

Yi-Han Zhu

List of Publications by Year in Descending Order

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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.

118
papers

11,624
citations

52
h-index

107
g-index

121
ext. papers

13,809
ext. citations

12.6
avg. IF

6.35
L-index

#	Paper	IF	Citations
118	The reaction mechanism of acetylene hydrochlorination on defective carbon supported ruthenium catalysts identified by DFT calculations and experimental approaches. <i>Inorganic Chemistry Frontiers</i> , 2022 , 9, 458-467	6.8	0
117	Synthesis of a magnetic extended carbon nanosolenoid with Riemann surfaces.. <i>Nature Communications</i> , 2022 , 13, 1239	17.4	3
116	Isorecticular Series of Two-Dimensional Covalent Organic Frameworks with the kgd Topology and Controllable Micropores.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	10
115	Evoking ordered vacancies in metallic nanostructures toward a vacated Barlow packing for high-performance hydrogen evolution. <i>Science Advances</i> , 2021 , 7,	14.3	25
114	Boosting Electrocatalytic Activity of 3d-Block Metal (Hydro)oxides by Ligand-Induced Conversion. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 10614-10619	16.4	42
113	Boosting Electrocatalytic Activity of 3d-Block Metal (Hydro)oxides by Ligand-Induced Conversion. <i>Angewandte Chemie</i> , 2021 , 133, 10708-10713	3.6	1
112	Short-Range Ordered Iridium Single Atoms Integrated into Cobalt Oxide Spinel Structure for Highly Efficient Electrocatalytic Water Oxidation. <i>Journal of the American Chemical Society</i> , 2021 , 143, 5201-5211	16.4	98
111	Molecular Scalpel to Chemically Cleave Metal-Organic Frameworks for Induced Phase Transition. <i>Journal of the American Chemical Society</i> , 2021 , 143, 6681-6690	16.4	26
110	Pattern-Potential-Guided Growth of Textured Macromolecular Films on Graphene/High-Index Copper. <i>Advanced Materials</i> , 2021 , 33, e2006836	24	1
109	Symmetry Breaking in Monometallic Nanocrystals toward Broadband and Direct Electron Transfer Enhanced Plasmonic Photocatalysis. <i>Advanced Functional Materials</i> , 2021 , 31, 2006738	15.6	3
108	Noble metal nanowire arrays as an ethanol oxidation electrocatalyst. <i>Nanoscale Advances</i> , 2021 , 3, 177-181	3.1	2
107	Integrating pore interconnectivity and adaptability in a single crystal hierarchical zeolite for liquid alkylation. <i>AIChE Journal</i> , 2021 , 67, e17177	3.6	0
106	Grafting nanometer metal/oxide interface towards enhanced low-temperature acetylene semi-hydrogenation. <i>Nature Communications</i> , 2021 , 12, 5770	17.4	14
105	Crystalline tetra-aniline with chloride interactions towards a biocompatible supercapacitor. <i>Materials Horizons</i> , 2021 ,	14.4	2
104	Enabling Superior Sodium Capture for Efficient Water Desalination by a Tubular Polyaniline Decorated with Prussian Blue Nanocrystals. <i>Advanced Materials</i> , 2020 , 32, e1907404	24	76
103	Intramolecular Hydrogen Bonding-Based Topology Regulation of Two-Dimensional Covalent Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2020 , 142, 13162-13169	16.4	29
102	Imaging Beam-Sensitive Materials by Electron Microscopy. <i>Advanced Materials</i> , 2020 , 32, e1907619	24	42

101	Single-Site Au/Carbon Catalysts with Single-Atom and Au Nanoparticles for Acetylene Hydrochlorination. <i>ACS Applied Nano Materials</i> , 2020 , 3, 3004-3010	5.6	11
100	Direct Imaging of Atomically Dispersed Molybdenum that Enables Location of Aluminum in the Framework of Zeolite ZSM-5. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 819-825	16.4	63
99	Direct Imaging of Atomically Dispersed Molybdenum that Enables Location of Aluminum in the Framework of Zeolite ZSM-5. <i>Angewandte Chemie</i> , 2020 , 132, 829-835	3.6	23
98	Bulk and local structures of metal-organic frameworks unravelled by high-resolution electron microscopy. <i>Communications Chemistry</i> , 2020 , 3,	6.3	20
97	Room-Temperature Valley Polarization in Atomically Thin Semiconductors Chalcogenide Alloying. <i>ACS Nano</i> , 2020 , 14, 9873-9883	16.7	10
96	Imaging defects and their evolution in a metal-organic framework at sub-unit-cell resolution. <i>Nature Chemistry</i> , 2019 , 11, 622-628	17.6	211
95	Towards super-clean graphene. <i>Nature Communications</i> , 2019 , 10, 1912	17.4	89
94	A tightly-bonded and flexible mesoporous zeolite-cotton hybrid hemostat. <i>Nature Communications</i> , 2019 , 10, 1932	17.4	72
93	Syngas production from electrocatalytic CO ₂ reduction with high energetic efficiency and current density. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 7675-7682	13	47
92	Crystal phase regulation in noble metal nanocrystals. <i>Chinese Journal of Catalysis</i> , 2019 , 40, 1035-1056	11.3	12
91	Direct Imaging of Tunable Crystal Surface Structures of MOF MIL-101 Using High-Resolution Electron Microscopy. <i>Journal of the American Chemical Society</i> , 2019 , 141, 12021-12028	16.4	47
90	Advancing Atomic-Resolution TEM of Electron Beam-Sensitive Crystalline Materials from [Impossible] to Routine. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1676-1677	0.5	
89	Characterization of Nanomaterials by Electron Microscopy. <i>World Scientific Series in Nanoscience and Nanotechnology</i> , 2019 , 35-173	0.1	
88	Microscopy of Nanoporous Crystals. <i>Springer Handbooks</i> , 2019 , 1391-1450	1.3	4
87	Charge-Redistribution-Enhanced Nanocrystalline Ru@IrO _x Electrocatalysts for Oxygen Evolution in Acidic Media. <i>Chem</i> , 2019 , 5, 445-459	16.2	205
86	Single-site catalyst promoters accelerate metal-catalyzed nitroarene hydrogenation. <i>Nature Communications</i> , 2018 , 9, 1362	17.4	111
85	Atomic-resolution transmission electron microscopy of electron beam-sensitive crystalline materials. <i>Science</i> , 2018 , 359, 675-679	33.3	242
84	Strain Effect in Bimetallic Electrocatalysts in the Hydrogen Evolution Reaction. <i>ACS Energy Letters</i> , 2018 , 3, 1198-1204	20.1	124

83	Investigation of the Linker Swing Motion in the Zeolitic Imidazolate Framework ZIF-90. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 7203-7209	3.8	11
82	Ultrathin graphdiyne film on graphene through solution-phase van der Waals epitaxy. <i>Science Advances</i> , 2018 , 4, eaat6378	14.3	134
81	Sinter-resistant metal nanoparticle catalysts achieved by immobilization within zeolite crystals via seed-directed growth. <i>Nature Catalysis</i> , 2018 , 1, 540-546	36.5	175
80	Observation of superconductivity in structure-selected Ti ₂ O ₃ thin films. <i>NPG Asia Materials</i> , 2018 , 10, 522-532	10.3	20
79	Crystal Phase and Architecture Engineering of Lotus-Thalamus-Shaped Pt-Ni Anisotropic Superstructures for Highly Efficient Electrochemical Hydrogen Evolution. <i>Advanced Materials</i> , 2018 , 30, e1801741	24	128
78	Three-dimensional oriented attachment growth of single-crystal pre-perovskite PbTiO ₃ hollowed fibers. <i>CrystEngComm</i> , 2018 , 20, 448-453	3.3	4
77	Submicroreactors: The Development of Yolk@Shell-Structured Pd&ZnO@Carbon Submicroreactors with High Selectivity and Stability (Adv. Funct. Mater. 32/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870227	15.6	1
76	Effect of acidity and ruthenium species on catalytic performance of ruthenium catalysts for acetylene hydrochlorination. <i>Catalysis Science and Technology</i> , 2018 , 8, 6143-6149	5.5	30
75	Confined Lithium-Sulfur Reactions in Narrow-Diameter Carbon Nanotubes Reveal Enhanced Electrochemical Reactivity. <i>ACS Nano</i> , 2018 , 12, 9775-9784	16.7	44
74	The Development of Yolk@Shell-Structured Pd&ZnO@Carbon Submicroreactors with High Selectivity and Stability. <i>Advanced Functional Materials</i> , 2018 , 28, 1801737	15.6	60
73	Sodium-Induced Reordering of Atomic Stacks in Black Phosphorus. <i>Chemistry of Materials</i> , 2017 , 29, 1350-1356	9.6	44
72	Molecule-Level g-CN Coordinated Transition Metals as a New Class of Electrocatalysts for Oxygen Electrode Reactions. <i>Journal of the American Chemical Society</i> , 2017 , 139, 3336-3339	16.4	816
71	Unravelling surface and interfacial structures of a metal-organic framework by transmission electron microscopy. <i>Nature Materials</i> , 2017 , 16, 532-536	27	207
70	Investigation on CO catalytic oxidation reaction kinetics of faceted perovskite nanostructures loaded with Pt. <i>RSC Advances</i> , 2017 , 7, 6102-6107	3.7	3
69	Ultrathin Two-Dimensional Covalent Organic Framework Nanosheets: Preparation and Application in Highly Sensitive and Selective DNA Detection. <i>Journal of the American Chemical Society</i> , 2017 , 139, 8698-8704	16.4	301
68	Microporous cokes formed in zeolite catalysts enable efficient solar evaporation. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 6860-6865	13	41
67	Platinum-nickel hydroxide nanocomposites for electrocatalytic reduction of water. <i>Nano Energy</i> , 2017 , 31, 456-461	17.1	88
66	Strong Metal@Support Interactions Achieved by Hydroxide-to-Oxide Support Transformation for Preparation of Sinter-Resistant Gold Nanoparticle Catalysts. <i>ACS Catalysis</i> , 2017 , 7, 7461-7465	13.1	109

65	Out-of-Plane Piezoelectricity and Ferroelectricity in Layered In_2Se_3 Nanoflakes. <i>Nano Letters</i> , 2017 , 17, 5508-5513	11.5	317
64	Theoretical prediction of the mechanical properties of zeolitic imidazolate frameworks (ZIFs). <i>RSC Advances</i> , 2017 , 7, 41499-41503	3.7	12
63	Catalytic Activity Control via Crossover between Two Different Microstructures. <i>Journal of the American Chemical Society</i> , 2017 , 139, 13740-13748	16.4	29
62	Synthesis of $\text{WO}_n\text{-WX}_2$ ($n=2.7, 2.9$; $X=\text{S, Se}$) Heterostructures for Highly Efficient Green Quantum Dot Light-Emitting Diodes. <i>Angewandte Chemie</i> , 2017 , 129, 10622-10626	3.6	7
61	Synthesis of $\text{WO}_n\text{-WX}_2$ ($n=2.7, 2.9$; $X=\text{S, Se}$) Heterostructures for Highly Efficient Green Quantum Dot Light-Emitting Diodes. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 10486-10490	16.4	20
60	Thermally stable single atom Pt/m-AlO for selective hydrogenation and CO oxidation. <i>Nature Communications</i> , 2017 , 8, 16100	17.4	390
59	Inside Perovskites: Quantum Luminescence from Bulk Cs_4PbBr_6 Single Crystals. <i>Chemistry of Materials</i> , 2017 , 29, 7108-7113	9.6	160
58	Edge Epitaxy of Two-Dimensional MoSe and MoS Nanosheets on One-Dimensional Nanowires. <i>Journal of the American Chemical Society</i> , 2017 , 139, 8653-8660	16.4	90
57	Epitaxial growth of unusual 4H hexagonal Ir, Rh, Os, Ru and Cu nanostructures on 4H Au nanoribbons. <i>Chemical Science</i> , 2017 , 8, 795-799	9.4	64
56	Harnessing structural darkness in the visible and infrared wavelengths for a new source of light. <i>Nature Nanotechnology</i> , 2016 , 11, 60-6	28.7	94
55	High Electrocatalytic Hydrogen Evolution Activity of an Anomalous Ruthenium Catalyst. <i>Journal of the American Chemical Society</i> , 2016 , 138, 16174-16181	16.4	586
54	Multicolour synthesis in lanthanide-doped nanocrystals through cation exchange in water. <i>Nature Communications</i> , 2016 , 7, 13059	17.4	144
53	Unravelling Thiol's Role in Directing Asymmetric Growth of Au Nanorod-Au Nanoparticle Dimers. <i>Nano Letters</i> , 2016 , 16, 617-23	11.5	46
52	Controlled growth of high-density CdS and CdSe nanorod arrays on selective facets of two-dimensional semiconductor nanoplates. <i>Nature Chemistry</i> , 2016 , 8, 470-5	17.6	142
51	Atomic Resolution Studies of W Dopants Effect on the Phase Transformation of VO_2 . <i>Microscopy and Microanalysis</i> , 2016 , 22, 884-885	0.5	1
50	Beyond Creation of Mesoporosity: The Advantages of Polymer-Based Dual-Function Templates for Fabricating Hierarchical Zeolites. <i>Advanced Functional Materials</i> , 2016 , 26, 1881-1891	15.6	51
49	Hierarchical Zeolites: Beyond Creation of Mesoporosity: The Advantages of Polymer-Based Dual-Function Templates for Fabricating Hierarchical Zeolites (Adv. Funct. Mater. 12/2016). <i>Advanced Functional Materials</i> , 2016 , 26, 1854-1854	15.6	
48	Two-dimensional gold nanostructures with high activity for selective oxidation of carbon-hydrogen bonds. <i>Nature Communications</i> , 2015 , 6, 6957	17.4	98

47	Synthesis of Ultrathin Face-Centered-Cubic Au@Pt and Au@Pd Core-Shell Nanoplates from Hexagonal-Close-Packed Au Square Sheets. <i>Angewandte Chemie</i> , 2015 , 127, 5764-5768	3.6	26
46	Synthesis of ultrathin face-centered-cubic au@pt and au@pd core-shell nanoplates from hexagonal-close-packed au square sheets. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 5672-6	16.4	94
45	A general solid-state synthesis of chemically-doped fluorescent graphene quantum dots for bioimaging and optoelectronic applications. <i>Nanoscale</i> , 2015 , 7, 10162-9	7.7	85
44	Surface modification-induced phase transformation of hexagonal close-packed gold square sheets. <i>Nature Communications</i> , 2015 , 6, 6571	17.4	157
43	Atomic Origins of Monoclinic-Tetragonal (Rutile) Phase Transition in Doped VO ₂ Nanowires. <i>Nano Letters</i> , 2015 , 15, 7179-88	11.5	39
42	Investigating the Influence of Mesoporosity in Zeolite Beta on Its Catalytic Performance for the Conversion of Methanol to Hydrocarbons. <i>ACS Catalysis</i> , 2015 , 5, 5837-5845	13.1	68
41	Thickness-Dependent Dielectric Constant of Few-Layer InSe Nanoflakes. <i>Nano Letters</i> , 2015 , 15, 8136-40	11.5	67
40	Nanocrystals: Fabricating a Homogeneously Alloyed AuAg Shell on Au Nanorods to Achieve Strong, Stable, and Tunable Surface Plasmon Resonances (Small 39/2015). <i>Small</i> , 2015 , 11, 5328-5328	11	1
39	Strain-Mediated Asymmetric Growth of Plasmonic Nanocrystals: A Monometallic Au Nanorod-Au Nanoparticle Heterodimer. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2207-2208	0.5	
38	Fabricating a Homogeneously Alloyed AuAg Shell on Au Nanorods to Achieve Strong, Stable, and Tunable Surface Plasmon Resonances. <i>Small</i> , 2015 , 11, 5214-21	11	59
37	Rugae-like FeP nanocrystal assembly on a carbon cloth: an exceptionally efficient and stable cathode for hydrogen evolution. <i>Nanoscale</i> , 2015 , 7, 10974-81	7.7	107
36	CoP nanosheet assembly grown on carbon cloth: A highly efficient electrocatalyst for hydrogen generation. <i>Nano Energy</i> , 2015 , 15, 634-641	17.1	290
35	Hydrogen evolution by a metal-free electrocatalyst. <i>Nature Communications</i> , 2014 , 5, 3783	17.4	1572
34	Highly mesoporous single-crystalline zeolite beta synthesized using a nonsurfactant cationic polymer as a dual-function template. <i>Journal of the American Chemical Society</i> , 2014 , 136, 2503-10	16.4	214
33	Structural Diversity in Ordered Mesoporous Silica Materials 2014 , 1-34		1
32	Monolayer MoSe ₂ grown by chemical vapor deposition for fast photodetection. <i>ACS Nano</i> , 2014 , 8, 8582-807	10.7	413
31	Direct conversion of cellulose using carbon monoxide and water on a Pt/Mo ₂ C/C catalyst. <i>Energy and Environmental Science</i> , 2014 , 7, 393-398	35.4	68
30	Facile synthesis of PbTiO ₃ truncated octahedra via solid-state reaction and their application in low-temperature CO oxidation by loading Pt nanoparticles. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 9035-9039	13	11

29	Chiral gold nanowires with Boerdijk-Coxeter-Bernal structure. <i>Journal of the American Chemical Society</i> , 2014 , 136, 12746-52	16.4	49
28	Lithiation-induced shuffling of atomic stacks. <i>Nano Letters</i> , 2014 , 14, 5301-7	11.5	17
27	STEM Tomography and Surface Plasmon Imaging of a Au-Pd Bi-metallic Nanorod with Exotic Morphology. <i>Microscopy and Microanalysis</i> , 2014 , 20, 622-623	0.5	
26	Experimental Evidence of Chiral Gold Nanowires with Boerdijk-Coxeter-Bernal Structure by Atomic-Resolution Imaging. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1060-1061	0.5	1
25	High-performance gas sensing achieved by mesoporous tungsten oxide mesocrystals with increased oxygen vacancies. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 8653	13	55
24	Site-specific growth of Au-Pd alloy horns on Au nanorods: a platform for highly sensitive monitoring of catalytic reactions by surface enhancement Raman spectroscopy. <i>Journal of the American Chemical Society</i> , 2013 , 135, 8552-61	16.4	198
23	Sub-10 nm Fe ₃ O ₄ @Cu(2-x)S core-shell nanoparticles for dual-modal imaging and photothermal therapy. <i>Journal of the American Chemical Society</i> , 2013 , 135, 8571-7	16.4	510
22	Enhanced binding affinity, remarkable selectivity, and high capacity of CO ₂ by dual functionalization of a rht-type metal-organic framework. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 1412-5	16.4	398
21	Cu-TDPAT, an rht-Type Dual-Functional Metal-Organic Framework Offering Significant Potential for Use in H ₂ and Natural Gas Purification Processes Operating at High Pressures. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 16609-16618	3.8	64
20	Atomic Resolution Imaging of Nanoscale Structural Ordering in a Complex Metal Oxide Catalyst. <i>Chemistry of Materials</i> , 2012 , 24, 3269-3278	9.6	6
19	Self-Templated Synthesis of Single-Crystal and Single-Domain Ferroelectric Nanoplates. <i>Angewandte Chemie</i> , 2012 , 124, 9417-9421	3.6	10
18	Self-templated synthesis of single-crystal and single-domain ferroelectric nanoplates. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 9283-7	16.4	64
17	Epitaxial TiO ₂ /SnO ₂ core-shell heterostructure by atomic layer deposition. <i>Journal of Materials Chemistry</i> , 2012 , 22, 10665		28
16	Synthesis and Gas Transport Properties of Hydroxyl-Functionalized Polyimides with Intrinsic Microporosity. <i>Macromolecules</i> , 2012 , 45, 3841-3849	5.5	163
15	Direct Observation of Surface Reconstruction and Termination on a Complex Metal Oxide Catalyst by Electron Microscopy. <i>Angewandte Chemie</i> , 2012 , 124, 4252-4256	3.6	2
14	Direct observation of surface reconstruction and termination on a complex metal oxide catalyst by electron microscopy. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 4176-80	16.4	12
13	Lanthanide-doped Na(x)ScF(3+x) nanocrystals: crystal structure evolution and multicolor tuning. <i>Journal of the American Chemical Society</i> , 2012 , 134, 8340-3	16.4	286
12	Strain-activated edge reconstruction of graphene nanoribbons. <i>Physical Review B</i> , 2012 , 85,	3.3	23

11	Controlled Synthesis of the Tricontinuous Mesoporous Material IBN-9 and Its Carbon and Platinum Derivatives. <i>Chemistry of Materials</i> , 2011 , 23, 3775-3786	9.6	24
10	Purification of hydrogen from carbon monoxide for fuel cell application over modified mesoporous CuO/TeO ₂ catalysts. <i>Applied Catalysis B: Environmental</i> , 2011 , 108-109, 72-72	21.8	11
9	Highly Selective and Complete Conversion of Cellobiose to Gluconic Acid over Au/Cs ₂ HPW ₁₂ O ₄₀ Nanocomposite Catalyst. <i>ChemCatChem</i> , 2011 , 3, 1294-1298	5.2	72
8	A liquid-based eutectic system: LiBH ₄ /NH ₃ ·NH ₃ BH ₃ with high dehydrogenation capacity at moderate temperature. <i>Journal of Materials Chemistry</i> , 2011 , 21, 14509		24
7	PbTiO ₃ nanofibers with edge-shared TiO ₆ octahedra. <i>Journal of the American Chemical Society</i> , 2010 , 132, 5572-3	16.4	53
6	Chemistry-Controlled Structural Relaxation and Enhanced Redox Abilities in Vanadium-Doped Two-Dimensional Semiconductive TeMo ₅ O ₁₆ Catalyst. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 13277-13286 ¹	3.8	13286 ¹
5	Hydrogen release from amminelithium borohydride, LiBH ₄ x NH ₃ . <i>Chemical Communications</i> , 2010 , 46, 2599-601	5.8	100
4	Roles of Vanadium Substitution of Monoclinic TeMo ₅ O ₁₆ Catalyst for Propane Selective Oxidation. <i>Chinese Journal of Catalysis</i> , 2010 , 31, 689-694	11.3	0
3	A Combined Bond-Valence and Periodic DFT Study of the Active Sites in M1 Phase of MoVTeNbO Composite Oxide Catalyst. <i>Chinese Journal of Catalysis</i> , 2010 , 31, 1286-1292	11.3	
2	Selective modification of surface and bulk V ⁵⁺ /V ⁴⁺ ratios and its effects on the catalytic performance of MoVTeO catalysts. <i>Journal of Catalysis</i> , 2007 , 246, 382-389	7.3	43
1	Synthesis and Visualization of Entangled 3D Covalent Organic Frameworks with High-Valency Stereoscopic Molecular Nodes for Gas Separation. <i>Angewandte Chemie - International Edition</i> ,	16.4	6