

Zhiliang Wang

List of Publications by Year in descending order

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77
papers

6,474
citations

70961

41
h-index

69108

77
g-index

80
all docs

80
docs citations

80
times ranked

6842
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanochemically Synthesised Flexible Electrodes Based on Bimetallic Metal-Organic Framework Glasses for the Oxygen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	41
2	Formation, Detection, and Function of Oxygen Vacancy in Metal Oxides for Solar Energy Conversion. <i>Advanced Functional Materials</i> , 2022, 32, 2109503.	7.8	74
3	Photocatalytic and Photoelectrochemical Carbon Dioxide Reductions toward Value-Added Multicarbon Products. <i>ACS ES&T Engineering</i> , 2022, 2, 975-988.	3.7	22
4	Simultaneous removal of micropollutants, antibiotic resistant bacteria, and antibiotic resistance genes using graphitic carbon nitride under simulated solar irradiation. <i>Chemical Engineering Journal</i> , 2022, 433, 133839.	6.6	25
5	Machine Learning Guided Dopant Selection for Metal Oxide-Based Photoelectrochemical Water Splitting: The Case Study of Fe ₂ O ₃ and CuO. <i>Advanced Materials</i> , 2022, 34, e2106776.	11.1	26
6	Photoelectrocatalytic hydrogen peroxide production based on transition-metal-oxide semiconductors. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1204-1215.	6.9	17
7	Coordination Chemistry Engineered Polymeric Carbon Nitride Photoanode with Ultralow Onset Potential for Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	16
8	Simultaneous Removal of Antibiotic Resistant Bacteria, Antibiotic Resistance Genes, and Micropollutants by FeS ₂ @GO-Based Heterogeneous Photo-Fenton Process. <i>Environmental Science & Technology</i> , 2022, 56, 15156-15166.	4.6	31
9	Role of oxygen vacancy in metal oxide based photoelectrochemical water splitting. <i>EcoMat</i> , 2021, 3, e12075.	6.8	65
10	Efficient photocatalytic destruction of recalcitrant micropollutants using graphitic carbon nitride under simulated sunlight irradiation. <i>Environmental Science and Ecotechnology</i> , 2021, 5, 100079.	6.7	48
11	Efficiency Accreditation and Testing Protocols for Particulate Photocatalysts toward Solar Fuel Production. <i>Joule</i> , 2021, 5, 344-359.	11.7	165
12	Metal-Organic Framework-Based Materials for Solar Water Splitting. <i>Small Science</i> , 2021, 1, 2000074.	5.8	39
13	Carbon Nitride Functionalized with Sb Resulting in High Photocatalytic Activity. <i>ACS Applied Energy Materials</i> , 2021, 4, 5677-5686.	2.5	8
14	Nanoconfined Topochemical Conversion from MXene to Ultrathin Non-Layered TiN Nanomesh toward Superior Electrocatalysts for Lithium-Sulfur Batteries. <i>Small</i> , 2021, 17, e2101360.	5.2	25
15	Bismuth based photoelectrodes for solar water splitting. <i>Journal of Energy Chemistry</i> , 2021, 61, 517-530.	7.1	47
16	Metal-free ĩ-conjugated hybrid g-C ₃ N ₄ with tunable band structure for enhanced visible-light photocatalytic H ₂ production. <i>Journal of Materials Science and Technology</i> , 2021, 87, 207-215.	5.6	18
17	Revisiting solar hydrogen production through photovoltaic-electrocatalytic and photoelectrochemical water splitting. <i>Frontiers in Energy</i> , 2021, 15, 596-599.	1.2	18
18	Liquid-phase sintering of lead halide perovskites and metal-organic framework glasses. <i>Science</i> , 2021, 374, 621-625.	6.0	137

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19	Boosting the performance of hybrid supercapacitors through redox electrolyte-mediated capacity balancing. <i>Nano Energy</i> , 2020, 68, 104226.	8.2	48
20	Efficient hydrogen peroxide synthesis by metal-free polyterthiophene <i>via</i> photoelectrocatalytic dioxygen reduction. <i>Energy and Environmental Science</i> , 2020, 13, 238-245.	15.6	146
21	Recent Advances of Metal-Oxide Photoanodes: Engineering of Charge Separation and Transportation toward Efficient Solar Water Splitting. <i>Solar Rrl</i> , 2020, 4, 1900509.	3.1	45
22	Fabricating highly efficient heterostructured CuBi_2O_4 photocathodes for unbiased water splitting. <i>Journal of Materials Chemistry A</i> , 2020, 8, 2498-2504.	5.2	57
23	Design of twin junction with solid solution interface for efficient photocatalytic H_2 production. <i>Nano Energy</i> , 2020, 69, 104410.	8.2	62
24	Two-dimensional heterojunction $\text{SnS}_2/\text{SnO}_2$ photoanode with excellent photoresponse up to near infrared region. <i>Solar Energy Materials and Solar Cells</i> , 2020, 207, 110342.	3.0	13
25	Luminescent europium-doped titania for efficiency and UV-stability enhancement of planar perovskite solar cells. <i>Nano Energy</i> , 2020, 69, 104392.	8.2	47
26	Hybridization of ZSM-5 with Spinel Oxides for Biomass Vapour Upgrading. <i>ChemCatChem</i> , 2020, 12, 1403-1412.	1.8	11
27	Reddish GaN:ZnO photoelectrode for improved photoelectrochemical solar water splitting. <i>Journal of Chemical Physics</i> , 2020, 153, 024706.	1.2	5
28	Molten Salt Synthesis of Atomic Heterogeneous Catalysts: Old Chemistry for Advanced Materials. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 2942-2949.	1.0	26
29	Lithiation-Induced Vacancy Engineering of Co_3O_4 with Improved Faradic Reactivity for High-Performance Supercapacitor. <i>Advanced Functional Materials</i> , 2020, 30, 2004172.	7.8	156
30	Intermarriage of Halide Perovskites and Metal-Organic Framework Crystals. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 19434-19449.	7.2	73
31	Intermarriage of Halide Perovskites and Metal-Organic Framework Crystals. <i>Angewandte Chemie</i> , 2020, 132, 19602-19617.	1.6	14
32	Designing efficient $\text{Bi}_2\text{Fe}_4\text{O}_9$ photoanodes <i>via</i> bulk and surface defect engineering. <i>Chemical Communications</i> , 2020, 56, 9376-9379.	2.2	14
33	Molten-Salt-Mediated Synthesis of an Atomic Nickel Co-catalyst on TiO_2 for Improved Photocatalytic H_2 Evolution. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 7230-7234.	7.2	221
34	Molten-Salt-Mediated Synthesis of an Atomic Nickel Co-catalyst on TiO_2 for Improved Photocatalytic H_2 Evolution. <i>Angewandte Chemie</i> , 2020, 132, 7297-7301.	1.6	55
35	Lattice distortion induced internal electric field in TiO_2 photoelectrode for efficient charge separation and transfer. <i>Nature Communications</i> , 2020, 11, 2129.	5.8	108
36	Hollow Structure for Photocatalytic CO_2 Reduction. <i>ChemNanoMat</i> , 2020, 6, 881-888.	1.5	39

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37	Chapter 7. Bridging Homogeneous and Heterogeneous Systemsâ€”Photoelectrodes for CO ₂ Electrochemical Conversion. RSC Energy and Environment Series, 2020, , 287-316.	0.2	1
38	Hollow Nanostructures for Photocatalysis: Advantages and Challenges. Advanced Materials, 2019, 31, e1801369.	11.1	506
39	Identifying Copper Vacancies and Their Role in the CuO Based Photocathode for Water Splitting. Angewandte Chemie - International Edition, 2019, 58, 17604-17609.	7.2	82
40	Identifying Copper Vacancies and Their Role in the CuO Based Photocathode for Water Splitting. Angewandte Chemie, 2019, 131, 17768-17773.	1.6	42
41	Enhancing photocatalytic activity of tantalum nitride by rational suppression of bulk, interface and surface charge recombination. Applied Catalysis B: Environmental, 2019, 246, 195-201.	10.8	50
42	Understanding the Roles of Oxygen Vacancies in Hematiteâ€”Based Photoelectrochemical Processes. Angewandte Chemie - International Edition, 2019, 58, 1030-1034.	7.2	268
43	Understanding the Roles of Oxygen Vacancies in Hematiteâ€”Based Photoelectrochemical Processes. Angewandte Chemie, 2019, 131, 1042-1046.	1.6	89
44	Cyclic Voltammetry in Lithiumâ€”Sulfur Batteriesâ€”Challenges and Opportunities. Energy Technology, 2019, 7, 1801001.	1.8	138
45	2D Porous TiO ₂ Singleâ€”Crystalline Nanostructure Demonstrating High Photoâ€”Electrochemical Water Splitting Performance. Advanced Materials, 2018, 30, e1705666.	11.1	176
46	Photoelectrode for water splitting: Materials, fabrication and characterization. Science China Materials, 2018, 61, 806-821.	3.5	44
47	Mimicking the Key Functions of Photosystem II in Artificial Photosynthesis for Photoelectrocatalytic Water Splitting. Journal of the American Chemical Society, 2018, 140, 3250-3256.	6.6	224
48	Progress in designing effective photoelectrodes for solar water splitting. Chinese Journal of Catalysis, 2018, 39, 369-378.	6.9	49
49	Inhibiting competing reactions of iodate/iodide redox mediators by surface modification of photocatalysts to enable Z-scheme overall water splitting. Applied Catalysis B: Environmental, 2018, 224, 579-585.	10.8	33
50	Fabrication of a Robust Tantalum Nitride Photoanode from a Flameâ€”Heatingâ€”Derived Compact Oxide Film. ChemPhotoChem, 2018, 2, 249-256.	1.5	5
51	An Unusual Red Carbon Nitride to Boost the Photoelectrochemical Performance of Wide Bandgap Photoanodes. Advanced Functional Materials, 2018, 28, 1805698.	7.8	94
52	Energy loss analysis in photoelectrochemical water splitting: a case study of hematite photoanodes. Physical Chemistry Chemical Physics, 2018, 20, 22629-22635.	1.3	15
53	Amorphous Cobalt Oxide Nanoparticles as Active Waterâ€”Oxidation Catalysts. ChemCatChem, 2017, 9, 3641-3645.	1.8	34
54	Photocatalytic aerobic oxidation of toluene and its derivatives to aldehydes on Pd/Bi ₂ WO ₆ . Chinese Journal of Catalysis, 2017, 38, 440-446.	6.9	48

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55	Photoelectrocatalytic Water Splitting: Significance of Cocatalysts, Electrolyte, and Interfaces. <i>ACS Catalysis</i> , 2017, 7, 675-688.	5.5	488
56	To boost photocatalytic activity in selective oxidation of alcohols on ultrathin Bi ₂ MoO ₆ nanoplates with Pt nanoparticles as cocatalyst. <i>Journal of Catalysis</i> , 2017, 345, 96-103.	3.1	116
57	Biomimetic electron transport via multiredox shuttles from photosystem II to a photoelectrochemical cell for solar water splitting. <i>Energy and Environmental Science</i> , 2017, 10, 765-771.	15.6	68
58	Promoting Charge Separation and Injection by Optimizing the Interfaces of GaN:ZnO Photoanode for Efficient Solar Water Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 30696-30702.	4.0	34
59	Decorating mesoporous silicon with amorphous metal- δ -phosphorous-derived nanocatalysts towards enhanced photoelectrochemical water reduction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 14960-14967.	5.2	16
60	Bridging surface states and current-potential response over hematite-based photoelectrochemical water oxidation. <i>RSC Advances</i> , 2016, 6, 85582-85586.	1.7	39
61	Moisture-Assisted Preparation of Compact GaN:ZnO Photoanode Toward Efficient Photoelectrochemical Water Oxidation. <i>Advanced Energy Materials</i> , 2016, 6, 1600864.	10.2	54
62	Enhancing charge separation on high symmetry SrTiO ₃ exposed with anisotropic facets for photocatalytic water splitting. <i>Energy and Environmental Science</i> , 2016, 9, 2463-2469.	15.6	372
63	Efficient and stable polymer solar cells with electrochemical deposition of CuSCN as an anode interlayer. <i>RSC Advances</i> , 2016, 6, 56845-56850.	1.7	8
64	Understanding the anatase-rutile phase junction in charge separation and transfer in a TiO ₂ electrode for photoelectrochemical water splitting. <i>Chemical Science</i> , 2016, 7, 6076-6082.	3.7	138
65	Enabling an integrated tantalum nitride photoanode to approach the theoretical photocurrent limit for solar water splitting. <i>Energy and Environmental Science</i> , 2016, 9, 1327-1334.	15.6	332
66	Insight into the charge transfer in particulate Ta ₃ N ₅ photoanode with high photoelectrochemical performance. <i>Chemical Science</i> , 2016, 7, 4391-4399.	3.7	64
67	Substrate-Electrode Interface Engineering by an Electron-Transport Layer in Hematite Photoanode. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 7086-7091.	4.0	30
68	Conversion of Biomass Derivatives to Electricity in Photo Fuel Cells using Undoped and Tungsten-Doped Bismuth Vanadate Photoanodes. <i>ChemSusChem</i> , 2015, 8, 4049-4055.	3.6	41
69	Abnormal Effects of Cations (Li ⁺ , Na ⁺ , and K ⁺) on Photoelectrochemical and Electrocatalytic Water Splitting. <i>Journal of Physical Chemistry B</i> , 2015, 119, 3560-3566.	1.2	31
70	Direct electron transfer from photosystem II to hematite in a hybrid photoelectrochemical cell. <i>Chemical Communications</i> , 2015, 51, 16952-16955.	2.2	33
71	Synergetic Effect of Conjugated Ni(OH) ₂ /IrO ₂ Cocatalyst on Titanium-Doped Hematite Photoanode for Solar Water Splitting. <i>Journal of Physical Chemistry C</i> , 2015, 119, 19607-19612.	1.5	167
72	Transition metal (Ni, Fe, and Cu) hydroxides enhanced δ -Fe ₂ O ₃ photoanode-based photofuel cell. <i>RSC Advances</i> , 2014, 4, 47383-47388.	1.7	19

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73	Solar-to-hydrogen efficiency exceeding 2.5% achieved for overall water splitting with an all earth-abundant dual-photoelectrode. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 15608-15614.	1.3	94
74	A hematite photoanode with gradient structure shows an unprecedentedly low onset potential for photoelectrochemical water oxidation. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 23544-23548.	1.3	41
75	A Tantalum Nitride Photoanode Modified with a Hole-Storage Layer for Highly Stable Solar Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 7295-7299.	7.2	354
76	Bridging localized electron states of pyrite-type CoS ₂ cocatalyst for activated solar H ₂ evolution. <i>Nano Research</i> , 0, , 1.	5.8	12
77	Mechanochemically Synthesised Flexible Electrodes based on Bimetallic Metal-Organic Framework Glasses for the Oxygen Evolution Reaction. <i>Angewandte Chemie</i> , 0, , .	1.6	7