

Xun Cao

List of Publications by Year in descending order

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77
papers

3,342
citations

147801

31
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155660

55
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80
all docs

80
docs citations

80
times ranked

3859
citing authors

#	ARTICLE	IF	CITATIONS
1	Interpenetrating interfaces for efficient perovskite solar cells with high operational stability and mechanical robustness. <i>Nature Communications</i> , 2021, 12, 973.	12.8	189
2	Ultrafine Metal Nanoparticles/Nâ€Doped Porous Carbon Hybrids Coated on Carbon Fibers as Flexible and Binderâ€Free Water Splitting Catalysts. <i>Advanced Energy Materials</i> , 2017, 7, 1700220.	19.5	156
3	Van der Waals negative capacitance transistors. <i>Nature Communications</i> , 2019, 10, 3037.	12.8	144
4	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.	10.3	137
5	Recent advances in VO₂-based thermochromic composites for smart windows. <i>Journal of Materials Chemistry C</i> , 2018, 6, 1903-1919.	5.5	136
6	Nanoporous Thermochromic VO₂ (M) Thin Films: Controlled Porosity, Largely Enhanced Luminous Transmittance and Solar Modulating Ability. <i>Langmuir</i> , 2014, 30, 1710-1715.	3.5	134
7	Facile and Low-Temperature Fabrication of Thermochromic Cr₂O₃/VO₂ Smart Coatings: Enhanced Solar Modulation Ability, High Luminous Transmittance and UV-Shielding Function. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26029-26037.	8.0	120
8	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. <i>Nature Communications</i> , 2020, 11, 3729.	12.8	120
9	Terbium-Doped VO₂ Thin Films: Reduced Phase Transition Temperature and Largely Enhanced Luminous Transmittance. <i>Langmuir</i> , 2016, 32, 759-764.	3.5	112
10	Review on thermochromic vanadium dioxide based smart coatings: from lab to commercial application. <i>Advances in Manufacturing</i> , 2018, 6, 1-19.	6.1	107
11	Spatially Resolved Dynamically Reconfigurable Multilevel Control of Thermal Emission. <i>Laser and Photonics Reviews</i> , 2020, 14, 1900162.	8.7	103
12	High Performance and Enhanced Durability of Thermochromic Films Using VO₂@ZnO Coreâ€Shell Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 27784-27791.	8.0	102
13	Confining Tiny MoO₂ Clusters into Reduced Graphene Oxide for Highly Efficient Low Frequency Microwave Absorption. <i>Small</i> , 2020, 16, e2001686.	10.0	87
14	Challenges and Opportunities toward Real Application of VO₂-Based Smart Glazing. <i>Matter</i> , 2020, 2, 862-881.	10.0	83
15	Phase engineering of Cr₅Te₈ with colossal anomalous Hall effect. <i>Nature Electronics</i> , 2022, 5, 224-232.	26.0	68
16	Reversible Al Metal Anodes Enabled by Amorphization for Aqueous Aluminum Batteries. <i>Journal of the American Chemical Society</i> , 2022, 144, 11444-11455.	13.7	63
17	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.	20.2	62
18	Oxygen vacancy mediated bismuth stannate ultra-small nanoparticle towards photocatalytic CO₂-to-CO conversion. <i>Applied Catalysis B: Environmental</i> , 2020, 276, 119156.	20.2	59

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19	Rational design of intertwined carbon nanotubes threaded porous CoP@carbon nanocubes as anode with superior lithium storage. <i>Carbon</i> , 2019, 142, 269-277.	10.3	58
20	Nanostructured Metal-Organic Conjugated Coordination Polymers with Ligand Tailoring for Superior Rechargeable Energy Storage. <i>Small</i> , 2019, 15, e1903188.	10.0	57
21	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.	6.2	57
22	Mitigating Deterioration of Vanadium Dioxide Thermochromic Films by Interfacial Encapsulation. <i>Matter</i> , 2019, 1, 734-744.	10.0	55
23	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.	6.1	53
24	Self-Template Synthesis of Nanoporous VO ₂ -Based Films: Localized Surface Plasmon Resonance and Enhanced Optical Performance for Solar Glazing Application. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 22692-22702.	8.0	53
25	High thermoelectric performance enabled by convergence of nested conduction bands in Pb ₇ Bi ₄ Se ₁₃ with low thermal conductivity. <i>Nature Communications</i> , 2021, 12, 4793.	12.8	53
26	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.	8.0	49
27	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.	9.0	47
28	The Self-Passivation Mechanism in Degradation of BiVO ₄ Photoanode. <i>IScience</i> , 2019, 19, 976-985.	4.1	40
29	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.	19.5	40
30	High Thermoelectric Performance through Crystal Symmetry Enhancement in Triply Doped Diamondoid Compound Cu ₂ SnSe ₃ . <i>Advanced Energy Materials</i> , 2021, 11, 2100661.	19.5	39
31	Superior Li-ion storage of VS ₄ nanowires anchored on reduced graphene. <i>Nanoscale</i> , 2019, 11, 9556-9562.	5.6	35
32	Highly anisotropic thermoelectric properties of black phosphorus crystals. <i>2D Materials</i> , 2019, 6, 045009.	4.4	33
33	Atomically Dispersed Intrinsic Hollow Sites of <i>M</i> ₁ â€ <i>M</i> ₁ â€ <i>M</i> (<i>M</i> ₁ = Pt, Ir; <i>M</i> = Fe, Co, Ni, Cu, Pt, Ir) on FeCoNiCuPtIr Nanocrystals Enabling Rapid Water Redox. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	33
34	Confinement of single polyoxometalate clusters in molecular-scale cages for improved flexible solid-state supercapacitors. <i>Nanoscale</i> , 2020, 12, 11887-11898.	5.6	31
35	Innovative development on a p-type delafossite CuCrO ₂ nanoparticles based triethylamine sensor. <i>Sensors and Actuators B: Chemical</i> , 2020, 324, 128743.	7.8	29
36	Highly Enhanced Thermochromic Performance of VO ₂ Film Using â€œMovableâ€•Antireflective Coatings. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 4712-4718.	8.0	28

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37	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.	10.3	28
38	Development of polyoxometalate-anchored 3D hybrid hydrogel for high-performance flexible pseudo-solid-state supercapacitor. <i>Electrochimica Acta</i> , 2020, 329, 135181.	5.2	28
39	A plasmonic non-stoichiometric WO ₃ homojunction with stabilizing surface plasmonic resonance for selective photochromic modulation. <i>Chemical Communications</i> , 2018, 54, 5241-5244.	4.1	26
40	Solution-based fabrication of VO ₂ (M) nanoparticles via lyophilisation. <i>RSC Advances</i> , 2015, 5, 25669-25675.	3.6	24
41	Highly flexible interconnected Li ⁺ ion-sieve porous hydrogels with self-regulating nanonetwork structure for marine lithium recovery. <i>Chemical Engineering Journal</i> , 2022, 445, 136780.	12.7	24
42	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.	10.0	23
43	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.	5.1	23
44	Electrons-Donating Derived Dual-Resistant Crust of VO ₂ Nano-Particles via Ascorbic Acid Treatment for Highly Stable Smart Windows Applications. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41229-41237.	8.0	22
45	Extraordinary catalysis induced by titanium foil cathode plasma for degradation of water pollutant. <i>Chemosphere</i> , 2019, 214, 341-348.	8.2	21
46	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.	2.0	21
47	Broadband thermochromic VO ₂ -based composite film with ultra-high solar modulation ability. <i>Materials Letters</i> , 2018, 222, 62-65.	2.6	20
48	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.	7.1	20
49	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.	5.5	19
50	Mechanically Durable Memristor Arrays Based on a Discrete Structure Design. <i>Advanced Materials</i> , 2022, 34, e2106212.	21.0	19
51	Transmittance change with thickness for polycrystalline VO ₂ films deposited at room temperature. <i>Journal of Alloys and Compounds</i> , 2019, 791, 648-654.	5.5	18
52	Molecular-scale cage-confinement pyrolysis route to size-controlled molybdenum carbide nanoparticles for electrochemical sensor. <i>Biosensors and Bioelectronics</i> , 2020, 165, 112373.	10.1	17
53	Sputtering Flexible VO ₂ Films for Effective Thermal Modulation. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 28105-28113.	8.0	17
54	The Electrochemical Response of Single Crystalline Copper Nanowires to Atmospheric Air and Aqueous Solution. <i>Small</i> , 2017, 13, 1603411.	10.0	15

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55	Chemical Vapor Deposition of Superconducting FeTe _{1-x} Se _x Nanosheets. <i>Nano Letters</i> , 2021, 21, 5338-5344.	9.1	15
56	Multifunctional Flexible Vanadium Dioxide Films. <i>Accounts of Materials Research</i> , 2021, 2, 714-725.	11.7	14
57	Highly Strained Au Nanoparticles for Improved Electrocatalysis of Ethanol Oxidation Reaction. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3005-3013.	4.6	12
58	Catalysis of Au nano-pyramids formed across the surfaces of ordered Au nano-ring arrays. <i>Journal of Catalysis</i> , 2019, 377, 389-399.	6.2	11
59	Tunable low-dimensional self-assembly of H-shaped bichromophoric perylene diimide Gemini in solution. <i>Nanoscale</i> , 2020, 12, 3058-3067.	5.6	11
60	Strained Ultralong Silver Nanowires for Enhanced Electrocatalytic Oxygen Reduction Reaction in Alkaline Medium. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 2029-2035.	4.6	10
61	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.	5.4	9
62	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.	3.7	9
63	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.	5.5	8
64	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.	4.7	8
65	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.	5.5	8
66	Design of Hierarchical Oxide-Carbon Nanostructures for Trifunctional Electrocatalytic Applications. <i>Advanced Materials Interfaces</i> , 2022, 9, .	3.7	8
67	Facile synthesis of hydrated magnesium vanadium bronze γ -Mg _{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.	5.5	7
68	Decomposition behavior in the early-stage oxidation of Sm ₂ Co ₁₇ -type magnets. <i>Scripta Materialia</i> , 2021, 200, 113911.	5.2	7
69	Atomic-scale oxidation of a Sm ₂ Co ₁₇ -type magnet. <i>Acta Materialia</i> , 2021, 220, 117343.	7.9	6
70	Metal-organic framework derived Co ₃ Se ₄ @Nitrogen-doped porous carbon as a high-performance anode material for lithium ion batteries. <i>Nanotechnology</i> , 2020, 31, 215602.	2.6	6
71	Solid-Ionic Memory in a van der Waals Heterostructure. <i>ACS Nano</i> , 2022, 16, 221-231.	14.6	6
72	Bifunctional copper cathode induced oxidation of glycerol with liquid plasma discharge. <i>Separation and Purification Technology</i> , 2019, 220, 328-333.	7.9	5

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73	Unraveling the effects of anions in NixAy@CC (A=O, S, P) on Li-sulfur batteries. <i>Materials Today Nano</i> , 2021, 13, 100106.	4.6	5
74	Twinning enhanced electrical conductivity and surface activity of nanostructured CuCrO2 gas sensor. <i>Sensors and Actuators B: Chemical</i> , 2021, 338, 129845.	7.8	4
75	Bioactive CaTiO3 film prepared on the biomedical porous Tiâ€“15Mo alloy by one-step hydrothermal treatment. <i>Journal of Materials Research and Technology</i> , 2021, 14, 202-209.	5.8	4
76	Flexible Au micro-array electrode with atomic-scale Au thin film for enhanced ethanol oxidation reaction. <i>Nano Research</i> , 2021, 14, 311-319.	10.4	3
77	Zinc Ferrite Nanoparticles: Simple Synthesis via Lyophilisation and Electrochemical Application as Glucose Biosensor. <i>Nano Express</i> , 0, , .	2.4	2