

# xiao bin Liao

## List of Publications by Year in descending order

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49  
papers

3,751  
citations

147726  
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times ranked

4923  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sodium Ion Stabilized Vanadium Oxide Nanowire Cathode for High-Performance Zinc-Ion Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1702463.	10.2	650
2	Lithiophilic-lithiophobic gradient interfacial layer for a highly stable lithium metal anode. <i>Nature Communications</i> , 2018, 9, 3729.	5.8	331
3	Low-Crystalline Bimetallic Metal-Organic Framework Electrocatalysts with Rich Active Sites for Oxygen Evolution. <i>ACS Energy Letters</i> , 2019, 4, 285-292.	8.8	255
4	Nanowires in Energy Storage Devices: Structures, Synthesis, and Applications. <i>Advanced Energy Materials</i> , 2018, 8, 1802369.	10.2	169
5	Field Effect Enhanced Hydrogen Evolution Reaction of MoS <sub>2</sub> Nanosheets. <i>Advanced Materials</i> , 2017, 29, 1604464.	11.1	148
6	Oxygen Vacancy-Determined Highly Efficient Oxygen Reduction in NiCo <sub>2</sub> O <sub>4</sub> /Hollow Carbon Spheres. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 16410-16417.	4.0	148
7	High-Voltage Cycling Induced Thermal Vulnerability in LiCoO <sub>2</sub> Cathode: Cation Loss and Oxygen Release Driven by Oxygen Vacancy Migration. <i>ACS Nano</i> , 2020, 14, 6181-6190.	7.3	144
8	Field-Effect Tuned Adsorption Dynamics of VSe <sub>2</sub> Nanosheets for Enhanced Hydrogen Evolution Reaction. <i>Nano Letters</i> , 2017, 17, 4109-4115.	4.5	134
9	±-MoO <sub>3</sub> -by plasma etching with improved capacity and stabilized structure for lithium storage. <i>Nano Energy</i> , 2018, 49, 555-563.	8.2	133
10	Carbon-MEMS-Based Alternating Stacked MoS <sub>2</sub> @rGO-CNT Micro-Supercapacitor with High Capacitance and Energy Density. <i>Small</i> , 2017, 13, 1700639.	5.2	132
11	Ligand Modulation of Active Sites to Promote Electrocatalytic Oxygen Evolution. <i>Advanced Materials</i> , 2022, 34, e2200270.	11.1	108
12	Density Functional Theory for Electrocatalysis. <i>Energy and Environmental Materials</i> , 2022, 5, 157-185.	7.3	95
13	Boosting Polysulfide Redox Kinetics by Graphene-Supported Ni Nanoparticles with Carbon Coating. <i>Advanced Energy Materials</i> , 2020, 10, 2000907.	10.2	89
14	On-Chip Ni-Zn Microbattery Based on Hierarchical Ordered Porous Ni@Ni(OH) <sub>2</sub> Microelectrode with Ultrafast Ion and Electron Transport Kinetics. <i>Advanced Functional Materials</i> , 2019, 29, 1808470.	7.8	88
15	Reversible V <sup>3+</sup> /V <sup>5+</sup> double redox in lithium vanadium oxide cathode for zinc storage. <i>Energy Storage Materials</i> , 2020, 29, 113-120.	9.5	85
16	Heterostructure Design in Bimetallic Phthalocyanine Boosts Oxygen Reduction Reaction Activity and Durability. <i>Advanced Functional Materials</i> , 2020, 30, 2005000.	7.8	78
17	Surface Pseudocapacitive Mechanism of Molybdenum Phosphide for High-Energy and High-Power Sodium-Ion Capacitors. <i>Advanced Energy Materials</i> , 2019, 9, 1900967.	10.2	62
18	Superior Hydrogen Evolution Reaction Performance in 2H-MoS <sub>2</sub> to that of 1T Phase. <i>Small</i> , 2019, 15, e1900964.	5.2	59

#	ARTICLE	IF	CITATIONS
19	Coordination environments tune the activity of oxygen catalysis on single atom catalysts: A computational study. <i>Nano Research</i> , 2022, 15, 3073-3081.	5.8	58
20	Gradient SEI layer induced by liquid alloy electrolyte additive for high rate lithium metal battery. <i>Nano Energy</i> , 2021, 88, 106237.	8.2	48
21	MoS <sub>2</sub> /MnO <sub>2</sub> heterostructured nanodevices for electrochemical energy storage. <i>Nano Research</i> , 2018, 11, 2083-2092.	5.8	47
22	Wearable Textile-Based Co <sup>2+</sup> /Zn Alkaline Microbattery with High Energy Density and Excellent Reliability. <i>Small</i> , 2020, 16, e2000293.	5.2	47
23	Unveiling the role of surface P=O group in P-doped Co <sub>3</sub> O <sub>4</sub> for electrocatalytic oxygen evolution by On-chip micro-device. <i>Nano Energy</i> , 2021, 83, 105748.	8.2	46
24	Rational Design of Ion Transport Paths at the Interface of Metal-Organic Framework Modified Solid Electrolyte. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 22930-22938.	4.0	45
25	Sn stabilized pyrovanadate structure rearrangement for zinc ion battery. <i>Nano Energy</i> , 2021, 81, 105584.	8.2	41
26	Oxygen defects boost polysulfides immobilization and catalytic conversion: First-principles computational characterization and experimental design. <i>Nano Research</i> , 2020, 13, 2299-2307.	5.8	36
27	Three-Dimensional Porous Nitrogen-Doped Carbon Nanosheet with Embedded Ni <sub>3</sub> Co <sub>3</sub> S <sub>4</sub> Nanocrystals for Advanced Lithium-Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 9181-9189.	4.0	36
28	Gradient sulfur fixing separator with catalytic ability for stable lithium sulfur battery. <i>Chemical Engineering Journal</i> , 2021, 422, 130107.	6.6	36
29	Low-coordinated cobalt arrays for efficient hydrazine electrooxidation. <i>Energy and Environmental Science</i> , 2022, 15, 3246-3256.	15.6	36
30	Strongly Coupled Pyridine-V <sub>2</sub> O <sub>5</sub> ·nH <sub>2</sub> O Nanowires with Intercalation Pseudocapacitance and Stabilized Layer for High Energy Sodium Ion Capacitors. <i>Small</i> , 2019, 15, e1900379.	5.2	35
31	Extrapolation of high-order correlation energies: the WMS model. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 27375-27384.	1.3	34
32	Accurate Binding Energies for Lithium Polysulfides and Assessment of Density Functionals for Lithium-Sulfur Battery Research. <i>Journal of Physical Chemistry C</i> , 2019, 123, 20737-20747.	1.5	34
33	<i>In situ</i> monitoring of the electrochemically induced phase transition of thermodynamically metastable 1T-MoS <sub>2</sub> at nanoscale. <i>Nanoscale</i> , 2020, 12, 9246-9254.	2.8	33
34	A three-dimensional nitrogen-doped graphene framework decorated with an atomic layer deposited ultrathin V <sub>2</sub> O <sub>5</sub> layer for lithium sulfur batteries with high sulfur loading. <i>Journal of Materials Chemistry A</i> , 2020, 8, 12106-12113.	5.2	28
35	Establishing a theoretical insight for penta-coordinated iron-nitrogen-carbon catalysts toward oxygen reaction. <i>Nano Research</i> , 2022, 15, 6067-6075.	5.8	28
36	Langmuir-Blodgett Nanowire Devices for In Situ Probing of Zinc-Ion Batteries. <i>Small</i> , 2019, 15, e1902141.	5.2	25

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37	Theoretical insights into dual-atom catalysts for the oxygen reduction reaction: the crucial role of orbital polarization. <i>Journal of Materials Chemistry A</i> , 2022, 10, 9150-9160.	5.2	25
38	Interface cation migration kinetics induced oxygen release heterogeneity in layered lithium cathodes. <i>Energy Storage Materials</i> , 2021, 36, 115-122.	9.5	23
39	Facet-Dependent Oxygen Reduction Reaction Activity on the Surfaces of $\text{Co}_3\text{O}_4$ . <i>Energy and Environmental Materials</i> , 2021, 4, 407-412.	7.3	19
40	Electric field and photoelectrical effect bi-enhanced hydrogen evolution reaction. <i>Nano Research</i> , 2018, 11, 3205-3212.	5.8	17
41	Ultrastable High-Energy On-Chip Nickel-Bismuth Microbattery Powered by Crystalline Bi Anode and Ni-Co Hydroxide Cathode. <i>Energy Technology</i> , 2019, 7, 1900144.	1.8	13
42	A Durable Ni-Zn Microbattery with Ultrahigh-Rate Capability Enabled by In Situ Reconstructed Nanoporous Nickel with Epitaxial Phase. <i>Small</i> , 2021, 17, e2103136.	5.2	11
43	One-step electrodeposited $\text{Mn}_x\text{Co}_{1-x}(\text{OH})_2$ nanosheet arrays as cathode for asymmetric on-chip micro-supercapacitors. <i>Applied Physics Letters</i> , 2019, 114, 223903.	1.5	10
44	A facile surface alloy-engineering route to enable robust lithium metal anodes. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 4751-4758.	1.3	8
45	Interfacial and Vacancies Engineering of Copper Nickel Sulfide for Enhanced Oxygen Reduction and Alcohols Oxidation Activity. <i>Energy and Environmental Materials</i> , 2023, 6, .	7.3	8
46	Accurate redox potentials for solvents in Li-metal batteries and assessment of density functionals. <i>International Journal of Quantum Chemistry</i> , 2022, 122, .	1.0	6
47	A novel mixed ether-based electrolyte for lithium-sulfur batteries with Li anode protection by dual salts. <i>Sustainable Energy and Fuels</i> , 2022, 6, 3658-3668.	2.5	5
48	Sulfide synergistic electrochemical activity for high-performance alkaline rechargeable microbatteries. <i>Journal of Materials Science</i> , 2021, 56, 629-639.	1.7	4
49	Multistep Reaction Pathway for $\text{CO}_2$ Reduction on Hydride-Capped Si Nanosheets. <i>ChemCatChem</i> , 2020, 12, 722-725.	1.8	1