

Jin-Chong Tan

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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.

113 papers	6,689 citations	43 h-index	80 g-index
131 ext. papers	7,588 ext. citations	8.7 avg, IF	6.3 L-index

#	Paper	IF	Citations
113	Zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes for gas separation. <i>Energy and Environmental Science</i> , 2012 , 5, 8359	35.4	535
112	Mechanical properties of hybrid inorganic-organic framework materials: establishing fundamental structure-property relationships. <i>Chemical Society Reviews</i> , 2011 , 40, 1059-80	58.5	533
111	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, 9938-43	11.5	362
110	Dynamic continuous recrystallization characteristics in two stage deformation of Mg ₃ Al ₂ Zn alloy sheet. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 339, 124-132	5.3	342
109	A sol-gel monolithic metal-organic framework with enhanced methane uptake. <i>Nature Materials</i> , 2018 , 17, 174-179	27	257
108	Structure and properties of an amorphous metal-organic framework. <i>Physical Review Letters</i> , 2010 , 104, 115503	7.4	198
107	Exceptionally low shear modulus in a prototypical imidazole-based metal-organic framework. <i>Physical Review Letters</i> , 2012 , 108, 095502	7.4	176
106	Hybrid glasses from strong and fragile metal-organic framework liquids. <i>Nature Communications</i> , 2015 , 6, 8079	17.4	164
105	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	7.4	159
104	Facile mechanosynthesis of amorphous zeolitic imidazolate frameworks. <i>Journal of the American Chemical Society</i> , 2011 , 133, 14546-9	16.4	155
103	Reversible pressure-induced amorphization of a zeolitic imidazolate framework (ZIF-4). <i>Chemical Communications</i> , 2011 , 47, 7983-5	5.8	152
102	Hybrid nanosheets of an inorganic-organic framework material: facile synthesis, structure, and elastic properties. <i>ACS Nano</i> , 2012 , 6, 615-21	16.7	145
101	Ball-milling-induced amorphization of zeolitic imidazolate frameworks (ZIFs) for the irreversible trapping of iodine. <i>Chemistry - A European Journal</i> , 2013 , 19, 7049-55	4.8	142
100	Electrochemical Film Deposition of the Zirconium Metal-Organic Framework UiO-66 and Application in a Miniaturized Sorbent Trap. <i>Chemistry of Materials</i> , 2015 , 27, 1801-1807	9.6	128
99	Thermal amorphization of zeolitic imidazolate frameworks. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 3067-71	16.4	120
98	Mixed-matrix membranes of zeolitic imidazolate framework (ZIF-8)/Matrimid nanocomposite: Thermo-mechanical stability and viscoelasticity underpinning membrane separation performance. <i>Journal of Membrane Science</i> , 2016 , 498, 276-290	9.6	112
97	Mechanical properties of dense zeolitic imidazolate frameworks (ZIFs): a high-pressure X-ray diffraction, nanoindentation and computational study of the zinc framework Zn(Im) ₂ , and its lithium-boron analogue, LiB(Im) ₄ . <i>Chemistry - A European Journal</i> , 2010 , 16, 10684-90	4.8	105

96	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	13	96
95	Porous materials for thermal management under extreme conditions. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2006 , 364, 125-46	3	96
94	Superplasticity and grain boundary sliding characteristics in two stage deformation of Mg-Bi-Zn alloy sheet. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 339, 81-89	5.3	95
93	Anisotropic mechanical properties of polymorphic hybrid inorganic-organic framework materials with different dimensionalities. <i>Acta Materialia</i> , 2009 , 57, 3481-3496	8.4	87
92	Kinetically controlled synthesis of two-dimensional Zr/Hf metal-organic framework nanosheets via a modulated hydrothermal approach. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 8954-8963	13	85
91	Multifunctional Supramolecular Hybrid Materials Constructed from Hierarchical Self-Ordering of In Situ Generated Metal-Organic Framework (MOF) Nanoparticles. <i>Advanced Materials</i> , 2015 , 27, 4438-4446	24	83
90	Nanoporous metal organic framework materials for smart applications. <i>Materials Science and Technology</i> , 2014 , 30, 1598-1612	1.5	81
89	Quantum mechanical predictions to elucidate the anisotropic elastic properties of zeolitic imidazolate frameworks: ZIF-4 vs. ZIF-zni. <i>CrystEngComm</i> , 2015 , 17, 375-382	3.3	76
88	Relating mechanical properties and chemical bonding in an inorganic-organic framework material: a single-crystal nanoindentation study. <i>Journal of the American Chemical Society</i> , 2009 , 131, 14252-4	16.4	74
87	Mechanical metamaterials with star-shaped pores exhibiting negative and zero Poisson's ratio. <i>Materials and Design</i> , 2018 , 146, 28-37	8.1	73
86	Influence of ligand field stabilization energy on the elastic properties of multiferroic MOFs with the perovskite architecture. <i>Dalton Transactions</i> , 2012 , 41, 3949-52	4.3	69
85	Discovering connections between terahertz vibrations and elasticity underpinning the collective dynamics of the HKUST-1 metal-organic framework. <i>CrystEngComm</i> , 2016 , 18, 4303-4312	3.3	68
84	A family of simple benzene 1,3,5-tricarboxamide (BTA) aromatic carboxylic acid hydrogels. <i>Chemical Communications</i> , 2013 , 49, 4268-70	5.8	68
83	Optochemically Responsive 2D Nanosheets of a 3D Metal-Organic Framework Material. <i>Advanced Materials</i> , 2017 , 29, 1701463	24	66
82	Mechanical and magnetic properties of metal fibre networks, with and without a polymeric matrix. <i>Composites Science and Technology</i> , 2005 , 65, 2492-2499	8.6	66
81	The effect of pressure on Cu-btc: framework compression vs. guest inclusion. <i>Chemical Communications</i> , 2012 , 48, 1535-7	5.8	63
80	Dynamic molecular interactions between polyurethane and ZIF-8 in a polymer-MOF nanocomposite: Microstructural, thermo-mechanical and viscoelastic effects. <i>Polymer</i> , 2016 , 97, 31-43	3.9	57
79	Mechanical properties of zeolitic metal-organic frameworks: mechanically flexible topologies and stabilization against structural collapse. <i>CrystEngComm</i> , 2015 , 17, 286-289	3.3	50

78	Superplasticity in a rolled Mg ₃ Al ₂ Zn alloy by two-stage deformation method. <i>Scripta Materialia</i> , 2002 , 47, 101-106	5.6	50
77	Analysis of Tomography Images of Bonded Fibre Networks to Measure Distributions of Fibre Segment Length and Fibre Orientation. <i>Advanced Engineering Materials</i> , 2006 , 8, 495-500	3.5	48
76	Mechanical properties of electrochemically synthesised metal-organic framework thin films. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 7716	7.1	47
75	Heterometallic Inorganic-Organic Frameworks of Sodium-Bismuth Benzenedicarboxylates. <i>Crystal Growth and Design</i> , 2010 , 10, 1736-1741	3.5	47
74	Layered inorganic-organic frameworks based on the 2,2-dimethylsuccinate ligand: structural diversity and its effect on nanosheet exfoliation and magnetic properties. <i>Dalton Transactions</i> , 2012 , 41, 8585-93	4.3	46
73	Isomer-directed structural diversity and its effect on the nanosheet exfoliation and magnetic properties of 2,3-dimethylsuccinate hybrid frameworks. <i>Inorganic Chemistry</i> , 2012 , 51, 11198-209	5.1	44
72	Sol-Gel Synthesis of Robust Metal-Organic Frameworks for Nanoparticle Encapsulation. <i>Advanced Functional Materials</i> , 2018 , 28, 1705588	15.6	43
71	Explaining the mechanical mechanisms of zeolitic metal-organic frameworks: revealing auxeticity and anomalous elasticity. <i>Dalton Transactions</i> , 2016 , 45, 4154-61	4.3	43
70	Detecting Molecular Rotational Dynamics Complementing the Low-Frequency Terahertz Vibrations in a Zirconium-Based Metal-Organic Framework. <i>Physical Review Letters</i> , 2017 , 118, 255502	7.4	42
69	Isostructural zirconium-based metal-organic frameworks: discovering mechanical trends and elastic anomalies controlling chemical structure stability. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 9079-87	3.6	39
68	AFM Nanoindentation To Quantify Mechanical Properties of Nano- and Micron-Sized Crystals of a Metal-Organic Framework Material. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 39839-39854	9.5	38
67	Highly stretchable two-dimensional auxetic metamaterial sheets fabricated via direct-laser cutting. <i>International Journal of Mechanical Sciences</i> , 2020 , 167, 105242	5.5	38
66	Supramolecular isomerism of a metallocyclic dipyridyldiamide ligand metal halide system generating isostructural (Hg, Co and Zn) porous materials. <i>Chemical Communications</i> , 2012 , 48, 2110-2	5.8	36
65	A steady-state Bi-substrate technique for measurement of the thermal conductivity of ceramic coatings. <i>Surface and Coatings Technology</i> , 2006 , 201, 1414-1420	4.4	35
64	Probing the mechanical properties of hybrid inorganic-organic frameworks: a computational and experimental study. <i>ChemPhysChem</i> , 2010 , 11, 2332-6	3.2	34
63	Capture and immobilisation of iodine (I ₂) utilising polymer-based ZIF-8 nanocomposite membranes. <i>Molecular Systems Design and Engineering</i> , 2016 , 1, 122-131	4.6	34
62	Probing Dielectric Properties of Metal-Organic Frameworks: MIL-53(Al) as a Model System for Theoretical Predictions and Experimental Measurements via Synchrotron Far- and Mid-Infrared Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 5035-5040	6.4	32
61	Mechanochromic MOF nanoplates: spatial molecular isolation of light-emitting guests in a sodalite framework structure. <i>Nanoscale</i> , 2018 , 10, 3953-3960	7.7	31

60	Supersonic cold spraying for zeolitic metal-organic framework films. <i>Chemical Engineering Journal</i> , 2016 , 295, 49-56	14.7	29
59	Thermal Amorphization of Zeolitic Imidazolate Frameworks. <i>Angewandte Chemie</i> , 2011 , 123, 3123-3127	3.6	28
58	Elucidating the Drug Release from Metal-Organic Framework Nanocomposites via In Situ Synchrotron Microspectroscopy and Theoretical Modeling. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 5147-5156	9.5	26
57	Photonic hybrid crystals constructed from in situ host-guest nanoconfinement of a light-emitting complex in metal-organic framework pores. <i>Nanoscale</i> , 2016 , 8, 6851-9	7.7	26
56	MOF-Based Polymeric Nanocomposite Films as Potential Materials for Drug Delivery Devices in Ocular Therapeutics. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 30189-30197	9.5	25
55	Ferrous Fibre Network Materials for Jet Noise Reduction in Aeroengines Part I: Acoustic Effects. <i>Advanced Engineering Materials</i> , 2008 , 10, 192-200	3.5	24
54	Dual-Guest Functionalized Zeolitic Imidazolate Framework-8 for 3D Printing White Light-Emitting Composites. <i>Advanced Optical Materials</i> , 2020 , 8, 1901912	8.1	23
53	Structural diversity and luminescent properties of lanthanide 2,2- and 2,3-dimethylsuccinate frameworks. <i>CrystEngComm</i> , 2013 , 15, 100-110	3.3	23
52	Dye-Encapsulated Zeolitic Imidazolate Framework (ZIF-71) for Fluorochromic Sensing of Pressure, Temperature, and Volatile Solvents. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 37477-37488	9.5	22
51	Tracking thermal-induced amorphization of a zeolitic imidazolate framework via synchrotron in situ far-infrared spectroscopy. <i>Chemical Communications</i> , 2017 , 53, 7041-7044	5.8	21
50	Dielectric Properties of Zeolitic Imidazolate Frameworks in the Broad-Band Infrared Regime. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 2678-2684	6.4	21
49	Ferrous Fibre Network Materials for Jet Noise Reduction in Aeroengines Part II: Thermo-Mechanical Stability. <i>Advanced Engineering Materials</i> , 2008 , 10, 201-209	3.5	20
48	Micromechanical Behavior of Polycrystalline Metal-Organic Framework Thin Films Synthesized by Electrochemical Reaction. <i>Crystal Growth and Design</i> , 2015 , 15, 1991-1999	3.5	19
47	Electrochromic thin films of Zn-based MOF-74 nanocrystals facilely grown on flexible conducting substrates at room temperature. <i>APL Materials</i> , 2019 , 7, 081101	5.7	19
46	Stacking Faults and Mechanical Behavior beyond the Elastic Limit of an Imidazole-Based Metal Organic Framework: ZIF-8. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 3377-81	6.4	19
45	Alternative synthetic methodology for amide formation in the post-synthetic modification of Ti-MIL125-NH ₂ . <i>CrystEngComm</i> , 2013 , 15, 9368	3.3	19
44	Thermo-mechanical properties of mixed-matrix membranes encompassing zeolitic imidazolate framework-90 and polyvinylidene difluoride: ZIF-90/PVDF nanocomposites. <i>APL Materials</i> , 2017 , 5, 086104	5.7	19
43	A mechano-responsive supramolecular metal-organic framework (supraMOF) gel material rich in ZIF-8 nanoplates. <i>Chemical Communications</i> , 2017 , 53, 8502-8505	5.8	19

42	Resistance welding of thin stainless steel sandwich sheets with fibrous metallic cores: experimental and numerical studies. <i>Science and Technology of Welding and Joining</i> , 2007 , 12, 490-504	3.7	19
41	Guest-host interactions of nanoconfined anti-cancer drug in metal-organic framework exposed by terahertz dynamics. <i>Chemical Communications</i> , 2019 , 55, 3868-3871	5.8	18
40	Confinement of Luminescent Guests in Metal-Organic Frameworks: Understanding Pathways from Synthesis and Multimodal Characterization to Potential Applications of LG@MOF Systems.. <i>Chemical Reviews</i> , 2022 ,	68.1	18
39	Mechanical properties of the ferroelectric metal-free perovskite [MDABCO](NH)I. <i>Chemical Communications</i> , 2019 , 55, 3911-3914	5.8	17
38	Highly luminescent silver-based MOFs: Scalable eco-friendly synthesis paving the way for photonics sensors and electroluminescent devices. <i>Applied Materials Today</i> , 2020 , 21, 100817	6.6	16
37	Out-of-plane auxeticity in sintered fibre network mats. <i>Scripta Materialia</i> , 2015 , 106, 30-33	5.6	15
36	Freestanding fiber mats of zeolitic imidazolate framework 7 via one-step, scalable electrospinning. <i>Journal of Applied Polymer Science</i> , 2016 , 133,	2.9	15
35	Electroluminescent Guest@MOF Nanoparticles for Thin Film Optoelectronics and Solid-State Lighting. <i>Advanced Optical Materials</i> , 2020 , 8, 2000670	8.1	14
34	Framework flexibility of ZIF-8 under liquid intrusion: discovering time-dependent mechanical response and structural relaxation. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 10108-10113	3.6	13
33	High-rate nanofluidic energy absorption in porous zeolitic frameworks. <i>Nature Materials</i> , 2021 , 20, 1015-1023	10.23	12
32	Fine-scale tribological performance of zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes. <i>APL Materials</i> , 2014 , 2, 124101	5.7	11
31	Near-Field Infrared Nanospectroscopy Reveals Guest Confinement in Metal-Organic Framework Single Crystals. <i>Nano Letters</i> , 2020 , 20, 7446-7454	11.5	11
30	OX-1 Metal-Organic Framework Nanosheets as Robust Hosts for Highly Active Catalytic Palladium Species. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 5875-5885	8.3	11
29	Green Reconstruction of MIL-100 (Fe) in Water for High Crystallinity and Enhanced Guest Encapsulation. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 8247-8255	8.3	9
28	Multifaceted Study of the Interactions between CPO-27-Ni and Polyurethane and Their Impact on Nitric Oxide Release Performance. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 58263-58276	9.5	9
27	Facile patterning of electrospun polymer fibers enabled by electrostatic lensing interactions. <i>APL Materials</i> , 2016 , 4, 086107	5.7	8
26	Operando observation of the Taylor cone during electrospinning by multiple synchrotron X-ray techniques. <i>Materials and Design</i> , 2016 , 110, 933-934	8.1	7
25	Impact of Pressure and Temperature on the Broadband Dielectric Response of the HKUST-1 Metal-Organic Framework. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 29427-29435	3.8	7

24	Liquid Intrusion into Zeolitic Imidazolate Framework-7 Nanocrystals: Exposing the Roles of Phase Transition and Gate Opening to Enable Energy Absorption Applications. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 41831-41838	9.5	7
23	Tunable Fluorescein-Encapsulated Zeolitic Imidazolate Framework-8 Nanoparticles for Solid-State Lighting. <i>ACS Applied Nano Materials</i> ,	5.6	7
22	Guest-Tunable Dielectric Sensing Using a Single Crystal of HKUST-1. <i>Advanced Materials Interfaces</i> , 2020 , 7, 2000408	4.6	6
21	Mechanochemical approaches towards the in situ confinement of 5-FU anti-cancer drug within MIL-100 (Fe) metal-organic framework. <i>CrystEngComm</i> , 2020 , 22, 4526-4530	3.3	6
20	Electrospun rhodamine@MOF/polymer luminescent fibers with a quantum yield of over 90. <i>IScience</i> , 2021 , 24, 103035	6.1	6
19	2D auxetic metamaterials with tuneable micro-/nanoscale apertures. <i>Applied Materials Today</i> , 2020 , 20, 100780	6.6	5
18	Facile and Fast Transformation of Nonluminescent to Highly Luminescent Metal-Organic Frameworks: Acetone Sensing for Diabetes Diagnosis and Lead Capture from Polluted Water. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 7801-7811	9.5	5
17	Self-Assembled, Fluorine-Rich Porous Organic Polymers: A Class of Mechanically Stiff and Hydrophobic Materials. <i>Chemistry - A European Journal</i> , 2018 , 24, 11771-11778	4.8	5
16	Tuning crystalline structure of zeolitic metal-organic frameworks by supersonic spraying of precursor nanoparticle suspensions. <i>Materials and Design</i> , 2017 , 114, 416-423	8.1	4
15	Influence of mechanical, thermal, and electrical perturbations on the dielectric behaviour of guest-encapsulated HKUST-1 crystals. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 12886-12892	7.1	4
14	Nanomechanical behavior and interfacial deformation beyond the elastic limit in 2D metal-organic framework nanosheets. <i>Nanoscale Advances</i> , 2020 , 2, 5181-5191	5.1	4
13	Broadband Dielectric Behavior of an MIL-100 Metal-Organic Framework as a Function of Structural Amorphization. <i>ACS Applied Electronic Materials</i> , 2021 , 3, 1191-1198	4	4
12	Large elastic recovery of zinc dicyanoaurate. <i>APL Materials</i> , 2017 , 5, 066107	5.7	3
11	Nanoconfinement of tetraphenylethylene in zeolitic metal-organic framework for turn-on mechanofluorochromic stress sensing. <i>Applied Materials Today</i> , 2022 , 27, 101434	6.6	3
10	Polymer nanocomposites functionalised with nanocrystals of zeolitic imidazolate frameworks as ethylene control agents. <i>Materials Today Advances</i> , 2019 , 2, 100008	7.4	2
9	A Method for Fabricating Stainless Steel Pellets with Open-Cell Porosity by Alkaline Leaching of Silica Template . <i>Advanced Engineering Materials</i> , 2016 , 18, 1616-1625	3.5	2
8	Mechanical properties and nanostructure of monolithic zeolitic imidazolate frameworks: a nanoindentation, nanospectroscopy, and finite element study. <i>Materials Today Nano</i> , 2022 , 17, 100166	9.7	2
7	Probing the nano-scale architecture of diamond-patterned electrospun fibre mats by synchrotron small angle X-ray scattering. <i>RSC Advances</i> , 2017 , 7, 8200-8204	3.7	1

6	Supramolecular Materials: Multifunctional Supramolecular Hybrid Materials Constructed from Hierarchical Self-Ordering of In Situ Generated Metal-Organic Framework (MOF) Nanoparticles (Adv. Mater. 30/2015). <i>Advanced Materials</i> , 2015 , 27, 4523	24	1
5	4.22 Metal-Organic Framework Based Composites 2018 , 525-553		0
4	Vibrational Modes and Terahertz Phenomena of the Large-Cage Zeolitic Imidazolate Framework-71.. <i>Journal of Physical Chemistry Letters</i> , 2022 , 2838-2844	6.4	0
3	Metal-Organic Frameworks: Guest-Tunable Dielectric Sensing Using a Single Crystal of HKUST-1 (Adv. Mater. Interfaces 14/2020). <i>Advanced Materials Interfaces</i> , 2020 , 7, 2070080	4.6	
2	Electroluminescent Nanoparticles: Electroluminescent Guest@MOF Nanoparticles for Thin Film Optoelectronics and Solid-State Lighting (Advanced Optical Materials 16/2020). <i>Advanced Optical Materials</i> , 2020 , 8, 2070066	8.1	
1	3D-Printed Light Converter: Dual-Guest Functionalized Zeolitic Imidazolate Framework-8 for 3D Printing White Light-Emitting Composites (Advanced Optical Materials 8/2020). <i>Advanced Optical Materials</i> , 2020 , 8, 2070032	8.1	