Lei Zhang

List of Publications by Citations

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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.

81 papers	7,916 citations	44 h-index	82 g-index
82 ext. papers	9,305 ext. citations	14.8 avg, IF	6.61 L-index

#	Paper	IF	Citations
81	Nanostructured Pt-alloy electrocatalysts for PEM fuel cell oxygen reduction reaction. *Chemical Society Reviews*, **2010**, 39, 2184-202	58.5	926
80	NANOCATALYSTS. Platinum-based nanocages with subnanometer-thick walls and well-defined, controllable facets. *Science*, **2015**, 349, 412-6	33.3	724
79	Nanostructured Materials for Heterogeneous Electrocatalytic CO Reduction and their Related Reaction Mechanisms. *Angewandte Chemie - International Edition*, **2017**, 56, 11326-11353	16.4	588
78	Recent progress made in the mechanism comprehension and design of electrocatalysts for alkaline water splitting. *Energy and Environmental Science*, **2019**, 12, 2620-2645	35.4	532
77	Atomic layer-by-layer deposition of Pt on Pd nanocubes for catalysts with enhanced activity and durability toward oxygen reduction. *Nano Letters*, **2014**, 14, 3570-6	11.5	380
76	Palladium-platinum core-shell icosahedra with substantially enhanced activity and durability towards oxygen reduction. *Nature Communications*, **2015**, 6, 7594	17.4	365
75	Pt-Based electrocatalysts with high atom utilization efficiency: from nanostructures to single atoms. *Energy and Environmental Science*, **2019**, 12, 492-517	35.4	275
74	Cu(2+)-assisted synthesis of hexoctahedral Au-Pd alloy nanocrystals with high-index facets. *Journal of the American Chemical Society*, **2011**, 133, 17114-7	16.4	214
73	Unique excavated rhombic dodecahedral PtCu3 alloy nanocrystals constructed with ultrathin nanosheets of high-energy {110} facets. *Journal of the American Chemical Society*, **2014**, 136, 3748-51	16.4	207
72	Synergism of Geometric Construction and Electronic Regulation: 3D Se-(NiCo)S /(OH) Nanosheets for Highly Efficient Overall Water Splitting. *Advanced Materials*, **2018**, 30, e1705538	24	193
71	Shape-controlled synthesis of Au-Pd bimetallic nanocrystals for catalytic applications. *Chemical Society Reviews*, **2016**, 45, 3916-34	58.5	193
70	Atomic layer-by-layer deposition of platinum on palladium octahedra for enhanced catalysts toward the oxygen reduction reaction. *ACS Nano*, **2015**, 9, 2635-47	16.7	180
69	Thin Heterojunctions and Spatially Separated Cocatalysts To Simultaneously Reduce Bulk and Surface Recombination in Photocatalysts. *Angewandte Chemie - International Edition*, **2016**, 55, 13734-13738	16.4	124
68	Nano-designed semiconductors for electro- and photoelectro-catalytic conversion of carbon dioxide. *Chemical Society Reviews*, **2018**, 47, 5423-5443	58.5	119
67	PdCu Bimetallic Tripods: A Mechanistic Understanding of the Synthesis and Their Enhanced Electrocatalytic Activity for Formic Acid Oxidation. *Advanced Functional Materials*, **2014**, 24, 7520-7529	15.6	118
66	Transformation of Pd nanocubes into octahedra with controlled sizes by maneuvering the rates of etching and regrowth. *Journal of the American Chemical Society*, **2013**, 135, 11752-5	16.4	99
65	Edge Sites with Unsaturated Coordination on Core-Shell Mn O @Mn Co O Nanostructures for Electrocatalytic Water Oxidation. *Advanced Materials*, **2017**, 29, 1701820	24	97

64	Hierarchical Flowerlike Gold Nanoparticles Labeled Immunochromatography Test Strip for Highly Sensitive Detection of Escherichia coli O157:H7. *Langmuir*, **2015**, 31, 5537-44	4	91
63	Low-Coordinated Edge Sites on Ultrathin Palladium Nanosheets Boost Carbon Dioxide Electroreduction Performance. *Angewandte Chemie - International Edition*, **2018**, 57, 11544-11548	16.4	90
62	Synthesis of concave palladium nanocubes with high-index surfaces and high electrocatalytic activities. *Chemistry - A European Journal*, **2011**, 17, 9915-9	4.8	89
61	Facile syntheses and enhanced electrocatalytic activities of Pt nanocrystals with {hkk} high-index surfaces. *Nano Research*, **2012**, 5, 181-189	10	87
60	Solid state precursor strategy for synthesizing hollow TiO2 boxes with a high percentage of reactive {001} facets exposed. *Chemical Communications*, **2011**, 47, 6722-4	5.8	87
59	Nanostrukturierte Materialien f□die elektrokatalytische CO2-Reduktion und ihre Reaktionsmechanismen. *Angewandte Chemie*, **2017**, 129, 11482-11511	3.6	86
58	Surfactant-concentration-dependent shape evolution of Au-Pd alloy nanocrystals from rhombic dodecahedron to trisoctahedron and hexoctahedron. *Small*, **2013**, 9, 538-44	11	86
57	Ultrathin Pd-Au Shells with Controllable Alloying Degree on Pd Nanocubes toward Carbon Dioxide Reduction. *Journal of the American Chemical Society*, **2019**, 141, 4791-4794	16.4	85
56	□u-Doped PdCu@Au Tripods: A Multifunctional Nanomaterial for Positron Emission Tomography and Image-Guided Photothermal Cancer Treatment. *ACS Nano*, **2016**, 10, 3121-31	16.7	85
55	Scaling up the production of colloidal nanocrystals: should we increase or decrease the reaction volume?. *Advanced Materials*, **2014**, 26, 2600-6	24	85
54	Controlled synthesis of concave Cu2O microcrystals enclosed by {hhl} high-index facets and enhanced catalytic activity. *Journal of Materials Chemistry A*, **2013**, 1, 282-287	13	84
53	Polyol syntheses of palladium decahedra and icosahedra as pure samples by maneuvering the reaction kinetics with additives. *ACS Nano*, **2014**, 8, 7041-50	16.7	82
52	Engineering Pt/Pd Interfacial Electronic Structures for Highly Efficient Hydrogen Evolution and Alcohol Oxidation. *ACS Applied Materials & Interfaces*, **2017**, 9, 18008-18014	9.5	80
51	A review of core-shell nanostructured electrocatalysts for oxygen reduction reaction. *Energy Storage Materials*, **2018**, 12, 260-276	19.4	70
50	Morphological and Compositional Design of Pd-Cu Bimetallic Nanocatalysts with Controllable Product Selectivity toward CO Electroreduction. *Small*, **2018**, 14, 1703314	11	65
49	Formation of Enriched Vacancies for Enhanced CO2 Electrocatalytic Reduction over AuCu Alloys. *ACS Energy Letters*, **2018**, 3, 2144-2149	20.1	64
48	Pt/Pd Single-Atom Alloys as Highly Active Electrochemical Catalysts and the Origin of Enhanced Activity. *ACS Catalysis*, **2019**, 9, 9350-9358	13.1	61
47	Facile syntheses and electrocatalytic properties of porous Pd and its alloy nanospheres. *Journal of Materials Chemistry*, **2011**, 21, 9620		59

46	Underpotential deposition-induced synthesis of composition-tunable Pt-Cu nanocrystals and their catalytic properties. *Chemistry - A European Journal*, **2013**, 19, 3119-24	4.8	58
45	Hierarchically porous Cu/Zn bimetallic catalysts for highly selective CO2 electroreduction to liquid C2 products. *Applied Catalysis B: Environmental*, **2020**, 269, 118800	21.8	53
44	Porous single-crystalline AuPt@Pt bimetallic nanocrystals with high mass electrocatalytic activities. *Chemical Science*, **2016**, 7, 3500-3505	9.4	53
43	One-Pot Synthesis of Penta-twinned Palladium Nanowires and Their Enhanced Electrocatalytic Properties. *ACS Applied Materials & Interfaces*, **2017**, 9, 31203-31212	9.5	50
42	Active and Stable PtNi Alloy Octahedra Catalyst for Oxygen Reduction via Near-Surface Atomical Engineering. *ACS Catalysis*, **2020**, 10, 4205-4214	13.1	47
41	Synthesis and high electrocatalytic performance of hexagram shaped gold particles having an open surface structure with kinks. *Nano Research*, **2011**, 4, 612-622	10	46
40	Toward a quantitative understanding of symmetry reduction involved in the seed-mediated growth of Pd nanocrystals. *Journal of the American Chemical Society*, **2015**, 137, 6643-52	16.4	44
39	Synthesis of ultrathin wrinkle-free PdCu alloy nanosheets for modulating d-band electrons for efficient methanol oxidation. *Journal of Materials Chemistry A*, **2018**, 6, 8531-8536	13	44
38	Synthesis of Platinum Nanotubes and Nanorings via Simultaneous Metal Alloying and Etching. *Journal of the American Chemical Society*, **2016**, 138, 6332-5	16.4	44
37	Rational design of porous structures via molecular layer deposition as an effective stabilizer for enhancing Pt ORR performance. *Nano Energy*, **2019**, 60, 111-118	17.1	41
36	Atomic/molecular layer deposition for energy storage and conversion. *Chemical Society Reviews*, **2021**, 50, 3889-3956	58.5	39
35	Non-noble Metal Electrocatalysts for the Hydrogen Evolution Reaction in Water Electrolysis. *Electrochemical Energy Reviews*, **2021**, 4, 473-507	29.3	38
34	Self-assembly of noble metal nanoparticles into sub-100 nm colloidosomes with collective optical and catalytic properties. *Chemical Science*, **2017**, 8, 6103-6110	9.4	33
33	Low-Coordinated Edge Sites on Ultrathin Palladium Nanosheets Boost Carbon Dioxide Electroreduction Performance. *Angewandte Chemie*, **2018**, 130, 11718-11722	3.6	32
32	Structural evolution of concave trimetallic nanocubes with tunable ultra-thin shells for oxygen reduction reaction. *Nanoscale*, **2016**, 8, 16640-16649	7.7	31
31	Synthesis of spatially uniform metal alloys nanocrystals via a diffusion controlled growth strategy: The case of Au-Pd alloy trisoctahedral nanocrystals with tunable composition. *Nano Research*, **2012**, 5, 618-629	10	31
30	Formation of Second-Generation Nanoclusters on Metal Nanoparticles Driven by Reactant Gases. *Nano Letters*, **2016**, 16, 5001-9	11.5	27
29	Synthesis of size-controlled monodisperse Pd nanoparticles via a non-aqueous seed-mediated growth. *Nanoscale Research Letters*, **2012**, 7, 312	5	26

28	Facet design promotes electroreduction of carbon dioxide to carbon monoxide on palladium nanocrystals. *Chemical Engineering Science*, **2019**, 194, 29-35	4.4	26
27	Abundant Ce Ions in Au-CeO Nanosheets to Enhance CO Electroreduction Performance. *Small*, **2019** , 15, e1900289	11	25
26	Trimetallic PtPdNi octahedral nanocages with subnanometer thick-wall towards high oxygen reduction reaction. *Nano Energy*, **2019**, 64, 103890	17.1	25
25	Five-Fold Twinned Pd Nanorods and Their Use as Templates for the Synthesis of Bimetallic or Hollow Nanostructures. *ChemNanoMat*, **2015**, 1, 246-252	3.5	25
24	Fabrication of bilayer Pd-Pt nanocages with sub-nanometer thin shells for enhanced hydrogen evolution reaction. *Nano Research*, **2019**, 12, 2268-2274	10	23
23	Achieving convenient CO electroreduction and photovoltage in tandem using potential-insensitive disordered Ag nanoparticles. *Chemical Science*, **2018**, 9, 6599-6604	9.4	22
22	Controlling the Growth of Au on Icosahedral Seeds of Pd by Manipulating the Reduction Kinetics. *Journal of Physical Chemistry C*, **2016**, 120, 20768-20774	3.8	22
21	Facet-evolution growth of Mn3O4@CoxMn3-xO4 electrocatalysts on Ni foam towards efficient oxygen evolution reaction. *Journal of Catalysis*, **2019**, 369, 105-110	7.3	22
20	A Ligand-Exchange Route to Nobel Metal Nanocrystals with a Clean Surface for Enhanced Optical and Catalytic Properties. *Particle and Particle Systems Characterization*, **2017**, 34, 1700075	3.1	21
19	Designing a reductive hybrid membrane to selectively capture noble metallic ions during oil/water emulsion separation with further function enhancement. *Journal of Materials Chemistry A*, **2018**, 6, 10217-10225	13	20
18	Tuning Oxygen Vacancies of Oxides to Promote Electrocatalytic Reduction of Carbon Dioxide. *ACS Energy Letters*, **2020**, 5, 552-558	20.1	19
17	Gold nanoshurikens with uniform sharp tips for chemical sensing by the localized surface plasmon resonance. *Nanoscale*, **2017**, 9, 17037-17043	7.7	17
16	Cu@Pt catalysts prepared by galvanic replacement of polyhedral copper nanoparticles for polymer electrolyte membrane fuel cells. *Electrochimica Acta*, **2019**, 306, 167-174	6.7	17
15	Highly stable one-dimensional Pt nanowires with modulated structural disorder towards the oxygen reduction reaction. *Journal of Materials Chemistry A*, **2019**, 7, 24830-24836	13	14
14	Three-Dimensional Cathodes for Electrochemical Reduction of CO: From Macro- to Nano-Engineering. *Nanomaterials*, **2020**, 10,	5.4	13
13	Facile synthesis of Pd@Pt octahedra supported on carbon for electrocatalytic applications. *AICHE Journal*, **2017**, 63, 2528-2534	3.6	12
12	Cu2+ underpotential-deposition assisted synthesis of Au and AuPd alloy nanocrystals with systematic shape evolution. *CrystEngComm*, **2015**, 17, 5556-5561	3.3	12
11	A Facile and Environmentally Friendly One-Pot Synthesis of Pt Surface-Enriched Pt-Pd(x)/C Catalyst for Oxygen Reduction. *Electrocatalysis*, **2018**, 9, 495-504	2.7	12

10	Robust synthesis of ultrathin AuAg nanowires as a high-surface-area, synergistic substrate for constructing efficient Pt-based catalysts. *Journal of Materials Chemistry A*, **2018**, 6, 22161-22169	13	12
9	Recent Development of Electrocatalytic CO Reduction Application to Energy Conversion. *Small*, **2021**, 17, e2100323	11	12
8	Nucleation-mediated synthesis and enhanced catalytic properties of Au-Pd bimetallic tripods and bipyramids with twinned structures and high-energy facets. *Nanoscale*, **2016**, 8, 2819-25	7.7	11
7	Do polymer ligands block the catalysis of metal nanoparticles? Unexpected importance of binding motifs in improving catalytic activity. *Journal of Materials Chemistry A*, **2020**, 8, 15900-15908	13	10
6	Concentrating and activating carbon dioxide over AuCu aerogel grain boundaries. *Journal of Chemical Physics*, **2020**, 152, 204703	3.9	6
5	Self-assembly of 2,6-naphthalenedicarboxylic acid and 4,4?-biphenyldicarboxylic acid on highly oriented pyrolytic graphite and Au(1 1 1) surfaces. *Electrochimica Acta*, **2010**, 55, 8287-8292	6.7	5
4	Single atom surface engineering: A new strategy to boost electrochemical activities of Pt catalysts. *Nano Energy*, **2022**, 93, 106813	17.1	3
3	Characterization of Supported Metal Single-Atom Catalysts **2022**, 169-198		2
2	Low cytotoxicity porous Nd(2)(SiO(4))(3) nanoparticles with near infrared excitation and emission. *Nanotechnology*, **2011**, 22, 185703	3.4	1
1	Oxygen Reduction Reaction Electrocatalysts **2022**, 1-34		0