Zhiheng Lyu

List of Publications by Year
in descending order

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46 papers	2,165 citations	279487 23 h-index	233125 45 g-index
48 all docs	48 docs citations	48 times ranked	2251 citing authors

#	Article	IF	Citations
1	Bimetallic Janus Nanocrystals: Syntheses and Applications. Advanced Materials, 2022, 34, e2102591.	11.1	55
2	Size-Dependent Reaction Mechanism of Î» -MnO ₂ Particles as Cathodes in Aqueous Zinc-Ion Batteries. Energy Material Advances, 2022, 2022, .	4.7	20
3	Phase-Controlled Synthesis of Ru Nanocrystals via Template-Directed Growth: Surface Energy versus Bulk Energy. Nano Letters, 2022, 22, 3591-3597.	4.5	7
4	Noble-Metal Nanocrystals with Controlled Shapes for Catalytic and Electrocatalytic Applications. Chemical Reviews, 2021, 121, 649-735.	23.0	388
5	Controlling the Surface Oxidation of Cu Nanowires Improves Their Catalytic Selectivity and Stability toward C 2+ Products in CO 2 Reduction. Angewandte Chemie, 2021, 133, 1937-1943.	1.6	13
6	Controlling the Surface Oxidation of Cu Nanowires Improves Their Catalytic Selectivity and Stability toward C₂₊ Products in CO₂ Reduction. Angewandte Chemie - International Edition, 2021, 60, 1909-1915.	7.2	122
7	Physical Transformations of Noble-Metal Nanocrystals upon Thermal Activation. Accounts of Chemical Research, 2021, 54, 1-10.	7.6	23
8	Bifunctional Janus Particles as Multivalent Synthetic Nanoparticle Antibodies (SNAbs) for Selective Depletion of Target Cells. Nano Letters, 2021, 21, 875-886.	4.5	24
9	Using Reduction Kinetics to Control and Predict the Outcome of a Colloidal Synthesis of Noble-Metal Nanocrystals. Inorganic Chemistry, 2021, 60, 4182-4197.	1.9	10
10	Twin-Directed Deposition of Pt on Pd Icosahedral Nanocrystals for Catalysts with Enhanced Activity and Durability toward Oxygen Reduction. Nano Letters, 2021, 21, 2248-2254.	4.5	36
11	Janus Nanocages of Platinumâ€Group Metals and Their Use as Effective Dualâ€Electrocatalysts. Angewandte Chemie, 2021, 133, 10472-10480.	1.6	4
12	Janus Nanocages of Platinumâ€Group Metals and Their Use as Effective Dualâ€Electrocatalysts. Angewandte Chemie - International Edition, 2021, 60, 10384-10392.	7.2	33
13	Kinetically Controlled Synthesis of Rhodium Nanocrystals with Different Shapes and a Comparison Study of Their Thermal and Catalytic Properties. Journal of the American Chemical Society, 2021, 143, 6293-6302.	6.6	26
14	Ptâ€“Co@Pt Octahedral Nanocrystals: Enhancing Their Activity and Durability toward Oxygen Reduction with an Intermetallic Core and an Ultrathin Shell. Journal of the American Chemical Society, 2021, 143, 8509-8518.	6.6	128
15	Improving the Purity and Uniformity of Pd and Pt Nanocrystals by Decoupling Growth from Nucleation in a Flow Reactor. Chemistry of Materials, 2021, 33, 3791-3801.	3.2	5
16	Pdâ€“Au Asymmetric Nanopyramids: Lateral vs Vertical Growth of Au on Pd Decahedral Seeds. Chemistry of Materials, 2021, 33, 5391-5400.	3.2	9
17	Maximizing the Catalytic Performance of Pd@Au_xPd_{1â^'x} Nanocubes in H₂O₂ Production by Reducing Shell Thickness to Increase Compositional Stability. Angewandte Chemie, 2021, 133, 19795-19799.	1.6	11
18	Maximizing the Catalytic Performance of Pd@Au_xPd_{1â^'x} Nanocubes in H₂O₂ Production by Reducing Shell Thickness to Increase Compositional Stability. Angewandte Chemie - International Edition, 2021, 60, 19643-19647.	7.2	44

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19	Kinetically Controlled Synthesis of Pdâ€“Cu Janus Nanocrystals with Enriched Surface Structures and Enhanced Catalytic Activities toward CO₂ Reduction. Journal of the American Chemical Society, 2021, 143, 149-162.	6.6	77
20	Facet-controlled Ptâ€“Ir nanocrystals with substantially enhanced activity and durability towards oxygen reduction. Materials Today, 2020, 35, 69-77.	8.3	45
21	Facile Synthesis of Pdâ^'Cu Bimetallic Twin Nanocubes and a Mechanistic Understanding of the Shape Evolution. ChemNanoMat, 2020, 6, 386-391.	1.5	3
22	How to Remove the Capping Agent from Pd Nanocubes without Destructing Their Surface Structure for the Maximization of Catalytic Activity?. Angewandte Chemie - International Edition, 2020, 59, 19129-19135.	7.2	24
23	How to Remove the Capping Agent from Pd Nanocubes without Destructing Their Surface Structure for the Maximization of Catalytic Activity?. Angewandte Chemie, 2020, 132, 19291-19297.	1.6	2
24	A Mechanistic Study of the Multiple Roles of Oleic Acid in the Oilâ€Phase Synthesis of Pt Nanocrystals. Chemistry - A European Journal, 2020, 26, 15636-15642.	1.7	9
25	Ptâ€“Co truncated octahedral nanocrystals: a class of highly active and durable catalysts toward oxygen reduction. Nanoscale, 2020, 12, 11718-11727.	2.8	13
26	Ptâ€Irâ€Pd Trimetallic Nanocages as a Dual Catalyst for Efficient Oxygen Reduction and Evolution Reactions in Acidic Media. Advanced Energy Materials, 2020, 10, 1904114.	10.2	100
27	Facile Synthesis of Ag@Pd_{nL} Icosahedral Nanocrystals as a Class of Costâ€Effective Electrocatalysts toward Formic Acid Oxidation. ChemCatChem, 2020, 12, 5156-5163.	1.8	8
28	A New Catalytic System with Balanced Activity and Durability toward Oxygen Reduction. ChemCatChem, 2020, 12, 4817-4824.	1.8	3
29	Pdâ€Ru Alloy Nanocages with a Faceâ€Centered Cubic Structure and Their Enhanced Activity toward the Oxidation of Ethylene Glycol and Glycerol. Small Methods, 2020, 4, 1900843.	4.6	46
30	Pencil-like Ag Nanorods Asymmetrically Capped by Pd. Chemistry of Materials, 2020, 32, 5361-5367.	3.2	8
31	Catalytic System Based on Sub-2 nm Pt Particles and Its Extraordinary Activity and Durability for Oxygen Reduction. Nano Letters, 2019, 19, 4997-5002.	4.5	68
32	Facile Synthesis and Characterization of Pd@Ir_{nL} (n = 1â€“4) Coreâ€“Shell Nanocubes for Highly Efficient Oxygen Evolution in Acidic Media. Chemistry of Materials, 2019, 31, 5867-5875.	3.2	65
33	A Quantitative Analysis of the Reduction Kinetics Involved in the Synthesis of Au@Pd Concave Nanocubes. Chemistry - A European Journal, 2019, 25, 16397-16404.	1.7	11
34	General Approach to the Synthesis of Heterodimers of Metal Nanoparticles through Site-Selected Protection and Growth. Nano Letters, 2019, 19, 6703-6708.	4.5	51
35	RÃ¼cktitelbild: Iridiumâ€Based Cubic Nanocages with 1.1â€nmâ€Thick Walls: A Highly Efficient and Durable Electrocatalyst for Water Oxidation in an Acidic Medium (Angew. Chem. 22/2019). Angewandte Chemie, 2019, 131, 7576-7576.	1.6	0
36	Iridiumâ€Based Cubic Nanocages with 1.1â€nmâ€Thick Walls: A Highly Efficient and Durable Electrocatalyst for Water Oxidation in an Acidic Medium. Angewandte Chemie - International Edition, 2019, 58, 7244-7248.	7.2	89

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37	One-Dimensional Metal Nanostructures: From Colloidal Syntheses to Applications. Chemical Reviews, 2019, 119, 8972-9073.	23.0	240
38	Iridiumâ€Based Cubic Nanocages with 1.1â€nmâ€Thick Walls: A Highly Efficient and Durable Electrocatalyst for Water Oxidation in an Acidic Medium. Angewandte Chemie, 2019, 131, 7322-7326.	1.6	12
39	Ru Octahedral Nanocrystals with a Face-Centered Cubic Structure, {111} Facets, Thermal Stability up to 400 Â°C, and Enhanced Catalytic Activity. Journal of the American Chemical Society, 2019, 141, 7028-7036.	6.6	122
40	Continuous and Scalable Synthesis of Pt Multipods with Enhanced Electrocatalytic Activity toward the Oxygen Reduction Reaction. ChemNanoMat, 2019, 5, 599-605.	1.5	8
41	Au@Cu Coreâ€“Shell Nanocubes with Controllable Sizes in the Range of 20â€“30 nm for Applications in Catalysis and Plasmonics. ACS Applied Nano Materials, 2019, 2, 1533-1540.	2.4	22
42	Nearâ€Infraredâ€Triggered Release of Ca²⁺ Ions for Potential Application in Combination Cancer Therapy. Advanced Healthcare Materials, 2019, 8, e1801113.	3.9	39
43	A Rationally Designed Route to the One-Pot Synthesis of Right Bipyramidal Nanocrystals of Copper. Chemistry of Materials, 2018, 30, 6469-6477.	3.2	28
44	Synthesis of Pt nanocrystals with different shapes using the same protocol to optimize their catalytic activity toward oxygen reduction. Materials Today, 2018, 21, 834-844.	8.3	58
45	Enabling Complete Ligand Exchange on the Surface of Gold Nanocrystals through the Deposition and Then Etching of Silver. Journal of the American Chemical Society, 2018, 140, 11898-11901.	6.6	53
46	Synthesis and Characterization of Ptâ€Ag Icosahedral Nanocages with Enhanced Catalytic Activity toward Oxygen Reduction. ChemNanoMat, 0, , .	1.5	1