Shuhei Furukawa

List of Publications by Year
in descending order

127 papers	15,327 citations	30070 54 h-index	17105 122 g-index
151 all docs	151 docs citations	151 times ranked	15650 citing authors

#	Article	IF	Citations
1	Thermal Conversion of Coreâ€“Shell Metalâ€“Organic Frameworks: A New Method for Selectively Functionalized Nanoporous Hybrid Carbon. Journal of the American Chemical Society, 2015, 137, 1572-1580.	13.7	1,307
2	Three-Dimensional Porous Coordination Polymer Functionalized with Amide Groups Based on Tridentate Ligand:Â Selective Sorption and Catalysis. Journal of the American Chemical Society, 2007, 129, 2607-2614.	13.7	921
3	Structuring of metalâ€“organic frameworks at the mesoscopic/macroscopic scale. Chemical Society Reviews, 2014, 43, 5700-5734.	38.1	760
4	Molecular decoding using luminescence from an entangled porous framework. Nature Communications, 2011, 2, 168.	12.8	715
5	Nanoporous Nanorods Fabricated by Coordination Modulation and Oriented Attachment Growth. Angewandte Chemie - International Edition, 2009, 48, 4739-4743.	13.8	611
6	Direct Carbonization of Al-Based Porous Coordination Polymer for Synthesis of Nanoporous Carbon. Journal of the American Chemical Society, 2012, 134, 2864-2867.	13.7	588
7	Shape-Memory Nanopores Induced in Coordination Frameworks by Crystal Downsizing. Science, 2013, 339, 193-196.	12.6	483
8	Application of metal and metal oxide nanoparticles@MOFs. Coordination Chemistry Reviews, 2016, 307, 237-254.	18.8	479
9	Controlled Multiscale Synthesis of Porous Coordination Polymer in Nano/Micro Regimes. Chemistry of Materials, 2010, 22, 4531-4538.	6.7	459
10	Enhanced selectivity in mixed matrix membranes for CO2 capture through efficient dispersion of amine-functionalized MOF nanoparticles. Nature Energy, 2017, 2, .	39.5	428
11	Synthesis of Prussian Blue Nanoparticles with a Hollow Interior by Controlled Chemical Etching. Angewandte Chemie - International Edition, 2012, 51, 984-988.	13.8	424
12	Morphology Design of Porous Coordination Polymer Crystals by Coordination Modulation. Journal of the American Chemical Society, 2011, 133, 15506-15513.	13.7	383
13	Mesoscopic architectures of porous coordination polymers fabricated by pseudomorphic replication. Nature Materials, 2012, 11, 717-723.	27.5	352
14	Two-Dimensional Porous Molecular Networks of Dehydrobenzo[12]annulene Derivatives via Alkyl Chain Interdigitation. Journal of the American Chemical Society, 2006, 128, 16613-16625.	13.7	343
15	Heterogeneously Hybridized Porous Coordination Polymer Crystals: Fabrication of Heterometallic Coreâ€“Shell Single Crystals with an Inâ€Plane Rotational Epitaxial Relationship. Angewandte Chemie - International Edition, 2009, 48, 1766-1770.	13.8	287
16	Using Functional Nano- and Microparticles for the Preparation of Metalâ€“Organic Framework Composites with Novel Properties. Accounts of Chemical Research, 2014, 47, 396-405.	15.6	264
17	Preparation of Microporous Carbon Fibers through Carbonization of Al-Based Porous Coordination Polymer (Al-PCP) with Furfuryl Alcohol. Chemistry of Materials, 2011, 23, 1225-1231.	6.7	231
18	Precise Control and Consecutive Modulation of Spin Transition Temperature Using Chemical Migration in Porous Coordination Polymers. Journal of the American Chemical Society, 2011, 133, 8600-8605.	13.7	191

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19	Structural Transformation of a Two-Dimensional Molecular Network in Response to Selective Guest Inclusion. Angewandte Chemie - International Edition, 2007, 46, 2831-2834.	13.8	182
20	Sequential Functionalization of Porous Coordination Polymer Crystals. Angewandte Chemie - International Edition, 2011, 50, 8057-8061.	13.8	175
21	Integration of Porous Coordination Polymers and Gold Nanorods into Coreâ€"Shell Mesoscopic Composites toward Light-Induced Molecular Release. Journal of the American Chemical Society, 2013, 135, 10998-11005.	13.7	171
22	Self-assembly of metalâ€"organic polyhedra into supramolecular polymers with intrinsic microporosity. Nature Communications, 2018, 9, 2506.	12.8	152
23	Molecular Clusters in Two-Dimensional Surface-Confined Nanoporous Molecular Networks: Structure, Rigidity, and Dynamics. Journal of the American Chemical Society, 2008, 130, 7119-7129.	13.7	149
24	A block PCP crystal: anisotropic hybridization of porous coordination polymers by face-selective epitaxial growth. Chemical Communications, 2009, , 5097.	4.1	147
25	MOF-on-MOF heteroepitaxy: perfectly oriented [Zn2(ndc)2(dabco)]n grown on [Cu2(ndc)2(dabco)]n thin films. Dalton Transactions, 2011, 40, 4954.	3.3	146
26	Molecular Geometry Directed KagomÃ© and Honeycomb Networks:Â Toward Two-Dimensional Crystal Engineering. Journal of the American Chemical Society, 2006, 128, 3502-3503.	13.7	143
27	Direct synthesis of nanoporous carbon nitride fibers using Al-based porous coordination polymers (Al-PCPs). Chemical Communications, 2011, 47, 8124.	4.1	140
28	MOFBOTS: Metalâ€"Organicâ€Frameworkâ€Based Biomedical Microrobots. Advanced Materials, 2019, 31, e1901592.	21.0	139
29	Doping Light Emitters into Metalâ€"Organic Frameworks. Angewandte Chemie - International Edition, 2012, 51, 8431-8433.	13.8	137
30	Coordinatively Immobilized Monolayers on Porous Coordination Polymer Crystals. Angewandte Chemie - International Edition, 2010, 49, 5327-5330.	13.8	133
31	Binary Janus Porous Coordination Polymer Coatings for Sensor Devices with Tunable Analyte Affinity. Angewandte Chemie - International Edition, 2013, 52, 341-345.	13.8	125
32	Emerging applications of metalâ€"organic frameworks. CrystEngComm, 2016, 18, 6532-6542.	2.6	125
33	Localized cell stimulation by nitric oxide using a photoactive porous coordination polymer platform. Nature Communications, 2013, 4, 2684.	12.8	122
34	Self-assembled materials and supramolecular chemistry within microfluidic environments: from common thermodynamic states to non-equilibrium structures. Chemical Society Reviews, 2018, 47, 3788-3803.	38.1	119
35	Solâ€"Gel Processing of Metalâ€"Organic Frameworks. Chemistry of Materials, 2017, 29, 2626-2645.	6.7	116
36	Design of Superhydrophobic Porous Coordination Polymers through the Introduction of External Surface Corrugation by the Use of an Aromatic Hydrocarbon Building Unit. Angewandte Chemie - International Edition, 2014, 53, 8225-8230.	13.8	110

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37	Postsynthetic Covalent and Coordination Functionalization of Rhodium(II)-Based Metalâ€“Organic Polyhedra. Journal of the American Chemical Society, 2019, 141, 4094-4102.	13.7	104
38	Porous Coordination Polymer Hybrid Device with Quartz Oscillator: Effect of Crystal Size on Sorption Kinetics. Journal of the American Chemical Society, 2011, 133, 11932-11935.	13.7	98
39	Combining UV Lithography and an Imprinting Technique for Patterning Metalâ€Organic Frameworks. Advanced Materials, 2013, 25, 4701-4705.	21.0	98
40	Rhodiumâ€“Organic Cuboctahedra as Porous Solids with Strong Binding Sites. Inorganic Chemistry, 2016, 55, 10843-10846.	4.0	97
41	Light responsive metalâ€“organic frameworks as controllable CO-releasing cell culture substrates. Chemical Science, 2017, 8, 2381-2386.	7.4	96
42	Formulation of Metalâ€“Organic Framework Inks for the 3D Printing of Robust Microporous Solids toward High-Pressure Gas Storage and Separation. ACS Applied Materials & Interfaces, 2020, 12, 10983-10992.	8.0	95
43	Metal-Organic Cuboctahedra for Synthetic Ion Channels with Multiple Conductance States. CheM, 2017, 2, 393-403.	11.7	89
44	Crystal morphology-directed framework orientation in porous coordination polymer films and freestanding membranes via Langmuirâ€“Blodgettry. Journal of Materials Chemistry, 2012, 22, 10159.	6.7	74
45	Mechanically stable, hierarchically porous Cu₃(btc)₂ (HKUST-1) monoliths via direct conversion of copper(<scp>ii</scp>) hydroxide-based monoliths. Chemical Communications, 2015, 51, 3511-3514.	4.1	67
46	Chiral Alignment of OPV Chromophores:Â Exploitation of the Ureidophthalimide-Based Foldamer. Journal of the American Chemical Society, 2006, 128, 16113-16121.	13.7	63
47	A New Class of Cyclic Hexamer: [Co6L6]24âˆ’ (H6L=hexaazatriphenylene hexacarboxylic acid). Angewandte Chemie - International Edition, 2001, 40, 3817-3819.	13.8	62
48	A Coordinative Solubilizer Method to Fabricate Soft Porous Materials from Insoluble Metalâ€“Organic Polyhedra. Angewandte Chemie - International Edition, 2019, 58, 6347-6350.	13.8	62
49	Charge Transfer and Exciplex Emissions from a Naphthalenediimide-Entangled Coordination Framework Accommodating Various Aromatic Guests. Journal of Physical Chemistry C, 2012, 116, 26084-26090.	3.1	60
50	Beyond Frameworks: Structuring Reticular Materials across Nanoâ€‚ Mesoâ€‚ and Bulk Regimes. Angewandte Chemie - International Edition, 2020, 59, 22350-22370.	13.8	60
51	Assembling metalâ€“organic cages as porous materials. Chemical Society Reviews, 2022, 51, 4876-4889.	38.1	60
52	Rhodium-Based Metalâ€“Organic Polyhedra Assemblies for Selective CO₂ Photoreduction. Journal of the American Chemical Society, 2022, 144, 3626-3636.	13.7	57
53	Two-Dimensional Crystal Engineering at the Liquidâ€“Solid Interface. Topics in Current Chemistry, 2008, 287, 87-133.	4.0	56
54	Hierarchical structuring of metalâ€“organic framework thin-films on quartz crystal microbalance (QCM) substrates for selective adsorption applications. Journal of Materials Chemistry A, 2015, 3, 23385-23394.	10.3	56

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55	Control over the nucleation process determines the framework topology of porous coordination polymers. CrystEngComm, 2010, 12, 2350.	2.6	55
56	Effect of the Metal-Assisted Assembling Mode on the Redox States of Hexaazatriphenylene Hexacarbonitrile. Angewandte Chemie - International Edition, 2005, 44, 2700-2704.	13.8	50
57	Diffusion-Coupled Molecular Assembly: Structuring of Coordination Polymers Across Multiple Length Scales. Journal of the American Chemical Society, 2014, 136, 14966-14973.	13.7	50
58	Redox reaction in two-dimensional porous coordination polymers based on ferrocenedicarboxylates. Dalton Transactions, 2012, 41, 3924.	3.3	49
59	Targeted functionalisation of a hierarchically-structured porous coordination polymer crystal enhances its entire function. Chemical Communications, 2012, 48, 6472.	4.1	48
60	Control over Flexibility of Entangled Porous Coordination Frameworks by Molecular and Mesoscopic Chemistries. Chemistry Letters, 2013, 42, 570-576.	1.3	48
61	Control of the charge-transfer interaction between a flexible porous coordination host and aromatic guests by framework isomerism. CrystEngComm, 2011, 13, 3360.	2.6	46
62	Rational synthesis of a two-dimensional honeycomb structure based on a paramagnetic paddlewheel diruthenium complex. Chemical Communications, 2005, , 865.	4.1	43
63	Porous Coordination Polymer with Ï€ Lewis Acidic Pore Surfaces, {[Cu3(CN)3{hat(CN)3(OEt)3}]â‹…3â€‰THF}n. Angewandte Chemie - International Edition, 2006, 45, 4628-4631.	13.8	43
64	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
65	Switchable gate-opening effect in metalâ€“organic polyhedra assemblies through solution processing. Chemical Science, 2018, 9, 6463-6469.	7.4	40
66	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
67	Hypercrosslinked Polymer Gels as a Synthetic Hybridization Platform for Designing Versatile Molecular Separators. Journal of the American Chemical Society, 2022, 144, 6861-6870.	13.7	40
68	Neutral Paddlewheel Diruthenium Complexes with Tetracarboxylates of Large Ï€-Conjugated Substituents:Â Facile One-Pot Synthesis, Crystal Structures, and Electrochemical Studies. Inorganic Chemistry, 2004, 43, 6464-6472.	4.0	39
69	Mesoscopic superstructures of flexible porous coordination polymers synthesized <i>via</i> coordination replication. Chemical Science, 2015, 6, 5938-5946.	7.4	39
70	Structuralization of Ca²⁺-Based Metalâ€“Organic Frameworks Prepared via Coordination Replication of Calcium Carbonate. Inorganic Chemistry, 2016, 55, 3700-3705.	4.0	39
71	Spatiotemporal Control of Supramolecular Polymerization and Gelation of Metalâ€“Organic Polyhedra. Journal of the American Chemical Society, 2021, 143, 3562-3570.	13.7	39
72	Impact of crystal orientation on the adsorption kinetics of a porous coordination polymerâ€“quartz crystal microbalance hybrid sensor. Journal of Materials Chemistry C, 2014, 2, 3336.	5.5	38

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73	Influence of nanoscale structuralisation on the catalytic performance of ZIF-8: a cautionary surface catalysis study. CrystEngComm, 2018, 20, 4926-4934.	2.6	38
74	Confined synthesis of CdSe quantum dots in the pores of metalâ€"organic frameworks. Journal of Materials Chemistry C, 2014, 2, 7173-7175.	5.5	36
75	Partially fluorinated MIL-101(Cr): from a miniscule structure modification to a huge chemical environment transformation inspected by ¹²⁹Xe NMR. Journal of Materials Chemistry A, 2019, 7, 15101-15112.	10.3	36
76	Supramolecular Hydrophobicâ^'Hydrophilic Nanopatterns at Electrified Interfaces. Nano Letters, 2007, 7, 791-795.	9.1	35
77	Enhanced properties of metalâ€"organic framework thin films fabricated via a coordination modulation-controlled layer-by-layer process. Journal of Materials Chemistry A, 2017, 5, 13665-13673.	10.3	35
78	Understanding the multiscale self-assembly of metalâ€"organic polyhedra towards functionally graded porous gels. Chemical Science, 2019, 10, 10833-10842.	7.4	33
79	Two-Leg Molecular Ladders Formed by Hierarchical Self-Assembly of an Organic Radical. Journal of the American Chemical Society, 2009, 131, 6246-6252.	13.7	31
80	Coordination Modulation Method To Prepare New Metalâ€"Organic Framework-Based CO-Releasing Materials. ACS Applied Materials & Interfaces, 2018, 10, 31158-31167.	8.0	31
81	Light-induced nitric oxide release from physiologically stable porous coordination polymers. Dalton Transactions, 2015, 44, 15324-15333.	3.3	30
82	Coordination/metalâ€"organic cages inside out. Coordination Chemistry Reviews, 2022, 467, 214612.	18.8	29
83	Molecular pentagonal tiling: self-assemblies of pentagonal-shaped macrocycles at liquid/solid interfaces. CrystEngComm, 2011, 13, 5551.	2.6	28
84	Impact of Molecular Clustering inside Nanopores on Desorption Processes. Journal of the American Chemical Society, 2013, 135, 4608-4611.	13.7	28
85	Particle size effects in the kinetic trapping of a structurally-locked form of a flexible MOF. CrystEngComm, 2016, 18, 4172-4179.	2.6	28
86	Electrochemical reactions at a porphyrinâ€"copper interface. Physical Chemistry Chemical Physics, 2009, 11, 5422.	2.8	27
87	Programmed crystallization via epitaxial growth and ligand replacement towards hybridizing porous coordination polymer crystals. Dalton Transactions, 2013, 42, 15868.	3.3	27
88	Periodic molecular boxes in entangled enantiomorphic lcy nets. Chemical Communications, 2010, 46, 4142.	4.1	26
89	Localized Conversion of Metalâ€"Organic Frameworks into Polymer Gels via Light-Induced Click Chemistry. Chemistry of Materials, 2017, 29, 5982-5989.	6.7	26
90	Reductive coordination replication of V2O5 sacrificial macrostructures into vanadium-based porous coordination polymers. CrystEngComm, 2015, 17, 323-330.	2.6	25

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91	Trapping of a Spatial Transient State During the Framework Transformation of a Porous Coordination Polymer. Journal of the American Chemical Society, 2014, 136, 4938-4944.	13.7	24
92	Multiscale structural control of linked metalâ€“organic polyhedra gel by aging-induced linkage-reorganization. Chemical Science, 2021, 12, 12556-12563.	7.4	24
93	Enhanced Phosphorescence Emission by Incorporating Aromatic Halides into an Entangled Coordination Framework Based on Naphthalenediimide. ChemPhysChem, 2014, 15, 2517-2521.	2.1	20
94	Porous materials as carriers of gasotransmitters towards gas biology and therapeutic applications. Chemical Communications, 2020, 56, 9750-9766.	4.1	20
95	Liquid Phase Separation of Polyaromatics on [Cu2(BDC)2(dabco)]. Langmuir, 2011, 27, 9083-9087.	3.5	19
96	Porous Colloidal Hydrogels Formed by Coordinationâ€Driven Selfâ€Assembly of Charged Metalâ€Organic Polyhedra. Chemistry - an Asian Journal, 2021, 16, 1092-1100.	3.3	19
97	Charting a course for chemistry. Nature Chemistry, 2019, 11, 286-294.	13.6	18
98	Pseudo-5-Fold-Symmetrical Ligand Drives Geometric Frustration in Porous Metalâ€“Organic and Hydrogen-Bonded Frameworks. Journal of the American Chemical Society, 2020, 142, 13839-13845.	13.7	18
99	Anomalous temperature dependence of the sound velocities of SiO2-TiO2 glasses. Journal of Materials Science Letters, 1995, 14, 697.	0.5	17
100	A Coordinative Solubilizer Method to Fabricate Soft Porous Materials from Insoluble Metalâ€“Organic Polyhedra. Angewandte Chemie, 2019, 131, 6413-6416.	2.0	17
101	A selective ionic rectifier. Nature Materials, 2020, 19, 701-702.	27.5	16
102	Fibrous Architectures of Porous Coordination Polymersâ€“Alumina Composites Fabricated by Coordination Replication. Chemistry Letters, 2014, 43, 1052-1054.	1.3	15
103	Fighting at the Interface: Structural Evolution during Heteroepitaxial Growth of Cyanometallate Coordination Polymers. Inorganic Chemistry, 2018, 57, 8701-8704.	4.0	14
104	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
105	Hysteresis in the gas sorption isotherms of metalâ€“organic cages accompanied by subtle changes in molecular packing. Chemical Communications, 2020, 56, 3689-3692.	4.1	14
106	Directional asymmetry over multiple length scales in reticular porous materials. Chemical Science, 2021, 12, 18-33.	7.4	14
107	Formation of Nanocrystals of a Zinc Pillared-layer Porous Coordination Polymer Using Microwave-assisted Coordination Modulation. Chemistry Letters, 2012, 41, 1436-1438.	1.3	13
108	Mechanoresponsive Porosity in Metal-Organic Frameworks. Trends in Chemistry, 2021, 3, 254-265.	8.5	13

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109	Photopatterning of fluorescent hostâ€“guest carriers through pore activation of metalâ€“organic framework single crystals. Chemical Communications, 2017, 53, 7222-7225.	4.1	12
110	Fast multipoint immobilization of lipase through chiral<scp>l</scp>-proline on a MOF as a chiral bioreactor. Dalton Transactions, 2021, 50, 1866-1873.	3.3	12
111	<scp>l</scp>-Glutamic acid release from a series of aluminum-based isoreticular porous coordination polymers. Journal of Materials Chemistry B, 2015, 3, 4205-4212.	5.8	11
112	Directing the Assembly of Charged Organic Molecules by a Hydrophilicâ^'Hydrophobic Nanostructured Monolayer at Electrified Interfaces. Nano Letters, 2008, 8, 1163-1168.	9.1	10
113	Understanding the role of linker flexibility in soft porous coordination polymers. Molecular Systems Design and Engineering, 2020, 5, 284-293.	3.4	9
114	Mehr als nur ein Netzwerk: Strukturierung retikulÃrer Materialien im Nanoâ€, Mesoâ€•und Volumenbereich. Angewandte Chemie, 2020, 132, 22534-22556.	2.0	8
115	Control of Extrinsic Porosities in Linked Metalâ€“Organic Polyhedra Gels by Imparting Coordination-Driven Self-Assembly with Electrostatic Repulsion. ACS Applied Materials & Interfaces, 2022, 14, 23660-23668.	8.0	8
116	2D analogues of the inverted hexagonal phase self-assembled from 4,6-dialkoxylated isophthalic acids at solidâ€“liquid interfaces. Nanoscale, 2010, 2, 1773.	5.6	7
117	Thermodynamically controlled coordination-engineering of novel 2D cadmium thiolate coordination polymers. New Journal of Chemistry, 2011, 35, 1265.	2.8	7
118	Hostâ€“Guest Metalâ€“Organic Frameworks for Photonics. Structure and Bonding, 2013, , 167-186.	1.0	6
119	Tuning Light Emission towards White Light from a Naphthalenediimide-Based Entangled Metal-Organic Framework by Mixing Aromatic Guest Molecules. Polymers, 2018, 10, 188.	4.5	6
120	Controlled Sequential Assembly of Metalâ€“Organic Polyhedra into Colloidal Gels with High Chemical Complexity. Small Structures, 2022, 3, .	12.0	6
121	Greater Porosity with Redox Reaction Speeds Up MOF Color Change. CheM, 2016, 1, 186-188.	11.7	5
122	Open framework materials for energy applications. APL Materials, 2020, 8, 040401.	5.1	4
123	Dynamic properties of a flexible metal-organic framework exhibiting a unique â€œpicture frameâ€•like crystal morphology. Nano Research, 2021, 14, 432-437.	10.4	4
124	Terahertz phase contrast imaging of sorption kinetics in porous coordination polymer nanocrystals using differential optical resonator. Optics Express, 2014, 22, 11061.	3.4	3
125	Architecture and Functional Engineering Based on Paddlewheel Dinuclear Tetracarboxylate Building Blocks. , 2006, , 195-218.		1
126	Monte Carlo wavefunction approach to the dissipative quantum-phase dynamics of two-component Bose-Einstein condensates. European Physical Journal D, 2006, 38, 523-532.	1.3	1

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127	Materials Designed for Biological Nitric Oxide Delivery. Fundamental Biomedical Technologies, 2021, , 125-133.	0.2	1