Weiwei Cai

List of Publications by Year
in descending order

90	3,612	34	55
papers	citations	h-index	g-index
		117453	155451

91	91	91	3807
all docs	docs citations	times ranked	citing authors

#	ARTICLE	IF	CITATIONS
1	Stable NiPtâ€"Mo2C active site pairs enable boosted water splitting and direct methanol fuel cell. Green Energy and Environment, 2023, 8, 559-566.	4.7	10
2	Hetero-structural mass transfer channel boosts electrocatalytic oxygen reactions of metallic catalyst. Chemical Engineering Journal, 2022, 428, 131140.	6.6	7
3	Mutual promotion effect of Ni and Mo2C encapsulated in N-doped porous carbon on bifunctional overall urea oxidation catalysis. Journal of Catalysis, 2022, 405, 606-613.	3.1	20
4	Dual-template induced multi-scale porous Fe@FeNC oxygen reduction catalyst for high-performance electrochemical devices. Chemical Engineering Journal, 2022, 445, 136628.	6.6	13
5	Interconnected Porous Structural Construction of Mn- and N-Doped Carbon Nanosheets for Fuel Cell Application. Energy & Fuels, 2022, 36, 8432-8438.	2.5	7
6	Stabilizing phosphotungstic acid in Nafion membrane via targeted silica fixation for high-temperature fuel cell application. International Journal of Hydrogen Energy, 2021, 46, 4301-4308.	3.8	15
7	Graphene quantum dot reinforced hyperbranched polyamide proton exchange membrane for direct methanol fuel cell. International Journal of Hydrogen Energy, 2021, 46, 9782-9789.	3.8	25
8	Regulated coordination environment of Ni single atom catalyst toward high-efficiency oxygen electrocatalysis for rechargeable Zinc-air batteries. Energy Storage Materials, 2021, 35, 723-730.	9.5	89
9	Multistage porogen-induced heteroporous Co, N-doped carbon catalyst toward efficient oxygen reduction. Chemical Communications, 2021, 57, 903-906.	2.2	15
10	Nitrogen dopants in nickel nanoparticles embedded carbon nanotubes promote overall urea oxidation. Applied Catalysis B: Environmental, 2021, 280, 119436.	10.8	151
11	Co nanocluster strain-engineered by atomic Ru for efficient and stable oxygen reduction catalysis. Materials Today Physics, 2021, 17, 100338.	2.9	12
12	Enabling interfacial stability via 3D networking single ion conducting nano fiber electrolyte for high performance lithium metal batteries. Journal of Power Sources, 2021, 490, 229545.	4.0	16
13	Sulfur vacancies in ultrathin cobalt sulfide nanoflowers enable boosted electrocatalytic activity of nitrogen reduction reaction. Chemical Engineering Journal, 2021, 415, 129018.	6.6	63
14	Heterointerface-rich Mo2C/MoO2 porous nanorod enables superior alkaline hydrogen evolution. Chemical Engineering Journal, 2021, 421, 127807.	6.6	38
15	Selfâ€confined CoPt/Mo 2 C nanoparticles encapsulated in carbon cages for boosted hydrogen evolution catalysis. Nano Select, 2021, 2, 600-607.	1.9	4
16	Porogen-in-Resin-Induced Fe, N-Doped Interconnected Porous Carbon Sheets as Cathode Catalysts for Proton Exchange Membrane Fuel Cells. ACS Applied Materials & Interfaces, 2021, 13, 48962-48970.	4.0	12
17	Highly-defective Fe-N-C catalysts towards pH-Universal oxygen reduction reaction. Applied Catalysis B: Environmental, 2020, 263, 118347.	10.8	121
18	Electronically delocalized Ir enables efficient and stable acidic water splitting. Journal of Materials Chemistry A, 2020, 8, 20168-20174.	5.2	25

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19	N-Rich hetero-porous defective carbon induced by trace B-doping enables efficient oxygen reduction. Chemical Communications, 2020, 56, 12214-12217.	2.2	7
20	Highly graphitic carbon shell on molybdenum carbide nanosheets by iron doping for stable hydrogen evolution. International Journal of Hydrogen Energy, 2020, 45, 14368-14374.	3.8	9
21	Largely boosted methanol electrooxidation using ionic liquid/PdCu aerogels <i>via</i> interface engineering. Materials Horizons, 2020, 7, 2407-2413.	6.4	36
22	Robust hydrogen evolution reaction activity catalyzed by ultrasmall Rhâ€“Rh₂P nanoparticles. Journal of Materials Chemistry A, 2020, 8, 12378-12384.	5.2	49
23	Identification of functionality of heteroatoms in boron, nitrogen and fluorine ternary-doped carbon as a robust electrocatalyst for nitrogen reduction reaction powered by rechargeable zincâ€“air batteries. Journal of Materials Chemistry A, 2020, 8, 8430-8439.	5.2	53
24	Pt/Mo2C heteronanosheets for superior hydrogen evolution reaction. Journal of Energy Chemistry, 2020, 47, 317-323.	7.1	36
25	Robust and Stable Acidic Overall Water Splitting on Ir Single Atoms. Nano Letters, 2020, 20, 2120-2128.	4.5	190
26	Strain induced rich planar defects in heterogeneous WS₂/WO₂ enable efficient nitrogen fixation at low overpotential. Journal of Materials Chemistry A, 2020, 8, 12996-13003.	5.2	45
27	Bi-Functional Composting the Sulfonic Acid Based Proton Exchange Membrane for High Temperature Fuel Cell Application. Polymers, 2020, 12, 1000.	2.0	6
28	Non-destructive fabrication of Nafion/silica composite membrane via swelling-filling modification strategy for high temperature and low humidity PEM fuel cell. Renewable Energy, 2020, 153, 935-939.	4.3	48
29	Boosting the acidic electrocatalytic nitrogen reduction performance of MoS₂ by strain engineering. Journal of Materials Chemistry A, 2020, 8, 10426-10432.	5.2	59
30	Pâ€“Fe bond oxygen reduction catalysts toward high-efficiency metalâ€“air batteries and fuel cells. Journal of Materials Chemistry A, 2020, 8, 9121-9127.	5.2	52
31	Effect of Fe doping on the graphitic level of Mo2C/N-C for electrocatalytic water splitting. Applied Catalysis A: General, 2020, 601, 117623.	2.2	18
32	A novel thermomechanically stable LaF3CsH5(PO4)2 composite electrolyte with high proton conductivity at elevated temperatures over 150ÂÂ°C. Journal of Energy Chemistry, 2019, 30, 114-120.	7.1	3
33	A robust electrocatalytic activity toward the hydrogen evolution reaction from W/W₂C heterostructured nanoparticles coated with a N,P dual-doped carbon layer. Chemical Communications, 2019, 55, 9665-9668.	2.2	18
34	Nitrogen Atoms as Stabilizers and Promoters for Ruâ€Clusterâ€Catalyzed Alkaline Water Splitting. ChemCatChem, 2019, 11, 4327-4333.	1.8	21
35	Boosting hydrogen evolution activity and durability of Pdâ€“Niâ€“P nanocatalyst via crystalline degree and surface chemical state modulations. International Journal of Hydrogen Energy, 2019, 44, 31053-31061.	3.8	18
36	Rh nanoroses for isopropanol oxidation reaction. Applied Catalysis B: Environmental, 2019, 259, 118082.	10.8	44

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37	An enhanced proton conductivity and reduced methanol permeability composite membrane prepared by sulfonated covalent organic nanosheets/Nafion. International Journal of Hydrogen Energy, 2019, 44, 24985-24996.	3.8	35
38	Engineering oxygen vacancies of cobalt tungstate nanoparticles enable efficient water splitting in alkaline medium. Applied Catalysis B: Environmental, 2019, 259, 118090.	10.8	50
39	Self-assembled growth of Pdâ€“Ni sub-microcages as a highly active and durable electrocatalyst. Journal of Materials Chemistry A, 2019, 7, 5179-5184.	5.2	9
40	Engineering of Ru/Ru₂P interfaces superior to Pt active sites for catalysis of the alkaline hydrogen evolution reaction. Journal of Materials Chemistry A, 2019, 7, 5621-5625.	5.2	71
41	Engineering highly active oxygen sites in perovskite oxides for stable and efficient oxygen evolution. Applied Catalysis B: Environmental, 2019, 256, 117817.	10.8	79
42	Robust hydrogen evolution reaction catalysis by ultrasmall amorphous ruthenium phosphide nanoparticles. Chemical Communications, 2019, 55, 7623-7626.	2.2	26
43	Contribution of carbon support in cost-effective metal oxide/carbon composite catalysts for the alkaline oxygen evolution reaction. Catalysis Communications, 2019, 127, 5-9.	1.6	14
44	Facial fabrication of yolk-shell Pd-Ni-P alloy with mesoporous structure as an advanced catalyst for methanol electro-oxidation. Applied Surface Science, 2019, 484, 441-445.	3.1	24
45	Targeted filling of silica in Nafion by a modified <i>in situ</i> solâ€“gel method for enhanced fuel cell performance at elevated temperatures and low humidity. Chemical Communications, 2019, 55, 5499-5502.	2.2	25
46	Tungsten Carbide Hollow Microspheres with Robust and Stable Electrocatalytic Activity toward Hydrogen Evolution Reaction. ACS Omega, 2019, 4, 4185-4191.	1.6	24
47	Fe@Fe₂P Coreâ€Shell Nanorods Encapsulated in Nitrogen Doped Carbon Nanotubes as Robust and Stable Electrocatalyst Toward Hydrogen Evolution. ChemElectroChem, 2019, 6, 1413-1418.	1.7	23
48	Decorated PtRu Electrocatalyst for Concentrated Direct Methanol Fuel Cells. ChemCatChem, 2019, 11, 1238-1243.	1.8	16
49	Metallic 1T-MoS2 nanosheets in-situ entrenched on N,P,S-codoped hierarchical carbon microflower as an efficient and robust electro-catalyst for hydrogen evolution. Applied Catalysis B: Environmental, 2019, 243, 614-620.	10.8	77
50	A self-template synthesis of defect-rich WS₂ as a highly efficient electrocatalyst for the hydrogen evolution reaction. Chemical Communications, 2018, 54, 2631-2634.	2.2	79
51	Effect of nano-size of functionalized silica on overall performance of swelling-filling modified Nafion membrane for direct methanol fuel cell application. Applied Energy, 2018, 213, 408-414.	5.1	73
52	Nitrogen-doped carbon active sites boost the ultra-stable hydrogen evolution reaction on defect-rich MoS2 nanosheets. International Journal of Hydrogen Energy, 2018, 43, 2026-2033.	3.8	35
53	In Situ Engineering of Double-Phase Interface in Mo/Mo₂C Heteronanosheets for Boosted Hydrogen Evolution Reaction. ACS Energy Letters, 2018, 3, 341-348.	8.8	144
54	Constructing Successive Active Sites for Metalâ€free Electrocatalyst with Boosted Electrocatalytic Activities Toward Hydrogen Evolution and Oxygen Reduction Reactions. ChemCatChem, 2018, 10, 5194-5200.	1.8	30

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55	Palladium Phosphide as a Stable and Efficient Electrocatalyst for Overall Water Splitting. Angewandte Chemie - International Edition, 2018, 57, 14862-14867.	7.2	233
56	Palladium Phosphide as a Stable and Efficient Electrocatalyst for Overall Water Splitting. Angewandte Chemie, 2018, 130, 15078-15083.	1.6	20
57	Ionic-exchange immobilization of ultra-low loading palladium on a rGO electro-catalyst for high activity formic acid oxidation. RSC Advances, 2018, 8, 18619-18625.	1.7	3
58	Single ion conducting lithium sulfur polymer batteries with improved safety and stability. Journal of Materials Chemistry A, 2018, 6, 14330-14338.	5.2	49
59	Carbon nitride simultaneously boosted a PtRu electrocatalyst's stability and electrocatalytic activity toward concentrated methanol. Chemical Communications, 2018, 54, 9282-9285.	2.2	26
60	Non-destructive modification on Nafion membrane via in-situ inserting of sheared graphene oxide for direct methanol fuel cell applications. Electrochimica Acta, 2018, 282, 362-368.	2.6	39
61	An inâ€“situ Organicâ€Inorganic Hybrid Methanolâ€Permeation resistant PEM with Great Mechanical Stability Retention Capacity. ChemistrySelect, 2017, 2, 1525-1529.	0.7	3
62	Performance dependence of swelling-filling treated Nafion membrane on nano-structure of macromolecular filler. Journal of Membrane Science, 2017, 534, 68-72.	4.1	24
63	A robust pendant-type cross-linked anion exchange membrane (AEM) with high hydroxide conductivity at a moderate IEC value. Journal of Materials Science, 2017, 52, 3946-3958.	1.7	10
64	Salt-templated synthesis of defect-rich MoN nanosheets for boosted hydrogen evolution reaction. Journal of Materials Chemistry A, 2017, 5, 24193-24198.	5.2	154
65	High Durability and Performance of a Platinum Electrocatalyst Supported on Sulfonated Macromolecules Coated Carbon Nanotubes. ChemCatChem, 2017, 9, 4005-4012.	1.8	5
66	An in-situ nano-scale swelling-filling strategy to improve overall performance of Nafion membrane for direct methanol fuel cell application. Journal of Power Sources, 2016, 332, 37-41.	4.0	31
67	A bi-functional polymeric nano-sieve Nafion composite membrane: Improved performance for direct methanol fuel cell applications. International Journal of Hydrogen Energy, 2016, 41, 17102-17111.	3.8	33
68	Fabrication of a polymer electrolyte membrane with uneven side chains for enhancing proton conductivity. RSC Advances, 2016, 6, 79593-79601.	1.7	20
69	A high performance polyamide-based proton exchange membrane fabricated via construction of hierarchical proton conductive channels. Journal of Power Sources, 2016, 302, 189-194.	4.0	29
70	Recent Developments on Alternative Proton Exchange Membranes: Strategies for Systematic Performance Improvement. Energy Technology, 2015, 3, 675-691.	1.8	80
71	3Dâ€Branched Rigidâ€“Flexible Hybrid Sulfonated Polyamide for Proton Exchange Membranes (PEMs) in Fuel Cell Applications. Energy Technology, 2015, 3, 155-161.	1.8	14
72	Towards neat methanol operation of direct methanol fuel cells: a novel self-assembled proton exchange membrane. Chemical Communications, 2015, 51, 6556-6559.	2.2	54

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73	Melamineâ€“terephthalaldehydeâ€“lithium complex: a porous organic network based single ion electrolyte for lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 5132-5139.	5.2	46
74	A high performance polysiloxane-based single ion conducting polymeric electrolyte membrane for application in lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 20267-20276.	5.2	83
75	Novel Polyamide Proton Exchange Membranes with Bi-Functional Sulfonimide Bridges for Fuel Cell Applications. Electrochimica Acta, 2015, 151, 168-176.	2.6	18
76	A Polyamide Singleâ€Ion Electrolyte Membrane for Application in Lithiumâ€Ion Batteries. Energy Technology, 2014, 2, 698-704.	1.8	31
77	Rigidâ€“Flexible Hybrid Protonâ€Exchange Membranes with Improved Waterâ€Retention Properties and High Stability for Fuel Cells. Energy Technology, 2014, 2, 685-691.	1.8	16
78	Lithiumâ€Ion Batteries with a Wide Temperature Range Operability Enabled by Highly Conductive sp³ Boronâ€Based Single Ion Polymer Electrolytes. Energy Technology, 2014, 2, 643-650.	1.8	26
79	Fabrication of a proton exchange membrane via blended sulfonimide functionalized polyamide. Journal of Materials Science, 2014, 49, 3442-3450.	1.7	38
80	Singleâ€Ion Polymer Electrolyte Membranes Enable Lithiumâ€Ion Batteries with a Broad Operating Temperature Range. ChemSusChem, 2014, 7, 1063-1067.	3.6	28
81	A gel single ion polymer electrolyte membrane for lithium-ion batteries with wide-temperature range operability. RSC Advances, 2014, 4, 21163-21170.	1.7	45
82	Minimizing Polysulfide Shuttles in Lithium Sulfur Batteries by Introducing Immobile Lithium Ions into Carbonâ€“Sulfur Nanocomposites. ChemElectroChem, 2014, 1, 1662-1666.	1.7	6
83	Design and synthesis of a single ion conducting block copolymer electrolyte with multifunctionality for lithium ion batteries. RSC Advances, 2014, 4, 43857-43864.	1.7	40
84	Functionalized meso/macro-porous single ion polymeric electrolyte for applications in lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 2960-2967.	5.2	55
85	A lithium poly(pyromellitic acid borate) gel electrolyte membrane for lithium-ion batteries. Journal of Materials Science, 2014, 49, 6111-6117.	1.7	22
86	Real contribution of formic acid in direct formic acid fuel cell: Investigation of origin and guiding for micro structure design. International Journal of Hydrogen Energy, 2013, 38, 212-218.	3.8	28
87	A modified Nafion membrane with extremely low methanol permeability via surface coating of sulfonated organic silica. Chemical Communications, 2012, 48, 2870.	2.2	53
88	Development of a 30ÂW class direct formic acid fuel cell stack with high stability and durability. International Journal of Hydrogen Energy, 2012, 37, 3425-3432.	3.8	18
89	Transient behavior analysis of a new designed passive direct methanol fuel cell fed with highly concentrated methanol. Journal of Power Sources, 2011, 196, 3781-3789.	4.0	21
90	Design and simulation of a liquid electrolyte passive direct methanol fuel cell with low methanol crossover. Journal of Power Sources, 2011, 196, 7616-7626.	4.0	22