane-Functionalized Silica and Titania Combining Microcalorimetry and in Situ Infrared Spectroscopy. Journal of Physical Chemistry C, 2009, 113, 21726-21734.	1.5	220
23	Multistep N₂ Breathing in the Metalâˆ’Organic Framework Co(1,4-benzenedipyrazolate). Journal of the American Chemical Society, 2010, 132, 13782-13788.	6.6	220
24	Functionalised micro-/mesoporous silica for the adsorption of carbon dioxide. Microporous and Mesoporous Materials, 2007, 99, 79-85.	2.2	216
25	Using Pressure to Provoke the Structural Transition of Metalâ€“Organic Frameworks. Angewandte Chemie - International Edition, 2010, 49, 7526-7529.	7.2	200
26	How Water Fosters a Remarkable 5-Fold Increase in Low-Pressure CO₂ Uptake within Mesoporous MIL-100(Fe). Journal of the American Chemical Society, 2012, 134, 10174-10181.	6.6	198
27	Infrared study of the influence of reducible iron(iii) metal sites on the adsorption of CO, CO2, propane, propene and propyne in the mesoporous metalâ€“organic framework MIL-100. Physical Chemistry Chemical Physics, 2011, 13, 11748.	1.3	192
28	An Evaluation of UiOâ€66 for Gasâ€Based Applications. Chemistry - an Asian Journal, 2011, 6, 3270-3280.	1.7	192
29	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
30	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
31	CH4 storage and CO2 capture in highly porous zirconium oxide based metalâ€“organic frameworks. Chemical Communications, 2012, 48, 9831.	2.2	180
32	Water Sorption on Mesoporous Aluminosilicate MCM-41. Langmuir, 1995, 11, 574-577.	1.6	179
33	Structural Transformations and Adsorption of Fuel-Related Gases of a Structurally Responsive Nickel Phosphonate Metalâˆ’Organic Framework, Ni-STA-12. Journal of the American Chemical Society, 2008, 130, 15967-15981.	6.6	175
34	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
35	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
36	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

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37	Effect of pore size on adsorbate condensation and hysteresis within a potential model adsorbent: M41S. Microporous Materials, 1994, 3, 345-349.	1.6	146
38	Understanding CO₂ Adsorption in CuBTC MOF: Comparing Combined DFTâ€“ab Initio Calculations with Microcalorimetry Experiments. Journal of Physical Chemistry C, 2011, 115, 17925-17933.	1.5	146
39	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
40	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
41	A robust amino-functionalized titanium(iv) based MOF for improved separation of acid gases. Chemical Communications, 2013, 49, 10082.	2.2	135
42	An Adsorbent Performance Indicator as a First Step Evaluation of Novel Sorbents for Gas Separations: Application to Metalâ€“Organic Frameworks. Langmuir, 2013, 29, 3301-3309.	1.6	131
43	Step-wise dealumination of natural clinoptilolite: Structural and physicochemical characterization. Microporous and Mesoporous Materials, 2010, 135, 187-196.	2.2	129
44	Tuning the breathing behaviour of MIL-53 by cation mixing. Chemical Communications, 2012, 48, 10237.	2.2	129
45	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
46	Effect of the organic functionalization of flexible MOFs on the adsorption of CO2. Journal of Materials Chemistry, 2012, 22, 10266.	6.7	125
47	Gas adsorption microcalorimetry and modelling to characterise zeolites and related materials. Comptes Rendus Chimie, 2005, 8, 283-302.	0.2	124
48	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
49	Adsorption by MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction. 1. Argon, krypton, and methane. Langmuir, 1993, 9, 1846-1851.	1.6	122
50	Adsorption by MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction. 2. Nitrogen and carbon monoxide. Langmuir, 1993, 9, 1852-1856.	1.6	120
51	Evidence of CO2 molecule acting as an electron acceptor on a nanoporous metalâ€“organic-framework MIL-53 or Cr3+(OH)(O2Câ€“C6H4â€“CO2). Chemical Communications, 2007, , 3291.	2.2	117
52	A Robust Infinite Zirconium Phenolate Building Unit to Enhance the Chemical Stability of Zr MOFs. Angewandte Chemie - International Edition, 2015, 54, 13297-13301.	7.2	116
53	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
54	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

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55	Self and Transport Diffusivity of CO₂ in the Metalâˆ’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
56	A Method for Screening the Potential of MOFs as CO₂ Adsorbents in Pressure Swing Adsorption Processes. ChemSusChem, 2012, 5, 762-776.	3.6	109
57	Mechanical energy storage performance of an aluminum fumarate metalâ€“organic framework. Chemical Science, 2016, 7, 446-450.	3.7	103
58	Occurrence of Uncommon Infinite Chains Consisting of Edge-Sharing Octahedra in a Porous Metal Organic Framework-Type Aluminum Pyromellitate Al₄(OH)₈[C₁₀O₈H₂] (MIL-120): Synthesis, Structure, and Gas Sorption Properties. Chemistry of Materials, 2009, 21, 5783-5791.	3.2	102
59	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
60	Metal-organic framework crystal-glass composites. Nature Communications, 2019, 10, 2580.	5.8	97
61	Adsorption of CO₂ on amine-functionalised MCM-41: experimental and theoretical studies. Physical Chemistry Chemical Physics, 2015, 17, 11095-11102.	1.3	93
62	Calcination of the MCMâ€41 mesophase: mechanism of surfactant thermal degradation and evolution of the porosity. Journal of Materials Chemistry, 1999, 9, 2843-2849.	6.7	91
63	Single Crystal X-ray Diffraction Studies of Carbon Dioxide and Fuel-Related Gases Adsorbed on the Small Pore Scandium Terephthalate Metal Organic Framework, Sc₂(O₂CC₆H₄CO₂)₃. Langmuir, 2009, 25, 3618-3626.	1.6	91
64	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
65	Screening the Effect of Water Vapour on Gas Adsorption Performance: Application to CO₂ Capture from Flue Gas in Metalâ€“Organic Frameworks. ChemSusChem, 2017, 10, 1543-1553.	3.6	89
66	Tailoring the separation properties of flexible metal-organic frameworks using mechanical pressure. Nature Communications, 2020, 11, 1216.	5.8	88
67	Role of Structural Defects in the Adsorption and Separation of C3 Hydrocarbons in Zr-Fumarate-MOF (MOF-801). Chemistry of Materials, 2019, 31, 8413-8423.	3.2	87
68	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
69	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
70	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
71	Ozone treatment for the removal of surfactant to form MCM-41 type materials. Chemical Communications, 1998, , 2203-2204.	2.2	82
72	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

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73	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
74	Separation of CO2â€“CH4 mixtures in the mesoporous MIL-100(Cr) MOF: experimental and modelling approaches. Dalton Transactions, 2012, 41, 4052.	1.6	78
75	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
76	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
77	Conformation-Controlled Sorption Properties and Breathing of the Aliphatic Al-MOF [Al(OH)(CDC)]. Inorganic Chemistry, 2014, 53, 4610-4620.	1.9	74
78	Synthesis of Bi2O3 by controlled transformation rate thermal analysis: a new route for this oxide?. Solid State Ionics, 2003, 157, 163-169.	1.3	73
79	Towards general network architecture design criteria for negative gas adsorption transitions in ultraporous frameworks. Nature Communications, 2019, 10, 3632.	5.8	73
80	MCM-41 and related materials as media for controlled polymerization processes. Studies in Surface Science and Catalysis, 1994, 84, 2013-2020.	1.5	68
81	Solâ€“gel synthesis and characterization of Ce doped-BaTiO3. Journal of the European Ceramic Society, 2006, 26, 3241-3246.	2.8	66
82	A Water Stable Metalâ€“Organic Framework with Optimal Features for CO₂ Capture. Angewandte Chemie, 2013, 125, 10506-10510.	1.6	66
83	Mesoporous Silica Modified with Titania:Â Structure and Thermal Stability. Chemistry of Materials, 2006, 18, 3184-3191.	3.2	65
84	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
85	Direct accessibility of mixed-metal (<scp>iii</scp>/<scp>ii</scp>) acid sites through the rational synthesis of porous metal carboxylates. Chemical Communications, 2015, 51, 10194-10197.	2.2	63
86	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
87	Influence of [Mo₆Br₈F₆]^{2âˆ’}Cluster Unit Inclusion within the Mesoporous Solid MIL-101 on Hydrogen Storage Performance. Langmuir, 2010, 26, 11283-11290.	1.6	59
88	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
89	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
90	Using water adsorption measurements to access the chemistry of defects in the metalâ€“organic framework UiO-66. CrystEngComm, 2017, 19, 4137-4141.	1.3	58

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91	Preparation, characterisation and crystal structure of two zinc(II) benzoate complexes with pyridine-based ligands nicotinamide and methyl-3-pyridylcarbamate. Inorganica Chimica Acta, 2004, 357, 2049-2059.	1.2	56
92	Argon and Nitrogen Adsorption in Disordered Nanoporous Carbons:Â Simulation and Experiment. Langmuir, 2005, 21, 4431-4440.	1.6	56
93	Combined Theoretical and Experimental Investigation of CO Adsorption on Coordinatively Unsaturated Sites in CuBTC MOF. ChemPhysChem, 2012, 13, 488-495.	1.0	53
94	Adsorption Contraction Mechanics: Understanding Breathing Energetics in Isoreticular Metalâ€"Organic Frameworks. Journal of Physical Chemistry C, 2018, 122, 19171-19179.	1.5	52
95	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
96	Thermal Stability and Thermodynamic Properties of Hybrid Proton-Conducting Polyaryl Etherketones. Journal of Physical Chemistry B, 2006, 110, 15817-15823.	1.2	49
97	A comparison between melting-solidification and capillary condensation hysteresis in mesoporous materials: application to the interpretation of thermoporometry data. Thermochimica Acta, 2004, 421, 11-18.	1.2	48
98	Impregnation of vitamin E acetate on silica mesoporous phases using supercritical carbon dioxide. Journal of Supercritical Fluids, 2009, 51, 278-286.	1.6	48
99	Experimental Screening of Porous Materials for High Pressure Gas Adsorption and Evaluation in Gas Separations: Application to MOFs (MIL-100 and CAU-10). ACS Combinatorial Science, 2013, 15, 111-119.	3.8	48
100	Adsorption of Propane and Propylene on CuBTC Metalâ€"Organic Framework: Combined Theoretical and Experimental Investigation. Journal of Physical Chemistry C, 2013, 117, 11159-11167.	1.5	48
101	Some aspects of thermal decomposition of NiC2O4Â·2H2O. Thermochimica Acta, 2007, 466, 57-62.	1.2	47
102	The Direct Heat Measurement of Mechanical Energy Storage Metalâ€"Organic Frameworks. Angewandte Chemie - International Edition, 2015, 54, 4626-4630.	7.2	47
103	Study of Gypsum Dehydration by Controlled Transformation Rate Thermal Analysis (CRTA). Journal of Solid State Chemistry, 1998, 139, 37-44.	1.4	46
104	Investigation of the mechanism of the surfactant removal from a mesoporous alumina prepared in the presence of sodium dodecylsulfate. Microporous and Mesoporous Materials, 2001, 44-45, 195-201.	2.2	46
105	Tuning the Properties of MOFâ€808 via Defect Engineering and Metal Nanoparticle Encapsulation. Chemistry - A European Journal, 2021, 27, 6804-6814.	1.7	46
106	In situ surfactant removal from MCM-type mesostructures by ozone treatment. Journal of Materials Chemistry, 2001, 11, 589-593.	6.7	45
107	A co-templating route to the synthesis of Cu SAPO STA-7, giving an active catalyst for the selective catalytic reduction of NO. Microporous and Mesoporous Materials, 2011, 146, 36-47.	2.2	44
108	Direct synthesis of mesoporous silica presenting large and tunable pores using BAB triblock copolymers: Influence of each copolymer block on the porous structure. Microporous and Mesoporous Materials, 2008, 112, 612-620.	2.2	43

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109	On Defining a Simple Empirical Relationship to Predict the Pore Size of Mesoporous Silicas Prepared from PEO-<i>b</i>-PS Diblock Copolymers. Chemistry of Materials, 2009, 21, 48-55.	3.2	43
110	Adsorption of Carbon Dioxide on Mesoporous Zirconia: Microcalorimetric Measurements, Adsorption Isotherm Modeling, and Density Functional Theory Calculations. Journal of Physical Chemistry C, 2011, 115, 10097-10103.	1.5	43
111	Evaluation of MIL-47(V) for CO₂-Related Applications. Journal of Physical Chemistry C, 2013, 117, 962-970.	1.5	42
112	Vaporâ€Phase Linker Exchange of the Metalâ€“Organic Framework ZIFâ€8: A Solventâ€Free Approach to Postâ€synthetic Modification. Angewandte Chemie - International Edition, 2019, 58, 18471-18475.	7.2	42
113	Adsorption of carbon dioxide in SAPO STA-7 and AlPO-18: Grand Canonical Monte Carlo simulations andÂmicrocalorimetry measurements. Adsorption, 2008, 14, 207-213.	1.4	41
114	Observing the Effects of Shaping on Gas Adsorption in Metalâ€Organic Frameworks. European Journal of Inorganic Chemistry, 2016, 2016, 4416-4423.	1.0	40
115	Adsorption of Non Polar and Quadrupolar Gases in Siliceous Faujasite: Molecular Simulations and Experiments. Adsorption, 2005, 11, 331-336.	1.4	39
116	Controlled Rate Thermal Analysis of kaolinite dehydroxylation: effect of water vapour pressure on the mechanism. Thermochimica Acta, 2002, 390, 123-132.	1.2	38
117	CO2 adsorption in LiY and NaY at high temperature: molecularÂsimulations compared to experiments. Adsorption, 2007, 13, 453-460.	1.4	38
118	Highly Selective CO₂ Capture by Small Pore Scandium-Based Metalâ€“Organic Frameworks. Journal of Physical Chemistry C, 2015, 119, 23592-23598.	1.5	38
119	Glass transition, freezing and melting of liquids confined in the mesoporous silicate MCM-41. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1847-1855.	0.6	36
120	Highly Efficient Proton Conduction in a Three-Dimensional Titanium Hydrogen Phosphate. Chemistry of Materials, 2017, 29, 7263-7271.	3.2	35
121	Thermodynamic and structural properties of physisorbed phases within the model mesoporous adsorbent M41S (pore diameter 2.5 nm). Surface Science, 1996, 352-354, 468-474.	0.8	34
122	Modeling of pore wall amorphous structures: influence of wall heterogeneity on the mechanism of adsorption. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 241, 137-142.	2.3	34
123	Adsorption of argon and nitrogen in X-faujasites: relationships for understanding the interactions with monovalent and divalent cations. Microporous and Mesoporous Materials, 2005, 79, 53-59.	2.2	34
124	Using Pressure to Provoke the Structural Transition of Metalâ€“Organic Frameworks. Angewandte Chemie, 2010, 122, 7688-7691.	1.6	34
125	pyGAPS: a Python-based framework for adsorption isotherm processing and material characterisation. Adsorption, 2019, 25, 1533-1542.	1.4	33
126	Influence of Solventâ€Like Sidechains on the Adsorption of Light Hydrocarbons in Metalâ€“Organic Frameworks. Chemistry - A European Journal, 2015, 21, 18764-18769.	1.7	32

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127	High pressure methane adsorption on microporous carbon monoliths prepared by olives stones. Materials Letters, 2013, 99, 184-187.	1.3	31
128	Microporous Leadâ€“Organic Framework for Selective CO₂ Adsorption and Heterogeneous Catalysis. Inorganic Chemistry, 2018, 57, 1774-1786.	1.9	31
129	The CO2 adsorption behavior study on activated carbon synthesized from olive waste. Journal of CO2 Utilization, 2020, 42, 101292.	3.3	31
130	Diversity of carboxylate coordination in two novel zinc(II) cinnamate complexes. Inorganic Chemistry Communication, 2007, 10, 27-32.	1.8	30
131	Engineering micromechanics of soft porous crystals for negative gas adsorption. Chemical Science, 2020, 11, 9468-9479.	3.7	30
132	Metalâ€Organic Frameworks as Catalyst Supports: Influence of Lattice Disorder on Metal Nanoparticle Formation. Chemistry - A European Journal, 2018, 24, 7498-7506.	1.7	29
133	Synthesis of ZIFâ€93/11 Hybrid Nanoparticles via Postâ€Synthetic Modification of ZIFâ€93 and Their Use for H₂/CO₂ Separation. Chemistry - A European Journal, 2018, 24, 11211-11219.	1.7	27
134	A microcalorimetric comparison of the adsorption of various gases on two microporous adsorbents: a model aluminophosphate and a natural clay. Thermochimica Acta, 1992, 204, 79-88.	1.2	26
135	Zinc(II)-benzoato complexes immobilised in mesoporous silica host. Microporous and Mesoporous Materials, 2005, 83, 125-135.	2.2	25
136	Simulation of the adsorption properties of CH4 in faujasites up to high pressure: Comparison with microcalorimetry. Microporous and Mesoporous Materials, 2006, 89, 96-102.	2.2	25
137	Dehydroxylation mechanisms of polyphosphate glasses in relation to temperature and pressure. Journal of Non-Crystalline Solids, 1997, 222, 415-421.	1.5	24
138	High-Resolution N₂ Adsorption Isotherms at 77.4 K: Critical Effect of the He Used During Calibration. Journal of Physical Chemistry C, 2013, 117, 16885-16889.	1.5	22
139	Preparation of reactive nickel oxide by the controlled thermolysis of hexahydrated nickel nitrate. Solid State Ionics, 1997, 101-103, 1293-1298.	1.3	21
140	Comparing the Basic Phenomena Involved in Three Methods of Pore-size Characterization: Gas Adsorption, Liquid Intrusion and Thermoporometry. Particle and Particle Systems Characterization, 2004, 21, 128-137.	1.2	21
141	Monte Carlo simulations of krypton adsorption in nanopores: Influence of pore-wall heterogeneity on the adsorption mechanism. Low Temperature Physics, 2003, 29, 880-882.	0.2	20
142	Acetylene and argon adsorption in a supramolecular organic zeolite. Physical Chemistry Chemical Physics, 2012, 14, 311-317.	1.3	20
143	Functionalization of Zr-based MOFs with alkyl and perfluoroalkyl groups: the effect on the water sorption behavior. Dalton Transactions, 2015, 44, 19687-19692.	1.6	20
144	Metalâ€“Organic Frameworks from Divalent Metals and 1,4-Benzenedicarboxylate with Bidentate Pyridine-<i>N</i>-oxide Co-ligands. Crystal Growth and Design, 2015, 15, 891-899.	1.4	19

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145	Location of CO₂during its uptake by the flexible porous metalâ€“organic framework MIL-53(Fe): a high resolution powder X-ray diffraction study. CrystEngComm, 2015, 17, 422-429.	1.3	19
146	On the physisorption isotherm of the MFI-type zeolites: The high-pressure hysteresis. Microporous Materials, 1993, 1, 247-256.	1.6	18
147	Emanation thermal analysis study of synthetic gibbsite. Journal of Thermal Analysis and Calorimetry, 2003, 71, 773-782.	2.0	18
148	Diffusion of CO2 in NaY and NaX Faujasite systems: Quasi-elastic neutron scattering experiments and molecular dynamics simulations. European Physical Journal: Special Topics, 2007, 141, 127-132.	1.2	18
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