Ming-Zi Sun

List of Publications by Year
in descending order

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115	6,879	66234	64668
papers	citations	42 h-index	79 g-index

121	121	121	6593
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Eu ³⁺ -Eu ²⁺ ion redox shuttle imparts operational durability to Pb-I perovskite solar cells. Science, 2019, 363, 265-270.	6.0	793
2	General synthesis of two-dimensional van der Waals heterostructure arrays. Nature, 2020, 579, 368-374.	13.7	393
3	Channelâ€Rich RuCu Nanosheets for pHâ€Universal Overall Water Splitting Electrocatalysis. Angewandte Chemie - International Edition, 2019, 58, 13983-13988.	7.2	274
4	Exploiting Ruâ€Induced Lattice Strain in CoRu Nanoalloys for Robust Bifunctional Hydrogen Production. Angewandte Chemie - International Edition, 2021, 60, 3290-3298.	7.2	254
5	Oxygenâ€Incorporated NiMoP Nanotube Arrays as Efficient Bifunctional Electrocatalysts For Ureaâ€Assisted Energyâ€Saving Hydrogen Production in Alkaline Electrolyte. Advanced Functional Materials, 2021, 31, 2104951.	7.8	247
6	Atomically targeting NiFe LDH to create multivacancies for OER catalysis with a small organic anchor. Nano Energy, 2021, 81, 105606.	8.2	204
7	Exploiting Ruâ€Induced Lattice Strain in CoRu Nanoalloys for Robust Bifunctional Hydrogen Production. Angewandte Chemie, 2021, 133, 3327-3335.	1.6	189
8	Multimodal Luminescent Yb³⁺/Er³⁺/Bi³⁺â€Doped Perovskite Single Crystals for Xâ€ray Detection and Antiâ€Counterfeiting. Advanced Materials, 2020, 32, e2004506.	11.1	187
9	Impacts of alkaline on the defects property and crystallization kinetics in perovskite solar cells. Nature Communications, 2019, 10, 1112.	5.8	185
10	Self-Elimination of Intrinsic Defects Improves the Low-Temperature Performance of Perovskite Photovoltaics. Joule, 2020, 4, 1961-1976.	11.7	152
11	High-efficiency direct methane conversion to oxygenates on a cerium dioxide nanowires supported rhodium single-atom catalyst. Nature Communications, 2020, 11, 954.	5.8	152
12	Atomic Sulfur Filling Oxygen Vacancies Optimizes H Absorption and Boosts the Hydrogen Evolution Reaction in Alkaline Media. Angewandte Chemie - International Edition, 2021, 60, 14117-14123.	7.2	129
13	Fabrication of layered double hydroxide microcapsules mediated by cerium doping in metalâ€“organic frameworks for boosting water splitting. Energy and Environmental Science, 2020, 13, 2949-2956.	15.6	126
14	Uncovering the Promotion of CeO₂/CoS_{1.97} Heterostructure with Specific Spatial Architectures on Oxygen Evolution Reaction. Advanced Materials, 2021, 33, e2102593.	11.1	118
15	Au Clusters on Pd Nanosheets Selectively Switch the Pathway of Ethanol Electrooxidation: Amorphous/Crystalline Interface Matters. Advanced Energy Materials, 2021, 11, 2100187.	10.2	113
16	A General Strategy to Glassy Mâ€Te (M = Ru, Rh, Ir) Porous Nanorods for Efficient Electrochemical N₂ Fixation. Advanced Materials, 2020, 32, e1907112.	11.1	111
17	Locally collective hydrogen bonding isolates lead octahedra for white emission improvement. Nature Communications, 2019, 10, 5190.	5.8	109
18	A General Synthetic Method for High-Entropy Alloy Subnanometer Ribbons. Journal of the American Chemical Society, 2022, 144, 10582-10590.	6.6	108

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19	Oxygen Vacancies on Layered Niobic Acid That Weaken the Catalytic Conversion of Polysulfides in Lithiumâ€“Sulfur Batteries. Angewandte Chemie - International Edition, 2019, 58, 11491-11496.	7.2	104
20	Accelerating Atomic Catalyst Discovery by Theoretical Calculationsâ€Machine Learning Strategy. Advanced Energy Materials, 2020, 10, 1903949.	10.2	99
21	pH-Universal Water Splitting Catalyst: Ru-Ni Nanosheet Assemblies. IScience, 2019, 11, 492-504.	1.9	97
22	High energy X-ray radiation sensitive scintillating materials for medical imaging, cancer diagnosis and therapy. Nano Energy, 2021, 79, 105437.	8.2	95
23	The Spacer Cations Interplay for Efficient and Stable Layered 2D Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1901566.	10.2	89
24	Atomically Dispersed Cu Catalyst for Efficient Chemoselective Hydrogenation Reaction. Nano Letters, 2021, 21, 10284-10291.	4.5	85
25	Atomic PdAu Interlayer Sandwiched into Pd/Pt Core/Shell Nanowires Achieves Superstable Oxygen Reduction Catalysis. ACS Nano, 2020, 14, 11570-11578.	7.3	84
26	Tunable CO/H ₂ ratios of electrochemical reduction of CO ₂ through the Zn-Ln dual atomic catalysts. Science Advances, 2021, 7, eabl4915.	4.7	82
27	Confined Growth of Silverâ€“Copper Janus Nanostructures with {100} Facets for Highly Selective Tandem Electrocatalytic Carbon Dioxide Reduction. Advanced Materials, 2022, 34, e2110607.	11.1	82
28	The facile oil-phase synthesis of a multi-site synergistic high-entropy alloy to promote the alkaline hydrogen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 889-893.	5.2	80
29	Alloyed Palladiumâ€“Silver Nanowires Enabling Ultrastable Carbon Dioxide Reduction to Formate. Advanced Materials, 2021, 33, e2005821.	11.1	73
30	Interface Modulation of MoS₂/Metal Oxide Heterostructures for Efficient Hydrogen Evolution Electrocatalysis. Small, 2020, 16, e2002212.	5.2	68
31	Mapping of atomic catalyst on graphdiyne. Nano Energy, 2019, 62, 754-763.	8.2	64
32	A New Hexagonal Cobalt Nanosheet Catalyst for Selective CO₂ Conversion to Ethanal. Journal of the American Chemical Society, 2021, 143, 15335-15343.	6.6	64
33	Manipulating Crystallization Kinetics in Highâ€Performance Bladeâ€Coated Perovskite Solar Cells via Cosolventâ€Assisted Phase Transition. Advanced Materials, 2022, 34, e2200276.	11.1	64
34	Non-noble metal-based bifunctional electrocatalysts for hydrogen production. Rare Metals, 2022, 41, 2169-2183.	3.6	62
35	When rare earth meets carbon nanodots: mechanisms, applications and outlook. Chemical Society Reviews, 2020, 49, 9220-9248.	18.7	61
36	A Review on Ceo₂â€Based Electrocatalyst and Photocatalyst in Energy Conversion. Advanced Energy and Sustainability Research, 2021, 2, 2000063.	2.8	60

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37	Phaseâ€Dependent Electrocatalytic CO₂ Reduction on Pd₃Bi Nanocrystals. Angewandte Chemie - International Edition, 2021, 60, 21741-21745.	7.2	59
38	Channelâ€Rich RuCu Nanosheets for pHâ€Universal Overall Water Splitting Electrocatalysis. Angewandte Chemie, 2019, 131, 14121-14126.	1.6	58
39	Selfâ€Validated Machine Learning Study of Graphdiyneâ€Based Dual Atomic Catalyst. Advanced Energy Materials, 2021, 11, 2003796.	10.2	57
40	TM LDH Meets Birnessite: A 2Dâ€2D Hybrid Catalyst with Longâ€Term Stability for Water Oxidation at Industrial Operating Conditions. Angewandte Chemie - International Edition, 2021, 60, 9699-9705.	7.2	57
41	Understanding contact electrification at liquidâ€“solid interfaces from surface electronic structure. Nature Communications, 2021, 12, 1752.	5.8	56
42	Tailoring Oxygen Reduction Reaction Pathway on Spinel Oxides via Surficial Geometricalâ€Site Occupation Modification Driven by the Oxygen Evolution Reaction. Advanced Materials, 2022, 34, e2202874.	11.1	52
43	Nanophotonic energy storage in upconversion nanoparticles. Nano Energy, 2019, 56, 473-481.	8.2	43
44	All-inorganic perovskite nanocrystals: next-generation scintillation materials for high-resolution X-ray imaging. Nanoscale Advances, 2022, 4, 680-696.	2.2	43
45	Fast Li-ion Conductor of Li₃HoBr₆ for Stable All-Solid-State Lithiumâ€“Sulfur Battery. Nano Letters, 2021, 21, 9325-9331.	4.5	41
46	The self-complementary effect through strong orbital coupling in ultrathin high-entropy alloy nanowires boosting pH-universal multifunctional electrocatalysis. Applied Catalysis B: Environmental, 2022, 312, 121431.	10.8	40
47	Strain modulation of phase transformation of noble metal nanomaterials. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 715-734.	8.5	38
48	Engineering the synergistic effect of carbon dotsâ€stabilized atomic and subnanometric ruthenium as highly efficient electrocatalysts for robust hydrogen evolution. SmartMat, 2022, 3, 249-259.	6.4	38
49	Electronic Tunability and Mobility Anisotropy of Quasi-2D Perovskite Single Crystals with Varied Spacer Cations. Journal of Physical Chemistry Letters, 2020, 11, 7610-7616.	2.1	35
50	Metallated Graphynes as a New Class of Photofunctional 2D Organometallic Nanosheets. Angewandte Chemie - International Edition, 2021, 60, 11326-11334.	7.2	34
51	Stepping Out of Transition Metals: Activating the Dual Atomic Catalyst through Main Group Elements. Advanced Energy Materials, 2021, 11, 2101404.	10.2	33
52	Mesoporosityâ€Enabled Selectivity of Mesoporous Palladiumâ€Based Nanocrystals Catalysts in Semihydrogenation of Alkynes. Angewandte Chemie - International Edition, 2022, 61, e202114539.	7.2	33
53	Multimodal channel cancer chemotherapy by 2D functional gadolinium metalâ€“organic framework. National Science Review, 2021, 8, nwaa221.	4.6	31
54	Boosting the Electrocatalytic Oxygen Evolution of Perovskite LaCo_{1â€™}_xFe_xO₃ by the Construction of Yolkâ€Shell Nanostructures and Electronic Modulation. Small, 2022, 18, .	5.2	31

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55	Phenylene-bridged perylenediimide-porphyrin acceptors for non-fullerene organic solar cells. Sustainable Energy and Fuels, 2018, 2, 2616-2624.	2.5	30
56	Surface Molecular Functionalization of Unusual Phase Metal Nanomaterials for Highly Efficient Electrochemical Carbon Dioxide Reduction under Industryâ€Relevant Current Density. Small, 2022, 18, e2106766.	5.2	30
57	Intrinsic energy conversions for photon-generation in piezo-phototronic materials: A case study on alkaline niobates. Nano Energy, 2018, 47, 150-171.	8.2	29
58	Dilute Aqueousâ€Aprotic Hybrid Electrolyte Enabling a Wide Electrochemical Window through Solvation Structure Engineering. Advanced Materials, 2021, 33, e2102390.	11.1	28
59	Expanding the toolbox for lanthanide-doped upconversion nanocrystals. Journal Physics D: Applied Physics, 2019, 52, 383002.	1.3	27
60	Atomic Sulfur Filling Oxygen Vacancies Optimizes H Absorption and Boosts the Hydrogen Evolution Reaction in Alkaline Media. Angewandte Chemie, 2021, 133, 14236-14242.	1.6	27
61	Entanglement of Spatial and Energy Segmentation for C₁ Pathways in CO₂ Reduction on Carbon Skeleton Supported Atomic Catalysts. Advanced Energy Materials, 2022, 12, .	10.2	27
62	Application of machine learning for advanced material prediction and design. EcoMat, 2022, 4, .	6.8	27
63	Effective Repeatable Mechanoluminescence in Heterostructured Li_{1â^'}_xNa_xNbO₃: Pr³⁺. Small, 2021, 17, e2103441.	5.2	26
64	Controlling the Cation Exsolution of Perovskite to Customize Heterostructure Active Site for Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2022, 14, 25638-25647.	4.0	26
65	â€œEnergy Selection Channelsâ€•for High-Performance Electrolyte: Anion-Frenkel Defect Pair as Dominant Source for O Ion Conductions in Pyrochlore-type Lanthanide Hafnium Oxides SOFC. Inorganic Chemistry, 2017, 56, 7975-7984.	1.9	25
66	Highly Controllable Hierarchically Porous Ag/Ag₂S Heterostructure by Cation Exchange for Efficient Hydrogen Evolution. Small, 2021, 17, e2103064.	5.2	25
67	The interfacial effect induced by rare earth oxide in boosting the conversion of CO₂ to formate. Energy and Environmental Science, 2022, 15, 3494-3502.	15.6	25
68	Discovering and Dissecting Mechanically Excited Luminescence of Mn²⁺ Activators via Matrix Microstructure Evolution. Advanced Functional Materials, 2021, 31, 2100221.	7.8	24
69	Hexagonal PtBi Intermetallic Inlaid with Subâ€Monolayer Pb Oxyhydroxide Boosts Methanol Oxidation. Small, 2022, 18, e2107803.	5.2	24
70	Highly efficient catalysts for oxygen reduction using well-dispersed iron carbide nanoparticles embedded in multichannel hollow nanofibers. Journal of Materials Chemistry A, 2020, 8, 18125-18131.	5.2	23
71	Probing oxide-ion conduction in low-temperature SOFCs. Nano Energy, 2018, 50, 88-96.	8.2	22
72	Atomic Imaging of Electrically Switchable Striped Domains in Î²â€²â€²In₂Se₃. Advanced Science, 2021, 8, e2100713.	5.6	22

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73	Gramâ€Scale Synthesis of Nanosized Li₃HoBr₆ Solid Electrolyte for Allâ€Solidâ€State Liâ€Se Battery. Small Methods, 2021, 5, e2101002.	4.6	22
74	Interface synergistic effects induced multi-mode luminescence. Nano Research, 2022, 15, 4457-4465.	5.8	21
75	Carboxylated carbon nanotubes with high electrocatalytic activity for oxygen evolution in acidic conditions. InformaÄ›nÃ-MateriÃ¡ly, 2022, 4, .	8.5	21
76	Unexpected high selectivity for acetate formation from CO₂ reduction with copper based 2D hybrid catalysts at ultralow potentials. Chemical Science, 2021, 12, 15382-15388.	3.7	19
77	Atomicâ€Strain Mapping of Highâ€Index Facets in Lateâ€Transitionâ€Metal Nanoparticles for Electrocatalysis. Angewandte Chemie - International Edition, 2021, 60, 22996-23001.	7.2	16
78	Probing the Irregular Lattice Strainâ€Induced Electronic Structure Variations on Late Transition Metals for Boosting the Electrocatalyst Activity. Small, 2020, 16, e2002434.	5.2	15
79	Non-equilibrium insertion of lithium ions into graphite. Journal of Materials Chemistry A, 2021, 9, 12080-12086.	5.2	15
80	Graphdiyne based catalysts for energy applications. Materials Chemistry Frontiers, 2021, 5, 7369-7383.	3.2	15
81	Blue energy case study and analysis: Attack of chloride ions on chromia passive film on metallic electrode of nanogenerator. Nano Energy, 2019, 62, 103-110.	8.2	14
82	Oxygen Vacancies on Layered Niobic Acid That Weaken the Catalytic Conversion of Polysulfides in Lithiumâ€“Sulfur Batteries. Angewandte Chemie, 2019, 131, 11615-11620.	1.6	13
83	Phaseâ€Dependent Electrocatalytic CO 2 Reduction on Pd 3 Bi Nanocrystals. Angewandte Chemie, 2021, 133, 21909-21913.	1.6	11
84	Unravelling the energy transfer of Er³⁺-self-sensitized upconversion in Er³⁺â€“Yb³⁺â€“Er³⁺clustered core@shell nanoparticles. Nanoscale, 2017, 9, 18490-18497.	2.8	10
85	Revealing Atomic Structure and Oxidation States of Dopants in Charge-Ordered Nanoparticles for Migration-Promoted Oxygen-Exchange Capacity. Chemistry of Materials, 2019, 31, 5769-5777.	3.2	10
86	Highly active electron-affinity for ultra-low barrier for alkaline ORR in Pd3Cu. Materials Today Energy, 2019, 12, 426-430.	2.5	10
87	[Rh^{III}(Cp*)]-catalyzed arylfluorination of Î±-diazoketoesters for facile synthesis of Î±-aryl-Î±-fluoroketoesters. Organic and Biomolecular Chemistry, 2019, 17, 1191-1201.	1.5	9
88	Native point defect modulated Cr³⁺â€“LaAlO₃ as an in vitro excited contrast medium for in vivo near-infrared persistent deep-tissue bio-imaging. Chemical Communications, 2021, 57, 9366-9369.	2.2	9
89	Energy conversion modeling of the intrinsic persistent luminescence of solids via energy transfer paths between transition levels. Physical Chemistry Chemical Physics, 2017, 19, 9457-9469.	1.3	8
90	Unraveling the correlation between oxide-ion motion and upconversion luminescence in Î²-La2Mo2O9:Yb3+,Er3+ derivatives. Journal of Materials Chemistry C, 2017, 5, 10965-10970.	2.7	8

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91	Ultrastable bimetallic Fe2Mo for efficient oxygen reduction reaction in pH-universal applications. Nano Research, 2022, 15, 4950-4957.	5.8	8
92	Comparison and correlation of structural disorder caused by anion Frenkel in affecting ion conduction of La2Hf2O7 and La2Mo2O9 as high performance electrolytes in SOFCs. MRS Advances, 2017, 2, 3317-3322.	0.5	7
93	Dynamically self-activated catalyst for direct synthesis of hydrogen peroxide (H2O2). Materials Today Energy, 2018, 10, 307-316.	2.5	7
94	Decoding of crystal synthesis of fcc-hcp reversible transition for metals: theoretical mechanistic study from facet control to phase transition engineering. Nano Energy, 2021, 85, 106026.	8.2	7
95	Synergistic Effect of Graphdiyne-based Electrocatalysts. Chemical Research in Chinese Universities, 2021, 37, 1242-1256.	1.3	7
96	Phonon Evidence of Kohn Anomalies in Nanogenerator ZnO. Nano Energy, 2019, 59, 626-635.	8.2	6
97	Anion charge density disturbance induces in-plane instabilities within 2D lateral heterojunction of TMD: An atomic view. Nano Energy, 2020, 70, 104484.	8.2	6
98	Electronic modification in graphdiyne for future electrocatalytic applications. 2D Materials, 2021, 8, 044009.	2.0	6
99	Mesoporosityâ€Enabled Selectivity of Mesoporous Palladiumâ€Based Nanocrystals Catalysts in Semihydrogenation of Alkynes. Angewandte Chemie, 2022, 134, .	1.6	6
100	Atomic substitution effects of inorganic perovskites for optoelectronic properties modulations. EcoMat, 2022, 4, .	6.8	6
101	Flexible modulations on selectivity of syngas formation via CO2 reduction on atomic catalysts. Nano Energy, 2022, 99, 107382.	8.2	6
102	Designing the future atomic electrocatalyst for efficient energy systems. Engineering Reports, 2020, 2, e12327.	0.9	5
103	Neighboring effects of active sites for CO2 transition to C1 products on atomic catalysts. Nano Energy, 2022, 99, 107398.	8.2	5
104	Electronic View of Triboelectric Nanogenerator for Energy Harvesting: Mechanisms and Applications. Advanced Energy and Sustainability Research, 2021, 2, 2000087.	2.8	4
105	TM LDH Meets Birnessite: A 2Dâ€2D Hybrid Catalyst with Longâ€Term Stability for Water Oxidation at Industrial Operating Conditions. Angewandte Chemie, 2021, 133, 9785-9791.	1.6	3
106	Metallated Graphynes as a New Class of Photofunctional 2D Organometallic Nanosheets. Angewandte Chemie, 2021, 133, 11427-11435.	1.6	3
107	Chiral self-assembly of terminal alkyne and selenium clusters organic-inorganic hybrid. Nano Research, 2022, 15, 2741-2745.	5.8	3
108	New framework of integrated electrocatalysis systems for nitrogen fixation. Journal of Materials Chemistry A, 2022, 10, 19506-19517.	5.2	3

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109	Hydrogen Evolution Electrocatalysis: Interface Modulation of MoS₂/Metal Oxide Heterostructures for Efficient Hydrogen Evolution Electrocatalysis (Small 28/2020). Small, 2020, 16, 2070158.	5.2	2
110	A full picture of intrinsic defects induced self-activation of elastic potential fluctuation within monolayered metal chalcogenide. Nano Energy, 2020, 70, 104530.	8.2	2
111	Palladiumâ€“Silver Nanowires: Alloyed Palladiumâ€“Silver Nanowires Enabling Ultrastable Carbon Dioxide Reduction to Formate (Adv. Mater. 4/2021). Advanced Materials, 2021, 33, 2170027.	11.1	1
112	Oxygen Vacancies on Layered Niobic Acid that Weaken the Catalytic Conversion of Polysulfides in Lithiumâ€“Sulfur Batteries. Angewandte Chemie, 2019, 131, 11245.	1.6	0
113	Atomicâ€Strain Mapping of Highâ€Index Facets in Lateâ€Transitionâ€Metal Nanoparticles for Electrocatalysis. Angewandte Chemie, 2021, 133, 23178.	1.6	0
114	Potential Probing Techniques For Future Energy Supply System-Solid Oxide Fuel Cells (SOFCs). , 2018, , .		0
115	Entanglement of Spatial and Energy Segmentation for C₁ Pathways in CO₂ Reduction on Carbon Skeleton Supported Atomic Catalysts (Adv. Energy Mater. 14/2022). Advanced Energy Materials, 2022, 12, .	10.2	0