Jaeyoung Lee

List of Publications by Year in descending order

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236 papers	8,942 citations	41344 49 h-index	60623 81 g-index
248 all docs	248 docs citations	248 times ranked	10326 citing authors

#	Article	IF	Citations
1	Investigation on removal of hardness ions by capacitive deionization (CDI) for water softening applications. Water Research, 2010, 44, 2267-2275.	11.3	370
2	Importance of Agâ€“Cu Biphasic Boundaries for Selective Electrochemical Reduction of CO₂to Ethanol. ACS Catalysis, 2017, 7, 8594-8604.	11.2	287
3	Electrocatalytic Production of C3â€C4 Compounds by Conversion of CO₂ on a Chlorideâ€Induced Biâ€Phasic Cu₂Oâ€Cu Catalyst. Angewandte Chemie - International Edition, 2015, 54, 14701-14705.	13.8	243
4	Graphene supported electrocatalysts for methanol oxidation. Electrochemistry Communications, 2010, 12, 129-131.	4.7	199
5	Insights into an autonomously formed oxygen-evacuated Cu₂O electrode for the selective production of C₂H₄ from CO₂. Physical Chemistry Chemical Physics, 2015, 17, 824-830.	2.8	197
6	A structured Coâ€“B catalyst for hydrogen extraction from NaBH4 solution. Catalysis Today, 2007, 120, 305-310.	4.4	192
7	Oxygen electrocatalysis in chemical energy conversion and storage technologies. Current Applied Physics, 2013, 13, 309-321.	2.4	167
8	Understanding underlying processes in formic acid fuel cells. Physical Chemistry Chemical Physics, 2009, 11, 9326.	2.8	158
9	Nanoparticle-Enhanced Surface Plasmon Resonance Detection of Proteins at Attomolar Concentrations: Comparing Different Nanoparticle Shapes and Sizes. Analytical Chemistry, 2012, 84, 1702-1707.	6.5	148
10	Anodization of nanoimprinted titanium: a comparison with formation of porous alumina. Electrochimica Acta, 2004, 49, 2645-2652.	5.2	138
11	Alkaline CO₂ Electrolysis toward Selective and Continuous HCOO^{â€“} Production over SnO₂ Nanocatalysts. Journal of Physical Chemistry C, 2015, 119, 4884-4890.	3.1	127
12	Direct formic acid fuel cell portable power system for the operation of a laptop computer. Journal of Power Sources, 2006, 162, 532-540.	7.8	126
13	Fuel crossover in direct formic acid fuel cells. Journal of Power Sources, 2007, 168, 119-125.	7.8	124
14	Influence of Bi Modification of Pt Anode Catalyst in Direct Formic Acid Fuel Cells. Journal of Physical Chemistry B, 2006, 110, 7270-7274.	2.6	120
15	Electrocatalytic activity of Cu electrode in electroreduction of CO2. Electrochimica Acta, 2001, 46, 3015-3022.	5.2	119
16	Designing a Highly Active Metalâ€Free Oxygen Reduction Catalyst in Membrane Electrode Assemblies for Alkaline Fuel Cells: Effects of Pore Size and Dopingâ€Site Position. Angewandte Chemie - International Edition, 2015, 54, 9230-9234.	13.8	118
17	On the Origin of Electrocatalytic Oxygen Reduction Reaction on Electrospun Nitrogenâ€“Carbon Species. Journal of Physical Chemistry C, 2013, 117, 11619-11624.	3.1	112
18	Ultrafast and stable hydrogen generation from sodium borohydride in methanol and water over Feâ€“B nanoparticles. Journal of Power Sources, 2013, 243, 444-450.	7.8	110

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19	Bifunctional Silver Nanoparticle Cathode in Microbial Fuel Cells for Microbial Growth Inhibition with Comparable Oxygen Reduction Reaction Activity. Environmental Science & Technology, 2011, 45, 5441-5446.	10.0	109
20	Activity of Pt anode catalyst modified by underpotential deposited Pb in a direct formic acid fuel cell. Electrochemistry Communications, 2007, 9, 2027-2031.	4.7	108
21	A Stable and Costâ€Effective Anode Catalyst Structure for Formic Acid Fuel Cells. Angewandte Chemie - International Edition, 2008, 47, 10163-10166.	13.8	104
22	Development of nanophase CeO2-Pt/C cathode catalyst for direct methanol fuel cell. Journal of Power Sources, 2005, 140, 59-65.	7.8	100
23	Electrocatalytic reduction of CO2 gas at Sn based gas diffusion electrode. Current Applied Physics, 2011, 11, 986-988.	2.4	97
24	Sustainable production of formic acid by electrolytic reduction of gaseous carbon dioxide. Journal of Materials Chemistry A, 2015, 3, 3029-3034.	10.3	95
25	On the consequences of methanol crossover in passive air-breathing direct methanol fuel cells. Journal of Power Sources, 2005, 142, 50-55.	7.8	90
26	Electrochemical oscillations in the methanol oxidation on Pt. Electrochimica Acta, 2002, 47, 2297-2301.	5.2	89
27	Tuning the crystallinity of thermoelectric Bi₂Te₃nanowire arrays grown by pulsed electrodeposition. Nanotechnology, 2008, 19, 365701.	2.6	86
28	Ultra-sensitive detection of IgE using biofunctionalized nanoparticle-enhanced SPR. Talanta, 2010, 81, 1755-1759.	5.5	85
29	Formic Acid from Carbon Dioxide on Nanolayered Electrocatalyst. Electrocatalysis, 2010, 1, 108-115.	3.0	79
30	Cobalt oxide preparation from waste LiCoO2 by electrochemicalâ€“hydrothermal method. Journal of Power Sources, 2002, 112, 639-642.	7.8	77
31	Characterization of direct formic acid fuel cells by Impedance Studies: In comparison of direct methanol fuel cells. Journal of Power Sources, 2008, 178, 34-43.	7.8	73
32	Electrode Buildâ€Up of Reducible Metal Composites toward Achievable Electrochemical Conversion of Carbon Dioxide. ChemSusChem, 2016, 9, 333-344.	6.8	72
33	Clean hydrogen production from methanolâ€“water solutions via power-saved electrolytic reforming process. Journal of Power Sources, 2012, 198, 218-222.	7.8	67
34	Hydrogen generation system using sodium borohydride for operation of a 400W-scale polymer electrolyte fuel cell stack. Journal of Power Sources, 2007, 170, 412-418.	7.8	66
35	Extensive Active-Site Formation in Trirutile CoSb₂O₆ by Oxygen Vacancy for Oxygen Evolution Reaction in Anion Exchange Membrane Water Splitting. ACS Energy Letters, 2021, 6, 364-370.	17.4	66
36	Biomass-derived bifunctional electrocatalysts for oxygen reduction and evolution reaction: A review. Journal of Energy Chemistry, 2022, 65, 149-172.	12.9	66

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37	Electrodeposition of PbO2 onto Au and Ti substrates. Electrochemistry Communications, 2000, 2, 646-652.	4.7	65
38	Electrocatalytic Recycling of CO₂ and Small Organic Molecules. Chemistry - an Asian Journal, 2009, 4, 1516-1523.	3.3	64
39	Preparation of cost-effective Ptâ€“Co electrodes by pulse electrodeposition for PEMFC electrocatalysts. Electrochimica Acta, 2011, 56, 3036-3041.	5.2	63
40	Influence of Au contents of AuPt anode catalyst on the performance of direct formic acid fuel cell. Electrochimica Acta, 2008, 53, 3474-3478.	5.2	59
41	On the origin of oscillations in the electrocatalytic oxidation of HCOOH on a Pt electrode modified by Bi deposition. Electrochimica Acta, 2001, 47, 501-508.	5.2	58
42	Alkaline Ammonia Electrolysis on Electrodeposited Platinum for Controllable Hydrogen Production. ChemSusChem, 2016, 9, 403-408.	6.8	57
43	Operational characteristics of a 50W DMFC stack. Journal of Power Sources, 2006, 155, 203-212.	7.8	56
44	Cu2O Nanowires in an Alumina Template: Electrochemical Conditions for the Synthesis and Photoluminescence Characteristics. ChemPhysChem, 2006, 7, 1505-1509.	2.1	55
45	Durable power performance of a direct ash-free coal fuel cell. Electrochimica Acta, 2014, 115, 511-517.	5.2	55
46	Direct power generation from waste coffee grounds in a biomass fuel cell. Journal of Power Sources, 2015, 296, 433-439.	7.8	52
47	Enhanced electrocatalysis of PtRu onto graphene separated by Vulcan carbon spacer. Journal of Power Sources, 2013, 222, 261-266.	7.8	51
48	Functionalized Grapheneâ€Based Cathode for Highly Reversible Lithiumâ€“Sulfur Batteries. ChemSusChem, 2014, 7, 1265-1273.	6.8	51
49	Iridium oxide fabrication and application: A review. Journal of Energy Chemistry, 2020, 46, 152-172.	12.9	51
50	A facile route for preparation of non-noble CNF cathode catalysts in alkaline ethanol fuel cells. Electrochimica Acta, 2011, 56, 9186-9190.	5.2	50
51	Electrodeposition of ZnO on ITO Electrode by Potential Modulation Method. Electrochemical and Solid-State Letters, 2001, 4, C63.	2.2	49
52	Electrodeposition of Cu[sub 2]O Nanowires Using Nanoporous Alumina Template. Electrochemical and Solid-State Letters, 2004, 7, C27.	2.2	48
53	Nitrogen-Deficient ORR Active Sites Formation by Iron-Assisted Water Vapor Activation of Electrospun Carbon Nanofibers. Journal of Physical Chemistry C, 2016, 120, 7705-7714.	3.1	48
54	Recycling of sodium metaborate to borax. International Journal of Hydrogen Energy, 2007, 32, 2982-2987.	7.1	47

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55	Al-incorporation into Li7La3Zr2O12 solid electrolyte keeping stabilized cubic phase for all-solid-state Li batteries. Journal of Energy Chemistry, 2018, 27, 1501-1508.	12.9	47
56	Influence of underpotentially deposited Sb onto Pt anode surface on the performance of direct formic acid fuel cells. Electrochimica Acta, 2008, 53, 6089-6092.	5.2	46
57	Electrocatalytic activity of Ni nanowires prepared by galvanic electrodeposition for hydrogen evolution reaction. Catalysis Today, 2009, 146, 188-191.	4.4	45
58	Porous niobium oxide films prepared by anodizationâ€“annealingâ€“anodization. Nanotechnology, 2007, 18, 055603.	2.6	43
59	Highly effective anode structure in a direct formic acid fuel cell. Electrochimica Acta, 2008, 53, 5162-5168.	5.2	43
60	Spatio-temporal interfacial potential patterns during the electrocatalyzed oxidation of formic acid on Bi-modified Pt. Journal of Chemical Physics, 2001, 115, 1485-1492.	3.0	42
61	Microstructural surface changes of electrodeposited Pb on gas diffusion electrode during electroreduction of gasâ€phase CO₂. Surface and Interface Analysis, 2010, 42, 564-567.	1.8	42
62	Diagnosis of the measurement inconsistencies of carbon-based electrocatalysts for the oxygen reduction reaction in alkaline media. RSC Advances, 2015, 5, 1571-1580.	3.6	42
63	A stable Niâ€“B catalyst in hydrogen generation via NaBH4 hydrolysis. Catalysis Communications, 2011, 16, 120-123.	3.3	41
64	Electrochromic Mechanism of IrO[sub 2] Prepared by Pulsed Anodic Electrodeposition. Electrochemical and Solid-State Letters, 2004, 7, H5.	2.2	40
65	Carbon dioxide reforming of methane over mesoporous Ni/SiO2. Fuel, 2013, 112, 111-116.	6.4	40
66	Excavated Feâ€Nâ€C Sites for Enhanced Electrocatalytic Activity in the Oxygen Reduction Reaction. ChemSusChem, 2014, 7, 1289-1294.	6.8	40
67	Enhanced corrosion tolerance and highly durable ORR activity by low Pt electrocatalyst on unique pore structured CNF in PEM fuel cell. Electrochimica Acta, 2020, 348, 136346.	5.2	40
68	The influence of a fibrous carbon envelope on the formation of CoFe nanoparticles for durable electrocatalytic oxygen evolution. Physical Chemistry Chemical Physics, 2014, 16, 13807-13813.	2.8	39
69	Sulfonated poly(ether sulfone) for universal polymer electrolyte fuel cell operations. Journal of Power Sources, 2006, 160, 353-358.	7.8	38
70	Gently reduced graphene oxide incorporated into cobalt oxalate rods as bifunctional oxygen electrocatalyst. Electrochimica Acta, 2014, 140, 404-411.	5.2	38
71	Treeâ€Barkâ€Shaped Nâ€Doped Porous Carbon Anode for Hydrazine Fuel Cells. Angewandte Chemie - International Edition, 2017, 56, 13513-13516.	13.8	38
72	Moderate oxophilic CoFe in carbon nanofiber for the oxygen evolution reaction in anion exchange membrane water electrolysis. Electrochimica Acta, 2020, 353, 136521.	5.2	37

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73	Graphene Supported Pd Electrocatalysts for Formic Acid Oxidation. Electrocatalysis, 2010, 1, 139-143.	3.0	36
74	Feâ€“B catalyst fabricated by hybrid capacitive adsorptionâ€“chemical reduction method and its application for hydrogen production from NaBH4 solution. Catalysis Today, 2013, 216, 240-245.	4.4	36
75	Improved water management of Pt/C cathode modified by graphitized carbon nanofiber in proton exchange membrane fuel cell. Journal of Power Sources, 2018, 399, 350-356.	7.8	36
76	Enhancing Role of Nickel in the Nickelâ€“Palladium Bilayer for Electrocatalytic Oxidation of Ethanol in Alkaline Media. Journal of Physical Chemistry C, 2014, 118, 22473-22478.	3.1	35
77	Electrochemical codeposition of Pt/graphene catalyst for improved methanol oxidation. Current Applied Physics, 2015, 15, 219-225.	2.4	35
78	Contribution of Interstitial Boron in a Boron-Incorporated Palladium Catalyst Toward Formate Oxidation in an Alkaline Direct Formate Fuel Cell. ACS Catalysis, 2021, 11, 4722-4729.	11.2	35
79	Self-Organized One-Dimensional Cobalt Compound Nanostructures from CoC₂O₄for Superior Oxygen Evolution Reaction. Journal of Physical Chemistry C, 2013, 117, 23712-23715.	3.1	34
80	Anion dependent CO/H 2 production ratio from CO 2 reduction on Au electro-catalyst. Catalysis Today, 2017, 295, 82-88.	4.4	34
81	Understanding of anodization of zinc in an electrolyte containing fluoride ions. Electrochimica Acta, 2008, 53, 7941-7945.	5.2	33
82	Narrow size distribution of Pt nanoparticles covered by an S-doped carbon layer for an improved oxygen reduction reaction in fuel cells. Journal of Power Sources, 2020, 450, 227650.	7.8	33
83	Controlling oxygen functional species of graphene oxide for an electro-oxidation of L-ascorbic acid. Electrochemistry Communications, 2011, 13, 677-680.	4.7	32
84	Electrochemically oxidized carbon anode in direct l-ascorbic acid fuel cells. Electrochimica Acta, 2007, 53, 1731-1736.	5.2	31
85	Disproportionation of thermoelectric bismuth telluride nanowires as a result of the annealing process. Physical Chemistry Chemical Physics, 2010, 12, 15247.	2.8	31
86	Enhanced reversible capacity of Li-S battery cathode based on graphene oxide. Journal of Energy Chemistry, 2013, 22, 336-340.	12.9	31
87	Morphological features of electrodeposited Pt nanoparticles and its application as anode catalysts in polymer electrolyte formic acid fuel cells. Journal of Power Sources, 2010, 195, 5929-5933.	7.8	30
88	A high-performing nanostructured TiO2 filter for volatile organic compounds using atomic layer deposition. Chemical Communications, 2011, 47, 5605-5607.	4.1	30
89	Enhanced Seebeck Coefficients of Thermoelectric Bi₂Te₃ Nanowires as a Result of an Optimized Annealing Process. Journal of Physical Chemistry C, 2012, 116, 19512-19516.	3.1	30
90	Effect of transition metal induced pore structure on oxygen reduction reaction of electrospun fibrous carbon. Catalysis Today, 2016, 260, 82-88.	4.4	30

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91	Fast and selective Cu2O nanorod growth into anodic alumina templates via electrodeposition. Current Applied Physics, 2012, 12, 60-64.	2.4	29
92	Electrocatalytic oxygen evolution reaction at a FeNi composite on a carbon nanofiber matrix in alkaline media. Chinese Journal of Catalysis, 2014, 35, 891-895.	14.0	29
93	Improvement of water softening efficiency in capacitive deionization by ultra purification process of reduced graphene oxide. Current Applied Physics, 2015, 15, 1397-1401.	2.4	29
94	On the origin of electrodeposition mechanism of ZnO on ITO substrate. Korean Journal of Chemical Engineering, 2005, 22, 161-164.	2.7	28
95	Catalytically active highly metallic palladium on carbon support for oxidation of HCOO â^'. Catalysis Today, 2017, 295, 26-31.	4.4	28
96	Electrocatalytic Activity of Pdâ€“CeO2 Nanobundle in an Alkaline Ethanol Oxidation. Catalysis Letters, 2010, 138, 46-49.	2.6	26
97	Atomic-layer-deposited TiO2 on cathode gas diffusion layer for low humidity operation in hydrogen fuel cells. Electrochemistry Communications, 2012, 24, 108-111.	4.7	26
98	Controlled Electrochemical Etching of Nanoporous Si Anodes and Its Discharge Behavior in Alkaline Siâ€“Air Batteries. ACS Applied Materials & Interfaces, 2015, 7, 3126-3132.	8.0	26
99	Influence of copper oxide modification of a platinum cathode on the activity of direct methanol fuel cell. Electrochimica Acta, 2007, 52, 2272-2276.	5.2	25
100	Bioaffinity detection of pathogens on surfaces. Journal of Industrial and Engineering Chemistry, 2010, 16, 169-177.	5.8	25
101	Atomic layer deposition of TiO2 nanotubes and its improved electrostatic capacitance. Electrochemistry Communications, 2010, 12, 210-212.	4.7	25
102	Enhanced electrical and mass transfer characteristics of acid-treated carbon nanotubes for capacitive deionization. Current Applied Physics, 2015, 15, 1539-1544.	2.4	25
103	Comparable mono and bipolar connection of capacitive deionization stack in NaCl treatment. Journal of Industrial and Engineering Chemistry, 2012, 18, 763-766.	5.8	24
104	Influence of Solution pH on Pt Anode Catalyst in Direct Formic Acid Fuel Cells. ACS Catalysis, 2015, 5, 6848-6851.	11.2	24
105	Electrocatalytic Oxidation of Formic Acid: Closing the Gap Between Fundamental Study and Technical Applications. Electrocatalysis, 2015, 6, 20-32.	3.0	24
106	Pore-filled anion-exchange membranes for electrochemical energy conversion applications. Electrochimica Acta, 2016, 222, 212-220.	5.2	24
107	Electro-oxidation of mixed reactants of ethanol and formate on Pd/C in alkaline fuel cells. Journal of Energy Chemistry, 2016, 25, 683-690.	12.9	24
108	Development of high quality Fe3O4/rGO composited electrode for low energy water treatment. Journal of Energy Chemistry, 2016, 25, 354-360.	12.9	24

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109	Recent advances in water-splitting electrocatalysts based on manganese oxide. Carbon Resources Conversion, 2019, 2, 242-255.	5.9	24
110	Formation of 1-Butanol from CO₂ without *CO Dimerization on a Phosphorus-Rich Copper Cathode. ACS Energy Letters, 2021, 6, 2090-2095.	17.4	24
111	EQCM analysis of Bi oxidation mechanism on a Pt electrode. Electrochemistry Communications, 2005, 7, 1375-1379.	4.7	23
112	A novel approach for fabrication of bismuth-silicon dioxide core-shell structures by atomic layer deposition. Journal of Materials Chemistry, 2009, 19, 7050.	6.7	23
113	Ethylene Selectivity in CO Electroreduction when using Cu Oxides: An In Situ ATRâ€SEIRAS Study. ChemElectroChem, 2018, 5, 558-564.	3.4	23
114	Power factor measurements of bismuth telluride nanowires grown by pulsed electrodeposition. Physica Status Solidi - Rapid Research Letters, 2010, 4, 43-45.	2.4	22
115	Quasi-perpetual discharge behaviour in p-type Geâ€“air batteries. Physical Chemistry Chemical Physics, 2014, 16, 22487-22494.	2.8	22
116	Atomic layer deposition of ultrathin layered TiO2 on Pt/C cathode catalyst for extended durability in polymer electrolyte fuel cells. Journal of Energy Chemistry, 2016, 25, 258-264.	12.9	22
117	A single-step approach to create nano-pottery structures for efficient water electrocatalysis. Electrochemistry Communications, 2009, 11, 2121-2124.	4.7	21
118	An etched nanoporous Ge anode in a novel metalâ€“air energy conversion cell. Physical Chemistry Chemical Physics, 2013, 15, 6333.	2.8	21
119	Controlled water flooding of polymer electrolyte fuel cells applying superhydrophobic gas diffusion layer. Current Applied Physics, 2014, 14, 1374-1379.	2.4	21
120	Polydimethylsiloxane treated cathode catalyst layer to prolong hydrogen fuel cell lifetime. Catalysis Today, 2016, 262, 155-160.	4.4	21
121	Epitaxial Growth of Cu[sub 2]Oâ€‰(111) by Electrodeposition. Electrochemical and Solid-State Letters, 1999, 2, 559.	2.2	20
122	Controlled self-assembly of nanoporous alumina for the self-templating synthesis of polyaniline nanowires. Electrochemistry Communications, 2007, 9, 971-975.	4.7	20
123	Improvement of Energy Capacity with Vitaminâ€…C Treated Dualâ€Layered Grapheneâ€“Sulfur Cathodes in Lithiumâ€“Sulfur Batteries. ChemSusChem, 2015, 8, 2883-2891.	6.8	20
124	Optimistic performance of carbon-free hydrazine fuel cells based on controlled electrode structure and water management. Journal of Energy Chemistry, 2020, 51, 175-181.	12.9	20
125	Carbonâ€Based Capacitive Deionization Electrodes: Development Techniques and its Influence on Electrode Properties. Chemical Record, 2021, 21, 820-840.	5.8	20
126	Electrode Architecture in Galvanic and Electrolytic Energy Cells. Angewandte Chemie - International Edition, 2016, 55, 4870-4880.	13.8	19

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127	Adsorbed Hydrogen as a Site-Occupying Species in the Electrocatalytic Oxidation of Formate on Pd/C in Alkaline Medium. Journal of the Electrochemical Society, 2018, 165, J3266-J3270.	2.9	19
128	Peptide-Programmable Nanoparticle Superstructures with Tailored Electrocatalytic Activity. ACS Nano, 2018, 12, 6554-6562.	14.6	19
129	The Role of Loneâ€Pair Electrons in Ptâ€“N Interactions for the Oxygen Reduction Reaction in Polymer Exchange Membrane Fuel Cells. ChemSusChem, 2020, 13, 1751-1758.	6.8	19
130	Selective conversion of N2 to NH3 on highly dispersed RuO2 using amphiphilic ionic liquid-anchored fibrous carbon structure. Journal of Energy Chemistry, 2022, 67, 474-482.	12.9	19
131	Electrochemical Deposition of a Single Phase of Pure Cu[sub 2]O Films by Current Modulation Methods. Electrochemical and Solid-State Letters, 1999, 3, 69.	2.2	18
132	Existence regions of spatiotemporal patterns in the electro-oxidation of formic acid. Physical Chemistry Chemical Physics, 2003, 5, 935-938.	2.8	18
133	Electrostatic capacitance of TiO2nanowires in a porous alumina template. Nanotechnology, 2005, 16, 1449-1453.	2.6	18
134	Electrochemically Deposited NanoColumnar Junctions of Cu[sub 2]O and ZnO on Ni Nanowires. Electrochemical and Solid-State Letters, 2005, 8, C81.	2.2	18
135	Effect of anode diffusion media on direct formic acid fuel cells. Journal of Industrial and Engineering Chemistry, 2008, 14, 493-498.	5.8	18
136	Accelerated durability test of DMFC electrodes by electrochemical potential cycling. Journal of Industrial and Engineering Chemistry, 2009, 15, 661-664.	5.8	18
137	Analyses of interfacial resistances in a membrane-electrode assembly for a proton exchange membrane fuel cell using symmetrical impedance spectroscopy. Physical Chemistry Chemical Physics, 2010, 12, 15291.	2.8	18
138	SPPO pore-filled composite membranes with electrically aligned ion channels via a lab-scale continuous caster for fuel cells: An optimal DC electric field strength-IEC relationship. Journal of Membrane Science, 2016, 501, 15-23.	8.2	18
139	Au on highly hydrophobic carbon substrate for improved selective CO production from CO2 in gas-phase electrolytic cell. Catalysis Today, 2020, 355, 340-346.	4.4	18
140	Nanostructured cobalt-based metal-organic framework/cadmium sulfide electrocatalyst for enhanced oxygen evolution reaction and anion exchange membrane-based water electrolysis: Synergistic effect. Journal of Power Sources, 2022, 527, 231151.	7.8	18
141	Dip-coating synthesis of high-surface area nanostructured FeB for direct usage as anode in metal/metalloid-air battery. Current Applied Physics, 2016, 16, 1075-1080.	2.4	17
142	Positively charged carbon electrocatalyst for enhanced power performance of L-ascorbic acid fuel cells. Journal of Energy Chemistry, 2016, 25, 793-797.	12.9	16
143	Dehydration Pathway for the Dissociation of Gas-Phase Formic Acid on Pt(111) Surface Observed via Ambient-Pressure XPS. Journal of Physical Chemistry C, 2018, 122, 2064-2069.	3.1	16
144	Experimental and Density Functional Theory Corroborated Optimization of Durable Metal Embedded Carbon Nanofiber for Oxygen Electrocatalysis. Journal of Physical Chemistry Letters, 2019, 10, 3109-3114.	4.6	16

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145	Rapid determination of lithium-ion battery degradation: High C-rate LAM and calculated limiting LLI. Journal of Energy Chemistry, 2022, 67, 663-671.	12.9	16
146	Bulk pH contribution to CO/HCOOâ˜ production from CO2 on oxygen-evacuated Cu2O electrocatalyst. Catalysis Today, 2017, 288, 11-17.	4.4	15
147	Electrocatalytic Activity of Carbon in N-Doped Graphene to Achieve High-Energy Density Liâ€“S Batteries. Journal of Physical Chemistry C, 2018, 122, 23045-23052.	3.1	15
148	Solid polymer electrolytes from double-comb Poly(methylhydrosiloxane) based on quaternary ammonium moiety-containing crosslinking system for Li/S battery. Journal of Power Sources, 2020, 450, 227690.	7.8	15
149	Improved Redox Reaction of Lithium Polysulfides on the Interfacial Boundary of Polar CoC₂O₄ as a Polysulfide Catenator for a Highâ€Capacity Lithiumâ€Sulfur Battery. ChemSusChem, 2021, 14, 876-883.	6.8	15
150	Steam activation of Fe-N-C catalyst for advanced power performance of alkaline hydrazine fuel cells. Journal of Energy Chemistry, 2022, 64, 276-285.	12.9	15
151	Selective electrodeposition of ZnO onto Cu2O. Electrochemistry Communications, 2000, 2, 765-768.	4.7	14
152	Comparative studies of a single cell and a stack of direct methanol fuel cells. Korean Journal of Chemical Engineering, 2005, 22, 406-411.	2.7	14
153	Electrochemical characteristics of chloride ion modified Pt cathode in direct methanol fuel cells. Journal of Power Sources, 2006, 159, 59-62.	7.8	14
154	Catalytic decomposition of nitrous oxide over Fe-BEA zeolites: Essential components of iron active sites. Korean Journal of Chemical Engineering, 2010, 27, 76-82.	2.7	14
155	On the origin of reactive Pd catalysts for an electrooxidation of formic acid. Physical Chemistry Chemical Physics, 2011, 13, 6192.	2.8	14
156	Interfacial Charge-Transfer Loss in Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 2734-2739.	3.1	14
157	Ameliorated performance in a direct carbon fuel cell using Sn mediator on Niâ€“YSZ anode surface. Catalysis Today, 2016, 260, 158-164.	4.4	14
158	A graphitic edge plane rich meso-porous carbon anode for alkaline water electrolysis. Physical Chemistry Chemical Physics, 2017, 19, 21987-21995.	2.8	14
159	Reduction of Iridium Loading to the Minimum Level Required for Water Oxidation Electrocatalysis without Sacrificing the Electrochemical Stability. Journal of Physical Chemistry C, 2019, 123, 12928-12934.	3.1	14
160	High Energy Density Germanium Anodes for Next Generation Lithium Ion Batteries. Applied Chemistry for Engineering, 2014, 25, 1-13.	0.2	14
161	Iron-Cobalt Modified Electrospun Carbon Nanofibers as Oxygen Reduction Catalysts in Alkaline Fuel Cells. ECS Transactions, 2010, 33, 1757-1767.	0.5	13
162	Highâ€Powerâ€Density Semiconductorâ€“Air Batteries Based on Pâ€Type Germanium with Different Crystal Orientations. ChemElectroChem, 2016, 3, 242-246.	3.4	13

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163	Optimized electrode structure for performance and mechanical stability in a direct formate fuel cell using cation ionomer. Sustainable Energy and Fuels, 2020, 4, 1899-1907.	4.9	13
164	Improved Specific Capacitance of Amorphous Vanadium Pentoxide in a Nanoporous Alumina Template. Electrochemical and Solid-State Letters, 2010, 13, A25.	2.2	12
165	Development of a 600 W Proton Exchange Membrane Fuel Cell Power System for the Hazardous Mission Robot. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	12
166	Effect of thermal treatment on the aluminum hydroxide nanofibers synthesized by electrolysis of Al plates. Microelectronic Engineering, 2012, 89, 89-91.	2.4	12
167	Observation of in situ oxidation dynamics of vanadium thin film with ambient pressure X-ray photoemission spectroscopy. Journal of Applied Physics, 2016, 120, .	2.5	12
168	Porous and Conductive Fibrous Carbon for Enhanced Electrocatalytic Oxygen Reduction Reaction in Alkaline Media. Journal of Physical Chemistry C, 2016, 120, 22342-22348.	3.1	11
169	Metalâ€Derived Mesoporous Structure of a Carbon Nanofiber Electrocatalyst for Improved Oxygen Evolution Reaction in Alkaline Water Electrolysis. ChemElectroChem, 2016, 3, 1720-1724.	3.4	11
170	Green ammonia synthesis using CeO₂/RuO₂ nanolayers on vertical graphene catalyst via electrochemical route in alkaline electrolyte. Nanoscale, 2022, 14, 1395-1408.	5.6	11
171	Boosting the oxygen evolution reaction performance of wrinkled Mn(OH)2 via conductive activation with a carbon binder. Journal of Energy Chemistry, 2022, 71, 580-587.	12.9	11
172	Investigation of hydrogen adsorption behaviours in the presence of methanol and dissolved oxygen using electrochemical quartz crystal microbalance. Electrochimica Acta, 2004, 50, 693-697.	5.2	10
173	Controlled growth of Cu2O particles on a hexagonally nanopatterned aluminium substrate. Nanotechnology, 2007, 18, 215303.	2.6	10
174	Peptide-based bimetallic nanostructures with tailored surface compositions and their oxygen electroreduction activities. CrystEngComm, 2016, 18, 6024-6028.	2.6	10
175	Induced changes of Pt/C in activity and durability through heat-treatment for oxygen reduction reaction in acidic medium. International Journal of Hydrogen Energy, 2017, 42, 22830-22840.	7.1	10
176	Dischargeable nickel matrix charges iron species for oxygen evolution electrocatalysis. Electrochimica Acta, 2021, 386, 138401.	5.2	10
177	Rhodium-molybdenum oxide electrocatalyst with dual active sites for electrochemical ammonia synthesis under neutral pH condition. Journal of Electroanalytical Chemistry, 2021, 896, 115157.	3.8	10
178	Enhancement of Methanol Tolerance in DMFC Cathode: Addition of Chloride Ions. ChemPhysChem, 2008, 9, 1425-1429.	2.1	9
179	Asymmetric polymer electrolyte membranes for water management of fuel cells. Electrochemistry Communications, 2010, 12, 148-151.	4.7	9
180	Enhanced anode interface for electrochemical oxidation of solid fuel in direct carbon fuel cells: The role of liquid Sn in mixed state. Journal of Power Sources, 2011, , .	7.8	9

#	Article	IF	Citations
181	Autonomous interfacial creation of nanostructured lead oxide. Nanoscale, 2011, 3, 4984.	5.6	9
182	Looking Back and Looking Ahead in Electrochemical Reduction of CO₂. Chemical Record, 2020, 20, 89-101.	5.8	9
183	Improved electrosorption kinetics in meso/microporous carbon composite electrode for swift salt removal. Catalysis Today, 2021, 359, 133-140.	4.4	9
184	The effect of morphological difference and hydride incorporation on the activity of Pd/C catalysts in direct alkaline formate fuel cell. Catalysis Today, 2021, 359, 28-34.	4.4	9
185	In situ demonstration of anodic interface degradation during water electrolysis: Corrosion and passivation. Electrochimica Acta, 2021, 365, 137276.	5.2	9
186	Syngas production for Fischer-Tropsch process via co-electrolytic processes of CO2 reduction and NH3 oxidation. Chemical Engineering Journal, 2022, 430, 132563.	12.7	9
187	Electrocatalytic Oxidation of Ethanol on Nanoporous Ni Electrode in Alkaline Media. Electrocatalysis, 2010, 1, 104-107.	3.0	8
188	Open circuit interaction of borohydride with oxidized platinum surfaces. Electrochemistry Communications, 2012, 16, 107-109.	4.7	8
189	High-temperature liquid Sn-air energy storage cell. Journal of Energy Chemistry, 2015, 24, 614-619.	12.9	8
190	The Effect of Synthesis Temperature on Pd-H Catalyst Structure for Alkaline Direct Formate Fuel Cells. ECS Transactions, 2018, 85, 149-158.	0.5	8
191	Crusty-Structured Cu@NiCo Nanoparticles as Anode Catalysts in Alkaline Fuel Cells. ACS Applied Nano Materials, 2021, 4, 8145-8153.	5.0	8
192	Spatiotemporal self-organization in the oscillatory HCOOH oxidation on a Pt ribbon electrode â€“ Theory and experiments. Surface Science, 2009, 603, 1652-1661.	1.9	7
193	Pyrolytic carbon infiltrated nanoporous alumina reducing contact resistance of aluminum/carbon interface. Electrochimica Acta, 2013, 89, 173-179.	5.2	7
194	in-situ electrochemical extended X-ray absorption fine structure spectroscopy study on the reactivation of Pd electrocatalyst in formic acid oxidation. Electrochimica Acta, 2014, 140, 525-528.	5.2	7
195	Facile preparation of SnC2O4 nanowires for anode materials of a Li ion battery. Current Applied Physics, 2014, 14, 892-896.	2.4	7
196	Crosslinked poly(allyl glycidyl ether) with pendant nitrile groups as solid polymer electrolytes for Liâ€“S batteries. Electrochimica Acta, 2020, 362, 137141.	5.2	7
197	Edge effects in an electrochemical reaction: HCOOH oxidation on a Pt ribbon. Journal of Chemical Physics, 2007, 126, 144702.	3.0	6
198	Origin of peculiar electrochemical phenomena in direct carbon fuel cells. Chemical Engineering Journal, 2017, 327, 1163-1175.	12.7	6

#	Article	IF	Citations
199	Meticulous insight on the state of fuel in a solid oxide carbon fuel cell. Chemical Engineering Journal, 2017, 308, 974-979.	12.7	6
200	Competitiveness of Formic Acid Fuel Cells: In Comparison with Methanol. Applied Chemistry for Engineering, 2016, 27, 123-127.	0.2	6
201	Investigation on the Growth Mechanism of Zinc Oxide Film Prepared by Electrochemical Method. Materials Research Society Symposia Proceedings, 1997, 495, 457.	0.1	5
202	Controlled pulse reversal on a ring electrode. Chemical Physics Letters, 2001, 346, 246-250.	2.6	5
203	Electro-oxidation of methanol diffused through proton exchange membrane on Pt surface: crossover rate of methanol. Electrochimica Acta, 2004, 50, 607-610.	5.2	5
204	N-heterocyclic carbeneâ€“silver complexes: Potential conductive materials for silver pastes in electronic applications. Polyhedron, 2011, 30, 465-469.	2.2	5
205	High-Density Nanoporous Structures for Enhanced Electrocatalysis. Journal of Physical Chemistry C, 2012, 116, 2915-2918.	3.1	5
206	Quasi-Photonic Crystal Effect of TiCl₃/Electrolyte Matrix in Unipolar Dyeâ€“Absorber Devices. ACS Applied Materials & Interfaces, 2014, 6, 14399-14404.	8.0	5
207	Improvement of Energy Capacity with Vitaminâ€…C Treated Dual-Layered Graphene-Sulfur Cathodes in Lithium-Sulfur Batteries. ChemSusChem, 2015, 8, 2754-2754.	6.8	5
208	Treeâ€Barkâ€Shaped Nâ€Doped Porous Carbon Anode for Hydrazine Fuel Cells. Angewandte Chemie, 2017, 129, 13698-13701.	2.0	5
209	High-performance capacitive deionization electrodes through regulated electrodeposition of manganese oxide and nickel-manganese oxide/hydroxide onto activated carbon. Separation and Purification Technology, 2022, 280, 119873.	7.9	5
210	Phosphate-decorated Pt Nanoparticles as Methanol-tolerant Oxygen Reduction Electrocatalyst for Direct Methanol Fuel Cells. Journal of Electrochemical Science and Technology, 2022, 13, 354-361.	2.2	5
211	Spatiotemporal Mixed-Mode Oscillations on a Ring Electrode. Zeitschrift Fur Physikalische Chemie, 2002, 216, .	2.8	4
212	Remote electro-precipitation of transparent ZnO on nano-porous alumina template. Electrochimica Acta, 2005, 51, 1-6.	5.2	4
213	Surface Modifications of a Carbon Anode Catalyst by Control of Functional Groups for Vitamin C Fuel Cells. Electrocatalysis, 2011, 2, 200-206.	3.0	4
214	Improved dimensional stability of Nafion membrane modified using a layer by layer self-assembly of biophilic polymers. Current Applied Physics, 2012, 12, 1235-1238.	2.4	4
215	Influence of acid/base co-catalyst on the photoelectrochemical properties of TiO2 thin films in dye-sensitized solar cells. Electrochimica Acta, 2013, 107, 619-623.	5.2	4
216	Enhancement of catalytic activity of a programmed gold nanoparticle superstructure modulated by supramolecular protein assembly. Catalysis Today, 2017, 295, 95-101.	4.4	4

#	Article	IF	Citations
217	Enhanced Capacitive Deionization of Graphene Nanoplatelet/Activated Carbon Composite Electrode. ECS Transactions, 2018, 85, 1321-1327.	0.5	4
218	Non-noble electrocatalysts discovered by scaling relations of Gibbs-free energies of key oxygen adsorbates in water oxidation. Journal of Materials Chemistry A, 0, , .	10.3	4
219	Effect of hydrogen partial pressure on a polymer electrolyte fuel cell performance. Korean Journal of Chemical Engineering, 2010, 27, 843-847.	2.7	3
220	End-group cross-linked large-size composite membranes via a lab-made continuous caster: enhanced oxidative stability and scale-up feasibility in a 50 cm2 single-cell and a 220 W class 5-cell PEFC stack. RSC Advances, 2013, 3, 24154.	3.6	3
221	Ultrahigh purification in concentrated NaOH by electrowinning for solar cell application. Separation and Purification Technology, 2015, 145, 24-28.	7.9	3
222	Influence of the mediating behaviour of Sn according to its particle size on a Ni/yttria-stabilised zirconia porous anode structure in a direct carbon fuel cell. RSC Advances, 2016, 6, 109036-109044.	3.6	3
223	Current Status of Thermoelectric Power Generation Technology. Applied Chemistry for Engineering, 2016, 27, 353-357.	0.2	3
224	Nanoporous alumina formation using multi-step anodization and cathodic electrodeposition of metal oxides on its structure. Studies in Surface Science and Catalysis, 2003, 146, 205-208.	1.5	2
225	An optimized mild reduction route towards excellent cobaltâ€“graphene catalysts for water oxidation. RSC Advances, 2015, 5, 64858-64864.	3.6	2
226	Surface analysis and dynamics. Catalysis Today, 2016, 260, 1-2.	4.4	2
227	Improved Redox Reaction of Lithium Polysulfides on the Interfacial Boundary of Polar CoC 2 O 4 as a Polysulfide Catenator for a Highâ€Capacity Lithiumâ€Sulfur Battery. ChemSusChem, 2021, 14, 757-757.	6.8	2
228	Carbon Electrodes in Capacitive Deionization Process. Applied Chemistry for Engineering, 2014, 25, 346-351.	0.2	2
229	Role of Graphene as a Catalyst Support in SOM Oxidation. ECS Transactions, 2010, 33, 1725-1732.	0.5	1
230	Overcome Mass Transfer Limitation of PEMFC Cathode Via Incorporation of Hydrophobic Carbon Nanostructure. ECS Transactions, 2018, 85, 475-487.	0.5	1
231	The Role of Loneâ€Pair Electrons in Ptâ€“N Interactions for the Oxygen Reduction Reaction in Polymer Exchange Membrane Fuel Cells. ChemSusChem, 2020, 13, 1660-1660.	6.8	1
232	Ideally Ordered Anodic Aluminum Oxide Membranes via the Replicated Nickel Imprint Stamp. Advanced Science Letters, 2010, 3, 411-414.	0.2	1
233	Changes in the surface structure of Pd/Ta₂O₅ by oxygen and CO studied using Xâ€ray Photoelectron Spectroscopy (XPS). Surface and Interface Analysis, 2011, 43, 1371-1376.	1.8	0
234	Elektrodenarchitektur in galvanischen und elektrolytischen Energiezellen. Angewandte Chemie, 2016, 128, 4952-4962.	2.0	0

#	Article	IF	Citations
235	10.2478/s11814-010-0099-5. , 2011, 27, 76.		0
236	III-V Tandem, CuInGa(S,Se)₂, and Cu₂ZnSn(S,Se)₄ Compound Semiconductor Thin Film Solar Cells. Applied Chemistry for Engineering, 2015, 26, 526-532.	0.2	0