Lars Heinke

List of Publications by Year
in descending order

107 papers	5,387 citations	66250 44 h-index	104191 69 g-index
117 all docs	117 docs citations	117 times ranked	4887 citing authors

#	Article	IF	Citations
1	Conductivity measurement of ionic liquids confined in the nanopores of metalâ€“organic frameworks: a case study for [BMIM][TFSI] in HKUST-1. Ionics, 2022, 28, 487-494.	1.2	9
2	Stability and Degradation of Metalâ€“Organicâ€Framework Films under Ambient Air Explored by Uptake and Diffusion Experiments. Advanced Materials Interfaces, 2022, 9, 2101947.	1.9	12
3	Mass transfer of toluene in a series of metalâ€“organic frameworks: molecular clusters inside the nanopores cause slow and step-like release. Physical Chemistry Chemical Physics, 2022, 24, 3994-4001.	1.3	8
4	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
5	An Enantioselective eâ€Nose: An Array of Nanoporous Homochiral MOF Films for Stereospecific Sensing of Chiral Odors. Angewandte Chemie - International Edition, 2021, 60, 3566-3571.	7.2	72
6	Eine enantioselektive elektronische Nase: Ein Array nanoporÃ¶ser homochiraler MOFâ€Filme zur stereospezifischen Erkennung chiraler GeruchsmolekÃ¼le. Angewandte Chemie, 2021, 133, 3609-3614.	1.6	5
7	Photoswitchable Metalâ€“Organic Framework Thin Films: From Spectroscopy to Remote-Controllable Membrane Separation and Switchable Conduction. Langmuir, 2021, 37, 2-15.	1.6	29
8	Programmed Molecular Assembly of Abrupt Crystalline Organic/Organic Heterointerfaces Yielding Metalâ€Organic Framework Diodes with Large Onâ€Off Ratios. Advanced Science, 2021, 8, 2001884.	5.6	18
9	Identification of Mint Scents Using a QCM Based E-Nose. Chemosensors, 2021, 9, 31.	1.8	27
10	Structural and Dynamic Insights into the Conduction of Lithium-Ionic-Liquid Mixtures in Nanoporous Metalâ€“Organic Frameworks as Solid-State Electrolytes. ACS Applied Materials & Interfaces, 2021, 13, 21166-21174.	4.0	19
11	Chirality Remote Control in Nanoporous Materials by Circularly Polarized Light. Journal of the American Chemical Society, 2021, 143, 7059-7068.	6.6	41
12	Sniff Species: SURMOF-Based Sensor Array Discriminates Aromatic Plants beyond the Genus Level. Chemosensors, 2021, 9, 171.	1.8	5
13	Insights in the Ionic Conduction inside Nanoporous Metal-Organic Frameworks by Using an Appropriate Equivalent Circuit. Materials, 2021, 14, 4352.	1.3	2
14	Sensing Molecules with Metalâ€“Organic Framework Functionalized Graphene Transistors. Advanced Materials, 2021, 33, e2103316.	11.1	25
15	A photoprogrammable electronic nose with switchable selectivity for VOCs using MOF films. Chemical Science, 2021, 12, 15700-15709.	3.7	28
16	Proton-conduction photomodulation in spiropyran-functionalized MOFs with large onâ€“off ratio. Chemical Science, 2020, 11, 1404-1410.	3.7	85
17	Advanced Photoresponsive Materials Using the Metalâ€“Organic Framework Approach. Advanced Materials, 2020, 32, e1905227.	11.1	184
18	Towards a MOF e-Nose: A SURMOF sensor array for detection and discrimination of plant oil scents and their mixtures. Sensors and Actuators B: Chemical, 2020, 306, 127502.	4.0	50

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19	Introducing electrical conductivity to metalâ€“organic framework thin films by templated polymerization of methyl propiolate. Nanoscale, 2020, 12, 24419-24428.	2.8	8
20	Tuning Optical Properties by Controlled Aggregation: Electroluminescence Assisted by Thermallyâ€Activated Delayed Fluorescence from Thin Films of Crystalline Chromophores. Chemistry - A European Journal, 2020, 26, 17016-17020.	1.7	25
21	Zusammenwirken elektronischer und sterischer Effekte bei der Tieftemperaturâ€COâ€Oxidation an Einzelatomâ€Metallzentren in defektâ€manipuliertem HKUSTâ€1. Angewandte Chemie, 2020, 132, 10600-10604.	1.6	9
22	Thin Films of Homochiral Metalâ€“Organic Frameworks for Chiroptical Spectroscopy and Enantiomer Separation. Symmetry, 2020, 12, 686.	1.1	9
23	Conductive Metalâ€“Organic Framework Thin Film Hybrids by Electropolymerization of Monosubstituted Acetylenes. ACS Applied Materials & Interfaces, 2020, 12, 30972-30979.	4.0	13
24	Interplay of Electronic and Steric Effects to Yield Lowâ€Temperature CO Oxidation at Metal Single Sites in Defectâ€Engineered HKUSTâ€1. Angewandte Chemie - International Edition, 2020, 59, 10514-10518.	7.2	73
25	(Keynote) Conduction and Photoconduction in Fullerene- and Porphyrin-Containing Metal-Organic Framework Thin Films. ECS Transactions, 2020, 98, 15-20.	0.3	1
26	(Invited) The Interplay of Conformation and Electronic Structure in Metal Organic Frameworks. ECS Transactions, 2020, 98, 3-13.	0.3	2
27	(Invited) The Interplay of Conformation and Electronic Structure in Metal Organic Frameworks. ECS Meeting Abstracts, 2020, MA2020-02, 2001-2001.	0.0	0
28	Light-Switchable One-Dimensional Photonic Crystals Based on MOFs with Photomodulatable Refractive Index. Journal of Physical Chemistry Letters, 2019, 10, 6626-6633.	2.1	17
29	Dissolving uptake-hindering surface defects in metalâ€“organic frameworks. Chemical Science, 2019, 10, 153-160.	3.7	55
30	Surfaceâ€Mounted Metalâ€“Organic Frameworks: Crystalline and Porous Molecular Assemblies for Fundamental Insights and Advanced Applications. Advanced Materials, 2019, 31, e1806324.	11.1	134
31	Switching the enantioselectivity of nanoporous host materials by light. Chemical Communications, 2019, 55, 8776-8779.	2.2	42
32	PhotoleitfÃhigkeit in DÃ¼nnfilmen Metallâ€organischer GerÃ¼ste. Angewandte Chemie, 2019, 131, 9691-9696.	1.6	16
33	Photoconductivity in Metalâ€“Organic Framework (MOF) Thin Films. Angewandte Chemie - International Edition, 2019, 58, 9590-9595.	7.2	118
34	Bunching and Immobilization of Ionic Liquids in Nanoporous Metalâ€“Organic Framework. Nano Letters, 2019, 19, 2114-2120.	4.5	53
35	Lichtinduziertes Schalten der LeitfÃhigkeit von MOFs mit eingelagertem Spiropyran. Angewandte Chemie, 2019, 131, 1205-1210.	1.6	27
36	Conductance Photoswitching of Metalâ€“Organic Frameworks with Embedded Spiropyran. Angewandte Chemie - International Edition, 2019, 58, 1193-1197.	7.2	116

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37	Integration of thin film of metal-organic frameworks in metal-insulator-semiconductor capacitor structures. Microporous and Mesoporous Materials, 2018, 265, 185-188.	2.2	15
38	Switching the Proton Conduction in Nanoporous, Crystalline Materials by Light. Advanced Materials, 2018, 30, 1706551.	11.1	111
39	Thermal <i>cis</i>-to-<i>trans</i> Isomerization of Azobenzene Side Groups in Metal-Organic Frameworks investigated by Localized Surface Plasmon Resonance Spectroscopy. Zeitschrift Fur Physikalische Chemie, 2018, 233, 15-22.	1.4	8
40	Smart nanoporous metalâ€"organic frameworks by embedding photochromic moleculesâ€"state of the art and future perspectives. Photochemical and Photobiological Sciences, 2018, 17, 864-873.	1.6	62
41	Stimuliâ€Responsive Metalâ€Organic Frameworks with Photoswitchable Azobenzene Side Groups. Macromolecular Rapid Communications, 2018, 39, 1700239.	2.0	80
42	Water as a modulator in the synthesis of surface-mounted metalâ€"organic framework films of type HKUST-1. Dalton Transactions, 2018, 47, 16474-16479.	1.6	22
43	Series of Photoswitchable Azobenzene-Containing Metalâ€"Organic Frameworks with Variable Adsorption Switching Effect. Journal of Physical Chemistry C, 2018, 122, 19044-19050.	1.5	54
44	Diffusion and photoswitching in nanoporous thin films of metal-organic frameworks. Journal Physics D: Applied Physics, 2017, 50, 193004.	1.3	33
45	Switching Thin Films of Azobenzeneâ€Containing Metalâ€"Organic Frameworks with Visible Light. Chemistry - A European Journal, 2017, 23, 5434-5438.	1.7	99
46	Sprayable, Largeâ€Area Metalâ€"Organic Framework Films and Membranes of Varying Thickness. Chemistry - A European Journal, 2017, 23, 2294-2298.	1.7	73
47	Multiâ€Component Uptake of Dye Molecules by Films of Nanoporous Metalâ€"Organic Frameworks. ChemPhysChem, 2017, 18, 3548-3552.	1.0	7
48	Defects as Color Centers: The Apparent Color of Metalâ€"Organic Frameworks Containing Cu²⁺-Based Paddle-Wheel Units. ACS Applied Materials & Interfaces, 2017, 9, 37463-37467.	4.0	60
49	Photoswitchable nanoporous films by loading azobenzene in metalâ€"organic frameworks of type HKUST-1. Chemical Communications, 2017, 53, 8070-8073.	2.2	68
50	Multiâ€Component Uptake of Dye Molecules by Films of Nanoporous Metalâ€"Organic Frameworks. ChemPhysChem, 2017, 18, 3507-3507.	1.0	1
51	SURMOFs: Liquid-Phase Epitaxy of Metal-Organic Frameworks on Surfaces. , 2016, , 523-550.		1
52	Tunable molecular separation by nanoporous membranes. Nature Communications, 2016, 7, 13872.	5.8	208
53	Film Quality and Electronic Properties of a Surfaceâ€Anchored Metalâ€Organic Framework Revealed by using a Multiâ€technique Approach. ChemElectroChem, 2016, 3, 713-718.	1.7	22
54	Negative, anisotropic thermal expansion in monolithic thin films of crystalline metal-organic frameworks. Microporous and Mesoporous Materials, 2016, 222, 241-246.	2.2	19

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55	Experimental and theoretical investigations of the electronic band structure of metal-organic frameworks of HKUST-1 type. Applied Physics Letters, 2015, 107, .	1.5	57
56	Photoswitchable Adsorption in Metalâ€“Organic Frameworks Based on Polar Guestâ€“Host Interactions. ChemPhysChem, 2015, 16, 3779-3783.	1.0	74
57	Transport in Nanoporous Materials Including MOFs: The Applicability of Fickâ€™s Laws. Angewandte Chemie - International Edition, 2015, 54, 14580-14583.	7.2	90
58	Liquid- and Gas-Phase Diffusion of Ferrocene in Thin Films of Metal-Organic Frameworks. Materials, 2015, 8, 3767-3775.	1.3	32
59	Transparent films of metal-organic frameworks for optical applications. Microporous and Mesoporous Materials, 2015, 211, 82-87.	2.2	114
60	Planar-chiral building blocks for metalâ€“organic frameworks. Chemical Communications, 2015, 51, 4796-4798.	2.2	52
61	Free-Standing Nanomembranes Based on Selective CVD Deposition of Functional Poly-<i>p</i>-xylylenes. ACS Nano, 2015, 9, 1400-1407.	7.3	16
62	Photoswitching in nanoporous, crystalline solids: an experimental and theoretical study for azobenzene linkers incorporated in MOFs. Physical Chemistry Chemical Physics, 2015, 17, 14582-14587.	1.3	91
63	Enantioselective adsorption in homochiral metalâ€“organic frameworks: the pore size influence. Chemical Communications, 2015, 51, 8998-9001.	2.2	74
64	Surface-mounted metal-organic frameworks for applications in sensing and separation. Microporous and Mesoporous Materials, 2015, 216, 200-215.	2.2	126
65	cis-to-trans isomerization of azobenzene investigated by using thin films of metalâ€“organic frameworks. Physical Chemistry Chemical Physics, 2015, 17, 22721-22725.	1.3	64
66	Monolithic, Crystalline MOF Coating: An Excellent Patterning and Photoresist Material. ChemNanoMat, 2015, 1, 338-345.	1.5	33
67	The surface barrier phenomenon at the loading of metal-organic frameworks. Nature Communications, 2014, 5, 4562.	5.8	165
68	Photoswitching in Two-Component Surface-Mounted Metalâ€“Organic Frameworks: Optically Triggered Release from a Molecular Container. ACS Nano, 2014, 8, 1463-1467.	7.3	158
69	Interaction of Human Plasma Proteins with Thin Gelatin-Based Hydrogel Films: A QCM-D and ToF-SIMS Study. Biomacromolecules, 2014, 15, 2398-2406.	2.6	29
70	Adsorption and diffusion in thin films of nanoporous metalâ€“organic frameworks: ferrocene in SURMOF Cu2(ndc)2(dabco). Physical Chemistry Chemical Physics, 2013, 15, 9295.	1.3	56
71	Formation of Nanometer-Sized Surface Platinum Oxide Clusters on a Stepped Pt(557) Single Crystal Surface Induced by Oxygen: A High-Pressure STM and Ambient-Pressure XPS Study. Nano Letters, 2012, 12, 1491-1497.	4.5	95
72	Building Bridges in Catalysis Science. Monodispersed Metallic Nanoparticles for Homogeneous Catalysis and Atomic Scale Characterization of Catalysts Under Reaction Conditions. Topics in Catalysis, 2012, 55, 13-23.	1.3	29

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73	Atomic structure of surface defects in alumina studied by dynamic force microscopy: strain-relief-, translation- and reflection-related boundaries, including their junctions. New Journal of Physics, 2011, 13, 123028.	1.2	17
74	Defects in oxide surfaces studied by atomic force and scanning tunneling microscopy. Beilstein Journal of Nanotechnology, 2011, 2, 1-14.	1.5	21
75	The Nature of Surface Barriers on Nanoporous Solids Explored by Microimaging of Transient Guest Distributions. Journal of the American Chemical Society, 2011, 133, 2804-2807.	6.6	166
76	Correlating Surface Permeability with Intracrystalline Diffusivity in Nanoporous Solids. Physical Review Letters, 2011, 106, 074501.	2.9	80
77	Three-dimensional electrostatic interactions in dynamic force microscopy: Experiment and theory. Physical Review B, 2011, 83, .	1.1	3
78	Sorption kinetics for surface resistance controlled systems. Microporous and Mesoporous Materials, 2010, 132, 94-102.	2.2	18
79	Local Work Function Differences at Line Defects in Aluminium Oxide on NiAl(110). ChemPhysChem, 2010, 11, 2085-2087.	1.0	13
80	A new view of diffusion in nanoporous materials. Chemie-Ingenieur-Technik, 2010, 82, 779-804.	0.4	57
81	Exploring the nature of surface barriers on MOF Zn(tbip) by applying IR microscopy in high temporal and spatial resolution. Microporous and Mesoporous Materials, 2010, 129, 340-344.	2.2	43
82	Structure and electronic properties of step edges in the aluminum oxide film on NiAl(110). Physical Review B, 2010, 82, .	1.1	16
83	Growth and Structure of Crystalline Silica Sheet on Ru(0001). Physical Review Letters, 2010, 105, 146104.	2.9	198
84	Assessing Molecular Transport Properties of Nanoporous Materials by Interference Microscopy: Remarkable Effects of Composition and Microstructure on Diffusion in the Silicoaluminophosphate Zeotype STA-7. Journal of the American Chemical Society, 2010, 132, 11665-11670.	6.6	36
85	Mass Transfer in a Nanoscale Material Enhanced by an Opposing Flux. Physical Review Letters, 2010, 104, 085902.	2.9	111
86	Assessing Guest Diffusivities in Porous Hosts from Transient Concentration Profiles. Physical Review Letters, 2009, 102, 065901.	2.9	76
87	Discriminating the molecular pathways during uptake and release on nanoporous host systems. Journal of Chemical Physics, 2009, 130, 044707.	1.2	8
88	Ensemble Measurement of Diffusion: Novel Beauty and Evidence. ChemPhysChem, 2009, 10, 2623-2627.	1.0	56
89	Inside Cover: Ensemble Measurement of Diffusion: Novel Beauty and Evidence (ChemPhysChem 15/2009). ChemPhysChem, 2009, 10, 2550-2550.	1.0	0
90	Assessing Surface Permeabilities from Transient Guest Profiles in Nanoporous Host Materials. Angewandte Chemie - International Edition, 2009, 48, 3525-3528.	7.2	82

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91	Diffusion of n-butane/iso-butane mixtures in silicalite-1 investigated using infrared (IR) microscopy. Microporous and Mesoporous Materials, 2009, 125, 11-16.	2.2	30
92	Exploring Crystal Morphology of Nanoporous Hosts from Timeâ€Dependent Guest Profiles. Angewandte Chemie - International Edition, 2008, 47, 3954-3957.	7.2	59
93	Inflection in the loading dependence of the Maxwellâ€“Stefan diffusivity of iso-butane in MFI zeolite. Chemical Physics Letters, 2008, 459, 141-145.	1.2	44
94	Assessing one-dimensional diffusion in nanoporous materials from transient concentration profiles. New Journal of Physics, 2008, 10, 023035.	1.2	34
95	Three-dimensional diffusion in nanoporous host-guest materials monitored by interference microscopy. Europhysics Letters, 2008, 81, 26002.	0.7	24
96	Determining the transport diffusivity from intra-crystalline concentration profiles. Studies in Surface Science and Catalysis, 2008, 174, 607-610.	1.5	0
97	Looking into the crystallites: diffusion studies by interference microscopy. Studies in Surface Science and Catalysis, 2007, , 739-747.	1.5	4
98	Publisherâ€™s Note: Exchange Dynamics at the Interface of Nanoporous Materials with their Surroundings [Phys. Rev. Lett.99, 228301 (2007)]. Physical Review Letters, 2007, 99, .	2.9	7
99	Intracrystalline Diffusivities and Surface Permeabilities Deduced from Transient Concentration Profiles:Â Methanol in MOF Manganese Formate. Journal of the American Chemical Society, 2007, 129, 8041-8047.	6.6	71
100	Assessing Guest Diffusion in Nanoporous Materials by Boltzmann's Integration Method. Chemistry of Materials, 2007, 19, 3917-3923.	3.2	11
101	Effect of Surface Modification on Uptake Rates of Isobutane in MFI Crystals: An Infrared Microscopy Study. Chemistry of Materials, 2007, 19, 6012-6019.	3.2	54
102	Exchange Dynamics at the Interface of Nanoporous Materials with their Surroundings. Physical Review Letters, 2007, 99, 228301.	2.9	42
103	Application of Interference Microscopy and IR Microscopy for Characterizing and Investigating Mass Transport in Nanoporous Materials. Chemical Engineering and Technology, 2007, 30, 995-1002.	0.9	46
104	Analysis of thermal effects in infrared and interference microscopy: n-Butane-5A and methanolâ€“ferrierite systems. Microporous and Mesoporous Materials, 2007, 104, 18-25.	2.2	23
105	The options of interference microscopy to explore the significance of intracrystalline diffusion and surface permeation for overall mass transfer on nanoporous materials. Adsorption, 2007, 13, 215-223.	1.4	34
106	Internal Concentration Gradients of Guest Molecules in Nanoporous Host Materials:Â Measurement and Microscopic Analysis. Journal of Physical Chemistry B, 2006, 110, 23821-23828.	1.2	59
107	Unprecedented Insight into Diffusion by Monitoring the Concentration of Guest Molecules in Nanoporous Host Materials. Angewandte Chemie - International Edition, 2006, 45, 7846-7849.	7.2	107