

# Hiroyasu Furukawa

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

104 papers	40,852 citations	61 h-index	107 g-index
107 ext. papers	45,491 ext. citations	13.1 avg, IF	7.59 L-index

#	Paper	IF	Citations
104	Enhanced water stability and high CO storage capacity of a Lewis basic sites-containing zirconium metal-organic framework. <i>Dalton Transactions</i> , <b>2021</b> , 50, 16587-16592	4.3	1
103	Ambient-Temperature Hydrogen Storage via Vanadium(II)-Dihydrogen Complexation in a Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 6248-6256	16.4	22
102	Technoeconomic analysis of metal-organic frameworks for bulk hydrogen transportation. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 1083-1094	35.4	4
101	Negative cooperativity upon hydrogen bond-stabilized O adsorption in a redox-active metal-organic framework. <i>Nature Communications</i> , <b>2020</b> , 11, 3087	17.4	22
100	Design principles for the ultimate gas deliverable capacity material: nonporous to porous deformations without volume change. <i>Molecular Systems Design and Engineering</i> , <b>2020</b> , 5, 1491-1503	4.6	3
99	Iron detection and remediation with a functionalized porous polymer applied to environmental water samples. <i>Chemical Science</i> , <b>2019</b> , 10, 6651-6660	9.4	22
98	An assessment of strategies for the development of solid-state adsorbents for vehicular hydrogen storage. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 2784-2812	35.4	97
97	Hydrogen Adsorption in a Zeolitic Imidazolate Framework with ItA Topology. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 15435-15445	3.8	13
96	Synthesis and Characterization of Metal-Organic Frameworks <b>2018</b> , 17-81		2
95	Combining Linker Design and Linker-Exchange Strategies for the Synthesis of a Stable Large-Pore Zr-Based Metal-Organic Framework. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 35462-35468	9.5	11
94	Water harvesting from air with metal-organic frameworks powered by natural sunlight. <i>Science</i> , <b>2017</b> , 356, 430-434	33.3	800
93	The rotational dynamics of H adsorbed in covalent organic frameworks. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 13075-13082	3.6	13
92	High H <sub>2</sub> Sorption Energetics in Zeolitic Imidazolate Frameworks. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 1723-1733	3.8	10
91	Response to Comment on "Water harvesting from air with metal-organic frameworks powered by natural sunlight". <i>Science</i> , <b>2017</b> , 358,	33.3	2
90	Response to Comment on "Water harvesting from air with metal-organic frameworks powered by natural sunlight". <i>Science</i> , <b>2017</b> , 358,	33.3	13
89	High Methane Storage Working Capacity in Metal-Organic Frameworks with Acrylate Links. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 10244-51	16.4	201
88	Characterization of Adsorption Enthalpy of Novel Water-Stable Zeolites and Metal-Organic Frameworks. <i>Scientific Reports</i> , <b>2016</b> , 6, 19097	4.9	44

87	Seven Post-synthetic Covalent Reactions in Tandem Leading to Enzyme-like Complexity within Metal-Organic Framework Crystals. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 8352-5	16.4	146
86	Mixed-Metal Zeolitic Imidazolate Frameworks and their Selective Capture of Wet Carbon Dioxide over Methane. <i>Inorganic Chemistry</i> , <b>2016</b> , 55, 6201-7	5.1	38
85	High proton conductivity at low relative humidity in an anionic Fe-based metal-organic framework. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 3638-3641	13	65
84	Weaving of organic threads into a crystalline covalent organic framework. <i>Science</i> , <b>2016</b> , 351, 365-9	33.3	307
83	A Titanium-Organic Framework as an Exemplar of Combining the Chemistry of Metal- and Covalent-Organic Frameworks. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 4330-3	16.4	196
82	Extended Linkers for Ultrahigh Surface Area Metal-Organic Frameworks <b>2016</b> , 271-307		1
81	High Methanol Uptake Capacity in Two New Series of Metal-Organic Frameworks: Promising Materials for Adsorption-Driven Heat Pump Applications. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 6243-6249	9.6	36
80	The Development of Global Science. <i>ACS Central Science</i> , <b>2015</b> , 1, 18-23	16.8	5
79	L-Aspartate links for stable sodium metal-organic frameworks. <i>Chemical Communications</i> , <b>2015</b> , 51, 17463-6	3.8	22
78	Synthesis and Selective CO <sub>2</sub> Capture Properties of a Series of Hexatopic Linker-Based Metal-Organic Frameworks. <i>Inorganic Chemistry</i> , <b>2015</b> , 54, 10065-72	5.1	39
77	Three-Dimensional Metal-Catecholate Frameworks and Their Ultrahigh Proton Conductivity. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 15394-7	16.4	216
76	Heterogenität innerhalb von Ordnung in Metall-organischen Gerüsten. <i>Angewandte Chemie</i> , <b>2015</b> , 127, 3480-3494	3.6	67
75	Introduction of functionality, selection of topology, and enhancement of gas adsorption in multivariate metal-organic framework-177. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 2641-50	16.4	285
74	"Heterogeneity within order" in metal-organic frameworks. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 3417-30	16.4	390
73	High methane storage capacity in aluminum metal-organic frameworks. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 5271-4	16.4	349
72	Designed amyloid fibers as materials for selective carbon dioxide capture. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 191-6	11.5	82
71	Synthesis and hydrogen adsorption properties of internally polarized 2,6-azulenedicarboxylate based metal-organic frameworks. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 18823-18830	13	22
70	Selective capture of carbon dioxide under humid conditions by hydrophobic chabazite-type zeolitic imidazolate frameworks. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 10645-8	16.4	196

69	Synthesis and characterization of metal-organic framework-74 containing 2, 4, 6, 8, and 10 different metals. <i>Inorganic Chemistry</i> , <b>2014</b> , 53, 5881-3	5.1	303
68	Metal-organic frameworks with precisely designed interior for carbon dioxide capture in the presence of water. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 8863-6	16.4	317
67	Structure-based design of functional amyloid materials. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 18044-51	16.4	82
66	Selective Capture of Carbon Dioxide under Humid Conditions by Hydrophobic Chabazite-Type Zeolitic Imidazolate Frameworks. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 10821-10824	3.6	40
65	R&Ktitelbild: Selective Capture of Carbon Dioxide under Humid Conditions by Hydrophobic Chabazite-Type Zeolitic Imidazolate Frameworks (Angew. Chem. 40/2014). <i>Angewandte Chemie</i> , <b>2014</b> , 126, 11004-11004	3.6	
64	Water adsorption in porous metal-organic frameworks and related materials. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 4369-81	16.4	1433
63	The chemistry and applications of metal-organic frameworks. <i>Science</i> , <b>2013</b> , 341, 1230444	33.3	9059
62	A mesoporous lanthanide-organic framework constructed from a dendritic hexacarboxylate with cages of 2.4 nm. <i>CrystEngComm</i> , <b>2013</b> , 15, 9328	3.3	33
61	Single-crystal structure of a covalent organic framework. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 16336-9	16.4	277
60	Low-energy regeneration and high productivity in a lanthanide-hexacarboxylate framework for high-pressure CO <sub>2</sub> -CH <sub>4</sub> -H <sub>2</sub> separation. <i>Chemical Communications</i> , <b>2013</b> , 49, 6773-5	5.8	61
59	A Combined Experimental-Computational Investigation of Methane Adsorption and Selectivity in a Series of Isorecticular Zeolitic Imidazolate Frameworks. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 10326-10335	3.8	72
58	Photophysical pore control in an azobenzene-containing metal-organic framework. <i>Chemical Science</i> , <b>2013</b> , 4, 2858	9.4	208
57	Synthesis, structure, and metalation of two new highly porous zirconium metal-organic frameworks. <i>Inorganic Chemistry</i> , <b>2012</b> , 51, 6443-5	5.1	629
56	A Covalent Organic Framework that Exceeds the DOE 2015 Volumetric Target for H <sub>2</sub> Uptake at 298 K. <i>Journal of Physical Chemistry Letters</i> , <b>2012</b> , 3, 2671-5	6.4	85
55	A Combined Experimental-Computational Study on the Effect of Topology on Carbon Dioxide Adsorption in Zeolitic Imidazolate Frameworks. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 24084-24090	3.8	90
54	New Porous Crystals of Extended Metal-Catecholates. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 3511-3513	9.6	423
53	Nanoporous carbohydrate metal-organic frameworks. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 406-17	16.4	208
52	Large-pore apertures in a series of metal-organic frameworks. <i>Science</i> , <b>2012</b> , 336, 1018-23	33.3	1425

51	Reversible Interpenetration in a Metal-Organic Framework Triggered by Ligand Removal and Addition. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 8921-8925	3.6	25
50	Reversible interpenetration in a metal-organic framework triggered by ligand removal and addition. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 8791-5	16.4	113
49	Porous, conductive metal-triazolates and their structural elucidation by the charge-flipping method. <i>Chemistry - A European Journal</i> , <b>2012</b> , 18, 10595-601	4.8	172
48	Hydrogen Storage in New Metal-Organic Frameworks. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 13143-13151	38.51	154
47	Incorporation of active metal sites in MOFs via in situ generated ligand deficient metal-linker complexes. <i>Chemical Communications</i> , <b>2011</b> , 47, 11882-4	5.8	32
46	Crystalline covalent organic frameworks with hydrazone linkages. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 11478-81	16.4	561
45	Isorecticular expansion of metal-organic frameworks with triangular and square building units and the lowest calculated density for porous crystals. <i>Inorganic Chemistry</i> , <b>2011</b> , 50, 9147-52	5.1	263
44	A multiunit catalyst with synergistic stability and reactivity: a polyoxometalate-metal organic framework for aerobic decontamination. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 16839-46	16.4	437
43	Covalent Organic Frameworks with High Charge Carrier Mobility. <i>Chemistry of Materials</i> , <b>2011</b> , 23, 4094-4097	40.97	524
42	Strong and reversible binding of carbon dioxide in a green metal-organic framework. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 15312-5	16.4	297
41	Metal insertion in a microporous metal-organic framework lined with 2,2'-bipyridine. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 14382-4	16.4	463
40	A combined experimental-computational investigation of carbon dioxide capture in a series of isorecticular zeolitic imidazolate frameworks. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 11006-8	16.4	263
39	Adsorption mechanism and uptake of methane in covalent organic frameworks: theory and experiment. <i>Journal of Physical Chemistry A</i> , <b>2010</b> , 114, 10824-33	2.8	156
38	Ring-opening reactions within porous metal-organic frameworks. <i>Inorganic Chemistry</i> , <b>2010</b> , 49, 6387-9	5.1	99
37	Ultrahigh porosity in metal-organic frameworks. <i>Science</i> , <b>2010</b> , 329, 424-8	33.3	2869
36	Multiple functional groups of varying ratios in metal-organic frameworks. <i>Science</i> , <b>2010</b> , 327, 846-50	33.3	1399
35	A metal-organic framework with covalently bound organometallic complexes. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 9262-4	16.4	185
34	Azulene based metal-organic frameworks for strong adsorption of H <sub>2</sub> . <i>Chemical Communications</i> , <b>2010</b> , 46, 7981-3	5.8	55

33	Catalytic nickel nanoparticles embedded in a mesoporous metal-organic framework. <i>Chemical Communications</i> , <b>2010</b> , 46, 3086-8	5.8	134
32	Metal-Organic Frameworks from Edible Natural Products. <i>Angewandte Chemie</i> , <b>2010</b> , 122, 8812-8816	3.6	55
31	Titelbild: Metal-Organic Frameworks from Edible Natural Products (Angew. Chem. 46/2010). <i>Angewandte Chemie</i> , <b>2010</b> , 122, 8715-8715	3.6	
30	Metal-organic frameworks from edible natural products. <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 8630-4	16.4	426
29	Cover Picture: Metal-Organic Frameworks from Edible Natural Products (Angew. Chem. Int. Ed. 46/2010). <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 8535-8535	16.4	2
28	Isorecticular metalation of metal-organic frameworks. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 9492-3	16.4	248
27	Storage of hydrogen, methane, and carbon dioxide in highly porous covalent organic frameworks for clean energy applications. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 8875-83	16.4	1843
26	Synthesis and structure of chemically stable metal-organic polyhedra. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 12532-3	16.4	135
25	Control of pore size and functionality in isorecticular zeolitic imidazolate frameworks and their carbon dioxide selective capture properties. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 3875-7	16.4	1146
24	A crystalline imine-linked 3-D porous covalent organic framework. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 4570-1	16.4	1005
23	Highly efficient separation of carbon dioxide by a metal-organic framework replete with open metal sites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 20637-40	11.5	950
22	Colossal cages in zeolitic imidazolate frameworks as selective carbon dioxide reservoirs. <i>Nature</i> , <b>2008</b> , 453, 207-11	50.4	1302
21	Covalent organic frameworks as exceptional hydrogen storage materials. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 11580-1	16.4	643
20	Precision replication of hierarchical biological structures by metal oxides using a sonochemical method. <i>Langmuir</i> , <b>2008</b> , 24, 6292-9	4	47
19	Crystals as molecules: postsynthesis covalent functionalization of zeolitic imidazolate frameworks. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 12626-7	16.4	558
18	Control of vertex geometry, structure dimensionality, functionality, and pore metrics in the reticular synthesis of crystalline metal-organic frameworks and polyhedra. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 11650-61	16.4	467
17	High-throughput synthesis of zeolitic imidazolate frameworks and application to CO <sub>2</sub> capture. <i>Science</i> , <b>2008</b> , 319, 939-43	33.3	3044
16	Reticular synthesis of microporous and mesoporous 2D covalent organic frameworks. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 12914-5	16.4	601

15	Zeolite A imidazolate frameworks. <i>Nature Materials</i> , <b>2007</b> , 6, 501-6	27	809
14	Independent verification of the saturation hydrogen uptake in MOF-177 and establishment of a benchmark for hydrogen adsorption in metal-organic frameworks. <i>Journal of Materials Chemistry</i> , <b>2007</b> , 17, 3197		485
13	Crystal structure, dissolution, and deposition of a 5 nm functionalized metal-organic great rhombicuboctahedron. <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 8398-9	16.4	150
12	Porous Chiral Metal Organic Carboxylate Frameworks with a Double-interwoven SrSi <sub>2</sub> Topology: M <sub>3</sub> (TTCA) <sub>2</sub> 6DMF7H <sub>2</sub> O (TTCA = triphenylenetricarboxylate; M = Zn <sup>2+</sup> , Cd <sup>2+</sup> ). <i>Chemistry Letters</i> , <b>2006</b> , 35, 1054-1055	1.7	12
11	Energy transfer between chlorophyll derivatives in silica mesostructured films and photocurrent generation. <i>Langmuir</i> , <b>2005</b> , 21, 3992-7	4	25
10	Electrochemical Properties of Nanostructured Amorphous, Sol-gel-Synthesized TiO <sub>2</sub> /Acetylene Black Composite Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2004</b> , 151, A527	3.9	53
9	Effective inclusion of chlorophyllous pigments into mesoporous silica for the energy transfer between the chromophores. <i>Studies in Surface Science and Catalysis</i> , <b>2003</b> , 146, 577-580	1.8	1
8	Synthesis of Mesoporous Carbon-Containing Ferrocene Derivative and Its Electrochemical Property. <i>Chemistry Letters</i> , <b>2003</b> , 32, 132-133	1.7	19
7	Determination of Enzyme Immobilized into Electropolymerized Polymer Films. <i>Chemistry Letters</i> , <b>2003</b> , 32, 176-177	1.7	5
6	Effective Inclusion of Chlorophyllous Pigments into Mesoporous Silica Modified with 1,2-Diols. <i>Chemistry of Materials</i> , <b>2001</b> , 13, 2722-2729	9.6	38
5	Immobilization of chlorophyll derivatives into mesoporous silica and energy transfer between the chromophores in mesopores. <i>Chemical Communications</i> , <b>2001</b> , 2002-3	5.8	27
4	Effect of C <sup>13</sup> -Stereochemistry on the Molecular Properties of Chlorophylls. <i>Bulletin of the Chemical Society of Japan</i> , <b>2000</b> , 73, 1341-1351	5.1	21
3	Adsorption of Zinc-Metallated Chlorophyllous Pigments on FSM-Type Mesoporous Silica. <i>Chemistry Letters</i> , <b>2000</b> , 29, 1256-1257	1.7	9
2	Diastereoselective Self-Assemblies of Chlorophylls a and a <sub>1</sub> . <i>Journal of Physical Chemistry B</i> , <b>1999</b> , 103, 7398-7405	3.4	18
1	Supramolecular Structures of the Chlorophyll a <sub>1</sub> Aggregate and the Origin of the Diastereoselective Separation of Chlorophyll a and a <sub>1</sub> . <i>Journal of Physical Chemistry B</i> , <b>1998</b> , 102, 7882-7889	3.4	16