

# Simon Krause

## List of Publications by Year in descending order

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Version: 2024-02-01

43  
papers

2,518  
citations

236612

25  
h-index

276539

41  
g-index

69  
all docs

69  
docs citations

69  
times ranked

2848  
citing authors

#	ARTICLE	IF	CITATIONS
1	A pressure-amplifying framework material with negative gas adsorption transitions. <i>Nature</i> , 2016, 532, 348-352.	13.7	490
2	Chemistry of Soft Porous Crystals: Structural Dynamics and Gas Adsorption Properties. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15325-15341.	7.2	236
3	A highly porous metal-organic framework, constructed from a cuboctahedral super-molecular building block, with exceptionally high methane uptake. <i>Chemical Communications</i> , 2012, 48, 10841.	2.2	197
4	A new metal-organic framework with ultra-high surface area. <i>Chemical Communications</i> , 2014, 50, 3450.	2.2	178
5	Towards artificial molecular factories from framework-embedded molecular machines. <i>Nature Reviews Chemistry</i> , 2020, 4, 550-562.	13.8	97
6	The effect of crystallite size on pressure amplification in switchable porous solids. <i>Nature Communications</i> , 2018, 9, 1573.	5.8	92
7	Visible-Light-Driven Rotation of Molecular Motors in a Dual-Function Metal-Organic Framework Enabled by Energy Transfer. <i>Journal of the American Chemical Society</i> , 2020, 142, 9048-9056.	6.6	86
8	Proline Functionalization of the Mesoporous Metal-Organic Framework DUT-32. <i>Inorganic Chemistry</i> , 2015, 54, 1003-1009.	1.9	73
9	Illuminating solid gas storage in confined spaces - methane hydrate formation in porous model carbons. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 20607-20614.	1.3	73
10	Towards general network architecture design criteria for negative gas adsorption transitions in ultraporous frameworks. <i>Nature Communications</i> , 2019, 10, 3632.	5.8	73
11	A Stimuli-Responsive Zirconium Metal-Organic Framework Based on Supramolecular Design. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 10676-10680.	7.2	72
12	Tailoring adsorption induced phase transitions in the pillared-layer type metal-organic framework DUT-8(Ni). <i>Dalton Transactions</i> , 2017, 46, 4685-4695.	1.6	68
13	Assembly of metal-organic polyhedra into highly porous frameworks for ethene delivery. <i>Chemical Communications</i> , 2015, 51, 1046-1049.	2.2	65
14	Hydrophilic non-precious metal nitrogen-doped carbon electrocatalysts for enhanced efficiency in oxygen reduction reaction. <i>Chemical Communications</i> , 2015, 51, 17285-17288.	2.2	56
15	Tunable Flexibility and Porosity of the Metal-Organic Framework DUT-49 through Postsynthetic Metal Exchange. <i>Chemistry of Materials</i> , 2020, 32, 889-896.	3.2	54
16	Adsorption Contraction Mechanics: Understanding Breathing Energetics in Isoreticular Metal-Organic Frameworks. <i>Journal of Physical Chemistry C</i> , 2018, 122, 19171-19179.	1.5	52
17	Experimental Evidence of Confined Methane Hydrate in Hydrophilic and Hydrophobic Model Carbons. <i>Journal of Physical Chemistry C</i> , 2019, 123, 24071-24079.	1.5	52
18	In Situ Monitoring of Unique Switching Transitions in the Pressure-Amplifying Flexible Framework Material DUT-49 by High-Pressure <sup>129</sup> Xe NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 5195-5200.	1.5	41

#	ARTICLE	IF	CITATIONS
19	High-Pressure in Situ <sup>129</sup> Xe NMR Spectroscopy: Insights into Switching Mechanisms of Flexible Metal-Organic Frameworks Isorecticular to DUT-49. <i>Chemistry of Materials</i> , 2019, 31, 6193-6201.	3.2	41
20	Influence of precursor porosity on sodium and sulfur promoted iron/carbon Fischer-Tropsch catalysts derived from metal-organic frameworks. <i>Chemical Communications</i> , 2017, 53, 10204-10207.	2.2	36
21	Cooperative light-induced breathing of soft porous crystals via azobenzene buckling. <i>Nature Communications</i> , 2022, 13, 1951.	5.8	33
22	Impact of Defects and Crystal Size on Negative Gas Adsorption in DUT-49 Analyzed by <i>In Situ</i> <sup>129</sup> Xe NMR Spectroscopy. <i>Chemistry of Materials</i> , 2020, 32, 4641-4650.	3.2	31
23	Engineering micromechanics of soft porous crystals for negative gas adsorption. <i>Chemical Science</i> , 2020, 11, 9468-9479.	3.7	30
24	Exploring the thermodynamic criteria for responsive adsorption processes. <i>Chemical Science</i> , 2019, 10, 5011-5017.	3.7	29
25	The impact of crystal size and temperature on the adsorption-induced flexibility of the Zr-based metal-organic framework DUT-98. <i>Beilstein Journal of Nanotechnology</i> , 2019, 10, 1737-1744.	1.5	28
26	Die Chemie verformbarer poröser Kristalle – Strukturdynamik und Gasadsorptionseigenschaften. <i>Angewandte Chemie</i> , 2020, 132, 15438-15456.	1.6	28
27	Solvent-free synthesis of a porous thiophene polymer by mechanochemical oxidative polymerization. <i>Journal of Materials Chemistry A</i> , 2018, 6, 21901-21905.	5.2	24
28	Charting the Complete Thermodynamic Landscape of Gas Adsorption for a Responsive Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2021, 143, 4143-4147.	6.6	21
29	New insights into solvent-induced structural changes of <sup>13</sup> C labelled metal-organic frameworks by solid state NMR. <i>Chemical Communications</i> , 2019, 55, 9140-9143.	2.2	20
30	The role of temperature and adsorbate on negative gas adsorption transitions of the mesoporous metal-organic framework DUT-49. <i>Faraday Discussions</i> , 2021, 225, 168-183.	1.6	19
31	Light-driven molecular motors embedded in covalent organic frameworks. <i>Chemical Science</i> , 2022, 13, 8253-8264.	3.7	19
32	In Situ Imine-Based Linker Formation for the Synthesis of Zirconium MOFs: A Route to CO <sub>2</sub> Capture Materials and Ethylene Oligomerization Catalysts. <i>Inorganic Chemistry</i> , 2020, 59, 350-359.	1.9	18
33	Cooperative and synchronized rotation in motorized porous frameworks: impact on local and global transport properties of confined fluids. <i>Faraday Discussions</i> , 2021, 225, 286-300.	1.6	16
34	Structural Transitions of the Metal-Organic Framework DUT-49(Cu) upon Physi- and Chemisorption Studied by <i>In Situ</i> Electron Paramagnetic Resonance Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5856-5862.	2.1	14
35	Massive Pressure Amplification by Stimulated Contraction of Mesoporous Frameworks**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 11735-11739.	7.2	14
36	Perspectives on the Influence of Crystal Size and Morphology on the Properties of Porous Framework Materials. <i>Frontiers in Chemistry</i> , 2021, 9, 772059.	1.8	11

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37	A Stimuli-Responsive Zirconium Metal-Organic Framework Based on Supramolecular Design. <i>Angewandte Chemie</i> , 2017, 129, 10816-10820.	1.6	9
38	Theoretical and experimental investigations of <sup>129</sup> Xe NMR chemical shift isotherms in metal-organic frameworks. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 25039-25043.	1.3	8
39	Low Temperature Calorimetry Coupled with Molecular Simulations for an In-Depth Characterization of the Guest-Dependent Compliant Behavior of MOFs. <i>Chemistry of Materials</i> , 2020, 32, 3489-3498.	3.2	8
40	Massive Pressure Amplification by Stimulated Contraction of Mesoporous Frameworks**. <i>Angewandte Chemie</i> , 2021, 133, 11841-11845.	1.6	2
41	Novel computational tools: general discussion. <i>Faraday Discussions</i> , 2021, 225, 341-357.	1.6	1
42	Towards complex systems and devices: general discussion. <i>Faraday Discussions</i> , 2021, 225, 431-441.	1.6	0
43	Materials breaking the rules: general discussion. <i>Faraday Discussions</i> , 2021, 225, 255-270.	1.6	0