

Karim Adil

List of Publications by Year in descending order

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papers

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76322

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docs citations

106
times ranked

9425
citing authors

#	ARTICLE	IF	CITATIONS
1	Gas/vapour separation using ultra-microporous metal-organic frameworks: insights into the structure/separation relationship. <i>Chemical Society Reviews</i> , 2017, 46, 3402-3430.	38.1	1,033
2	A metal-organic framework-based splitter for separating propylene from propane. <i>Science</i> , 2016, 353, 137-140.	12.6	892
3	A supermolecular building approach for the design and construction of metal-organic frameworks. <i>Chemical Society Reviews</i> , 2014, 43, 6141-6172.	38.1	708
4	Zeolite-like metal-organic frameworks (ZMOFs): design, synthesis, and properties. <i>Chemical Society Reviews</i> , 2015, 44, 228-249.	38.1	662
5	MOF Crystal Chemistry Paving the Way to Gas Storage Needs: Aluminum-Based MOF for CH ₄ , O ₂ , and CO ₂ Storage. <i>Journal of the American Chemical Society</i> , 2015, 137, 13308-13318.	13.7	632
6	Made-to-order metal-organic frameworks for trace carbon dioxide removal and air capture. <i>Nature Communications</i> , 2014, 5, 4228.	12.8	510
7	Discovery and introduction of a (3,18)-connected net as an ideal blueprint for the design of metal-organic frameworks. <i>Nature Chemistry</i> , 2014, 6, 673-680.	13.6	396
8	Imaging defects and their evolution in a metal-organic framework at sub-unit-cell resolution. <i>Nature Chemistry</i> , 2019, 11, 622-628.	13.6	371
9	A Fine-Tuned Fluorinated MOF Addresses the Needs for Trace CO ₂ Removal and Air Capture Using Physisorption. <i>Journal of the American Chemical Society</i> , 2016, 138, 9301-9307.	13.7	366
10	Tunable Rare Earth MOF Platform: Access to Adsorption Kinetics Driven Gas/Vapor Separations via Pore Size Contraction. <i>Journal of the American Chemical Society</i> , 2015, 137, 5034-5040.	13.7	308
11	Fluorinated MOF platform for selective removal and sensing of SO ₂ from flue gas and air. <i>Nature Communications</i> , 2019, 10, 1328.	12.8	292
12	Hydrolytically stable fluorinated metal-organic frameworks for energy-efficient dehydration. <i>Science</i> , 2017, 356, 731-735.	12.6	275
13	A Fine-Tuned Metal-Organic Framework for Autonomous Indoor Moisture Control. <i>Journal of the American Chemical Society</i> , 2017, 139, 10715-10722.	13.7	224
14	Ultra-Tuning of the Rare-Earth MOF Aperture Size for Selective Molecular Exclusion of Branched Paraffins. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14353-14358.	13.8	222
15	Natural gas upgrading using a fluorinated MOF with tuned H ₂ S and CO ₂ adsorption selectivity. <i>Nature Energy</i> , 2018, 3, 1059-1066.	39.5	214
16	Reticular Synthesis of HKUST-like tbo-MOFs with Enhanced CH ₄ Storage. <i>Journal of the American Chemical Society</i> , 2016, 138, 1568-1574.	13.7	193
17	Enabling Fluorinated MOF-Based Membranes for Simultaneous Removal of H ₂ S and CO ₂ from Natural Gas. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 14811-14816.	13.8	176
18	[Ag ₆₇ (SPhMe ₂) ₃₂ (PPh ₃) ₈] ³⁺ : Synthesis, Total Structure, and Optical Properties of a Large Box-Shaped Silver Nanocluster. <i>Journal of the American Chemical Society</i> , 2016, 138, 14727-14732.	13.7	167

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19	Structural flexibility and intrinsic dynamics in the $M_2(2,6\text{-ndc})_2(\text{dabco})$ ($M = \text{Ni, Cu, Co, Zn}$) metal-organic frameworks. <i>Journal of Materials Chemistry</i> , 2012, 22, 10303.	6.7	139
20	A facile solvent-free synthesis route for the assembly of a highly CO_2 selective and H_2S tolerant NiSIFSIX metal-organic framework. <i>Chemical Communications</i> , 2015, 51, 13595-13598.	4.1	134
21	Enriching the Reticular Chemistry Repertoire: Merged Nets Approach for the Rational Design of Intricate Mixed-Linker Metal-Organic Framework Platforms. <i>Journal of the American Chemical Society</i> , 2018, 140, 8858-8867.	13.7	129
22	Versatile rare earth hexanuclear clusters for the design and synthesis of highly-connected MOFs . <i>Chemical Science</i> , 2015, 6, 4095-4102.	7.4	127
23	A Tailor-Made Interpenetrated MOF with Exceptional Carbon-Capture Performance from Flue Gas. <i>CheM</i> , 2019, 5, 950-963.	11.7	118
24	Conformation-Controlled Molecular Sieving Effects for Membrane-Based Propylene/Propane Separation. <i>Advanced Materials</i> , 2019, 31, e1807513.	21.0	117
25	A supermolecular building layer approach for gas separation and storage applications: the MOF platforms for CO_2 capture and hydrocarbon separation. <i>Journal of Materials Chemistry A</i> , 2015, 3, 6276-6281.	10.3	105
26	Applying the Power of Reticular Chemistry to Finding the Missing MOF Platform Based on the (6,12)-Coordinated Edge-Transitive Net. <i>Journal of the American Chemical Society</i> , 2017, 139, 3265-3274.	13.7	104
27	Achieving Superprotonic Conduction with a 2D Fluorinated Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2018, 140, 13156-13160.	13.7	103
28	Reticular Chemistry at Its Best: Directed Assembly of Hexagonal Building Units into the Awaited Metal-Organic Framework with the Intricate Polybenzene Topology, pbz-MOF . <i>Journal of the American Chemical Society</i> , 2016, 138, 12767-12770.	13.7	101
29	Metal-organic frameworks to satisfy gas upgrading demands: fine-tuning the MOF platform for the operative removal of H_2S . <i>Journal of Materials Chemistry A</i> , 2017, 5, 3293-3303.	10.3	94
30	Valuing Metal-Organic Frameworks for Postcombustion Carbon Capture: A Benchmark Study for Evaluating Physical Adsorbents. <i>Advanced Materials</i> , 2017, 29, 1702953.	21.0	88
31	Synthesis, structure determination and magnetic behaviour of the first porous hybrid oxyfluorinated vanado(iii)carboxylate: MIL-71 or $\text{V}_{10}(\text{OH})_2\text{F}_2\{\text{O}_2\text{C-C}_6\text{H}_4\text{-CO}_2\}\cdot\text{H}_2\text{O}$. <i>Journal of Materials Chemistry</i> , 2003, 13, 2208-2212.	6.7	84
32	A Fine-Tuned MOF for Gas and Vapor Separation: A Multipurpose Adsorbent for Acid Gas Removal, Dehydration, and BTX Sieving. <i>CheM</i> , 2017, 3, 822-833.	11.7	83
33	Trianglamine-Based Supramolecular Organic Framework with Permanent Intrinsic Porosity and Tunable Selectivity. <i>Journal of the American Chemical Society</i> , 2018, 140, 14571-14575.	13.7	78
34	Hydrocarbon recovery using ultra-microporous fluorinated MOF platform with and without uncoordinated metal sites: I- structure properties relationships for $\text{C}_2\text{H}_2/\text{C}_2\text{H}_4$ and $\text{CO}_2/\text{C}_2\text{H}_2$ separation. <i>Chemical Engineering Journal</i> , 2019, 359, 32-36.	12.7	77
35	Topology meets MOF chemistry for pore-aperture fine tuning: MOF platform for energy-efficient separations <i>via</i> adsorption kinetics or molecular sieving. <i>Chemical Communications</i> , 2018, 54, 6404-6407.	4.1	65
36	Structural chemistry of organically-templated metal fluorides. <i>Dalton Transactions</i> , 2010, 39, 5983.	3.3	58

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37	Advances in Shaping of Metal-Organic Frameworks for CO ₂ Capture: Understanding the Effect of Rubbery and Glassy Polymeric Binders. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 16897-16902.	3.7	46
38	Differential guest location by host dynamics enhances propylene/propane separation in a metal-organic framework. <i>Nature Communications</i> , 2020, 11, 6099.	12.8	44
39	SMARTER crystallography of the fluorinated inorganic-organic compound Zn ₃ Al ₂ F ₁₂ ·[HAmTAZ]6. <i>Dalton Transactions</i> , 2012, 41, 6232.	3.3	43
40	Enhanced Separation of Butane Isomers via Defect Control in a Fumarate/Zirconium-Based Metal Organic Framework. <i>Langmuir</i> , 2018, 34, 14546-14551.	3.5	43
41	Advances on CO ₂ storage. Synthetic porous solids, mineralization and alternative solutions. <i>Chemical Engineering Journal</i> , 2021, 419, 129569.	12.7	43
42	Enriching the Reticular Chemistry Repertoire with Minimal Edge-Transitive Related Nets: Access to Highly Coordinated Metal-Organic Frameworks Based on Double Six-Membered Rings as Net-Coded Building Units. <i>Journal of the American Chemical Society</i> , 2019, 141, 20480-20489.	13.7	42
43	Extremely Hydrophobic POPs to Access Highly Porous Storage Media and Capturing Agent for Organic Vapors. <i>CheM</i> , 2019, 5, 180-191.	11.7	42
44	Infrared, polarized Raman and ab initio calculations of the vibrational spectra of [N(C ₃ H ₇) ₄] ₂ Cu ₂ Cl ₆ crystals. <i>Vibrational Spectroscopy</i> , 2013, 64, 10-20.	2.2	36
45	Concurrent Sensing of CO ₂ and H ₂ O from Air Using Ultramicroporous Fluorinated Metal-Organic Frameworks: Effect of Transduction Mechanism on the Sensing Performance. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1706-1712.	8.0	35
46	Versatility vs stability. Are the assets of metal-organic frameworks deployable in aqueous acidic and basic media?. <i>Coordination Chemistry Reviews</i> , 2021, 443, 214020.	18.8	33
47	ZnAlF ₅ ·[TAZ]: an Al fluorinated MOF of MIL-53(Al) topology with cationic {Zn(1,2,4 triazole)} ₂₊ linkers. <i>Journal of Materials Chemistry</i> , 2011, 21, 3949.	6.7	32
48	Third structure determination by powder diffractometry round robin (SDPDRR-3). <i>Powder Diffraction</i> , 2009, 24, 254-262.	0.2	31
49	Operando Elucidation on the Working State of Immobilized Fluorinated Iron Porphyrin for Selective Aqueous Electroreduction of CO ₂ to CO. <i>ACS Catalysis</i> , 2021, 11, 6499-6509.	11.2	27
50	On isoelectronic fluorides [H ₃ tren]·(AlF ₆)·H ₂ O, [H ₃ tren]·(AlF ₆)·HF, [H ₄ tren]·(AlF ₆)·(F) and the iron analogue [H ₄ tren]·(FeF ₆)·(F). <i>Solid State Sciences</i> , 2006, 8, 698-703.	3.2	23
51	Hydrothermal synthesis, ab-initio structure determination and NMR study of the first mixed Cu-Al fluorinated MOF. <i>CrystEngComm</i> , 2013, 15, 3430.	2.6	23
52	Upgrading gasoline to high octane numbers using a zeolite-like metal-organic framework molecular sieve with <i>ana</i> -topology. <i>Chemical Communications</i> , 2018, 54, 9414-9417.	4.1	23
53	Evidence of 13 hybrid fluoroaluminates in the composition space diagram of the Al(OH) ₃ ·tren·HF·ethanol system. <i>Journal of Fluorine Chemistry</i> , 2009, 130, 1099-1105.	1.7	20
54	Hydrogen bonded H ₃ O ⁺ , H ₂ O, HF, F ⁻ in fluoride metalates (Al, Cr, Fe, Zr, Ta) templated with tren (tris-(2-aminoethyl)amine). <i>Journal of Fluorine Chemistry</i> , 2007, 128, 404-412.	1.7	19

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55	Synthesis and structures of new hybrid fluorides templated by tetraprotonated pentaerythryl tetramine. <i>Solid State Sciences</i> , 2004, 6, 1229-1235.	3.2	18
56	Novel Layered Hybrid Fluoroaluminate in the Composition Space Diagram of the Al(OH) ₃ -HguaCl-HFaq-EtOH System. <i>Inorganic Chemistry</i> , 2010, 49, 2392-2397.	4.0	17
57	A new one-dimensional hybrid material lattice: AC conductivity and structural characterization of [C ₇ H ₁₂ N ₂][CdCl ₄]. <i>Ionics</i> , 2011, 17, 145-155.	2.4	17
58	Enabling Fluorinated MOF-Based Membranes for Simultaneous Removal of H ₂ S and CO ₂ from Natural Gas. <i>Angewandte Chemie</i> , 2018, 130, 15027-15032.	2.0	17
59	Two-dimensional composition diagram of the Al(OH) ₃ -dien-HFaq-ethanol system: Evidence of a new tetrahedral (Al ₄ F ₁₈) ₆ ⁴⁻ polyanion. <i>Journal of Fluorine Chemistry</i> , 2006, 127, 1349-1354.	1.7	15
60	Tandem Payne/Meinwald versus Meinwald rearrangements on the β -hydroxy- or β -silyloxy-spiro epoxide skeleton. <i>Organic and Biomolecular Chemistry</i> , 2012, 10, 502-505.	2.8	15
61	[H ₄ tren] ₃ /2·(Al ₆ F ₂₄)·3H ₂ O, the most condensed fluoride in the Al(OH) ₃ -tren-HFaq-ethanol system. <i>Solid State Sciences</i> , 2007, 9, 531-534.	3.2	14
62	CO ₂ Capture Using the SIFSIX-2-Cu-i Metal-Organic Framework: A Computational Approach. <i>Journal of Physical Chemistry C</i> , 2017, 121, 27462-27472.	3.1	14
63	The chemistry of metal-organic frameworks with face-centered cubic topology. <i>Coordination Chemistry Reviews</i> , 2022, 468, 214644.	18.8	14
64	A New Organic-Inorganic Hybrid Oxyfluorotitanate [H ₂ gua] ₂ ·(Ti ₅ O ₅ F ₁₂) as a Transparent UV Filter. <i>Inorganic Chemistry</i> , 2011, 50, 5671-5678.	4.0	13
65	Investigation of the composition space diagram of the ZnF ₂ ·3,5-diamino-1,2,4-triazole·HF·H ₂ O chemical system and structural characterization of a new fluorinated guanazolate MOF [Zn ₃ F ₂](Am ₂ TAZ) ₄ . <i>Journal of Fluorine Chemistry</i> , 2013, 150, 104-108.	1.7	13
66	Carbonization of covalent triazine-based frameworks <i>via</i> ionic liquid induction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 15564-15568.	10.3	13
67	Perspectives in Adsorptive and Catalytic Mitigations of NO _x Using Metal-Organic Frameworks. <i>Energy & Fuels</i> , 2022, 36, 3347-3371.	5.1	13
68	Efficient Splitting of Trans-/Cis-Olefins Using an Anion-Pillared Ultramicroporous Metal-Organic Framework with Guest-Adaptive Pore Channels. <i>Engineering</i> , 2022, 11, 80-86.	6.7	13
69	Total synthesis of a novel macrotetrolide. <i>Tetrahedron</i> , 2008, 64, 11296-11303.	1.9	12
70	Supramolecular Self-Assembly of Histidine-Capped-Dialkoxyl-Anthracene: A Visible-Light-Triggered Platform for Facile siRNA Delivery. <i>Chemistry - A European Journal</i> , 2016, 22, 13789-13793.	3.3	12
71	Crystal chemistry of three new monodimensional fluorometalates templated with ethylenediamine. <i>Solid State Sciences</i> , 2009, 11, 1582-1586.	3.2	11
72	Crystal structure and ion conducting properties of La ₅ NbMo ₂ O ₁₆ . <i>Journal of Solid State Chemistry</i> , 2016, 237, 411-416.	2.9	11

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73	Synthesis, spectroscopy, thermal behavior, and X-ray crystal structure of two lead(II) complexes with 4-((4-tolyl)-2,2,6,6-tetrapyridine (ttpy)). Journal of Coordination Chemistry, 2011, 64, 4421-4433.	2.2	10
74	Mixed metal III-IV hybrid fluorides. Journal of Fluorine Chemistry, 2012, 134, 29-34.	1.7	10
75	Diammonium tetraborate dihydrate as hydrolytic by-product of ammonia borane in aqueous alkaline conditions. International Journal of Hydrogen Energy, 2020, 45, 9927-9935.	7.1	10
76	Ternary and tetrahedral symmetry in hybrid fluorides, fluoride carbonates and carbonates. Journal of Fluorine Chemistry, 2004, 125, 1709-1714.	1.7	8
77	Fluoroaluminates of purine and DNA bases, adenine, guanine: [Hpur]2·(AlF5), [Hade]3·(AlF6)·6.5H2O, [Hguan]3·(Al3F12). Solid State Sciences, 2011, 13, 151-157.	3.2	8
78	Facile modifications of HKUST-1 by V, Nb and Mn for low-temperature selective catalytic reduction of nitrogen oxides by NH3. Catalysis Today, 2022, 384-386, 25-32.	4.4	6
79	Investigation of Mn Promotion on HKUST-1 Metal-Organic Frameworks for Low-Temperature Selective Catalytic Reduction of NO with NH3. ChemCatChem, 2021, 13, 4029-4037.	3.7	6
80	Bis[tris(2-ammonioethyl)amine] bis(pentafluoridooxidomolybdate) difluoride monohydrate. Acta Crystallographica Section E: Structure Reports Online, 2007, 63, m1511-m1513.	0.2	5
81	Structural Characterization and Infrared and Electrical Properties of the New Inorganic-Organic Hybrid Compound. Journal of Chemistry, 2013, 2013, 1-10.	1.9	5
82	Computationally Assisted Assessment of the Metal-Organic Framework/Polymer Compatibility in Composites Integrating a Rigid Polymer. Advanced Theory and Simulations, 2019, 2, 1900116.	2.8	5
83	Hydrothermal Synthesis and Characterization Properties of C7H12N2[H2PO4]2.1/2H2O. Phosphorus, Sulfur and Silicon and the Related Elements, 2012, 187, 1173-1182.	1.6	4
84	Tris(2-ammonioethyl)aminium decafluoromolybdate monohydrate, (H4tren)[Al2F10]·H2O. Acta Crystallographica Section E: Structure Reports Online, 2004, 60, m1379-m1381.	0.2	3
85	A new 1D hybrid fluoroaluminate templated by an original tetramine. Polyhedron, 2007, 26, 2493-2497.	2.2	3
86	7,9-Bis(hydroxymethyl)-7H-purine-2,6,8(1H,3H,9H)trione. Acta Crystallographica Section E: Structure Reports Online, 2011, 67, o1458-o1458.	0.2	3
87	Investigation of the La2O3-Nb2O5-WO3 ternary phase diagram: Isolation and crystal structure determination of the original La3NbWO10 material. Journal of Solid State Chemistry, 2015, 229, 129-134.	2.9	3
88	Diethylenetriaminium hexafluoridotitanate(IV) fluoride. Acta Crystallographica Section E: Structure Reports Online, 2008, 64, m1375-m1375.	0.2	3
89	Room-temperature synthesis of a new stable (N2H4)2WO3 compound: a route for hydrazine trapping. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2019, 75, 127-133.	1.1	2
90	Cation-deficient Ca-doping lanthanum tungstate Ca2.06La2.61- δ 0.33W2O12: Structure and transport property study. Journal of Solid State Chemistry, 2022, 313, 123310.	2.9	2

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91	Diethylenetriaminium hexafluoroaluminate dihydrate. Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m1178-m1180.	0.2	1
92	Synthesis, Structural Characterization and Thermal Behavior of New Organic-Inorganic Sulfate. Journal of Cluster Science, 2015, 26, 1413-1424.	3.3	1
93	Poly[bis($\frac{1}{4}$ -purin-9-ido- η^2 N7:N9)zinc]. Acta Crystallographica Section E: Structure Reports Online, 2012, 68, m449-m449.	0.2	0
94	Poly[($\frac{1}{4}$ -3-hydrogenphosphato)(4H-1,2,4-triazole- η^1 N1)zinc]. Acta Crystallographica Section E: Structure Reports Online, 2012, 68, m1426-m1427.	0.2	0