

Zhemi Xu

List of Publications by Year in descending order

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98
papers

4,760
citations

109137

35
h-index

106150

65
g-index

99
all docs

99
docs citations

99
times ranked

6489
citing authors

#	ARTICLE	IF	CITATIONS
1	Performance degradation and mitigation strategies of silver nanowire networks: a review. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2022, 47, 435-459.	6.8	21
2	Electroluminescent Solar Cells Based on CsPbI ₃ Perovskite Quantum Dots. <i>Advanced Functional Materials</i> , 2022, 32, 2108615.	7.8	38
3	Highly Selective Metal-Free Electrochemical Production of Hydrogen Peroxide on Functionalized Vertical Graphene Edges. <i>Small</i> , 2022, 18, e2105082.	5.2	20
4	Quantum Dot Passivation of Halide Perovskite Films with Reduced Defects, Suppressed Phase Segregation, and Enhanced Stability. <i>Advanced Science</i> , 2022, 9, e2102258.	5.6	35
5	A Solution-Processed All-Perovskite Memory with Dual-Band Light Response and Tri-Mode Operation. <i>Advanced Functional Materials</i> , 2022, 32, 2110975.	7.8	30
6	Hydrazine Hydrate Intercalated 1T-Dominant MoS ₂ with Superior Ambient Stability for Highly Efficient Electrocatalytic Applications. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 16338-16347.	4.0	17
7	Perovskite Quantum Dot Solar Cells Fabricated from Recycled Lead-Acid Battery Waste. , 2022, 4, 120-127.		7
8	Indigo: A Natural Molecular Passivator for Efficient Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	60
9	Modulating Pt-O-Pt atomic clusters with isolated cobalt atoms for enhanced hydrogen evolution catalysis. <i>Nature Communications</i> , 2022, 13, 2430.	5.8	98
10	Surface Functionalities of Graphene Oxide with Varying Flake Size. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 6531-6536.	1.8	6
11	Two-Dimensional Nanomaterials for Moisture-Electric Generators: A Review. <i>ACS Applied Nano Materials</i> , 2022, 5, 12224-12244.	2.4	9
12	Electrodeposited cobalt sulfide on a vertical graphene nanocomposite for high-performance supercapacitors. <i>New Journal of Chemistry</i> , 2021, 45, 20249-20256.	1.4	2
13	Recent developments of hybrid piezo-triboelectric nanogenerators for flexible sensors and energy harvesters. <i>Nanoscale Advances</i> , 2021, 3, 5465-5486.	2.2	47
14	Power generation for wearable systems. <i>Energy and Environmental Science</i> , 2021, 14, 2114-2157.	15.6	178
15	Flexible and efficient perovskite quantum dot solar cells via hybrid interfacial architecture. <i>Nature Communications</i> , 2021, 12, 466.	5.8	176
16	MoS ₂ nanoflower incorporated with Au/Pt nanoparticles for highly efficient hydrogen evolution reaction. <i>Emergent Materials</i> , 2021, 4, 579-587.	3.2	19
17	Hybrid Perovskite Quantum Dot/Non-Fullerene Molecule Solar Cells with Efficiency Over 15%. <i>Advanced Functional Materials</i> , 2021, 31, 2101272.	7.8	44
18	Colossal barocaloric effects in the complex hydride Li ₂ B ₁₂ H ₁₂ . <i>Scientific Reports</i> , 2021, 11, 11915.	1.6	12

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19	Cytokines: From Clinical Significance to Quantification. <i>Advanced Science</i> , 2021, 8, e2004433.	5.6	216
20	Ab initio description of oxygen vacancies in epitaxially strained SrTiO_3 at finite temperatures. <i>Scientific Reports</i> , 2021, 11, 11499.	1.6	7
21	Non-Fullerene Molecules: Hybrid Perovskite Quantum Dot/Non-Fullerene Molecule Solar Cells with Efficiency Over 15% (<i>Adv. Funct. Mater.</i> 27/2021). <i>Advanced Functional Materials</i> , 2021, 31, 2170196.	7.8	3
22	Activated Graphene Nanoplatelets Decorated with Carbon Nitrides for Efficient Electrocatalytic Oxygen Reduction Reaction. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2100104.	2.8	11
23	Recent progress in artificial synaptic devices: materials, processing and applications. <i>Journal of Materials Chemistry C</i> , 2021, 9, 8372-8394.	2.7	41
24	Recent progress of surface coating on cathode materials for high-performance lithium-ion batteries. <i>Journal of Energy Chemistry</i> , 2020, 43, 220-235.	7.1	272
25	Hierarchically Constructed Silver Nanowire@Nickel-Iron Layered Double Hydroxide Nanostructures for Electrocatalytic Water Splitting. <i>ACS Applied Nano Materials</i> , 2020, 3, 887-895.	2.4	29
26	Fe ₃ O ₄ wrapped by reduced graphene oxide as a high-performance anode material for lithium-ion batteries. <i>Ionics</i> , 2020, 26, 1695-1701.	1.2	30
27	A monolithic artificial iconic memory based on highly stable perovskite-metal multilayers. <i>Applied Physics Reviews</i> , 2020, 7, .	5.5	46
28	Improved electrochemical performance of high-nickel cathode material with electronic conductor RuO ₂ as the protecting layer for lithium-ion batteries. <i>Applied Surface Science</i> , 2020, 531, 147245.	3.1	36
29	Synthesis and Mechanism of High Structural Stability of Nickel-Rich Cathode Materials by Adjusting Li-Excess. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 40393-40403.	4.0	93
30	Enhancing the Efficiency and Stability of PbS Quantum Dot Solar Cells through Engineering an Ultrathin NiO Nanocrystalline Interlayer. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 46239-46246.	4.0	24
31	Unique FeP@C with polyhedral structure in-situ coated with reduced graphene oxide as an anode material for lithium ion batteries. <i>Journal of Alloys and Compounds</i> , 2020, 841, 155670.	2.8	51
32	Shape and Orientation Controlled Hydrothermal Synthesis of Silicide and Metal Dichalcogenide on a Silicon Substrate. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 18850-18858.	4.0	10
33	Synergetic modulation of the electronic structure and hydrophilicity of nickel-iron hydroxide for efficient oxygen evolution by UV/ozone treatment. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13437-13442.	5.2	15
34	Facile Patterning of Silver Nanowires with Controlled Polarities via Inkjet-Assisted Manipulation of Interface Adhesion. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 34086-34094.	4.0	19
35	Oxygen-vacancy induced magnetic phase transitions in multiferroic thin films. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	25
36	Improving thermal and electrical stability of silver nanowire network electrodes through integrating graphene oxide intermediate layers. <i>Journal of Colloid and Interface Science</i> , 2020, 566, 375-382.	5.0	35

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37	Enhanced Electrochemical Performance of Ni-Rich Cathode Materials with $\text{Li}_{1.3}\text{Al}_{0.3}\text{Ti}_{1.7}(\text{PO}_4)_3$ Coating. ACS Sustainable Chemistry and Engineering, 2020, 8, 5819-5830.	3.2	118
38	Magnetic and Conductive Liquid Metal Gels. ACS Applied Materials & Interfaces, 2020, 12, 20119-20128.	4.0	73
39	Perovskite X-ray Detectors: Flexible, Printable Soft X-ray Detectors Based on All-inorganic Perovskite Quantum Dots (Adv. Mater. 30/2019). Advanced Materials, 2019, 31, 1970214.	11.1	18
40	Flexible, Printable Soft X-ray Detectors Based on All-inorganic Perovskite Quantum Dots. Advanced Materials, 2019, 31, e1901644.	11.1	221
41	Silver nanowire/nickel hydroxide nanosheet composite for a transparent electrode and all-solid-state supercapacitor. Nanoscale Advances, 2019, 1, 140-146.	2.2	38
42	Enhanced Electrochemical Performance of Li-Rich Layered Cathode Materials by Combined Cr Doping and LiAlO_2 Coating. ACS Sustainable Chemistry and Engineering, 2019, 7, 2225-2235.	3.2	116
43	Advanced three-dimensional hierarchical Pr_6O_{11} @Ni-Co oxides-based core-shell electrodes for supercapacitance application. Journal of Alloys and Compounds, 2019, 783, 772-778.	2.8	21
44	Tunable Type I and II heterojunction of CoOx nanoparticles confined in g-C ₃ N ₄ nanotubes for photocatalytic hydrogen production. Applied Catalysis B: Environmental, 2019, 244, 814-822.	10.8	151
45	Recent Progress in Lithium Lanthanum Titanate Electrolyte towards All Solid-State Lithium Ion Secondary Battery. Critical Reviews in Solid State and Materials Sciences, 2019, 44, 265-282.	6.8	69
46	Electrochemistry and redox characterization of rock-salt-type lithium metal oxides $\text{Li}_{1+z/3}\text{Ni}_{1/2-z/2}\text{Ti}_{1/2+z/6}\text{O}_2$ for Li-ion batteries. Journal of Alloys and Compounds, 2019, 773, 1-10.	2.8	54
47	Novel two-dimensional $\text{Bi}_4\text{V}_2\text{O}_{11}$ nanosheets: controllable synthesis, characterization and insight into the band structure. CrystEngComm, 2018, 20, 1116-1122.	1.3	16
48	Threshold Switching Induced by Controllable Fragmentation in Silver Nanowire Networks. ACS Applied Materials & Interfaces, 2018, 10, 2716-2724.	4.0	22
49	Construction of Z-Scheme System for Enhanced Photocatalytic H_2 Evolution Based on CdS Quantum Dots/CeO ₂ Nanorods Heterojunction. ACS Sustainable Chemistry and Engineering, 2018, 6, 2552-2562.	3.2	105
50	Recent Developments in Oxide-Based Ionic Conductors: Bulk Materials, Nanoionics, and Their Memory Applications. Critical Reviews in Solid State and Materials Sciences, 2018, 43, 47-82.	6.8	20
51	Correlating morphology and doping effects with the carbon monoxide catalytic activity of Zn doped CeO ₂ nanocrystals. Catalysis Science and Technology, 2018, 8, 134-138.	2.1	19
52	Digital to analog resistive switching transition induced by graphene buffer layer in strontium titanate based devices. Journal of Colloid and Interface Science, 2018, 512, 767-774.	5.0	43
53	Active site engineering by surface sulfurization for a highly efficient oxygen evolution reaction: a case study of Co_3O_4 electrocatalysts. Journal of Materials Chemistry A, 2018, 6, 22497-22502.	5.2	54
54	Electrochemical performance of $\text{Li}_{1.2}\text{Ni}_{0.2}\text{Mn}_{0.6}\text{O}_2$ coated with a facilely synthesized $\text{Li}_{1.3}\text{Al}_{0.3}\text{Ti}_{1.7}(\text{PO}_4)_3$. Journal of Power Sources, 2018, 403, 27-37.	4.0	64

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55	Engineering cationic defects in transparent tin oxide superlattices. <i>Materials and Design</i> , 2018, 155, 71-76.	3.3	7
56	Highly Efficient and Selective Cu/MnO _x Catalysts for Carbon Dioxide Reduction. <i>ACS Applied Energy Materials</i> , 2018, 1, 3035-3041.	2.5	13
57	A Deep Learning-Based Algorithm Identifies Glaucomatous Discs Using Monoscopic Fundus Photographs. <i>Ophthalmology Glaucoma</i> , 2018, 1, 15-22.	0.9	77
58	Room-temperature mechanocaloric effects in lithium-based superionic materials. <i>Nature Communications</i> , 2018, 9, 3337.	5.8	21
59	Cathode material LiNi _{0.8} Co _{0.1} Mn _{0.1} O ₂ /LaPO ₄ with high electrochemical performance for lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2018, 764, 44-50.	2.8	55
60	Recent Progress in Silver Nanowires: Synthesis and Applications. <i>Nanoscience and Nanotechnology Letters</i> , 2018, 10, 155-166.	0.4	6
61	Tunable resistance switching in solution processed chromium-doped strontium titanate nanoparticles films. <i>Journal of Colloid and Interface Science</i> , 2017, 494, 178-184.	5.0	16
62	Morphology control and large piezoresponse of hydrothermally synthesized lead-free piezoelectric (Bi _{0.5} Na _{0.5})TiO ₃ nanofibres. <i>RSC Advances</i> , 2017, 7, 15020-15026.	1.7	31
63	Enhanced electrochemical performance of LiNi _{0.8} Co _{0.1} Mn _{0.1} O ₂ with lithium-reactive Li ₃ VO ₄ coating. <i>Journal of Alloys and Compounds</i> , 2017, 706, 198-204.	2.8	109
64	Enhanced performance of doped BiOCl nanoplates for photocatalysis: understanding from doping insight into improved spatial carrier separation. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12542-12549.	5.2	138
65	Tailoring the multi-functionalities of one-dimensional ceria nanostructures via oxygen vacancy modulation. <i>Journal of Colloid and Interface Science</i> , 2017, 504, 305-314.	5.0	25
66	Engineering Silver Nanowire Networks: From Transparent Electrodes to Resistive Switching Devices. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 20762-20770.	4.0	60
67	Interfacial Redox Reactions Associated Ionic Transport in Oxide-Based Memories. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 1585-1592.	4.0	17
68	Lattice evolution and enhanced piezoelectric properties of hydrothermally synthesised 0.94(Bi _{0.5} Na _{0.5})TiO ₃ â€“0.06BaTiO ₃ nanofibers. <i>Journal of Materials Chemistry C</i> , 2017, 5, 10976-10984.	2.7	21
69	Development of ferroelectric oxides based resistive switching materials. <i>Materials Science and Technology</i> , 2017, 33, 2010-2023.	0.8	5
70	Synthesis and electrochemical properties of cation-disordered Li-Ni-Ti-O compounds as cathode material for lithium ion batteries. <i>Journal of Alloys and Compounds</i> , 2017, 728, 659-668.	2.8	22
71	Manipulating resistive states in oxide based resistive memories through defective layers design. <i>RSC Advances</i> , 2017, 7, 56390-56394.	1.7	8
72	Morphology Control and Applications of SrTiO ₃ Based Nanomaterials. <i>Current Physical Chemistry</i> , 2017, 7, .	0.1	0

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73	Recent progress in tungsten oxides based memristors and their neuromorphological applications. <i>Electronic Materials Letters</i> , 2016, 12, 715-731.	1.0	35
74	UV irradiation induced reversible graphene band gap behaviors. <i>Journal of Materials Chemistry C</i> , 2016, 4, 8459-8465.	2.7	13
75	Tuning the surface oxygen concentration of {111} surrounded ceria nanocrystals for enhanced photocatalytic activities. <i>Nanoscale</i> , 2016, 8, 378-387.	2.8	163
76	Growth of Lithium Lanthanum Titanate Nanosheets and Their Application in Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 1486-1492.	4.0	27
77	A Facile and Template-Free One-Pot Synthesis of Mn ₃ O ₄ Nanostructures as Electrochemical Supercapacitors. <i>Nano-Micro Letters</i> , 2016, 8, 165-173.	14.4	50
78	Evidence of Filamentary Switching in Oxide-based Memory Devices via Weak Programming and Retention Failure Analysis. <i>Scientific Reports</i> , 2015, 5, 13599.	1.6	37
79	Ethanol-directed morphological evolution of hierarchical CeO _x architectures as advanced electrochemical capacitors. <i>Journal of Materials Chemistry A</i> , 2015, 3, 13970-13977.	5.2	32
80	Electric double-layer transistors: a review of recent progress. <i>Journal of Materials Science</i> , 2015, 50, 5641-5673.	1.7	182
81	Synthesis of Au and Pt Hollow Capsules with Single Holes via Pickering Emulsion Strategy. <i>Journal of Physical Chemistry C</i> , 2015, 119, 28055-28060.	1.5	33
82	Thermoelectric properties of sol-gel derived lanthanum titanate ceramics. <i>RSC Advances</i> , 2015, 5, 14735-14739.	1.7	11
83	Recent developments in black phosphorus transistors. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8760-8775.	2.7	146
84	Three-Dimensional Hierarchical Nanostructured Cu/Ni-Co Coating Electrode for Hydrogen Evolution Reaction in Alkaline Media. <i>Nano-Micro Letters</i> , 2015, 7, 347-352.	14.4	21
85	Ferromagnetic ordering in Mn-doped ZnO nanoparticles. <i>Nanoscale Research Letters</i> , 2014, 9, 625.	3.1	61
86	Electrodeposition of Mesoporous Co ₃ O ₄ Nanosheets on Carbon Foam for High Performance Supercapacitors. <i>Journal of Nanomaterials</i> , 2014, 2014, 1-5.	1.5	8
87	Voltage sweep modulated conductance quantization in oxide nanocomposites. <i>Journal of Materials Chemistry C</i> , 2014, 2, 10291-10297.	2.7	29
88	Recent progress in high Bs and low Hc Fe-based nanocrystalline alloys. <i>Nanotechnology Reviews</i> , 2014, 3, .	2.6	8
89	Growth and self-assembly of BaTiO ₃ nanocubes for resistive switching memory cells. <i>Journal of Solid State Chemistry</i> , 2014, 214, 38-41.	1.4	16
90	Bipolar resistive switching characteristics in LaTiO ₃ nanosheets. <i>RSC Advances</i> , 2014, 4, 18127.	1.7	9

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91	Improved super-capacitive performance of carbon foam supported CeO _x nanoflowers by selective doping and UV irradiation. RSC Advances, 2014, 4, 35067-35071.	1.7	10
92	Interface Thermodynamic State-Induced High-Performance Memristors. Langmuir, 2014, 30, 1183-1189.	1.6	21
93	Reversible Hydrophobic to Hydrophilic Transition in Graphene via Water Splitting Induced by UV Irradiation. Scientific Reports, 2014, 4, 6450.	1.6	105
94	Tuneable resistive switching characteristics of In ₂ O ₃ nanorods array via Co doping. RSC Advances, 2013, 3, 13422.	1.7	23
95	Ga Substitution and Oxygen Diffusion Kinetics in Ca ₃ Co ₄ O _{9+δ} -Based Thermoelectric Oxides. Journal of Physical Chemistry C, 2013, 117, 13382-13387.	1.5	32
96	Crystallographic Orientation Dependence on Electrical Properties of (Bi, Na)TiO ₃ -based Thin Films. Journal of the American Ceramic Society, 2013, 96, 3530-3535.	1.9	18
97	Linking Phase Segregation and Photovoltaic Performance of Mixed-Halide Perovskite Films through Grain Size Engineering. ACS Energy Letters, 0, , 1649-1658.	8.8	33
98	Cationic Interstitials: An Overlooked Ionic Defect in Memristors. Frontiers in Chemistry, 0, 10, .	1.8	2