

# Wei-Hong Lai

## List of Publications by Year in descending order

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75  
papers

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87888

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85541

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docs citations

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times ranked

4755  
citing authors

#	ARTICLE	IF	CITATIONS
1	Organic Cathode Materials for Sodium-Ion Batteries: From Fundamental Research to Potential Commercial Application. <i>Advanced Functional Materials</i> , 2022, 32, 2107718.	14.9	75
2	Advanced Characterization Techniques Paving the Way for Commercialization of Low-Cost Prussian Blue Analog Cathodes. <i>Advanced Functional Materials</i> , 2022, 32, 2108616.	14.9	35
3	Recent Advances in Seawater Electrolysis. <i>Catalysts</i> , 2022, 12, 123.	3.5	26
4	Electrolytes/Interphases: Enabling Distinguishable Sulfur Redox Processes in Room-Temperature Sodium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	29
5	Continuous Carbon Channels Enable Full Na-Ion Accessibility for Superior Room-Temperature Na-S Batteries. <i>Advanced Materials</i> , 2022, 34, e2108363.	21.0	49
6	Streamline Sulfur Redox Reactions to Achieve Efficient Room-Temperature Sodium-Sulfur Batteries. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	38
7	Streamline Sulfur Redox Reactions to Achieve Efficient Room-Temperature Sodium-Sulfur Batteries. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	3
8	Effect of Eliminating Water in Prussian Blue Cathode for Sodium-Ion Batteries. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	66
9	Oxygen redox chemistry in lithium-rich cathode materials for Li-ion batteries: Understanding from atomic structure to nano-engineering. <i>Nano Materials Science</i> , 2022, 4, 322-338.	8.8	24
10	Enriched $\pi$ -Band Holes Enabling Fast Oxygen Evolution Kinetics on Atomic-Layered Defect-Rich Lithium Cobalt Oxide Nanosheets. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	24
11	High-Voltage, Highly Reversible Sodium Batteries Enabled by Fluorine-Rich Electrode/Electrolyte Interphases. <i>Small Methods</i> , 2022, 6, e2200209.	8.6	22
12	Efficient separators with fast Li-ion transfer and high polysulfide entrapment for superior lithium-sulfur batteries. <i>Chemical Engineering Journal</i> , 2021, 408, 127348.	12.7	25
13	Rechargeable Sodium-Based Hybrid Metal-Ion Batteries toward Advanced Energy Storage. <i>Advanced Functional Materials</i> , 2021, 31, 2006457.	14.9	39
14	Hard Carbon Anodes: Fundamental Understanding and Commercial Perspectives for Na-Ion Batteries beyond Li-Ion and K-Ion Counterparts. <i>Advanced Energy Materials</i> , 2021, 11, .	19.5	282
15	In-Situ Electrochemically Activated Surface Vanadium Valence in $V_2C$ MXene to Achieve High Capacity and Superior Rate Performance for Zn-Ion Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2008033.	14.9	156
16	Sustainable S cathodes with synergic electrocatalysis for room-temperature Na-S batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 566-574.	10.3	39
17	Approaching a high-rate and sustainable production of hydrogen peroxide: oxygen reduction on Co-N-C single-atom electrocatalysts in simulated seawater. <i>Energy and Environmental Science</i> , 2021, 14, 5444-5456.	30.8	126
18	Manipulating metal-sulfur interactions for achieving high-performance S cathodes for room temperature Li/Na-sulfur batteries. , 2021, 3, 253-270.		37

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19	Carbonaceous Hosts for Sulfur Cathode in Alkali-Metal/S (Alkali Metal = Lithium, Sodium, Potassium) Batteries. <i>Small</i> , 2021, 17, e2006504.	10.0	17
20	Architecting Amorphous Vanadium Oxide/MXene Nanohybrid via Tunable Anodic Oxidation for High-Performance Sodium-Ion Batteries. <i>Advanced Energy Materials</i> , 2021, 11, 2100757.	19.5	99
21	Atomic Cobalt Vacancy-Cluster Enabling Optimized Electronic Structure for Efficient Water Splitting. <i>Advanced Functional Materials</i> , 2021, 31, 2101797.	14.9	26
22	Understanding Sulfur Redox Mechanisms in Different Electrolytes for Room-Temperature Na-S Batteries. <i>Nano-Micro Letters</i> , 2021, 13, 121.	27.0	31
23	Atomic Structural Evolution of Single-Layer Pt Clusters as Efficient Electrocatalysts. <i>Small</i> , 2021, 17, e2100732.	10.0	26
24	Research progress of flexible sodium-ion batteries derived from renewable polymer materials. <i>Electrochemistry Communications</i> , 2021, 128, 107067.	4.7	17
25	Electrochemical release of catalysts in nanoreactors for solid sulfur redox reactions in room-temperature sodium-sulfur batteries. <i>Cell Reports Physical Science</i> , 2021, 2, 100539.	5.6	20
26	Atomically dispersed S-Fe-N4 for fast kinetics sodium-sulfur batteries via a dual function mechanism. <i>Cell Reports Physical Science</i> , 2021, 2, 100531.	5.6	31
27	Soft-Carbon-Coated, Free-Standing, Low-Defect, Hard-Carbon Anode To Achieve a 94% Initial Coulombic Efficiency for Sodium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 44358-44368.	8.0	50
28	Copper phosphide as a promising anode material for potassium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 8378-8385.	10.3	16
29	Temperature-regulated biomass-derived hard carbon as a superior anode for sodium-ion batteries. <i>Materials Chemistry Frontiers</i> , 2021, 5, 7595-7605.	5.9	11
30	Binders for sodium-ion batteries: progress, challenges and strategies. <i>Chemical Communications</i> , 2021, 57, 12406-12416.	4.1	26
31	Low-Cost Polyanion-Type Sulfate Cathode for Sodium-Ion Battery. <i>Advanced Energy Materials</i> , 2021, 11, 2101751.	19.5	48
32	Activating Inert Surface Pt Single Atoms via Subsurface Doping for Oxygen Reduction Reaction. <i>Nano Letters</i> , 2021, 21, 7970-7978.	9.1	33
33	Processing Rusty Metals into Versatile Prussian Blue for Sustainable Energy Storage. <i>Advanced Energy Materials</i> , 2021, 11, 2102356.	19.5	41
34	Fire-Retardant, Stable-Cycling and High-Safety Sodium Ion Battery. <i>Angewandte Chemie</i> , 2021, 133, 27292-27300.	2.0	17
35	Fire-Retardant, Stable-Cycling and High-Safety Sodium Ion Battery. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 27086-27094.	13.8	63
36	Remedies for Polysulfide Dissolution in Room-Temperature Sodium-Sulfur Batteries. <i>Advanced Materials</i> , 2020, 32, e1903952.	21.0	96

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37	Manipulating 2D Few-Layer Metal Sulfides as Anode Towards Enhanced Sodium-Ion Batteries. Batteries and Supercaps, 2020, 3, 236-253.	4.7	16
38	Uniform Polypyrrole Layer-Coated Sulfur/Graphene Aerogel via the Vapor-Phase Deposition Technique as the Cathode Material for Li-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 5958-5967.	8.0	29
39	The application of hollow micro-/nanostructured cathodes for sodium-ion batteries. Materials Chemistry Frontiers, 2020, 4, 1289-1303.	5.9	30
40	General Synthesis of Single-Atom Catalysts for Hydrogen Evolution Reactions and Room-Temperature Na-Ion Batteries. Angewandte Chemie - International Edition, 2020, 59, 22171-22178.	13.8	80
41	Multiregion Janus-Featured Cobalt Phosphide-Cobalt Composite for Highly Reversible Room-Temperature Sodium-Sulfur Batteries. ACS Nano, 2020, 14, 10284-10293.	14.6	81
42	Confining Ultrathin 2D Superlattices in Mesoporous Hollow Spheres Renders Ultrafast and High-Capacity Na-Ion Storage. Advanced Energy Materials, 2020, 10, 2001033.	19.5	25
43	Highly efficient Co <sub>3</sub> O <sub>4</sub> /Co@NCs bifunctional oxygen electrocatalysts for long life rechargeable Zn-air batteries. Nano Energy, 2020, 77, 105200.	16.0	71
44	General Synthesis of Single-Atom Catalysts for Hydrogen Evolution Reactions and Room-Temperature Na-Ion Batteries. Angewandte Chemie, 2020, 132, 22355-22362.	2.0	62
45	Promoted Photocharge Separation in 2D Lateral Epitaxial Heterostructure for Visible-Light-Driven CO <sub>2</sub> Photoreduction. Advanced Materials, 2020, 32, e2004311.	21.0	74
46	Tailoring MXene-Based Materials for Sodium-Ion Storage: Synthesis, Mechanisms, and Applications. Electrochemical Energy Reviews, 2020, 3, 766-792.	25.5	86
47	Sodium-Sulfur Batteries: Remedies for Polysulfide Dissolution in Room-Temperature Sodium-Sulfur Batteries (Adv. Mater. 18/2020). Advanced Materials, 2020, 32, 2070145.	21.0	2
48	Layered mesoporous CoO/reduced graphene oxide with strong interfacial coupling as a high-performance anode for lithium-ion batteries. Journal of Alloys and Compounds, 2020, 843, 156050.	5.5	32
49	A High-Kinetics Sulfur Cathode with a Highly Efficient Mechanism for Superior Room-Temperature Na-Ion Batteries. Advanced Materials, 2020, 32, e1906700.	21.0	126
50	Self-assembling RuO <sub>2</sub> nanogranulates with few carbon layers as an interconnected nanoporous structure for lithium-oxygen batteries. Chemical Communications, 2020, 56, 7253-7256.	4.1	5
51	Manipulating Molecular Structure and Morphology to Invoke High-Performance Sodium Storage of Copper Phosphide. Advanced Energy Materials, 2020, 10, 1903542.	19.5	38
52	Understanding rhombohedral iron hexacyanoferrate with three different sodium positions for high power and long stability sodium-ion battery. Energy Storage Materials, 2020, 30, 42-51.	18.0	62
53	Electrocatalyzing S Cathodes via Multisulfophilic Sites for Superior Room-Temperature Sodium-Sulfur Batteries. ACS Nano, 2020, 14, 7259-7268.	14.6	100
54	Morphology tuning of inorganic nanomaterials grown by precipitation through control of electrolytic dissociation and supersaturation. Nature Chemistry, 2019, 11, 695-701.	13.6	86

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55	Atomicâ€Local Environments of Singleâ€Atom Catalysts: Synthesis, Electronic Structure, and Activity. Advanced Energy Materials, 2019, 9, 1900722.	19.5	128
56	2D Titaniaâ€Carbon Superlattices Vertically Encapsulated in 3D Hollow Carbon Nanospheres Embedded with OD TiO <sub>2</sub> Quantum Dots for Exceptional Sodiumâ€Ion Storage. Angewandte Chemie - International Edition, 2019, 58, 14125-14128.	13.8	47
57	2D Titaniaâ€Carbon Superlattices Vertically Encapsulated in 3D Hollow Carbon Nanospheres Embedded with OD TiO <sub>2</sub> Quantum Dots for Exceptional Sodiumâ€Ion Storage. Angewandte Chemie, 2019, 131, 14263-14266.	2.0	13
58	Nickel sulfide nanocrystals on nitrogen-doped porous carbon nanotubes with high-efficiency electrocatalysis for room-temperature sodium-sulfur batteries. Nature Communications, 2019, 10, 4793.	12.8	147
59	Ultrathin 2D TiS <sub>2</sub> Nanosheets for High Capacity and Longâ€Life Sodium Ion Batteries. Advanced Energy Materials, 2019, 9, 1803210.	19.5	100
60	General â€Electronâ€Assisted Strategy for Ir, Pt, Ru, Pd, Fe, Ni Singleâ€Atom Electrocatalysts with Bifunctional Active Sites for Highly Efficient Water Splitting. Angewandte Chemie - International Edition, 2019, 58, 11868-11873.	13.8	229
61	General â€Electronâ€Assisted Strategy for Ir, Pt, Ru, Pd, Fe, Ni Singleâ€Atom Electrocatalysts with Bifunctional Active Sites for Highly Efficient Water Splitting. Angewandte Chemie, 2019, 131, 11994-11999.	2.0	28
62	Schwefelâ€basierte Elektroden mit Mehrelektronenreaktionen fÃ¼r Raumtemperaturâ€Natriumionenspeicherung. Angewandte Chemie, 2019, 131, 18490-18504.	2.0	9
63	Sulfurâ€Based Electrodes that Function via Multielectron Reactions for Roomâ€Temperature Sodiumâ€Ion Storage. Angewandte Chemie - International Edition, 2019, 58, 18324-18337.	13.8	69
64	The Quasiâ€Ptâ€Allotrope Catalyst: Hollow PtCo@singleâ€Atom Pt <sub>1</sub> on Nitrogenâ€Doped Carbon toward Superior Oxygen Reduction. Advanced Functional Materials, 2019, 29, 1807340.	14.9	97
65	Ordered platinumâ€bismuth intermetallic clusters with Pt-skin for a highly efficient electrochemical ethanol oxidation reaction. Journal of Materials Chemistry A, 2019, 7, 5214-5220.	10.3	48
66	Nanocomposite Materials for the Sodiumâ€Ion Battery: A Review. Small, 2018, 14, 1702514.	10.0	244
67	Feâ€Niâ€Mo Nitride Porous Nanotubes for Full Water Splitting and Znâ€Air Batteries. Advanced Energy Materials, 2018, 8, 1802327.	19.5	227
68	Atomic cobalt as an efficient electrocatalyst in sulfur cathodes for superior room-temperature sodium-sulfur batteries. Nature Communications, 2018, 9, 4082.	12.8	305
69	A Novel Graphene Oxide Wrapped Na <sub>2</sub> Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> /C Cathode Composite for Long Life and High Energy Density Sodiumâ€Ion Batteries. Advanced Energy Materials, 2018, 8, 1800944.	19.5	101
70	Roomâ€Temperature Sodiumâ€Sulfur Batteries: A Comprehensive Review on Research Progress and Cell Chemistry. Advanced Energy Materials, 2017, 7, 1602829.	19.5	270
71	Lithium self-diffusion in a model lithium garnet oxide Li <sub>5</sub> La <sub>3</sub> Ta <sub>2</sub> O <sub>12</sub> : A combined quasi-elastic neutron scattering and molecular dynamics study. Solid State Ionics, 2017, 312, 1-7.	2.7	19
72	In Situ Grown S Nanosheets on Cu Foam: An Ultrahigh Electroactive Cathode for Room-Temperature Naâ€S Batteries. ACS Applied Materials & Interfaces, 2017, 9, 24446-24450.	8.0	65

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73	Nanoengineering to Achieve High Sodium Storage: A Case Study of Carbon Coated Hierarchical Nanoporous TiO <sub>2</sub> Microfibers. Advanced Science, 2016, 3, 1600013.	11.2	47
74	Achieving High-Performance Room-Temperature Sodium–Sulfur Batteries With S@Interconnected Mesoporous Carbon Hollow Nanospheres. Journal of the American Chemical Society, 2016, 138, 16576-16579.	13.7	280
75	Ultrafine Mn <sub>3</sub> O <sub>4</sub> Nanowires/Three-Dimensional Graphene/Single-Walled Carbon Nanotube Composites: Superior Electrocatalysts for Oxygen Reduction and Enhanced Mg/Air Batteries. ACS Applied Materials & Interfaces, 2016, 8, 27710-27719.	8.0	48