

Zhengtao Xu

List of Publications by Year in descending order

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110
papers

4,900
citations

87888

38
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98798

67
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122
all docs

122
docs citations

122
times ranked

5838
citing authors

#	ARTICLE	IF	CITATIONS
1	Effective Mercury Sorption by Thiol-Laced Metal-Organic Frameworks: in Strong Acid and the Vapor Phase. <i>Journal of the American Chemical Society</i> , 2013, 135, 7795-7798.	13.7	492
2	2D metal-organic framework for stable perovskite solar cells with minimized lead leakage. <i>Nature Nanotechnology</i> , 2020, 15, 934-940.	31.5	258
3	Variable Pore Size, Variable Chemical Functionality, and an Example of Reactivity within Porous Phenylacetylene Silver Salts. <i>Journal of the American Chemical Society</i> , 1999, 121, 8204-8215.	13.7	215
4	A minimalist fluorescent probe for differentiating Cys, Hcy and GSH in live cells. <i>Chemical Science</i> , 2016, 7, 256-260.	7.4	195
5	An electroactive porous network from covalent metal-dithiolene links. <i>Chemical Communications</i> , 2014, 50, 3986-3988.	4.1	166
6	Conjugated porous polymers: incredibly versatile materials with far-reaching applications. <i>Chemical Society Reviews</i> , 2020, 49, 3981-4042.	38.1	162
7	Thioether Side Chains Improve the Stability, Fluorescence, and Metal Uptake of a Metal-Organic Framework. <i>Chemistry of Materials</i> , 2011, 23, 2940-2947.	6.7	145
8	White Light Emission and Second Harmonic Generation from Secondary Group Participation (SGP) in a Coordination Network. <i>Journal of the American Chemical Society</i> , 2012, 134, 1553-1559.	13.7	142
9	Multiphase-Assembly of Siloxane Oligomers with Improved Mechanical Strength and Water-Enhanced Healing. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 11242-11246.	13.8	129
10	Selective Ag(I) Binding, H ₂ S Sensing, and White-Light Emission from an Easy-to-Make Porous Conjugated Polymer. <i>Journal of the American Chemical Society</i> , 2014, 136, 2818-2824.	13.7	117
11	Convenient Detection of Pd(II) by a Metal-Organic Framework with Sulfur and Olefin Functions. <i>Journal of the American Chemical Society</i> , 2013, 135, 7807-7810.	13.7	113
12	Semiconducting Perovskites (2-XC ₆ H ₄ C ₂ H ₄ NH ₃) ₂ Sn ₄ (X = F, Cl, Br): Steric Interaction between the Organic and Inorganic Layers. <i>Inorganic Chemistry</i> , 2003, 42, 2031-2039.	4.0	104
13	A selective review on the making of coordination networks with potential semiconductive properties. <i>Coordination Chemistry Reviews</i> , 2006, 250, 2745-2757.	18.8	92
14	Reversible uptake of HgCl ₂ in a porous coordination polymer based on the dual functions of carboxylate and thioether. <i>Chemical Communications</i> , 2009, , 5439.	4.1	91
15	Pd Uptake and H ₂ S Sensing by an Amphoteric Metal-Organic Framework with a Soft Core and Rigid Side Arms. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 14438-14442.	13.8	91
16	Extraction of palladium from nuclear waste-like acidic solutions by a metal-organic framework with sulfur and alkene functions. <i>Journal of Materials Chemistry A</i> , 2015, 3, 3928-3934.	10.3	85
17	SnI ₄ -Based Hybrid Perovskites Templated by Multiple Organic Cations: Combining Organic Functionalities through Noncovalent Interactions. <i>Chemistry of Materials</i> , 2003, 15, 3632-3637.	6.7	75
18	[CH ₃ (CH ₂) ₁₁ NH ₃] ₃ SnI ₃ : A Hybrid Semiconductor with MoO ₃ -type Tin(II) Iodide Layers. <i>Inorganic Chemistry</i> , 2003, 42, 6589-6591.	4.0	72

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19	Halogen- C_2H_2 Binding in Ultramicroporous Metal-Organic Frameworks (MOFs) for Benchmark C_2H_2/CO_2 Separation Selectivity. <i>Chemistry - A European Journal</i> , 2020, 26, 4923-4929.	3.3	72
20	Rare earth-free composites of carbon dots/metal-organic frameworks as white light emitting phosphors. <i>Journal of Materials Chemistry C</i> , 2019, 7, 2207-2211.	5.5	68
21	$[(CH_3)_3NCH_2CH_2NH_3]SnI_4$: A Layered Perovskite with Quaternary/Primary Ammonium Dications and Short Interlayer Iodine-Iodine Contacts. <i>Inorganic Chemistry</i> , 2003, 42, 1400-1402.	4.0	67
22	Small Amphiphilic Organics, Coordination Extended Solids, and Constant Curvature Structures. <i>Accounts of Chemical Research</i> , 2005, 38, 251-261.	15.6	66
23	Anodic nanoporous SnO_2 grown on Cu foils as superior binder-free Na-ion battery anodes. <i>Journal of Power Sources</i> , 2016, 307, 634-640.	7.8	64
24	Hydrophilic-to-Hydrophobic Volume Ratios as Structural Determinant in Small-Length Scale Amphiphilic Crystalline Systems: Silver Salts of Phenylacetylene Nitriles with Pendant Oligo(ethylene) Tj ETQq01070 rgBT40verlock	13.7	60
25	Anchoring Co^{II} Ions into a Thiol-Laced Metal-Organic Framework for Efficient Visible-Light-Driven Conversion of CO_2 into CO. <i>ChemSusChem</i> , 2019, 12, 2166-2170.	6.8	58
26	Porous Siloxane Linked Phenylacetylene Nitrile Silver Salts from Solid State Dimerization and Low Polymerization. <i>Journal of the American Chemical Society</i> , 2000, 122, 6871-6883.	13.7	57
27	Building thiol and metal-thiolate functions into coordination nets: Clues from a simple molecule. <i>Journal of Solid State Chemistry</i> , 2009, 182, 1821-1826.	2.9	54
28	Dense thiol arrays for metal-organic frameworks: boiling water stability, Hg removal beyond 2 ppb and facile crosslinking. <i>Journal of Materials Chemistry A</i> , 2018, 6, 14566-14570.	10.3	52
29	Mixed-Valence $CuI_5Cu^{II}I_7$ Cluster Builds up a 3D Metal-Organic Framework with Paramagnetic and Thermochromic Characteristics. <i>Inorganic Chemistry</i> , 2008, 47, 7948-7950.	4.0	49
30	Metalation Triggers Single Crystalline Order in a Porous Solid. <i>Journal of the American Chemical Society</i> , 2016, 138, 14852-14855.	13.7	48
31	Shape-Selective Sorption and Fluorescence Sensing of Aromatics in a Flexible Network of Tetrakis[(4-methylthiophenyl)ethynyl]silane and $AgBF_4$. <i>Chemistry of Materials</i> , 2009, 21, 541-546.	6.7	47
32	Coordination Networks of C_{3v} and C_{2v} Phenylacetylene Nitriles and Silver(I) Salts: Interplay of Ligand Symmetry and Molecular Dipole Moments in the Solid State. <i>Chemistry of Materials</i> , 1999, 11, 1776-1783.	6.7	45
33	Coordination Networks from a Bifunctional Molecule Containing Carboxyl and Thioether Groups. <i>Inorganic Chemistry</i> , 2008, 47, 7459-7461.	4.0	45
34	In situ production of silver nanoparticles on an aldehyde-equipped conjugated porous polymer and subsequent heterogeneous reduction of aromatic nitro groups at room temperature. <i>Chemical Communications</i> , 2015, 51, 12197-12200.	4.1	45
35	A semiconducting gyroidal metal-sulfur framework for chemiresistive sensing. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16139-16143.	10.3	44
36	Room-temperature acetylene hydration by a Hg^{II} -laced metal-organic framework. <i>Chemical Communications</i> , 2015, 51, 10941-10944.	4.1	43

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37	Improving stability against desolvation and mercury removal performance of Zr(^{iv}) ²⁺ carboxylate frameworks by using bulky sulfur functions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 1648-1654.	10.3	43
38	Semiconductive Coordination Networks from 2,3,6,7,10,11-Hexakis(alkylthio)triphenylenes and Bismuth(III) Halides: Synthesis, Structure-Property Relations, and Solution Processing. <i>Chemistry of Materials</i> , 2005, 17, 4426-4437.	6.7	40
39	Immobilization of Volatile and Corrosive Iodine Monochloride (ICl) and I ₂ Reagents in a Stable Metal-Organic Framework. <i>Inorganic Chemistry</i> , 2014, 53, 6837-6843.	4.0	39
40	Facile synthesis of a conjugated microporous polymeric monolith via copper-free Sonogashira-Hagihara cross-coupling in water under aerobic conditions. <i>Polymer Chemistry</i> , 2015, 6, 7251-7255.	3.9	36
41	Photocatalytic cofactor regeneration involving triethanolamine revisited: The critical role of glycolaldehyde. <i>Applied Catalysis B: Environmental</i> , 2019, 243, 686-692.	20.2	36
42	Zwitterionic ultrathin covalent organic polymers for high-performance electrocatalytic carbon dioxide reduction. <i>Applied Catalysis B: Environmental</i> , 2021, 284, 119750.	20.2	35
43	A Boiling-Water-Stable, Tunable White-Emitting Metal-Organic Framework from Soft-Imprint Synthesis. <i>Chemistry - A European Journal</i> , 2016, 22, 1597-1601.	3.3	33
44	Mesoporous C-coated SnO _x nanosheets on copper foil as flexible and binder-free anodes for superior sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 2243-2250.	10.3	33
45	Multiphase-Assembly of Siloxane Oligomers with Improved Mechanical Strength and Water-Enhanced Healing. <i>Angewandte Chemie</i> , 2018, 130, 11412-11416.	2.0	33
46	A Thiol-Functionalized UiO-67-Type Porous Single Crystal: Filling in the Synthetic Gap. <i>Inorganic Chemistry</i> , 2019, 58, 1462-1468.	4.0	31
47	A nanoporous graphene analog for superfast heavy metal removal and continuous-flow visible-light photoredox catalysis. <i>Journal of Materials Chemistry A</i> , 2017, 5, 20180-20187.	10.3	30
48	Three-Dimensional Nets from Star-Shaped Hexakis(arylthio)triphenylene Molecules and Silver(I) Salts. <i>Inorganic Chemistry</i> , 2006, 45, 1032-1037.	4.0	29
49	Bio-inspired stabilization of sulfenyl iodide RS-I in a Zr(^{iv})-based metal-organic framework. <i>Dalton Transactions</i> , 2016, 45, 5334-5338.	3.3	28
50	Donor-acceptor covalent organic frameworks of nickel(ⁱⁱ) porphyrin for selective and efficient CO ₂ reduction into CO. <i>Dalton Transactions</i> , 2020, 49, 15587-15591.	3.3	26
51	Semiconductive Coordination Networks from Bismuth(III) Bromide and 1,2-Bis(methylthio)phenylacetylene-Based Ligands. <i>Inorganic Chemistry</i> , 2005, 44, 8855-8860.	4.0	25
52	Reactions of H ₂ S with AgCl within a Porous Coordination Network. <i>Inorganic Chemistry</i> , 2010, 49, 7629-7631.	4.0	25
53	Centripetal molecules as multifunctional building blocks for coordination networks. <i>Chemical Communications</i> , 2007, , 4779.	4.1	24
54	Coordination Networks from Cu Cations and Tetrakis(methylthio)benzenedicarboxylic Acid: Tunable Bonding Patterns and Selective Sensing for NH ₃ Gas. <i>Inorganic Chemistry</i> , 2010, 49, 10191-10198.	4.0	23

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55	Defect-enhanced selective ion transport in an ionic nanocomposite for efficient energy harvesting from moisture. <i>Energy and Environmental Science</i> , 2022, 15, 2601-2609.	30.8	22
56	Single-Crystalline UiO-67-Type Porous Network Stable to Boiling Water, Solvent Loss, and Oxidation. <i>Inorganic Chemistry</i> , 2018, 57, 6198-6201.	4.0	21
57	Coordination-Driven Assembly of Metal-Organic Framework Coating for Catalytically Active Superhydrophobic Surface. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001202.	3.7	21
58	Semirigid Aromatic Sulfone-Carboxylate Molecule for Dynamic Coordination Networks: Multiple Substitutions of the Ancillary Ligands. <i>Inorganic Chemistry</i> , 2011, 50, 7142-7149.	4.0	20
59	Functional shakeup of metal-organic frameworks: the rise of the sidekick. <i>CrystEngComm</i> , 2015, 17, 9254-9263.	2.6	20
60	Flexible Thioether-Ag(I) Interactions for Assembling Large Organic Ligands into Crystalline Networks. <i>Crystal Growth and Design</i> , 2009, 9, 1444-1451.	3.0	19
61	Structural regularity and diversity in hybrids of aromatic thioethers and BiBr ₃ : from discrete complexes to layers and 3D nets. <i>Dalton Transactions</i> , 2009, , 5083.	3.3	19
62	Dramatic improvement of stability by <i>in situ</i> linker cyclization of a metal-organic framework. <i>Chemical Communications</i> , 2018, 54, 9470-9473.	4.1	19
63	Structure Rationalization and Topology Prediction of Two-Distinct-Component Organic Crystals: The Role of Volume Fraction and Interface Topology. <i>Journal of the American Chemical Society</i> , 2002, 124, 121-135.	13.7	18
64	Made in Water: A Stable Microporous Cu(I)-carboxylate Framework (CityU-7) for CO ₂ , Water, and Iodine Uptake. <i>Inorganic Chemistry</i> , 2018, 57, 4807-4811.	4.0	18
65	Porphyrim Grafting on a Mercapto-Equipped Zr(IV)-Carboxylate Framework Enhances Photocatalytic Hydrogen Production. <i>Inorganic Chemistry</i> , 2020, 59, 12643-12649.	4.0	18
66	Dense Alkyne Arrays of a Zr(IV) Metal-Organic Framework Absorb Co ₂ (CO) ₈ for Functionalization. <i>Inorganic Chemistry</i> , 2020, 59, 5626-5631.	4.0	18
67	A Semiconductive Coordination Network Based on 2,3,6,7,10,11-Hexakis(methylthio)triphenylene and BiCl ₃ . <i>Crystal Growth and Design</i> , 2005, 5, 423-425.	3.0	17
68	Dense Dithiolene Units on Metal-Organic Frameworks for Mercury Removal and Superprotonic Conduction. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 1070-1076.	8.0	17
69	Metal-Based Photonic Coatings from Electrochemical Deposition. <i>Journal of the Electrochemical Society</i> , 2009, 156, D508.	2.9	16
70	Networks of Hexagonal Hierarchy from a Self-Similar Tritopic Molecule. <i>Crystal Growth and Design</i> , 2009, 9, 1663-1665.	3.0	16
71	Fluorescent Coordination Networks of 2,3,6,7,10,11-Hexakis(phenylthio)triphenylene and Silver(I) Triflate. <i>Inorganic Chemistry</i> , 2004, 43, 8018-8022.	4.0	15
72	Assembly of Large Aromatic Selenoether Ligands into Cubic and Non-interpenetrated (10, 3)-nets. <i>Crystal Growth and Design</i> , 2007, 7, 2542-2547.	3.0	15

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73	CuCN Pillars Induce Face-to-Face π -Overlap of Anthracene-Based Thioether Molecules within a Hybrid Coordination Network. <i>Crystal Growth and Design</i> , 2008, 8, 1468-1470.	3.0	14
74	Highly Polarizable Triiodide Anions (I_3^-) as Cross-Linkers for Coordination Polymers: Closing the Semiconductive Band Gap. <i>Inorganic Chemistry</i> , 2015, 54, 6087-6089.	4.0	14
75	Mineral Hydrogel from Inorganic Salts: Biocompatible Synthesis, All-in-One Charge Storage, and Possible Implications in the Origin of Life. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	14
76	Sulfur Chemistry for Stable and Electroactive Metal-Organic Frameworks: The Crosslinking Story. <i>Chemistry - A European Journal</i> , 2019, 25, 8654-8662.	3.3	13
77	An air-stable anionic two-dimensional semiconducting metal-thiolate network and its exfoliation into ultrathin few-layer nanosheets. <i>Chemical Communications</i> , 2020, 56, 3645-3648.	4.1	13
78	Bestow metal foams with nanostructured surfaces via a convenient electrochemical method for improved device performance. <i>Nano Research</i> , 2016, 9, 2364-2371.	10.4	12
79	Solution-Based Comproportionation Reaction for Facile Synthesis of Black TiO_2 Nanotubes and Nanoparticles. <i>ACS Applied Energy Materials</i> , 2020, 3, 6087-6092.	5.1	12
80	A Bumper Crop of Boiling-Water-Stable Metal-Organic Frameworks from Controlled Linker Sulfuration. <i>Inorganic Chemistry</i> , 2020, 59, 7097-7102.	4.0	12
81	Linker Deficiency, Aromatic Ring Fusion, and Electrocatalysis in a Porous Ni_8 -Pyrazolate Network. <i>Inorganic Chemistry</i> , 2021, 60, 161-166.	4.0	12
82	Multiple Bismuth(III)-Thioether Secondary Interactions Integrate Metalloporphyrin Ligands into Functional Networks. <i>Inorganic Chemistry</i> , 2007, 46, 4844-4849.	4.0	11
83	Improving the Loading Capacity of Metal-Organic Framework Thin Films Using Optimized Linkers. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 24699-24702.	8.0	10
84	Crystallinity after decarboxylation of a metal-carboxylate framework: indestructible porosity for catalysis. <i>Dalton Transactions</i> , 2020, 49, 11902-11910.	3.3	10
85	Conjugated crosslinks boost the conductivity and stability of a single crystalline metal-organic framework. <i>Chemical Communications</i> , 2021, 57, 187-190.	4.1	10
86	Covalent Triazine Frameworks Embedded with Ir Complexes for Enhanced Photocatalytic Hydrogen Evolution. <i>ACS Applied Energy Materials</i> , 2022, 5, 7473-7478.	5.1	10
87	Janus triple tripods build up a microporous manifold for $HgCl_2$ and I_2 uptake. <i>Chemical Communications</i> , 2019, 55, 5091-5094.	4.1	9
88	Building Conjugated Donor-Acceptor Cross-Links into Metal-Organic Frameworks for Photo- and Electroactivity. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19201-19209.	8.0	9
89	Water-assisted sintering of silica: Densification mechanisms and their possible implications in biomineralization. <i>Journal of the American Ceramic Society</i> , 2022, 105, 2945-2954.	3.8	8
90	Beadwork and Network: Strings of Silver Ions Stitch Large π -Pyrazolate Patches into a Two-dimensional Sheet. <i>Crystal Growth and Design</i> , 2018, 18, 3713-3718.	3.0	7

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91	Supervariate Ceramics: Gelatinous and Monolithic Ceramics Fabricated under Ambient Conditions. <i>Advanced Engineering Materials</i> , 0, , 2100866.	3.5	7
92	A facile approach for hierarchical architectures of an enzyme-metal-organic framework biocatalyst with high activity and stability. <i>Nanoscale</i> , 2022, 14, 3929-3934.	5.6	7
93	Distinct host-guest interaction and subdued fluorescence in a coordination network of 2,3,6,7,10,11-hexakis(phenylthio)triphenylene and silver(I) triflate. <i>Journal of Solid State Chemistry</i> , 2006, 179, 3688-3694.	2.9	6
94	Superprotonic conduction of intrinsically zwitterionic microporous polymers based on easy-to-make squaraine, croconaine and rhodizaine dyes. <i>Nanoscale Advances</i> , 2022, 4, 2922-2928.	4.6	6
95	Complex Metal-Organic Frameworks from Symmetrically Backfolded Dendrimers. <i>ChemistrySelect</i> , 2016, 1, 4075-4081.	1.5	5
96	Frontispiece: Sulfur Chemistry for Stable and Electroactive Metal-Organic Frameworks: The Crosslinking Story. <i>Chemistry - A European Journal</i> , 2019, 25, .	3.3	4
97	Symmetrically backfolded molecules emulating the self-similar features of a Sierpinski triangle. <i>Organic and Biomolecular Chemistry</i> , 2019, 17, 6032-6037.	2.8	4
98	Invisible Silver Guests Boost Order in a Framework That Cyclizes and Deposits Ag ₃ Sb Nanodots. <i>Inorganic Chemistry</i> , 2021, 60, 5757-5763.	4.0	4
99	Uniting Form and Function, Stability and Reactivity in Open Framework Materials. <i>Chemistry Letters</i> , 2021, 50, 627-631.	1.3	4
100	A Ferrocene Metal-Organic Framework Solid for Fe-Loaded Carbon Matrices and Nanotubes: High-Yield Synthesis and Oxygen Reduction Electrocatalysis. <i>Inorganic Chemistry</i> , 2021, 60, 17315-17324.	4.0	4
101	Liquefaction-induced plasticity from entropy-boosted amorphous ceramics. <i>Applied Materials Today</i> , 2021, 23, 101011.	4.3	3
102	A Porous and Solution-Processable Molecular Crystal Stable at 200 °C: The Surprising Donor-Acceptor Impact. <i>Crystal Growth and Design</i> , 2019, 19, 7411-7419.	3.0	2
103	Supervariate Ceramics: Gelatinous and Monolithic Ceramics Fabricated under Ambient Conditions. <i>Advanced Engineering Materials</i> , 2021, 23, .	3.5	2
104	Telltale diamagnetism at 50%K of a coordination polymer system. <i>Materials Research Letters</i> , 2022, 10, 496-500.	8.7	2
105	In Situ Observations of Abnormal Pore Size Changes of a Zirconium Based Metal-Organic Framework Using Atomic Resolution S/TEM and EELS. <i>Microscopy and Microanalysis</i> , 2019, 25, 1486-1487.	0.4	1
106	The Coordination Chemistry of Metal-Organic Frameworks: Metalation, Catalysis and Beyond. , 2021, , 99-117.		1
107	Enhancement of Protein Crystallization Using Nano-Sized Metal-Organic Framework. <i>Crystals</i> , 2022, 12, 578.	2.2	1
108	Metal-based photonic coatings from electrochemical methods. , 2010, , .		0

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109	Synthesis of a Thiol Building Block for the Crystallization of a Semiconducting Gyroidal Metal-sulfur Framework. <i>Journal of Visualized Experiments</i> , 2018, , .	0.3	0
110	Metal-Organic Frameworks for Heavy Metal Removal. <i>Series on Chemistry, Energy and the Environment</i> , 2018, , 377-410.	0.3	0