# Ji-Wook Jang

## List of Publications by Citations



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|---|---|---|---|
| 76 papers | 6,058 citations | 43 h-index | 77 g-index |
| 81 ext. papers | 6,959 ext. citations | 11.7 avg, IF | 5.88 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 76 | Single-crystalline, wormlike hematite photoanodes for efficient solar water splitting. *Scientific Reports*, **2013**, 3, 2681 | 4.9 | 519 |
| 75 | Toward practical solar hydrogen production - an artificial photosynthetic leaf-to-farm challenge. *Chemical Society Reviews*, **2019**, 48, 1908-1971 | 58.5 | 415 |
| 74 | Phosphate doping into monoclinic BiVO4 for enhanced photoelectrochemical water oxidation activity. *Angewandte Chemie - International Edition*, **2012**, 51, 3147-51 | 16.4 | 364 |
| 73 | Enabling unassisted solar water splitting by iron oxide and silicon. *Nature Communications*, **2015**, 6, 7447 | 17.4 | 359 |
| 72 | Fabrication of CaFe2O4/TaON heterojunction photoanode for photoelectrochemical water oxidation. *Journal of the American Chemical Society*, **2013**, 135, 5375-83 | 16.4 | 261 |
| 71 | Hetero-type dual photoanodes for unbiased solar water splitting with extended light harvesting. *Nature Communications*, **2016**, 7, 13380 | 17.4 | 197 |
| 70 | 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, 11820-9 | 16.7 | 172 |
| 69 | Carbon-doped ZnO nanostructures synthesized using vitamin C for visible light photocatalysis. *CrystEngComm*, **2010**, 12, 3929 | 3.3 | 162 |
| 68 | Understanding the origin of photoelectrode performance enhancement by probing surface kinetics. *Chemical Science*, **2016**, 7, 3347-3354 | 9.4 | 147 |
| 67 | 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 | 6.7 | 146 |
| 66 | Defective ZnFe□□ nanorods with oxygen vacancy for photoelectrochemical water splitting. *Nanoscale*, **2015**, 7, 19144-51 | 7.7 | 138 |
| 65 | Three-dimensional type II ZnO/ZnSe heterostructures and their visible light photocatalytic activities. *Langmuir*, **2011**, 27, 10243-50 | 4 | 137 |
| 64 | Precursor effects of citric acid and citrates on ZnO crystal formation. *Langmuir*, **2009**, 25, 3825-31 | 4 | 134 |
| 63 | High-Performance Hydrogen Evolution by Ru Single Atoms and Nitrided-Ru Nanoparticles Implanted on N-Doped Graphitic Sheet. *Advanced Energy Materials*, **2019**, 9, 1900931 | 21.8 | 131 |
| 62 | Selective CO production by Au coupled ZnTe/ZnO in the photoelectrochemical CO2 reduction system. *Energy and Environmental Science*, **2015**, 8, 3597-3604 | 35.4 | 122 |
| 61 | A highly efficient transition metal nitride-based electrocatalyst for oxygen reduction reaction: TiN on a CNT□graphene hybrid support. *Journal of Materials Chemistry A*, **2013**, 1, 8007 | 13 | 105 |
| 60 | Improved photoelectrochemical activity of CaFe2O4/BiVO4 heterojunction photoanode by reduced surface recombination in solar water oxidation. *ACS Applied Materials & Interfaces*, **2014**, 6, 17762-9 | 9.5 | 103 |

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| 59 | Highly Efficient and Stable Cadmium Chalcogenide Quantum Dot/ZnO Nanowires for Photoelectrochemical Hydrogen Generation. *Chemistry of Materials*, **2013**, 25, 184-189 | 9.6 | 96 |
| 58 | A Stable and Efficient Hematite Photoanode in a Neutral Electrolyte for Solar Water Splitting: Towards Stability Engineering. *Advanced Energy Materials*, **2014**, 4, 1400476 | 21.8 | 89 |
| 57 | Research Update: Strategies for efficient photoelectrochemical water splitting using metal oxide photoanodes. *APL Materials*, **2014**, 2, 010703 | 5.7 | 87 |
| 56 | Graphene–carbon nanotube composite as an effective conducting scaffold to enhance the photoelectrochemical water oxidation activity of a hematite film. *RSC Advances*, **2012**, 2, 9415 | 3.7 | 86 |
| 55 | Awakening Solar Water-Splitting Activity of ZnFe2O4 Nanorods by Hybrid Microwave Annealing. *Advanced Energy Materials*, **2015**, 5, 1401933 | 21.8 | 85 |
| 54 | Porous ZnO-ZnSe nanocomposites for visible light photocatalysis. *Nanoscale*, **2012**, 4, 2066-71 | 7.7 | 85 |
| 53 | Exposed crystal face controlled synthesis of 3D ZnO superstructures. *Langmuir*, **2010**, 26, 14255-62 | 4 | 83 |
| 52 | Phosphate Doping into Monoclinic BiVO4 for Enhanced Photoelectrochemical Water Oxidation Activity. *Angewandte Chemie*, **2012**, 124, 3201-3205 | 3.6 | 82 |
| 51 | Tree branch-shaped cupric oxide for highly effective photoelectrochemical water reduction. *Nanoscale*, **2015**, 7, 7624-31 | 7.7 | 80 |
| 50 | Mo-Compound/CNT-Graphene Composites as Efficient Catalytic Electrodes for Quantum-Dot-Sensitized Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1300775 | 21.8 | 79 |
| 49 | Observation and Alteration of Surface States of Hematite Photoelectrodes. *Journal of Physical Chemistry C*, **2014**, 118, 17054-17059 | 3.8 | 79 |
| 48 | Enhancing Charge Carrier Lifetime in Metal Oxide Photoelectrodes through Mild Hydrogen Treatment. *Advanced Energy Materials*, **2017**, 7, 1701536 | 21.8 | 78 |
| 47 | Anion-Doped Mixed Metal Oxide Nanostructures Derived from Layered Double Hydroxide as Visible Light Photocatalysts. *Advanced Functional Materials*, **2013**, 23, 2348-2356 | 15.6 | 75 |
| 46 | Photoelectrochemical water splitting over ordered honeycomb hematite electrodes stabilized by alumina shielding. *Energy and Environmental Science*, **2012**, 5, 6375-6382 | 35.4 | 75 |
| 45 | Aqueous-solution route to zinc telluride films for application to CO2 reduction. *Angewandte Chemie - International Edition*, **2014**, 53, 5852-7 | 16.4 | 72 |
| 44 | Key Strategies to Advance the Photoelectrochemical Water Splitting Performance of α-Fe2O3 Photoanode. *ChemCatChem*, **2019**, 11, 157-179 | 5.2 | 71 |
| 43 | A novel role of three dimensional graphene foam to prevent heater failure during boiling. *Scientific Reports*, **2013**, 3, 1960 | 4.9 | 68 |
| 42 | Enhanced Photocatalytic Hydrogen Production from Water–Methanol Solution by Nickel Intercalated into Titanate Nanotube. *Journal of Physical Chemistry C*, **2009**, 113, 8990-8996 | 3.8 | 66 |

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| 41 | Self-assembled foam-like graphene networks formed through nucleate boiling. *Scientific Reports*, **2013**, 3, 1396 | 4.9 | 65 |
| 40 | Fabrication of graphene-based electrode in less than a minute through hybrid microwave annealing. *Scientific Reports*, **2014**, 4, 5492 | 4.9 | 56 |
| 39 | Palladium oxide as a novel oxygen evolution catalyst on BiVO4 photoanode for photoelectrochemical water splitting. *Journal of Catalysis*, **2014**, 317, 126-134 | 7.3 | 56 |
| 38 | TiN nanoparticles on CNT-graphene hybrid support as noble-metal-free counter electrode for quantum-dot-sensitized solar cells. *ChemSusChem*, **2013**, 6, 261-7 | 8.3 | 49 |
| 37 | Demonstration of a 50 cm2 BiVO4 tandem photoelectrochemical-photovoltaic water splitting device. *Sustainable Energy and Fuels*, **2019**, 3, 2366-2379 | 5.8 | 48 |
| 36 | Photocatalytic overall water splitting with dual-bed system under visible light irradiation. *International Journal of Hydrogen Energy*, **2009**, 34, 3243-3249 | 6.7 | 47 |
| 35 | Formation of amorphous zinc citrate spheres and their conversion to crystalline ZnO nanostructures. *Langmuir*, **2011**, 27, 371-8 | 4 | 45 |
| 34 | 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 | 3.8 | 44 |
| 33 | Single-Crystalline Thin Films for Studying Intrinsic Properties of BiFeO3−SrTiO3 Solid Solution Photoelectrodes in Solar Energy Conversion. *Chemistry of Materials*, **2015**, 27, 6635-6641 | 9.6 | 40 |
| 32 | 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 | 3.5 | 40 |
| 31 | Solution-based fabrication of ZnO/ZnSe heterostructure nanowire arrays for solar energy conversion. *Journal of Materials Chemistry*, **2011**, 21, 17816 | | 36 |
| 30 | 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 | 35.4 | 33 |
| 29 | High-performance and stable photoelectrochemical water splitting cell with organic-photoactive-layer-based photoanode. *Nature Communications*, **2020**, 11, 5509 | 17.4 | 33 |
| 28 | Superaerophobic hydrogels for enhanced electrochemical and photoelectrochemical hydrogen production. *Science Advances*, **2020**, 6, eaaz3944 | 14.3 | 31 |
| 27 | Tailorable Au Nanoparticles Embedded in Epitaxial TiO Thin Films for Tunable Optical Properties. *ACS Applied Materials & Interfaces*, **2018**, 10, 32895-32902 | 9.5 | 29 |
| 26 | Photocatalytic synthesis of pure and water-dispersible graphene monosheets. *Chemistry - A European Journal*, **2012**, 18, 2762-7 | 4.8 | 27 |
| 25 | Self-assembled gold nanoparticle-mixed metal oxide nanocomposites for self-sensitized dye degradation under visible light irradiation. *Langmuir*, **2012**, 28, 17530-6 | 4 | 26 |
| 24 | Room temperature synthesis and optical properties of small diameter (5 nm) ZnO nanorod arrays. *Nanoscale*, **2010**, 2, 2199-202 | 7.7 | 26 |

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| 23 | N-Doped ZnS Nanoparticles Prepared through an Inorganic–Organic Hybrid Complex ZnS(piperazine)0.5. *Journal of Physical Chemistry C*, **2009**, 113, 20445-20451 | 3.8 | 26 |
| 22 | Unassisted solar lignin valorisation using a compartmented photo-electro-biochemical cell. *Nature Communications*, **2019**, 10, 5123 | 17.4 | 25 |
| 21 | Aqueous-Solution Route to Zinc Telluride Films for Application to CO2 Reduction. *Angewandte Chemie*, **2014**, 126, 5962-5967 | 3.6 | 24 |
| 20 | Self-Assembled Heteroepitaxial Oxide Nanocomposite for Photoelectrochemical Solar Water Oxidation. *Chemistry of Materials*, **2016**, 28, 3017-3023 | 9.6 | 23 |
| 19 | 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, 4588-94 | 9.5 | 21 |
| 18 | High performance H2O2 production achieved by sulfur-doped carbon on CdS photocatalyst via inhibiting reverse H2O2 decomposition. *Applied Catalysis B: Environmental*, **2021**, 284, 119690 | 21.8 | 18 |
| 17 | Immobilizing single atom catalytic sites onto highly reduced carbon hosts: FeN4/CNT as a durable oxygen reduction catalyst for Na–air batteries. *Journal of Materials Chemistry A*, **2020**, 8, 18891-18902 | 13 | 17 |
| 16 | Nature of Nitrogen Incorporation in BiVO4 Photoanodes through Chemical and Physical Methods. *Solar Rrl*, **2020**, 4, 1900290 | 7.1 | 14 |
| 15 | Phosphomolybdic Acid as a Catalyst for Oxidative Valorization of Biomass and Its Application as an Alternative Electron Source. *ACS Catalysis*, **2020**, 10, 2060-2068 | 13.1 | 13 |
| 14 | In-situ synthesis, local structure, photoelectrochemical property of Fe-intercalated titanate nanotube. *International Journal of Hydrogen Energy*, **2012**, 37, 11081-11089 | 6.7 | 10 |
| 13 | Strong O 2p-Fe 3d Hybridization Observed in Solution-Grown Hematite Films by Soft X-ray Spectroscopies. *Journal of Physical Chemistry B*, **2018**, 122, 927-932 | 3.4 | 10 |
| 12 | 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 | 10 | 9 |
| 11 | Unassisted photocatalytic H2O2 production under visible light by fluorinated polymer-TiO2 heterojunction. *Chemical Engineering Journal*, **2021**, 418, 129346 | 14.7 | 9 |
| 10 | Facile fabrication of two-dimensional inorganic nanostructures and their conjugation to nanocrystals. *Journal of Materials Chemistry C*, **2013**, 1, 4497 | 7.1 | 7 |
| 9 | A method for synthesizing ZnO–carbonaceous species nanocomposites, and their conversion to quasi-single crystal mesoporous ZnO nanostructures. *RSC Advances*, **2012**, 2, 566-572 | 3.7 | 7 |
| 8 | A Method for Modifying the Crystalline Nature and Texture of ZnO Nanostructure Surfaces. *Crystal Growth and Design*, **2011**, 11, 5615-5620 | 3.5 | 5 |
| 7 | 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 | 21.8 | 3 |
| 6 | 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 | 3.8 | 3 |

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| 5 | Direct propylene epoxidation with oxygen using a photo-electro-heterogeneous catalytic system. *Nature Catalysis*, **2022**, 5, 37-44 | 36.5 | 3 |
| 4 | Selective, Stable, Bias-Free, and Efficient Solar Hydrogen Peroxide Production on Inorganic Layered Materials. *Advanced Functional Materials*,2110412 | 15.6 | 2 |
| 3 | Alkali-Metal-Mediated Reversible Chemical Hydrogen Storage Using Seawater.. *Jacs Au*, **2021**, 1, 2339-2348 | | 2 |
| 2 | Unassisted selective solar hydrogen peroxide production by an oxidised buckypaper-integrated perovskite photocathode. *Nature Communications*, **2021**, 12, 6644 | 17.4 | 2 |
| 1 | Spontaneous stepwise formation of polar-facet-dominant ZnO crystals for enhanced catalytic H2O2 generation. *Applied Surface Science*, **2021**, 561, 150061 | 6.7 | 1 |