Yun Jeong Hwang

List of Publications by Year
in descending order

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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	Origin of Hydrogen Incorporated into Ethylene during Electrochemical CO₂ Reduction in Membrane Electrode Assembly. ACS Energy Letters, 2022, 7, 939-945.	17.4	36
2	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
3	Microfluidicsâ€Assisted Synthesis of Hierarchical Cu₂O Nanocrystal as C₂â€Selective CO₂ Reduction Electrocatalyst. Small Methods, 2022, 6, e2200074.	8.6	19
4	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
5	Microfluidicsâ€Assisted Synthesis of Hierarchical Cu₂O Nanocrystal as C₂â€Selective CO₂ Reduction Electrocatalyst (Small Methods 5/2022). Small Methods, 2022, 6, .	8.6	1
6	Electrocatalytic methane oxidation on Co3O4- incorporated ZrO2 nanotube powder. Applied Catalysis B: Environmental, 2021, 283, 119653.	20.2	33
7	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
8	Material strategies in the electrochemical nitrate reduction reaction to ammonia production. Materials Chemistry Frontiers, 2021, 5, 6803-6823.	5.9	37
9	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
10	Understanding morphological degradation of Ag nanoparticle during electrochemical CO2 reduction reaction by identical location observation. Electrochimica Acta, 2021, 371, 137795.	5.2	15
11	(Invited) Electrochemical CO2 Reduction Reaction to C2 Chemicals with Cu-Based Nanocatalysts. ECS Meeting Abstracts, 2021, MA2021-01, 1282-1282.	0.0	0
12	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
13	High crystallinity design of Ir-based catalysts drives catalytic reversibility for water electrolysis and fuel cells. Nature Communications, 2021, 12, 4271.	12.8	75
14	Electrocatalytic Reduction of Low Concentrations of CO₂ Gas in a Membrane Electrode Assembly Electrolyzer. ACS Energy Letters, 2021, 6, 3488-3495.	17.4	73
15	Progress in development of electrocatalyst for CO₂ conversion to selective CO production. , 2020, 2, 72-98.		117
16	A perspective on practical solar to carbon monoxide production devices with economic evaluation. Sustainable Energy and Fuels, 2020, 4, 199-212.	4.9	33
17	Data-driven pilot optimization for electrochemical CO mass production. Journal of Materials Chemistry A, 2020, 8, 16943-16950.	10.3	12
18	Catalystâ€"electrolyte interface chemistry for electrochemical CO₂ reduction. Chemical Society Reviews, 2020, 49, 6632-6665.	38.1	234

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19	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
20	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
21	Single-atom catalysts for the oxygen evolution reaction: recent developments and future perspectives. Chemical Communications, 2020, 56, 12687-12697.	4.1	69
22	Thermal Transformation of Molecular Ni²⁺â€“N₄ Sites for Enhanced CO₂ Electroreduction Activity. ACS Catalysis, 2020, 10, 10920-10931.	11.2	81
23	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
24	Catalyst design strategies for stable electrochemical CO₂ reduction reaction. Journal of Materials Chemistry A, 2020, 8, 15341-15357.	10.3	58
25	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
26	Electroactivation-induced IrNi nanoparticles under different pH conditions for neutral water oxidation. Nanoscale, 2020, 12, 14903-14910.	5.6	14
27	Potential Link between Cu Surface and Selective CO₂ Electroreduction: Perspective on Future Electrocatalyst Designs. Advanced Materials, 2020, 32, e1908398.	21.0	182
28	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
29	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
30	Mass Transport Control by Surface Graphene Oxide for Selective CO Production from Electrochemical CO₂ Reduction. ACS Catalysis, 2020, 10, 3222-3231.	11.2	57
31	(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
32	Development of Stable CO2 Electro-Reduction Catalyst in Real Water Matrix. ECS Meeting Abstracts, 2020, MA2020-02, 3217-3217.	0.0	0
33	Metalâ€“Oxide Interfaces for Selective Electrochemical Câ€“C Coupling Reactions. ACS Energy Letters, 2019, 4, 2241-2248.	17.4	62
34	Achieving tolerant CO2 electro-reduction catalyst in real water matrix. Applied Catalysis B: Environmental, 2019, 258, 117961.	20.2	19
35	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
36	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

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37	Cyclic two-step electrolysis for stable electrochemical conversion of carbon dioxide to formate. Nature Communications, 2019, 10, 3919.	12.8	76
38	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
39	Effect of Pt introduced on Ru-based electrocatalyst for oxygen evolution activity and stability. Electrochemistry Communications, 2019, 104, 106469.	4.7	40
40	General technoeconomic analysis for electrochemical coproduction coupling carbon dioxide reduction with organic oxidation. Nature Communications, 2019, 10, 5193.	12.8	219
41	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
42	Emulation of three-dimensional vision in plants in the red/far-red region by artificial photosynthesis. , 2019, , .		0
43	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
44	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
45	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
46	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
47	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
48	Understanding Selective Reduction of CO 2 to CO on Modified Carbon Electrocatalysts. ChemElectroChem, 2018, 5, 1615-1621.	3.4	16
49	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
50	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
51	Vision in plants by artificial photosynthesis. , 2018, , .		1
52	Comparative study of catalytic activities among transition metal-doped IrO2 nanoparticles. Scientific Reports, 2018, 8, 16777.	3.3	36
53	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
54	Sloughing a Precursor Layer to Expose Active Stainless Steel Catalyst for Water Oxidation. ACS Applied Materials & Interfaces, 2018, 10, 24499-24507.	8.0	25

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55	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
56	Insight into water oxidation activity enhancement of Ni-based electrocatalysts interacting with modified carbon supports. Electrochimica Acta, 2018, 281, 684-691.	5.2	8
57	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
58	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
59	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
60	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
61	Insight into Charge Separation in WO₃/BiVO₄ Heterojunction for Solar Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 19780-19790.	8.0	142
62	Insight into Electrochemical CO₂ Reduction on Surface-Molecule-Mediated Ag Nanoparticles. ACS Catalysis, 2017, 7, 779-785.	11.2	205
63	Surface-Morphology-Dependent Electrolyte Effects on Gold-Catalyzed Electrochemical CO₂ Reduction. Journal of Physical Chemistry C, 2017, 121, 22637-22643.	3.1	39
64	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
65	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
66	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
67	Stable surface oxygen on nanostructured silver for efficient CO2 electroreduction. Catalysis Today, 2017, 288, 48-53.	4.4	34
68	Surface analysis of N-doped TiO2 nanorods and their enhanced photocatalytic oxidation activity. Applied Catalysis B: Environmental, 2017, 204, 209-215.	20.2	86
69	Spontaneous solar water splitting by DSSC/CIGS tandem solar cells. Solar Energy, 2016, 135, 821-826.	6.1	11
70	Radiationâ€Hard and Ultralightweight Polycrystalline Cadmium Telluride Thinâ€Film Solar Cells for Space Applications. Energy Technology, 2016, 4, 1463-1468.	3.8	4
71	Contributors to Enhanced CO₂ Electroreduction Activity and Stability in a Nanostructured Au Electrocatalyst. ChemSusChem, 2016, 9, 2097-2102.	6.8	38
72	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

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73	Highly stable tandem solar cell monolithically integrating dye-sensitized and CIGS solar cells. Scientific Reports, 2016, 6, 30868.	3.3	25
74	D-sorbitol-induced phase control of TiO2 nanoparticles and its application for dye-sensitized solar cells. Scientific Reports, 2016, 6, 20103.	3.3	93
75	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
76	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
77	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
78	Semi-transparent thin film solar cells by a solution process. Korean Journal of Chemical Engineering, 2016, 33, 880-884.	2.7	14
79	Electrospun Mo-doped BiVO4 photoanode on a transparent conductive substrate for solar water oxidation. Catalysis Communications, 2016, 75, 18-22.	3.3	21
80	Gold catalyst reactivity for CO2 electro-reduction: From nano particle to layer. Catalysis Today, 2016, 260, 107-111.	4.4	67
81	Photocatalytic oxidation activities of TiO2 nanorod arrays: A surface spectroscopic analysis. Applied Catalysis B: Environmental, 2016, 180, 480-486.	20.2	15
82	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
83	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
84	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
85	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
86	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
87	Monolithic DSSC/CIGS tandem solar cell fabricated by a solution process. Scientific Reports, 2015, 5, 8970.	3.3	27
88	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
89	Simple Chemical Solution Deposition of Co₃O₄Thin Film Electrocatalyst for Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2015, 7, 24550-24555.	8.0	93
90	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

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91	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
92	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
93	Photo-oxidation activities on Pd-doped TiO2 nanoparticles: critical PdO formation effect. Applied Catalysis B: Environmental, 2015, 165, 20-26.	20.2	40
94	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
95	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
96	Embedding Covalency into Metal Catalysts for Efficient Electrochemical Conversion of CO₂. Journal of the American Chemical Society, 2014, 136, 11355-11361.	13.7	192
97	Cocktails of Paste Coatings for Performance Enhancement of CuInGaS₂ Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 888-893.	8.0	12
98	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
99	Fabrication of solution processed 3D nanostructured CuInGaS₂thin film solar cells. Nanotechnology, 2014, 25, 125401.	2.6	13
100	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
101	Experimental demonstration of a ferroelectric FET using paper substrate. IEICE Electronics Express, 2014, 11, 20140447-20140447.	0.8	5
102	Printable, wide band-gap chalcopyrite thin films for power generating window applications. Scientific Reports, 2014, 4, 4408.	3.3	65
103	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
104	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
105	Mesoporous Co3O4 as an electrocatalyst for water oxidation. Nano Research, 2013, 6, 47-54.	10.4	274
106	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
107	Si/InGaN Core/Shell Hierarchical Nanowire Arrays and their Photoelectrochemical Properties. Nano Letters, 2012, 12, 1678-1682.	9.1	209
108	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

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109	Epitaxial Growth of InGaN Nanowire Arrays for Light Emitting Diodes. ACS Nano, 2011, 5, 3970-3976.	14.6	118
110	Light-Induced Charge Transport within a Single Asymmetric Nanowire. Nano Letters, 2011, 11, 3755-3758.	9.1	57
111	Atomic and electronic structure of styrene on Ge(100). Surface Science, 2011, 605, 1438-1444.	1.9	3
112	Discrimination of Chiral Adsorption Configurations: Styrene on Germanium(100). Journal of Physical Chemistry C, 2009, 113, 1426-1432.	3.1	10
113	High Density n-Si/n-TiO₂Core/Shell Nanowire Arrays with Enhanced Photoactivity. Nano Letters, 2009, 9, 410-415.	9.1	535
114	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
115	Chiral Attachment of Styrene Mediated by Surface Dimers on Ge(100). Journal of the American Chemical Society, 2005, 127, 5016-5017.	13.7	28
116	Electrocatalyst for CO2 reduction reaction toward stable and practical application. , 0, , .		0