Yun Jeong Hwang

List of Publications by Year in Descending Order

111 papers	5,596 citations	35 h-index	73 g-index
120 ext. papers	6,870 ext. citations	10.9 avg, IF	6.16 L-index

#	Paper	IF	Citations
111	Microfluidics-Assisted Synthesis of Hierarchical Cu O Nanocrystal as C -Selective CO Reduction Electrocatalyst.. *Small Methods*, **2022**, e2200074	12.8	3
110	Electrochemical conversion of CO to value-added chemicals over bimetallic Pd-based nanostructures: Recent progress and emerging trends.. *Environmental Research*, **2022**, 113116	7.9	0
109	Microfluidics-Assisted Synthesis of Hierarchical Cu 2 O Nanocrystal as C 2 -Selective CO 2 Reduction Electrocatalyst (Small Methods 5/2022). *Small Methods*, **2022**, 6, 2270031	12.8	
108	Designing Atomically Dispersed Au on Tensile-Strained Pd for Efficient CO Electroreduction to Formate. *Journal of the American Chemical Society*, **2021**, 143, 5386-5395	16.4	23
107	Understanding morphological degradation of Ag nanoparticle during electrochemical CO2 reduction reaction by identical location observation. *Electrochimica Acta*, **2021**, 371, 137795	6.7	6
106	(Invited) Electrochemical CO2 Reduction Reaction to C2 Chemicals with Cu-Based Nanocatalysts. *ECS Meeting Abstracts*, **2021**, MA2021-01, 1282-1282	0	
105	Highly selective and stackable electrode design for gaseous CO2 electroreduction to ethylene in a zero-gap configuration. *Nano Energy*, **2021**, 84, 105859	17.1	7
104	High crystallinity design of Ir-based catalysts drives catalytic reversibility for water electrolysis and fuel cells. *Nature Communications*, **2021**, 12, 4271	17.4	17
103	Electrocatalytic methane oxidation on Co3O4- incorporated ZrO2 nanotube powder. *Applied Catalysis B: Environmental*, **2021**, 283, 119653	21.8	15
102	New strategies for economically feasible CO2 electroreduction using a porous membrane in zero-gap configuration. *Journal of Materials Chemistry A*, **2021**, 9, 16169-16177	13	3
101	Material strategies in the electrochemical nitrate reduction reaction to ammonia production. *Materials Chemistry Frontiers*, **2021**, 5, 6803-6823	7.8	6
100	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	13	11
99	Catalyst design strategies for stable electrochemical CO2 reduction reaction. *Journal of Materials Chemistry A*, **2020**, 8, 15341-15357	13	24
98	Highly selective and scalable CO2 to CO - Electrolysis using coral-nanostructured Ag catalysts in zero-gap configuration. *Nano Energy*, **2020**, 76, 105030	17.1	32
97	Electroactivation-induced IrNi nanoparticles under different pH conditions for neutral water oxidation. *Nanoscale*, **2020**, 12, 14903-14910	7.7	4
96	Potential Link between Cu Surface and Selective CO Electroreduction: Perspective on Future Electrocatalyst Designs. *Advanced Materials*, **2020**, 32, e1908398	24	78
95	Carbon-Supported IrCoO nanoparticles as an efficient and stable OER electrocatalyst for practicable CO2 electrolysis. *Applied Catalysis B: Environmental*, **2020**, 269, 118820	21.8	25

94	Controlling the C2+ product selectivity of electrochemical CO2 reduction on an electrosprayed Cu catalyst. *Journal of Materials Chemistry A*, **2020**, 8, 6210-6218	13	23
93	Mass Transport Control by Surface Graphene Oxide for Selective CO Production from Electrochemical CO2 Reduction. *ACS Catalysis*, **2020**, 10, 3222-3231	13.1	29
92	(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	
91	Progress in development of electrocatalyst for CO2 conversion to selective CO production **2020**, 2, 72-98		53
90	A perspective on practical solar to carbon monoxide production devices with economic evaluation. *Sustainable Energy and Fuels*, **2020**, 4, 199-212	5.8	20
89	Data-driven pilot optimization for electrochemical CO mass production. *Journal of Materials Chemistry A*, **2020**, 8, 16943-16950	13	5
88	Catalyst-electrolyte interface chemistry for electrochemical CO reduction. *Chemical Society Reviews* , **2020**, 49, 6632-6665	58.5	104
87	Time-resolved observation of C□ coupling intermediates on Cu electrodes for selective electrochemical CO2 reduction. *Energy and Environmental Science*, **2020**, 13, 4301-4311	35.4	63
86	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	8.3	14
85	Single-atom catalysts for the oxygen evolution reaction: recent developments and future perspectives. *Chemical Communications*, **2020**, 56, 12687-12697	5.8	24
84	Thermal Transformation of Molecular Ni2+N4 Sites for Enhanced CO2 Electroreduction Activity. *ACS Catalysis*, **2020**, 10, 10920-10931	13.1	32
83	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	20.1	15
82	Cyclic two-step electrolysis for stable electrochemical conversion of carbon dioxide to formate. *Nature Communications*, **2019**, 10, 3919	17.4	45
81	Electrochemical Fragmentation of CuO Nanoparticles Enhancing Selective C-C Coupling from CO Reduction Reaction. *Journal of the American Chemical Society*, **2019**, 141, 4624-4633	16.4	232
80	Effect of Pt introduced on Ru-based electrocatalyst for oxygen evolution activity and stability. *Electrochemistry Communications*, **2019**, 104, 106469	5.1	31
79	Metal□xide Interfaces for Selective Electrochemical C□ Coupling Reactions. *ACS Energy Letters*, **2019**, 4, 2241-2248	20.1	34
78	Achieving tolerant CO2 electro-reduction catalyst in real water matrix. *Applied Catalysis B: Environmental*, **2019**, 258, 117961	21.8	13
77	Cu(In,Ga)(S,Se)2 Photocathodes with a Grown-In CuxS Catalyst for Solar Water Splitting. *ACS Energy Letters*, **2019**, 4, 2937-2944	20.1	16

76	General technoeconomic analysis for electrochemical coproduction coupling carbon dioxide reduction with organic oxidation. *Nature Communications*, **2019**, 10, 5193	17.4	109
75	Charge transportation at cascade energy structure interfaces of CuInxGa1-xSeyS2-y/CdS/ZnS for spontaneous water splitting. *Electrochimica Acta*, **2019**, 297, 633-640	6.7	8
74	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	3.8	12
73	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	13.1	46
72	Charge separation properties of TaN photoanodes synthesized via a simple metal-organic-precursor decomposition process. *Physical Chemistry Chemical Physics*, **2018**, 20, 2865-2871	3.6	3
71	A highly efficient Cu(In,Ga)(S,Se) photocathode without a hetero-materials overlayer for solar-hydrogen production. *Scientific Reports*, **2018**, 8, 5182	4.9	8
70	How do plants see the world? - UV imaging with a TiO nanowire array by artificial photosynthesis. *Nanoscale*, **2018**, 10, 8443-8450	7.7	0
69	Understanding Selective Reduction of CO2 to CO on Modified Carbon Electrocatalysts. *ChemElectroChem*, **2018**, 5, 1615-1621	4.3	11
68	Achieving 14.4% Alcohol-Based Solution-Processed Cu(In,Ga)(S,Se) Thin Film Solar Cell through Interface Engineering. *ACS Applied Materials & Interfaces*, **2018**, 10, 9894-9899	9.5	31
67	New challenges of electrokinetic studies in investigating the reaction mechanism of electrochemical CO2 reduction. *Journal of Materials Chemistry A*, **2018**, 6, 14043-14057	13	83
66	Insight into water oxidation activity enhancement of Ni-based electrocatalysts interacting with modified carbon supports. *Electrochimica Acta*, **2018**, 281, 684-691	6.7	3
65	Mixed Copper States in Anodized Cu Electrocatalyst for Stable and Selective Ethylene Production from CO Reduction. *Journal of the American Chemical Society*, **2018**, 140, 8681-8689	16.4	238
64	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	2.3	5
63	Comparative study of catalytic activities among transition metal-doped IrO nanoparticles. *Scientific Reports*, **2018**, 8, 16777	4.9	23
62	Effect of halides on nanoporous Zn-based catalysts for highly efficient electroreduction of CO2 to CO. *Catalysis Communications*, **2018**, 114, 109-113	3.2	35
61	Sloughing a Precursor Layer to Expose Active Stainless Steel Catalyst for Water Oxidation. *ACS Applied Materials & Interfaces*, **2018**, 10, 24499-24507	9.5	16
60	Investigation of Surface Sulfurization in CuIn Ga S Se Thin Films by Using Kelvin Probe Force Microscopy. *ChemPhysChem*, **2018**, 19, 261-265	3.2	3
59	Multiple-Color-Generating Cu(In,Ga)(S,Se) Thin-Film Solar Cells via Dichroic Film Incorporation for Power-Generating Window Applications. *ACS Applied Materials & Interfaces*, **2017**, 9, 14817-14826	9.5	22

58	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	13.1	182
57	Insight into Charge Separation in WO/BiVO Heterojunction for Solar Water Splitting. *ACS Applied Materials & Interfaces*, **2017**, 9, 19780-19790	9.5	118
56	Insight into Electrochemical CO2 Reduction on Surface-Molecule-Mediated Ag Nanoparticles. *ACS Catalysis*, **2017**, 7, 779-785	13.1	151
55	Surface-Morphology-Dependent Electrolyte Effects on Gold-Catalyzed Electrochemical CO2 Reduction. *Journal of Physical Chemistry C*, **2017**, 121, 22637-22643	3.8	23
54	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	8.3	70
53	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	13	18
52	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	2.2	1
51	Stable surface oxygen on nanostructured silver for efficient CO2 electroreduction. *Catalysis Today*, **2017**, 288, 48-53	5.3	27
50	Surface analysis of N-doped TiO2 nanorods and their enhanced photocatalytic oxidation activity. *Applied Catalysis B: Environmental*, **2017**, 204, 209-215	21.8	67
49	Photocatalytic oxidation activities of TiO2 nanorod arrays: A surface spectroscopic analysis. *Applied Catalysis B: Environmental*, **2016**, 180, 480-486	21.8	12
48	Enhancement in carbon dioxide activity and stability on nanostructured silver electrode and the role of oxygen. *Applied Catalysis B: Environmental*, **2016**, 180, 372-378	21.8	59
47	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	8.1	12
46	Highly stable tandem solar cell monolithically integrating dye-sensitized and CIGS solar cells. *Scientific Reports*, **2016**, 6, 30868	4.9	19
45	D-sorbitol-induced phase control of TiO2 nanoparticles and its application for dye-sensitized solar cells. *Scientific Reports*, **2016**, 6, 20103	4.9	67
44	Enhanced Photocurrents with ZnS Passivated Cu(In,Ga)(Se,S) Photocathodes Synthesized Using a Nonvacuum Process for Solar Water Splitting. *Journal of the American Chemical Society*, **2016**, 138, 15673-15681	16.4	65
43	Water Oxidation by Manganese Oxide Electrocatalytic Films Synthesized by Chemical Solution Deposition Method. *Journal of the Electrochemical Society*, **2016**, 163, F3113-F3118	3.9	14
42	A Comparative Study of Nanoparticle-Ink-Based CIGSSe Thin Film Solar Cells on Different Back Contact Substrates. *Bulletin of the Korean Chemical Society*, **2016**, 37, 361-365	1.2	1
41	Semi-transparent thin film solar cells by a solution process. *Korean Journal of Chemical Engineering*, **2016**, 33, 880-884	2.8	12

40	Electrospun Mo-doped BiVO4 photoanode on a transparent conductive substrate for solar water oxidation. *Catalysis Communications*, **2016**, 75, 18-22	3.2	19
39	Gold catalyst reactivity for CO2 electro-reduction: From nano particle to layer. *Catalysis Today*, **2016**, 260, 107-111	5.3	53
38	Spontaneous solar water splitting by DSSC/CIGS tandem solar cells. *Solar Energy*, **2016**, 135, 821-826	6.8	7
37	Radiation-Hard and Ultralightweight Polycrystalline Cadmium Telluride Thin-Film Solar Cells for Space Applications. *Energy Technology*, **2016**, 4, 1463-1468	3.5	2
36	Contributors to Enhanced CO2 Electroreduction Activity and Stability in a Nanostructured Au Electrocatalyst. *ChemSusChem*, **2016**, 9, 2097-102	8.3	33
35	A monolithic and standalone solar-fuel device having comparable efficiency to photosynthesis in nature. *Journal of Materials Chemistry A*, **2015**, 3, 5835-5842	13	47
34	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, 7714-9	3.6	32
33	Effect of the Si/TiO2/BiVO4 heterojunction on the onset potential of photocurrents for solar water oxidation. *ACS Applied Materials & Interfaces*, **2015**, 7, 5788-96	9.5	49
32	Monolithic DSSC/CIGS tandem solar cell fabricated by a solution process. *Scientific Reports*, **2015**, 5, 8970	4.9	22
31	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	6.7	7
30	Simple Chemical Solution Deposition of Co□□Thin Film Electrocatalyst for Oxygen Evolution Reaction. *ACS Applied Materials & Interfaces*, **2015**, 7, 24550-5	9.5	80
29	Achieving Selective and Efficient Electrocatalytic Activity for CO2 Reduction Using Immobilized Silver Nanoparticles. *Journal of the American Chemical Society*, **2015**, 137, 13844-50	16.4	437
28	Chalcogenization-Derived Band Gap Grading in Solution-Processed CuIn(x)Ga(1-x)(Se,S)□Thin-Film Solar Cells. *ACS Applied Materials & Interfaces*, **2015**, 7, 27391-6	9.5	30
27	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	3.8	61
26	Photo-oxidation activities on Pd-doped TiO2 nanoparticles: critical PdO formation effect. *Applied Catalysis B: Environmental*, **2015**, 165, 20-26	21.8	29
25	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	3.7	6
24	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		
23	Printable, wide band-gap chalcopyrite thin films for power generating window applications. *Scientific Reports*, **2014**, 4, 4408	4.9	47

22	Synthesis of Bi2WO6 photoanode on transparent conducting oxide substrate with low onset potential for solar water splitting. *RSC Advances*, **2014**, 4, 24032-24037	3.7	10
21	Embedding covalency into metal catalysts for efficient electrochemical conversion of CO2. *Journal of the American Chemical Society*, **2014**, 136, 11355-61	16.4	157
20	Cocktails of paste coatings for performance enhancement of CuInGaS(2) thin-film solar cells. *ACS Applied Materials & Interfaces*, **2014**, 6, 888-93	9.5	11
19	Morphology control of one-dimensional heterojunctions for highly efficient photoanodes used for solar water splitting. *Journal of Materials Chemistry A*, **2014**, 2, 11408	13	37
18	Fabrication of solution processed 3D nanostructured CuInGaS□ thin film solar cells. *Nanotechnology*, **2014**, 25, 125401	3.4	12
17	Role of HA additive in quantum dot solar cell with Co[(bpy)3]2+/3+-based electrolyte. *RSC Advances* , **2014**, 4, 26907-26911	3.7	20
16	Experimental demonstration of a ferroelectric FET using paper substrate. *IEICE Electronics Express*, **2014**, 11, 20140447-20140447	0.5	4
15	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	2.6	10
14	Cobalt sulfide thin films for counter electrodes of dye-sensitized solar cells with cobalt complex based electrolytes. *Electrochimica Acta*, **2013**, 114, 745-749	6.7	16
13	Mesoporous Co3O4 as an electrocatalyst for water oxidation. *Nano Research*, **2013**, 6, 47-54	10	242
12	Facile growth of aligned WO3 nanorods on FTO substrate for enhanced photoanodic water oxidation activity. *Journal of Materials Chemistry A*, **2013**, 1, 3479	13	236
11	Si/InGaN core/shell hierarchical nanowire arrays and their photoelectrochemical properties. *Nano Letters*, **2012**, 12, 1678-82	11.5	195
10	Photoelectrochemical properties of TiO2 nanowire arrays: a study of the dependence on length and atomic layer deposition coating. *ACS Nano*, **2012**, 6, 5060-9	16.7	353
9	Epitaxial growth of InGaN nanowire arrays for light emitting diodes. *ACS Nano*, **2011**, 5, 3970-6	16.7	97
8	Light-induced charge transport within a single asymmetric nanowire. *Nano Letters*, **2011**, 11, 3755-8	11.5	51
7	Atomic and electronic structure of styrene on Ge(100). *Surface Science*, **2011**, 605, 1438-1444	1.8	3
6	Discrimination of Chiral Adsorption Configurations: Styrene on Germanium(100). *Journal of Physical Chemistry C*, **2009**, 113, 1426-1432	3.8	10
5	High density n-Si/n-TiO2 core/shell nanowire arrays with enhanced photoactivity. *Nano Letters*, **2009**, 9, 410-5	11.5	512

4	Bidentate Structures of Acetic Acid on Ge(100): The Role of Carboxyl Oxygen. *Journal of Physical Chemistry C*, **2007**, 111, 5941-5945	3.8	23
3	Chiral attachment of styrene mediated by surface dimers on Ge100. *Journal of the American Chemical Society*, **2005**, 127, 5016-7	16.4	28
2	Origin of Hydrogen Incorporated into Ethylene during Electrochemical CO2 Reduction in Membrane Electrode Assembly. *ACS Energy Letters*,939-945	20.1	7
1	Electrocatalytic Reduction of Low Concentrations of CO2 Gas in a Membrane Electrode Assembly Electrolyzer. *ACS Energy Letters*,3488-3495	20.1	17