

# 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	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
2	Flexible, Printable Soft X-ray Detectors Based on All-inorganic Perovskite Quantum Dots. <i>Advanced Materials</i> , 2019, 31, e1901644.	11.1	221
3	Cytokines: From Clinical Significance to Quantification. <i>Advanced Science</i> , 2021, 8, e2004433.	5.6	216
4	Electric double-layer transistors: a review of recent progress. <i>Journal of Materials Science</i> , 2015, 50, 5641-5673.	1.7	182
5	Power generation for wearable systems. <i>Energy and Environmental Science</i> , 2021, 14, 2114-2157.	15.6	178
6	Flexible and efficient perovskite quantum dot solar cells via hybrid interfacial architecture. <i>Nature Communications</i> , 2021, 12, 466.	5.8	176
7	Tuning the surface oxygen concentration of {111} surrounded ceria nanocrystals for enhanced photocatalytic activities. <i>Nanoscale</i> , 2016, 8, 378-387.	2.8	163
8	Tunable Type I and II heterojunction of CoOx nanoparticles confined in g-C <sub>3</sub> N <sub>4</sub> nanotubes for photocatalytic hydrogen production. <i>Applied Catalysis B: Environmental</i> , 2019, 244, 814-822.	10.8	151
9	Recent developments in black phosphorus transistors. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8760-8775.	2.7	146
10	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
11	Enhanced Electrochemical Performance of Ni-Rich Cathode Materials with Li <sub>1.3</sub> Al <sub>0.3</sub> Ti <sub>1.7</sub> (PO <sub>4</sub> ) <sub>3</sub> Coating. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 5819-5830.	3.2	118
12	Enhanced Electrochemical Performance of Li-Rich Layered Cathode Materials by Combined Cr Doping and LiAlO <sub>2</sub> Coating. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 2225-2235.	3.2	116
13	Enhanced electrochemical performance of LiNi <sub>0.8</sub> Co <sub>0.1</sub> Mn <sub>0.1</sub> O <sub>2</sub> with lithium-reactive Li <sub>3</sub> VO <sub>4</sub> coating. <i>Journal of Alloys and Compounds</i> , 2017, 706, 198-204.	2.8	109
14	Reversible Hydrophobic to Hydrophilic Transition in Graphene via Water Splitting Induced by UV Irradiation. <i>Scientific Reports</i> , 2014, 4, 6450.	1.6	105
15	Construction of Z-Scheme System for Enhanced Photocatalytic H <sub>2</sub> Evolution Based on CdS Quantum Dots/CeO <sub>2</sub> Nanorods Heterojunction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 2552-2562.	3.2	105
16	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
17	Synthesis and Mechanism of High Structural Stability of Nickel-Rich Cathode Materials by Adjusting Li-Excess. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 40393-40403.	4.0	93
18	A Deep Learning-Based Algorithm Identifies Glaucomatous Discs Using Monoscopic Fundus Photographs. <i>Ophthalmology Glaucoma</i> , 2018, 1, 15-22.	0.9	77

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19	Magnetic and Conductive Liquid Metal Gels. ACS Applied Materials & Interfaces, 2020, 12, 20119-20128.	4.0	73
20	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
21	Electrochemical performance of Li <sub>1.2</sub> Ni <sub>0.2</sub> Mn <sub>0.6</sub> O <sub>2</sub> coated with a facilely synthesized Li <sub>1.3</sub> Al <sub>0.3</sub> Ti <sub>1.7</sub> (PO <sub>4</sub> ) <sub>3</sub> . Journal of Power Sources, 2018, 403, 27-37.	4.0	64
22	Ferromagnetic ordering in Mn-doped ZnO nanoparticles. Nanoscale Research Letters, 2014, 9, 625.	3.1	61
23	Engineering Silver Nanowire Networks: From Transparent Electrodes to Resistive Switching Devices. ACS Applied Materials & Interfaces, 2017, 9, 20762-20770.	4.0	60
24	Indigo: A Natural Molecular Passivator for Efficient Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	60
25	Cathode material LiNi <sub>0.8</sub> Co <sub>0.1</sub> Mn <sub>0.1</sub> O <sub>2</sub> /LaPO <sub>4</sub> with high electrochemical performance for lithium-ion batteries. Journal of Alloys and Compounds, 2018, 764, 44-50.	2.8	55
26	Active site engineering by surface sulfurization for a highly efficient oxygen evolution reaction: a case study of Co <sub>3</sub> O <sub>4</sub> electrocatalysts. Journal of Materials Chemistry A, 2018, 6, 22497-22502.	5.2	54
27	Electrochemistry and redox characterization of rock-salt-type lithium metal oxides Li <sub>1+z/3</sub> Ni <sub>1/2-z/2</sub> Ti <sub>1/2+z/6</sub> O <sub>2</sub> for Li-ion batteries. Journal of Alloys and Compounds, 2019, 773, 1-10.	2.8	54
28	Unique FeP@C with polyhedral structure in-situ coated with reduced graphene oxide as an anode material for lithium ion batteries. Journal of Alloys and Compounds, 2020, 841, 155670.	2.8	51
29	A Facile and Template-Free One-Pot Synthesis of Mn <sub>3</sub> O <sub>4</sub> Nanostructures as Electrochemical Supercapacitors. Nano-Micro Letters, 2016, 8, 165-173.	14.4	50
30	Recent developments of hybrid piezo-triboelectric nanogenerators for flexible sensors and energy harvesters. Nanoscale Advances, 2021, 3, 5465-5486.	2.2	47
31	A monolithic artificial iconic memory based on highly stable perovskite-metal multilayers. Applied Physics Reviews, 2020, 7, .	5.5	46
32	Hybrid Perovskite Quantum Dot/Non-Fullerene Molecule Solar Cells with Efficiency Over 15%. Advanced Functional Materials, 2021, 31, 2101272.	7.8	44
33	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
34	Recent progress in artificial synaptic devices: materials, processing and applications. Journal of Materials Chemistry C, 2021, 9, 8372-8394.	2.7	41
35	Silver nanowire/nickel hydroxide nanosheet composite for a transparent electrode and all-solid-state supercapacitor. Nanoscale Advances, 2019, 1, 140-146.	2.2	38
36	Electroluminescent Solar Cells Based on CsPbI <sub>3</sub> Perovskite Quantum Dots. Advanced Functional Materials, 2022, 32, 2108615.	7.8	38

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37	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
38	Improved electrochemical performance of high-nickel cathode material with electronic conductor RuO <sub>2</sub> as the protecting layer for lithium-ion batteries. <i>Applied Surface Science</i> , 2020, 531, 147245.	3.1	36
39	Recent progress in tungsten oxides based memristors and their neuromorphological applications. <i>Electronic Materials Letters</i> , 2016, 12, 715-731.	1.0	35
40	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
41	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
42	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
43	Linking Phase Segregation and Photovoltaic Performance of Mixed-Halide Perovskite Films through Grain Size Engineering. <i>ACS Energy Letters</i> , 0, , 1649-1658.	8.8	33
44	Ga Substitution and Oxygen Diffusion Kinetics in Ca <sub>3</sub> Co <sub>4</sub> O <sub>9</sub> Ir <sup>+</sup> -Based Thermoelectric Oxides. <i>Journal of Physical Chemistry C</i> , 2013, 117, 13382-13387.	1.5	32
45	Ethanol-directed morphological evolution of hierarchical CeO <sub>x</sub> architectures as advanced electrochemical capacitors. <i>Journal of Materials Chemistry A</i> , 2015, 3, 13970-13977.	5.2	32
46	Morphology control and large piezoresponse of hydrothermally synthesized lead-free piezoelectric (Bi <sub>0.5</sub> Na <sub>0.5</sub> )TiO <sub>3</sub> nanofibres. <i>RSC Advances</i> , 2017, 7, 15020-15026.	1.7	31
47	Fe <sub>3</sub> O <sub>4</sub> 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
48	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
49	Voltage sweep modulated conductance quantization in oxide nanocomposites. <i>Journal of Materials Chemistry C</i> , 2014, 2, 10291-10297.	2.7	29
50	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
51	Growth of Lithium Lanthanum Titanate Nanosheets and Their Application in Lithium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 1486-1492.	4.0	27
52	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
53	Oxygen-vacancy induced magnetic phase transitions in multiferroic thin films. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	25
54	Enhancing the Efficiency and Stability of PbS Quantum Dot Solar Cells through Engineering an Ultrathin NiO Nanocrystalline Interlayer. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 46239-46246.	4.0	24

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55	Tuneable resistive switching characteristics of In <sub>2</sub> O <sub>3</sub> nanorods array via Co doping. RSC Advances, 2013, 3, 13422.	1.7	23
56	Synthesis and electrochemical properties of cation-disordered Li-Ni-Ti-O compounds as cathode material for lithium ion batteries. Journal of Alloys and Compounds, 2017, 728, 659-668.	2.8	22
57	Threshold Switching Induced by Controllable Fragmentation in Silver Nanowire Networks. ACS Applied Materials & Interfaces, 2018, 10, 2716-2724.	4.0	22
58	Interface Thermodynamic State-Induced High-Performance Memristors. Langmuir, 2014, 30, 1183-1189.	1.6	21
59	Three-Dimensional Hierarchical Nanostructured Cu/Ni@Co Coating Electrode for Hydrogen Evolution Reaction in Alkaline Media. Nano-Micro Letters, 2015, 7, 347-352.	14.4	21
60	Lattice evolution and enhanced piezoelectric properties of hydrothermally synthesised 0.94(Bi <sub>0.5</sub> Na <sub>0.5</sub> )TiO <sub>3</sub> @0.06BaTiO <sub>3</sub> nanofibers. Journal of Materials Chemistry C, 2017, 5, 10976-10984.	2.7	21
61	Room-temperature mechanocaloric effects in lithium-based superionic materials. Nature Communications, 2018, 9, 3337.	5.8	21
62	Advanced three-dimensional hierarchical Pr <sub>6</sub> O <sub>11</sub> @Ni-Co oxides-based core-shell electrodes for supercapacitance application. Journal of Alloys and Compounds, 2019, 783, 772-778.	2.8	21
63	Performance degradation and mitigation strategies of silver nanowire networks: a review. Critical Reviews in Solid State and Materials Sciences, 2022, 47, 435-459.	6.8	21
64	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
65	Highly Selective Metal-Free Electrochemical Production of Hydrogen Peroxide on Functionalized Vertical Graphene Edges. Small, 2022, 18, e2105082.	5.2	20
66	Correlating morphology and doping effects with the carbon monoxide catalytic activity of Zn doped CeO <sub>2</sub> nanocrystals. Catalysis Science and Technology, 2018, 8, 134-138.	2.1	19
67	Facile Patterning of Silver Nanowires with Controlled Polarities via Inkjet-Assisted Manipulation of Interface Adhesion. ACS Applied Materials & Interfaces, 2020, 12, 34086-34094.	4.0	19
68	MoS <sub>2</sub> nanoflower incorporated with Au/Pt nanoparticles for highly efficient hydrogen evolution reaction. Emergent Materials, 2021, 4, 579-587.	3.2	19
69	Crystallographic Orientation Dependence on Electrical Properties of (Bi, Na)TiO <sub>3</sub> -based Thin Films. Journal of the American Ceramic Society, 2013, 96, 3530-3535.	1.9	18
70	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
71	Interfacial Redox Reactions Associated Ionic Transport in Oxide-Based Memories. ACS Applied Materials & Interfaces, 2017, 9, 1585-1592.	4.0	17
72	Hydrazine Hydrate Intercalated 1T-Dominant MoS <sub>2</sub> with Superior Ambient Stability for Highly Efficient Electrocatalytic Applications. ACS Applied Materials & Interfaces, 2022, 14, 16338-16347.	4.0	17

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73	Growth and self-assembly of BaTiO <sub>3</sub> nanocubes for resistive switching memory cells. Journal of Solid State Chemistry, 2014, 214, 38-41.	1.4	16
74	Tunable resistance switching in solution processed chromium-doped strontium titanate nanoparticles films. Journal of Colloid and Interface Science, 2017, 494, 178-184.	5.0	16
75	Novel two-dimensional Bi <sub>4</sub> V <sub>2</sub> O <sub>11</sub> nanosheets: controllable synthesis, characterization and insight into the band structure. CrystEngComm, 2018, 20, 1116-1122.	1.3	16
76	Synergetic modulation of the electronic structure and hydrophilicity of nickel-iron hydroxide for efficient oxygen evolution by UV/ozone treatment. Journal of Materials Chemistry A, 2020, 8, 13437-13442.	5.2	15
77	UV irradiation induced reversible graphene band gap behaviors. Journal of Materials Chemistry C, 2016, 4, 8459-8465.	2.7	13
78	Highly Efficient and Selective Cu/MnO <sub>x</sub> Catalysts for Carbon Dioxide Reduction. ACS Applied Energy Materials, 2018, 1, 3035-3041.	2.5	13
79	Colossal barocaloric effects in the complex hydride Li <sub>2</sub> B <sub>12</sub> H <sub>12</sub> . Scientific Reports, 2021, 11, 11915.	1.6	12
80	Thermoelectric properties of sol-gel derived lanthanum titanate ceramics. RSC Advances, 2015, 5, 14735-14739.	1.7	11
81	Activated Graphene Nanoplatelets Decorated with Carbon Nitrides for Efficient Electrocatalytic Oxygen Reduction Reaction. Advanced Energy and Sustainability Research, 2021, 2, 2100104.	2.8	11
82	Improved super-capacitive performance of carbon foam supported CeO <sub>x</sub> nanoflowers by selective doping and UV irradiation. RSC Advances, 2014, 4, 35067-35071.	1.7	10
83	Shape and Orientation Controlled Hydrothermal Synthesis of Silicide and Metal Dichalcogenide on a Silicon Substrate. ACS Applied Materials & Interfaces, 2020, 12, 18850-18858.	4.0	10
84	Bipolar resistive switching characteristics in LaTiO <sub>3</sub> nanosheets. RSC Advances, 2014, 4, 18127.	1.7	9
85	Two-Dimensional Nanomaterials for Moisture-Electric Generators: A Review. ACS Applied Nano Materials, 2022, 5, 12224-12244.	2.4	9
86	Electrodeposition of Mesoporous Co <sub>3</sub> O <sub>4</sub> Nanosheets on Carbon Foam for High Performance Supercapacitors. Journal of Nanomaterials, 2014, 2014, 1-5.	1.5	8
87	Recent progress in high Bs and low Hc Fe-based nanocrystalline alloys. Nanotechnology Reviews, 2014, 3, .	2.6	8
88	Manipulating resistive states in oxide based resistive memories through defective layers design. RSC Advances, 2017, 7, 56390-56394.	1.7	8
89	Engineering cationic defects in transparent tin oxide superlattices. Materials and Design, 2018, 155, 71-76.	3.3	7
90	Ab initio description of oxygen vacancies in epitaxially strained SrTiO <sub>3</sub> at finite temperatures. Scientific Reports, 2021, 11, 11499.	1.6	7

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91	Perovskite Quantum Dot Solar Cells Fabricated from Recycled Lead-Acid Battery Waste. , 2022, 4, 120-127.		7
92	Recent Progress in Silver Nanowires: Synthesis and Applications. Nanoscience and Nanotechnology Letters, 2018, 10, 155-166.	0.4	6
93	Surface Functionalities of Graphene Oxide with Varying Flake Size. Industrial & Engineering Chemistry Research, 2022, 61, 6531-6536.	1.8	6
94	Development of ferroelectric oxides based resistive switching materials. Materials Science and Technology, 2017, 33, 2010-2023.	0.8	5
95	Non-Fullerene Molecules: Hybrid Perovskite Quantum Dot/Non-Fullerene Molecule Solar Cells with Efficiency Over 15% (Adv. Funct. Mater. 27/2021). Advanced Functional Materials, 2021, 31, 2170196.	7.8	3
96	Electrodeposited cobalt sulfide on a vertical graphene nanocomposite for high-performance supercapacitors. New Journal of Chemistry, 2021, 45, 20249-20256.	1.4	2
97	Cationic Interstitials: An Overlooked Ionic Defect in Memristors. Frontiers in Chemistry, 0, 10, .	1.8	2
98	Morphology Control and Applications of SrTiO <sub>3</sub> Based Nanomaterials. Current Physical Chemistry, 2017, 7, .	0.1	0