Ziyun Wang

List of Publications by Year
in descending order

60	8,607	87888 38	138484 58
papers	citations	h-index	g-index

64	64	64	6735
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Seeing is believing: In-situ visualising dynamic evolution in CO2 electrolysis. Current Opinion in Electrochemistry, 2022, 31, 100846.	4.8	5
2	Efficient electrosynthesis of n-propanol from carbon monoxide using a Agâ€“Ruâ€“Cu catalyst. Nature Energy, 2022, 7, 170-176.	39.5	96
3	High carbon utilization in CO2 reduction to multi-carbon products in acidic media. Nature Catalysis, 2022, 5, 564-570.	34.4	197
4	Accurate and Affordable Explicit Solvent Quantum Mechanics for Electrocatalysis Investigations. Matter, 2021, 4, 12-14.	10.0	4
5	Rational catalyst design for CO oxidation: a gradient-based optimization strategy. Catalysis Science and Technology, 2021, 11, 2604-2615.	4.1	5
6	Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. Journal of the American Chemical Society, 2021, 143, 6482-6490.	13.7	204
7	Silica-copper catalyst interfaces enable carbon-carbon coupling towards ethylene electrosynthesis. Nature Communications, 2021, 12, 2808.	12.8	91
8	Gold-in-copper at low *CO coverage enables efficient electromethanation of CO2. Nature Communications, 2021, 12, 3387.	12.8	70
9	Coordination Number-Dependent Complete Oxidation of Methane on NiO Catalysts. ACS Catalysis, 2021, 11, 9837-9849.	11.2	9
10	Ternary Alloys Enable Efficient Production of Methoxylated Chemicals via Selective Electrocatalytic Hydrogenation of Lignin Monomers. Journal of the American Chemical Society, 2021, 143, 17226-17235.	13.7	43
11	Boride-derived oxygen-evolution catalysts. Nature Communications, 2021, 12, 6089.	12.8	51
12	Catalyst synthesis under CO2 electroreduction favours faceting and promotes renewable fuels electrosynthesis. Nature Catalysis, 2020, 3, 98-106.	34.4	325
13	Tuning OH binding energy enables selective electrochemical oxidation of ethylene to ethylene glycol. Nature Catalysis, 2020, 3, 14-22.	34.4	120
14	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. Nature Catalysis, 2020, 3, 985-992.	34.4	390
15	Promoting CO2 methanation via ligand-stabilized metal oxide clusters as hydrogen-donating motifs. Nature Communications, 2020, 11, 6190.	12.8	93
16	Enhanced multi-carbon alcohol electroproduction from CO via modulated hydrogen adsorption. Nature Communications, 2020, 11, 3685.	12.8	72
17	High-Rate and Efficient Ethylene Electrosynthesis Using a Catalyst/Promoter/Transport Layer. ACS Energy Letters, 2020, 5, 2811-2818.	17.4	106
18	Efficient electrically powered CO2-to-ethanol via suppression of deoxygenation. Nature Energy, 2020, 5, 478-486.	39.5	363

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19	Accelerated discovery of CO2 electrocatalysts using active machine learning. Nature, 2020, 581, 178-183.	27.8	807
20	Enhanced Nitrate-to-Ammonia Activity on Copperâ€“Nickel Alloys via Tuning of Intermediate Adsorption. Journal of the American Chemical Society, 2020, 142, 5702-5708.	13.7	638
21	Achieving rational design of alloy catalysts using a descriptor based on a quantitative structureâ€“energy equation. Chemical Communications, 2020, 56, 3214-3217.	4.1	13
22	Molecular tuning of CO2-to-ethylene conversion. Nature, 2020, 577, 509-513.	27.8	682
23	Hydrogenation of benzoic acid to benzyl alcohol over Pt/SnO2. Applied Catalysis A: General, 2020, 593, 117420.	4.3	15
24	Efficient Methane Electrosynthesis Enabled by Tuning Local CO₂ Availability. Journal of the American Chemical Society, 2020, 142, 3525-3531.	13.7	154
25	Cooperative CO2-to-ethanol conversion via enriched intermediates at moleculeâ€“metal catalyst interfaces. Nature Catalysis, 2020, 3, 75-82.	34.4	390
26	Gas Surface Interaction and Surface Reactions. Springer Handbooks, 2020, , 905-928.	0.6	0
27	Dopant-tuned stabilization of intermediates promotes electrosynthesis of valuable C3 products. Nature Communications, 2019, 10, 4807.	12.8	26
28	CO₂ Electroreduction from Carbonate Electrolyte. ACS Energy Letters, 2019, 4, 1427-1431.	17.4	141
29	Binding Site Diversity Promotes CO₂ Electroreduction to Ethanol. Journal of the American Chemical Society, 2019, 141, 8584-8591.	13.7	338
30	Identifying the general trend of activity of non-stoichiometric metal oxide phases for CO oxidation on Pd(111). Science China Chemistry, 2019, 62, 784-789.	8.2	13
31	Synergy of Single-Atom Ni₁ and Ru₁ Sites on CeO₂ for Dry Reforming of CH₄. Journal of the American Chemical Society, 2019, 141, 7283-7293.	13.7	272
32	Evidence of the Oâ€“Pdâ€“O and Pdâ€“O₄ structure units as oxide seeds and their origin on Pd(211): revealing the mechanism of surface oxide formation. Physical Chemistry Chemical Physics, 2019, 21, 6499-6505.	2.8	7
33	Efficient electrocatalytic conversion of carbon monoxide to propanol using fragmented copper. Nature Catalysis, 2019, 2, 251-258.	34.4	188
34	Hydroxide promotes carbon dioxide electroreduction to ethanol on copper via tuning of adsorbed hydrogen. Nature Communications, 2019, 10, 5814.	12.8	201
35	Efficient upgrading of CO to C3 fuel using asymmetric C-C coupling active sites. Nature Communications, 2019, 10, 5186.	12.8	127
36	Constraining CO coverage on copper promotes high-efficiency ethylene electroproduction. Nature Catalysis, 2019, 2, 1124-1131.	34.4	214

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37	Copper adparticle enabled selective electrosynthesis of n-propanol. Nature Communications, 2018, 9, 4614.	12.8	153
38	A robust fuel cell operated on nearly dry methane at 500 Â°C enabled by synergistic thermal catalysis and electrocatalysis. Nature Energy, 2018, 3, 1042-1050.	39.5	230
39	Copper nanocavities confine intermediates for efficient electrosynthesis of C3 alcohol fuels from carbon monoxide. Nature Catalysis, 2018, 1, 946-951.	34.4	354
40	Ionic-Liquid-Controlled Two-Dimensional Monolayer Bi₂MoO₆ and Its Adsorption of Azo Molecules. ACS Applied Nano Materials, 2018, 1, 5083-5091.	5.0	19
41	First-Principles Determination of CO Adsorption and Desorption on Pt(111) in the Free Energy Landscape. Journal of Physical Chemistry C, 2018, 122, 21478-21483.	3.1	29
42	Temperature-Controlled Selectivity of Hydrogenation and Hydrodeoxygenation in the Conversion of Biomass Molecule by the Ru₁/mpg-C₃N₄ Catalyst. Journal of the American Chemical Society, 2018, 140, 11161-11164.	13.7	199
43	Ordered Porous Nitrogenâ€Doped Carbon Matrix with Atomically Dispersed Cobalt Sites as an Efficient Catalyst for Dehydrogenation and Transfer Hydrogenation of Nâ€Heterocycles. Angewandte Chemie, 2018, 130, 11432-11436.	2.0	24
44	Ordered Porous Nitrogenâ€Doped Carbon Matrix with Atomically Dispersed Cobalt Sites as an Efficient Catalyst for Dehydrogenation and Transfer Hydrogenation of Nâ€Heterocycles. Angewandte Chemie - International Edition, 2018, 57, 11262-11266.	13.8	165
45	Insights into the mechanism of electrochemical ozone production via water splitting on the Ni and Sb doped SnO₂ catalyst. Physical Chemistry Chemical Physics, 2017, 19, 3800-3806.	2.8	18
46	Formulating the bonding contribution equation in heterogeneous catalysis: a quantitative description between the surface structure and adsorption energy. Physical Chemistry Chemical Physics, 2017, 19, 5063-5069.	2.8	15
47	Nonâ€Thermal Plasma Activation of Goldâ€Based Catalysts for Lowâ€Temperature Waterâ€“Gas Shift Catalysis. Angewandte Chemie, 2017, 129, 5671-5675.	2.0	11
48	Nonâ€Thermal Plasma Activation of Goldâ€Based Catalysts for Lowâ€Temperature Waterâ€“Gas Shift Catalysis. Angewandte Chemie - International Edition, 2017, 56, 5579-5583.	13.8	77
49	A rational catalyst design of CO oxidation using the bonding contribution equation. Chemical Communications, 2017, 53, 8106-8109.	4.1	11
50	Understanding Catalytic Reactions over Zeolites: A Density Functional Theory Study of Selective Catalytic Reduction of NO_x by NH₃ over Cu-SAPO-34. ACS Catalysis, 2016, 6, 7882-7891.	11.2	99
51	Towards rational catalyst design: a general optimization framework. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150078.	3.4	22
52	Elucidating the mechanism and active site of the cyclohexanol dehydrogenation on copper-based catalysts: A density functional theory study. Surface Science, 2015, 640, 181-189.	1.9	38
53	Understanding complete oxidation of methane on spinel oxides at a molecular level. Nature Communications, 2015, 6, 7798.	12.8	237
54	Some Attempts in the Rational Design of Heterogeneous Catalysts Using Density Functional Theory Calculations. Topics in Catalysis, 2015, 58, 633-643.	2.8	15

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55	Possibility of designing catalysts beyond the traditional volcano curve: a theoretical framework for multi-phase surfaces. Chemical Science, 2015, 6, 5703-5711.	7.4	40
56	Extraordinary mechanical properties of monatomic C3N2chain. Molecular Simulation, 2015, 41, 256-261.	2.0	0
57	Activity and coke formation of nickel and nickel carbide in dry reforming: A deactivation scheme from density functional theory. Journal of Catalysis, 2014, 311, 469-480.	6.2	231
58	Identifying the trend of reactivity for sp2 materials: an electron delocalization model from first principles calculations. Physical Chemistry Chemical Physics, 2013, 15, 9498.	2.8	30
59	Deep Separation of Benzene from Cyclohexane by Liquid Extraction Using Ionic Liquids as the Solvent. Industrial & Engineering Chemistry Research, 2012, 51, 5559-5564.	3.7	66
60	Evaluation of the ionic liquids 1-alkyl-3-methylimidazolium hexafluorophosphate as a solvent for the extraction of benzene from cyclohexane: (Liquid+liquid) equilibria. Journal of Chemical Thermodynamics, 2012, 48, 145-149.	2.0	49