Christopher E Wilmer

List of Publications by Year
in descending order

57	9,547	126858	143943
papers	citations	33 h-index	57 g-index

58	58	58	11482
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hybridization from Guestâ€“Host Interactions Reduces the Thermal Conductivity of Metalâ€“Organic Frameworks. Journal of the American Chemical Society, 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. ACS Sensors, 2022, 7, 1666-1675.	4.0	36
3	In Situ Nuclear Magnetic Resonance Investigation of Molecular Adsorption and Kinetics in Metalâ€“Organic Framework UiO-66. Journal of Physical Chemistry Letters, 2021, 12, 892-899.	2.1	10
4	Size Discrimination of Carbohydrates via Conductive Carbon Nanotube@Metal Organic Framework Composites. Journal of the American Chemical Society, 2021, 143, 8022-8033.	6.6	16
5	A framework for modeling fraud in E-waste management. Resources, Conservation and Recycling, 2021, 171, 105613.	5.3	10
6	Towards Comprehensive Exploration of the Physisorption Space in Porous Pseudomaterials Using an Iterative Mutation Search Algorithm. Journal of Chemical Physics, 2021, 155, 234114.	1.2	1
7	Computational Design of MOF-Based Electronic Noses for Dilute Gas Species Detection: Application to Kidney Disease Detection. ACS Sensors, 2021, 6, 4425-4434.	4.0	12
8	Silver Nanofilament Formation Dynamics in a Polymerâ€Ionic Liquid Thin Film by Direct Write. Advanced Functional Materials, 2020, 30, 1907950.	7.8	4
9	Influence of Missing Linker Defects on the Thermal Conductivity of Metalâ€“Organic Framework HKUST-1. ACS Applied Materials & Interfaces, 2020, 12, 56172-56177.	4.0	25
10	Observation of reduced thermal conductivity in a metal-organic framework due to the presence of adsorbates. Nature Communications, 2020, 11, 4010.	5.8	97
11	Effect of Flexibility on Thermal Transport in Breathing Porous Crystals. Journal of Physical Chemistry C, 2020, 124, 18604-18608.	1.5	13
12	Enhanced Thermal Conductivity in a Diamine-Appended Metalâ€“Organic Framework as a Result of Cooperative CO₂ Adsorption. ACS Applied Materials & Interfaces, 2020, 12, 44617-44621.	4.0	10
13	Modeling of Diffusion of Acetone in UiO-66. Journal of Physical Chemistry C, 2020, 124, 28469-28478.	1.5	23
14	Modeling diffusion of nanocars on a Cu (110) surface. Molecular Systems Design and Engineering, 2020, 5, 1186-1192.	1.7	5
15	Genetic Algorithm Design of MOF-based Gas Sensor Arrays for CO2-in-Air Sensing. Sensors, 2020, 20, 924.	2.1	10
16	Heat Flux for Many-Body Interactions: Corrections to LAMMPS. Journal of Chemical Theory and Computation, 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. Molecular Simulation, 2019, 45, 1082-1121.	0.9	74
18	High-throughput computational prediction of the cost of carbon capture using mixed matrix membranes. Energy and Environmental Science, 2019, 12, 1255-1264.	15.6	62

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19	Intelligent Selection of Metalâ€“Organic Framework Arrays for Methane Sensing via Genetic Algorithms. ACS Sensors, 2019, 4, 1586-1593.	4.0	44
20	Optimizing information content in MOF sensor arrays for analyzing methane-air mixtures. Sensors and Actuators B: Chemical, 2018, 267, 483-493.	4.0	36
21	Thermal Transport in Interpenetrated Metalâ€“Organic Frameworks. Chemistry of Materials, 2018, 30, 2281-2286.	3.2	40
22	Transient Mass and Thermal Transport during Methane Adsorption into the Metalâ€“Organic Framework HKUST-1. ACS Applied Materials & Interfaces, 2018, 10, 2400-2406.	4.0	46
23	High-Pressure Methane Adsorption in Porous Lennard-Jones Crystals. Journal of Physical Chemistry Letters, 2018, 9, 4275-4281.	2.1	9
24	(Invited) Progress Towards the Design of Metal-Organic Frameworks with Targeted Thermal Conductivities. ECS Meeting Abstracts, 2018, , .	0.0	0
25	Computational Design of Metalâ€“Organic Framework Arrays for Gas Sensing: Influence of Array Size and Composition on Sensor Performance. Journal of Physical Chemistry C, 2017, 121, 6033-6038.	1.5	50
26	MOFs modeling and theory: general discussion. Faraday Discussions, 2017, 201, 233-245.	1.6	4
27	Efficiently mapping structureâ€“property relationships of gas adsorption in porous materials: application to Xe adsorption. Faraday Discussions, 2017, 201, 221-232.	1.6	5
28	Discovery of hypothetical hetero-interpenetrated MOFs with arbitrarily dissimilar topologies and unit cell shapes. CrystEngComm, 2017, 19, 4497-4504.	1.3	14
29	Effect of pore size and shape on the thermal conductivity of metal-organic frameworks. Chemical Science, 2017, 8, 583-589.	3.7	120
30	Layer-by-Layer Assembled Films of Perylene Diimide- and Squaraine-Containing Metalâ€“Organic Framework-like Materials: Solar Energy Capture and Directional Energy Transfer. ACS Applied Materials & Interfaces, 2016, 8, 24983-24988.	4.0	44
31	Mechanisms of Heat Transfer in Porous Crystals Containing Adsorbed Gases: Applications to Metal-Organic Frameworks. Physical Review Letters, 2016, 116, 025902.	2.9	64
32	The effect of pyridine modification of Niâ€“DOBDC on CO₂ capture under humid conditions. Chemical Communications, 2014, 50, 3296-3298.	2.2	52
33	Metallacarborane-Based Metalâ€“Organic Framework with a Complex Topology. Crystal Growth and Design, 2014, 14, 1324-1330.	1.4	28
34	Exploring the Limits of Methane Storage and Delivery in Nanoporous Materials. Journal of Physical Chemistry C, 2014, 118, 6941-6951.	1.5	108
35	Enhanced Gas Sorption Properties and Unique Behavior toward Liquid Water in a Pillared-Paddlewheel Metalâ€“Organic Framework Transmetalated with Ni(II). Inorganic Chemistry, 2014, 53, 10432-10436.	1.9	24
36	High-Throughput Screening of Porous Crystalline Materials for Hydrogen Storage Capacity near Room Temperature. Journal of Physical Chemistry C, 2014, 118, 5383-5389.	1.5	84

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

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