Liang Zhang

List of Publications by Year
in descending order

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Version: 2024-02-01

44 papers	2,056 citations	236925 25 h-index	254184 43 g-index
45 all docs	45 docs citations	45 times ranked	3100 citing authors

#	Article	IF	Citations
1	Molybdenum Trioxide (Î±-MoO₃) Nanoribbons for Ultrasensitive Ammonia (NH₃) Gas Detection: Integrated Experimental and Density Functional Theory Simulation Studies. ACS Applied Materials & Interfaces, 2019, 11, 10697-10706.	8.0	174
2	Design of Pt-Shell Nanoparticles with Alloy Cores for the Oxygen Reduction Reaction. ACS Nano, 2013, 7, 9168-9172.	14.6	141
3	Catalytic Activity of Pd/Cu Random Alloy Nanoparticles for Oxygen Reduction. Journal of Physical Chemistry Letters, 2011, 2, 1328-1331.	4.6	131
4	Microwave Synthesis of Classically Immiscible Rhodiumâ€“Silver and Rhodiumâ€“Gold Alloy Nanoparticles: Highly Active Hydrogenation Catalysts. ACS Nano, 2014, 8, 11512-11521.	14.6	118
5	MXene Materials for the Electrochemical Nitrogen Reductionâ€”Functionalized or Not?. ACS Catalysis, 2020, 10, 253-264.	11.2	107
6	Efficient Electrocatalytic Oxidation of Formic Acid Using Au@Pt Dendrimer-Encapsulated Nanoparticles. Journal of the American Chemical Society, 2013, 135, 5521-5524.	13.7	103
7	High Cycling Stability for Solidâ€State Li Metal Batteries via Regulating Solvation Effect in Poly(Vinylidene Fluoride)â€Based Electrolytes. Batteries and Supercaps, 2020, 3, 876-883.	4.7	84
8	Activation of ultrathin SrTiO₃ with subsurface SrRuO₃ for the oxygen evolution reaction. Energy and Environmental Science, 2018, 11, 1762-1769.	30.8	83
9	CO Oxidation at the Auâ€“Cu Interface of Bimetallic Nanoclusters Supported on CeO₂(111). Journal of Physical Chemistry Letters, 2013, 4, 2943-2947.	4.6	80
10	A Theoretical and Experimental Approach for Correlating Nanoparticle Structure and Electrocatalytic Activity. Accounts of Chemical Research, 2015, 48, 1351-1357.	15.6	78
11	An Experimental and Theoretical Investigation of the Inversion of Pd@Pt Core@Shell Dendrimer-Encapsulated Nanoparticles. ACS Nano, 2013, 7, 9345-9353.	14.6	75
12	A theoretical and experimental examination of systematic ligand-induced disorder in Au dendrimer-encapsulated nanoparticles. Chemical Science, 2013, 4, 2912.	7.4	63
13	Tuning the Oxygen Reduction Activity of Pd Shell Nanoparticles with Random Alloy Cores. Journal of Physical Chemistry C, 2012, 116, 20860-20865.	3.1	58
14	EON: software for long time simulations of atomic scale systems. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 055002.	2.0	58
15	Oxygen Activation and Reaction on Pdâ€“Au Bimetallic Surfaces. Journal of Physical Chemistry C, 2015, 119, 11754-11762.	3.1	57
16	Au@Pt dendrimer encapsulated nanoparticles as model electrocatalysts for comparison of experiment and theory. Chemical Science, 2012, 3, 1033.	7.4	56
17	Microwave-Assisted Synthesis of Pd_xAu_{100â€“x} Alloy Nanoparticles: A Combined Experimental and Theoretical Assessment of Synthetic and Compositional Effects upon Catalytic Reactivity. ACS Catalysis, 2016, 6, 4882-4893.	11.2	54
18	RuCoO_x Nanofoam as a High-Performance Trifunctional Electrocatalyst for Rechargeable Zincâ€“Air Batteries and Water Splitting. Nano Letters, 2021, 21, 9633-9641.	9.1	49

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19	Atomically dispersed Pb ionic sites in PbCdSe quantum dot gels enhance room-temperature NO2 sensing. Nature Communications, 2021, 12, 4895.	12.8	40
20	Computational Design of Alloy-Core@Shell Metal Nanoparticle Catalysts. ACS Catalysis, 2015, 5, 655-660.	11.2	39
21	Efficient CO Oxidation Using Dendrimer-Encapsulated Pt Nanoparticles Activated with <2% Cu Surface Atoms. ACS Nano, 2016, 10, 8760-8769.	14.6	39
22	Oxygen and Hydroxyl Species Induce Multiple Reaction Pathways for the Partial Oxidation of Allyl Alcohol on Gold. Journal of the American Chemical Society, 2014, 136, 6489-6498.	13.7	37
23	Correlating Structure and Function of Metal Nanoparticles for Catalysis. Surface Science, 2015, 640, 65-72.	1.9	35
24	Reversible Electrochemical Gelation of Metal Chalcogenide Quantum Dots. Journal of the American Chemical Society, 2020, 142, 12207-12215.	13.7	35
25	Interface engineering for a rational design of poison-free bimetallic CO oxidation catalysts. Nanoscale, 2017, 9, 5244-5253.	5.6	28
26	Effect of annealing in oxygen on alloy structures of Pdâ€“Au bimetallic model catalysts. Physical Chemistry Chemical Physics, 2015, 17, 20588-20596.	2.8	23
27	Enhancing Oxygen Exchange Activity by Tailoring Perovskite Surfaces. Journal of Physical Chemistry Letters, 2019, 10, 4082-4088.	4.6	23
28	Control of selectivity in allylic alcohol oxidation on gold surfaces: the role of oxygen adatoms and hydroxyl species. Physical Chemistry Chemical Physics, 2015, 17, 4730-4738.	2.8	22
29	Computational screening of core@shell nanoparticles for the hydrogen evolution and oxygen reduction reactions. Journal of Chemical Physics, 2016, 145, 244708.	3.0	22
30	The effect of single pd atoms on the energetics of recombinative O2 desorption from Au(111). Surface Science, 2018, 677, 296-300.	1.9	20
31	Composition-Dependent Oxygen Reduction Reaction Activity of Pt-Surfaced PtNi Dodecahedral Nanoframes. ACS Applied Energy Materials, 2020, 3, 768-776.	5.1	20
32	Unusual Activity Trend for CO Oxidation on Pd_xAu_{140â€“x}@Pt Core@Shell Nanoparticle Electrocatalysts. Journal of Physical Chemistry Letters, 2015, 6, 2562-2568.	4.6	18
33	Kinetic interactions between H2 and CO in catalytic oxidation over PdO. Combustion and Flame, 2020, 211, 270-280.	5.2	16
34	Structural and electronic properties of Fe dopants in cobalt oxide nanoislands on Au(111). Journal of Chemical Physics, 2019, 150, 041731.	3.0	14
35	Reviving Inert Oxides for Electrochemical Water Splitting by Subsurface Engineering. Chemistry of Materials, 2020, 32, 5569-5578.	6.7	11
36	Photoexcited NO₂ Enables Accelerated Response and Recovery Kinetics in Light-Activated NO₂ Gas Sensing. ACS Sensors, 2021, 6, 4389-4397.	7.8	11

#	Article	IF	Citations
37	A Theoretical and Experimental In-Situ Electrochemical Infrared Spectroscopy Study of Adsorbed CO on Pt Dendrimer-Encapsulated Nanoparticles. Journal of the Electrochemical Society, 2016, 163, H3061-H3065.	2.9	10
38	Ridge-based bias potentials to accelerate molecular dynamics. Journal of Chemical Physics, 2015, 143, 244104.	3.0	7
39	Balancing oxygen evolution reaction and oxygen reduction reaction processes in Liâ€“O2 batteries through tuning the bond distances of RuO2. Composites Part B: Engineering, 2022, 234, 109727.	12.0	5
40	Anisotropic iron-doping patterns in two-dimensional cobalt oxide nanoislands on Au(111). Nano Research, 2019, 12, 2364-2372.	10.4	4
41	Role of Undercoordinated Sites for the Catalysis in Confined Spaces Formed by Two-Dimensional Material Overlayers. Journal of Physical Chemistry Letters, 2020, 11, 9400-9407.	4.6	4
42	A bimetallic nanocatalyst for light-free oxygen sensitization therapy. Cell Reports Physical Science, 2021, 2, 100538.	5.6	2
43	Distributed replica dynamics. Journal of Chemical Physics, 2015, 143, 174112.	3.0	1
44	Ultrasensitive ammonia (NH3) gas sensor: DFT Simulation-Directed Selection of High-Performance Metal-Doped Molybdenum Tri-oxide (Î±-MoO3) Nanoribbons for NH3 Detection. , 2019, , .		1