

# Sehkyu Park

## List of Publications by Year in descending order

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47  
papers

4,360  
citations

257450

24  
h-index

214800

47  
g-index

50  
all docs

50  
docs citations

50  
times ranked

6012  
citing authors

#	ARTICLE	IF	CITATIONS
1	Oxygen electrocatalysts for water electrolyzers and reversible fuel cells: status and perspective. <i>Energy and Environmental Science</i> , 2012, 5, 9331.	30.8	489
2	Development of a Titanium Dioxide-Supported Platinum Catalyst with Ultrahigh Stability for Polymer Electrolyte Membrane Fuel Cell Applications. <i>Journal of the American Chemical Society</i> , 2009, 131, 13898-13899.	13.7	482
3	Making Li-Air Batteries Rechargeable: Material Challenges. <i>Advanced Functional Materials</i> , 2013, 23, 987-1004.	14.9	477
4	Electrocatalysts for Nonaqueous Lithium-Air Batteries: Status, Challenges, and Perspective. <i>ACS Catalysis</i> , 2012, 2, 844-857.	11.2	443
5	A review of gas diffusion layer in PEM fuel cells: Materials and designs. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 5850-5865.	7.1	404
6	Stabilization of Electrocatalytic Metal Nanoparticles at Metal-Metal Oxide-Graphene Triple Junction Points. <i>Journal of the American Chemical Society</i> , 2011, 133, 2541-2547.	13.7	391
7	Effect of PTFE content in microporous layer on water management in PEM fuel cells. <i>Journal of Power Sources</i> , 2008, 177, 457-463.	7.8	204
8	Effect of carbon loading in microporous layer on PEM fuel cell performance. <i>Journal of Power Sources</i> , 2006, 163, 357-363.	7.8	202
9	Design of graphene sheets-supported Pt catalyst layer in PEM fuel cells. <i>Electrochemistry Communications</i> , 2011, 13, 258-261.	4.7	135
10	Development of electrodeposited IrO <sub>2</sub> electrodes as anodes in polymer electrolyte membrane water electrolysis. <i>Applied Catalysis B: Environmental</i> , 2015, 179, 285-291.	20.2	118
11	Effect of a GDL based on carbon paper or carbon cloth on PEM fuel cell performance. <i>Fuel</i> , 2011, 90, 436-440.	6.4	107
12	Electrochemical studies of an unsupported PtIr electrocatalyst as a bifunctional oxygen electrode in a unitized regenerative fuel cell. <i>Journal of Power Sources</i> , 2009, 191, 357-361.	7.8	99
13	Effect of cathode GDL characteristics on mass transport in PEM fuel cells. <i>Fuel</i> , 2009, 88, 2068-2073.	6.4	86
14	Highly stable Pt and PtPd hybrid catalysts supported on a nitrogen-modified carbon composite for fuel cell application. <i>Journal of Power Sources</i> , 2010, 195, 445-452.	7.8	78
15	Effect of hydrophobicity and pore geometry in cathode GDL on PEM fuel cell performance. <i>Electrochimica Acta</i> , 2009, 54, 3473-3479.	5.2	74
16	Polarization characteristics of a low catalyst loading PEM water electrolyzer operating at elevated temperature. <i>Journal of Power Sources</i> , 2016, 309, 127-134.	7.8	68
17	Electro-biocatalytic production of formate from carbon dioxide using an oxygen-stable whole cell biocatalyst. <i>Bioresource Technology</i> , 2015, 185, 35-39.	9.6	64
18	Crumpled rGO-supported Pt-Ir bifunctional catalyst prepared by spray pyrolysis for unitized regenerative fuel cells. <i>Journal of Power Sources</i> , 2017, 364, 215-225.	7.8	40

#	ARTICLE	IF	CITATIONS
19	Degradation of the Ionic Pathway in a PEM Fuel Cell Cathode. <i>Journal of Physical Chemistry C</i> , 2011, 115, 22633-22639.	3.1	36
20	Critical insight on the hydrothermal effects toward exfoliation of g-C <sub>3</sub> N <sub>4</sub> and simultaneous in-situ deposition of carbon quantum dots. <i>Applied Surface Science</i> , 2019, 471, 703-713.	6.1	36
21	An analytical model of Nafion <sup>®</sup> membrane humidifier for proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2009, 188, 498-501.	7.8	34
22	Development of porous Pt/IrO <sub>2</sub> /carbon paper electrocatalysts with enhanced mass transport as oxygen electrodes in unitized regenerative fuel cells. <i>Electrochemistry Communications</i> , 2016, 64, 14-17.	4.7	34
23	Polarization Losses under Accelerated Stress Test Using Multiwalled Carbon Nanotube Supported Pt Catalyst in PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2011, 158, B297.	2.9	33
24	Non-kinetic losses caused by electrochemical carbon corrosion in PEM fuel cells. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 8451-8458.	7.1	30
25	Micro-porous patterning of the surface of a polymer electrolyte membrane by an accelerated plasma and its performance for direct methanol fuel cells. <i>Macromolecular Research</i> , 2017, 25, 1-4.	2.4	24
26	Thermally Robust Porous Bimetallic (Ni <sub>x</sub> Pt <sub>1-x</sub> ) Alloy Mesocrystals within Carbon Framework: High-Performance Catalysts for Oxygen Reduction and Hydrogenation Reactions. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 21435-21444.	8.0	18
27	Boosting Stability and Activity of Oxygen Evolution Catalyst in Acidic Medium: Bimetallic Ir <sup>~</sup> Fe Oxides on Reduced Graphene Oxide Prepared through Ultrasonic Spray Pyrolysis. <i>ChemCatChem</i> , 2019, 11, 2615-2623.	3.7	15
28	Leveraging metal alloy-hybrid support interaction to enhance oxygen evolution kinetics and stability in proton exchange membrane water electrolyzers. <i>Journal of Power Sources</i> , 2021, 501, 230002.	7.8	15
29	Catalytic decomposition of hydrogen peroxide aerosols using granular activated carbon coated with manganese oxides. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 62, 225-230.	5.8	13
30	Electrochemical performance of Mn <sub>3</sub> O <sub>4</sub> nanorods by N-doped reduced graphene oxide using ultrasonic spray pyrolysis for lithium storage. <i>International Journal of Energy Research</i> , 2020, 44, 11171-11184.	4.5	13
31	Microarchitecture of polyvinylidene fluoride-bound self-standing microporous layer and its implication to water management in fuel cells. <i>Journal of Power Sources</i> , 2021, 506, 230129.	7.8	12
32	Thermally templated cobalt oxide nanobubbles on crumpled graphene sheets: A promising non-precious metal catalysts for acidic oxygen evolution. <i>Electrochimica Acta</i> , 2021, 382, 138277.	5.2	11
33	Development of a Self-supporting Microporous Layer on a Metal Mesh for Carbon Backing-free Cathodes in Proton Exchange Membrane Fuel Cells. <i>Fuel Cells</i> , 2018, 18, 57-62.	2.4	8
34	In situ electrochemical and mechanical accelerated stress tests of a gas diffusion layer for proton exchange membrane fuel cells. <i>Korean Journal of Chemical Engineering</i> , 2019, 36, 299-304.	2.7	8
35	Unveiling water drainage through microporous layer with laser-ablated open furrows in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2021, 491, 229563.	7.8	8
36	Effect of membrane-electrode-assembly configuration on proton exchange membrane fuel cell performance. <i>Korean Journal of Chemical Engineering</i> , 2014, 31, 1384-1388.	2.7	7

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37	Enzyme Electrode Platform Using Methyl Viologen Electrochemically Immobilized on Carbon Materials. <i>Journal of the Electrochemical Society</i> , 2016, 163, G93-G98.	2.9	7
38	Systematic Analysis for the Effects of Atmospheric Pollutants in Cathode Feed on the Performance of Proton Exchange Membrane Fuel Cells. <i>Bulletin of the Korean Chemical Society</i> , 2014, 35, 3475-3481.	1.9	7
39	Electrochemical study of highly durable cathode with Pt supported on ITO-CNT composite for proton exchange membrane fuel cells. <i>Journal of Industrial and Engineering Chemistry</i> , 2016, 42, 81-86.	5.8	6
40	Comprehensive Analysis of Critical Factors Determining Limiting Current of PEMFC: $O_2$ and $H^+$ Transport Resistance without Cathode Humidification. <i>Journal of the Electrochemical Society</i> , 2020, 167, 084511.	2.9	6
41	Cobalt-based oxygen evolution catalyst as active and stable as iridium in acidic media. <i>Electrochimica Acta</i> , 2020, 344, 136160.	5.2	4
42	Carbon-Free Nanocoral-Structured Platinum Electrocatalyst for Enhanced Methanol Oxidation Reaction Activity with Superior Poison Tolerance. <i>ChemElectroChem</i> , 2020, 7, 452-459.	3.4	3
43	Electrochemical impedance analysis of proton exchange membrane fuel cells with various cathode configurations. <i>Korean Journal of Chemical Engineering</i> , 2020, 37, 1394-1400.	2.7	3
44	Effect of PTFE Content in Microporous Layer on Water Management. <i>ECS Transactions</i> , 2007, 11, 623-628.	0.5	2
45	Analysis of the spatially distributed performance degradation of a polymer electrolyte membrane fuel cell stack. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 16548-16555.	7.1	2
46	Enhanced Oxygen Reduction Stability and Activity by Co and N (or O) Interaction in CoO on N-Doped Carbon Prepared through Spray Pyrolysis. <i>ChemElectroChem</i> , 2018, 5, 2089-2097.	3.4	2
47	A Study on Oxygen Evolution Activity of $Co_3O_4$ with different morphology prepared by Ultrasonic Spray Pyrolysis for Water Electrolysis. <i>Korean Chemical Engineering Research</i> , 2016, 54, 854-862.	0.2	1