Shu Hu

List of Publications by Year
in descending order

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Version: 2024-02-01

56	4,958	196777	198040
papers	citations	29 h-index	52 g-index

58	58	58	7105
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Comprehensive Evaluation for Protective Coatings: Optical, Electrical, Photoelectrochemical, and Spectroscopic Characterizations. Frontiers in Energy Research, 2022, 9, .	1.2	5
2	Scalable production of single 2D van der Waals layers through atomic layer deposition: bilayer silica on metal foils and films. 2D Materials, 2022, 9, 021003.	2.0	9
3	Hematite photoanodes prepared by particle transfer for photoelectrochemical water splitting. Sustainable Energy and Fuels, 2022, 6, 2067-2074.	2.5	9
4	Charge Separation in Photocatalysts: Mechanisms, Physical Parameters, and Design Principles. ACS Energy Letters, 2022, 7, 432-452.	8.8	41
5	Invention as a Complement to High School Chemistry. Journal of Chemical Education, 2022, 99, 2012-2019.	1.1	2
6	Emerging Dual-Functional 2D transition metal oxides for carbon capture and Utilization: A review. Fuel, 2022, 324, 124706.	3.4	15
7	Tuning Intermediate Bands of Protective Coatings to Reach the Bulkâ€Recombination Limit of Stable Waterâ€Oxidation GaP Photoanodes. Advanced Energy Materials, 2022, 12, .	10.2	10
8	Narrowing the Phase Distribution of Quasiâ€2D Perovskites for Stable Deepâ€Blue Electroluminescence. Advanced Science, 2022, 9, .	5.6	22
9	(Invited) A Coating Strategy for Heterogeneous Photocatalysis Producing Renewable Fuels. ECS Meeting Abstracts, 2022, MA2022-01, 1554-1554.	0.0	0
10	Defect-Tolerant TiO₂-Coated and Discretized Photoanodes for >600 h of Stable Photoelectrochemical Water Oxidation. ACS Energy Letters, 2021, 6, 193-200.	8.8	25
11	Microstructural origin of selective water oxidation to hydrogen peroxide at low overpotentials: a study on Mn-alloyed TiO₂. Journal of Materials Chemistry A, 2021, 9, 18498-18505.	5.2	12
12	A coating strategy to achieve effective local charge separation for photocatalytic coevolution. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	14
13	Selective hydrogen peroxide conversion tailored by surface, interface, and device engineering. Joule, 2021, 5, 1432-1461.	11.7	97
14	Selective Fluoride Transport in Subnanometer TiO₂ Pores. ACS Nano, 2021, 15, 16828-16838.	7.3	16
15	Mutually-dependent kinetics and energetics of photocatalyst/co-catalyst/two-redox liquid junctions. Energy and Environmental Science, 2020, 13, 162-173.	15.6	29
16	In Situ Identification of Reaction Intermediates and Mechanistic Understandings of Methane Oxidation over Hematite: A Combined Experimental and Theoretical Study. Journal of the American Chemical Society, 2020, 142, 17119-17130.	6.6	59
17	Stable CdTe Photoanodes with Energetics Matching Those of a Coating Intermediate Band. ACS Energy Letters, 2020, 5, 1865-1871.	8.8	18
18	RGB Arrays for Micro-Light-Emitting Diode Applications Using Nanoporous GaN Embedded with Quantum Dots. ACS Applied Materials & Interfaces, 2020, 12, 30890-30895.	4.0	49

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19	(Invited) Photocatalytic Water Splitting: Particulate Model and Reactor Engineering. ECS Meeting Abstracts, 2020, MA2020-01, 1769-1769.	0.0	0
20	(Invited) Coating-Stabilized Particulate Photocatalysts for Solar H2 Production. ECS Meeting Abstracts, 2020, MA2020-02, 3065-3065.	0.0	0
21	Hydrogen evolution activity tuning via two-dimensional electron accumulation at buried interfaces. Journal of Materials Chemistry A, 2019, 7, 20696-20705.	5.2	11
22	Catalytic manganese oxide nanostructures for the reverse water gas shift reaction. Nanoscale, 2019, 11, 16677-16688.	2.8	31
23	Membrane-less photoelectrochemical devices for H₂O₂ production: efficiency limit and operational constraint. Sustainable Energy and Fuels, 2019, 3, 101-114.	2.5	37
24	Elucidating charge separation in particulate photocatalysts using nearly intrinsic semiconductors with small asymmetric band bending. Sustainable Energy and Fuels, 2019, 3, 850-864.	2.5	30
25	Characterization of Electronic Transport through Amorphous TiO₂ Produced by Atomic Layer Deposition. Journal of Physical Chemistry C, 2019, 123, 20116-20129.	1.5	68
26	Unveiling the Interfacial Effects for Enhanced Hydrogen Evolution Reaction on MoS₂/WTe₂ Hybrid Structures. Small, 2019, 15, e1900078.	5.2	58
27	Cathodic Hydrogen Peroxide Electrosynthesis Using Anthraquinone Modified Carbon Nitride on Gas Diffusion Electrode. ACS Applied Energy Materials, 2019, 2, 7972-7979.	2.5	30
28	Electronic Tuning of Metal Nanoparticles for Highly Efficient Photocatalytic Hydrogen Peroxide Production. ACS Catalysis, 2019, 9, 626-631.	5.5	84
29	(Invited) Electronic Tuning of Photo-Electro-Catalytic Processes By Intermediate-Band Oxides. ECS Meeting Abstracts, 2019, , .	0.0	0
30	Stable Water Oxidation in Acid Using Manganese-Modified TiO₂ Protective Coatings. ACS Applied Materials & Interfaces, 2018, 10, 18805-18815.	4.0	24
31	Photocatalytic hydrogen peroxide production by anthraquinone-augmented polymeric carbon nitride. Applied Catalysis B: Environmental, 2018, 229, 121-129.	10.8	171
32	Energy-Conversion Properties of Si/GaAs Mesowires Containing fewer Threading Dislocations. , 2018, , .		0
33	Controlled TiO₂ Growth on Reverse Osmosis and Nanofiltration Membranes by Atomic Layer Deposition: Mechanisms and Potential Applications. Environmental Science & Technology, 2018, 52, 14311-14320.	4.6	40
34	High-Performance Capacitive Deionization via Manganese Oxide-Coated, Vertically Aligned Carbon Nanotubes. Environmental Science and Technology Letters, 2018, 5, 692-700.	3.9	69
35	Tunable nano-interfaces between MnO_x and layered double hydroxides boost oxygen evolving electrocatalysis. Journal of Materials Chemistry A, 2018, 6, 21918-21926.	5.2	29
36	IIIâ€“V Semiconductor Photoelectrodes. Semiconductors and Semimetals, 2017, 97, 81-138.	0.4	10

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37	Modellierung, Simulation und Implementierung von Zellen fÃ¼r die solargetriebene Wasserspaltung. Angewandte Chemie, 2016, 128, 13168-13183.	1.6	10
38	Operando Analyses of Solar Fuels Light Absorbers and Catalysts. Electrochimica Acta, 2016, 211, 711-719.	2.6	23
39	An Electrochemical, Microtopographical and Ambient Pressure X-Ray Photoelectron Spectroscopic Investigation of Si/TiO₂/Ni/Electrolyte Interfaces. Journal of the Electrochemical Society, 2016, 163, H139-H146.	1.3	24
40	Electrical, Photoelectrochemical, and Photoelectron Spectroscopic Investigation of the Interfacial Transport and Energetics of Amorphous TiO₂/Si Heterojunctions. Journal of Physical Chemistry C, 2016, 120, 3117-3129.	1.5	77
41	Direct observation of the energetics at a semiconductor/liquid junction by operando X-ray photoelectron spectroscopy. Energy and Environmental Science, 2015, 8, 2409-2416.	15.6	149
42	Stable Solar-Driven Water Oxidation to O₂(g) by Ni-Oxide-Coated Silicon Photoanodes. Journal of Physical Chemistry Letters, 2015, 6, 592-598.	2.1	144
43	The Influence of Structure and Processing on the Behavior of TiO₂ Protective Layers for Stabilization of n-Si/TiO₂/Ni Photoanodes for Water Oxidation. ACS Applied Materials & Interfaces, 2015, 7, 15189-15199.	4.0	114
44	Particle suspension reactors and materials for solar-driven water splitting. Energy and Environmental Science, 2015, 8, 2825-2850.	15.6	344
45	Thin-Film Materials for the Protection of Semiconducting Photoelectrodes in Solar-Fuel Generators. Journal of Physical Chemistry C, 2015, 119, 24201-24228.	1.5	245
46	A monolithically integrated, intrinsically safe, 10% efficient, solar-driven water-splitting system based on active, stable earth-abundant electrocatalysts in conjunction with tandem IIIâ€“V light absorbers protected by amorphous TiO₂ films. Energy and Environmental Science, 2015, 8, 3166-3172.	15.6	263
47	A sensitivity analysis to assess the relative importance of improvements in electrocatalysts, light absorbers, and system geometry on the efficiency of solar-fuels generators. Energy and Environmental Science, 2015, 8, 876-886.	15.6	32
48	Stabilization of Si microwire arrays for solar-driven H₂O oxidation to O₂(g) in 1.0 M KOH(aq) using conformal coatings of amorphous TiO₂. Energy and Environmental Science, 2015, 8, 203-207.	15.6	128
49	Amorphous TiO ₂ coatings stabilize Si, GaAs, and GaP photoanodes for efficient water oxidation. Science, 2014, 344, 1005-1009.	6.0	1,189
50	Stabilization of n-cadmium telluride photoanodes for water oxidation to O₂(g) in aqueous alkaline electrolytes using amorphous TiO₂ films formed by atomic-layer deposition. Energy and Environmental Science, 2014, 7, 3334-3337.	15.6	111
51	Modeling the Performance of an Integrated Photoelectrolysis System with 10 Ã— Solar Concentrators. Journal of the Electrochemical Society, 2014, 161, F1101-F1110.	1.3	36
52	Improved Stability of Polycrystalline Bismuth Vanadate Photoanodes by Use of Dual-Layer Thin TiO₂/Ni Coatings. Journal of Physical Chemistry C, 2014, 118, 19618-19624.	1.5	129
53	An analysis of the optimal band gaps of light absorbers in integrated tandem photoelectrochemical water-splitting systems. Energy and Environmental Science, 2013, 6, 2984.	15.6	497
54	Optical, electrical, and solar energy-conversion properties of gallium arsenide nanowire-array photoanodes. Energy and Environmental Science, 2013, 6, 1879.	15.6	102

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55	Simulations of the irradiation and temperature dependence of the efficiency of tandem photoelectrochemical water-splitting systems. Energy and Environmental Science, 2013, 6, 3605.	15.6	148
56	Twin-Free GaAs Nanosheets by Selective Area Growth: Implications for Defect-Free Nanostructures. Nano Letters, 2013, 13, 2506-2515.	4.5	68