

Xiangzhong Ren

List of Publications by Year in descending order

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91
papers

4,199
citations

136740

32
h-index

123241

61
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94
all docs

94
docs citations

94
times ranked

4636
citing authors

#	ARTICLE	IF	CITATIONS
1	Scalable 2D Hierarchical Porous Carbon Nanosheets for Flexible Supercapacitors with Ultrahigh Energy Density. <i>Advanced Materials</i> , 2018, 30, 1706054.	11.1	405
2	Carbon dioxide electroreduction on single-atom nickel decorated carbon membranes with industry compatible current densities. <i>Nature Communications</i> , 2020, 11, 593.	5.8	330
3	Supramolecular Adhesive Hydrogels for Tissue Engineering Applications. <i>Chemical Reviews</i> , 2022, 122, 5604-5640.	23.0	238
4	Spinel photocatalysts for environmental remediation, hydrogen generation, CO ₂ reduction and photoelectrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2018, 6, 11078-11104.	5.2	176
5	New Strategy for Polysulfide Protection Based on Atomic Layer Deposition of TiO ₂ onto Ferroelectric-Encapsulated Cathode: Toward Ultrastable Free-Standing Room Temperature Sodium-Sulfur Batteries. <i>Advanced Functional Materials</i> , 2018, 28, 1705537.	7.8	167
6	Elucidating the activity, mechanism and application of selective electrosynthesis of ammonia from nitrate on cobalt phosphide. <i>Energy and Environmental Science</i> , 2022, 15, 760-770.	15.6	133
7	Ultrathin MoS ₂ anchored on 3D carbon skeleton containing SnS quantum dots as a high-performance anode for advanced lithium ion batteries. <i>Chemical Engineering Journal</i> , 2021, 403, 126251.	6.6	105
8	Engineering defect-rich Fe-doped NiO coupled Ni cluster nanotube arrays with excellent oxygen evolution activity. <i>Applied Catalysis B: Environmental</i> , 2021, 285, 119809.	10.8	103
9	Electrochemical Construction of Low-Crystalline CoOOH Nanosheets with Short-Range Ordered Grains to Improve Oxygen Evolution Activity. <i>ACS Catalysis</i> , 2021, 11, 6104-6112.	5.5	103
10	Construction of K ⁺ Ion Gradient in Crystalline Carbon Nitride to Accelerate Exciton Dissociation and Charge Separation for Visible Light H ₂ Production. <i>ACS Catalysis</i> , 2021, 11, 6995-7005.	5.5	100
11	Hierarchical CuO _x -Co ₃ O ₄ heterostructure nanowires decorated on 3D porous nitrogen-doped carbon nanofibers as flexible and free-standing anodes for high-performance lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7691-7700.	5.2	90
12	A unique space confined strategy to construct defective metal oxides within porous nanofibers for electrocatalysis. <i>Energy and Environmental Science</i> , 2020, 13, 5097-5103.	15.6	80
13	The enhancement of electrochemical capacitance of biomass-carbon by pyrolysis of extracted nanofibers. <i>Electrochimica Acta</i> , 2017, 228, 398-406.	2.6	73
14	Recent Progress in 2D Catalysts for Photocatalytic and Electrocatalytic Artificial Nitrogen Reduction to Ammonia. <i>Advanced Energy Materials</i> , 2021, 11, 2003294.	10.2	73
15	Rational design of positive-hexagon-shaped two-dimensional ZIF-derived materials as improved bifunctional oxygen electrocatalysts for use as long-lasting rechargeable Zn-Air batteries. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117871.	10.8	70
16	CoO-Co ₃ O ₄ heterostructure nanoribbon/RGO sandwich-like composites as anode materials for high performance lithium-ion batteries. <i>Electrochimica Acta</i> , 2017, 241, 252-260.	2.6	69
17	In-Plane Charge Transport Dominates the Overall Charge Separation and Photocatalytic Activity in Crystalline Carbon Nitride. <i>ACS Catalysis</i> , 2022, 12, 4648-4658.	5.5	69
18	Unconventionally fabricating defect-rich NiO nanoparticles within ultrathin metal-organic framework nanosheets to enable high-output oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2020, 8, 2140-2146.	5.2	66

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19	Removing the barrier to water dissociation on single-atom Pt sites decorated with a CoP mesoporous nanosheet array to achieve improved hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11246-11254.	5.2	62
20	Amorphous MoS ₃ decoration on 2D functionalized MXene as a bifunctional electrode for stable and robust lithium storage. <i>Chemical Engineering Journal</i> , 2021, 406, 126775.	6.6	59
21	Protein-Based Nanomedicine for Therapeutic Benefits of Cancer. <i>ACS Nano</i> , 2021, 15, 8001-8038.	7.3	59
22	Co ₃ O ₄ Hollow Porous Nanospheres with Oxygen Vacancies for Enhanced Li ⁺ O ₂ Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 4014-4022.	2.5	57
23	MoS ₂ nanoflowers encapsulated into carbon nanofibers containing amorphous SnO ₂ as an anode for lithium-ion batteries. <i>Nanoscale</i> , 2019, 11, 16253-16261.	2.8	52
24	Size-Transformable Nanostructures: From Design to Biomedical Applications. <i>Advanced Materials</i> , 2020, 32, e2003752.	11.1	52
25	Recent Progress in Self-Supported Catalysts for CO ₂ Electrochemical Reduction. <i>Small Methods</i> , 2020, 4, 1900826.	4.6	48
26	PdNi alloy decorated 3D hierarchically, S co-doped macro-mesoporous carbon composites as efficient free-standing and binder-free catalysts for Li ⁺ O ₂ batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10856-10867.	5.2	47
27	Slower Removing Ligands of Metal Organic Frameworks Enables Higher Electrocatalytic Performance of Derived Nanomaterials. <i>Small</i> , 2020, 16, e2002210.	5.2	47
28	Construction of cobalt oxyhydroxide nanosheets with rich oxygen vacancies as high-performance lithium-ion battery anodes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 453-462.	5.2	47
29	Ternary PdNi-based nanocrystals supported on nitrogen-doped reduced graphene oxide as highly active electrocatalysts for the oxygen reduction reaction. <i>Electrochimica Acta</i> , 2017, 235, 543-552.	2.6	45
30	Air plasma etching towards rich active sites in Fe/N-porous carbon for the oxygen reduction reaction with superior catalytic performance. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16605-16610.	5.2	45
31	Ultra small few layer MoS ₂ embedded into three-dimensional macro-micro-mesoporous carbon as a high performance lithium ion batteries anode with superior lithium storage capacity. <i>Electrochimica Acta</i> , 2019, 317, 638-647.	2.6	43
32	Band Engineering Induced Conducting 2H-Phase MoS ₂ by Pd _{1-x} Si _x Re Sites Modification for Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	37
33	Co-Mo-P carbon nanospheres derived from metal-organic frameworks as a high-performance electrocatalyst towards efficient water splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1143-1149.	5.2	36
34	Deeply self-reconstructing CoFe(H ₃ O)(PO ₄) ₂ to low-crystalline Fe _{0.5} Co _{0.5} OOH with Fe ³⁺ -Fe ³⁺ motifs for oxygen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2022, 304, 120986.	10.8	36
35	Construction of tetrahedral Co ₃ O ₄ vacancies for activating the high oxygen evolution activity of Co ₃ xO ₄ porous nanosheet arrays. <i>Nanoscale</i> , 2020, 12, 11079-11087.	2.8	35
36	Confining Sb ₂ Se ₃ nanorod yolk in a mesoporous carbon shell with an in-built buffer space for stable Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 3388-3397.	5.2	35

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37	Atomic layer deposition of amorphous oxygen-deficient TiO _{2-x} on carbon nanotubes as cathode materials for lithium-air batteries. <i>Journal of Power Sources</i> , 2017, 360, 215-220.	4.0	34
38	Two dimensional ZIF-derived ultra-thin Cu ^N /C nanosheets as high performance oxygen reduction electrocatalysts for high-performance Zn ^{air} batteries. <i>Nanoscale</i> , 2020, 12, 14259-14266.	2.8	34
39	Long cyclic stability of acidic aqueous zinc-ion batteries achieved by atomic layer deposition: the effect of the induced orientation growth of the Zn anode. <i>Nanoscale</i> , 2021, 13, 12223-12232.	2.8	33
40	ZIF-derived β -Ni ₂ S ₈ /CeO ₂ /Co heterostructural nitrogen-doped carbon nanosheets as bifunctional oxygen electrocatalysts for Zn-air batteries. <i>Nanoscale</i> , 2021, 13, 3227-3236.	2.8	33
41	Flexible Three-Dimensional Heterostructured ZnO-Co ₃ O ₄ on Carbon Cloth as Free-Standing Anode with Outstanding Li/Na Storage Performance. <i>Journal of the Electrochemical Society</i> , 2018, 165, A3932-A3942.	1.3	32
42	Facile synthesis of PdSnCo/nitrogen-doped reduced graphene as a highly active catalyst for lithium-air batteries. <i>Electrochimica Acta</i> , 2017, 228, 36-44.	2.6	31
43	Heterostructured CoO-Co ₃ O ₄ nanoparticles anchored on nitrogen-doped hollow carbon spheres as cathode catalysts for Li ^{O₂} batteries. <i>Nanoscale</i> , 2019, 11, 14769-14776.	2.8	31
44	Heterostructure enhanced sodium storage performance for SnS ₂ in hierarchical SnS ₂ /Co ₃ S ₄ nanosheet array composite. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1630-1642.	5.2	30
45	A CoO _x /FeO _x heterojunction on carbon nanotubes prepared by plasma-enhanced atomic layer deposition for the highly efficient electrocatalysis of oxygen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15140-15147.	5.2	27
46	Mesoporous NiCo ₂ O ₄ networks with enhanced performance as counter electrodes for dye-sensitized solar cells. <i>Dalton Transactions</i> , 2017, 46, 4403-4411.	1.6	26
47	High Performance Overall CO ₂ Splitting on Hierarchical Structured Cobalt Disulfide with Partially Removed Sulfur Edges. <i>Advanced Functional Materials</i> , 2020, 30, 2000154.	7.8	26
48	Enhanced structural stability and overall conductivity of Li-rich layered oxide materials achieved by a dual electron/lithium-conducting coating strategy for high-performance lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 23964-23972.	5.2	25
49	Construction of single-atom copper sites with low coordination number for efficient CO ₂ electroreduction to CH ₄ . <i>Journal of Materials Chemistry A</i> , 2022, 10, 6187-6192.	5.2	24
50	Carbon nanotubes coupled with layered graphite to support SnTe nanodots as high-rate and ultra-stable lithium-ion battery anodes. <i>Nanoscale</i> , 2021, 13, 3782-3789.	2.8	23
51	An Insightful Picture of Nonlinear Photonics in 2D Materials and their Applications: Recent Advances and Future Prospects. <i>Advanced Optical Materials</i> , 2021, 9, 2001671.	3.6	23
52	Rapid ionic conductivity of ternary composite electrolytes for superior solid-state batteries with high-rate performance and long cycle life operated at room temperature. <i>Journal of Materials Chemistry A</i> , 2021, 9, 18338-18348.	5.2	23
53	Bifunctional oxygen electrocatalysis on ultra-thin Co ₉ S ₈ /MnS carbon nanosheets for all-solid-state zinc ^{air} batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 22635-22642.	5.2	22
54	Breaking the Limitation of Elevated Coulomb Interaction in Crystalline Carbon Nitride for Visible and Near-Infrared Light Photoactivity. <i>Advanced Science</i> , 2022, 9, .	5.6	22

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55	A lithium carboxylate grafted dendrite-free polymer electrolyte for an all-solid-state lithium-ion battery. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25818-25823.	5.2	21
56	One-step rapid in-situ synthesis of nitrogen and sulfur co-doped three-dimensional honeycomb-ordered carbon supported PdNi nanoparticles as efficient electrocatalyst for oxygen reduction reaction in alkaline solution. <i>Electrochimica Acta</i> , 2017, 253, 445-454.	2.6	20
57	Co/CoP Nanoparticles Encapsulated Within N, P-Doped Carbon Nanotubes on Nanoporous Metal-Organic Framework Nanosheets for Oxygen Reduction and Oxygen Evolution Reactions. <i>Nanoscale Research Letters</i> , 2020, 15, 82.	3.1	20
58	Atomic layer deposition of TiO ₂ on nitrogen-doped carbon nanofibers supported Ru nanoparticles for flexible Li-O ₂ battery: A combined DFT and experimental study. <i>Journal of Power Sources</i> , 2017, 368, 88-96.	4.0	19
59	MoS ₂ nanosheets vertically grown on CoSe ₂ hollow nanotube arrays as an efficient catalyst for the hydrogen evolution reaction. <i>Nanoscale</i> , 2022, 14, 2490-2501.	2.8	18
60	In situ growth of morphology-controllable nickel sulfides as efficient counter electrodes for dye-sensitized solar cells. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 2373-2382.	1.2	17
61	Tuning and understanding the electronic effect of Co-Mo-O sites in bifunctional electrocatalysts for ultralong-lasting rechargeable zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21716-21722.	5.2	16
62	Electrospun NiCo ₂ S ₄ with extraordinary electrocatalytic activity as counter electrodes for dye-sensitized solar cells. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 3579-3588.	1.2	15
63	Tumor Microenvironment Activated Chemodynamic-Photodynamic Therapy by Multistage Self-Assembly Engineered Protein Nanomedicine. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	15
64	Double-Enhanced Core-Shell Sb ₂ S ₃ /Sb@TiO ₂ @C Nanorod Composites for Lithium- and Sodium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 33064-33075.	4.0	15
65	3D Networks of Carbon-Coated Magnesium-Doped Olivine Nanofiber as Binder-Free Cathodes for High-Performance Li-Ion Battery. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600241.	1.9	14
66	Enhanced electrocatalytic performance of Fe-TiO ₂ /N-doped graphene cathodes for rechargeable Li-O ₂ batteries. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 909-917.	1.2	14
67	Unveiling the reaction mechanism of an Sb ₂ S ₃ -Co ₉ S ₈ /NC anode for high-performance lithium-ion batteries. <i>Nanoscale</i> , 2021, 13, 20041-20051.	2.8	13
68	Synthesis of Si-Sb-ZnO Composites as High-Performance Anodes for Lithium-ion Batteries. <i>Nanoscale Research Letters</i> , 2015, 10, 414.	3.1	12
69	Carbon-coated LiFePO ₄ synthesized by a simple solvothermal method. <i>CrystEngComm</i> , 2016, 18, 7537-7543.	1.3	12
70	Rational design of Ru species on N-doped graphene promoting water dissociation for boosting hydrogen evolution reaction. <i>Science China Chemistry</i> , 2022, 65, 521-531.	4.2	12
71	SnSb-ZnO composite materials as high performance anodes for lithium-ion batteries. <i>RSC Advances</i> , 2015, 5, 105643-105650.	1.7	11
72	Free-Standing Selenium Impregnated Carbonized Leaf Cathodes for High-Performance Sodium-Selenium Batteries. <i>Nanoscale Research Letters</i> , 2019, 14, 30.	3.1	11

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73	Novel Heteroatom-Doped Fe/N/C Electrocatalysts With Superior Activities for Oxygen Reduction Reaction in Both Acid and Alkaline Solutions. <i>Frontiers in Chemistry</i> , 2020, 8, 78.	1.8	10
74	Defective Fe ₃ O ₄ Few-Atom Clusters Anchored on Nitrogen-Doped Carbon as Efficient Oxygen Reduction Electrocatalysts for High-Performance Zinc-Air Batteries. <i>Small Methods</i> , 2022, 6, .	4.6	10
75	Co-CoO/MnO Heterostructured Nanocrystals Anchored on N/P-Doped 3D Porous Graphene for High-Performance Pseudocapacitive Lithium Storage. <i>Journal of the Electrochemical Society</i> , 2019, 166, A3820-A3829.	1.3	9
76	Extraordinary dual-ion electrochemical deionization capacity and energy efficiency enabled by coupling of Na ₃ Fe ₂ (PO ₄) ₃ and NiVAl layered double hydroxide electrodes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 22913-22925.	5.2	9
77	Engineering hollow multi-shelled Co ₃ O ₄ cubes to boost lithium storage performance. <i>Applied Surface Science</i> , 2021, 545, 149022.	3.1	9
78	Ultra-low-loaded Ni ²⁺ Fe Dimer Anchored to Nitrogen/Oxygen Sites for Boosting Electroreduction of Carbon Dioxide. <i>ChemSusChem</i> , 2021, 14, 4499-4506.	3.6	9
79	Efficient capture and conversion of polysulfides by zinc protoporphyrin framework-embedded triple-layer nanofiber separator for advanced Li-S batteries. <i>Journal of Colloid and Interface Science</i> , 2022, 609, 43-53.	5.0	9
80	<i>In situ</i> formed lithium ionic conductor thin film on the surface of high-crystal-layered LiCoO ₂ as a high-voltage cathode material. <i>Materials Chemistry Frontiers</i> , 2021, 5, 6171-6181.	3.2	8
81	Preparation and electrochemical properties of Si _{0.8} Sb/C nanofiber composite anode materials for lithium-ion batteries. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 2281-2289.	1.2	7
82	LiFePO ₄ /RGO composites synthesized by a solid phase combined with carbothermal reduction method. <i>Ferroelectrics</i> , 2018, 528, 1-7.	0.3	7
83	One-pot synthesis of N,S-doped pearl chain tube-loaded Ni ₃ S ₂ composite materials for high-performance lithium-air batteries. <i>Nanoscale</i> , 2020, 12, 21770-21779.	2.8	7
84	Facile synthesis of N-doped carbon-coated Si/Cu alloy with enhanced cyclic performance for lithium ion batteries. <i>RSC Advances</i> , 2016, 6, 78100-78105.	1.7	6
85	Three-dimensional nanoarchitecture SnSbZn-C composite nanofibers as anode materials for lithium-ion batteries. <i>RSC Advances</i> , 2016, 6, 52746-52753.	1.7	5
86	Synthesis of Ultrathin MoS ₂ Nanosheets Embedded in 3D Hierarchically Nitrogen and Sulfur Co-Doped Porous Carbon Composites as Efficient Oxygen Reduction Reaction Catalyst. <i>ChemElectroChem</i> , 2020, 7, 3260-3268.	1.7	4
87	A Multiscale Strategy to Construct Cobalt Nanoparticles Confined within Hierarchical Carbon Nanofibers for Efficient CO ₂ Electroreduction. <i>Small</i> , 2022, 18, e2104958.	5.2	4
88	Preparation and electrochemical performance of Cu ₆ Sn ₅ /CNTs anode materials for lithium-ion batteries. <i>Integrated Ferroelectrics</i> , 2016, 171, 193-202.	0.3	3
89	2D Electrocatalysts: Recent Progress in 2D Catalysts for Photocatalytic and Electrocatalytic Artificial Nitrogen Reduction to Ammonia (<i>Adv. Energy Mater.</i> 11/2021). <i>Advanced Energy Materials</i> , 2021, 11, 2170043.	10.2	3
90	Multiple anionic Ni(SO ₄) _{0.3} (OH) _{1.4} nanobelts/reduced graphene oxide enabled by enhanced multielectron reactions with superior lithium storage capacity. <i>Chemical Engineering Journal</i> , 2021, 426, 131863.	6.6	3

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91	Synthesis of V-notched half-open polymer microspheres <i>via</i> facile solvent-tuned self-assembly. <i>New Journal of Chemistry</i> , 2021, 45, 13964-13968.	1.4	1