Ivo Stassen

List of Publications by Year
in descending order

76 papers	9,371 citations	53660 45 h-index	74018 75 g-index
78 all docs	78 docs citations	78 times ranked	10294 citing authors

#	Article	IF	Citations
1	Tunable Electrical Conductivity in Metal-Organic Framework Thin-Film Devices. Science, 2014, 343, 66-69.	6.0	1,061
2	An updated roadmap for the integration of metalâ€“organic frameworks with electronic devices and chemical sensors. Chemical Society Reviews, 2017, 46, 3185-3241.	18.7	987
3	Influence of Connectivity and Porosity on Ligand-Based Luminescence in Zinc Metalâ^'Organic Frameworks. Journal of the American Chemical Society, 2007, 129, 7136-7144.	6.6	625
4	Chemical vapour deposition of zeolitic imidazolate framework thinÂfilms. Nature Materials, 2016, 15, 304-310.	13.3	528
5	Stress-Induced Chemical Detection Using Flexible Metalâ^'Organic Frameworks. Journal of the American Chemical Society, 2008, 130, 14404-14405.	6.6	469
6	Conductivity, Doping, and Redox Chemistry of a Microporous Dithiolene-Based Metalâ^'Organic Framework. Chemistry of Materials, 2010, 22, 4120-4122.	3.2	459
7	A Roadmap to Implementing Metalâ€“Organic Frameworks in Electronic Devices: Challenges and Critical Directions. Chemistry - A European Journal, 2011, 17, 11372-11388.	1.7	403
8	Silver Cluster Formation, Dynamics, and Chemistry in Metalâ^'Organic Frameworks. Nano Letters, 2009, 9, 3413-3418.	4.5	245
9	Thin Film Thermoelectric Metalâ€“Organic Framework with High Seebeck Coefficient and Low Thermal Conductivity. Advanced Materials, 2015, 27, 3453-3459.	11.1	227
10	Single Crystals of Electrically Conductive Two-Dimensional Metalâ€“Organic Frameworks: Structural and Electrical Transport Properties. ACS Central Science, 2019, 5, 1959-1964.	5.3	211
11	Electronic Devices Using Open Framework Materials. Chemical Reviews, 2020, 120, 8581-8640.	23.0	185
12	Gel-based morphological design of zirconium metalâ€“organic frameworks. Chemical Science, 2017, 8, 3939-3948.	3.7	177
13	Kinetics and mechanism of metalâ€“organic framework thin film growth: systematic investigation of HKUST-1 deposition on QCM electrodes. Chemical Science, 2012, 3, 1531.	3.7	169
14	Mechanical Properties in Metalâ€“Organic Frameworks: Emerging Opportunities and Challenges for Device Functionality and Technological Applications. Advanced Materials, 2018, 30, e1704124.	11.1	165
15	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.	3.2	159
16	A Microporous and Naturally Nanostructured Thermoelectric Metal-Organic Framework with Ultralow Thermal Conductivity. Joule, 2017, 1, 168-177.	11.7	159
17	Novel metalâ€“organic framework linkers for light harvesting applications. Chemical Science, 2014, 5, 2081-2090.	3.7	152
18	Guest-Induced Emergent Properties in Metalâ€“Organic Frameworks. Journal of Physical Chemistry Letters, 2015, 6, 1182-1195.	2.1	150

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19	Force Field Validation for Molecular Dynamics Simulations of IRMOF-1 and Other Isoreticular Zinc Carboxylate Coordination Polymers. Journal of Physical Chemistry C, 2008, 112, 5795-5802.	1.5	142
20	Solvent-free synthesis of supported ZIF-8 films and patterns through transformation of deposited zinc oxide precursors. CrystEngComm, 2013, 15, 9308.	1.3	124
21	Improving the mechanical stability of zirconium-based metalâ€“organic frameworks by incorporation of acidic modulators. Journal of Materials Chemistry A, 2015, 3, 1737-1742.	5.2	116
22	Direct X-ray and electron-beam lithography of halogenated zeolitic imidazolate frameworks. Nature Materials, 2021, 20, 93-99.	13.3	112
23	Ultrasensitive Humidity Detection Using Metalâ€“Organic Framework-Coated Microsensors. Analytical Chemistry, 2012, 84, 7043-7051.	3.2	111
24	Towards metalâ€“organic framework based field effect chemical sensors: UiO-66-NH₂ for nerve agent detection. Chemical Science, 2016, 7, 5827-5832.	3.7	108
25	Vapor-deposited zeolitic imidazolate frameworks as gap-filling ultra-low-k dielectrics. Nature Communications, 2019, 10, 3729.	5.8	106
26	Energy and charge transfer by donorâ€“acceptor pairs confined in a metalâ€“organic framework: a spectroscopic and computational investigation. Journal of Materials Chemistry A, 2014, 2, 3389-3398.	5.2	100
27	Waste PET (bottles) as a resource or substrate for MOF synthesis. Journal of Materials Chemistry A, 2016, 4, 9519-9525.	5.2	100
28	Green synthesis of zirconium-MOFs. CrystEngComm, 2015, 17, 4070-4074.	1.3	85
29	Metallic Metalâ€“Organic Frameworks Predicted by the Combination of Machine Learning Methods and Ab Initio Calculations. Journal of Physical Chemistry Letters, 2018, 9, 4562-4569.	2.1	84
30	MOF-Sensitized Solar Cells Enabled by a Pillared Porphyrin Framework. Journal of Physical Chemistry C, 2017, 121, 4816-4824.	1.5	83
31	Vaporâ€Phase Deposition and Modification of Metalâ€“Organic Frameworks: Stateâ€ofâ€theâ€Art and Future Directions. Chemistry - A European Journal, 2016, 22, 14452-14460.	1.7	81
32	Chemiresistive Sensing of Ambient CO₂ by an Autogenously Hydrated Cu₃(hexaiminobenzene)₂ Framework. ACS Central Science, 2019, 5, 1425-1431.	5.3	79
33	High electrical conductivity and high porosity in a Guest@MOF material: evidence of TCNQ ordering within Cu₃BTC₂ micropores. Chemical Science, 2018, 9, 7405-7412.	3.7	73
34	Unraveling the Semiconducting/Metallic Discrepancy in Ni₃(HITP)₂. Journal of Physical Chemistry Letters, 2018, 9, 481-486.	2.1	70
35	Proposed Modification of the Graphene Analogue Ni₃(HITP)₂ To Yield a Semiconducting Material. Journal of Physical Chemistry C, 2016, 120, 15001-15008.	1.5	67
36	Detailed spectral studies of copper acetate: excited-state interactions in copper dimers. Journal of the American Chemical Society, 1989, 111, 4009-4021.	6.6	64

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37	Ordered metal nanostructureself-assembly using metalâ€“organic frameworks as templates. Chemical Science, 2011, 2, 411-416.	3.7	64
38	A zirconium squarate metalâ€“organic framework with modulator-dependent molecular sieving properties. Chemical Communications, 2014, 50, 10055-10058.	2.2	64
39	Vapour-phase deposition of oriented copper dicarboxylate metalâ€“organic framework thin films. Chemical Communications, 2019, 55, 10056-10059.	2.2	64
40	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.	3.2	62
41	ZIF-8 as Nonlinear Optical Material: Influence of Structure and Synthesis. Chemistry of Materials, 2016, 28, 3203-3209.	3.2	57
42	Mechanical properties of electrochemically synthesised metalâ€“organic framework thin films. Journal of Materials Chemistry C, 2013, 1, 7716.	2.7	53
43	Thin Film Growth of nbo MOFs and their Integration with Electroacoustic Devices. Advanced Functional Materials, 2016, 26, 1699-1707.	7.8	53
44	Integrated Cleanroom Process for the Vapor-Phase Deposition of Large-Area Zeolitic Imidazolate Framework Thin Films. Chemistry of Materials, 2019, 31, 9462-9471.	3.2	52
45	MOF @ MEMS: Design optimization for high sensitivity chemical detection. Sensors and Actuators B: Chemical, 2012, 168, 256-262.	4.0	50
46	What Lies beneath a Metalâ€“Organic Framework Crystal Structure? New Design Principles from Unexpected Behaviors. Journal of the American Chemical Society, 2021, 143, 6705-6723.	6.6	48
47	Hybrid Polymer/Metalâ€“Organic Framework Films for Colorimetric Water Sensing over a Wide Concentration Range. ACS Applied Materials & Interfaces, 2018, 10, 24201-24208.	4.0	46
48	Alcohol amination with heterogeneous ruthenium hydroxyapatite catalysts. Applied Catalysis A: General, 2014, 469, 191-197.	2.2	45
49	First examples of aliphatic zirconium MOFs and the influence of inorganic anions on their crystal structures. CrystEngComm, 2015, 17, 331-337.	1.3	44
50	Porosimetry for Thin Films of Metalâ€“Organic Frameworks: A Comparison of Positron Annihilation Lifetime Spectroscopy and Adsorptionâ€Based Methods. Advanced Materials, 2021, 33, e2006993.	11.1	40
51	Get the light out: nanoscaling MOFs for luminescence sensing and optical applications. Chemical Communications, 2019, 55, 4647-4650.	2.2	38
52	Bioâ€Based Nitriles from the Heterogeneously Catalyzed Oxidative Decarboxylation of Amino Acids. ChemSusChem, 2015, 8, 345-352.	3.6	32
53	Ruthenium-catalyzed aerobic oxidative decarboxylation of amino acids: a green, zero-waste route to biobased nitriles. Chemical Communications, 2015, 51, 6528-6531.	2.2	31
54	Two-dimensional metalâ€“organic frameworks with high thermoelectric efficiency through metal ion selection. Physical Chemistry Chemical Physics, 2017, 19, 19461-19467.	1.3	30

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55	Surface Morphology and Electrical Properties of Cu₃BTC₂ Thin Films Before and After Reaction with TCNQ. ACS Applied Materials & Interfaces, 2018, 10, 39400-39410.	4.0	30
56	Guest molecules as a design element for metalâ€“organic frameworks. MRS Bulletin, 2016, 41, 865-869.	1.7	26
57	Resolving Interparticle Heterogeneities in Composition and Hydrogenation Performance between Individual Supported Silver on Silica Catalysts. ACS Catalysis, 2015, 5, 6690-6695.	5.5	22
58	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.	2.7	22
59	Controlled Nucleation and Growth of Pillared Paddlewheel Framework Nanostacks onto Chemically Modified Surfaces. ACS Applied Materials & Interfaces, 2014, 6, 1509-1514.	4.0	20
60	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.	1.0	15
61	Metalâ€“organic framework deposition on dealloyed substrates. Journal of Materials Chemistry A, 2015, 3, 19747-19753.	5.2	13
62	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.	1.7	13
63	Effect of different oxide and hybrid precursors on MOF-CVD of ZIF-8 films. Dalton Transactions, 2021, 50, 6784-6788.	1.6	13
64	Photopatterning of fluorescent hostâ€“guest carriers through pore activation of metalâ€“organic framework single crystals. Chemical Communications, 2017, 53, 7222-7225.	2.2	12
65	Why conductivity is not always king â€“ physical properties governing the capacitance of 2D metalâ€“organic framework-based EDLC supercapacitor electrodes: a Ni₃(HITP)₂ case study. Faraday Discussions, 2021, 231, 298-304.	1.6	12
66	Highly active gauze-supported skeletal nickel catalysts. Chemical Communications, 2013, 49, 8498.	2.2	11
67	From n- to p-Type Material: Effect of Metal Ion on Charge Transport in Metalâ€“Organic Materials. ACS Applied Materials & Interfaces, 2021, 13, 52055-52062.	4.0	10
68	Stabilising Ni catalysts for the dehydrationâ€“decarboxylationâ€“hydrogenation of citric acid to methylsuccinic acid. Green Chemistry, 2017, 19, 4642-4650.	4.6	9
69	Thermoelectric Properties of 2D Ni₃(hitp)₂and 3D Cu₃(btc)₂MOFs: First-Principles Studies. ECS Journal of Solid State Science and Technology, 2017, 6, N236-N242.	0.9	7
70	New directions in gas sorption and separation with MOFs: general discussion. Faraday Discussions, 2017, 201, 175-194.	1.6	6
71	Catalytically active gauze-supported skeletal nickel prepared from Niâ€“Zn alloys electrodeposited from an acetamideâ€“dimethyl sulfone eutectic mixture. Catalysis Today, 2015, 246, 191-197.	2.2	5
72	Effect of Solvent and Substrate on the Surface Binding Mode of Carboxylate-Functionalized Aromatic Molecules. Journal of Physical Chemistry C, 2018, 122, 10846-10856.	1.5	5

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73	MOFs modeling and theory: general discussion. Faraday Discussions, 2017, 201, 233-245.	1.6	4
74	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.	11.1	3
75	From conventional to conformal. Nature Materials, 2016, 15, 255-257.	13.3	2
76	Highlights from the Faraday Discussion on New Directions in Porous Crystalline Materials, Edinburgh, UK, June 2017. Chemical Communications, 2017, 53, 10750-10756.	2.2	0