

Christopher E Wilmer

List of Publications by Year in descending order

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57
papers

9,547
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145106
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docs citations

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times ranked

13204
citing authors

#	ARTICLE	IF	CITATIONS
1	Hybridization from Guest-Host Interactions Reduces the Thermal Conductivity of Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2022, 144, 3603-3613.	6.6	23
2	VOC Mixture Sensing with a MOF Film Sensor Array: Detection and Discrimination of Xylene Isomers and Their Ternary Blends. <i>ACS Sensors</i> , 2022, 7, 1666-1675.	4.0	36
3	In Situ Nuclear Magnetic Resonance Investigation of Molecular Adsorption and Kinetics in Metal-Organic Framework UiO-66. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 892-899.	2.1	10
4	Size Discrimination of Carbohydrates via Conductive Carbon Nanotube@Metal Organic Framework Composites. <i>Journal of the American Chemical Society</i> , 2021, 143, 8022-8033.	6.6	16
5	A framework for modeling fraud in E-waste management. <i>Resources, Conservation and Recycling</i> , 2021, 171, 105613.	5.3	10
6	Towards Comprehensive Exploration of the Physisorption Space in Porous Pseudomaterials Using an Iterative Mutation Search Algorithm. <i>Journal of Chemical Physics</i> , 2021, 155, 234114.	1.2	1
7	Computational Design of MOF-Based Electronic Noses for Dilute Gas Species Detection: Application to Kidney Disease Detection. <i>ACS Sensors</i> , 2021, 6, 4425-4434.	4.0	12
8	Silver Nanofilament Formation Dynamics in a Polymer-Ionic Liquid Thin Film by Direct Write. <i>Advanced Functional Materials</i> , 2020, 30, 1907950.	7.8	4
9	Influence of Missing Linker Defects on the Thermal Conductivity of Metal-Organic Framework HKUST-1. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 56172-56177.	4.0	25
10	Observation of reduced thermal conductivity in a metal-organic framework due to the presence of adsorbates. <i>Nature Communications</i> , 2020, 11, 4010.	5.8	97
11	Effect of Flexibility on Thermal Transport in Breathing Porous Crystals. <i>Journal of Physical Chemistry C</i> , 2020, 124, 18604-18608.	1.5	13
12	Enhanced Thermal Conductivity in a Diamine-Appended Metal-Organic Framework as a Result of Cooperative CO ₂ Adsorption. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 44617-44621.	4.0	10
13	Modeling of Diffusion of Acetone in UiO-66. <i>Journal of Physical Chemistry C</i> , 2020, 124, 28469-28478.	1.5	23
14	Modeling diffusion of nanocars on a Cu (110) surface. <i>Molecular Systems Design and Engineering</i> , 2020, 5, 1186-1192.	1.7	5
15	Genetic Algorithm Design of MOF-based Gas Sensor Arrays for CO ₂ -in-Air Sensing. <i>Sensors</i> , 2020, 20, 924.	2.1	10
16	Heat Flux for Many-Body Interactions: Corrections to LAMMPS. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 5579-5587.	2.3	80
17	The role of molecular modelling and simulation in the discovery and deployment of metal-organic frameworks for gas storage and separation. <i>Molecular Simulation</i> , 2019, 45, 1082-1121.	0.9	74
18	High-throughput computational prediction of the cost of carbon capture using mixed matrix membranes. <i>Energy and Environmental Science</i> , 2019, 12, 1255-1264.	15.6	62

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19	Intelligent Selection of Metal-Organic Framework Arrays for Methane Sensing via Genetic Algorithms. <i>ACS Sensors</i> , 2019, 4, 1586-1593.	4.0	44
20	Optimizing information content in MOF sensor arrays for analyzing methane-air mixtures. <i>Sensors and Actuators B: Chemical</i> , 2018, 267, 483-493.	4.0	36
21	Thermal Transport in Interpenetrated Metal-Organic Frameworks. <i>Chemistry of Materials</i> , 2018, 30, 2281-2286.	3.2	40
22	Transient Mass and Thermal Transport during Methane Adsorption into the Metal-Organic Framework HKUST-1. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2400-2406.	4.0	46
23	High-Pressure Methane Adsorption in Porous Lennard-Jones Crystals. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 4275-4281.	2.1	9
24	(Invited) Progress Towards the Design of Metal-Organic Frameworks with Targeted Thermal Conductivities. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
25	Computational Design of Metal-Organic Framework Arrays for Gas Sensing: Influence of Array Size and Composition on Sensor Performance. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6033-6038.	1.5	50
26	MOFs modeling and theory: general discussion. <i>Faraday Discussions</i> , 2017, 201, 233-245.	1.6	4
27	Efficiently mapping structure-property relationships of gas adsorption in porous materials: application to Xe adsorption. <i>Faraday Discussions</i> , 2017, 201, 221-232.	1.6	5
28	Discovery of hypothetical hetero-interpenetrated MOFs with arbitrarily dissimilar topologies and unit cell shapes. <i>CrystEngComm</i> , 2017, 19, 4497-4504.	1.3	14
29	Effect of pore size and shape on the thermal conductivity of metal-organic frameworks. <i>Chemical Science</i> , 2017, 8, 583-589.	3.7	120
30	Layer-by-Layer Assembled Films of Perylene Diimide- and Squaraine-Containing Metal-Organic Framework-like Materials: Solar Energy Capture and Directional Energy Transfer. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 24983-24988.	4.0	44
31	Mechanisms of Heat Transfer in Porous Crystals Containing Adsorbed Gases: Applications to Metal-Organic Frameworks. <i>Physical Review Letters</i> , 2016, 116, 025902.	2.9	64
32	The effect of pyridine modification of Ni-DOBDC on CO ₂ capture under humid conditions. <i>Chemical Communications</i> , 2014, 50, 3296-3298.	2.2	52
33	Metallacarborane-Based Metal-Organic Framework with a Complex Topology. <i>Crystal Growth and Design</i> , 2014, 14, 1324-1330.	1.4	28
34	Exploring the Limits of Methane Storage and Delivery in Nanoporous Materials. <i>Journal of Physical Chemistry C</i> , 2014, 118, 6941-6951.	1.5	108
35	Enhanced Gas Sorption Properties and Unique Behavior toward Liquid Water in a Pillared-Paddlewheel Metal-Organic Framework Transmetalated with Ni(II). <i>Inorganic Chemistry</i> , 2014, 53, 10432-10436.	1.9	24
36	High-Throughput Screening of Porous Crystalline Materials for Hydrogen Storage Capacity near Room Temperature. <i>Journal of Physical Chemistry C</i> , 2014, 118, 5383-5389.	1.5	84

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37	Carborane-Based Metal-Organic Framework with High Methane and Hydrogen Storage Capacities. <i>Chemistry of Materials</i> , 2013, 25, 3539-3543.	3.2	115
38	Light-Harvesting and Ultrafast Energy Migration in Porphyrin-Based Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2013, 135, 862-869.	6.6	510
39	Gram-scale, high-yield synthesis of a robust metal-organic framework for storing methane and other gases. <i>Energy and Environmental Science</i> , 2013, 6, 1158.	15.6	219
40	Simultaneously high gravimetric and volumetric methane uptake characteristics of the metal-organic framework NU-111. <i>Chemical Communications</i> , 2013, 49, 2992.	2.2	137
41	Large-Scale Quantitative Structure-Property Relationship (QSPR) Analysis of Methane Storage in Metal-Organic Frameworks. <i>Journal of Physical Chemistry C</i> , 2013, 117, 7681-7689.	1.5	174
42	Large-Scale Generation and Screening of Hypothetical Metal-Organic Frameworks for Applications in Gas Storage and Separations. <i>Topics in Current Chemistry</i> , 2013, 345, 257-289.	4.0	8
43	Structure-property relationships of porous materials for carbon dioxide separation and capture. <i>Energy and Environmental Science</i> , 2012, 5, 9849.	15.6	334
44	Polyporous Metal-Coordination Frameworks. <i>Organic Letters</i> , 2012, 14, 1460-1463.	2.4	47
45	An Extended Charge Equilibration Method. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2506-2511.	2.1	253
46	Metal-Organic Framework Materials with Ultrahigh Surface Areas: Is the Sky the Limit?. <i>Journal of the American Chemical Society</i> , 2012, 134, 15016-15021.	6.6	1,497
47	Designing Higher Surface Area Metal-Organic Frameworks: Are Triple Bonds Better Than Phenyls?. <i>Journal of the American Chemical Society</i> , 2012, 134, 9860-9863.	6.6	198
48	Nanoporous Carbohydrate Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2012, 134, 406-417.	6.6	271
49	Review and Analysis of Molecular Simulations of Methane, Hydrogen, and Acetylene Storage in Metal-Organic Frameworks. <i>Chemical Reviews</i> , 2012, 112, 703-723.	23.0	1,085
50	Thermodynamic analysis of Xe/Kr selectivity in over 137,000 hypothetical metal-organic frameworks. <i>Chemical Science</i> , 2012, 3, 2217.	3.7	248
51	Large-scale screening of hypothetical metal-organic frameworks. <i>Nature Chemistry</i> , 2012, 4, 83-89.	6.6	1,098
52	Towards rapid computational screening of metal-organic frameworks for carbon dioxide capture: Calculation of framework charges via charge equilibration. <i>Chemical Engineering Journal</i> , 2011, 171, 775-781.	6.6	141
53	Precision Assembly of Oppositely and Like-Charged Nanoobjects Mediated by Charge-Induced Dipole Interactions. <i>Nano Letters</i> , 2010, 10, 2275-2280.	4.5	49
54	Nanoscale Forces and Their Uses in Self-Assembly. <i>Small</i> , 2009, 5, 1600-1630.	5.2	1,362

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55	The 'wired' universe of organic chemistry. <i>Nature Chemistry</i> , 2009, 1, 31-36.	6.6	130
56	Mechanical and electrical properties of nanostructured "plastic metals". <i>Journal of Non-Crystalline Solids</i> , 2009, 355, 1313-1317.	1.5	2
57	Self-assembly: from crystals to cells. <i>Soft Matter</i> , 2009, 5, 1110.	1.2	385