Yun Jeong Hwang

List of Publications by Year
in descending order

116 papers	8,124 citations	53794 45 h-index	49909 87 g-index
120 all docs	120 docs citations	120 times ranked	9664 citing authors

#	Article	IF	Citations
1	Achieving Selective and Efficient Electrocatalytic Activity for CO₂ Reduction Using Immobilized Silver Nanoparticles. Journal of the American Chemical Society, 2015, 137, 13844-13850.	13.7	575
2	High Density n-Si/n-TiO₂Core/Shell Nanowire Arrays with Enhanced Photoactivity. Nano Letters, 2009, 9, 410-415.	9.1	535
3	Mixed Copper States in Anodized Cu Electrocatalyst for Stable and Selective Ethylene Production from CO₂ Reduction. Journal of the American Chemical Society, 2018, 140, 8681-8689.	13.7	397
4	Electrochemical Fragmentation of Cu₂O Nanoparticles Enhancing Selective Câ€“C Coupling from CO₂ Reduction Reaction. Journal of the American Chemical Society, 2019, 141, 4624-4633.	13.7	390
5	Photoelectrochemical Properties of TiO₂ Nanowire Arrays: A Study of the Dependence on Length and Atomic Layer Deposition Coating. ACS Nano, 2012, 6, 5060-5069.	14.6	378
6	Facile growth of aligned WO3 nanorods on FTO substrate for enhanced photoanodic water oxidation activity. Journal of Materials Chemistry A, 2013, 1, 3479.	10.3	279
7	Mesoporous Co3O4 as an electrocatalyst for water oxidation. Nano Research, 2013, 6, 47-54.	10.4	274
8	Facile CO₂ Electro-Reduction to Formate via Oxygen Bidentate Intermediate Stabilized by High-Index Planes of Bi Dendrite Catalyst. ACS Catalysis, 2017, 7, 5071-5077.	11.2	263
9	Catalystâ€“electrolyte interface chemistry for electrochemical CO₂ reduction. Chemical Society Reviews, 2020, 49, 6632-6665.	38.1	234
10	General technoeconomic analysis for electrochemical coproduction coupling carbon dioxide reduction with organic oxidation. Nature Communications, 2019, 10, 5193.	12.8	219
11	Si/InGaN Core/Shell Hierarchical Nanowire Arrays and their Photoelectrochemical Properties. Nano Letters, 2012, 12, 1678-1682.	9.1	209
12	Insight into Electrochemical CO₂ Reduction on Surface-Molecule-Mediated Ag Nanoparticles. ACS Catalysis, 2017, 7, 779-785.	11.2	205
13	Time-resolved observation of Câ€“C coupling intermediates on Cu electrodes for selective electrochemical CO₂ reduction. Energy and Environmental Science, 2020, 13, 4301-4311.	30.8	197
14	Embedding Covalency into Metal Catalysts for Efficient Electrochemical Conversion of CO₂. Journal of the American Chemical Society, 2014, 136, 11355-11361.	13.7	192
15	Potential Link between Cu Surface and Selective CO₂ Electroreduction: Perspective on Future Electrocatalyst Designs. Advanced Materials, 2020, 32, e1908398.	21.0	182
16	Insight into Charge Separation in WO₃/BiVO₄ Heterojunction for Solar Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 19780-19790.	8.0	142
17	Selective CO₂ Reduction on Zinc Electrocatalyst: The Effect of Zinc Oxidation State Induced by Pretreatment Environment. ACS Sustainable Chemistry and Engineering, 2017, 5, 11377-11386.	6.7	127
18	Epitaxial Growth of InGaN Nanowire Arrays for Light Emitting Diodes. ACS Nano, 2011, 5, 3970-3976.	14.6	118

#	ARTICLE	IF	CITATIONS
19	New challenges of electrokinetic studies in investigating the reaction mechanism of electrochemical CO₂ reduction. Journal of Materials Chemistry A, 2018, 6, 14043-14057.	10.3	118
20	Progress in development of electrocatalyst for CO₂ conversion to selective CO production. , 2020, 2, 72-98.		117
21	Simple Chemical Solution Deposition of Co₃O₄Thin Film Electrocatalyst for Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2015, 7, 24550-24555.	8.0	93
22	D-sorbitol-induced phase control of TiO2 nanoparticles and its application for dye-sensitized solar cells. Scientific Reports, 2016, 6, 20103.	3.3	93
23	Surface analysis of N-doped TiO2 nanorods and their enhanced photocatalytic oxidation activity. Applied Catalysis B: Environmental, 2017, 204, 209-215.	20.2	86
24	Thermal Transformation of Molecular Ni²⁺â€“N₄ Sites for Enhanced CO₂ Electroreduction Activity. ACS Catalysis, 2020, 10, 10920-10931.	11.2	81
25	Cyclic two-step electrolysis for stable electrochemical conversion of carbon dioxide to formate. Nature Communications, 2019, 10, 3919.	12.8	76
26	High crystallinity design of Ir-based catalysts drives catalytic reversibility for water electrolysis and fuel cells. Nature Communications, 2021, 12, 4271.	12.8	75
27	Designing Atomically Dispersed Au on Tensile-Strained Pd for Efficient CO₂ Electroreduction to Formate. Journal of the American Chemical Society, 2021, 143, 5386-5395.	13.7	74
28	Highly selective and scalable CO2 to CO - Electrolysis using coral-nanostructured Ag catalysts in zero-gap configuration. Nano Energy, 2020, 76, 105030.	16.0	73
29	Electrocatalytic Reduction of Low Concentrations of CO₂ Gas in a Membrane Electrode Assembly Electrolyzer. ACS Energy Letters, 2021, 6, 3488-3495.	17.4	73
30	Enhanced Photocurrents with ZnS Passivated Cu(In,Ga)(Se,S)₂ Photocathodes Synthesized Using a Nonvacuum Process for Solar Water Splitting. Journal of the American Chemical Society, 2016, 138, 15673-15681.	13.7	72
31	Oxygen Plasma Induced Hierarchically Structured Gold Electrocatalyst for Selective Reduction of Carbon Dioxide to Carbon Monoxide. Journal of Physical Chemistry C, 2015, 119, 883-889.	3.1	70
32	Enhancement in carbon dioxide activity and stability on nanostructured silver electrode and the role of oxygen. Applied Catalysis B: Environmental, 2016, 180, 372-378.	20.2	70
33	Toward an Effective Control of the H₂ to CO Ratio of Syngas through CO₂ Electroreduction over Immobilized Gold Nanoparticles on Layered Titanate Nanosheets. ACS Catalysis, 2018, 8, 4364-4374.	11.2	69
34	Single-atom catalysts for the oxygen evolution reaction: recent developments and future perspectives. Chemical Communications, 2020, 56, 12687-12697.	4.1	69
35	Gold catalyst reactivity for CO2 electro-reduction: From nano particle to layer. Catalysis Today, 2016, 260, 107-111.	4.4	67
36	Printable, wide band-gap chalcopyrite thin films for power generating window applications. Scientific Reports, 2014, 4, 4408.	3.3	65

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37	Metalâ€“Oxide Interfaces for Selective Electrochemical Câ€“C Coupling Reactions. ACS Energy Letters, 2019, 4, 2241-2248.	17.4	62
38	Effect of the Si/TiO₂/BiVO₄ Heterojunction on the Onset Potential of Photocurrents for Solar Water Oxidation. ACS Applied Materials & Interfaces, 2015, 7, 5788-5796.	8.0	60
39	Catalyst design strategies for stable electrochemical CO₂ reduction reaction. Journal of Materials Chemistry A, 2020, 8, 15341-15357.	10.3	58
40	Light-Induced Charge Transport within a Single Asymmetric Nanowire. Nano Letters, 2011, 11, 3755-3758.	9.1	57
41	Mass Transport Control by Surface Graphene Oxide for Selective CO Production from Electrochemical CO₂ Reduction. ACS Catalysis, 2020, 10, 3222-3231.	11.2	57
42	Effect of halides on nanoporous Zn-based catalysts for highly efficient electroreduction of CO2 to CO. Catalysis Communications, 2018, 114, 109-113.	3.3	55
43	A monolithic and standalone solar-fuel device having comparable efficiency to photosynthesis in nature. Journal of Materials Chemistry A, 2015, 3, 5835-5842.	10.3	54
44	Achieving 14.4% Alcohol-Based Solution-Processed Cu(In,Ga)(S,Se)₂ Thin Film Solar Cell through Interface Engineering. ACS Applied Materials & Interfaces, 2018, 10, 9894-9899.	8.0	54
45	Carbon-Supported IrCoO nanoparticles as an efficient and stable OER electrocatalyst for practicable CO2 electrolysis. Applied Catalysis B: Environmental, 2020, 269, 118820.	20.2	54
46	Morphology control of one-dimensional heterojunctions for highly efficient photoanodes used for solar water splitting. Journal of Materials Chemistry A, 2014, 2, 11408.	10.3	52
47	Photo-oxidation activities on Pd-doped TiO2 nanoparticles: critical PdO formation effect. Applied Catalysis B: Environmental, 2015, 165, 20-26.	20.2	40
48	Effect of Pt introduced on Ru-based electrocatalyst for oxygen evolution activity and stability. Electrochemistry Communications, 2019, 104, 106469.	4.7	40
49	Surface-Morphology-Dependent Electrolyte Effects on Gold-Catalyzed Electrochemical CO₂ Reduction. Journal of Physical Chemistry C, 2017, 121, 22637-22643.	3.1	39
50	Improved photoelectrochemical water oxidation kinetics using a TiO₂ nanorod array photoanode decorated with graphene oxide in a neutral pH solution. Physical Chemistry Chemical Physics, 2015, 17, 7714-7719.	2.8	38
51	Contributors to Enhanced CO₂ Electroreduction Activity and Stability in a Nanostructured Au Electrocatalyst. ChemSusChem, 2016, 9, 2097-2102.	6.8	38
52	Controlling the C2+ product selectivity of electrochemical CO₂reduction on an electrosprayed Cu catalyst. Journal of Materials Chemistry A, 2020, 8, 6210-6218.	10.3	37
53	Material strategies in the electrochemical nitrate reduction reaction to ammonia production. Materials Chemistry Frontiers, 2021, 5, 6803-6823.	5.9	37
54	Comparative study of catalytic activities among transition metal-doped IrO2 nanoparticles. Scientific Reports, 2018, 8, 16777.	3.3	36

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55	Highly selective and stackable electrode design for gaseous CO2 electroreduction to ethylene in a zero-gap configuration. Nano Energy, 2021, 84, 105859.	16.0	36
56	Origin of Hydrogen Incorporated into Ethylene during Electrochemical CO₂ Reduction in Membrane Electrode Assembly. ACS Energy Letters, 2022, 7, 939-945.	17.4	36
57	Chalcogenization-Derived Band Gap Grading in Solution-Processed CuIn_{<i>x</i>}Ga_{1â€“<i>x</i>}(Se,S)₂ Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 27391-27396.	8.0	34
58	Stable surface oxygen on nanostructured silver for efficient CO2 electroreduction. Catalysis Today, 2017, 288, 48-53.	4.4	34
59	A perspective on practical solar to carbon monoxide production devices with economic evaluation. Sustainable Energy and Fuels, 2020, 4, 199-212.	4.9	33
60	Electrocatalytic methane oxidation on Co3O4- incorporated ZrO2 nanotube powder. Applied Catalysis B: Environmental, 2021, 283, 119653.	20.2	33
61	Oxygen Vacancies Induced NiFe-Hydroxide as a Scalable, Efficient, and Stable Electrode for Alkaline Overall Water Splitting. ACS Sustainable Chemistry and Engineering, 2020, 8, 14071-14081.	6.7	32
62	Chiral Attachment of Styrene Mediated by Surface Dimers on Ge(100). Journal of the American Chemical Society, 2005, 127, 5016-5017.	13.7	28
63	Monolithic DSSC/CIGS tandem solar cell fabricated by a solution process. Scientific Reports, 2015, 5, 8970.	3.3	27
64	Multiple-Color-Generating Cu(In,Ga)(S,Se)₂ Thin-Film Solar Cells via Dichroic Film Incorporation for Power-Generating Window Applications. ACS Applied Materials & Interfaces, 2017, 9, 14817-14826.	8.0	27
65	A catalyst design for selective electrochemical reactions: direct production of hydrogen peroxide in advanced electrochemical oxidation. Journal of Materials Chemistry A, 2020, 8, 9859-9870.	10.3	26
66	Highly stable tandem solar cell monolithically integrating dye-sensitized and CIGS solar cells. Scientific Reports, 2016, 6, 30868.	3.3	25
67	Sloughing a Precursor Layer to Expose Active Stainless Steel Catalyst for Water Oxidation. ACS Applied Materials & Interfaces, 2018, 10, 24499-24507.	8.0	25
68	Bidentate Structures of Acetic Acid on Ge(100):â€‰ The Role of Carboxyl Oxygen. Journal of Physical Chemistry C, 2007, 111, 5941-5945.	3.1	23
69	A self-generated and degradation-resistive cratered stainless steel electrocatalyst for efficient water oxidation in a neutral electrolyte. Journal of Materials Chemistry A, 2017, 5, 19210-19219.	10.3	23
70	Turning Harmful Deposition of Metal Impurities into Activation of Nitrogen-Doped Carbon Catalyst toward Durable Electrochemical CO₂ Reduction. ACS Energy Letters, 2019, 4, 2343-2350.	17.4	23
71	Role of HA additive in quantum dot solar cell with Co[(bpy)₃]^{2+/3+}-based electrolyte. RSC Advances, 2014, 4, 26907-26911.	3.6	21
72	Electrospun Mo-doped BiVO4 photoanode on a transparent conductive substrate for solar water oxidation. Catalysis Communications, 2016, 75, 18-22.	3.3	21

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73	Cobalt sulfide thin films for counter electrodes of dye-sensitized solar cells with cobalt complex based electrolytes. Electrochimica Acta, 2013, 114, 745-749.	5.2	20
74	Cu(In,Ga)(S,Se)2 Photocathodes with a Grown-In CuxS Catalyst for Solar Water Splitting. ACS Energy Letters, 2019, 4, 2937-2944.	17.4	20
75	Achieving tolerant CO2 electro-reduction catalyst in real water matrix. Applied Catalysis B: Environmental, 2019, 258, 117961.	20.2	19
76	Microfluidicsâ€Assisted Synthesis of Hierarchical Cu₂O Nanocrystal as C₂â€Selective CO₂ Reduction Electrocatalyst. Small Methods, 2022, 6, e2200074.	8.6	19
77	Cluster Expansion Method for Simulating Realistic Size of Nanoparticle Catalysts with an Application in CO₂ Electroreduction. Journal of Physical Chemistry C, 2018, 122, 9245-9254.	3.1	17
78	Understanding Selective Reduction of CO 2 to CO on Modified Carbon Electrocatalysts. ChemElectroChem, 2018, 5, 1615-1621.	3.4	16
79	Microenvironments of Cu catalysts in zero-gap membrane electrode assembly for efficient CO₂ electrolysis to C₂₊ products. Journal of Materials Chemistry A, 2022, 10, 10363-10372.	10.3	16
80	Water Oxidation by Manganese Oxide Electrocatalytic Films Synthesized by Chemical Solution Deposition Method. Journal of the Electrochemical Society, 2016, 163, F3113-F3118.	2.9	15
81	Photocatalytic oxidation activities of TiO2 nanorod arrays: A surface spectroscopic analysis. Applied Catalysis B: Environmental, 2016, 180, 480-486.	20.2	15
82	Understanding morphological degradation of Ag nanoparticle during electrochemical CO2 reduction reaction by identical location observation. Electrochimica Acta, 2021, 371, 137795.	5.2	15
83	Tandem Architecture of Perovskite and Cu(In,Ga)(S,Se)₂ Created by Solution Processes for Solar Cells. Advanced Optical Materials, 2016, 4, 2102-2108.	7.3	14
84	Semi-transparent thin film solar cells by a solution process. Korean Journal of Chemical Engineering, 2016, 33, 880-884.	2.7	14
85	Electroactivation-induced IrNi nanoparticles under different pH conditions for neutral water oxidation. Nanoscale, 2020, 12, 14903-14910.	5.6	14
86	New strategies for economically feasible CO₂ electroreduction using a porous membrane in zero-gap configuration. Journal of Materials Chemistry A, 2021, 9, 16169-16177.	10.3	14
87	Synthesis of Bi₂WO₆ photoanode on transparent conducting oxide substrate with low onset potential for solar water splitting. RSC Advances, 2014, 4, 24032-24037.	3.6	13
88	Fabrication of solution processed 3D nanostructured CuInGaS₂thin film solar cells. Nanotechnology, 2014, 25, 125401.	2.6	13
89	A highly efficient Cu(In,Ga)(S,Se)2 photocathode without a hetero-materials overlayer for solar-hydrogen production. Scientific Reports, 2018, 8, 5182.	3.3	13
90	Cocktails of Paste Coatings for Performance Enhancement of CuInGaS₂ Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 888-893.	8.0	12

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91	Data-driven pilot optimization for electrochemical CO mass production. Journal of Materials Chemistry A, 2020, 8, 16943-16950.	10.3	12
92	Spontaneous solar water splitting by DSSC/CIGS tandem solar cells. Solar Energy, 2016, 135, 821-826.	6.1	11
93	Charge transportation at cascade energy structure interfaces of CuInxGa1-xSeyS2-y/CdS/ZnS for spontaneous water splitting. Electrochimica Acta, 2019, 297, 633-640.	5.2	11
94	Discrimination of Chiral Adsorption Configurations: Styrene on Germanium(100). Journal of Physical Chemistry C, 2009, 113, 1426-1432.	3.1	10
95	Influence of TiO2 nanotube morphology and TiCl4 treatment on the charge transfer in dye-sensitized solar cells. Applied Physics A: Materials Science and Processing, 2013, 112, 733-737.	2.3	10
96	Insight into water oxidation activity enhancement of Ni-based electrocatalysts interacting with modified carbon supports. Electrochimica Acta, 2018, 281, 684-691.	5.2	8
97	A simple chemical route for composition graded Cu(In,Ga)S2 thin film solar cells: multi-stage paste coating. RSC Advances, 2015, 5, 103439-103444.	3.6	7
98	Calcium carbonate electronic-insulating layers improve the charge collection efficiency of tin oxide photoelectrodes in dye-sensitized solar cells. Electrochimica Acta, 2015, 167, 379-387.	5.2	7
99	Facile and Cost Effective Synthesis of Oxide-Derived Silver Catalyst Electrodes via Chemical Solution Deposition for CO2 Electro-Reduction. Topics in Catalysis, 2018, 61, 389-396.	2.8	7
100	Experimental demonstration of a ferroelectric FET using paper substrate. IEICE Electronics Express, 2014, 11, 20140447-20140447.	0.8	5
101	Radiationâ€Hard and Ultralightweight Polycrystalline Cadmium Telluride Thinâ€Film Solar Cells for Space Applications. Energy Technology, 2016, 4, 1463-1468.	3.8	4
102	Electrochemical conversion of CO2 to value-added chemicals over bimetallic Pd-based nanostructures: Recent progress and emerging trends. Environmental Research, 2022, 211, 113116.	7.5	4
103	Atomic and electronic structure of styrene on Ge(100). Surface Science, 2011, 605, 1438-1444.	1.9	3
104	Charge separation properties of Ta3N5 photoanodes synthesized via a simple metalâ€"organic-precursor decomposition process. Physical Chemistry Chemical Physics, 2018, 20, 2865-2871.	2.8	3
105	How do plants see the world? â€" UV imaging with a TiO2 nanowire array by artificial photosynthesis. Nanoscale, 2018, 10, 8443-8450.	5.6	3
106	Investigation of Surface Sulfurization in CuIn_{1âˆ'<i>x</i>}Ga_{<i>x</i>}S_{2âˆ'<i>y</i>}Se_{<i>y</i>} Thin Films by Using Kelvin Probe Force Microscopy. ChemPhysChem, 2018, 19, 261-265.	2.1	3
107	A Comparative Study of Nanoparticleâ€Inkâ€Based <scp>CIGSSe</scp> Thin Film Solar Cells on Different Back Contact Substrates. Bulletin of the Korean Chemical Society, 2016, 37, 361-365.	1.9	1
108	3-D architecture between indium tin oxide nano-rods and a solution processed CuInGaS2 absorber layer for thin film solar cells. Thin Solid Films, 2017, 636, 506-511.	1.8	1

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109	Vision in plants by artificial photosynthesis. , 2018, , .		1
110	Microfluidicsâ€Assisted Synthesis of Hierarchical Cu₂O Nanocrystal as C₂â€Selective CO₂ Reduction Electrocatalyst (Small Methods 5/2022). Small Methods, 2022, 6, .	8.6	1
111	(Invited) Electrochemical CO2 Reduction Reaction to C2 Chemicals with Cu-Based Nanocatalysts. ECS Meeting Abstracts, 2021, MA2021-01, 1282-1282.	0.0	0
112	Design of a Monolithic Photoelectrochemical Tandem Cell for Solar Water Splitting with a Dye-sensitized Solar Cell and WO3/BiVO4Photoanode. Rapid Communication in Photoscience, 2015, 4, 82-85.	0.1	0
113	Emulation of three-dimensional vision in plants in the red/far-red region by artificial photosynthesis. , 2019, , .		0
114	Electrocatalyst for CO2 reduction reaction toward stable and practical application. , 0, , .		0
115	(Keynote) Understanding Selective C-C Coupling Reaction on Cu Based Nanoparticle from Electrochemical CO₂ Reduction Reaction. ECS Meeting Abstracts, 2020, MA2020-02, 3230-3230.	0.0	0
116	Development of Stable CO2 Electro-Reduction Catalyst in Real Water Matrix. ECS Meeting Abstracts, 2020, MA2020-02, 3217-3217.	0.0	0