

# Xin-yi Zhang

## List of Publications by Year in descending order

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67  
papers

3,587  
citations

201575

27  
h-index

133188

59  
g-index

71  
all docs

71  
docs citations

71  
times ranked

5897  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electro-synthesis of ammonia from nitrogen at ambient temperature and pressure in ionic liquids. <i>Energy and Environmental Science</i> , 2017, 10, 2516-2520.	15.6	497
2	Nanostructured photoelectrochemical solar cell for nitrogen reduction using plasmon-enhanced black silicon. <i>Nature Communications</i> , 2016, 7, 11335.	5.8	294
3	Rational Electrode-Electrolyte Design for Efficient Ammonia Electrosynthesis under Ambient Conditions. <i>ACS Energy Letters</i> , 2018, 3, 1219-1224.	8.8	204
4	Hierarchical Porous Plasmonic Metamaterials for Reproducible Ultrasensitive Surface-Enhanced Raman Spectroscopy. <i>Advanced Materials</i> , 2015, 27, 1090-1096.	11.1	193
5	NiS and MoS <sub>2</sub> nanosheet co-modified graphitic C <sub>3</sub> N <sub>4</sub> ternary heterostructure for high efficient visible light photodegradation of antibiotic. <i>Journal of Hazardous Materials</i> , 2018, 341, 10-19.	6.5	179
6	Carbon Quantum Dots/Cu <sub>2</sub> O Heterostructures for Solar-Light-Driven Conversion of CO <sub>2</sub> to Methanol. <i>Advanced Energy Materials</i> , 2015, 5, 1401077.	10.2	163
7	MnO <sub>2</sub> /MnCo <sub>2</sub> O <sub>4</sub> /Ni heterostructure with quadruple hierarchy: a bifunctional electrode architecture for overall urea oxidation. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7825-7832.	5.2	152
8	A graphene-directed assembly route to hierarchically porous Co <sub>x</sub> /C catalysts for high-performance oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2015, 3, 16867-16873.	5.2	151
9	Metal-polydopamine frameworks and their transformation to hollow metal/N-doped carbon particles. <i>Nanoscale</i> , 2017, 9, 5323-5328.	2.8	140
10	Energy-Efficient Nitrogen Reduction to Ammonia at Low Overpotential in Aqueous Electrolyte under Ambient Conditions. <i>ChemSusChem</i> , 2018, 11, 3416-3422.	3.6	140
11	A facile synthesis of mesoporous Co <sub>3</sub> O <sub>4</sub> /CeO <sub>2</sub> hybrid nanowire arrays for high performance supercapacitors. <i>Journal of Materials Chemistry A</i> , 2015, 3, 10425-10431.	5.2	108
12	Controllable synthesis of mesoporous carbon nanospheres and Fe <sub>N</sub> /carbon nanospheres as efficient oxygen reduction electrocatalysts. <i>Nanoscale</i> , 2015, 7, 6247-6254.	2.8	104
13	MOF-74 derived porous hybrid metal oxide hollow nanowires for high-performance electrochemical energy storage. <i>Journal of Materials Chemistry A</i> , 2018, 6, 8396-8404.	5.2	101
14	CeO <sub>2-x</sub> /C/rGO nanocomposites derived from Ce-MOF and graphene oxide as a robust platform for highly sensitive uric acid detection. <i>Nanoscale</i> , 2018, 10, 1939-1945.	2.8	88
15	Nanostructured Gold/Bismutite Hybrid Heterocatalysts for Plasmon-Enhanced Photosynthesis of Ammonia. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 10858-10863.	3.2	77
16	Sulfated Carbon Quantum Dots as Efficient Visible-Light Switchable Acid Catalysts for Room-Temperature Ring-Opening Reactions. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 8420-8424.	7.2	68
17	Synthesis and Physicochemical Properties of Fluorinated Ionic Liquids with High Nitrogen Gas Solubility. <i>Journal of Physical Chemistry C</i> , 2018, 122, 24550-24558.	1.5	60
18	Electrocatalytic production of ammonia: Biomimetic electrode-electrolyte design for efficient electrocatalytic nitrogen fixation under ambient conditions. <i>Applied Catalysis B: Environmental</i> , 2020, 271, 118919.	10.8	55

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19	The twinned Pd nanocatalyst exhibits sustainable NRR electrocatalytic performance by promoting the desorption of $\text{NH}_3$ . <i>Journal of Materials Chemistry A</i> , 2021, 9, 13483-13489.	5.2	48
20	In situ growth of $\text{Co}_3\text{O}_4$ nanoparticles on $\text{MnO}_2$ nanotubes: a new hybrid for high-performance supercapacitors. <i>Journal of Materials Chemistry A</i> , 2014, 2, 8465-8471.	5.2	44
21	Synthesis of porous $\text{NiO/CeO}_2$ hybrid nanoflake arrays as a platform for electrochemical biosensing. <i>Nanoscale</i> , 2016, 8, 770-774.	2.8	41
22	Electrochemical Biosensor based on Pt/Au Alloy Nanowire Arrays for Phosphate Detection. <i>Journal of the Electrochemical Society</i> , 2015, 162, B62-B67.	1.3	34
23	Highly Ordered Hierarchical Mesoporous $\text{MnCo}_2\text{O}_4$ with Cubic $\text{I}^{-3}d$ Symmetry for Electrochemical Energy Storage. <i>Journal of Physical Chemistry C</i> , 2016, 120, 23976-23983.	1.5	34
24	Highly Efficient Photoelectrochemical Synthesis of Ammonia Using Plasmon-Enhanced Black Silicon under Ambient Conditions. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 20376-20382.	4.0	34
25	$\text{g-C}_3\text{N}_4/\text{g-C}_3\text{N}_4$ isotype heterojunction as an efficient platform for direct photodegradation of antibiotic. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2018, 26, 210-217.	1.0	32
26	Ultrasensitive surface-enhanced Raman scattering detection of urea by highly ordered Au/Cu hybrid nanostructure arrays. <i>Chemical Communications</i> , 2017, 53, 7949-7952.	2.2	30
27	Boosting the photocatalytic activity of mesoporous $\text{SrTiO}_3$ for nitrogen fixation through multiple defects and strain engineering. <i>Journal of Materials Chemistry A</i> , 2020, 8, 22251-22256.	5.2	28
28	Ultrathin porous $\text{Bi}_5\text{O}_7\text{X}$ (X = Cl, Br, I) nanotubes for effective solar desalination. <i>Journal of Materials Chemistry A</i> , 2018, 6, 20037-20043.	5.2	24
29	High Nitrogen Gas Solubility and Physicochemical Properties of $[\text{C}_4\text{mpyr}][\text{eFAP}]$ Fluorinated Solvent Mixtures. <i>Journal of Physical Chemistry C</i> , 2019, 123, 21376-21385.	1.5	23
30	Highly Ordered Ag/Cu Hybrid Nanostructure Arrays for Ultrasensitive Surface-Enhanced Raman Spectroscopy. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600115.	1.9	22
31	Quantum Dots: Carbon Quantum Dots/ $\text{Cu}_2\text{O}$ Heterostructures for Solar-Light-Driven Conversion of $\text{CO}_2$ to Methanol ( <i>Adv. Energy Mater.</i> 5/2015). <i>Advanced Energy Materials</i> , 2015, 5, .	10.2	21
32	Electrocatalytic reduction of nitrogen on FeAg/Si for ammonia synthesis: A simple strategy for continuous regulation of faradaic efficiency by controlling $\text{H}^+$ ions transfer rate. <i>Applied Catalysis B: Environmental</i> , 2021, 283, 119606.	10.8	21
33	An amorphous $\text{MoS}_x$ modified $\text{g-C}_3\text{N}_4$ composite for efficient photocatalytic hydrogen evolution under visible light. <i>RSC Advances</i> , 2019, 9, 15900-15909.	1.7	20
34	Ultrathin PtCo nanorod assemblies with self-optimized surface for oxygen reduction reaction. <i>Journal of Electroanalytical Chemistry</i> , 2020, 870, 114194.	1.9	19
35	Synthesis of $\text{Ni}^{\sim}\text{MoS}_x/\text{g-C}_3\text{N}_4$ for Photocatalytic Hydrogen Evolution under Visible Light. <i>ChemCatChem</i> , 2020, 12, 911-916.	1.8	18
36	Synthesis of Nitrogen-Doped Porous Carbon Nanocubes as a Catalyst Support for Methanol Oxidation. <i>ChemCatChem</i> , 2016, 8, 1901-1904.	1.8	17

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37	Surfactant-free Synthesis of Graphene-supported PdCu Nanocrystals with High Alloying Degree as Highly Active Catalyst for Formic Acid Electrooxidation. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700227.	1.9	17
38	MoS <sub>2</sub> Quantum Dot-Modified Black Silicon for Highly Efficient Photoelectrochemical Hydrogen Evolution. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17598-17605.	3.2	17
39	Self-assembled highly crystalline TiO <sub>2</sub> mesostructures for sunlight-driven, pH-responsive photodegradation of dyes. <i>Materials Research Bulletin</i> , 2014, 55, 13-18.	2.7	15
40	In Situ Synthesis of Core-shell-Ni <sub>3</sub> Fe(OH) <sub>9</sub> /Ni <sub>3</sub> Fe Hybrid Nanostructures as Highly Active and Stable Bifunctional Catalysts for Water Electrolysis. <i>ACS Applied Energy Materials</i> , 2018, 1, 986-992.	2.5	15
41	High-capacity and high-rate Ni-Fe batteries based on mesostructured quaternary carbon/Fe/FeO/Fe <sub>3</sub> O <sub>4</sub> hybrid material. <i>IScience</i> , 2021, 24, 102547.	1.9	15
42	Controlled morphogenesis and self-assembly of bismutite nanocrystals into three-dimensional nanostructures and their applications. <i>Journal of Materials Chemistry A</i> , 2014, 2, 2275-2282.	5.2	14
43	Rational Design and in-situ Synthesis of Ultra-Thin $\hat{I}^2$ -Ni(OH) <sub>2</sub> Nanoplates for High Performance All-Solid-State Flexible Supercapacitors. <i>Frontiers in Chemistry</i> , 2020, 8, 602322.	1.8	14
44	Dual-MnCo <sub>2</sub> O <sub>4</sub> /Ni electrode with three-level hierarchy for high-performance electrochemical energy storage. <i>Electrochimica Acta</i> , 2018, 280, 55-61.	2.6	13
45	Metal-Free Black Silicon for Solar-powered Hydrogen Generation. <i>Electrochimica Acta</i> , 2017, 235, 453-462.	2.6	12
46	UV/ozone-assisted low temperature preparation of mesoporous TiO <sub>2</sub> with tunable phase composition and enhanced solar light photocatalytic activity. <i>Journal of Materials Chemistry A</i> , 2014, 2, 18791-18795.	5.2	11
47	Hierarchically Ordered Nanochannel Array Membrane Reactor with Three-Dimensional Electrocatalytic Interfaces for Electrohydrogenation of CO <sub>2</sub> to Alcohol. <i>ACS Energy Letters</i> , 2018, 3, 2649-2655.	8.8	11
48	Ultrathin Co <sub>3</sub> O <sub>4</sub> -Pt core-shell nanoparticles coupled with three-dimensional graphene for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 10303-10311.	3.8	11
49	Advanced Aqueous Zinc-Ion Batteries Enabled by 3D Ternary MnO/Reduced Graphene Oxide/Multiwall Carbon Nanotube Hybrids. <i>Energy Technology</i> , 2021, 9, 2100022.	1.8	11
50	Nanofabrication of highly ordered, tunable metallic mesostructures via quasi-hard-templating of lyotropic liquid crystals. <i>Scientific Reports</i> , 2015, 4, 7420.	1.6	10
51	A facile strategy synthesized PtRhNi truncated triangle nanoflakes with PtRh-rich surface as highly active and stable bifunctional catalysts for direct methanol fuel cells. <i>Journal of Colloid and Interface Science</i> , 2021, 604, 894-902.	5.0	10
52	Controllable fabrication of heterostructured Au/Bi <sub>2</sub> O <sub>3</sub> with plasmon effect for efficient photodegradation of rhodamine 6G. <i>Journal of Experimental Nanoscience</i> , 2017, 12, 33-44.	1.3	8
53	SBA-15 Templated Mesoporous Graphitic C <sub>3</sub> N <sub>4</sub> for Remarkably Enhanced Photocatalytic Degradation of Organic Pollutants under Visible Light. <i>Nano</i> , 2019, 14, 1950136.	0.5	8
54	High-efficient CO <sub>2</sub> electrocatalysis over nanoporous Au film enabled by a combined pore engineering and ionic liquid-mediated approach. <i>Chemical Engineering Journal</i> , 2021, 425, 131663.	6.6	8

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55	Rational Electrode-Electrolyte Design for Long-Life Rechargeable Aqueous Zinc-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2022, 126, 1264-1270.	1.5	8
56	A bifunctional catalyst based on a carbon quantum dots/mesoporous SrTiO <sub>3</sub> heterostructure for cascade photoelectrochemical nitrogen reduction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 12713-12721.	5.2	8
57	Measure and control: molecular management is a key to the Sustainocene!. <i>Green Chemistry</i> , 2016, 18, 5689-5692.	4.6	7
58	Photoelectrochemical Characterisation on Surface-Inverted Black Silicon Photocathodes by Using Platinum/Palladium Co-catalysts for Solar Hydrogen Conversion. <i>ChemPlusChem</i> , 2018, 83, 651-657.	1.3	7
59	Novel Periodic Bilayer Au Nanostructures for Ultrasensitive Surface-Enhanced Raman Spectroscopy. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800820.	1.9	7
60	Solid-state synthesis semiconducting BaTiO <sub>3</sub> nanoparticles at low temperature. <i>Materials Chemistry and Physics</i> , 2020, 242, 122496.	2.0	7
61	Enhanced Visible-Light Photocatalytic Remediation of Tetracycline Hydrochloride by Nanostructured BiOI Homojunctions. <i>Nano</i> , 2019, 14, 1950112.	0.5	6
62	Influence of Structural Parameters on the Surface Enhanced Raman Scattering of Au Nanoarrays. <i>Journal of Nanoscience and Nanotechnology</i> , 2019, 19, 5317-5322.	0.9	4
63	Enhanced Visible-Light Photocatalytic Degradation of Antibiotics by MoS <sub>2</sub> -Modified U-g-C <sub>3</sub> N <sub>4</sub> /T-g-C <sub>3</sub> N <sub>4</sub> Isotypic Heterojunction. <i>Nano</i> , 2019, 14, 1950111.	0.5	4
64	Unveiling the synergistic effect of cobalt ion in nickel-cobalt layered double hydroxide for electrochemical energy storage: Experimental and computational approaches. <i>Electrochimica Acta</i> , 2022, 423, 140547.	2.6	3
65	Transformation of cellulosic saccharides into alkyl glucosides catalyzed by bifunctional ionic liquids. <i>Chemical Communications</i> , 2018, 54, 11969-11972.	2.2	2
66	Large-scale Synthesis of Porous Pt Nanospheres /Three-dimensional Graphene Hybrid Materials as a Highly Active and Stable Electrocatalyst for Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2021, 6, 2080-2084.	0.7	1
67	Energy-Efficient Nitrogen Reduction to Ammonia at Low Overpotential in Aqueous Electrolyte under Ambient Conditions. <i>ChemSusChem</i> , 2018, 11, 3356-3356.	3.6	0