

Hyun Soo Han

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

40
papers

3,418
citations

22
h-index

42
g-index

42
ext. papers

4,026
ext. citations

10.7
avg, IF

5.15
L-index

#	Paper	IF	Citations
40	Activating and optimizing MoS ₂ basal planes for hydrogen evolution through the formation of strained sulphur vacancies. <i>Nature Materials</i> , 2016 , 15, 48-53	27	1563
39	Electrochemical generation of sulfur vacancies in the basal plane of MoS for hydrogen evolution. <i>Nature Communications</i> , 2017 , 8, 15113	17.4	396
38	Boosting the solar water oxidation performance of a BiVO ₄ photoanode by crystallographic orientation control. <i>Energy and Environmental Science</i> , 2018 , 11, 1299-1306	35.4	227
37	Nb-Doped TiO ₂ : A New Compact Layer Material for TiO ₂ Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 6878-6882	3.8	197
36	Enhancing Low-Bias Performance of Hematite Photoanodes for Solar Water Splitting by Simultaneous Reduction of Bulk, Interface, and Surface Recombination Pathways. <i>Advanced Energy Materials</i> , 2016 , 6, 1501840	21.8	125
35	Spontaneous generation of hydrogen peroxide from aqueous microdroplets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 19294-19298	11.5	119
34	One-Step Hydrothermal Deposition of Ni:FeOOH onto Photoanodes for Enhanced Water Oxidation. <i>ACS Energy Letters</i> , 2016 , 1, 624-632	20.1	84
33	Enhancing Mo:BiVO ₄ Solar Water Splitting with Patterned Au Nanospheres by Plasmon-Induced Energy Transfer. <i>Advanced Energy Materials</i> , 2018 , 8, 1701765	21.8	60
32	Functional Multilayered Transparent Conducting Oxide Thin Films for Photovoltaic Devices. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 1083-1087	3.8	56
31	A tree-like nanoporous WO ₃ photoanode with enhanced charge transport efficiency for photoelectrochemical water oxidation. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 12920-12926	13	51
30	Nanowire-Based Three-Dimensional Transparent Conducting Oxide Electrodes for Extremely Fast Charge Collection. <i>Advanced Energy Materials</i> , 2011 , 1, 829-835	21.8	48
29	Tailoring the Morphology and Structure of Nanosized Zn ₂ SiO ₄ : Mn ²⁺ Phosphors Using the Hydrothermal Method and Their Luminescence Properties. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 10330-10335	3.8	45
28	Nanostructured Ti-doped hematite (Fe ₂ O ₃) photoanodes for efficient photoelectrochemical water oxidation. <i>International Journal of Hydrogen Energy</i> , 2014 , 39, 17501-17507	6.7	39
27	Direct printing synthesis of self-organized copper oxide hollow spheres on a substrate using copper(II) complex ink: gas sensing and photoelectrochemical properties. <i>Langmuir</i> , 2014 , 30, 700-9	4	37
26	Indium Oxide Nanowire Array Based CdSe/CdS/TiO ₂ One-Dimensional Heterojunction Photoelectrode for Enhanced Solar Hydrogen Production. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 1161-1168	8.3	30
25	1-D structured flexible supercapacitor electrodes with prominent electronic/ionic transport capabilities. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 268-74	9.5	29
24	Aligned Photoelectrodes with Large Surface Area Prepared by Pulsed Laser Deposition. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 8102-8110	3.8	28

23	A Newly Designed Nb-Doped TiO ₂ /Al-Doped ZnO Transparent Conducting Oxide Multilayer for Electrochemical Photoenergy Conversion Devices. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 13867-13871	3.8	28
22	Condensing water vapor to droplets generates hydrogen peroxide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 30934-30941	11.5	28
21	Surface-area-tuned, quantum-dot-sensitized heterostructured nanoarchitectures for highly efficient photoelectrodes. <i>Nano Research</i> , 2014 , 7, 144-153	10	24
20	Tin doped indium oxide core-TiO ₂ shell nanowires on stainless steel mesh for flexible photoelectrochemical cells. <i>Applied Physics Letters</i> , 2012 , 100, 084104	3.4	23
19	Retarded Charge-Carrier Recombination in Photoelectrochemical Cells from Plasmon-Induced Resonance Energy Transfer. <i>Advanced Energy Materials</i> , 2020 , 10, 2000570	21.8	22
18	CdS-sensitized 1-D single-crystalline anatase TiO ₂ nanowire arrays for photoelectrochemical hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2015 , 40, 863-869	6.7	18
17	Facile and controllable surface-functionalization of TiO ₂ nanotubes array for highly-efficient photoelectrochemical water-oxidation. <i>Journal of Catalysis</i> , 2018 , 365, 138-144	7.3	16
16	Fabrication of an ingenious metallic asymmetric supercapacitor by the integration of anodic iron oxide and cathodic nickel phosphide. <i>Applied Surface Science</i> , 2020 , 511, 145424	6.7	14
15	Facile hydrothermal synthesis of InVO ₄ microspheres and their visible-light photocatalytic activities. <i>Materials Letters</i> , 2012 , 72, 98-100	3.3	13
14	In ₂ O ₃ :Sn/TiO ₂ /CdS heterojunction nanowire array photoanode in photoelectrochemical cells. <i>International Journal of Hydrogen Energy</i> , 2014 , 39, 17473-17480	6.7	13
13	(0 2 0)-Textured tungsten trioxide nanostructure with enhanced photoelectrochemical activity. <i>Journal of Catalysis</i> , 2020 , 389, 328-336	7.3	11
12	TiO ₂ nanocrystals shell layer on highly conducting indium tin oxide nanowire for photovoltaic devices. <i>Nanoscale</i> , 2013 , 5, 3520-6	7.7	11
11	Enhancing the Densification of Nanocrystalline TiO ₂ by Reduction in Spark Plasma Sintering. <i>Journal of the American Ceramic Society</i> , 2010 , 93, 993-997	3.8	11
10	A Hierarchically Organized Photoelectrode Architecture for Highly Efficient CdS/CdSe-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2014 , 4, 1300395	21.8	10
9	Photo-annealed amorphous titanium oxide for perovskite solar cells. <i>Nanoscale</i> , 2019 , 11, 19488-19496	7.7	9
8	Facile fabrication of nanotubular heterostructure for enhanced photoelectrochemical performance. <i>Ceramics International</i> , 2021 , 47, 3972-3977	5.1	9
7	Point defect-reduced colloidal SnO electron transport layers for stable and almost hysteresis-free perovskite solar cells.. <i>RSC Advances</i> , 2019 , 9, 7334-7337	3.7	7
6	Enhancing Solar Water Splitting of Textured BiVO ₄ by Dual Effect of a Plasmonic Silver Nanoshell: Plasmon-Induced Light Absorption and Enhanced Hole Transport. <i>ACS Applied Energy Materials</i> , 2020 , 3, 11886-11892	6.1	4

5	Tunable Dielectric and Thermal Properties of Oxide Dielectrics via Substrate Biasing in Plasma-Enhanced Atomic Layer Deposition. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 44912-44918	9.5	3
4	Dual textured BiVO ₄ /Sb:SnO ₂ heterostructure for enhanced photoelectrochemical Water-splitting. <i>Chemical Engineering Journal</i> , 2022 , 435, 135183	14.7	2
3	Sharp-edged nanoflakes array of CuO with enhanced optical and charge transport properties for Bias-Free tandem solar Water-splitting. <i>Applied Surface Science</i> , 2022 , 585, 152632	6.7	2
2	Facile Preparation of TiO ₂ Nanobranh/Nanoparticle Hybrid Architecture with Enhanced Light Harvesting Properties for Dye-Sensitized Solar Cells. <i>Journal of Nanomaterials</i> , 2015 , 2015, 1-9	3.2	1
1	3D Transparent Conducting Oxides: Nanowire-Based Three-Dimensional Transparent Conducting Oxide Electrodes for Extremely Fast Charge Collection (Adv. Energy Mater. 5/2011). <i>Advanced Energy Materials</i> , 2011 , 1, 702-702	21.8	