

Chao 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.

69

papers

2,662

citations

27

h-index

51

g-index

82

ext. papers

3,880

ext. citations

16.4

avg, IF

5.16

L-index

#	Paper	IF	Citations
69	Amorphizing noble metal chalcogenide catalysts at the single-layer limit towards hydrogen production. <i>Nature Catalysis</i> , 2022 , 5, 212-221	36.5	14
68	Direct growth of single-metal-atom chains 2022 , 1, 245-253		1
67	Defect-mediated ripening of core-shell nanostructures.. <i>Nature Communications</i> , 2022 , 13, 2211	17.4	1
66	Phase engineering of Cr ₅ Te ₈ with colossal anomalous Hall effect. <i>Nature Electronics</i> , 2022 , 5, 224-232	28.4	10
65	Ti1g graphene single-atom material for improved energy level alignment in perovskite solar cells. <i>Nature Energy</i> , 2021 , 6, 1154-1163	62.3	14
64	Thickness dependent properties of ultrathin perovskite nanosheets with Ruddlesden-Popper-like atomic stackings. <i>Nanoscale</i> , 2021 , 13, 18961-18966	7.7	
63	Atomically Dispersed Co -N and Fe-N Costructures Boost Oxygen Reduction Reaction in Both Alkaline and Acidic Media. <i>Advanced Materials</i> , 2021 , e2104718	24	41
62	Mimicking Neuroplasticity via Ion Migration in van der Waals Layered Copper Indium Thiophosphate. <i>Advanced Materials</i> , 2021 , e2104676	24	7
61	Atomic Evolution of MetalOrganic Frameworks into CoN ₃ Coupling Vacancies by Cooperative Cascade Protection Strategy for Promoting Triiodide Reduction. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 6147-6156	3.8	5
60	Direct Laser Patterning of a 2D WSe ₂ Logic Circuit. <i>Advanced Functional Materials</i> , 2021 , 31, 2009549	15.6	6
59	Tuned single atom coordination structures mediated by polarization force and sulfur anions for photovoltaics. <i>Nano Research</i> , 2021 , 14, 4025	10	3
58	PdPSe: Component-Fusion-Based Topology Designer of Two-Dimensional Semiconductor. <i>Advanced Functional Materials</i> , 2021 , 31, 2102943	15.6	8
57	Penta-PdPSe: A New 2D Pentagonal Material with Highly In-Plane Optical, Electronic, and Optoelectronic Anisotropy. <i>Advanced Materials</i> , 2021 , 33, e2102541	24	27
56	2D Material Based Synaptic Devices for Neuromorphic Computing. <i>Advanced Functional Materials</i> , 2021 , 31, 2005443	15.6	56
55	Ternary Ta PdS Atomic Layers for an Ultrahigh Broadband Photoresponsive Phototransistor. <i>Advanced Materials</i> , 2021 , 33, e2005607	24	25
54	Salt melt synthesis of Chlorella-derived nitrogen-doped porous carbon with atomically dispersed CoN sites for efficient oxygen reduction reaction. <i>Journal of Colloid and Interface Science</i> , 2021 , 586, 498-504	9.3	9
53	Direct transformation of raw biomass into a FeNx single-atom catalyst for efficient oxygen reduction reaction. <i>Materials Chemistry Frontiers</i> , 2021 , 5, 3093-3098	7.8	2

52	Mid-infrared light-emitting properties and devices based on thin-film black phosphorus. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 4418-4424	7.1	2
51	Synaptic Devices: 2D Material Based Synaptic Devices for Neuromorphic Computing (Adv. Funct. Mater. 4/2021). <i>Advanced Functional Materials</i> , 2021 , 31, 2170022	15.6	
50	Van der Waals engineering of ferroelectric heterostructures for long-retention memory. <i>Nature Communications</i> , 2021 , 12, 1109	17.4	29
49	Interpenetrating interfaces for efficient perovskite solar cells with high operational stability and mechanical robustness. <i>Nature Communications</i> , 2021 , 12, 973	17.4	75
48	Polymorphism of Segmented Grain Boundaries in Two-Dimensional Transition Metal Dichalcogenides. <i>Nano Letters</i> , 2021 , 21, 6014-6021	11.5	2
47	Understanding the Synergistic Effects of Cobalt Single Atoms and Small Nanoparticles: Enhancing Oxygen Reduction Reaction Catalytic Activity and Stability for Zinc-Air Batteries. <i>Advanced Functional Materials</i> , 2021 , 31, 2104735	15.6	32
46	MoTe: Semiconductor or Semimetal?. <i>ACS Nano</i> , 2021 ,	16.7	4
45	Single-atom-catalyst with abundant Co-S sites for use as a counter electrode in photovoltaics. <i>Chemical Communications</i> , 2021 , 57, 5302-5305	5.8	3
44	Controlled oxidative etching of gold nanorods revealed through in-situ liquid cell electron microscopy. <i>Science China Materials</i> , 2020 , 63, 2599-2605	7.1	2
43	Synthesis of Atomically Thin 1T-TaSe ₂ with a Strongly Enhanced Charge-Density-Wave Order. <i>Advanced Functional Materials</i> , 2020 , 30, 2001903	15.6	8
42	Optogenetics inspired transition metal dichalcogenide neuristors for in-memory deep recurrent neural networks. <i>Nature Communications</i> , 2020 , 11, 3211	17.4	20
41	Strain-driven growth of ultra-long two-dimensional nano-channels. <i>Nature Communications</i> , 2020 , 11, 772	17.4	16
40	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. <i>Journal of the American Chemical Society</i> , 2020 , 142, 2948-2955	16.4	12
39	Synthesis of Co-Doped MoS Monolayers with Enhanced Valley Splitting. <i>Advanced Materials</i> , 2020 , 32, e1906536	24	35
38	A Novel Single-Atom Electrocatalyst Ti/rGO for Efficient Cathodic Reduction in Hybrid Photovoltaics. <i>Advanced Materials</i> , 2020 , 32, e2000478	24	20
37	Recent Advances in Two-Dimensional Magnets: Physics and Devices towards Spintronic Applications. <i>Research</i> , 2020 , 2020, 1768918	7.8	17
36	Dual-Metal Interbonding as the Chemical Facilitator for Single-Atom Dispersions. <i>Advanced Materials</i> , 2020 , 32, e2003484	24	40
35	Strain-Engineering of Bi ₂ O ₃ /Br ₂ Nanotubes for Boosting Photocatalytic CO ₂ Reduction 2020 , 2, 1025-1032		38

34	Embedding Ultrafine Metal Oxide Nanoparticles in Monolayered Metal-Organic Framework Nanosheets Enables Efficient Electrocatalytic Oxygen Evolution. <i>ACS Nano</i> , 2020 , 14, 1971-1981	16.7	57
33	Engineering the Phases and Heterostructures of Ultrathin Hybrid Perovskite Nanosheets. <i>Advanced Materials</i> , 2020 , 32, e2002392	24	13
32	Triple-Mode Emissions with Invisible Near-Infrared After-Glow from Cr -Doped Zinc Aluminum Germanium Nanoparticles for Advanced Anti-Counterfeiting Applications. <i>Small</i> , 2020 , 16, e2003121	11	28
31	Robust nature of the chiral spin helix in CrNb ₃ S ₆ nanostructures studied by off-axis electron holography. <i>Physical Review B</i> , 2020 , 102,	3.3	4
30	Band Engineering: Band Structure Engineering of Interfacial Semiconductors Based on Atomically Thin Lead Iodide Crystals (Adv. Mater. 17/2019). <i>Advanced Materials</i> , 2019 , 31, 1970121	24	
29	Band Structure Engineering of Interfacial Semiconductors Based on Atomically Thin Lead Iodide Crystals. <i>Advanced Materials</i> , 2019 , 31, e1806562	24	49
28	Van der Waals negative capacitance transistors. <i>Nature Communications</i> , 2019 , 10, 3037	17.4	71
27	Self-gating in semiconductor electrocatalysis. <i>Nature Materials</i> , 2019 , 18, 1098-1104	27	84
26	Bismuth Vacancy-Tuned Bismuth Oxybromide Ultrathin Nanosheets toward Photocatalytic CO Reduction. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 30786-30792	9.5	79
25	Isolated single atom cobalt in BiOBr atomic layers to trigger efficient CO photoreduction. <i>Nature Communications</i> , 2019 , 10, 2840	17.4	177
24	Insight into the Activity and Stability of Transition-Metal Atoms Embedded in MnO for Triiodide Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 19303-19310	8.3	2
23	Ultrasensitive 2D Bi O Se Phototransistors on Silicon Substrates. <i>Advanced Materials</i> , 2019 , 31, e1804945	24	119
22	Biomass-Derived Multilayer-Graphene-Encapsulated Cobalt Nanoparticles as Efficient Electrocatalyst for Versatile Renewable Energy Applications. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 1137-1145	8.3	23
21	In-situ liquid cell transmission electron microscopy investigation on oriented attachment of gold nanoparticles. <i>Nature Communications</i> , 2018 , 9, 421	17.4	117
20	Synergistic Gating of Electro-Iono-Photoactive 2D Chalcogenide Neuristors: Coexistence of Hebbian and Homeostatic Synaptic Metaplasticity. <i>Advanced Materials</i> , 2018 , 30, e1800220	24	188
19	One-Step Synthesis of Metal/Semiconductor Heterostructure NbS ₂ /MoS ₂ . <i>Chemistry of Materials</i> , 2018 , 30, 4001-4007	9.6	54
18	Light-Tunable 1T-TaS Charge-Density-Wave Oscillators. <i>ACS Nano</i> , 2018 , 12, 11203-11210	16.7	32
17	Defect-Rich Bi ₁₂ O ₁₇ Cl ₂ Nanotubes Self-Accelerating Charge Separation for Boosting Photocatalytic CO ₂ Reduction. <i>Angewandte Chemie</i> , 2018 , 130, 15063-15067	3.6	34

16	Defect-Rich Bi O Cl Nanotubes Self-Accelerating Charge Separation for Boosting Photocatalytic CO Reduction. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 14847-14851	16.4	219
15	In-situ TEM Study on Sub-10 nm Materials. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1650-1651	0.5	
14	Room-temperature electrically driven phase transition of two-dimensional 1T-TaS layers. <i>Nanoscale</i> , 2017 , 9, 2436-2441	7.7	16
13	Electrically driven cation exchange for in situ fabrication of individual nanostructures. <i>Nature Communications</i> , 2017 , 8, 14889	17.4	25
12	High Mobility 2D Palladium Diselenide Field-Effect Transistors with Tunable Ambipolar Characteristics. <i>Advanced Materials</i> , 2017 , 29, 1602969	24	180
11	Electric Field Effect in Two-Dimensional Transition Metal Dichalcogenides. <i>Advanced Functional Materials</i> , 2017 , 27, 1602404	15.6	36
10	High-quality monolayer superconductor NbSe grown by chemical vapour deposition. <i>Nature Communications</i> , 2017 , 8, 394	17.4	199
9	Large-Area and High-Quality 2D Transition Metal Telluride. <i>Advanced Materials</i> , 2017 , 29, 1603471	24	140
8	Optoelectronic properties of atomically thin ReSSe with weak interlayer coupling. <i>Nanoscale</i> , 2016 , 8, 5826-34	7.7	27
7	2D Black Phosphorus/SrTiO ₃ -Based Programmable Photoconductive Switch. <i>Advanced Materials</i> , 2016 , 28, 7768-73	24	44
6	CNT-based bifacial perovskite solar cells toward highly efficient 4-terminal tandem photovoltaics. <i>Energy and Environmental Science</i> ,	35.4	4
5	Surface Local Polarization Induced by Bismuth-Oxygen Vacancy Pairs Tuning Non-Covalent Interaction for CO ₂ Photoreduction. <i>Advanced Energy Materials</i> ,2102389	21.8	11
4	Integration of Morphology and Electronic Structure Modulation on Atomic Iron-Nitrogen-Carbon Catalysts for Highly Efficient Oxygen Reduction. <i>Advanced Functional Materials</i> ,2108345	15.6	10
3	Strong Piezoelectricity in 3R-MoS ₂ Flakes. <i>Advanced Electronic Materials</i> ,2101131	6.4	1
2	2D Cairo Pentagonal PdPS: Air-Stable Anisotropic Ternary Semiconductor with High Optoelectronic Performance. <i>Advanced Functional Materials</i> ,2113255	15.6	5
1	Composition and phase engineering of metal chalcogenides and phosphorous chalcogenides. <i>Nature Materials</i> ,	27	11