

Xun Cao

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74
papers

1,788
citations

24
h-index

40
g-index

80
ext. papers

2,512
ext. citations

9.7
avg, IF

5.17
L-index

#	Paper	IF	Citations
74	Ultrafine Metal Nanoparticles/N-Doped Porous Carbon Hybrids Coated on Carbon Fibers as Flexible and Binder-Free Water Splitting Catalysts. <i>Advanced Energy Materials</i> , 2017 , 7, 1700220	21.8	126
73	Nanoporous thermochromic VO ₂ (M) thin films: controlled porosity, largely enhanced luminous transmittance and solar modulating ability. <i>Langmuir</i> , 2014 , 30, 1710-5	4	101
72	Recent advances in VO ₂ -based thermochromic composites for smart windows. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 1903-1919	7.1	92
71	Terbium-Doped VO ₂ Thin Films: Reduced Phase Transition Temperature and Largely Enhanced Luminous Transmittance. <i>Langmuir</i> , 2016 , 32, 759-64	4	83
70	Facile and Low-Temperature Fabrication of Thermochromic CrO/VO Smart Coatings: Enhanced Solar Modulation Ability, High Luminous Transmittance and UV-Shielding Function. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 26029-26037	9.5	82
69	Interpenetrating interfaces for efficient perovskite solar cells with high operational stability and mechanical robustness. <i>Nature Communications</i> , 2021 , 12, 973	17.4	75
68	Van der Waals negative capacitance transistors. <i>Nature Communications</i> , 2019 , 10, 3037	17.4	71
67	High Performance and Enhanced Durability of Thermochromic Films Using VO@ZnO Core-Shell Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 27784-27791	9.5	71
66	Review on thermochromic vanadium dioxide based smart coatings: from lab to commercial application. <i>Advances in Manufacturing</i> , 2018 , 6, 1-19	2.7	69
65	Spatially Resolved Dynamically Reconfigurable Multilevel Control of Thermal Emission. <i>Laser and Photonics Reviews</i> , 2020 , 14, 1900162	8.3	59
64	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. <i>Nature Communications</i> , 2020 , 11, 3729	17.4	57
63	Confining Tiny MoO Clusters into Reduced Graphene Oxide for Highly Efficient Low Frequency Microwave Absorption. <i>Small</i> , 2020 , 16, e2001686	11	43
62	Exploring the impact of atomic lattice deformation on oxygen evolution reactions based on a sub-5 nm pure face-centred cubic high-entropy alloy electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 11938-11947	13	42
61	Self-assembled Cu-Ni bimetal oxide 3D in-plane epitaxial structures for highly efficient oxygen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2019 , 244, 56-62	21.8	41
60	Nanostructured Metal-Organic Conjugated Coordination Polymers with Ligand Tailoring for Superior Rechargeable Energy Storage. <i>Small</i> , 2019 , 15, e1903188	11	40
59	Nanostructured CuO/C Hollow Shell@3D Copper Dendrites as a Highly Efficient Electrocatalyst for Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 23807-23812	9.5	40
58	Effects of V ₂ O ₃ buffer layers on sputtered VO ₂ smart windows: Improved thermochromic properties, tunable width of hysteresis loops and enhanced durability. <i>Applied Surface Science</i> , 2018 , 441, 764-772	6.7	38

57	Rational design of intertwined carbon nanotubes threaded porous CoP@carbon nanocubes as anode with superior lithium storage. <i>Carbon</i> , 2019 , 142, 269-277	10.4	38
56	Application-oriented VO ₂ thermochromic coatings with composite structures: Optimized optical performance and robust fatigue properties. <i>Solar Energy Materials and Solar Cells</i> , 2019 , 189, 138-148	6.4	36
55	Challenges and Opportunities toward Real Application of VO ₂ -Based Smart Glazing. <i>Matter</i> , 2020 , 2, 862-881	12.7	34
54	Mitigating Deterioration of Vanadium Dioxide Thermochromic Films by Interfacial Encapsulation. <i>Matter</i> , 2019 , 1, 734-744	12.7	34
53	Self-Template Synthesis of Nanoporous VO-Based Films: Localized Surface Plasmon Resonance and Enhanced Optical Performance for Solar Glazing Application. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 22692-22702	9.5	30
52	Oxygen vacancy mediated bismuth stannate ultra-small nanoparticle towards photocatalytic CO ₂ -to-CO conversion. <i>Applied Catalysis B: Environmental</i> , 2020 , 276, 119156	21.8	30
51	The Self-Passivation Mechanism in Degradation of BiVO Photoanode. <i>IScience</i> , 2019 , 19, 976-985	6.1	27
50	The synergistic catalysis on Co nanoparticles and Co _{Nx} sites of aniline-modified ZIF derived Co@NCs for oxidative esterification of HMF. <i>Chinese Chemical Letters</i> , 2021 , 32, 685-690	8.1	23
49	Superior Li-ion storage of VS nanowires anchored on reduced graphene. <i>Nanoscale</i> , 2019 , 11, 9556-9562	7.7	21
48	Solution-based fabrication of VO ₂ (M) nanoparticles via lyophilisation. <i>RSC Advances</i> , 2015 , 5, 25669-25675	7.5	21
47	A plasmonic non-stoichiometric WO homojunction with stabilizing surface plasmonic resonance for selective photochromic modulation. <i>Chemical Communications</i> , 2018 , 54, 5241-5244	5.8	21
46	Development of polyoxometalate-anchored 3D hybrid hydrogel for high-performance flexible pseudo-solid-state supercapacitor. <i>Electrochimica Acta</i> , 2020 , 329, 135181	6.7	18
45	Highly Enhanced Thermochromic Performance of VO Film Using "Movable" Antireflective Coatings. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 4712-4718	9.5	17
44	Highly anisotropic thermoelectric properties of black phosphorus crystals. <i>2D Materials</i> , 2019 , 6, 045009	5.9	17
43	Broadband thermochromic VO ₂ -based composite film with ultra-high solar modulation ability. <i>Materials Letters</i> , 2018 , 222, 62-65	3.3	16
42	Ordered distributed nickel sulfide nanoparticles across graphite nanosheets for efficient oxygen evolution reaction electrocatalyst. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 1544-1554	6.7	16
41	The Electrochemical Response of Single Crystalline Copper Nanowires to Atmospheric Air and Aqueous Solution. <i>Small</i> , 2017 , 13, 1603411	11	15
40	High thermoelectric performance enabled by convergence of nested conduction bands in PbBiSe with low thermal conductivity. <i>Nature Communications</i> , 2021 , 12, 4793	17.4	15

39	How to properly evaluate and compare the thermochromic performance of VO ₂ -based smart coatings. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 24164-24172	13	13
38	Co-synthesis of CuO-ZnO nanoflowers by low voltage liquid plasma discharge with brass electrode. <i>Journal of Alloys and Compounds</i> , 2019 , 773, 762-769	5.7	13
37	Extraordinary catalysis induced by titanium foil cathode plasma for degradation of water pollutant. <i>Chemosphere</i> , 2019 , 214, 341-348	8.4	12
36	High Thermoelectric Performance through Crystal Symmetry Enhancement in Triply Doped Diamondoid Compound Cu ₂ SnSe ₃ . <i>Advanced Energy Materials</i> , 2021 , 11, 2100661	21.8	11
35	Porous cobalt@N-doped carbon derived from chitosan for oxidative esterification of 5-Hydroxymethylfurfural: The roles of zinc in the synthetic and catalytic process. <i>Molecular Catalysis</i> , 2020 , 482, 110695	3.3	11
34	Innovative development on a p-type delafossite CuCrO ₂ nanoparticles based triethylamine sensor. <i>Sensors and Actuators B: Chemical</i> , 2020 , 324, 128743	8.5	11
33	Confinement of single polyoxometalate clusters in molecular-scale cages for improved flexible solid-state supercapacitors. <i>Nanoscale</i> , 2020 , 12, 11887-11898	7.7	11
32	Electrons-Donating Derived Dual-Resistant Crust of VO Nano-Particles via Ascorbic Acid Treatment for Highly Stable Smart Windows Applications. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 41229-41237	9.5	10
31	Phase engineering of Cr ₅ Te ₈ with colossal anomalous Hall effect. <i>Nature Electronics</i> , 2022 , 5, 224-232	28.4	10
30	Transmittance change with thickness for polycrystalline VO ₂ films deposited at room temperature. <i>Journal of Alloys and Compounds</i> , 2019 , 791, 648-654	5.7	9
29	Microwave Absorption: Confining Tiny MoO ₂ Clusters into Reduced Graphene Oxide for Highly Efficient Low Frequency Microwave Absorption (Small 30/2020). <i>Small</i> , 2020 , 16, 2070168	11	9
28	Molecular-scale cage-confinement pyrolysis route to size-controlled molybdenum carbide nanoparticles for electrochemical sensor. <i>Biosensors and Bioelectronics</i> , 2020 , 165, 112373	11.8	8
27	Growth of Lattice Coherent Co ₉ S ₈ /Co ₃ O ₄ Nano-Heterostructure for Maximizing the Catalysis of Co-Based Composites. <i>ChemCatChem</i> , 2020 , 12, 2431-2435	5.2	8
26	Dual-Nitrogen-Doped Carbon Decorated on Na ₃ V ₂ (PO ₄) ₃ to Stabilize the Intercalation of Three Sodium Ions. <i>ACS Applied Energy Materials</i> , 2020 , 3, 6870-6879	6.1	8
25	Chemical Vapor Deposition of Superconducting FeTeSe Nanosheets. <i>Nano Letters</i> , 2021 , 21, 5338-5344	11.5	8
24	Highly Strained Au Nanoparticles for Improved Electrocatalysis of Ethanol Oxidation Reaction. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 3005-3013	6.4	7
23	Janus-like particles prepared through partial UV irradiation at the water/oil interface and their encapsulation capabilities. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020 , 589, 124460	5.1	6
22	Tunable low-dimensional self-assembly of H-shaped bichromophoric perylene diimide Gemini in solution. <i>Nanoscale</i> , 2020 , 12, 3058-3067	7.7	6

21	Mechanically Durable Memristor Arrays Based on a Discrete Structure Design. <i>Advanced Materials</i> , 2021 , e2106212	24	5
20	Metal-organic framework derived CoSe@Nitrogen-doped porous carbon as a high-performance anode material for lithium ion batteries. <i>Nanotechnology</i> , 2020 , 31, 215602	3.4	5
19	Strained Ultralong Silver Nanowires for Enhanced Electrocatalytic Oxygen Reduction Reaction in Alkaline Medium. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 2029-2035	6.4	5
18	Catalysis of Au nano-pyramids formed across the surfaces of ordered Au nano-ring arrays. <i>Journal of Catalysis</i> , 2019 , 377, 389-399	7.3	4
17	A three-dimensional porous MoS ₂ @PVP aerogel as a highly efficient and recyclable sorbent for oils and organic solvents. <i>Materials Advances</i> , 2020 , 1, 760-766	3.3	4
16	Bifunctional copper cathode induced oxidation of glycerol with liquid plasma discharge. <i>Separation and Purification Technology</i> , 2019 , 220, 328-333	8.3	3
15	Epitaxial Bi ₉ Ti ₃ Fe ₅ O ₂₇ thin films: a new type of layer-structure room-temperature multiferroic. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 7720-7725	7.1	3
14	Unraveling the effects of anions in Ni _x Ay@CC (A=O, S, P) on Li-sulfur batteries. <i>Materials Today Nano</i> , 2021 , 13, 100106	9.7	3
13	Atomically Dispersed Intrinsic Hollow Sites of M - M ₁ - M ₂ (M ₁ ≠ Pt, Ir; M ₂ ≠ Fe, Co, Ni, Cu, Pt, Ir) on FeCoNiCuPtIr Nanocrystals Enabling Rapid Water Redox. <i>Advanced Functional Materials</i> , 2110645	15.6	2
12	Conductivity Modulation of 3D-Printed Shellular Electrodes through Embedding Nanocrystalline Intermetallics into Amorphous Matrix for Ultrahigh-Current Oxygen Evolution. <i>Advanced Energy Materials</i> , 2021 , 11, 2100968	21.8	2
11	Decomposition behavior in the early-stage oxidation of Sm ₂ Co ₁₇ -type magnets. <i>Scripta Materialia</i> , 2021 , 200, 113911	5.6	2
10	Twinning enhanced electrical conductivity and surface activity of nanostructured CuCrO ₂ gas sensor. <i>Sensors and Actuators B: Chemical</i> , 2021 , 338, 129845	8.5	2
9	Facile synthesis of hydrated magnesium vanadium bronze EMg _{0.25} V ₂ O ₅ ·H ₂ O as a novel cathode material for lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2019 , 777, 931-938	5.7	2
8	Multifunctional Flexible Vanadium Dioxide Films. <i>Accounts of Materials Research</i> , 2021 , 2, 714-725	7.5	2
7	One-step fabrication of Cu ₂ O-Cu catalytic electrodes with regular porous array by ultra-fast laser scanning. <i>Journal of Alloys and Compounds</i> , 2022 , 900, 163455	5.7	1
6	Bioactive CaTiO ₃ film prepared on the biomedical porous Ti-5Mo alloy by one-step hydrothermal treatment. <i>Journal of Materials Research and Technology</i> , 2021 , 14, 202-209	5.5	1
5	Flexible Au micro-array electrode with atomic-scale Au thin film for enhanced ethanol oxidation reaction. <i>Nano Research</i> , 2021 , 14, 311-319	10	0
4	Atomic-scale oxidation of a Sm ₂ Co ₁₇ -type magnet. <i>Acta Materialia</i> , 2021 , 117343	8.4	0

- 3 Design of Hierarchical Oxide-Carbon Nanostructures for Trifunctional Electrocatalytic Applications. *Advanced Materials Interfaces*, 2022, 13, 2200071 4.6 ○
- 2 Highly flexible interconnected Li⁺ ion-sieve porous hydrogels with self-regulating nanonetwork structure for marine lithium recovery. *Chemical Engineering Journal*, 2022, 445, 136780 14.7 ○
- 1 Correction to Multifunctional Flexible Vanadium Dioxide Films *Accounts of Materials Research*, 2022, 3, 403-403 7.5