Xiaochun Zhou

List of Publications by Year
in descending order

61 papers	3,388 citations	236925 25 h-index	144013 57 g-index
61 all docs	61 docs citations	61 times ranked	3660 citing authors

#	Article	IF	Citations
1	Size-Dependent Catalytic Activity and Dynamics of Gold Nanoparticles at the Single-Molecule Level. Journal of the American Chemical Society, 2010, 132, 138-146.	13.7	499
2	High-quality hydrogen from the catalyzed decomposition of formic acid by Pdâ€"Au/C and Pdâ€"Ag/C. Chemical Communications, 2008, , 3540.	4.1	315
3	Quantitative super-resolution imaging uncovers reactivity patterns on single nanocatalysts. Nature Nanotechnology, 2012, 7, 237-241.	31.5	264
4	Novel PdAu@Au/C Coreâ˘'Shell Catalyst: Superior Activity and Selectivity in Formic Acid Decomposition for Hydrogen Generation. Chemistry of Materials, 2010, 22, 5122-5128.	6.7	226
5	Single-Molecule Catalysis Mapping Quantifies Site-Specific Activity and Uncovers Radial Activity Gradient on Single 2D Nanocrystals. Journal of the American Chemical Society, 2013, 135, 1845-1852.	13.7	189
6	Single-molecule fluorescence imaging of nanocatalytic processes. Chemical Society Reviews, 2010, 39, 4560.	38.1	152
7	Spatiotemporal catalytic dynamics within single nanocatalysts revealed by single-molecule microscopy. Chemical Society Reviews, 2014, 43, 1107-1117.	38.1	135
8	Available hydrogen from formic acid decomposed by rare earth elements promoted Pdâ€Au/C catalysts at low temperature. ChemSusChem, 2010, 3, 1379-1382.	6.8	110
9	Single-Molecule Electrocatalysis by Single-Walled Carbon Nanotubes. Nano Letters, 2009, 9, 3968-3973.	9.1	105
10	How Does a Single Pt Nanocatalyst Behave in Two Different Reactions? A Single-Molecule Study. Nano Letters, 2012, 12, 1253-1259.	9.1	102
11	Cooperative communication within and between single nanocatalysts. Nature Chemistry, 2018, 10, 607-614.	13.6	95
12	Imaging Catalytic Hotspots on Single Plasmonic Nanostructures via Correlated Super-Resolution and Electron Microscopy. ACS Nano, 2018, 12, 5570-5579.	14.6	89
13	Flexible and Lightweight Fuel Cell with High Specific Power Density. ACS Nano, 2017, 11, 5982-5991.	14.6	88
14	Nanobubbles: An Effective Way to Study Gas-Generating Catalysis on a Single Nanoparticle. Journal of the American Chemical Society, 2017, 139, 14277-14284.	13.7	71
15	Scalable Parallel Screening of Catalyst Activity at the Single-Particle Level and Subdiffraction Resolution. ACS Catalysis, 2013, 3, 1448-1453.	11.2	62
16	Hydrogen generation from methanol at near-room temperature. Chemical Science, 2017, 8, 7498-7504.	7.4	62
17	Single-nanoparticle catalysis at single-turnover resolution. Chemical Physics Letters, 2009, 470, 151-157.	2.6	61
18	Highly Active Carbon Supported Pdâ€"Ag Nanofacets Catalysts for Hydrogen Production from HCOOH. ACS Applied Materials & Interfaces, 2016, 8, 20839-20848.	8.0	53

#	Article	IF	Citations
19	Single-Molecule Kinetics Reveals a Hidden Surface Reaction Intermediate in Single-Nanoparticle Catalysis. Journal of Physical Chemistry C, 2014, 118, 26902-26911.	3.1	47
20	Platinum-macrocycle co-catalyst for electro-oxidation of formic acid. Electrochemistry Communications, 2007, 9, 1469-1473.	4.7	45
21	Carbon Defect-Induced Reversible Carbonâ€"Oxygen Interfaces for Efficient Oxygen Reduction. ACS Applied Materials & Interfaces, 2018, 10, 39735-39744.	8.0	45
22	An ultra-thin, flexible, low-cost and scalable gas diffusion layer composed of carbon nanotubes for high-performance fuel cells. Journal of Materials Chemistry A, 2020, 8, 5986-5994.	10.3	43
23	Platinum-macrocycle co-catalysts for electro-oxidation of formic acid. Journal of Power Sources, 2008, 179, 481-488.	7.8	41
24	Great improvement in the performance and lifetime of a fuel cell using a highly dense, well-ordered, and cone-shaped Nafion array. Journal of Materials Chemistry A, 2020, 8, 5489-5500.	10.3	34
25	Revealing the Activity Distribution of a Single Nanocatalyst by Locating Single Nanobubbles with Super-Resolution Microscopy. Journal of Physical Chemistry Letters, 2018, 9, 5630-5635.	4.6	26
26	The mechanism of formic acid electrooxidation on iron tetrasulfophthalocyanine-modified platinum electrode. Electrochemistry Communications, 2008, 10, 131-135.	4.7	23
27	Dark-field spectroscopy: development, applications and perspectives in single nanoparticle catalysis. Journal of Physics Condensed Matter, 2019, 31, 473001.	1.8	23
28	Optical super-resolution microscopy and its applications in nano-catalysis. Nano Research, 2015, 8, 441-455.	10.4	22
29	Evolution of single nanobubbles through multi-state dynamics. Chinese Chemical Letters, 2020, 31, 2442-2446.	9.0	22
30	<i>In situ</i> self-doped biomass-derived porous carbon as an excellent oxygen reduction electrocatalyst for fuel cells and metalâ€"air batteries. Journal of Materials Chemistry A, 2021, 9, 14331-14343.	10.3	22
31	Determining factors in the growth of MOF single crystals unveiled by in situ interface imaging. CheM, 2022, 8, 1637-1657.	11.7	22
32	Fluorescence enhancement on silver nanoplates at the single- and sub-nanoparticle level. Nanoscale, 2015, 7, 20132-20141.	5.6	21
33	Flexible and Adaptable Fuel Cell Pack with High Energy Density Realized by a Bifunctional Catalyst. ACS Applied Materials & Interfaces, 2020, 12, 4473-4481.	8.0	19
34	Well-Dispersed Nafion Array Prepared by the Freeze-Drying Method to Effectively Improve the Performance of Proton Exchange Membrane Fuel Cells. ACS Sustainable Chemistry and Engineering, 2021, 9, 16770-16777.	6.7	18
35	Imaging the Site-Specific Activity and Kinetics on a Single Nanomaterial by Microchamber Array. ACS Catalysis, 2017, 7, 3607-3614.	11.2	16
36	All-solid-state passive direct methanol fuel cells with great orientation stability and high energy density based on solid methanol fuels. Journal of Power Sources, 2020, 450, 227669.	7.8	16

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37	Highly Distorted Platinum Nanorods for High-Efficiency Fuel Cell Catalysis. CCS Chemistry, 2020, 2, 401-412.	7.8	16
38	Highly flat and highly homogeneous carbon paper with ultra-thin thickness for high-performance proton exchange membrane fuel cell (PEMFC). Journal of Power Sources, 2022, 520, 230832.	7.8	15
39	A new flow field and its two-dimension model for polymer electrolyte membrane fuel cells (PEMFCs). Journal of Power Sources, 2006, 158, 1209-1221.	7.8	14
40	Critical importance of current collector property to the performance of flexible electrochemical power sources. Chinese Chemical Letters, 2019, 30, 1282-1288.	9.0	14
41	Plasma treated carbon paper electrode greatly improves the performance of iron-hydrogen battery for low-cost energy storage. Chinese Chemical Letters, 2022, 33, 1095-1099.	9.0	13
42	Methanolâ€“Water Aqueousâ€Phase Reforming with the Assistance of Dehydrogenases at Nearâ€Room Temperature. ChemSusChem, 2018, 11, 864-871.	6.8	12
43	One-step to prepare high-performance gas diffusion layer (GDL) with three different functional layers for proton exchange membrane fuel cells (PEMFCs). International Journal of Hydrogen Energy, 2022, 47, 25769-25779.	7.1	12
44	Immobilized iridium complexes for hydrogen evolution from formic acid dehydrogenation. Sustainable Energy and Fuels, 2020, 4, 2519-2526.	4.9	11
45	Hydrogen generation from glucose catalyzed by organoruthenium catalysts under mild conditions. Chemical Communications, 2017, 53, 4230-4233.	4.1	10
46	Hydrogen Generation from <i>s</i>-Trioxane and Water Catalytic Reforming: A Solid Organic Hydrogen Carrier. ACS Applied Energy Materials, 2018, 1, 4860-4866.	5.1	9
47	Promotion of iridium complex catalysts for HCOOH dehydrogenation by trace oxygen. Kinetics and Catalysis, 2017, 58, 499-505.	1.0	8
48	Second Sphere Ligand Promoted Organoiridium Catalysts for Methanol Dehydrogenation under Mild Conditions. ChemCatChem, 2020, 12, 4024-4028.	3.7	8
49	Performance improvement of air-breathing proton exchange membrane fuel cell (PEMFC) with a condensing-tower-like curved flow field. Chinese Chemical Letters, 2023, 34, 107441.	9.0	8
50	Singleâ€Nanoparticle Coulometry Method with High Sensitivity and High Throughput to Study the Electrochemical Activity and Oscillation of Single Nanocatalysts. Small, 2021, 17, e2007302.	10.0	7
51	Preparation and simulation of an additional catalyst layer for direct methanol fuel cell. Journal of Electroanalytical Chemistry, 2006, 588, 129-139.	3.8	6
52	â€œHot spotsâ€•growth on single nanowire controlled by electric charge. Nanoscale, 2016, 8, 12029-12034.	5.6	6
53	Lowâ€Temperature Methanolâ€Water Reforming Over Alcohol Dehydrogenase and Immobilized Ruthenium Complex. ChemSusChem, 2021, 14, 3867-3875.	6.8	6
54	Uncovering growth species of multivariate MOFs in liquid phase by mass spectrometry. Chinese Chemical Letters, 2022, 33, 3993-3998.	9.0	6

#	Article	IF	Citations
55	Highly Safe, Durable, Adaptable, and Flexible Fuel Cell Using Gel/Sponge Composite Material. Advanced Energy Materials, 2022, 12, .	19.5	6
56	Multifunctions of Net Surface Charge in the Reaction on a Single Nanoparticle. Journal of Physical Chemistry C, 2016, 120, 16608-16616.	3.1	5
57	Massively Screening the Temporal Spectra of Single Nanoparticles to Uncover the Mechanism of Nanosynthesis. Small, 2016, 12, 5049-5057.	10.0	5
58	Hydrogen Generation from Catalytic Reforming of Paraformaldehyde and Water by Polymeric Bifunctional Catalysts Comprising Ruthenium and Sulfonic Acid Units. ChemPlusChem, 2020, 85, 1646-1654.	2.8	4
59	Insights into the promotion effect of macrocycle molecule on HCOOH electro-oxidation. Journal of Electroanalytical Chemistry, 2014, 734, 38-42.	3.8	2
60	Ultralight, Safe, Economical, and Portable Oxygen Generators with Low Energy Consumption Prepared by Air-Breathing Electrochemical Extraction. ACS Applied Materials & Interfaces, 2022, 14, 28114-28122.	8.0	2
61	Highly Safe, Durable, Adaptable, and Flexible Fuel Cell Using Gel/Sponge Composite Material (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock	19.5	0