

# Zhonghua Xiang

## List of Publications by Citations

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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.

91  
papers

5,944  
citations

38  
h-index

77  
g-index

92  
ext. papers

6,832  
ext. citations

10.4  
avg, IF

6.27  
L-index

#	Paper	IF	Citations
91	ZIF-derived in situ nitrogen-doped porous carbons as efficient metal-free electrocatalysts for oxygen reduction reaction. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 442-450	35.4	634
90	Highly efficient electrocatalysts for oxygen reduction based on 2D covalent organic polymers complexed with non-precious metals. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 2433-7	16.4	363
89	Unveiling the high-activity origin of single-atom iron catalysts for oxygen reduction reaction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 6626-6631	11.5	346
88	Porous covalent-organic materials: synthesis, clean energy application and design. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 2691-2718	13	300
87	An amino group functionalized metal-organic framework as a luminescent probe for highly selective sensing of Fe <sup>3+</sup> ions. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 7662	13	280
86	Nitrogen-doped holey graphitic carbon from 2D covalent organic polymers for oxygen reduction. <i>Advanced Materials</i> , <b>2014</b> , 26, 3315-20	24	259
85	Metal-organic frameworks with incorporated carbon nanotubes: improving carbon dioxide and methane storage capacities by lithium doping. <i>Angewandte Chemie - International Edition</i> , <b>2011</b> , 50, 491-4	16.4	229
84	Zeolitic imidazolate framework-8 as a luminescent material for the sensing of metal ions and small molecules. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 6649		226
83	Selective adsorption of carbon dioxide by carbonized porous aromatic framework (PAF). <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 8370	35.4	200
82	Synthesis of luminescent covalent-organic polymers for detecting nitroaromatic explosives and small organic molecules. <i>Macromolecular Rapid Communications</i> , <b>2012</b> , 33, 1184-90	4.8	192
81	Systematic Tuning and Multifunctionalization of Covalent Organic Polymers for Enhanced Carbon Capture. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 13301-7	16.4	171
80	A pyrolysis-free path toward superiorly catalytic nitrogen-coordinated single atom. <i>Science Advances</i> , <b>2019</b> , 5, eaaw2322	14.3	168
79	Well-defined two dimensional covalent organic polymers: rational design, controlled syntheses, and potential applications. <i>Polymer Chemistry</i> , <b>2015</b> , 6, 1896-1911	4.9	162
78	Covalent-organic polymers for carbon dioxide capture. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 22663		136
77	Multiscale simulation and modelling of adsorptive processes for energy gas storage and carbon dioxide capture in porous coordination frameworks. <i>Energy and Environmental Science</i> , <b>2010</b> , 3, 1469	35.4	130
76	[email protected]3(BTC) <sub>2</sub> and Metal-Organic Frameworks for Separation of CO <sub>2</sub> /CH <sub>4</sub> Mixture. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 19864-19871	3.8	126
75	Edge Functionalization of Graphene and Two-Dimensional Covalent Organic Polymers for Energy Conversion and Storage. <i>Advanced Materials</i> , <b>2016</b> , 28, 6253-61	24	120

74	2020 roadmap on two-dimensional materials for energy storage and conversion. <i>Chinese Chemical Letters</i> , <b>2019</b> , 30, 2053-2064	8.1	108
73	In Situ Charge Exfoliated Soluble Covalent Organic Framework Directly Used for Zn-Air Flow Battery. <i>ACS Nano</i> , <b>2019</b> , 13, 878-884	16.7	107
72	Postsynthetic Lithium Modification of Covalent-Organic Polymers for Enhancing Hydrogen and Carbon Dioxide Storage. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 5974-5980	3.8	90
71	Well-Defined 2D Covalent Organic Polymers for Energy Electrocatalysis. <i>ACS Energy Letters</i> , <b>2017</b> , 2, 1308-1314	20.1	87
70	Highly Efficient Oxygen Reduction Reaction Electrocatalysts Synthesized under Nanospace Confinement of Metal-Organic Framework. <i>ACS Nano</i> , <b>2017</b> , 11, 8379-8386	16.7	80
69	A Pyrolysis-Free Covalent Organic Polymer for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 12567-12572	16.4	77
68	Facile preparation of high-capacity hydrogen storage metal-organic frameworks: A combination of microwave-assisted solvothermal synthesis and supercritical activation. <i>Chemical Engineering Science</i> , <b>2010</b> , 65, 3140-3146	4.4	69
67	Functional Group Modification of Metal-Organic Frameworks for CO <sub>2</sub> Capture. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 10573-10579	3.8	64
66	Lithium doping on metal-organic frameworks for enhancing H <sub>2</sub> Storage. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 946-950	6.7	59
65	Phosphorous-Nitrogen-Codoped Carbon Materials Derived from Metal-Organic Frameworks as Efficient Electrocatalysts for Oxygen Reduction Reactions. <i>European Journal of Inorganic Chemistry</i> , <b>2016</b> , 2016, 2100-2105	2.3	57
64	Ultrastable hydrogen evolution electrocatalyst derived from phosphide postmodified metal-organic frameworks. <i>Nano Energy</i> , <b>2017</b> , 35, 115-120	17.1	53
63	Improving Energy Conversion Efficiency of Dye-Sensitized Solar Cells by Modifying TiO <sub>2</sub> Photoanodes with Nitrogen-Reduced Graphene Oxide. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2014</b> , 2, 1234-1240	8.3	50
62	Hydrogen Storage in Mesoporous Coordination Frameworks: Experiment and Molecular Simulation. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 15106-15109	3.8	50
61	Ultrastable and Efficient Visible-Light-Driven Hydrogen Production Based on Donor-Acceptor Copolymerized Covalent Organic Polymer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 30698-30703	8.5	49
60	Highly Efficient Electrocatalysts for Oxygen Reduction Based on 2D Covalent Organic Polymers Complexed with Non-precious Metals. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 2465-2469	3.6	47
59	Confined-Space-Assisted Preparation of Fe <sub>3</sub> O <sub>4</sub> -Nanoparticle-Modified Fe-Ni Catalysts Derived from a Covalent Organic Polymer for Oxygen Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2017</b> , 5, 7871-7877	8.3	47
58	In-situ La doped Co <sub>3</sub> O <sub>4</sub> as highly efficient photocatalyst for solar hydrogen generation. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 8674-8682	6.7	45
57	Hierarchically porous metal-free carbon with record high mass activity for oxygen reduction and Zn-air batteries. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 9831-9836	13	42

56	Two-Dimensional Fully Conjugated Polymeric Photosensitizers for Advanced Photodynamic Therapy. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 8651-8658	9.6	42
55	Bimetal-phthalocyanine based covalent organic polymers for highly efficient oxygen electrode. <i>Applied Catalysis B: Environmental</i> , <b>2019</b> , 243, 204-211	21.8	39
54	Toward high energy-density and long cycling-lifespan lithium ion capacitors: a 3D carbon modified low-potential Li <sub>2</sub> TiSiO <sub>5</sub> anode coupled with a lignin-derived activated carbon cathode. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 8234-8244	13	38
53	Fully Conjugated Covalent Organic Polymer with Carbon-Encapsulated NiP for Highly Sustained Photocatalytic H <sub>2</sub> Production from Seawater. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 41313-41320	9.5	38
52	Reaction milling for scalable synthesis of N, P-codoped covalent organic polymers for metal-free bifunctional electrocatalysts. <i>Chemical Engineering Journal</i> , <b>2019</b> , 358, 427-434	14.7	35
51	Covalent organic polymer modified TiO <sub>2</sub> nanosheets as highly efficient photocatalysts for hydrogen generation. <i>Chemical Engineering Science</i> , <b>2017</b> , 162, 33-40	4.4	31
50	Target-oriented electrode constructions toward ultra-fast and ultra-stable all-graphene lithium ion capacitors. <i>Energy Storage Materials</i> , <b>2019</b> , 23, 409-417	19.4	29
49	Efficient unitary oxygen electrode for air-based flow batteries. <i>Nano Energy</i> , <b>2018</b> , 47, 361-367	17.1	28
48	A porous diamond carbon framework: a new carbon allotrope with extremely high gas adsorption and mechanical properties. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 3851	13	28
47	Highly Accessible Atomically Dispersed Fe-N Sites Electrocatalyst for Proton-Exchange Membrane Fuel Cell. <i>Advanced Science</i> , <b>2021</b> , 8, 2002249	13.6	26
46	PAF-derived nitrogen-doped 3D Carbon Materials for Efficient Energy Conversion and Storage. <i>Scientific Reports</i> , <b>2015</b> , 5, 8307	4.9	25
45	A long-life hybrid zinc flow battery achieved by dual redox couples at cathode. <i>Nano Energy</i> , <b>2019</b> , 63, 103822	17.1	21
44	Highly efficient iron-nitrogen electrocatalyst derived from covalent organic polymer for oxygen reduction. <i>Journal of Energy Chemistry</i> , <b>2017</b> , 26, 1168-1173	12	21
43	A Pyrolysis-Free Covalent Organic Polymer for Oxygen Reduction. <i>Angewandte Chemie</i> , <b>2018</b> , 130, 12747-12752	16.2	21
42	Preparation and Characterization of Covalent Organic Polymer Supported Palladium Catalysts for Oxidation of CO and Benzyl Alcohol. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2014</b> , 53, 1359-1367	3.9	18
41	In situ growing catalytic sites on 3D carbon fiber paper as self-standing bifunctional air electrodes for air-based flow batteries. <i>Nano Energy</i> , <b>2019</b> , 63, 103897	17.1	17
40	Dynamic separation of Xe and Kr by metal-organic framework and covalent-organic materials: a comparison with activated charcoal. <i>Science China Chemistry</i> , <b>2016</b> , 59, 643-650	7.9	17
39	Highly efficient electrocatalysts derived from carbon black supported non-precious metal macrocycle catalysts for oxygen reduction reaction. <i>Journal of Energy Chemistry</i> , <b>2019</b> , 28, 73-78	12	17

38	Metal-Organic Frameworks with Incorporated Carbon Nanotubes: Improving Carbon Dioxide and Methane Storage Capacities by Lithium Doping. <i>Angewandte Chemie</i> , <b>2011</b> , 123, 511-514	3.6	16
37	Photoelectronic Porous Covalent Organic Materials: Research Progress and Perspective. <i>Acta Chimica Sinica</i> , <b>2015</b> , 73, 557	3.3	16
36	A new steric tetra-imidazole for facile synthesis of high loading atomically dispersed FeN <sub>4</sub> electrocatalysts. <i>Nano Energy</i> , <b>2021</b> , 80, 105533	17.1	16
35	Superior oxygen electrocatalysts derived from predesigned covalent organic polymers for zinc-air flow batteries. <i>Nanoscale</i> , <b>2018</b> , 11, 211-218	7.7	15
34	N-rich covalent organic polymer in situ modified TiO <sub>2</sub> for highly efficient photocatalytic hydrogen evolution. <i>Science Bulletin</i> , <b>2018</b> , 63, 369-375	10.6	13
33	Mechanistic Understanding of Size-Dependent Oxygen Reduction Activity and Selectivity over Pt/CNT Nanocatalysts. <i>European Journal of Inorganic Chemistry</i> , <b>2019</b> , 2019, 3210-3217	2.3	12
32	Effect of an acetylene bond on hydrogen adsorption in diamond-like carbon allotropes: from first principles to atomic simulation. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 9261-9269	3.6	9
31	A superior unitary oxygen electrode with accelerated mass transfer and highly exposed active sites for rechargeable air-based batteries. <i>Journal of Power Sources</i> , <b>2021</b> , 488, 229468	8.9	9
30	Pathways towards Boosting Solar-Driven Hydrogen Evolution of Conjugated Polymers. <i>Small</i> , <b>2021</b> , 17, e2007576	11	9
29	Microfluidic interface boosted synthesis of covalent organic polymer capsule. <i>Green Chemical Engineering</i> , <b>2020</b> , 1, 63-69	3	8
28	Cobalt Incorporated Porous Aromatic Framework for CO <sub>2</sub> /CH <sub>4</sub> Separation. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2018</b> , 57, 10985-10991	3.9	8
27	Identifying the impact of the covalent-bonded carbon matrix to FeN sites for acidic oxygen reduction.. <i>Nature Communications</i> , <b>2022</b> , 13, 57	17.4	8
26	Pyrene-Based Covalent Organic Polymers for Enhanced Photovoltaic Performance and Solar-Driven Hydrogen Production. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 7007-7013	6.1	8
25	Quasi-Phthalocyanine Conjugated Covalent Organic Frameworks with Nitrogen-Coordinated Transition Metal Centers for High-Efficiency Electrocatalytic Ammonia Synthesis.. <i>Nano Letters</i> , <b>2021</b> ,	11.5	8
24	Fungi residue derived carbon as highly efficient hydrogen peroxide electrocatalyst. <i>Chemical Engineering Science</i> , <b>2017</b> , 174, 222-228	4.4	7
23	Microfluidics for synthesis and morphology control of hierarchical porous covalent organic polymer monolith. <i>Chemical Engineering Science</i> , <b>2019</b> , 195, 801-809	4.4	7
22	Pyrolysis-Free Synthesized Catalyst towards Acidic Oxygen Reduction by Deprotonation. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 20865-20871	16.4	7
21	HiGee Strategy toward Rapid Mass Production of Porous Covalent Organic Polymers with Superior Methane Deliverable Capacity. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1908079	15.6	6

20	Oxygen Reduction: Nitrogen-Doped Holey Graphitic Carbon from 2D Covalent Organic Polymers for Oxygen Reduction (Adv. Mater. 20/2014). <i>Advanced Materials</i> , <b>2014</b> , 26, 3356-3356	24	6
19	Holey Graphitic Carbon Derived from Covalent Organic Polymers Impregnated with Nonprecious Metals for CO <sub>2</sub> Capture from Natural Gas. <i>Particle and Particle Systems Characterization</i> , <b>2017</b> , 34, 16002319	3.1	5
18	Nitro-Group-Doped Fully Conjugated 2D Covalent Organic Polymers for Enhanced Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 3728-3733	8.3	5
17	Soluble Covalent Organic Polymer for the Flexible Electrode of Supercapacitors. <i>Frontiers in Materials</i> , <b>2019</b> , 6,	4	4
16	Controlled synthesis of porous nitrogen-doped carbon nanoshells for highly efficient oxygen reduction. <i>Reaction Chemistry and Engineering</i> , <b>2018</b> , 3, 238-243	4.9	4
15	Semiconducting and conducting transition of covalent-organic polymers induced by defects. <i>Nanotechnology</i> , <b>2012</b> , 23, 395702	3.4	4
14	PAF-1 as oxygen tank to in-situ synthesize edge-exposed O-MoS <sub>2</sub> for highly efficient hydrogen evolution. <i>Catalysis Today</i> , <b>2020</b> , 347, 56-62	5.3	4
13	Localized electron density modulation in conjugated polymer nanosheets for boosting photocatalytic H <sub>2</sub> evolution. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 19625-19630	13	4
12	Capture and separation of CO <sub>2</sub> by porous coordination frameworks: Research progress and perspective. <i>Scientia Sinica Chimica</i> , <b>2012</b> , 42, 235-244	1.6	3
11	Bimetallic MOF-Derived Sulfides with Heterojunction Interfaces Synthesized for Photocatalytic Hydrogen Evolution. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2021</b> , 60, 11439-11449	3.9	3
10	Two-Dimensional Closed Conjugated Covalent Organic Polymers for Oxygen Reduction Reaction. <i>Frontiers in Materials</i> , <b>2019</b> , 6,	4	2
9	How PM <sub>2.5</sub> Affects Pt-Catalyzed Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 9385-9392	8.3	2
8	Binary ligand strategy toward interweaved encapsulation-nanotubes structured electrocatalyst for proton exchange membrane fuel cell. <i>Journal of Energy Chemistry</i> , <b>2022</b> , 64, 129-135	12	2
7	High retention volume covalent organic polymer for xenon capture: Dynamic separation of Xe and Kr. <i>Green Energy and Environment</i> , <b>2020</b> ,	5.7	1
6	FeNi co-doped electrocatalyst synthesized via binary ligand strategy as a bifunctional catalyst for Zn-air flow battery. <i>Chemical Engineering Science</i> , <b>2022</b> , 247, 117038	4.4	1
5	A Pyrolysis-Free Method Toward Large-Scale Synthesis of Ultra-Highly Efficient Bifunctional Oxygen Electrocatalyst for Zinc-Air Flow Batteries.. <i>Small</i> , <b>2022</b> , e2201197	11	1
4	Sodium laurate-assisted CeO <sub>2</sub> nanoparticles as highly efficient and recyclable catalysts for cyanosilylation reaction. <i>Applied Catalysis A: General</i> , <b>2021</b> , 628, 118404	5.1	0
3	Pyrolysis-Free Synthesized Catalyst towards Acidic Oxygen Reduction by Deprotonation. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 21033-21039	3.6	0

- 2 Dithiine Bridged Phthalocyanine-Based Covalent Organic Frameworks for Highly Efficient Oxygen Reduction Reaction. *Journal of Physical Chemistry C*, **2022**, 126, 4008-4014 3.8 ○
- 1 Dual-template strategy synthesis of hierarchically porous electrocatalysts for oxygen reduction reaction **2022**, 100006