

Wooyul Kim

List of Publications by Year in descending order

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72
papers

6,113
citations

76326

40
h-index

82547

72
g-index

73
all docs

73
docs citations

73
times ranked

8571
citing authors

#	ARTICLE	IF	CITATIONS
1	Changes in levels of N-nitrosamine formed from amine-containing compounds during chloramination via photocatalytic pretreatment with immobilized TiO ₂ : Effect of source water and pH. <i>Journal of Hazardous Materials</i> , 2022, 424, 127398.	12.4	1
2	A two-photon tandem black phosphorus quantum dot-sensitized BiVO ₄ photoanode for solar water splitting. <i>Energy and Environmental Science</i> , 2022, 15, 672-679.	30.8	64
3	Interface rich CuO/Al ₂ O ₃ /CuO surface for selective ethylene production from electrochemical CO ₂ conversion. <i>Energy and Environmental Science</i> , 2022, 15, 2397-2409.	30.8	54
4	High-Valent Iron Redox-Mediated Photoelectrochemical Water Oxidation. <i>ACS Energy Letters</i> , 2022, 7, 59-66.	17.4	10
5	Gas Diffusion through Nanoporous Channels of Graphene Oxide and Reduced Graphene Oxide Membranes. <i>ACS Applied Nano Materials</i> , 2022, 5, 7029-7035.	5.0	3
6	Investigation of the AgCl Formation Mechanism on the Ag Wire Surface for the Fabrication of a Marine Low-Frequency-Electric-Field-Detection Ag/AgCl Sensor Electrode. <i>ACS Omega</i> , 2022, 7, 25110-25121.	3.5	6
7	Visible-Light Activation of a Dissolved Organic Matter-TiO ₂ Complex Mediated <i>via</i> Ligand-to-Metal Charge Transfer. <i>Environmental Science & Technology</i> , 2022, 56, 10829-10837.	10.0	17
8	Oxygen vacancy engineering of cerium oxide for the selective photocatalytic oxidation of aromatic pollutants. <i>Journal of Hazardous Materials</i> , 2021, 404, 123976.	12.4	63
9	Three-dimensional construction of electrode materials using TiC nanoarray substrates for highly efficient electrogeneration of sulfate radicals and molecular hydrogen in a single electrolysis cell. <i>Journal of Materials Chemistry A</i> , 2021, 9, 11705-11717.	10.3	5
10	Formamidine disulfide oxidant as a localised electron scavenger for >20% perovskite solar cell modules. <i>Energy and Environmental Science</i> , 2021, 14, 4903-4914.	30.8	63
11	Unexpected discovery of superoxide radical generation by oxygen vacancies containing biomass derived granular activated carbon. <i>Water Research</i> , 2021, 190, 116757.	11.3	17
12	Selective electrochemical reduction of nitric oxide to hydroxylamine by atomically dispersed iron catalyst. <i>Nature Communications</i> , 2021, 12, 1856.	12.8	106
13	Unusual Hole Transfer Dynamics of the NiO Layer in Methylammonium Lead Tri-iodide Absorber Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 2770-2779.	4.6	12
14	Crystal phase-dependent generation of mobile OH radicals on TiO ₂ : Revisiting the photocatalytic oxidation mechanism of anatase and rutile. <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119905.	20.2	61
15	Photocatalytic exoskeleton: Chitin nanofiber for retrievable and sustainable TiO ₂ carriers for the decomposition of various pollutants. <i>Carbohydrate Polymers</i> , 2021, 271, 118413.	10.2	7
16	Local pH induced electrochemical CO ₂ reduction on nanostructured Ag for adjustable syngas composition. <i>Electrochimica Acta</i> , 2021, 395, 139190.	5.2	12
17	Biomimetic photocatalysts for the conversion of aqueous- and gas-phase nitrogen species to molecular nitrogen <i>via</i> denitrification and ammonia oxidation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19179-19205.	10.3	6
18	A highly active, robust photocatalyst heterogenized in discrete cages of metal-organic polyhedra for CO ₂ reduction. <i>Energy and Environmental Science</i> , 2020, 13, 519-526.	30.8	59

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19	Mechanisms of Two-Electron and Four-Electron Electrochemical Oxygen Reduction Reactions at Nitrogen-Doped Reduced Graphene Oxide. <i>ACS Catalysis</i> , 2020, 10, 852-863.	11.2	184
20	Photocatalytic degradation of phenolic compounds of defect engineered Fe ₃ O ₄ : An alternative approach to solar activation via ligand-to-metal charge transfer. <i>Applied Surface Science</i> , 2020, 509, 144853.	6.1	10
21	Enhancement of cesium adsorption on Prussian blue by TiO ₂ photocatalysis: Effect of the TiO ₂ /PB ratio. <i>Journal of Water Process Engineering</i> , 2020, 38, 101571.	5.6	8
22	Detailed Characterization of an Annealed Reduced Graphene Oxide Catalyst for Selective Peroxide Formation Activity. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 46439-46445.	8.0	4
23	Time-resolved observation of C-C coupling intermediates on Cu electrodes for selective electrochemical CO ₂ reduction. <i>Energy and Environmental Science</i> , 2020, 13, 4301-4311.	30.8	197
24	Underestimation of Platinum Electrocatalysis Induced by Carbon Monoxide Evolved from Graphite Counter Electrodes. <i>ACS Catalysis</i> , 2020, 10, 10773-10783.	11.2	26
25	Operando Spectroscopic Investigation of a Boron-Doped CuO Catalyst and Its Role in Selective Electrochemical C-C Coupling. <i>ACS Applied Energy Materials</i> , 2020, 3, 11343-11349.	5.1	28
26	Ag(I) ions working as a hole-transfer mediator in photoelectrocatalytic water oxidation on WO ₃ film. <i>Nature Communications</i> , 2020, 11, 967.	12.8	66
27	Nafion-Assisted Noncovalent Assembly of Molecular Sensitizers and Catalysts for Sustained Photoreduction of CO ₂ to CO. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 3709-3717.	6.7	10
28	Titanium dioxide surface modified with both palladium and fluoride as an efficient photocatalyst for the degradation of urea. <i>Separation and Purification Technology</i> , 2019, 209, 580-587.	7.9	26
29	Enhanced photoelectrochemical and hydrogen production activity of aligned CdS nanowire with anisotropic transport properties. <i>Applied Surface Science</i> , 2019, 463, 339-347.	6.1	37
30	Organometallic Iridium(III) Complex Sensitized Ternary Hybrid Photocatalyst for CO ₂ to CO Conversion. <i>Chemistry - A European Journal</i> , 2019, 25, 13609-13623.	3.3	14
31	Formation of TiO ₂ @Carbon Core/Shell Nanocomposites from a Single Molecular Layer of Aromatic Compounds for Photocatalytic Hydrogen Peroxide Generation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41196-41203.	8.0	24
32	Thorn-like TiO ₂ nanoarrays with broad spectrum antimicrobial activity through physical puncture and photocatalytic action. <i>Scientific Reports</i> , 2019, 9, 13697.	3.3	19
33	Black phosphorene as a hole extraction layer boosting solar water splitting of oxygen evolution catalysts. <i>Nature Communications</i> , 2019, 10, 2001.	12.8	222
34	Role of phosphate in ruthenium-complex-sensitized TiO ₂ system for hydrogen production: Mechanism and kinetics. <i>Catalysis Today</i> , 2019, 335, 236-242.	4.4	13
35	Carbon Dioxide Dimer Radical Anion as Surface Intermediate of Photoinduced CO ₂ Reduction at Aqueous Cu and CdSe Nanoparticle Catalysts by Rapid-Scan FT-IR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2018, 140, 4363-4371.	13.7	84
36	Ostwald Ripening Driven Exfoliation to Ultrathin Layered Double Hydroxides Nanosheets for Enhanced Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 44518-44526.	8.0	53

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37	Photocatalytic enhancement of cesium removal by Prussian blue-deposited TiO ₂ . Journal of Hazardous Materials, 2018, 357, 449-456.	12.4	23
38	Active {001} Facet Exposed TiO ₂ Nanotubes Photocatalyst Filter for Volatile Organic Compounds Removal: From Material Development to Commercial Indoor Air Cleaner Application. Environmental Science & Technology, 2018, 52, 9330-9340.	10.0	121
39	An antenna/spacer/reflector based Au/BiVO ₄ /WO ₃ /Au nanopatterned photoanode for plasmon-enhanced photoelectrochemical water splitting. Applied Catalysis B: Environmental, 2018, 237, 763-771.	20.2	70
40	Is surface fluorination of TiO ₂ effective for water purification? The degradation vs. mineralization of phenolic pollutants. Catalysis Today, 2017, 282, 24-30.	4.4	25
41	Investigating the Unrevealed Photocatalytic Activity and Stability of Nanostructured Brookite TiO ₂ Film as an Environmental Photocatalyst. ACS Applied Materials & Interfaces, 2017, 9, 16252-16260.	8.0	63
42	Environmentally benign synthesis of CuInS ₂ /ZnO heteronanorods: visible light activated photocatalysis of organic pollutant/bacteria and study of its mechanism. Photochemical and Photobiological Sciences, 2017, 16, 1792-1800.	2.9	17
43	Visible-light-induced activation of periodate that mimics dye-sensitization of TiO ₂ : Simultaneous decolorization of dyes and production of oxidizing radicals. Applied Catalysis B: Environmental, 2017, 203, 475-484.	20.2	97
44	Coupling carbon dioxide reduction with water oxidation in nanoscale photocatalytic assemblies. Chemical Society Reviews, 2016, 45, 3221-3243.	38.1	124
45	Hierarchical Inorganic Assemblies for Artificial Photosynthesis. Accounts of Chemical Research, 2016, 49, 1634-1645.	15.6	94
46	Harnessing and storing visible light using a heterojunction of WO ₃ and CdS for sunlight-free catalysis. Photochemical and Photobiological Sciences, 2016, 15, 1006-1011.	2.9	13
47	Anodic TiO ₂ nanotube layer directly formed on the inner surface of Ti pipe for a tubular photocatalytic reactor. Applied Catalysis A: General, 2016, 521, 174-181.	4.3	17
48	Mechanistic Investigations of Water Oxidation by a Molecular Cobalt Oxide Analogue: Evidence for a Highly Oxidized Intermediate and Exclusive Terminal Oxo Participation. Journal of the American Chemical Society, 2015, 137, 12865-12872.	13.7	124
49	Directed Assembly of Cuprous Oxide Nanocatalyst for CO ₂ Reduction Coupled to Heterobinuclear ZrOCo ^{II} Light Absorber in Mesoporous Silica. ACS Catalysis, 2015, 5, 5627-5635.	11.2	32
50	N-doped TiO ₂ nanotubes coated with a thin TaO _x N _y layer for photoelectrochemical water splitting: dual bulk and surface modification of photoanodes. Energy and Environmental Science, 2015, 8, 247-257.	30.8	155
51	Inorganic core-shell assemblies for closing the artificial photosynthetic cycle. Faraday Discussions, 2014, 176, 233-249.	3.2	29
52	Molecular-Level Understanding of the Photocatalytic Activity Difference between Anatase and Rutile Nanoparticles. Angewandte Chemie - International Edition, 2014, 53, 14036-14041.	13.8	143
53	Solar production of H ₂ O ₂ on reduced graphene oxide-TiO ₂ hybrid photocatalysts consisting of earth-abundant elements only. Energy and Environmental Science, 2014, 7, 4023-4028.	30.8	311
54	Light Induced Carbon Dioxide Reduction by Water at Binuclear ZrOCo ^{II} Unit Coupled to Ir Oxide Nanocluster Catalyst. Journal of the American Chemical Society, 2014, 136, 11034-11042.	13.7	85

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55	Visible light photocatalytic activities of nitrogen and platinum-doped TiO ₂ : Synergistic effects of co-dopants. <i>Applied Catalysis B: Environmental</i> , 2014, 147, 642-650.	20.2	69
56	Ruthenium(ii) complexes incorporating the bidentate ligand containing an imidazolium moiety: synthesis, characterization, and electrochemical properties and their application in a visible-light induced hydrogen-evolving system. <i>New Journal of Chemistry</i> , 2013, 37, 3174.	2.8	16
57	TiO ₂ nanodisks designed for Li-ion batteries: a novel strategy for obtaining an ultrathin and high surface area anode material at the ice interface. <i>Energy and Environmental Science</i> , 2013, 6, 2932.	30.8	97
58	Promoting water photooxidation on transparent WO ₃ thin films using an alumina overlayer. <i>Energy and Environmental Science</i> , 2013, 6, 3732.	30.8	134
59	Surface modification of TiO ₂ photocatalyst for environmental applications. <i>Journal of Photochemistry and Photobiology C: Photochemistry Reviews</i> , 2013, 15, 1-20.	11.6	858
60	Role of Interparticle Charge Transfers in Agglomerated Photocatalyst Nanoparticles: Demonstration in Aqueous Suspension of Dye-Sensitized TiO ₂ . <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 189-194.	4.6	93
61	Superior Electron Transport and Photocatalytic Abilities of Metal-Nanoparticle-Loaded TiO ₂ Superstructures. <i>Journal of Physical Chemistry C</i> , 2012, 116, 25444-25453.	3.1	135
62	Nafion layer-enhanced photosynthetic conversion of CO ₂ into hydrocarbons on TiO ₂ nanoparticles. <i>Energy and Environmental Science</i> , 2012, 5, 6066.	30.8	137
63	Selective Oxidative Degradation of Organic Pollutants by Singlet Oxygen-Mediated Photosensitization: Tin Porphyrin versus C ₆₀ Aminofullerene Systems. <i>Environmental Science & Technology</i> , 2012, 46, 9606-9613.	10.0	190
64	Enhanced Photocatalytic and Photoelectrochemical Activity in the Ternary Hybrid of CdS/TiO ₂ /WO ₃ through the Cascadal Electron Transfer. <i>Journal of Physical Chemistry C</i> , 2011, 115, 9797-9805.	3.1	238
65	Photochemical loading of metal nanoparticles on reduced graphene oxide sheets using phosphotungstate. <i>Carbon</i> , 2011, 49, 3454-3462.	10.3	97
66	Tin-porphyrin sensitized TiO ₂ for the production of H ₂ under visible light. <i>Energy and Environmental Science</i> , 2010, 3, 1789.	30.8	127
67	Carbon-doped TiO ₂ photocatalyst synthesized without using an external carbon precursor and the visible light activity. <i>Applied Catalysis B: Environmental</i> , 2009, 91, 355-361.	20.2	351
68	Photocatalysis of Dye-Sensitized TiO ₂ Nanoparticles with Thin Overcoat of Al ₂ O ₃ : Enhanced Activity for H ₂ Production and Dechlorination of CCl ₄ . <i>Journal of Physical Chemistry C</i> , 2009, 113, 10603-10609.	3.1	146
69	Highly enhanced photocatalytic degradation of tetramethylammonium on the hybrid catalyst of titania and MCM-41 obtained from rice husk silica. <i>Applied Catalysis B: Environmental</i> , 2009, 91, 157-164.	20.2	62
70	Visible Light Photocatalysts Based on Homogeneous and Heterogenized Tin Porphyrins. <i>Journal of Physical Chemistry C</i> , 2008, 112, 491-499.	3.1	72
71	Effect of the Agglomerated State on the Photocatalytic Hydrogen Production with in Situ Agglomeration of Colloidal TiO ₂ Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2008, 112, 20451-20457.	3.1	107
72	Solar denitrification coupled with <i>in situ</i> water splitting. <i>Energy and Environmental Science</i> , 0, ,.	30.8	21