

Omar M Yaghi

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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.

346 papers	162,561 citations	160 h-index	379 g-index
379 ext. papers	178,595 ext. citations	16.4 avg, IF	9.05 L-index

#	Paper	IF	Citations
346	The chemistry and applications of metal-organic frameworks. <i>Science</i> , 2013 , 341, 1230444	33.3	9059
345	Reticular synthesis and the design of new materials. <i>Nature</i> , 2003 , 423, 705-14	50.4	7597
344	Systematic design of pore size and functionality in isorecticular MOFs and their application in methane storage. <i>Science</i> , 2002 , 295, 469-72	33.3	6475
343	Design and synthesis of an exceptionally stable and highly porous metal-organic framework. <i>Nature</i> , 1999 , 402, 276-279	50.4	5851
342	Exceptional chemical and thermal stability of zeolitic imidazolate frameworks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 10186-10191	11.5	4715
341	Modular chemistry: secondary building units as a basis for the design of highly porous and robust metal-organic carboxylate frameworks. <i>Accounts of Chemical Research</i> , 2001 , 34, 319-30	24.3	4600
340	Porous, crystalline, covalent organic frameworks. <i>Science</i> , 2005 , 310, 1166-70	33.3	4039
339	Hydrogen storage in microporous metal-organic frameworks. <i>Science</i> , 2003 , 300, 1127-9	33.3	4026
338	High-throughput synthesis of zeolitic imidazolate frameworks and application to CO ₂ capture. <i>Science</i> , 2008 , 319, 939-43	33.3	3044
337	Ultrahigh porosity in metal-organic frameworks. <i>Science</i> , 2010 , 329, 424-8	33.3	2869
336	A route to high surface area, porosity and inclusion of large molecules in crystals. <i>Nature</i> , 2004 , 427, 523-7	50.4	2337
335	Metal-organic frameworks with exceptionally high capacity for storage of carbon dioxide at room temperature. <i>Journal of the American Chemical Society</i> , 2005 , 127, 17998-9	16.4	2281
334	Metal-organic frameworks: a new class of porous materials. <i>Microporous and Mesoporous Materials</i> , 2004 , 73, 3-14	5.3	2204
333	Strategies for hydrogen storage in metal-organic frameworks. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 4670-9	16.4	2144
332	Secondary building units, nets and bonding in the chemistry of metal-organic frameworks. <i>Chemical Society Reviews</i> , 2009 , 38, 1257-83	58.5	2025
331	Reticular chemistry: occurrence and taxonomy of nets and grammar for the design of frameworks. <i>Accounts of Chemical Research</i> , 2005 , 38, 176-82	24.3	1975
330	Synthesis, structure, and carbon dioxide capture properties of zeolitic imidazolate frameworks. <i>Accounts of Chemical Research</i> , 2010 , 43, 58-67	24.3	1967

329	Rod packings and metal-organic frameworks constructed from rod-shaped secondary building units. <i>Journal of the American Chemical Society</i> , 2005 , 127, 1504-18	16.4	1963
328	Synthetic Strategies, Structure Patterns, and Emerging Properties in the Chemistry of Modular Porous Solids. <i>Accounts of Chemical Research</i> , 1998 , 31, 474-484	24.3	1917
327	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> , 2009 , 131, 8875-83	16.4	1843
326	Deconstructing the crystal structures of metal-organic frameworks and related materials into their underlying nets. <i>Chemical Reviews</i> , 2012 , 112, 675-702	68.1	1794
325	Selective binding and removal of guests in a microporous metal-organic framework. <i>Nature</i> , 1995 , 378, 703-706	50.4	1695
324	The Reticular Chemistry Structure Resource (RCSR) database of, and symbols for, crystal nets. <i>Accounts of Chemical Research</i> , 2008 , 41, 1782-9	24.3	1680
323	Designed synthesis of 3D covalent organic frameworks. <i>Science</i> , 2007 , 316, 268-72	33.3	1675
322	Effects of functionalization, catenation, and variation of the metal oxide and organic linking units on the low-pressure hydrogen adsorption properties of metal-organic frameworks. <i>Journal of the American Chemical Society</i> , 2006 , 128, 1304-15	16.4	1555
321	Covalent organic frameworks comprising cobalt porphyrins for catalytic CO ₂ reduction in water. <i>Science</i> , 2015 , 349, 1208-13	33.3	1540
320	Water adsorption in porous metal-organic frameworks and related materials. <i>Journal of the American Chemical Society</i> , 2014 , 136, 4369-81	16.4	1433
319	Large-pore apertures in a series of metal-organic frameworks. <i>Science</i> , 2012 , 336, 1018-23	33.3	1425
318	Multiple functional groups of varying ratios in metal-organic frameworks. <i>Science</i> , 2010 , 327, 846-50	33.3	1399
317	Impact of preparation and handling on the hydrogen storage properties of Zn ₄ O(1,4-benzenedicarboxylate) ₃ (MOF-5). <i>Journal of the American Chemical Society</i> , 2007 , 129, 14176-7	16.4	1355
316	Colossal cages in zeolitic imidazolate frameworks as selective carbon dioxide reservoirs. <i>Nature</i> , 2008 , 453, 207-11	50.4	1302
315	The atom, the molecule, and the covalent organic framework. <i>Science</i> , 2017 , 355,	33.3	1278
314	Hydrogen sorption in functionalized metal-organic frameworks. <i>Journal of the American Chemical Society</i> , 2004 , 126, 5666-7	16.4	1172
313	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> , 2009 , 131, 3875-7	16.4	1146
312	Interwoven metal-organic framework on a periodic minimal surface with extra-large pores. <i>Science</i> , 2001 , 291, 1021-3	33.3	1089

311	Exceptional H ₂ saturation uptake in microporous metal-organic frameworks. <i>Journal of the American Chemical Society</i> , 2006 , 128, 3494-5	16.4	1079
310	A microporous metal-organic framework for gas-chromatographic separation of alkanes. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 1390-3	16.4	1060
309	A crystalline imine-linked 3-D porous covalent organic framework. <i>Journal of the American Chemical Society</i> , 2009 , 131, 4570-1	16.4	1005
308	Chemistry of Covalent Organic Frameworks. <i>Accounts of Chemical Research</i> , 2015 , 48, 3053-63	24.3	964
307	High H ₂ adsorption in a microporous metal-organic framework with open metal sites. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 4745-9	16.4	959
306	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> , 2009 , 106, 20637-40	11.5	950
305	Carbon capture and conversion using metal-organic frameworks and MOF-based materials. <i>Chemical Society Reviews</i> , 2019 , 48, 2783-2828	58.5	910
304	Highly Porous and Stable Metal-Organic Frameworks: Structure Design and Sorption Properties. <i>Journal of the American Chemical Society</i> , 2000 , 122, 1391-1397	16.4	901
303	Topological analysis of metal-organic frameworks with polytopic linkers and/or multiple building units and the minimal transitivity principle. <i>Chemical Reviews</i> , 2014 , 114, 1343-70	68.1	894
302	Establishing Microporosity in Open Metal-Organic Frameworks: Gas Sorption Isotherms for Zn(BDC) (BDC = 1,4-Benzenedicarboxylate). <i>Journal of the American Chemical Society</i> , 1998 , 120, 8571-8572	16.4	893
301	Frameworks for Extended Solids: Geometrical Design Principles. <i>Journal of Solid State Chemistry</i> , 2000 , 152, 3-20	3.3	840
300	Zeolite A imidazolate frameworks. <i>Nature Materials</i> , 2007 , 6, 501-6	27	809
299	Water harvesting from air with metal-organic frameworks powered by natural sunlight. <i>Science</i> , 2017 , 356, 430-434	33.3	800
298	Gas adsorption sites in a large-pore metal-organic framework. <i>Science</i> , 2005 , 309, 1350-4	33.3	785
297	The chemistry of metal-organic frameworks for CO ₂ capture, regeneration and conversion. <i>Nature Reviews Materials</i> , 2017 , 2,	73.3	776
296	Metal-organic frameworks for electrocatalytic reduction of carbon dioxide. <i>Journal of the American Chemical Society</i> , 2015 , 137, 14129-35	16.4	768
295	From Condensed Lanthanide Coordination Solids to Microporous Frameworks Having Accessible Metal Sites. <i>Journal of the American Chemical Society</i> , 1999 , 121, 1651-1657	16.4	765
294	Reticular chemistry of metal-organic polyhedra. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 5136-47	16.4	760

293	Assembly of metal-organic frameworks from large organic and inorganic secondary building units: new examples and simplifying principles for complex structures. <i>Journal of the American Chemical Society</i> , 2001 , 123, 8239-47	16.4	734
292	Metal-organic frameworks with high capacity and selectivity for harmful gases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 11623-7	11.5	714
291	Exceptional ammonia uptake by a covalent organic framework. <i>Nature Chemistry</i> , 2010 , 2, 235-8	17.6	675
290	Room temperature synthesis of metal-organic frameworks: MOF-5, MOF-74, MOF-177, MOF-199, and IRMOF-0. <i>Tetrahedron</i> , 2008 , 64, 8553-8557	2.4	674
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288	Covalent organic frameworks as exceptional hydrogen storage materials. <i>Journal of the American Chemical Society</i> , 2008 , 130, 11580-1	16.4	643
287	Selective Guest Binding by Tailored Channels in a 3-D Porous Zinc(II) Benzenetricarboxylate Network. <i>Journal of the American Chemical Society</i> , 1997 , 119, 2861-2868	16.4	635
286	Synthesis, structure, and metalation of two new highly porous zirconium metal-organic frameworks. <i>Inorganic Chemistry</i> , 2012 , 51, 6443-5	5.1	629
285	Tailored Porous Materials. <i>Chemistry of Materials</i> , 1999 , 11, 2633-2656	9.6	623
284	Design of new materials for methane storage. <i>Langmuir</i> , 2004 , 20, 2683-9	4	621
283	Reticular synthesis of microporous and mesoporous 2D covalent organic frameworks. <i>Journal of the American Chemical Society</i> , 2007 , 129, 12914-5	16.4	601
282	Structures of Metal-Organic Frameworks with Rod Secondary Building Units. <i>Chemical Reviews</i> , 2016 , 116, 12466-12535	68.1	570
281	Crystalline covalent organic frameworks with hydrazone linkages. <i>Journal of the American Chemical Society</i> , 2011 , 133, 11478-81	16.4	561
280	Porous metal-organic polyhedra: 25 Å cuboctahedron constructed from 12 Cu ₂ (CO ₂) ₄ paddle-wheel building blocks. <i>Journal of the American Chemical Society</i> , 2001 , 123, 4368-9	16.4	561
279	Crystals as molecules: postsynthesis covalent functionalization of zeolitic imidazolate frameworks. <i>Journal of the American Chemical Society</i> , 2008 , 130, 12626-7	16.4	558
278	Supercapacitors of nanocrystalline metal-organic frameworks. <i>ACS Nano</i> , 2014 , 8, 7451-7	16.7	540
277	Design, synthesis, structure, and gas (N ₂ , Ar, CO ₂ , CH ₄ , and H ₂) sorption properties of porous metal-organic tetrahedral and heterocuboidal polyhedra. <i>Journal of the American Chemical Society</i> , 2005 , 127, 7110-8	16.4	526
276	Covalent Organic Frameworks with High Charge Carrier Mobility. <i>Chemistry of Materials</i> , 2011 , 23, 4094-4097	16.7	524

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- 274 Independent verification of the saturation hydrogen uptake in MOF-177 and establishment of a benchmark for hydrogen adsorption in metal-organic frameworks. *Journal of Materials Chemistry*, **2007**, 17, 3197 485
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- 260 Three-periodic nets and tilings: regular and quasiregular nets. *Acta Crystallographica Section A: Foundations and Advances*, **2003**, 59, 22-7 385
- 259 Supertetrahedral sulfide crystals with giant cavities and channels. *Science*, **1999**, 283, 1145-7 33.3 370
- 258 Large Free Volume in Maximally Interpenetrating Networks: The Role of Secondary Building Units Exemplified by Tb₂(ADB)₃[(CH₃)₂SO]₄·6[(CH₃)₂SO]₁. *Journal of the American Chemical Society*, **2000**, 122, 4843-4844 16.4 363

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256	Superacidity in sulfated metal-organic framework-808. <i>Journal of the American Chemical Society</i> , 2014 , 136, 12844-7	16.4	350
255	High methane storage capacity in aluminum metal-organic frameworks. <i>Journal of the American Chemical Society</i> , 2014 , 136, 5271-4	16.4	349
254	Mapping of functional groups in metal-organic frameworks. <i>Science</i> , 2013 , 341, 882-5	33.3	349
253	Cu(2)[o-Br-C(6)H(3)(CO(2))(2)](2)(H(2)O)(2).(DMF)(8)(H(2)O)(2): a framework deliberately designed to have the NbO structure type. <i>Journal of the American Chemical Society</i> , 2002 , 124, 376-7	16.4	345
252	Secondary building units as the turning point in the development of the reticular chemistry of MOFs. <i>Science Advances</i> , 2018 , 4, eaat9180	14.3	342
251	Coordinatively Unsaturated Metal Centers in the Extended Porous Framework of Zn ₃ (BDC)3[6CH ₃ OH (BDC = 1,4-Benzenedicarboxylate). <i>Journal of the American Chemical Society</i> , 1998 , 120, 2186-2187	16.4	335
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249	Metal-organic frameworks with precisely designed interior for carbon dioxide capture in the presence of water. <i>Journal of the American Chemical Society</i> , 2014 , 136, 8863-6	16.4	317
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247	Weaving of organic threads into a crystalline covalent organic framework. <i>Science</i> , 2016 , 351, 365-9	33.3	307
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244	Reticular Electronic Tuning of Porphyrin Active Sites in Covalent Organic Frameworks for Electrocatalytic Carbon Dioxide Reduction. <i>Journal of the American Chemical Society</i> , 2018 , 140, 1116-1122	16.4	300
243	Strong and reversible binding of carbon dioxide in a green metal-organic framework. <i>Journal of the American Chemical Society</i> , 2011 , 133, 15312-5	16.4	297
242	Metal-Organic Frameworks for Water Harvesting from Air. <i>Advanced Materials</i> , 2018 , 30, e1704304	24	291
241	Mutually Interpenetrating Sheets and Channels in the Extended Structure of [Cu(4,4'-bpy)Cl]. <i>Angewandte Chemie International Edition in English</i> , 1995 , 34, 207-209		286
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- 227 Metal-organic frameworks based on trigonal prismatic building blocks and the new "acs" topology. *Inorganic Chemistry*, **2005**, 44, 2998-3000 5.1 243
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- 225 **2019**, 239
- 224 Advances in the chemistry of metal-organic frameworks. *CrystEngComm*, **2002**, 4, 401-404 3.3 239
- 223 Chemical Conversion of Linkages in Covalent Organic Frameworks. *Journal of the American Chemical Society*, **2016**, 138, 15519-15522 16.4 236
- 222 Tunable electrical conductivity in oriented thin films of tetrathiafulvalene-based covalent organic framework. *Chemical Science*, **2014**, 5, 4693-4700 9.4 235

221	Adsorption-based atmospheric water harvesting device for arid climates. <i>Nature Communications</i> , 2018 , 9, 1191	17.4	227
220	Taxonomy of periodic nets and the design of materials. <i>Physical Chemistry Chemical Physics</i> , 2007 , 9, 1035-43	3.3	227
219	What do we know about three-periodic nets?. <i>Journal of Solid State Chemistry</i> , 2005 , 178, 2533-2554	3.3	220
218	Highly Active and Stable Single-Atom Cu Catalysts Supported by a Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2019 , 141, 5201-5210	16.4	219
217	Three-Dimensional Metal-Catecholate Frameworks and Their Ultrahigh Proton Conductivity. <i>Journal of the American Chemical Society</i> , 2015 , 137, 15394-7	16.4	216
216	Metal nanocrystals embedded in single nanocrystals of MOFs give unusual selectivity as heterogeneous catalysts. <i>Nano Letters</i> , 2014 , 14, 5979-83	11.5	215
215	Practical water production from desert air. <i>Science Advances</i> , 2018 , 4, eaat3198	14.3	214
214	Coordinative alignment of molecules in chiral metal-organic frameworks. <i>Science</i> , 2016 , 353, 808-11	33.3	211
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209	A Microporous Metal-Organic Framework for Gas-Chromatographic Separation of Alkanes. <i>Angewandte Chemie</i> , 2006 , 118, 1418-1421	3.6	202
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8	Dynamic Frameworks 2019 , 481-496		
7	Binary Metal-Organic Frameworks 2019 , 83-119		
6	Complexity and Heterogeneity in MOFs 2019 , 121-144		

5 Functionalization of MOFs **2019**, 145-176

4 Linkages in Covalent Organic Frameworks **2019**, 197-223

3 Reaktitelbild: Selective Capture of Carbon Dioxide under Humid Conditions by Hydrophobic Chabazite-Type Zeolitic Imidazolate Frameworks (Angew. Chem. 40/2014). *Angewandte Chemie*, **2014**, 126, 11004-11004 3.6

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