Han-Sung Kim

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1562690/publications.pdf

Version: 2024-02-01

111 papers	4,493 citations	101496 36 h-index	114418 63 g-index
113 all docs	113 docs citations	113 times ranked	5899 citing authors

#	Article	IF	Citations
1	Characterization of hydrous ruthenium oxide/carbon nanocomposite supercapacitors prepared by a colloidal method. Journal of Power Sources, 2002, 104, 52-61.	4.0	282
2	Synthesis and Characterization of MnO[sub 2]-Based Mixed Oxides as Supercapacitors. Journal of the Electrochemical Society, 2003, 150, D56.	1.3	267
3	Heavily nitrogen doped, graphene supercapacitor from silk cocoon. Electrochimica Acta, 2015, 160, 244-253.	2.6	172
4	Studies on Co-based catalysts supported on modified carbon substrates for PEMFC cathodes. Journal of Power Sources, 2006, 157, 56-63.	4.0	154
5	Functionalized Zn@ZnO Hexagonal Pyramid Array for Dendriteâ€Free and Ultrastable Zinc Metal Anodes. Advanced Functional Materials, 2020, 30, 2004210.	7.8	148
6	Seed treatment with iron pyrite (FeS₂) nanoparticles increases the production of spinach. RSC Advances, 2014, 4, 58495-58504.	1.7	122
7	Investigation of carbon-supported Pt nanocatalyst preparation by the polyol process for fuel cell applications. Electrochimica Acta, 2007, 52, 7278-7285.	2.6	113
8	The role of transition metals in non-precious nitrogen-modified carbon-based electrocatalysts for oxygen reduction reaction. Journal of Power Sources, 2012, 212, 220-225.	4.0	112
9	Carbon-supported, nano-structured, manganese oxide composite electrode for electrochemical supercapacitor. Journal of Power Sources, 2007, 173, 1024-1028.	4.0	110
10	Effect of Water Electrolysis Catalysts on Carbon Corrosion in Polymer Electrolyte Membrane Fuel Cells. Journal of the American Chemical Society, 2010, 132, 14700-14701.	6.6	109
11	Effect of operating conditions on carbon corrosion in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2009, 193, 575-579.	4.0	100
12	Corrosion resistance and sintering effect of carbon supports in polymer electrolyte membrane fuel cells. Electrochimica Acta, 2009, 54, 6515-6521.	2.6	92
13	Development of highly active and stable non-precious oxygen reduction catalysts for PEM fuel cells using polypyrrole and a chelating agent. Electrochemistry Communications, 2011, 13, 879-881.	2.3	87
14	Fabrication of nitrogen-doped graphite felts as positive electrodes using polypyrrole as a coating agent in vanadium redox flow batteries. Journal of Materials Chemistry A, 2015, 3, 12276-12283.	5.2	82
15	The influence of the structural properties of carbon on the oxygen reduction reaction of nitrogen modified carbon based catalysts. International Journal of Hydrogen Energy, 2011, 36, 8181-8186.	3.8	81
16	On-line mass spectrometry study of carbon corrosion in polymer electrolyte membrane fuel cells. Electrochemistry Communications, 2008, 10, 1048-1051.	2.3	80
17	Modification of polyol process for synthesis of highly platinum loaded platinumâ€“carbon catalysts for fuel cells. Journal of Power Sources, 2008, 183, 600-603.	4.0	79
18	Effect of chemical oxidation of CNFs on the electrochemical carbon corrosion in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2010, 35, 701-708.	3.8	79

#	Article	IF	Citations
19	High crystallinity design of Ir-based catalysts drives catalytic reversibility for water electrolysis and fuel cells. Nature Communications, 2021, 12, 4271.	5.8	75
20	Efficient Synthesis of Pt Nanoparticles Supported on Hydrophobic Graphitized Carbon Nanofibers for Electrocatalysts Using Noncovalent Functionalization. Advanced Functional Materials, 2011, 21, 3954-3960.	7.8	74
21	Li₄SiO₄-Based Artificial Passivation Thin Film for Improving Interfacial Stability of Li Metal Anodes. ACS Applied Materials & Interfaces, 2018, 10, 8692-8701.	4.0	71
22	Sirtuin 3 (SIRT3) maintains bone homeostasis by regulating AMPK-PGC-1Î² axis in mice. Scientific Reports, 2016, 6, 22511.	1.6	70
23	Electrochemical carbon corrosion in high temperature proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2012, 37, 10844-10849.	3.8	60
24	Development of a glucose oxidase-based biocatalyst adopting both physical entrapment and crosslinking, and its use in biofuel cells. Nanoscale, 2016, 8, 9201-9210.	2.8	59
25	Oxidized iridium nanodendrites as catalysts for oxygen evolution reactions. Catalysis Communications, 2011, 12, 408-411.	1.6	58
26	Development of Novel Method for Preparation of PEMFC Electrodes. Electrochemical and Solid-State Letters, 2004, 7, A71.	2.2	54
27	Analysis of Carbon Corrosion in Anode under Fuel Starvation Using On-Line Mass Spectrometry in Polymer Electrolyte Membrane Fuel Cells. Journal of the Electrochemical Society, 2017, 164, F1580-F1586.	1.3	54
28	Preparation of Pt/zeoliteâ€“Nafion composite membranes for self-humidifying polymer electrolyte fuel cells. Journal of Power Sources, 2007, 165, 733-738.	4.0	51
29	Platinum dendrites with controlled sizes for oxygen reduction reaction. Electrochemistry Communications, 2010, 12, 1596-1599.	2.3	49
30	Growth and characterization of carbon-supported MnO2 nanorods for supercapacitor electrode. Physica B: Condensed Matter, 2008, 403, 1763-1769.	1.3	48
31	Graphite Felt Coated with Dopamine-Derived Nitrogen-Doped Carbon as a Positive Electrode for a Vanadium Redox Flow Battery. Journal of the Electrochemical Society, 2015, 162, A1675-A1681.	1.3	46
32	Nitrogen-doped carbon catalysts derived from ionic liquids in the presence of transition metals for the oxygen reduction reaction. Applied Catalysis B: Environmental, 2014, 158-159, 355-360.	10.8	45
33	Tin phosphide-based anodes for sodium-ion batteries: synthesis via solvothermal transformation of Sn metal and phase-dependent Na storage performance. Scientific Reports, 2016, 6, 26195.	1.6	44
34	Deep eutectic solvent-assisted synthesis of RuCo₂O₄: an efficient positive electrode for hybrid supercapacitors. Sustainable Energy and Fuels, 2020, 4, 3066-3076.	2.5	43
35	Regenerative Electrocatalytic Redox Cycle of Copper Sulfide for Sustainable NH₃ Production under Ambient Conditions. ACS Catalysis, 2021, 11, 435-445.	5.5	43
36	The inhibition of electrochemical carbon corrosion in polymer electrolyte membrane fuel cells using iridium nanodendrites. International Journal of Hydrogen Energy, 2012, 37, 2455-2461.	3.8	38

#	Article	IF	Citations
37	Multilayered, Bipolar, Allâ€Solidâ€State Battery Enabled by a Perovskiteâ€Based Biphasic Solid Electrolyte. ChemSusChem, 2018, 11, 3184-3190.	3.6	38
38	First-principles database driven computational neural network approach to the discovery of active ternary nanocatalysts for oxygen reduction reaction. Physical Chemistry Chemical Physics, 2018, 20, 24539-24544.	1.3	37
39	Coin cell fabricated symmetric supercapacitor device of two-steps synthesized V2O5 Nanorods. Journal of Electroanalytical Chemistry, 2020, 864, 114080.	1.9	36
40	Tuning the hierarchical pore structure of graphene oxide through dual thermal activation for high-performance supercapacitor. Scientific Reports, 2021, 11, 2063.	1.6	36
41	Polypyrrole-modified hydrophobic carbon nanotubes as promising electrocatalyst supports in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2011, 36, 11564-11571.	3.8	35
42	Euphorbia factor L1 inhibits osteoclastogenesis by regulating cellular redox status and induces Fas-mediated apoptosis in osteoclast. Free Radical Biology and Medicine, 2017, 112, 191-199.	1.3	34
43	Improved photoelectrochemical properties of TiO2 nanotubes doped with Er and effects on hydrogen production from water splitting. Chemosphere, 2021, 267, 129289.	4.2	34
44	Effect of heat-treatment temperature on carbon corrosion in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2010, 195, 2623-2627.	4.0	33
45	Use of a carbon nanocage as a catalyst support in polymer electrolyte membrane fuel cells. Electrochemistry Communications, 2009, 11, 1131-1134.	2.3	32
46	Î±-Fe2O3 anchored on porous N doped carbon derived from green microalgae via spray pyrolysis as anode materials for lithium ion batteries. Journal of Industrial and Engineering Chemistry, 2019, 69, 39-47.	2.9	31
47	Development of Ruthenium-Based Catalysts for Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2007, 154, A123.	1.3	29
48	Synthesis of coreâ€“shell nanoparticles with a Pt nanoparticle core and a silica shell. Current Applied Physics, 2013, 13, 130-136.	1.1	29
49	Development of nitrogen-doped carbons using the hydrothermal method as electrode materials for vanadium redox flow batteries. Journal of Applied Electrochemistry, 2013, 43, 553-557.	1.5	28
50	Modification of electrodes using Al2O3 to reduce phosphoric acid loss and increase the performance of high-temperature proton exchange membrane fuel cells. Journal of Materials Chemistry A, 2013, 1, 2578.	5.2	27
51	Synthesis of Activated Graphite Felt Using Consecutive Post-Treatments for Vanadium Redox Flow Batteries. Journal of the Electrochemical Society, 2016, 163, A2586-A2591.	1.3	26
52	Experimental and theoretical investigations of a newly synthesized azomethine compound as inhibitor for mild steel corrosion in aggressive media: A comprehensive study. Journal of Molecular Liquids, 2018, 259, 199-208.	2.3	25
53	Synthesis and characterization of PtNx/C as methanol-tolerant oxygen reduction electrocatalysts for a direct methanol fuel cell. Journal of Power Sources, 2008, 181, 74-78.	4.0	24
54	Synthesis of Activated Graphite Felts Using Short-Term Ozone/Heat Treatment for Vanadium Redox Flow Batteries. Journal of the Electrochemical Society, 2017, 164, A3011-A3017.	1.3	24

#	Article	IF	Citations
55	Preparation of carbon-supported nanosegregated Pt alloy catalysts for the oxygen reduction reaction using a silica encapsulation process to inhibit the sintering effect during heat treatment. Journal of Materials Chemistry, 2012, 22, 15215.	6.7	23
56	Analysis of Concentration Polarization Using UV-Visible Spectrophotometry in a Vanadium Redox Flow Battery. Journal of the Electrochemical Society, 2014, 161, A1291-A1296.	1.3	23
57	Stable Zn Metal Anodes with Limited Zn-Doping in MgF2 Interphase for Fast and Uniformly Ionic Flux. Nano-Micro Letters, 2022, 14, 46.	14.4	23
58	High-Yield One-Pot Recovery and Characterization of Nanostructured Cobalt Oxalate from Spent Lithium-Ion Batteries and Successive Re-Synthesis of LiCoO2. Metals, 2017, 7, 303.	1.0	22
59	Analysis of the Effect of MnO₂Precipitation on the Performance of a Vanadium/Manganese Redox Flow Battery. Journal of the Electrochemical Society, 2018, 165, A952-A956.	1.3	22
60	Fuel Consumption and CO2 Emission Reductions of Ships Powered by a Fuel-Cell-Based Hybrid Power Source. Journal of Marine Science and Engineering, 2019, 7, 230.	1.2	22
61	Electrochemical Nitrogen Reduction Kinetics on a Copper Sulfide Catalyst for NH₃Synthesis at Low Temperature and Atmospheric Pressure. ACS Applied Materials & Interfaces, 2021, 13, 24593-24603.	4.0	22
62	New hybrid redox flow battery with high energy density using Vâ€“Mn/Vâ€“Mn multiple redox couples. Journal of Power Sources, 2020, 451, 227746.	4.0	21
63	Development of a Redox Flow Battery with Multiple Redox Couples at Both Positive and Negative Electrolytes for High Energy Density. Journal of the Electrochemical Society, 2018, 165, A3215-A3220.	1.3	20
64	Synthesis and characterization of a hierarchically structured three-dimensional conducting scaffold for highly stable Li metal anodes. Journal of Materials Chemistry A, 2019, 7, 12882-12892.	5.2	20
65	Optimization of Electrode Structure to Suppress Electrochemical Carbon Corrosion of Gas Diffusion Layer for Unitized Regenerative Fuel Cell. Journal of the Electrochemical Society, 2014, 161, F729-F733.	1.3	19
66	Maximizing Redox Charge Storage via Cation (V)â€“Anion (S) Dual Doping on Nickel Diselenide Nanodiscs for Hybrid Supercapacitors. ACS Applied Energy Materials, 2021, 4, 2430-2439.	2.5	19
67	Effect of an Iodine Film on Charge-Transfer Resistance during the Electro-Oxidation of Iodide in Redox Flow Batteries. ACS Applied Materials & Interfaces, 2021, 13, 6385-6393.	4.0	19
68	Novel method for the preparation of carbon supported nano-sized amorphous ruthenium oxides for supercapacitors. Electrochemistry Communications, 2008, 10, 1035-1037.	2.3	18
69	Electrocatalytic activity and durability study of carbon supported Pt nanodendrites in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2013, 38, 7126-7132.	3.8	18
70	A novel synthetic route for the preparation of core shell like carbon-supported nanoparticles with a Pt-rich shell. Journal of Materials Chemistry A, 2014, 2, 11635.	5.2	18
71	Preparation of graphene hollow spheres from vacuum residue of ultra-heavy oil as an effective oxygen electrode for Liâ€“O₂batteries. Journal of Materials Chemistry A, 2018, 6, 4040-4047.	5.2	18
72	Development of Nitrogen-Doped Carbon Catalysts Using Melamine-Based Polymer as a Nitrogen Precursor for the Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2015, 162, F744-F749.	1.3	17

#	Article	IF	Citations
73	Polydopamine-Derived Nitrogen-Doped Graphitic Carbon for a Bifunctional Oxygen Electrode in a Non-Aqueous Li-O₂Battery. Journal of the Electrochemical Society, 2017, 164, A1595-A1600.	1.3	17
74	Blocking of the Ubiquitin-Proteasome System Prevents Inflammation-Induced Bone Loss by Accelerating M-CSF Receptor c-Fms Degradation in Osteoclast Differentiation. International Journal of Molecular Sciences, 2017, 18, 2054.	1.8	17
75	Metabolic alterations in the bone tissues of aged osteoporotic mice. Scientific Reports, 2018, 8, 8127.	1.6	17
76	Lichen-like anchoring of MoSe₂ on functionalized multiwalled carbon nanotubes: an efficient electrode for asymmetric supercapacitors. RSC Advances, 2020, 10, 40092-40105.	1.7	17
77	A novel synthesis of 2D porous ZnCo2O4 nanoflakes using deep eutectic solvent for high-performance asymmetric supercapacitors. Journal of Electroanalytical Chemistry, 2021, 892, 115299.	1.9	17
78	Surface modified Pt/C as a methanol tolerant oxygen reduction catalyst for direct methanol fuel cells. Electrochemistry Communications, 2007, 9, 2629-2632.	2.3	16
79	Application of Carbon Felt as a Flow Distributor for Polymer Electrolyte Membrane Fuel Cells. Journal of the Electrochemical Society, 2019, 166, F74-F78.	1.3	16
80	Sirt6 cooperates with Blimp1 to positively regulate osteoclast differentiation. Scientific Reports, 2016, 6, 26186.	1.6	15
81	Preparation of carbon-supported Ptâ€“Ru core-shell nanoparticles using carbonized polydopamine and ozone for a CO tolerant electrocatalyst. International Journal of Hydrogen Energy, 2019, 44, 21588-21596.	3.8	15
82	Mechanism of manganese (mono and di) telluride thin-film formation and properties. Physica B: Condensed Matter, 2007, 390, 314-319.	1.3	14
83	Low-temperature proton-exchange membrane fuel cell-grade hydrogen production by membrane reformer equipped with Pd-composite membrane and methanation catalyst on permeation stream. Journal of Membrane Science, 2021, 634, 119373.	4.1	14
84	Enhanced photocatalytic activity of TiO2 nanotubes decorated with erbium and reduced graphene oxide. Applied Surface Science, 2021, 565, 150459.	3.1	14
85	Preparation of a Carbon-Supported Pt-Ni Bimetallic Catalyst with a Pt-Rich Shell Using a Dopamine as Protective Coating. Journal of the Electrochemical Society, 2017, 164, F65-F70.	1.3	13
86	Preparation of CO-tolerant PtRuNi/C ternary electrocatalyst having a composition gradient shell. Chemical Engineering Journal, 2021, 414, 128792.	6.6	13
87	A combined approach for high-performance Liâ€“O2 batteries: A binder-free carbon electrode and atomic layer deposition of RuO2 as an inhibitorâ€“promoter. APL Materials, 2018, 6, .	2.2	12
88	Investigation of a non-noble composite catalyst for hydrogen release control of ammonia-borane. Research on Chemical Intermediates, 2008, 34, 709-715.	1.3	10
89	Nitrogen-doped carbon supported platinum catalyst via direct soft nitriding for high-performance polymer electrolyte membrane fuel cell. International Journal of Hydrogen Energy, 2018, 43, 17873-17879.	3.8	10
90	Preparation of a self-assembled organosilane coating on carbon black as a catalyst support in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2015, 274, 1140-1146.	4.0	8

#	Article	IF	Citations
91	Comprehensive adsorption characteristics of a newly synthesized and sustainable anti-corrosion catalyst on mild steel surface exposed to a highly corrosive electrolytic solution. Journal of Molecular Liquids, 2018, 268, 37-48.	2.3	7
92	Vanadiumâ€Incorporated Metallic (1â€T) Molybdenum Sulfide Nanoroses for Highâ€Energyâ€Density Asymmetric Supercapacitors. ChemSusChem, 2020, 13, 221-229.	3.6	7
93	Preparation of Bimodal Porous Carbon Supported PtRu Catalysts for Fuel Cells. Fuel Cells, 2010, 10, 245-250.	1.5	6
94	4-(2-pyridylazo-)-resorcinol as effective corrosion inhibitor for mild steel in 0Â·5M sulphuric acid. Surface Engineering, 2007, 23, 187-193.	1.1	5
95	Analysis of Internal Gas Leaks in an MCFC System Package for an LNG-Fueled Ship. Applied Sciences (Switzerland), 2019, 9, 2330.	1.3	5
96	Characteristics of Human Responses in a Braked Stationary Lead Vehicle during Low-Speed, Rear-End Collisions. International Journal of Precision Engineering and Manufacturing, 2019, 20, 1255-1264.	1.1	5
97	Tailoring percolative conduction networks and reaction interfaces via infusion of polymeric ionic conductor for high-performance solid-state batteries. Chemical Engineering Journal, 2021, 408, 127274.	6.6	5
98	A Synthetic Route for the Preparation of Core-Shell Nanoparticles Using a Protective Carbon Layer and Ozone Treatment. Journal of the Electrochemical Society, 2018, 165, F285-F290.	1.3	4
99	Three-Dimensional Nitrogen-Doped Hollow Carbon Fiber with a Micro-Scale Diameter as a Binder-Free Oxygen Electrode for Li-O₂ Batteries. Journal of the Electrochemical Society, 2019, 166, A3425-A3431.	1.3	4
100	Noncovalent Modification of Carbon Nanofibers Using 2-Naphthalenethiol for Catalyst Supports in PEM Fuel Cells. Journal of Electrochemical Science and Technology, 2010, 1, 92-96.	0.9	4
101	Effect of operating cell voltage on the NaCl poisoning mechanism in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2022, 538, 231590.	4.0	3
102	The effects of circadian disturbances induced by night shifts on the mouse peripheral tissues. Animal Cells and Systems, 2012, 16, 357-365.	0.8	2
103	Development of Nitrogen Doped Carbon Supported PtNi Alloy with a Pt Shell for the Production of Impurity-Free V^{3.5+} Electrolyte for Vanadium Redox Flow Batteries. ACS Sustainable Chemistry and Engineering, 2022, 10, 6181-6189.	3.2	2
104	Preparation of Pt/C catalyst using alcohol reduction and a polyol process in the presence of urea for oxygen reduction reaction. Research on Chemical Intermediates, 2008, 34, 853-861.	1.3	1
105	Self-Standing N-Doped Inverse Opal Carbon via Ultrafast Polymerization of Polydopamine and its High Energy Storage Capability in Liâ€“O2 Batteries. ACS Applied Energy Materials, 2019, 2, 7791-7798.	2.5	1
106	Development of Activated Graphite Felt Electrode Using Ozone and Ammonia Consecutive Post Treatments for Vanadium Redox Flow Batteries. Transactions of the Korean Hydrogen and New Energy Society, 2021, 32, 256-262.	0.1	1
107	Cross-Linked PVA/PAA Fibrous Web Composite Membrane for Enhanced Performance of PEM Fuel Cells under High-Temperature and Low-Humidity Conditions. Journal of Chemical Engineering of Japan, 2020, 53, 569-575.	0.3	1
108	Ionomer immobilized onto nitrogen-doped carbon black as efficient and durable electrode binder and electrolyte for polymer electrolyte fuel cells. Electrochimica Acta, 2022, 421, 140427.	2.6	1

#	Article	IF	Citations
109	Synthesis and Characterization of Pt based Alloy Catalysts for Direct Ethanol Fuel Cell. Journal of the Korean Electrochemical Society, 2008, 11, 109-114.	0.1	0
110	Effect of Acid Treatment of Graphitized Carbon on Carbon Corrosion in Polymer Electrolyte Membrane Fuel Cells. Journal of the Korean Electrochemical Society, 2009, 12, 181-188.	0.1	0
111	Effect of Graphitized Carbon Supports on Electrochemical Carbon Corrosion in Polymer Electrolyte Membrane Fuel Cells. Journal of the Korean Electrochemical Society, 2009, 12, 142-147.	0.1	0