

Thomas D Bennett

List of Publications by Year in descending order

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docs citations

151
times ranked

7896
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#	ARTICLE	IF	CITATIONS
1	Mechanochemically Synthesised Flexible Electrodes Based on Bimetallic Metal-Organic Framework Glasses for the Oxygen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	41
2	Properties of Single-Component Metal-Organic Framework Crystal-Glass Composites. <i>Chemistry - A European Journal</i> , 2022, 28, e202104026.	1.7	2
3	Dicyanamide-perovskites at the edge of dense hybrid organic-inorganic materials. <i>Coordination Chemistry Reviews</i> , 2022, 455, 214337.	9.5	10
4	Amorphization of hybrid framework materials. , 2022, , .		0
5	Principles of melting in hybrid organic-inorganic perovskite and polymorphic ABX ₃ structures. <i>Chemical Science</i> , 2022, 13, 2033-2042.	3.7	9
6	Mechanochemically synthesised dicyanamide hybrid organic-inorganic perovskites, and their melt-quenched glasses. <i>Chemical Communications</i> , 2022, 58, 3949-3952.	2.2	5
7	Post-Synthetic Modification of a Metal-Organic Framework Glass. <i>Chemistry of Materials</i> , 2022, 34, 2187-2196.	3.2	27
8	Metal-Organic Frameworks: Special Collection 2020. <i>Chemistry - A European Journal</i> , 2022, 28, e202200607.	1.7	0
9	Materials Formed by Combining Inorganic Glasses and Metal-Organic Frameworks. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	7
10	Multivariate analysis of disorder in metal-organic frameworks. <i>Nature Communications</i> , 2022, 13, 2173.	5.8	10
11	The deformation of short-range order leading to rearrangement of topological network structure in zeolitic imidazolate framework glasses. <i>IScience</i> , 2022, 25, 104351.	1.9	11
12	Introducing porosity into metal-organic framework glasses. <i>Journal of Materials Chemistry A</i> , 2022, 10, 19552-19559.	5.2	10
13	Frontispiece: Materials Formed by Combining Inorganic Glasses and Metal-Organic Frameworks. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	1
14	Low-Temperature Melting and Glass Formation of the Zeolitic Imidazolate Frameworks ZIF-62 and ZIF-76 through Ionic Liquid Incorporation. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	14
15	Identifying the liquid and glassy states of coordination polymers and metal-organic frameworks. <i>Faraday Discussions</i> , 2021, 225, 210-225.	1.6	25
16	Guest size limitation in metal-organic framework crystal-glass composites. <i>Journal of Materials Chemistry A</i> , 2021, 9, 8386-8393.	5.2	15
17	Glassy behaviour of mechanically amorphised ZIF-62 isomorphs. <i>Chemical Communications</i> , 2021, 57, 9272-9275.	2.2	15
18	Melt-quenched porous organic cage glasses. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19807-19816.	5.2	15

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19	Mixed hierarchical local structure in a disordered metal-organic framework. Nature Communications, 2021, 12, 2062.	5.8	44
20	The changing state of porous materials. Nature Materials, 2021, 20, 1179-1187.	13.3	147
21	Melting of hybrid organic-inorganic perovskites. Nature Chemistry, 2021, 13, 778-785.	6.6	65
22	From n- to p-Type Material: Effect of Metal Ion on Charge Transport in Metal-Organic Materials. ACS Applied Materials & Interfaces, 2021, 13, 52055-52062.	4.0	10
23	Ionic liquid facilitated melting of the metal-organic framework ZIF-8. Nature Communications, 2021, 12, 5703.	5.8	74
24	Materials breaking the rules: general discussion. Faraday Discussions, 2021, 225, 255-270.	1.6	0
25	Novel computational tools: general discussion. Faraday Discussions, 2021, 225, 341-357.	1.6	1
26	The reactivity of an inorganic glass melt with ZIF-8. Dalton Transactions, 2021, 50, 3529-3535.	1.6	5
27	Stepwise collapse of a giant pore metal-organic framework. Dalton Transactions, 2021, 50, 5011-5022.	1.6	23
28	Liquid-phase sintering of lead halide perovskites and metal-organic framework glasses. Science, 2021, 374, 621-625.	6.0	137
29	Disorder classification of the vibrational spectra of modern glasses. Physical Review B, 2021, 104, .	1.1	15
30	Gas adsorption in the topologically disordered Fe-BTC framework. Journal of Materials Chemistry A, 2021, 9, 27019-27027.	5.2	7
31	Plasticity of Metal-Organic Framework Glasses. Journal of the American Chemical Society, 2021, 143, 20717-20724.	6.6	21
32	Metal-organic framework gels and monoliths. Chemical Science, 2020, 11, 310-323.	3.7	173
33	Relating structural disorder and melting in complex mixed ligand zeolitic imidazolate framework glasses. Dalton Transactions, 2020, 49, 850-857.	1.6	25
34	Comparison of the ionic conductivity properties of microporous and mesoporous MOFs infiltrated with a Na-ion containing IL mixture. Dalton Transactions, 2020, 49, 15914-15924.	1.6	20
35	Metal-organic framework and inorganic glass composites. Nature Communications, 2020, 11, 5800.	5.8	35
36	Structure of Metal-Organic Framework Glasses by <i>Ab Initio</i> Molecular Dynamics. Chemistry of Materials, 2020, 32, 8004-8011.	3.2	24

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37	Impact of 1-Methylimidazole on Crystal Formation, Phase Transitions, and Glass Formation in a Zeolitic Imidazolate Framework. <i>Crystal Growth and Design</i> , 2020, 20, 6528-6534.	1.4	13
38	A new route to porous metal-organic framework crystal-glass composites. <i>Chemical Science</i> , 2020, 11, 9910-9918.	3.7	21
39	Investigating the melting behaviour of polymorphic zeolitic imidazolate frameworks. <i>CrystEngComm</i> , 2020, 22, 3627-3637.	1.3	37
40	The thermal stability of metal-organic frameworks. <i>Coordination Chemistry Reviews</i> , 2020, 419, 213388.	9.5	197
41	Tuning the Morphological Appearance of Iron(III) Fumarate: Impact on Material Characteristics and Biocompatibility. <i>Chemistry of Materials</i> , 2020, 32, 2253-2263.	3.2	19
42	Interfacial engineering of a polymer-MOF composite by <i>in situ</i> vitrification. <i>Chemical Communications</i> , 2020, 56, 3609-3612.	2.2	43
43	Mechanochemical synthesis of mixed metal, mixed linker, glass-forming metal-organic frameworks. <i>Green Chemistry</i> , 2020, 22, 2505-2512.	4.6	58
44	Sodium Ion Conductivity in Superionic IL-Impregnated Metal-Organic Frameworks: Enhancing Stability Through Structural Disorder. <i>Scientific Reports</i> , 2020, 10, 3532.	1.6	35
45	Coordination cages as permanently porous ionic liquids. <i>Nature Chemistry</i> , 2020, 12, 270-275.	6.6	151
46	Halogenated Metal-Organic Framework Glasses and Liquids. <i>Journal of the American Chemical Society</i> , 2020, 142, 3880-3890.	6.6	83
47	Functional Group Mapping by Electron Beam Vibrational Spectroscopy from Nanoscale Volumes. <i>Nano Letters</i> , 2020, 20, 1272-1279.	4.5	28
48	Structural integrity, meltability, and variability of thermal properties in the mixed-linker zeolitic imidazolate framework ZIF-62. <i>Journal of Chemical Physics</i> , 2020, 153, 204501.	1.2	14
49	Electron Ptychography Using Fast Binary 4D STEM Data. <i>Microscopy and Microanalysis</i> , 2019, 25, 1662-1663.	0.2	3
50	Local Coordination in Metal-Organic Frameworks Probed in the Vibrational and Optical Regime by EELS. <i>Microscopy and Microanalysis</i> , 2019, 25, 606-607.	0.2	0
51	Mapping Non-Crystalline Nanostructure in Beam Sensitive Systems With Low-dose Scanning Electron Pair Distribution Function Analysis. <i>Microscopy and Microanalysis</i> , 2019, 25, 1636-1637.	0.2	3
52	Synthesis and Properties of a Compositional Series of MIL-53(Al) Metal-Organic Framework Crystal-Glass Composites. <i>Journal of the American Chemical Society</i> , 2019, 141, 15641-15648.	6.6	65
53	Phase diagrams of liquid-phase mixing in multi-component metal-organic framework glasses constructed by quantitative elemental nano-tomography. <i>APL Materials</i> , 2019, 7, .	2.2	18
54	Rich Polymorphism of a Metal-Organic Framework in Pressure-Temperature Space. <i>Journal of the American Chemical Society</i> , 2019, 141, 9330-9337.	6.6	68

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55	Gas Permeation of Sulfur Thin-Films and Potential as a Barrier Material. <i>Membranes</i> , 2019, 9, 72.	1.4	0
56	X-ray radiation-induced amorphization of metal-organic frameworks. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 12389-12395.	1.3	30
57	Metal-organic framework crystal-glass composites. <i>Nature Communications</i> , 2019, 10, 2580.	5.8	97
58	Novel metal-organic framework materials: blends, liquids, glasses and crystal-glass composites. <i>Chemical Communications</i> , 2019, 55, 8705-8715.	2.2	72
59	Improving the Acidic Stability of Zeolitic Imidazolate Frameworks by Biofunctional Molecules. <i>CheM</i> , 2019, 5, 1597-1608.	5.8	148
60	Pressure promoted low-temperature melting of metal-organic frameworks. <i>Nature Materials</i> , 2019, 18, 370-376.	13.3	134
61	Structural evolution in a melt-quenched zeolitic imidazolate framework glass during heat-treatment. <i>Chemical Communications</i> , 2019, 55, 2521-2524.	2.2	21
62	Templated growth of vertically aligned 2D metal-organic framework nanosheets. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5811-5818.	5.2	40
63	Flux melting of metal-organic frameworks. <i>Chemical Science</i> , 2019, 10, 3592-3601.	3.7	67
64	Mechanical Properties and Processing Techniques of Bulk Metal-Organic Framework Glasses. <i>Journal of the American Chemical Society</i> , 2019, 141, 1027-1034.	6.6	93
65	Structural, electronic, and dielectric properties of a large random network model of amorphous zeolitic imidazolate frameworks and its analogues. <i>Journal of the American Ceramic Society</i> , 2019, 102, 4602-4611.	1.9	13
66	Optical properties of a melt-quenched metal-organic framework glass. <i>Optics Letters</i> , 2019, 44, 1623.	1.7	58
67	Structural investigations of amorphous metal-organic frameworks formed via different routes. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 7857-7861.	1.3	22
68	A metal-organic framework with ultrahigh glass-forming ability. <i>Science Advances</i> , 2018, 4, eaao6827.	4.7	196
69	Linking defects, hierarchical porosity generation and desalination performance in metal-organic frameworks. <i>Chemical Science</i> , 2018, 9, 3508-3516.	3.7	65
70	Polymorph formation for a zeolitic imidazolate framework composition - Zn(Im) ₂ . <i>Microporous and Mesoporous Materials</i> , 2018, 265, 57-62.	2.2	13
71	Manufacturing Macroporous Monoliths of Microporous Metal-Organic Frameworks. <i>ACS Applied Nano Materials</i> , 2018, 1, 497-500.	2.4	28
72	Dielectric Properties of Zeolitic Imidazolate Frameworks in the Broad-Band Infrared Regime. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2678-2684.	2.1	31

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73	Neutron and X-ray total scattering study of hydrogen disorder in fully hydrated hydrogrossular, Ca ₃ Al ₂ (O ₄ H ₄) ₃ . <i>Physics and Chemistry of Minerals</i> , 2018, 45, 333-342.	0.3	5
74	Tuning the Swing Effect by Chemical Functionalization of Zeolitic Imidazolate Frameworks. <i>Journal of the American Chemical Society</i> , 2018, 140, 382-387.	6.6	55
75	Mechanical Properties in Metal-Organic Frameworks: Emerging Opportunities and Challenges for Device Functionality and Technological Applications. <i>Advanced Materials</i> , 2018, 30, e1704124.	11.1	165
76	Metal-organic framework glasses with permanent accessible porosity. <i>Nature Communications</i> , 2018, 9, 5042.	5.8	147
77	Subwavelength Spatially Resolved Coordination Chemistry of Metal-Organic Framework Glass Blends. <i>Journal of the American Chemical Society</i> , 2018, 140, 17862-17866.	6.6	23
78	Prediction of the Glass Transition Temperatures of Zeolitic Imidazolate Glasses through Topological Constraint Theory. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6985-6990.	2.1	29
79	Enabling Computational Design of ZIFs Using ReaxFF. <i>Journal of Physical Chemistry B</i> , 2018, 122, 9616-9624.	1.2	49
80	Liquid, glass and amorphous solid states of coordination polymers and metal-organic frameworks. <i>Nature Reviews Materials</i> , 2018, 3, 431-440.	23.3	314
81	Ultrasensitive Pebax Membranes Enabled by Templated Microphase Separation. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 20006-20013.	4.0	48
82	Thermodynamic features and enthalpy relaxation in a metal-organic framework glass. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 18291-18296.	1.3	24
83	Elucidating the Variable-Temperature Mechanical Properties of a Negative Thermal Expansion Metal-Organic Framework. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 21079-21083.	4.0	27
84	Liquid phase blending of metal-organic frameworks. <i>Nature Communications</i> , 2018, 9, 2135.	5.8	69
85	Melt-Quenched Hybrid Glasses from Metal-Organic Frameworks. <i>Advanced Materials</i> , 2017, 29, 1601705.	11.1	62
86	Tracking thermal-induced amorphization of a zeolitic imidazolate framework via synchrotron in situ far-infrared spectroscopy. <i>Chemical Communications</i> , 2017, 53, 7041-7044.	2.2	30
87	Amorphous-to-amorphous transition in a porous coordination polymer. <i>Chemical Communications</i> , 2017, 53, 7060-7063.	2.2	27
88	Gel-based morphological design of zirconium metal-organic frameworks. <i>Chemical Science</i> , 2017, 8, 3939-3948.	3.7	177
89	Interplay between defects, disorder and flexibility in metal-organic frameworks. <i>Nature Chemistry</i> , 2017, 9, 11-16.	6.6	342
90	Liquid metal-organic frameworks. <i>Nature Materials</i> , 2017, 16, 1149-1154.	13.3	326

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91	Electronic, magnetic and photophysical properties of MOFs and COFs: general discussion. Faraday Discussions, 2017, 201, 87-99.	1.6	9
92	New directions in gas sorption and separation with MOFs: general discussion. Faraday Discussions, 2017, 201, 175-194.	1.6	6
93	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
94	Tackling the Defect Conundrum in UiO-66: A Mixed-Linker Approach to Engineering Missing Linker Defects. Chemistry of Materials, 2017, 29, 10478-10486.	3.2	102
95	Detecting Molecular Rotational Dynamics Complementing the Low-Frequency Terahertz Vibrations in a Zirconium-Based Metal-Organic Framework. Physical Review Letters, 2017, 118, 255502.	2.9	60
96	Uncovering a reconstructive solid-solid phase transition in a metal-organic framework. Royal Society Open Science, 2017, 4, 171355.	1.1	7
97	Template-based Synthesis of a Formate Metal-Organic Framework/Activated Carbon Fiber Composite for High-performance Methane Adsorptive Separation. Chemistry - an Asian Journal, 2016, 11, 3014-3017.	1.7	19
98	A Computational and Experimental Approach Linking Disorder, High-Pressure Behavior, and Mechanical Properties in UiO Frameworks. Angewandte Chemie, 2016, 128, 2447-2451.	1.6	24
99	A Computational and Experimental Approach Linking Disorder, High-Pressure Behavior, and Mechanical Properties in UiO Frameworks. Angewandte Chemie - International Edition, 2016, 55, 2401-2405.	7.2	103
100	Porosity in metal-organic framework glasses. Chemical Communications, 2016, 52, 3750-3753.	2.2	76
101	Postsynthetic bromination of UiO-66 analogues: altering linker flexibility and mechanical compliance. Dalton Transactions, 2016, 45, 4132-4135.	1.6	34
102	Melt-Quenched Glasses of Metal-Organic Frameworks. Journal of the American Chemical Society, 2016, 138, 3484-3492.	6.6	252
103	Flexibility and disorder in metal-organic frameworks. Dalton Transactions, 2016, 45, 4058-4059.	1.6	26
104	Defects and disorder in metal organic frameworks. Dalton Transactions, 2016, 45, 4113-4126.	1.6	159
105	Connecting defects and amorphization in UiO-66 and MIL-140 metal-organic frameworks: a combined experimental and computational study. Physical Chemistry Chemical Physics, 2016, 18, 2192-2201.	1.3	85
106	A comparison of the amorphization of zeolitic imidazolate frameworks (ZIFs) and aluminosilicate zeolites by ball-milling. Dalton Transactions, 2016, 45, 4258-4268.	1.6	34
107	Pressure-induced oversaturation and phase transition in zeolitic imidazolate frameworks with remarkable mechanical stability. Dalton Transactions, 2015, 44, 4498-4503.	1.6	32
108	Mechanically and chemically robust ZIF-8 monoliths with high volumetric adsorption capacity. Journal of Materials Chemistry A, 2015, 3, 2999-3005.	5.2	104

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109	Amorphous metal-organic frameworks for drug delivery. <i>Chemical Communications</i> , 2015, 51, 13878-13881.	2.2	309
110	Extreme Flexibility in a Zeolitic Imidazolate Framework: Porous to Dense Phase Transition in Desolvated ZIF-4. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 6447-6451.	7.2	87
111	Combined experimental and computational NMR study of crystalline and amorphous zeolitic imidazolate frameworks. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 25191-25196.	1.3	28
112	Hybrid glasses from strong and fragile metal-organic framework liquids. <i>Nature Communications</i> , 2015, 6, 8079.	5.8	242
113	Improving the mechanical stability of zirconium-based metal-organic frameworks by incorporation of acidic modulators. <i>Journal of Materials Chemistry A</i> , 2015, 3, 1737-1742.	5.2	116
114	Topochemical conversion of a dense metal-organic framework from a crystalline insulator to an amorphous semiconductor. <i>Chemical Science</i> , 2015, 6, 1465-1473.	3.7	66
115	Mechanical properties of zeolitic metal-organic frameworks: mechanically flexible topologies and stabilization against structural collapse. <i>CrystEngComm</i> , 2015, 17, 286-289.	1.3	53
116	Crystallography of metal-organic frameworks. <i>IUCr</i> , 2014, 1, 563-570.	1.0	62
117	Identifying the Role of Terahertz Vibrations in Metal-Organic Frameworks: From Gate-Opening Phenomenon to Shear-Driven Structural Destabilization. <i>Physical Review Letters</i> , 2014, 113, 215502.	2.9	202
118	Amorphous Metal-Organic Frameworks. <i>Accounts of Chemical Research</i> , 2014, 47, 1555-1562.	7.6	502
119	Ball-Milling-Induced Amorphization of Zeolitic Imidazolate Frameworks (ZIFs) for the Irreversible Trapping of Iodine. <i>Chemistry - A European Journal</i> , 2013, 19, 7049-7055.	1.7	171
120	Thermochemistry of Zeolitic Imidazolate Frameworks of Varying Porosity. <i>Journal of the American Chemical Society</i> , 2013, 135, 598-601.	6.6	112
121	Flexibility of zeolitic imidazolate framework structures studied by neutron total scattering and the reverse Monte Carlo method. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 395403.	0.7	28
122	Exceptionally Low Shear Modulus in a Prototypical Imidazole-Based Metal-Organic Framework. <i>Physical Review Letters</i> , 2012, 108, 095502.	2.9	210
123	Negative Linear Compressibility of a Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2012, 134, 11940-11943.	6.6	251
124	Amorphization of the prototypical zeolitic imidazolate framework ZIF-8 by ball-milling. <i>Chemical Communications</i> , 2012, 48, 7805.	2.2	137
125	Facile Mechanochemistry of Amorphous Zeolitic Imidazolate Frameworks. <i>Journal of the American Chemical Society</i> , 2011, 133, 14546-14549.	6.6	184
126	Reversible pressure-induced amorphization of a zeolitic imidazolate framework (ZIF-4). <i>Chemical Communications</i> , 2011, 47, 7983.	2.2	192

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127	Thermal Amorphization of Zeolitic Imidazolate Frameworks. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 3067-3071.	7.2	146
128	Diffraction study of pressure-amorphized ZrW_2O_{14} . <i>Angewandte Chemie - International Edition</i> , 2011, 50, 3067-3071.	1.1	17
129	Mechanical Properties of Dense Zeolitic Imidazolate Frameworks (ZIFs): A High-Pressure X-Ray Diffraction, Nanoindentation and Computational Study of the Zinc Framework Zn_4O_4 , and its Lithium-Boron Analogue, LiB_4O_4 . <i>Chemistry - A European Journal</i> , 2010, 16, 10684-10690.	1.7	119
130	Chemical structure, network topology, and porosity effects on the mechanical properties of Zeolitic Imidazolate Frameworks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 9938-9943.	3.3	450
131	Structure and Properties of an Amorphous Metal-Organic Framework. <i>Physical Review Letters</i> , 2010, 104, 115503.	2.9	246
132	The Effect of Pressure on ZIF-8: Increasing Pore Size with Pressure and the Formation of a High-Pressure Phase at 1.47 GPa. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 7087-7089.	7.2	444
133	Mechanochemically Synthesised Flexible Electrodes based on Bimetallic Metal-Organic Framework Classes for the Oxygen Evolution Reaction. <i>Angewandte Chemie</i> , 0, , .	1.6	7