

# Chang Hyuck Choi

## List of Publications by Year in Descending Order

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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.

69  
papers

4,945  
citations

32  
h-index

70  
g-index

75  
ext. papers

5,907  
ext. citations

11.5  
avg, IF

5.96  
L-index

#	Paper	IF	Citations
69	On the importance of the electric double layer structure in aqueous electrocatalysis.. <i>Nature Communications</i> , <b>2022</b> , 13, 174	17.4	13
68	Understanding the Grain Boundary Behavior of Bimetallic Platinum-Cobalt Alloy Nanowires toward Oxygen Electro-Reduction. <i>ACS Catalysis</i> , <b>2022</b> , 12, 3516-3523	13.1	3
67	Unraveling the role of introduced W in oxidation tolerance for Pt-based catalysts via on-line inductive coupled plasma-mass spectrometry. <i>Electrochemistry Communications</i> , <b>2022</b> , 139, 107301	5.1	
66	Selective electrochemical reduction of nitric oxide to hydroxylamine by atomically dispersed iron catalyst. <i>Nature Communications</i> , <b>2021</b> , 12, 1856	17.4	25
65	Quantification of Active Site Density and Turnover Frequency: From Single-Atom Metal to Nanoparticle Electrocatalysts. <i>Jacs Au</i> , <b>2021</b> , 1, 586-597		16
64	Bendable BiVO-Based Photoanodes on a Metal Substrate Realized through Template Engineering for Photoelectrochemical Water Splitting. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 16478-16484	9.5	1
63	Single-Atom Catalysts: A Perspective toward Application in Electrochemical Energy Conversion. <i>Jacs Au</i> , <b>2021</b> , 1, 1086-1100		12
62	Highly selective and stackable electrode design for gaseous CO <sub>2</sub> electroreduction to ethylene in a zero-gap configuration. <i>Nano Energy</i> , <b>2021</b> , 84, 105859	17.1	7
61	High crystallinity design of Ir-based catalysts drives catalytic reversibility for water electrolysis and fuel cells. <i>Nature Communications</i> , <b>2021</b> , 12, 4271	17.4	17
60	Selective H <sub>2</sub> O <sub>2</sub> production on surface-oxidized metal-nitrogen-carbon electrocatalysts. <i>Catalysis Today</i> , <b>2021</b> , 359, 99-105	5.3	14
59	Deactivation of Fe-N-C catalysts during catalyst ink preparation process. <i>Catalysis Today</i> , <b>2021</b> , 359, 9-15	5.3	1
58	Real-time monitoring of electrochemical carbon corrosion in alkaline media. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 19834-19839	13	7
57	Identification of Single-Atom Ni Site Active toward Electrochemical CO Conversion to CO. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 925-933	16.4	39
56	Pyrolyzed Mn <sub>2</sub> C catalysts for oxygen reduction reaction: progress and prospects. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 2158-2185	35.4	44
55	Highly selective and scalable CO <sub>2</sub> to CO - Electrolysis using coral-nanostructured Ag catalysts in zero-gap configuration. <i>Nano Energy</i> , <b>2020</b> , 76, 105030	17.1	32
54	pH Effect on the H <sub>2</sub> O <sub>2</sub> -Induced Deactivation of Fe-N-C Catalysts. <i>ACS Catalysis</i> , <b>2020</b> , 10, 8485-8495	13.1	37
53	Carbon-Supported IrCoO nanoparticles as an efficient and stable OER electrocatalyst for practicable CO <sub>2</sub> electrolysis. <i>Applied Catalysis B: Environmental</i> , <b>2020</b> , 269, 118820	21.8	25

52	The basics of electrode material evaluation in (photo)electrochemical system. <i>Ceramist</i> , <b>2020</b> , 23, 339-349	49.3	
51	Overestimation of Photoelectrochemical Hydrogen Evolution Reactivity Induced by Noble Metal Impurities Dissolved from Counter/Reference Electrodes. <i>ACS Catalysis</i> , <b>2020</b> , 10, 3381-3389	13.1	12
50	Boosting the Role of Ir in Mitigating Corrosion of Carbon Support by Alloying with Pt. <i>ACS Catalysis</i> , <b>2020</b> , 10, 12300-12309	13.1	17
49	Atomistic Insights into the Stability of Pt Single-Atom Electrocatalysts. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 15496-15504	16.4	37
48	Underestimation of Platinum Electrocatalysis Induced by Carbon Monoxide Evolved from Graphite Counter Electrodes. <i>ACS Catalysis</i> , <b>2020</b> , 10, 10773-10783	13.1	14
47	Oxygen Vacancies Induced NiFe-Hydroxide as a Scalable, Efficient, and Stable Electrode for Alkaline Overall Water Splitting. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 14071-14081	8.3	14
46	Operando Stability of Platinum Electrocatalysts in Ammonia Oxidation Reactions. <i>ACS Catalysis</i> , <b>2020</b> , 10, 11674-11684	13.1	10
45	Turning Harmful Deposition of Metal Impurities into Activation of Nitrogen-Doped Carbon Catalyst toward Durable Electrochemical CO <sub>2</sub> Reduction. <i>ACS Energy Letters</i> , <b>2019</b> , 4, 2343-2350	20.1	15
44	Effect of Pt introduced on Ru-based electrocatalyst for oxygen evolution activity and stability. <i>Electrochemistry Communications</i> , <b>2019</b> , 104, 106469	5.1	31
43	Accurate Evaluation of Active-Site Density (SD) and Turnover Frequency (TOF) of PGM-Free Metal-Nitrogen-Doped Carbon (MNC) Electrocatalysts using CO Cryo Adsorption. <i>ACS Catalysis</i> , <b>2019</b> , 9, 4841-4852	13.1	49
42	Catalytic Surface Specificity of Ni(OH) <sub>2</sub> -Decorated Pt Nanocubes for the Hydrogen Evolution Reaction in an Alkaline Electrolyte. <i>ChemSusChem</i> , <b>2019</b> , 12, 4021-4028	8.3	20
41	Theoretical and Experimental Understanding of Hydrogen Evolution Reaction Kinetics in Alkaline Electrolytes with Pt-Based Core-Shell Nanocrystals. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 18256-18263	16.4	58
40	Electrochemical Evidence for Two Sub-families of Fe <sub>N</sub> xCy Moieties with Concentration-Dependent Cyanide Poisoning. <i>ChemElectroChem</i> , <b>2018</b> , 5, 1880-1885	4.3	18
39	NO <sub>x</sub> -induced deactivation of Pt electrocatalysis towards the ammonia oxidation reaction. <i>Electrochemistry Communications</i> , <b>2018</b> , 94, 31-35	5.1	5
38	The Achilles Heel of iron-based catalysts during oxygen reduction in an acidic medium. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 3176-3182	35.4	208
37	Carbon Monoxide as a Promoter of Atomically Dispersed Platinum Catalyst in Electrochemical Hydrogen Evolution Reaction. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 16198-16205	16.4	55
36	Electrocatalytic synthesis of hydrogen peroxide on Au-Pd nanoparticles: From fundamentals to continuous production. <i>Chemical Physics Letters</i> , <b>2017</b> , 683, 436-442	2.5	73
35	Fluorophore Metal-Organic Complexes: High-Throughput Optical Screening for Aprotic Electrochemical Systems. <i>ACS Combinatorial Science</i> , <b>2017</b> , 19, 81-84	3.9	1

34	Carbon nanofibers as parent materials for a graphene-based Fe-N-C catalyst for the oxygen reduction reaction. <i>Catalysis Today</i> , <b>2017</b> , 295, 125-131	5.3	15
33	Graphene-derived Fe/Co-N-C catalyst in direct methanol fuel cells: Effects of the methanol concentration and ionomer content on cell performance. <i>Journal of Power Sources</i> , <b>2017</b> , 358, 76-84	8.9	32
32	Unraveling the Nature of Sites Active toward Hydrogen Peroxide Reduction in Fe-N-C Catalysts. <i>Angewandte Chemie</i> , <b>2017</b> , 129, 8935-8938	3.6	13
31	Unraveling the Nature of Sites Active toward Hydrogen Peroxide Reduction in Fe-N-C Catalysts. <i>Angewandte Chemie - International Edition</i> , <b>2017</b> , 56, 8809-8812	16.4	144
30	Tuning selectivity of electrochemical reactions by atomically dispersed platinum catalyst. <i>Nature Communications</i> , <b>2016</b> , 7, 10922	17.4	509
29	Dimensional tailoring of nitrogen-doped graphene for high performance supercapacitors. <i>RSC Advances</i> , <b>2016</b> , 6, 55577-55583	3.7	4
28	Minimizing Operando Demetallation of Fe-N-C Electrocatalysts in Acidic Medium. <i>ACS Catalysis</i> , <b>2016</b> , 6, 3136-3146	13.1	151
27	Optimization of catalyst layer composition for PEMFC using graphene-based oxygen reduction reaction catalysts. <i>Journal of Power Sources</i> , <b>2015</b> , 286, 166-174	8.9	15
26	Dimensionality-dependent oxygen reduction activity on doped graphene: Is graphene a promising substrate for electrocatalysis?. <i>Nano Energy</i> , <b>2015</b> , 11, 526-532	17.1	19
25	Stability of Fe-N-C Catalysts in Acidic Medium Studied by Operando Spectroscopy. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 12753-7	16.4	231
24	Stability of Fe-N-C Catalysts in Acidic Medium Studied by Operando Spectroscopy. <i>Angewandte Chemie</i> , <b>2015</b> , 127, 12944-12948	3.6	28
23	Rational Design of a Hierarchical Tin Dendrite Electrode for Efficient Electrochemical Reduction of CO <sub>2</sub> . <i>ChemSusChem</i> , <b>2015</b> , 8, 3092-8	8.3	204
22	Aerosol-assisted controlled packing of silica nanocolloids: templateless synthesis of mesoporous silicates with structural tunability and complexity. <i>Langmuir</i> , <b>2015</b> , 31, 542-50	4	4
21	Synergism between CdTe semiconductor and pyridine [photoenhanced electrocatalysis for CO <sub>2</sub> reduction to formic acid. <i>RSC Advances</i> , <b>2014</b> , 4, 3016-3019	3.7	34
20	Photoelectrochemical production of formic acid and methanol from carbon dioxide on metal-decorated CuO/Cu <sub>2</sub> O-layered thin films under visible light irradiation. <i>Applied Catalysis B: Environmental</i> , <b>2014</b> , 158-159, 217-223	21.8	70
19	Long-range electron transfer over graphene-based catalyst for high-performing oxygen reduction reactions: importance of size, N-doping, and metallic impurities. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 9070-7	16.4	256
18	Hydrogen Peroxide Synthesis via Enhanced Two-Electron Oxygen Reduction Pathway on Carbon-Coated Pt Surface. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 30063-30070	3.8	161
17	Nitrogen-doped graphene/carbon nanotube self-assembly for efficient oxygen reduction reaction in acid media. <i>Applied Catalysis B: Environmental</i> , <b>2014</b> , 144, 760-766	21.8	86

16	Combinatorial high-throughput screening for highly active Pd-Ir-Ce based ternary catalysts in electrochemical oxygen reduction reaction. <i>ACS Combinatorial Science</i> , <b>2013</b> , 15, 572-9	3.9	30
15	B, N- and P, N-doped graphene as highly active catalysts for oxygen reduction reactions in acidic media. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 3694	13	355
14	Enhanced electrochemical oxygen reduction reaction by restacking of N-doped single graphene layers. <i>RSC Advances</i> , <b>2013</b> , 3, 4246	3.7	30
13	Doping of chalcogens (sulfur and/or selenium) in nitrogen-doped graphene/CNT self-assembly for enhanced oxygen reduction activity in acid media. <i>RSC Advances</i> , <b>2013</b> , 3, 12417	3.7	47
12	Additional doping of phosphorus and/or sulfur into nitrogen-doped carbon for efficient oxygen reduction reaction in acidic media. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 1802-5	3.6	150
11	Enhanced hydrogen generation from methanol aqueous solutions over Pt/MoO <sub>3</sub> /TiO <sub>2</sub> under ultraviolet light. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 3582-3587	6.7	49
10	Easy and controlled synthesis of nitrogen-doped carbon. <i>Carbon</i> , <b>2013</b> , 55, 98-107	10.4	35
9	Designed synthesis of well-defined Pd@Pt core-shell nanoparticles with controlled shell thickness as efficient oxygen reduction electrocatalysts. <i>Chemistry - A European Journal</i> , <b>2013</b> , 19, 8190-8	4.8	85
8	Phosphorus/Nitrogen dual doped carbon as an effective catalyst for oxygen reduction reaction in acidic media: effects of the amount of P-doping on the physical and electrochemical properties of carbon. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 12107		191
7	Oxygen reduction activity of Pd-Mn <sub>3</sub> O <sub>4</sub> nanoparticles and performance enhancement by voltammetrically accelerated degradation. <i>Physical Chemistry Chemical Physics</i> , <b>2012</b> , 14, 6842-8	3.6	28
6	Binary and ternary doping of nitrogen, boron, and phosphorus into carbon for enhancing electrochemical oxygen reduction activity. <i>ACS Nano</i> , <b>2012</b> , 6, 7084-91	16.7	701
5	Facile growth of N-doped CNTs on Vulcan carbon and the effects of iron content on electrochemical activity for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 4563-4570	6.7	29
4	N-doped carbon prepared by pyrolysis of dicyandiamide with various MeCl <sub>2</sub> ·xH <sub>2</sub> O (Me = Co, Fe, and Ni) composites: Effect of type and amount of metal seed on oxygen reduction reactions. <i>Applied Catalysis B: Environmental</i> , <b>2012</b> , 119-120, 123-131	21.8	61
3	Heteroatom doped carbons prepared by the pyrolysis of bio-derived amino acids as highly active catalysts for oxygen electro-reduction reactions. <i>Green Chemistry</i> , <b>2011</b> , 13, 406-412	10	167
2	Highly active N-doped-CNTs grafted on Fe/C prepared by pyrolysis of dicyandiamide on Fe <sub>2</sub> O <sub>3</sub> /C for electrochemical oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , <b>2011</b> , 103, 362-368	21.8	76
1	Does the Encapsulation Strategy of Pt Nanoparticles with Carbon Layers Really Ensure Both Highly Active and Durable Electrocatalysis in Fuel Cells?. <i>ACS Catalysis</i> , <b>2011</b> , 1, 7317-7325	13.1	3