

# Mengfan Wang

## List of Publications by Year in descending order

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49  
papers

3,864  
citations

108046

37  
h-index

223390

49  
g-index

49  
all docs

49  
docs citations

49  
times ranked

5665  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interfacial Microextraction Boosting Nitrogen Feed for Efficient Ambient Ammonia Synthesis in Aqueous Electrolyte. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	41
2	Recent advances in material design and reactor engineering for electrocatalytic ambient nitrogen fixation. <i>Materials Chemistry Frontiers</i> , 2022, 6, 843-879.	3.2	14
3	Altering the rate-determining step over cobalt single clusters leading to highly efficient ammonia synthesis. <i>National Science Review</i> , 2021, 8, nwaal136.	4.6	64
4	Rapid leakage responsive and self-healing Li-metal batteries. <i>Chemical Engineering Journal</i> , 2021, 404, 126470.	6.6	26
5	Boosting Oxygen Dissociation over Bimetal Sites to Facilitate Oxygen Reduction Activity of Zinc-Air Battery. <i>Advanced Functional Materials</i> , 2021, 31, 2006533.	7.8	64
6	Proton-filtering covalent organic frameworks with superior nitrogen penetration flux promote ambient ammonia synthesis. <i>Nature Catalysis</i> , 2021, 4, 322-331.	16.1	216
7	Salting-out effect promoting highly efficient ambient ammonia synthesis. <i>Nature Communications</i> , 2021, 12, 3198.	5.8	105
8	In Situ/Operando Spectroscopic Characterizations Guide the Compositional and Structural Design of Lithium-Sulfur Batteries. <i>Small Methods</i> , 2020, 4, 1900467.	4.6	42
9	Identifying the Lewis Base Chemistry in Preventing the Deposition of Metal Oxides on Ketone-Enriched Carbon Cathodes for Highly Durable Metal-Air Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 3603-3609.	4.0	9
10	Pyridinic and graphitic nitrogen-enriched carbon paper as a highly active bifunctional catalyst for Zn-air batteries. <i>Electrochimica Acta</i> , 2020, 334, 135562.	2.6	45
11	Artificial Lithium Isopropyl-Sulfide Macromolecules as an Ion-Selective Interface for Long-Life Lithium-Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 54537-54544.	4.0	49
12	Atomic Metal Vacancy Modulation of Single-Atom Dispersed Co/N/C for Highly Efficient and Stable Air Cathode. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 15298-15304.	4.0	33
13	Single-atom scale metal vacancy engineering in heteroatom-doped carbon for rechargeable zinc-air battery with reduced overpotential. <i>Chemical Engineering Journal</i> , 2020, 393, 124702.	6.6	43
14	Unveiling the Essential Nature of Lewis Basicity in Thermodynamically and Dynamically Promoted Nitrogen Fixation. <i>Advanced Functional Materials</i> , 2020, 30, 2001244.	7.8	49
15	In-situ observation as activity descriptor enables rational design of oxygen reduction catalyst for zinc-air battery. <i>Energy Storage Materials</i> , 2020, 27, 226-231.	9.5	42
16	Wiping off oxygen bonding to maximize heteroatom-induced improvement in oxygen reaction activity of metal site for high-performance zinc-air battery. <i>Nanotechnology</i> , 2020, 31, 195403.	1.3	1
17	Toward safer solid-state lithium metal batteries: a review. <i>Nanoscale Advances</i> , 2020, 2, 1828-1836.	2.2	50
18	Enhanced utilization of active sites of Fe/N/C catalysts by pore-in-pore structures for ultrahigh mass activity. <i>Nanotechnology</i> , 2020, 31, 315401.	1.3	6

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19	High Coulombic efficiency cathode with nitril grafted sulfur for Li-S battery. <i>Energy Storage Materials</i> , 2019, 17, 260-265.	9.5	35
20	Modulating the d-band center of boron doped single-atom sites to boost the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 20952-20957.	5.2	117
21	Updating the Intrinsic Activity of a Single-Atom Site with a P=O Bond for a Rechargeable Zn-Air Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 33054-33061.	4.0	47
22	Nonflammable and High-Voltage-Tolerated Polymer Electrolyte Achieving High Stability and Safety in 4.9 V-Class Lithium Metal Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 45048-45056.	4.0	73
23	Facilitating nitrogen accessibility to boron-rich covalent organic frameworks via electrochemical excitation for efficient nitrogen fixation. <i>Nature Communications</i> , 2019, 10, 3898.	5.8	191
24	Stabilizing cathodes of lithium-sulfur batteries by the chemical binding of sulfur and their discharge products to carbon nanofibers. <i>New Journal of Chemistry</i> , 2019, 43, 15267-15274.	1.4	7
25	Over 56.55% Faradaic efficiency of ambient ammonia synthesis enabled by positively shifting the reaction potential. <i>Nature Communications</i> , 2019, 10, 341.	5.8	412
26	Single-cluster Au as an usher for deeply cyclable Li metal anodes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14496-14503.	5.2	51
27	Selenium-Doped Carbon Nanosheets with Strong Electron Cloud Delocalization for Nondeposition of Metal Oxides on Air Cathode of Zinc-Air Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 20056-20063.	4.0	46
28	High-Safety All-Solid-State Lithium-Metal Battery with High-Ionic-Conductivity Thermoresponsive Solid Polymer Electrolyte. <i>Nano Letters</i> , 2019, 19, 3066-3073.	4.5	108
29	A functional-gradient-structured ultrahigh modulus solid polymer electrolyte for all-solid-state lithium metal batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 24477-24485.	5.2	51
30	Oxidizing Vacancies in Nitrogen-Doped Carbon Enhance Air-Cathode Activity. <i>Advanced Materials</i> , 2019, 31, e1803339.	11.1	52
31	<i>In situ</i> optical spectroscopy characterization for optimal design of lithium-sulfur batteries. <i>Chemical Society Reviews</i> , 2019, 48, 5432-5453.	18.7	120
32	Progress and perspective of organosulfur polymers as cathode materials for advanced lithium-sulfur batteries. <i>Energy Storage Materials</i> , 2018, 15, 53-64.	9.5	131
33	Use of Tween Polymer To Enhance the Compatibility of the Li/Electrolyte Interface for the High-Performance and High-Safety Quasi-Solid-State Lithium-Sulfur Battery. <i>Nano Letters</i> , 2018, 18, 4598-4605.	4.5	81
34	Bioinspired Polysulfiphobic Artificial Interphase Layer on Lithium Metal Anodes for Lithium Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 30058-30064.	4.0	49
35	Facilitated Oxygen Chemisorption in Heteroatom-Doped Carbon for Improved Oxygen Reaction Activity in All-Solid-State Zinc-Air Batteries. <i>Advanced Materials</i> , 2018, 30, 1704898.	11.1	135
36	An Efficient Bifunctional Electrocatalyst for a Zinc-Air Battery Derived from Fe/N/C and Bimetallic Metal-Organic Framework Composites. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 5213-5221.	4.0	113

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37	Unprecedented Activity of Bifunctional Electrocatalyst for High Power Density Aqueous Zinc-Air Batteries. ACS Applied Materials & Interfaces, 2017, 9, 21216-21224.	4.0	64
38	Ni/Fe Ratio Dependence of Catalytic Activity in Monodisperse Ternary Nickel Iron Phosphide for Efficient Water Oxidation. ChemElectroChem, 2017, 4, 2150-2157.	1.7	44
39	Active Fe Sites in Carbon Nanosheets as Oxygen Reduction Electrocatalyst for Flexible Solid-State Zinc-Air Batteries. Advanced Sustainable Systems, 2017, 1, 1700085.	2.7	43
40	Porous yolk-shell microspheres as N-doped carbon matrix for motivating the oxygen reduction activity of oxygen evolution oriented materials. Nanotechnology, 2017, 28, 365403.	1.3	10
41	Selenium-Doped Cathodes for Lithium-Organosulfur Batteries with Greatly Improved Volumetric Capacity and Coulombic Efficiency. Advanced Materials, 2017, 29, 1701294.	11.1	126
42	Confined silicon nanospheres by biomass lignin for stable lithium ion battery. Nanotechnology, 2017, 28, 405401.	1.3	19
43	Electronic Modulation of Electrocatalytically Active Center of Cu <sub>7</sub> S <sub>4</sub> Nanodisks by Cobalt-Doping for Highly Efficient Oxygen Evolution Reaction. ACS Nano, 2017, 11, 12230-12239.	7.3	139
44	Molecularly Imprinted Polymer Enables High-Efficiency Recognition and Trapping Lithium Polysulfides for Stable Lithium Sulfur Battery. Nano Letters, 2017, 17, 5064-5070.	4.5	112
45	Stationary Full Li-Ion Batteries with Interlayer-Expanded V <sub>6</sub> O <sub>13</sub> Cathodes and Lithiated Graphite Anodes. Electrochimica Acta, 2016, 203, 171-177.	2.6	42
46	A Sustainable Route from Biomass Byproduct Okara to High Content Nitrogen-Doped Carbon Sheets for Efficient Sodium Ion Batteries. Advanced Materials, 2016, 28, 539-545.	11.1	384
47	Core-Shell Coating Silicon Anode Interfaces with Coordination Complex for Stable Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 5358-5365.	4.0	60
48	Nanomeses of highly crystalline nitrogen-doped carbon encapsulated Fe/Fe <sub>3</sub> C electrodes as ultrafast and stable anodes for Li-ion batteries. Journal of Materials Chemistry A, 2015, 3, 15008-15014.	5.2	51
49	A new approach towards the synthesis of nitrogen-doped graphene/MnO <sub>2</sub> hybrids for ultralong cycle-life lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 6291-6296.	5.2	52