Zhen-Xing Liang

List of Publications by Year
in descending order

96 papers	6,150 citations	66315 42 h-index	69214 77 g-index
96 all docs	96 docs citations	96 times ranked	7211 citing authors

#	Article	IF	Citations
1	Mechanism study of the ethanol oxidation reaction on palladium in alkaline media. Electrochimica Acta, 2009, 54, 2203-2208.	2.6	764
2	Multiwalled Carbon Nanotube Supported PtRu for the Anode of Direct Methanol Fuel Cells. Journal of Physical Chemistry B, 2006, 110, 5245-5252.	1.2	275
3	FT-IR study of the microstructure of NafionÂ® membrane. Journal of Membrane Science, 2004, 233, 39-44.	4.1	246
4	Performance of alkaline electrolyte-membrane-based direct ethanol fuel cells. Journal of Power Sources, 2009, 187, 387-392.	4.0	189
5	Effect of membrane thickness on the performance and efficiency of passive direct methanol fuel cells. Journal of Power Sources, 2006, 153, 61-67.	4.0	175
6	Nitrogen-doped ordered mesoporous carbon: synthesis and active sites for electrocatalysis of oxygen reduction reaction. Applied Catalysis B: Environmental, 2015, 165, 566-571.	10.8	172
7	Preparation and characterization of carbon-supported sub-monolayer palladium decorated gold nanoparticles for the electro-oxidation of ethanol in alkaline media. Journal of Power Sources, 2009, 187, 80-84.	4.0	169
8	Pt/CN-doped electrocatalysts: Superior electrocatalytic activity for methanol oxidation reaction and mechanistic insight into interfacial enhancement. Applied Catalysis B: Environmental, 2017, 203, 541-548.	10.8	153
9	Effect of Redox Cocatalysts Location on Photocatalytic Overall Water Splitting over Cubic NaTaO₃ Semiconductor Crystals Exposed with Equivalent Facets. ACS Catalysis, 2016, 6, 2182-2191.	5.5	149
10	pH Effect on Electrochemistry of Nitrogen-Doped Carbon Catalyst for Oxygen Reduction Reaction. ACS Catalysis, 2015, 5, 4325-4332.	5.5	142
11	The effect of methanol and ethanol cross-over on the performance of PtRu/C-based anode DAFCs. Applied Catalysis B: Environmental, 2005, 55, 65-72.	10.8	141
12	A simple method for the synthesis of PtRu nanoparticles on the multi-walled carbon nanotube for the anode of a DMFC. Electrochimica Acta, 2007, 52, 2649-2656.	2.6	130
13	Facile Preparation of AuPt Alloy Nanoparticles from Organometallic Complex Precursor. Chemistry of Materials, 2008, 20, 1688-1690.	3.2	117
14	A Study of the Mechanism of the Hydrogen Evolution Reaction on Nickel by Surface Interrogation Scanning Electrochemical Microscopy. Journal of the American Chemical Society, 2017, 139, 4854-4858.	6.6	113
15	Direct methanol fuel cells: The effect of electrode fabrication procedure on MEAs structural properties and cell performance. Journal of Power Sources, 2005, 145, 495-501.	4.0	112
16	The roles of defect states in photoelectric and photocatalytic processes for Zn_xCd_{1â^'x}S. Energy and Environmental Science, 2011, 4, 466-470.	15.6	112
17	Carbon supported platinumâ€“gold alloy catalyst for direct formic acid fuel cells. Journal of Power Sources, 2008, 185, 857-861.	4.0	104
18	Sulfonation of carbon-nanotube supported platinum catalysts for polymer electrolyte fuel cells. Journal of Power Sources, 2008, 176, 9-15.	4.0	101

#	Article	IF	Citations
19	Synthesis of Active Platinumâ^'Silver Alloy Electrocatalyst toward the Formic Acid Oxidation Reaction. Journal of Physical Chemistry C, 2008, 112, 17362-17367.	1.5	98
20	Effect of polymer binders in anode catalyst layer on performance of alkaline direct ethanol fuel cells. Journal of Power Sources, 2009, 190, 223-229.	4.0	97
21	2D nitrogen-doped hierarchically porous carbon: Key role of low dimensional structure in favoring electrocatalysis and mass transfer for oxygen reduction reaction. Applied Catalysis B: Environmental, 2017, 209, 447-454.	10.8	94
22	Photoassisted Oxygen Reduction Reaction in H₂â€“O₂ Fuel Cells. Angewandte Chemie - International Edition, 2016, 55, 14748-14751.	7.2	81
23	Hemin: A Highly Effective Electrocatalyst Mediating the Oxygen Reduction Reaction. Journal of Physical Chemistry C, 2011, 115, 2604-2610.	1.5	79
24	The dependence of photocatalytic activity on the selective and nonselective deposition of noble metal cocatalysts on the facets of rutile TiO2. Journal of Catalysis, 2016, 337, 36-44.	3.1	78
25	Organic silica/NafionÂ® composite membrane for direct methanol fuel cells. Journal of Membrane Science, 2006, 282, 450-455.	4.1	73
26	The stability of a PtRu/C electrocatalyst at anode potentials in a direct methanol fuel cell. Journal of Power Sources, 2006, 160, 933-939.	4.0	73
27	New DMFC Anode Structure Consisting of Platinum Nanowires Deposited into a Nafion Membrane. Journal of Physical Chemistry C, 2007, 111, 8128-8134.	1.5	71
28	High-performance coreâ€“shell PdPt@Pt/C catalysts via decorating PdPt alloy cores with Pt. Journal of Power Sources, 2009, 194, 805-810.	4.0	70
29	Highly effective oxygen reduction reaction electrocatalysis: Nitrogen-doped hierarchically mesoporous carbon derived from interpenetrated nonporous metal-organic frameworks. Applied Catalysis B: Environmental, 2017, 218, 260-266.	10.8	70
30	Electrochemical Dynamics of a Single Platinum Nanoparticle Collision Event for the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2018, 57, 3464-3468.	7.2	68
31	Diphenylsilicate-incorporated NafionÂ® membranes for reduction of methanol crossover in direct methanol fuel cells. Journal of Membrane Science, 2006, 283, 219-224.	4.1	66
32	Efficient Nitrogenâ€Doped Carbon for Zincâ€“Bromine Flow Battery. Small, 2019, 15, e1901848.	5.2	65
33	Active sites and mechanism on nitrogen-doped carbon catalyst for hydrogen evolution reaction. Journal of Catalysis, 2017, 348, 151-159.	3.1	64
34	Pd and Pd-Cu Alloy Deposited Nafion Membranes for Reduction of Methanol Crossover in Direct Methanol Fuel Cells. Journal of the Electrochemical Society, 2005, 152, A1390.	1.3	63
35	Phenyleneâ€Bridged Bispyridinium with High Capacity and Stability for Aqueous Flow Batteries. Advanced Materials, 2021, 33, e2005839.	11.1	63
36	Anodic oxidation of ethanol on core-shell structured Ru@PtPd/C catalyst in alkaline media. Journal of Power Sources, 2011, 196, 6138-6143.	4.0	62

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37	Stabilization of the platinumâ€“ruthenium electrocatalyst against the dissolution of ruthenium with the incorporation of gold. Journal of Power Sources, 2008, 185, 166-170.	4.0	60
38	Ordered mesoporous tungsten carbide/carbon composites promoted Pt catalyst with high activity and stability for methanol electrooxidation. Applied Catalysis B: Environmental, 2014, 147, 518-525.	10.8	58
39	Self-humidification of a PEM fuel cell using a novel Pt/SiO2/C anode catalyst. International Journal of Hydrogen Energy, 2010, 35, 7874-7880.	3.8	50
40	Non-Precious Electrocatalysts for Oxygen Reduction Reaction in Alkaline Media: Latest Achievements on Novel Carbon Materials. Catalysts, 2016, 6, 159.	1.6	49
41	A glue method for fabricating membrane electrode assemblies for direct methanol fuel cells. Electrochimica Acta, 2006, 51, 6412-6418.	2.6	47
42	Microscopic characterizations of membrane electrode assemblies prepared under different hot-pressing conditions. Electrochimica Acta, 2007, 53, 894-902.	2.6	46
43	N, S-containing MOF-derived dual-doped mesoporous carbon as a highly effective oxygen reduction reaction electrocatalyst. Catalysis Science and Technology, 2018, 8, 335-343.	2.1	43
44	Radical Stabilization of a Tripyridiniumâ€“Triazine Molecule Enables Reversible Storage of Multiple Electrons. Angewandte Chemie - International Edition, 2021, 60, 20921-20925.	7.2	42
45	Conversion of Biomass Derivatives to Electricity in Photo Fuel Cells using Undoped and Tungstenâ€doped Bismuth Vanadate Photoanodes. ChemSusChem, 2015, 8, 4049-4055.	3.6	41
46	A mesoporous hollow silica sphere (MHSS): Synthesis through a facile emulsion approach and application of support for high performance Pd/MHSS catalyst for phenol hydrogenation. Applied Surface Science, 2011, 257, 4472-4477.	3.1	39
47	Effect of pyrolysis conditions on nitrogen-doped ordered mesoporous carbon electrocatalysts. Chinese Journal of Catalysis, 2015, 36, 1197-1204.	6.9	39
48	Oxygen reduction reaction operated on magnetically-modified PtFe/C electrocatalyst. International Journal of Hydrogen Energy, 2010, 35, 942-948.	3.8	38
49	Hybrid PdAg alloy-Au nanorods: Controlled growth, optical properties and electrochemical catalysis. Nano Research, 2013, 6, 571-580.	5.8	37
50	Electrochemical Dynamics of a Single Platinum Nanoparticle Collision Event for the Hydrogen Evolution Reaction. Angewandte Chemie, 2018, 130, 3522-3526.	1.6	37
51	A novel high-energy-density positive electrolyte with multiple redox couples for redox flow batteries. Applied Energy, 2014, 136, 576-581.	5.1	36
52	High-performance LiFePO4/C materials: Effect of carbon source on microstructure and performance. Journal of Power Sources, 2012, 211, 52-58.	4.0	35
53	Fe/N/C carbon nanotubes with high nitrogen content as effective non-precious catalyst for oxygen reduction reaction in alkaline medium. International Journal of Hydrogen Energy, 2017, 42, 5908-5915.	3.8	35
54	Nitrogen-doped carbon nanoflower with superior ORR performance in both alkaline and acidic electrolyte and enhanced durability. International Journal of Hydrogen Energy, 2018, 43, 4311-4320.	3.8	33

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55	Synthesis of nitrogen-doped ordered mesoporous carbon electrocatalyst: Nanoconfinement effect in SBA-15 template. International Journal of Hydrogen Energy, 2016, 41, 18027-18032.	3.8	32
56	Low-dimensional nitrogen-doped carbon for Br2/Brâ˜' redox reaction in zinc-bromine flow battery. Chemical Engineering Journal, 2020, 380, 122606.	6.6	31
57	One-pot synthesis of ordered mesoporous Cu-KIT-6 and its improved catalytic behavior for the epoxidation of styrene: Effects of the pH value of the initial gel. Chinese Journal of Catalysis, 2017, 38, 518-528.	6.9	30
58	Viologen-Decorated TEMPO for Neutral Aqueous Organic Redox Flow Batteries. Energy Material Advances, 2021, 2021, .	4.7	29
59	Nitrogen-doped ordered mesoporous carbon: Effect of carbon precursor on oxygen reduction reactions. Chinese Journal of Catalysis, 2016, 37, 1562-1567.	6.9	27
60	Photoassisted Oxygen Reduction Reaction in H₂â€“O₂ Fuel Cells. Angewandte Chemie, 2016, 128, 14968-14971.	1.6	25
61	Fiveâ€Memberedâ€Heterocycle Bridged Viologen with High Voltage and Superior Stability for Flow Battery. Advanced Functional Materials, 2022, 32, .	7.8	25
62	Gelatin-assisted templating route to synthesize sponge-like mesoporous silica with bimodal porosity and lysozyme adsorption behavior. Microporous and Mesoporous Materials, 2011, 143, 263-269.	2.2	24
63	Noble metal nanowires incorporated NafionÂ® membranes for reduction of methanol crossover in direct methanol fuel cells. International Journal of Hydrogen Energy, 2010, 35, 9182-9185.	3.8	23
64	Polyaniline-Derived Ordered Mesoporous Carbon as an Efficient Electrocatalyst for Oxygen Reduction Reaction. Catalysts, 2015, 5, 1034-1045.	1.6	23
65	Enhancement of the photocatalytic activity of a TiO₂/carbon aerogel based on a hydrophilic secondary pore structure. RSC Advances, 2016, 6, 68416-68423.	1.7	23
66	Nitrogen-doped 3D hierarchical ordered mesoporous carbon supported palladium electrocatalyst for the simultaneous detection of ascorbic acid, dopamine, and glucose. Ionics, 2019, 25, 6061-6070.	1.2	23
67	Oxygen reduction reaction on single Pt nanoparticle. Journal of Energy Chemistry, 2020, 49, 323-326.	7.1	23
68	Stability of hemin/C electrocatalyst for oxygen reduction reaction. International Journal of Hydrogen Energy, 2012, 37, 4606-4611.	3.8	21
69	Electrochemical Behavior of Vanadium Redox Couples on Carbon Electrode. Journal of the Electrochemical Society, 2016, 163, H937-H942.	1.3	21
70	Organic silica/NafionÂ® composite membrane for direct methanol fuel cells. Fuel Cells Bulletin, 2006, 2006, 12-16.	0.7	20
71	A highly efficient flower-like cobalt catalyst for electroreduction of carbon dioxide. Chinese Journal of Catalysis, 2018, 39, 914-919.	6.9	19
72	The determination of DNA methyltransferase activity by quenching of tris(2,2â€²-bipyridine)ruthenium electrogenerated chemiluminescence with ferrocene. Chemical Communications, 2015, 51, 9487-9490.	2.2	18

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73	Electrochemistry of vanadium redox couples on nitrogen-doped carbon. Electrochimica Acta, 2018, 259, 687-693.	2.6	17
74	Three dimensional palladium nanoflowers with enhanced electrocatalytic activity towards the anodic oxidation of formic acid. Journal of Materials Chemistry A, 2015, 3, 973-977.	5.2	16
75	Synthesis of nitrogen-doped mesoporous carbon nanosheets for oxygen reduction electrocatalytic activity enhancement in acid and alkaline media. International Journal of Hydrogen Energy, 2019, 44, 4423-4431.	3.8	16
76	A miniature passive direct formic acid fuel cell based twin-cell stack with highly stable and reproducible long-term discharge performance. Journal of Power Sources, 2011, 196, 1107-1111.	4.0	15
77	Effective sulfur-doping in carbon by high-temperature molten salt bath and its electrocatalysis for oxygen reduction reaction. Electrochemistry Communications, 2018, 86, 53-56.	2.3	15
78	A robust photocatalyst of Au₂₅@ZIF-8@TiO₂-ReP with dual photoreductive sites to promote photoelectron utilization in H₂O splitting to H₂ and CO₂ reduction to CO. Chemical Communications, 2019, 55, 12976-12979.	2.2	15
79	A novel cesium hydrogen sulfateâ€“zeolite inorganic composite electrolyte membrane for polymer electrolyte membrane fuel cell application. Journal of Power Sources, 2009, 193, 483-487.	4.0	14
80	Improvement of proton exchange membrane fuel cell performance in low-humidity conditions by adding hygroscopic agarose powder to the catalyst layer. Journal of Power Sources, 2015, 273, 168-173.	4.0	12
81	Iron/Quinone-based all-in-one solar rechargeable flow cell for highly efficient solar energy conversion and storage. Nano Energy, 2020, 76, 104907.	8.2	12
82	Immobilization of highly active Pd nano-catalysts on functionalized mesoporous silica supports using mercapto groups as anchoring sites and their catalytic performance for phenol hydrogenation. Chinese Journal of Catalysis, 2013, 34, 1519-1526.	6.9	11
83	An ultrathin 2D semi-ordered mesoporous silica film: co-operative assembly and application. RSC Advances, 2016, 6, 75058-75062.	1.7	11
84	Synthesis of 2D Nitrogen-Doped Mesoporous Carbon Catalyst for Oxygen Reduction Reaction. Materials, 2017, 10, 197.	1.3	11
85	Enhancement of Electricity Generation in Single Chamber Microbial Fuel Cell Using Binuclear-Cobalt-Phthalocyanine and Cerium Oxide Co-Supported on Ordered Mesoporous Carbon as Cathode Catalyst. Journal of the Electrochemical Society, 2019, 166, F9-F17.	1.3	11
86	Ultrafast Carbothermal Shock Constructing Ni₃Fe_{1â€“x}Cr_x Intermetallic Integrated Electrodes for Efficient and Durable Overall Water Splitting. ACS Applied Materials & Interfaces, 2022, 14, 19524-19533.	4.0	10
87	Effects of tailoring and dehydrated cross-linking on morphology evolution of ordered mesoporous carbons. RSC Advances, 2016, 6, 19515-19521.	1.7	9
88	Facile synthesis strategy of NicorePtshell electrocatalyst for oxygen reduction reaction. Journal of Energy Chemistry, 2019, 37, 192-196.	7.1	9
89	Faradaic Counter for Liposomes Loaded with Potassium, Sodium Ions, or Protonated Dopamine. Analytical Chemistry, 2021, 93, 9495-9504.	3.2	9
90	Radical Stabilization of a Tripyridiniumâ€“Triazine Molecule Enables Reversible Storage of Multiple Electrons. Angewandte Chemie, 2021, 133, 21089-21093.	1.6	7

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91	Recent Development of Anode Electrocatalysts for Direct Methanol Fuel Cells. Chinese Journal of Catalysis, 2010, 31, 141-149.	6.9	7
92	Modulating pâ€Orbital of Bismuth Nanosheet by Nickel Doping for Electrocatalytic Carbon Dioxide Reduction Reaction. ChemSusChem, 2022, 15, .	3.6	7
93	Ultralow platinum-loading PtPdRu@PtRuIr/C catalyst with excellent CO tolerance and high performance for the methanol oxidation reaction. Rare Metals, 2014, 33, 337-342.	3.6	5
94	A TiN0.3/CeO2 photo-anode and its photo-electrocatalytic performance. Chinese Journal of Catalysis, 2015, 36, 550-554.	6.9	5
95	Effect of Pt Oxidation State on Methanol Oxidation Activity. Chinese Journal of Catalysis, 2011, 32, 86-92.	6.9	3
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