

# Ming-Zi Sun

## List of Publications by Citations

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112  
papers

2,902  
citations

26  
h-index

51  
g-index

121  
ext. papers

4,596  
ext. citations

14.2  
avg, IF

5.94  
L-index

#	Paper	IF	Citations
112	A Eu-Eu ion redox shuttle imparts operational durability to Pb-I perovskite solar cells. <i>Science</i> , <b>2019</b> , 363, 265-270	33.3	533
111	General synthesis of two-dimensional van der Waals heterostructure arrays. <i>Nature</i> , <b>2020</b> , 579, 368-374	50.4	195
110	Channel-Rich RuCu Nanosheets for pH-Universal Overall Water Splitting Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 13983-13988	16.4	162
109	Impacts of alkaline on the defects property and crystallization kinetics in perovskite solar cells. <i>Nature Communications</i> , <b>2019</b> , 10, 1112	17.4	124
108	Exploiting Ru-Induced Lattice Strain in CoRu Nanoalloys for Robust Bifunctional Hydrogen Production. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 3290-3298	16.4	120
107	Multimodal Luminescent Yb /Er /Bi -Doped Perovskite Single Crystals for X-ray Detection and Anti-Counterfeiting. <i>Advanced Materials</i> , <b>2020</b> , 32, e2004506	24	88
106	Self-Elimination of Intrinsic Defects Improves the Low-Temperature Performance of Perovskite Photovoltaics. <i>Joule</i> , <b>2020</b> , 4, 1961-1976	27.8	82
105	Oxygen Vacancies on Layered Niobic Acid That Weaken the Catalytic Conversion of Polysulfides in Lithium-Sulfur Batteries. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 11491-11496	16.4	76
104	High-efficiency direct methane conversion to oxygenates on a cerium dioxide nanowires supported rhodium single-atom catalyst. <i>Nature Communications</i> , <b>2020</b> , 11, 954	17.4	70
103	Atomically targeting NiFe LDH to create multivacancies for OER catalysis with a small organic anchor. <i>Nano Energy</i> , <b>2021</b> , 81, 105606	17.1	69
102	pH-Universal Water Splitting Catalyst: Ru-Ni Nanosheet Assemblies. <i>IScience</i> , <b>2019</b> , 11, 492-504	6.1	67
101	Locally collective hydrogen bonding isolates lead octahedra for white emission improvement. <i>Nature Communications</i> , <b>2019</b> , 10, 5190	17.4	67
100	A General Strategy to Glassy M-Te (M = Ru, Rh, Ir) Porous Nanorods for Efficient Electrochemical N Fixation. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907112	24	66
99	Fabrication of layered double hydroxide microcapsules mediated by cerium doping in metal-organic frameworks for boosting water splitting. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 2949-2956	35.4	58
98	The Spacer Cations Interplay for Efficient and Stable Layered 2D Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1901566	21.8	57
97	Mapping of atomic catalyst on graphdiyne. <i>Nano Energy</i> , <b>2019</b> , 62, 754-763	17.1	45
96	Atomic Sulfur Filling Oxygen Vacancies Optimizes H Absorption and Boosts the Hydrogen Evolution Reaction in Alkaline Media. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 14117-14123	16.4	44

95	Accelerating Atomic Catalyst Discovery by Theoretical Calculations-Machine Learning Strategy. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1903949	21.8	41
94	Interface Modulation of MoS <sub>2</sub> /Metal Oxide Heterostructures for Efficient Hydrogen Evolution Electrocatalysis. <i>Small</i> , <b>2020</b> , 16, e2002212	11	39
93	Oxygen-Incorporated NiMoP Nanotube Arrays as Efficient Bifunctional Electrocatalysts For Urea-Assisted Energy-Saving Hydrogen Production in Alkaline Electrolyte. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2104951	15.6	39
92	Atomic PdAu Interlayer Sandwiched into Pd/Pt Core/Shell Nanowires Achieves Superstable Oxygen Reduction Catalysis. <i>ACS Nano</i> , <b>2020</b> , 14, 11570-11578	16.7	37
91	Atomically Dispersed Cu Catalyst for Efficient Chemoselective Hydrogenation Reaction. <i>Nano Letters</i> , <b>2021</b> ,	11.5	34
90	Au Clusters on Pd Nanosheets Selectively Switch the Pathway of Ethanol Electrooxidation: Amorphous/Crystalline Interface Matters. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2100187	21.8	34
89	Nanophotonic energy storage in upconversion nanoparticles. <i>Nano Energy</i> , <b>2019</b> , 56, 473-481	17.1	33
88	Uncovering the Promotion of CeO <sub>2</sub> /CoS Heterostructure with Specific Spatial Architectures on Oxygen Evolution Reaction. <i>Advanced Materials</i> , <b>2021</b> , 33, e2102593	24	27
87	Intrinsic energy conversions for photon-generation in piezo-phototronic materials: A case study on alkaline niobates. <i>Nano Energy</i> , <b>2018</b> , 47, 150-171	17.1	26
86	The facile oil-phase synthesis of a multi-site synergistic high-entropy alloy to promote the alkaline hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 889-893	13	26
85	When rare earth meets carbon nanodots: mechanisms, applications and outlook. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 9220-9248	58.5	23
84	"Energy Selection Channels" for High-Performance Electrolyte: Anion-Frenkel Defect Pair as Dominant Source for O Ion Conductions in Pyrochlore-type Lanthanide Hafnium Oxides SOFC. <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 7975-7984	5.1	23
83	Alloyed Palladium-Silver Nanowires Enabling Ultrastable Carbon Dioxide Reduction to Formate. <i>Advanced Materials</i> , <b>2021</b> , 33, e2005821	24	23
82	High energy X-ray radiation sensitive scintillating materials for medical imaging, cancer diagnosis and therapy. <i>Nano Energy</i> , <b>2021</b> , 79, 105437	17.1	22
81	Strain modulation of phase transformation of noble metal nanomaterials. <i>Information Materials</i> , <b>2020</b> , 2, 715-734	23.1	21
80	Channel-Rich RuCu Nanosheets for pH-Universal Overall Water Splitting Electrocatalysis. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 14121-14126	3.6	21
79	Self-Validated Machine Learning Study of Graphdiyne-Based Dual Atomic Catalyst. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2003796	21.8	21
78	A Review on CeO <sub>2</sub> -Based Electrocatalyst and Photocatalyst in Energy Conversion. <i>Advanced Energy and Sustainability Research</i> , <b>2021</b> , 2, 2000063	1.6	21

77	TM LDH Meets Birnessite: A 2D-2D Hybrid Catalyst with Long-Term Stability for Water Oxidation at Industrial Operating Conditions. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 9699-9705	16.4	20
76	Phenylene-bridged perylene-diimide-porphyrin acceptors for non-fullerene organic solar cells. <i>Sustainable Energy and Fuels</i> , <b>2018</b> , 2, 2616-2624	5.8	20
75	Phase-Dependent Electrocatalytic CO Reduction on Pd Bi Nanocrystals. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 21741-21745	16.4	19
74	Expanding the toolbox for lanthanide-doped upconversion nanocrystals. <i>Journal Physics D: Applied Physics</i> , <b>2019</b> , 52, 383002	3	18
73	Understanding contact electrification at liquid-solid interfaces from surface electronic structure. <i>Nature Communications</i> , <b>2021</b> , 12, 1752	17.4	17
72	Highly efficient catalysts for oxygen reduction using well-dispersed iron carbide nanoparticles embedded in multichannel hollow nanofibers. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 18125-18131	13	15
71	A New Hexagonal Cobalt Nanosheet Catalyst for Selective CO Conversion to Ethanal. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 15335-15343	16.4	15
70	Probing oxide-ion conduction in low-temperature SOFCs. <i>Nano Energy</i> , <b>2018</b> , 50, 88-96	17.1	14
69	Tunable CO/H ratios of electrochemical reduction of CO through the Zn-Ln dual atomic catalysts. <i>Science Advances</i> , <b>2021</b> , 7, eabl4915	14.3	13
68	Electronic Tunability and Mobility Anisotropy of Quasi-2D Perovskite Single Crystals with Varied Spacer Cations. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 7610-7616	6.4	13
67	Exploiting Ru-Induced Lattice Strain in CoRu Nanoalloys for Robust Bifunctional Hydrogen Production. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 3327-3335	3.6	13
66	Dilute Aqueous-Aprotic Hybrid Electrolyte Enabling a Wide Electrochemical Window through Solvation Structure Engineering. <i>Advanced Materials</i> , <b>2021</b> , 33, e2102390	24	11
65	Manipulating Crystallization Kinetics in High-Performance Blade-Coated Perovskite Solar Cells via Cosolvent-Assisted Phase Transition.. <i>Advanced Materials</i> , <b>2022</b> , e2200276	24	11
64	Blue energy case study and analysis: Attack of chloride ions on chromia passive film on metallic electrode of nanogenerator. <i>Nano Energy</i> , <b>2019</b> , 62, 103-110	17.1	10
63	Metallated Graphynes as a New Class of Photofunctional 2D Organometallic Nanosheets. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 11326-11334	16.4	10
62	Stepping Out of Transition Metals: Activating the Dual Atomic Catalyst through Main Group Elements. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2101404	21.8	10
61	Multimodal channel cancer chemotherapy by 2D functional gadolinium metal-organic framework. <i>National Science Review</i> , <b>2021</b> , 8, nwaa221	10.8	10
60	Confined growth of silver-copper Janus nanostructures with {100} facets for highly selective tandem electrocatalytic carbon dioxide reduction.. <i>Advanced Materials</i> , <b>2022</b> , e2110607	24	10

59	Mesoporosity-Enabled Selectivity of Mesoporous Palladium-Based Nanocrystals Catalysts in Semihydrogenation of Alkynes.. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , e202114539	16.4	9
58	Fast Li-ion Conductor of LiHoBr for Stable All-Solid-State Lithium-Sulfur Battery. <i>Nano Letters</i> , <b>2021</b> , 21, 9325-9331	11.5	9
57	Energy conversion modeling of the intrinsic persistent luminescence of solids via energy transfer paths between transition levels. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 9457-9469	3.6	8
56	Unravelling the energy transfer of Er-self-sensitized upconversion in Er-Yb-Er clustered core@shell nanoparticles. <i>Nanoscale</i> , <b>2017</b> , 9, 18490-18497	7.7	8
55	All-inorganic perovskite nanocrystals: next-generation scintillation materials for high-resolution X-ray imaging. <i>Nanoscale Advances</i> , <b>2022</b> , 4, 680-696	5.1	8
54	Unraveling the correlation between oxide-ion motion and upconversion luminescence in $\text{La}_2\text{Mo}_2\text{O}_9:\text{Yb}^{3+},\text{Er}^{3+}$ derivatives. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 10965-10970	7.1	7
53	[Rh(Cp*)]-catalyzed arylfluorination of $\alpha$ -diazoketoesters for facile synthesis of $\alpha$ -aryl- $\beta$ -fluoroketoesters. <i>Organic and Biomolecular Chemistry</i> , <b>2019</b> , 17, 1191-1201	3.9	7
52	Revealing Atomic Structure and Oxidation States of Dopants in Charge-Ordered Nanoparticles for Migration-Promoted Oxygen-Exchange Capacity. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 5769-5777	9.6	7
51	Comparison and correlation of structural disorder caused by anion Frenkel in affecting ion conduction of $\text{La}_2\text{Hf}_2\text{O}_7$ and $\text{La}_2\text{Mo}_2\text{O}_9$ as high performance electrolytes in SOFCs. <i>MRS Advances</i> , <b>2017</b> , 2, 3317-3322	0.7	7
50	Surface Molecular Functionalization of Unusual Phase Metal Nanomaterials for Highly Efficient Electrochemical Carbon Dioxide Reduction under Industry-Relevant Current Density.. <i>Small</i> , <b>2022</b> , e2106766	11.7	7
49	Probing the Irregular Lattice Strain-Induced Electronic Structure Variations on Late Transition Metals for Boosting the Electrocatalyst Activity. <i>Small</i> , <b>2020</b> , 16, e2002434	11	7
48	Atomic Sulfur Filling Oxygen Vacancies Optimizes H Absorption and Boosts the Hydrogen Evolution Reaction in Alkaline Media. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 14236-14242	3.6	7
47	Discovering and Dissecting Mechanically Excited Luminescence of $\text{Mn}^{2+}$ Activators via Matrix Microstructure Evolution. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2100221	15.6	6
46	Atomic Imaging of Electrically Switchable Striped Domains in $\text{In}_2\text{Se}_3$ . <i>Advanced Science</i> , <b>2021</b> , 8, e2100713	3.6	6
45	Anion charge density disturbance induces in-plane instabilities within 2D lateral heterojunction of TMD: An atomic view. <i>Nano Energy</i> , <b>2020</b> , 70, 104484	17.1	5
44	Effective Repeatable Mechanoluminescence in Heterostructured $\text{Li Na NbO} : \text{Pr}$ . <i>Small</i> , <b>2021</b> , 17, e2103441	11	5
43	Phase-Dependent Electrocatalytic $\text{CO}_2$ Reduction on $\text{Pd}_3\text{Bi}$ Nanocrystals. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 21909-21913	3.6	5
42	Highly Controllable Hierarchically Porous $\text{Ag}/\text{Ag}_2\text{S}$ Heterostructure by Cation Exchange for Efficient Hydrogen Evolution. <i>Small</i> , <b>2021</b> , 17, e2103064	11	5

41	Graphdiyne based catalysts for energy applications. <i>Materials Chemistry Frontiers</i> ,	7.8	5
40	Hexagonal PtBi Intermetallic Inlaid with Sub-Monolayer Pb Oxyhydroxide Boosts Methanol Oxidation.. <i>Small</i> , <b>2022</b> , e2107803	11	5
39	Entanglement of Spatial and Energy Segmentation for C 1 Pathways in CO 2 Reduction on Carbon Skeleton Supported Atomic Catalysts. <i>Advanced Energy Materials</i> ,2103781	21.8	5
38	Gram-Scale Synthesis of Nanosized Li HoBr Solid Electrolyte for All-Solid-State Li-Se Battery.. <i>Small Methods</i> , <b>2021</b> , 5, e2101002	12.8	4
37	Dynamically self-activated catalyst for direct synthesis of hydrogen peroxide (H2O2). <i>Materials Today Energy</i> , <b>2018</b> , 10, 307-316	7	4
36	Atomic-Strain Mapping of High-Index Facets in Late-Transition-Metal Nanoparticles for Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 22996-23001	16.4	4
35	Tailoring Oxygen Reduction Reaction Pathway on Spinel Oxides via Surficial Geometrical-Site Occupation Modification Driven by Oxygen Evolution Reaction.. <i>Advanced Materials</i> , <b>2022</b> , e2202874	24	4
34	Highly active electron-affinity for ultra-low barrier for alkaline ORR in Pd3Cu. <i>Materials Today Energy</i> , <b>2019</b> , 12, 426-430	7	3
33	Phonon Evidence of Kohn Anomalies in Nanogenerator ZnO. <i>Nano Energy</i> , <b>2019</b> , 59, 626-635	17.1	3
32	Unexpected high selectivity for acetate formation from CO reduction with copper based 2D hybrid catalysts at ultralow potentials.. <i>Chemical Science</i> , <b>2021</b> , 12, 15382-15388	9.4	3
31	Synergistic Effect of Graphdiyne-based Electrocatalysts. <i>Chemical Research in Chinese Universities</i> ,1	2.2	3
30	Native point defect modulated Cr-LaAlO as an excited contrast medium for near-infrared persistent deep-tissue bio-imaging. <i>Chemical Communications</i> , <b>2021</b> , 57, 9366-9369	5.8	3
29	Electronic modification in graphdiyne for future electrocatalytic applications. <i>2D Materials</i> , <b>2021</b> , 8, 044009	9.9	3
28	Boosting the Electrocatalytic Oxygen Evolution of Perovskite LaCo 1/3 Fe x O 3 by the Construction of Yolk-Shell Nanostructures and Electronic Modulation. <i>Small</i> ,2201131	11	3
27	Designing the future atomic electrocatalyst for efficient energy systems. <i>Engineering Reports</i> , <b>2020</b> , 2, e12327	1.2	2
26	A full picture of intrinsic defects induced self-activation of elastic potential fluctuation within monolayered metal chalcogenide. <i>Nano Energy</i> , <b>2020</b> , 70, 104530	17.1	2
25	Hydrogen Evolution Electrocatalysis: Interface Modulation of MoS2/Metal Oxide Heterostructures for Efficient Hydrogen Evolution Electrocatalysis (Small 28/2020). <i>Small</i> , <b>2020</b> , 16, 2070158	11	2
24	TM LDH Meets Birnessite: A 2D-2D Hybrid Catalyst with Long-Term Stability for Water Oxidation at Industrial Operating Conditions. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 9785-9791	3.6	2

23	Metallated Graphynes as a New Class of Photofunctional 2D Organometallic Nanosheets. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 11427-11435	3.6	2
22	Decoding of crystal synthesis of fcc-hcp reversible transition for metals: theoretical mechanistic study from facet control to phase transition engineering. <i>Nano Energy</i> , <b>2021</b> , 85, 106026	17.1	2
21	Non-equilibrium insertion of lithium ions into graphite. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 12080-12086	13.086	2
20	Engineering the synergistic effect of carbon dots-stabilized atomic and subnanometric ruthenium as highly efficient electrocatalysts for robust hydrogen evolution. <i>SmartMat</i> ,	22.8	2
19	Interface synergistic effects induced multi-mode luminescence. <i>Nano Research</i> ,1	10	2
18	Application of machine learning for advanced material prediction and design. <i>EcoMat</i> ,	9.4	2
17	Non-noble metal-based bifunctional electrocatalysts for hydrogen production. <i>Rare Metals</i> ,1	5.5	2
16	Carboxylated carbon nanotubes with high electrocatalytic activity for oxygen evolution in acidic conditions. <i>Informa Mater</i> , <b>2022</b> , 4,	23.1	2
15	Electronic View of Triboelectric Nanogenerator for Energy Harvesting: Mechanisms and Applications. <i>Advanced Energy and Sustainability Research</i> , <b>2021</b> , 2, 2000087	1.6	1
14	PalladiumSilver Nanowires: Alloyed PalladiumSilver Nanowires Enabling Ultrastable Carbon Dioxide Reduction to Formate (Adv. Mater. 4/2021). <i>Advanced Materials</i> , <b>2021</b> , 33, 2170027	24	1
13	Ultrastable bimetallic Fe <sub>2</sub> Mo for efficient oxygen reduction reaction in pH-universal applications. <i>Nano Research</i> ,1	10	1
12	The self-complementary effect through strong orbital coupling in ultrathin high-entropy alloy nanowires boosting pH-universal multifunctional electrocatalysis. <i>Applied Catalysis B: Environmental</i> , <b>2022</b> , 121431	21.8	1
11	Chiral self-assembly of terminal alkyne and selenium clusters organic-inorganic hybrid. <i>Nano Research</i> ,1	10	0
10	Flexible Modulations on Selectivity of Syngas Formation via CO <sub>2</sub> Reduction on Atomic Catalysts. <i>Nano Energy</i> , <b>2022</b> , 107382	17.1	0
9	Oxygen Vacancies on Layered Niobic Acid That Weaken the Catalytic Conversion of Polysulfides in LithiumSulfur Batteries. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 11615	3.6	
8	Titelbild: Oxygen Vacancies on Layered Niobic Acid That Weaken the Catalytic Conversion of Polysulfides in LithiumSulfur Batteries (Angew. Chem. 33/2019). <i>Angewandte Chemie</i> , <b>2019</b> , 131, 11245	3.6	
7	Rare-earth Nanomaterials for PEC Energy Conversion <b>2022</b> , 399-410		
6	Rare-earth Nanomaterials for PC Energy Conversion <b>2022</b> , 309-323		

- 5 Rare-earth Nanomaterials for EC Energy Conversion **2022**, 171-189
- 4 Rare-Earth Nanomaterials for PV Energy Conversion **2022**, 559-579
- 3 Atomic-Strain Mapping of High-Index Facets in Late-Transition-Metal Nanoparticles for Electrocatalysis. *Angewandte Chemie*, **2021**, 133, 23178 3.6
- 2 Entanglement of Spatial and Energy Segmentation for C 1 Pathways in CO 2 Reduction on Carbon Skeleton Supported Atomic Catalysts (Adv. Energy Mater. 14/2022). *Advanced Energy Materials*, **2022**, 12, 2270057 21.8
- 1 Neighboring effects of active sites for CO2 transition to C1 products on atomic catalysts. *Nano Energy*, **2022**, 99, 107398 17.1