Rob Ameloot

List of Publications by Year
in descending order

110 papers	10,654 citations	47006 47 h-index	31849 101 g-index
137 all docs	137 docs citations	137 times ranked	12184 citing authors

#	Article	IF	Citations
1	An updated roadmap for the integration of metalâ€“organic frameworks with electronic devices and chemical sensors. Chemical Society Reviews, 2017, 46, 3185-3241.	38.1	987
2	Chemical vapour deposition of zeolitic imidazolate framework thinÂfilms. Nature Materials, 2016, 15, 304-310.	27.5	528
3	Iron(III)-Based Metalâ€“Organic Frameworks As Visible Light Photocatalysts. Journal of the American Chemical Society, 2013, 135, 14488-14491.	13.7	502
4	Interfacial synthesis of hollow metalâ€“organic framework capsules demonstrating selective permeability. Nature Chemistry, 2011, 3, 382-387.	13.6	483
5	Application of metal and metal oxide nanoparticles@MOFs. Coordination Chemistry Reviews, 2016, 307, 237-254.	18.8	479
6	The Current Status of MOF and COF Applications. Angewandte Chemie - International Edition, 2021, 60, 23975-24001.	13.8	450
7	Patterned Growth of Metal-Organic Framework Coatings by Electrochemical Synthesis. Chemistry of Materials, 2009, 21, 2580-2582.	6.7	428
8	An amino-modified Zr-terephthalate metalâ€“organic framework as an acidâ€“base catalyst for cross-aldol condensation. Chemical Communications, 2011, 47, 1521-1523.	4.1	392
9	Electronic Effects of Linker Substitution on Lewis Acid Catalysis with Metalâ€“Organic Frameworks. Angewandte Chemie - International Edition, 2012, 51, 4887-4890.	13.8	384
10	3D printing in chemical engineering and catalytic technology: structured catalysts, mixers and reactors. Chemical Society Reviews, 2018, 47, 209-230.	38.1	351
11	Direct Patterning of Oriented Metalâ€“Organic Framework Crystals via Control over Crystallization Kinetics in Clear Precursor Solutions. Advanced Materials, 2010, 22, 2685-2688.	21.0	224
12	Biobased Ionic Liquids: Solvents for a Green Processing Industry?. ACS Sustainable Chemistry and Engineering, 2016, 4, 2917-2931.	6.7	195
13	Sequential Pore Wall Modification in a Covalent Organic Framework for Application in Lactic Acid Adsorption. Chemistry of Materials, 2016, 28, 626-631.	6.7	189
14	Ionic Conductivity in the Metalâ€“Organic Framework UiOâ€66 by Dehydration and Insertion of Lithium <i>tert</i>â€Butoxide. Chemistry - A European Journal, 2013, 19, 5533-5536.	3.3	182
15	Gel-based morphological design of zirconium metalâ€“organic frameworks. Chemical Science, 2017, 8, 3939-3948.	7.4	177
16	Tuning the catalytic performance of metalâ€“organic frameworks in fine chemistry by active site engineering. Journal of Materials Chemistry, 2012, 22, 10313.	6.7	176
17	Superâ€Resolution Reactivity Mapping of Nanostructured Catalyst Particles. Angewandte Chemie - International Edition, 2009, 48, 9285-9289.	13.8	175
18	Separation of C₅-Hydrocarbons on Microporous Materials: Complementary Performance of MOFs and Zeolites. Journal of the American Chemical Society, 2010, 132, 2284-2292.	13.7	173

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19	Electrochemical Film Deposition of the Zirconium Metalâ€“Organic Framework UiO-66 and Application in a Miniaturized Sorbent Trap. Chemistry of Materials, 2015, 27, 1801-1807.	6.7	159
20	In situ synthesis of Cuâ€“BTC (HKUST-1) in macro-/mesoporous silica monoliths for continuous flow catalysis. Chemical Communications, 2012, 48, 4749.	4.1	151
21	Metalâ€“organic frameworks as solid magnesium electrolytes. Energy and Environmental Science, 2014, 7, 667.	30.8	150
22	Morphology of Large ZSM-5 Crystals Unraveled by Fluorescence Microscopy. Journal of the American Chemical Society, 2008, 130, 5763-5772.	13.7	147
23	Electrochemical synthesis of thin HKUST-1 layers on copper mesh. Microporous and Mesoporous Materials, 2012, 158, 209-213.	4.4	126
24	Solvent-free synthesis of supported ZIF-8 films and patterns through transformation of deposited zinc oxide precursors. CrystEngComm, 2013, 15, 9308.	2.6	124
25	Tetraarylborate polymer networks as single-ion conducting solid electrolytes. Chemical Science, 2015, 6, 5499-5505.	7.4	123
26	Threeâ€Dimensional Visualization of Defects Formed during the Synthesis of Metalâ€“Organic Frameworks: A Fluorescence Microscopy Study. Angewandte Chemie - International Edition, 2013, 52, 401-405.	13.8	121
27	Silicaâ€“MOF Composites as a Stationary Phase in Liquid Chromatography. European Journal of Inorganic Chemistry, 2010, 2010, 3735-3738.	2.0	120
28	Improving the mechanical stability of zirconium-based metalâ€“organic frameworks by incorporation of acidic modulators. Journal of Materials Chemistry A, 2015, 3, 1737-1742.	10.3	116
29	Direct X-ray and electron-beam lithography of halogenated zeolitic imidazolate frameworks. Nature Materials, 2021, 20, 93-99.	27.5	112
30	Towards metalâ€“organic framework based field effect chemical sensors: UiO-66-NH₂ for nerve agent detection. Chemical Science, 2016, 7, 5827-5832.	7.4	108
31	Vapor-deposited zeolitic imidazolate frameworks as gap-filling ultra-low-k dielectrics. Nature Communications, 2019, 10, 3729.	12.8	106
32	A Flexible Photoactive Titanium Metalâ€“Organic Framework Based on a [Ti^{IV}₃(Î¼₃â€O)(O)₂(COO)₆] Cluster. Angewandte Chemie - International Edition, 2015, 54, 13912-13917.	13.8	103
33	Reversible Optical Writing and Data Storage in an Anthraceneâ€Loaded Metalâ€“Organic Framework. Angewandte Chemie - International Edition, 2019, 58, 2423-2427.	13.8	102
34	Metalâ€“Organic Framework Single Crystals as Photoactive Matrices for the Generation of Metallic Microstructures. Advanced Materials, 2011, 23, 1788-1791.	21.0	100
35	Waste PET (bottles) as a resource or substrate for MOF synthesis. Journal of Materials Chemistry A, 2016, 4, 9519-9525.	10.3	100
36	Digital Microfluidic Highâ€Throughput Printing of Single Metalâ€Organic Framework Crystals. Advanced Materials, 2012, 24, 1316-1320.	21.0	88

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37	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.	6.7	87
38	Patterned film growth of metalâ€“organic frameworks based on galvanic displacement. Chemical Communications, 2010, 46, 3735.	4.1	86
39	Vaporâ€Phase Deposition and Modification of Metalâ€“Organic Frameworks: Stateâ€ofâ€theâ€Art and Future Directions. Chemistry - A European Journal, 2016, 22, 14452-14460.	3.3	81
40	Znâ€“Co Double Metal Cyanides as Heterogeneous Catalysts for Hydroamination: A Structureâ€“Activity Relationship. ACS Catalysis, 2013, 3, 597-607.	11.2	67
41	A zirconium squarate metalâ€“organic framework with modulator-dependent molecular sieving properties. Chemical Communications, 2014, 50, 10055-10058.	4.1	64
42	Vapour-phase deposition of oriented copper dicarboxylate metalâ€“organic framework thin films. Chemical Communications, 2019, 55, 10056-10059.	4.1	64
43	Relating Pore Structure to Activity at the Subcrystal Level for ZSM-5: An Electron Backscattering Diffraction and Fluorescence Microscopy Study. Journal of the American Chemical Society, 2008, 130, 13516-13517.	13.7	62
44	Solvent-Free Powder Synthesis and MOF-CVD Thin Films of the Large-Pore Metalâ€“Organic Framework MAF-6. Chemistry of Materials, 2020, 32, 1784-1793.	6.7	62
45	Mechanical properties of electrochemically synthesised metalâ€“organic framework thin films. Journal of Materials Chemistry C, 2013, 1, 7716.	5.5	53
46	Bringing Porous Organic and Carbonâ€Based Materials toward Thinâ€Film Applications. Advanced Functional Materials, 2018, 28, 1801545.	14.9	53
47	Integrated Cleanroom Process for the Vapor-Phase Deposition of Large-Area Zeolitic Imidazolate Framework Thin Films. Chemistry of Materials, 2019, 31, 9462-9471.	6.7	52
48	Carbon dioxide as a reversible amine-protecting agent in selective Michael additions and acylations. Green Chemistry, 2013, 15, 1550.	9.0	46
49	First examples of aliphatic zirconium MOFs and the influence of inorganic anions on their crystal structures. CrystEngComm, 2015, 17, 331-337.	2.6	44
50	Active Role of Methanol in Post-Synthetic Linker Exchange in the Metalâ€“Organic Framework UiO-66. Chemistry of Materials, 2019, 31, 1359-1369.	6.7	43
51	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.	13.8	42
52	Lithographic Deposition of Patterned Metalâ€“Organic Framework Coatings Using a Photobase Generator. Angewandte Chemie - International Edition, 2014, 53, 5561-5565.	13.8	41
53	Bulk-to-Surface Proton-Coupled Electron Transfer Reactivity of the Metalâ€“Organic Framework MIL-125. Journal of the American Chemical Society, 2018, 140, 16184-16189.	13.7	41
54	Towards direct monitoring of discrete events in a catalytic cycle at the single molecule level. Photochemical and Photobiological Sciences, 2009, 8, 453-456.	2.9	40

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55	Parts per Million Detection of Alcohol Vapors via Metal Organic Framework Functionalized Surface Plasmon Resonance Sensors. Analytical Chemistry, 2017, 89, 4480-4487.	6.5	40
56	Porosimetry for Thin Films of Metalâ€“Organic Frameworks: A Comparison of Positron Annihilation Lifetime Spectroscopy and Adsorptionâ€Based Methods. Advanced Materials, 2021, 33, e2006993.	21.0	40
57	Lewis acid double metal cyanide catalysts for hydroamination of phenylacetylene. Chemical Communications, 2011, 47, 4114.	4.1	36
58	Solid-phase microextraction coatings based on the metal-organic framework ZIF-8: Ensuring stable and reusable fibers. Talanta, 2020, 215, 120910.	5.5	36
59	3D Printing of Monolithic Capillarityâ€Driven Microfluidic Devices for Diagnostics. Advanced Materials, 2021, 33, e2008712.	21.0	36
60	Enthalpic effects in the adsorption of alkylaromatics on the metal-organic frameworks MIL-47 and MIL-53. Microporous and Mesoporous Materials, 2012, 157, 82-88.	4.4	33
61	Hierarchical Metalâ€Organic Framework Films with Controllable Meso/Macroporosity. Advanced Science, 2020, 7, 2002368.	11.2	32
62	Correction: An updated roadmap for the integration of metalâ€“organic frameworks with electronic devices and chemical sensors. Chemical Society Reviews, 2017, 46, 3853-3853.	38.1	30
63	Vapor-Phase Processing of Metalâ€“Organic Frameworks. Accounts of Chemical Research, 2022, 55, 186-196.	15.6	29
64	Miniaturized Layer-by-Layer Deposition of Metalâ€“Organic Framework Coatings through Digital Microfluidics. Chemistry of Materials, 2013, 25, 1021-1023.	6.7	28
65	Pore network model for permeability characterization of three-dimensionally-printed porous materials for passive microfluidics. Physical Review E, 2019, 99, 033107.	2.1	28
66	Counteranion effects on the catalytic activity of copper salts immobilized on the 2,2â€²-bipyridine-functionalized metalâ€“organic framework MOF-253. Catalysis Today, 2015, 246, 55-59.	4.4	27
67	Reversible Optical Writing and Data Storage in an Anthraceneâ€Loaded Metalâ€Organic Framework. Angewandte Chemie, 2018, 131, 2445.	2.0	24
68	Silver-induced reconstruction of an adeninate-based metalâ€“organic framework for encapsulation of luminescent adenine-stabilized silver clusters. Journal of Materials Chemistry C, 2016, 4, 4259-4268.	5.5	22
69	An in situ investigation of the water-induced phase transformation of UTSA-74 to MOF-74(Zn). CrystEngComm, 2017, 19, 4152-4156.	2.6	20
70	Sodium-coupled electron transfer reactivity of metalâ€“organic frameworks containing titanium clusters: the importance of cations in redox chemistry. Chemical Science, 2019, 10, 1322-1331.	7.4	20
71	Templateâ€Mediated Control over Polymorphism in the Vaporâ€Assisted Formation of Zeolitic Imidazolate Framework Powders and Films. Angewandte Chemie - International Edition, 2021, 60, 7553-7558.	13.8	20
72	Flexible Metal Halide Perovskite Photodetector Arrays via Photolithography and Dry Liftâ€Off Patterning. Advanced Engineering Materials, 2022, 24, 2100930.	3.5	19

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73	Benchtop <i>In Situ</i> Measurement of Full Adsorption Isotherms by NMR. Journal of the American Chemical Society, 2021, 143, 8249-8254.	13.7	18
74	Der derzeitige Stand von MOFâ€•und COFâ€Anwendungen. Angewandte Chemie, 2021, 133, 24174-24202.	2.0	18
75	Adsorption and Reactive Desorption on Metalâ€"Organic Frameworks: A Direct Strategy for Lactic Acid Recovery. ChemSusChem, 2017, 10, 643-650.	6.8	17
76	2022 roadmap on 3D printing for energy. JPhys Energy, 2022, 4, 011501.	5.3	17
77	Templated Solvent-Free Powder Synthesis and MOF-CVD Films of the Ultramicroporous Metalâ€"Organic Framework Î±-Magnesium Formate. Chemistry of Materials, 2020, 32, 10469-10475.	6.7	16
78	Scattering Model for Composite Stereolithography to Enable Resinâ€"Filler Selection and Cure Depth Control. ACS Applied Polymer Materials, 2021, 3, 6705-6712.	4.4	16
79	Solventâ€Free Powder Synthesis and Thin Film Chemical Vapor Deposition of a Zinc Bipyridylâ€Triazolate Framework. European Journal of Inorganic Chemistry, 2020, 2020, 71-74.	2.0	15
80	Vaporâ€Phase Linker Exchange of the Metalâ€"Organic Framework ZIFâ€8: A Solventâ€Free Approach to Postâ€synthetic Modification. Angewandte Chemie, 2019, 131, 18642-18646.	2.0	14
81	Cellulose Amorphization by Swelling in Ionic Liquid/Water Mixtures: A Combined Macroscopic and Secondâ€Harmonic Microscopy Study. ChemSusChem, 2015, 8, 82-86.	6.8	13
82	Aqueous Flow Reactor and Vapourâ€Assisted Synthesis of Aluminium Dicarboxylate Metalâ€"Organic Frameworks with Tuneable Water Sorption Properties. Chemistry - A European Journal, 2020, 26, 10841-10848.	3.3	13
83	Effect of different oxide and hybrid precursors on MOF-CVD of ZIF-8 films. Dalton Transactions, 2021, 50, 6784-6788.	3.3	13
84	Photopatterning of fluorescent hostâ€"guest carriers through pore activation of metalâ€"organic framework single crystals. Chemical Communications, 2017, 53, 7222-7225.	4.1	12
85	Direct Electrocatalytic Nâ€"H Aziridination of Aromatic Alkenes Using Ammonia. ACS Sustainable Chemistry and Engineering, 2021, 9, 11596-11603.	6.7	12
86	Chlorine-Resistant Epoxide-Based Membranes for Sustainable Water Desalination. Environmental Science and Technology Letters, 2021, 8, 818-824.	8.7	12
87	Chemical Vapor Deposition of Ionic Liquids for the Fabrication of Ionogel Films and Patterns. Angewandte Chemie - International Edition, 2021, 60, 25668-25673.	13.8	12
88	Topochemical Engineering of Celluloseâ€"Carboxymethyl Cellulose Beads: A Low-Field NMR Relaxometry Study. Molecules, 2021, 26, 14.	3.8	12
89	Stabilising Ni catalysts for the dehydrationâ€"decarboxylationâ€"hydrogenation of citric acid to methylsuccinic acid. Green Chemistry, 2017, 19, 4642-4650.	9.0	9
90	Parts-per-Million Detection of Volatile Organic Compounds via Surface Plasmon Polaritons and Nanometer-Thick Metalâ€"Organic Framework Films. ACS Applied Nano Materials, 2022, 5, 5006-5016.	5.0	9

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91	Cyclic Plasma Halogenation of Amorphous Carbon for Defect-Free Area-Selective Atomic Layer Deposition of Titanium Oxide. ACS Applied Materials & Interfaces, 2021, 13, 32381-32392.	8.0	8
92	Influence of Precursor Density and Conversion Time on the Orientation of Vapor-Deposited ZIF-8. Crystals, 2022, 12, 217.	2.2	8
93	4D synchrotron microtomography and pore-network modelling for direct <i>in situ</i> capillary flow visualization in 3D printed microfluidic channels. Lab on A Chip, 2020, 20, 2403-2411.	6.0	7
94	Photocurable resin-silica composites with low thermal expansion for 3D printing microfluidic components onto printed circuit boards. Materials Today Communications, 2022, 31, 103482.	1.9	7
95	Binder-jetting 3D printer capable of voxel-based control over deposited ink volume, adaptive layer thickness, and selective multi-pass printing. Review of Scientific Instruments, 2021, 92, 125106.	1.3	6
96	CCIQS-1: A Dynamic Metalâ€“Organic Framework with Selective Guest-Triggered Porosity Switching. Chemistry of Materials, 2022, 34, 669-677.	6.7	6
97	Lithographic Deposition of Patterned Metalâ€“Organic Framework Coatings Using a Photobase Generator. Angewandte Chemie, 2014, 126, 5667-5671.	2.0	5
98	Surfactant-assisted synthesis of titanium nanoMOFs for thin film fabrication. Chemical Communications, 2021, 57, 9040-9043.	4.1	4
99	Fluorescence Photoswitching in a Series of Metalâ€Organic Frameworks Loaded with Different Anthracenes. European Journal of Inorganic Chemistry, 2021, 2021, 2986-2992.	2.0	4
100	Singleâ€Crystal Capacitive Sensors with Micropatterned Electrodes via Spaceâ€Confined Growth of the Metalâ€“Organic Framework HKUSTâ€1. Advanced Functional Materials, 0, , 2204065.	14.9	4
101	Porosimetry: Porosimetry for Thin Films of Metalâ€“Organic Frameworks: A Comparison of Positron Annihilation Lifetime Spectroscopy and Adsorptionâ€Based Methods (Adv. Mater. 17/2021). Advanced Materials, 2021, 33, 2170133.	21.0	3
102	Templateâ€Mediated Control over Polymorphism in the Vaporâ€Assisted Formation of Zeolitic Imidazolate Framework Powders and Films. Angewandte Chemie, 2021, 133, 7631-7636.	2.0	2
103	Plasma halogenated a-C:H as growth inhibiting layer for ASD of titanium oxide. , 2020, , .		2
104	Multiscale modelling of capillary imbibition in 3D-printed porous microfluidic channels. Microfluidics and Nanofluidics, 2022, 26, 1.	2.2	2
105	A Gas Sensor Based on Zif-8-Coated Coupled Resonators With Enhanced Sensitivity and Reversible Detection Ability. , 2022, , .		1
106	Microfluidic Devices: 3D Printing of Monolithic Capillarityâ€Driven Microfluidic Devices for Diagnostics (Adv. Mater. 25/2021). Advanced Materials, 2021, 33, 2170192.	21.0	0
107	Chemical Vapor Deposition of Ionic Liquids for the Fabrication of Ionogel Films and Patterns. Angewandte Chemie, 2021, 133, 25872.	2.0	0
108	(Invited) Vapor-Deposited MOFs As Gap-Filling Low-k Dielectrics. ECS Meeting Abstracts, 2019, , .	0.0	0

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109	Frontispiece: Chemical Vapor Deposition of Ionic Liquids for the Fabrication of Ionogel Films and Patterns. Angewandte Chemie - International Edition, 2021, 60, .	13.8	0
110	Frontispiz: Chemical Vapor Deposition of Ionic Liquids for the Fabrication of Ionogel Films and Patterns. Angewandte Chemie, 2021, 133, .	2.0	0