Ji-Wook Jang

List of Publications by Year
in descending order

74 papers	7,898 citations	44069 48 h-index	64796 79 g-index
81 all docs	81 docs citations	81 times ranked	10027 citing authors

#	Article	IF	Citations
1	Toward practical solar hydrogen production â€“ an artificial photosynthetic leaf-to-farm challenge. Chemical Society Reviews, 2019, 48, 1908-1971.	38.1	781
2	Single-crystalline, wormlike hematite photoanodes for efficient solar water splitting. Scientific Reports, 2013, 3, 2681.	3.3	580
3	Phosphate Doping into Monoclinic BiVO₄ for Enhanced Photoelectrochemical Water Oxidation Activity. Angewandte Chemie - International Edition, 2012, 51, 3147-3151.	13.8	435
4	Enabling unassisted solar water splitting by iron oxide and silicon. Nature Communications, 2015, 6, 7447.	12.8	429
5	Fabrication of CaFe₂O₄/TaON Heterojunction Photoanode for Photoelectrochemical Water Oxidation. Journal of the American Chemical Society, 2013, 135, 5375-5383.	13.7	282
6	Hetero-type dual photoanodes for unbiased solar water splitting with extended light harvesting. Nature Communications, 2016, 7, 13380.	12.8	263
7	Highâ€Performance Hydrogen Evolution by Ru Single Atoms and Nitridedâ€Ru Nanoparticles Implanted on Nâ€Doped Graphitic Sheet. Advanced Energy Materials, 2019, 9, 1900931.	19.5	224
8	Wireless Solar Water Splitting Device with Robust Cobalt-Catalyzed, Dual-Doped BiVO₄ Photoanode and Perovskite Solar Cell in Tandem: A Dual Absorber Artificial Leaf. ACS Nano, 2015, 9, 11820-11829.	14.6	219
9	Understanding the origin of photoelectrode performance enhancement by probing surface kinetics. Chemical Science, 2016, 7, 3347-3354.	7.4	185
10	Defective ZnFe₂O₄ nanorods with oxygen vacancy for photoelectrochemical water splitting. Nanoscale, 2015, 7, 19144-19151.	5.6	183
11	Carbon-doped ZnO nanostructures synthesized using vitamin C for visible light photocatalysis. CrystEngComm, 2010, 12, 3929.	2.6	175
12	Fabrication of CdS nanowires decorated with TiO2 nanoparticles for photocatalytic hydrogen production under visible light irradiation. International Journal of Hydrogen Energy, 2008, 33, 5975-5980.	7.1	165
13	Three-Dimensional Type II ZnO/ZnSe Heterostructures and Their Visible Light Photocatalytic Activities. Langmuir, 2011, 27, 10243-10250.	3.5	159
14	Selective CO production by Au coupled ZnTe/ZnO in the photoelectrochemical CO₂reduction system. Energy and Environmental Science, 2015, 8, 3597-3604.	30.8	152
15	Precursor Effects of Citric Acid and Citrates on ZnO Crystal Formation. Langmuir, 2009, 25, 3825-3831.	3.5	146
16	Key Strategies to Advance the Photoelectrochemical Water Splitting Performance of Î±â€Fe₂O₃ Photoanode. ChemCatChem, 2019, 11, 157-179.	3.7	135
17	A highly efficient transition metal nitride-based electrocatalyst for oxygen reduction reaction: TiN on a CNTâ€“graphene hybrid support. Journal of Materials Chemistry A, 2013, 1, 8007.	10.3	126
18	Research Update: Strategies for efficient photoelectrochemical water splitting using metal oxide photoanodes. APL Materials, 2014, 2, .	5.1	120

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19	Improved Photoelectrochemical Activity of CaFe₂O₄/BiVO₄ Heterojunction Photoanode by Reduced Surface Recombination in Solar Water Oxidation. ACS Applied Materials & Interfaces, 2014, 6, 17762-17769.	8.0	114
20	A Stable and Efficient Hematite Photoanode in a Neutral Electrolyte for Solar Water Splitting: Towards Stability Engineering. Advanced Energy Materials, 2014, 4, 1400476.	19.5	110
21	Highly Efficient and Stable Cadmium Chalcogenide Quantum Dot/ZnO Nanowires for Photoelectrochemical Hydrogen Generation. Chemistry of Materials, 2013, 25, 184-189.	6.7	106
22	Enhancing Charge Carrier Lifetime in Metal Oxide Photoelectrodes through Mild Hydrogen Treatment. Advanced Energy Materials, 2017, 7, 1701536.	19.5	104
23	High-performance and stable photoelectrochemical water splitting cell with organic-photoactive-layer-based photoanode. Nature Communications, 2020, 11, 5509.	12.8	103
24	Awakening Solar Waterâ€Splitting Activity of ZnFe₂O₄ Nanorods by Hybrid Microwave Annealing. Advanced Energy Materials, 2015, 5, 1401933.	19.5	95
25	Porous ZnOâ€“ZnSe nanocomposites for visible light photocatalysis. Nanoscale, 2012, 4, 2066.	5.6	94
26	Aqueousâ€Solution Route to Zinc Telluride Films for Application to CO₂ Reduction. Angewandte Chemie - International Edition, 2014, 53, 5852-5857.	13.8	91
27	Exposed Crystal Face Controlled Synthesis of 3D ZnO Superstructures. Langmuir, 2010, 26, 14255-14262.	3.5	90
28	Observation and Alteration of Surface States of Hematite Photoelectrodes. Journal of Physical Chemistry C, 2014, 118, 17054-17059.	3.1	90
29	Tree branch-shaped cupric oxide for highly effective photoelectrochemical water reduction. Nanoscale, 2015, 7, 7624-7631.	5.6	90
30	Grapheneâ€“carbon nanotube composite as an effective conducting scaffold to enhance the photoelectrochemical water oxidation activity of a hematite film. RSC Advances, 2012, 2, 9415.	3.6	88
31	Photoelectrochemical water splitting over ordered honeycomb hematite electrodes stabilized by alumina shielding. Energy and Environmental Science, 2012, 5, 6375-6382.	30.8	86
32	Anionâ€Doped Mixed Metal Oxide Nanostructures Derived from Layered Double Hydroxide as Visible Light Photocatalysts. Advanced Functional Materials, 2013, 23, 2348-2356.	14.9	86
33	Moâ€Compound/CNTâ€Graphene Composites as Efficient Catalytic Electrodes for Quantumâ€Dotâ€Sensitized Solar Cells. Advanced Energy Materials, 2014, 4, 1300775.	19.5	84
34	Demonstration of a 50 cm² BiVO₄ tandem photoelectrochemical-photovoltaic water splitting device. Sustainable Energy and Fuels, 2019, 3, 2366-2379.	4.9	84
35	Fabrication of graphene-based electrode in less than a minute through hybrid microwave annealing. Scientific Reports, 2014, 4, 5492.	3.3	76
36	Superaerophobic hydrogels for enhanced electrochemical and photoelectrochemical hydrogen production. Science Advances, 2020, 6, eaaz3944.	10.3	76

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37	Self-assembled foam-like graphene networks formed through nucleate boiling. Scientific Reports, 2013, 3, 1396.	3.3	75
38	A Novel Role of Three Dimensional Graphene Foam to Prevent Heater Failure during Boiling. Scientific Reports, 2013, 3, 1960.	3.3	75
39	Enhanced Photocatalytic Hydrogen Production from Waterâˆ'Methanol Solution by Nickel Intercalated into Titanate Nanotube. Journal of Physical Chemistry C, 2009, 113, 8990-8996.	3.1	72
40	High performance H2O2 production achieved by sulfur-doped carbon on CdS photocatalyst via inhibiting reverse H2O2 decomposition. Applied Catalysis B: Environmental, 2021, 284, 119690.	20.2	69
41	Unassisted solar lignin valorisation using a compartmented photo-electro-biochemical cell. Nature Communications, 2019, 10, 5123.	12.8	67
42	Palladium oxide as a novel oxygen evolution catalyst on BiVO4 photoanode for photoelectrochemical water splitting. Journal of Catalysis, 2014, 317, 126-134.	6.2	65
43	Unassisted photocatalytic H2O2 production under visible light by fluorinated polymer-TiO2 heterojunction. Chemical Engineering Journal, 2021, 418, 129346.	12.7	63
44	Direct propylene epoxidation with oxygen using a photo-electro-heterogeneous catalytic system. Nature Catalysis, 2022, 5, 37-44.	34.4	58
45	Photocatalytic overall water splitting with dual-bed system under visible light irradiation. International Journal of Hydrogen Energy, 2009, 34, 3243-3249.	7.1	51
46	TiN Nanoparticles on CNTâ€"Graphene Hybrid Support as Nobleâ€Metalâ€Free Counter Electrode for Quantumâ€Dotâ€Sensitized Solar Cells. ChemSusChem, 2013, 6, 261-267.	6.8	51
47	Large-Scale Fabrication of Sub-20-nm-Diameter ZnO Nanorod Arrays at Room Temperature and Their Photocatalytic Activity. Journal of Physical Chemistry C, 2009, 113, 10452-10458.	3.1	50
48	Formation of Amorphous Zinc Citrate Spheres and Their Conversion to Crystalline ZnO Nanostructures. Langmuir, 2011, 27, 371-378.	3.5	49
49	Single-Crystalline Thin Films for Studying Intrinsic Properties of BiFeO₃â€"SrTiO₃ Solid Solution Photoelectrodes in Solar Energy Conversion. Chemistry of Materials, 2015, 27, 6635-6641.	6.7	44
50	Simultaneous Synthesis of Al-Doped ZnO Nanoneedles and Zinc Aluminum Hydroxides through Use of a Seed Layer. Crystal Growth and Design, 2008, 8, 4553-4558.	3.0	42
51	Solution-based fabrication of ZnO/ZnSe heterostructure nanowire arrays for solar energy conversion. Journal of Materials Chemistry, 2011, 21, 17816.	6.7	40
52	An exceptionally facile method to produce layered double hydroxides on a conducting substrate and their application for solar water splitting without an external bias. Energy and Environmental Science, 2014, 7, 2301.	30.8	37
53	Tailorable Au Nanoparticles Embedded in Epitaxial TiO₂ Thin Films for Tunable Optical Properties. ACS Applied Materials & Interfaces, 2018, 10, 32895-32902.	8.0	34
54	Phosphomolybdic Acid as a Catalyst for Oxidative Valorization of Biomass and Its Application as an Alternative Electron Source. ACS Catalysis, 2020, 10, 2060-2068.	11.2	33

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55	Immobilizing single atom catalytic sites onto highly reduced carbon hosts: Feâ€“N₄/CNT as a durable oxygen reduction catalyst for Naâ€“air batteries. Journal of Materials Chemistry A, 2020, 8, 18891-18902.	10.3	31
56	Self-Assembled Heteroepitaxial Oxide Nanocomposite for Photoelectrochemical Solar Water Oxidation. Chemistry of Materials, 2016, 28, 3017-3023.	6.7	28
57	N-Doped ZnS Nanoparticles Prepared through an Inorganicâ^'Organic Hybrid Complex ZnSÂ·(piperazine)_{0.5}. Journal of Physical Chemistry C, 2009, 113, 20445-20451.	3.1	27
58	Self-Assembled Gold Nanoparticleâ€“Mixed Metal Oxide Nanocomposites for Self-Sensitized Dye Degradation under Visible Light Irradiation. Langmuir, 2012, 28, 17530-17536.	3.5	27
59	Photocatalytic Synthesis of Pure and Waterâ€Dispersible Graphene Monosheets. Chemistry - A European Journal, 2012, 18, 2762-2767.	3.3	27
60	Room temperature synthesis and optical properties of small diameter (5 nm) ZnO nanorod arrays. Nanoscale, 2010, 2, 2199.	5.6	26
61	Nature of Nitrogen Incorporation in BiVO4Photoanodes through Chemical and Physical Methods. Solar Rrl, 2020, 4, 1900290.	5.8	23
62	Unassisted selective solar hydrogen peroxide production by an oxidised buckypaper-integrated perovskite photocathode. Nature Communications, 2021, 12, 6644.	12.8	23
63	Effects of Postannealing Process on the Properties of RuO₂ Films and Their Performance As Electrodes in Organic Thin Film Transistors or Solar Cells. ACS Applied Materials & Interfaces, 2012, 4, 4588-4594.	8.0	21
64	Selective, Stable, Biasâ€Free, and Efficient Solar Hydrogen Peroxide Production on Inorganic Layered Materials. Advanced Functional Materials, 2022, 32, .	14.9	19
65	Strong O 2pâ€“Fe 3d Hybridization Observed in Solution-Grown Hematite Films by Soft X-ray Spectroscopies. Journal of Physical Chemistry B, 2018, 122, 927-932.	2.6	18
66	In-situ synthesis, local structure, photoelectrochemical property of Fe-intercalated titanate nanotube. International Journal of Hydrogen Energy, 2012, 37, 11081-11089.	7.1	12
67	Photocatalytic selective oxidation of the terminal methyl group of dodecane with molecular oxygen over atomically dispersed Ti in a mesoporous SiO2 matrix. Green Chemistry, 2013, 15, 3387.	9.0	10
68	A method for synthesizing ZnOâ€“carbonaceous species nanocomposites, and their conversion to quasi-single crystal mesoporous ZnO nanostructures. RSC Advances, 2012, 2, 566-572.	3.6	8
69	Facile fabrication of two-dimensional inorganic nanostructures and their conjugation to nanocrystals. Journal of Materials Chemistry C, 2013, 1, 4497.	5.5	8
70	Alkali-Metal-Mediated Reversible Chemical Hydrogen Storage Using Seawater. Jacs Au, 2021, 1, 2339-2348.	7.9	6
71	A Method for Modifying the Crystalline Nature and Texture of ZnO Nanostructure Surfaces. Crystal Growth and Design, 2011, 11, 5615-5620.	3.0	5
72	Light-Induced Cleaning of CdS and ZnS Nanoparticles: Superiority to Annealing as a Postsynthetic Treatment of Functional Nanoparticles. Journal of Physical Chemistry C, 2012, 116, 15427-15431.	3.1	3

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73	Photochemistry: A Stable and Efficient Hematite Photoanode in a Neutral Electrolyte for Solar Water Splitting: Towards Stability Engineering (Adv. Energy Mater. 13/2014). Advanced Energy Materials, 2014, 4, n/a-n/a.	19.5	3
74	Spontaneous stepwise formation of polar-facet-dominant ZnO crystals for enhanced catalytic H2O2 generation. Applied Surface Science, 2021, 561, 150061.	6.1	3