

Xiaolin Zheng

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105
papers

11,638
citations

47
h-index

107
g-index

116
ext. papers

13,372
ext. citations

12.2
avg, IF

6.46
L-index

#	Paper	IF	Citations
105	Coaxial silicon nanowires as solar cells and nanoelectronic power sources. <i>Nature</i> , 2007 , 449, 885-9	50.4	2531
104	Activating and optimizing MoS ₂ basal planes for hydrogen evolution through the formation of strained sulphur vacancies. <i>Nature Materials</i> , 2016 , 15, 48-53	27	1563
103	Branched TiO ₂ nanorods for photoelectrochemical hydrogen production. <i>Nano Letters</i> , 2011 , 11, 4978-84	11.5	760
102	Simultaneously efficient light absorption and charge separation in WO ₃ /BiVO ₄ core/shell nanowire photoanode for photoelectrochemical water oxidation. <i>Nano Letters</i> , 2014 , 14, 1099-105	11.5	580
101	Electrochemical generation of sulfur vacancies in the basal plane of MoS for hydrogen evolution. <i>Nature Communications</i> , 2017 , 8, 15113	17.4	396
100	Single and tandem axial p-i-n nanowire photovoltaic devices. <i>Nano Letters</i> , 2008 , 8, 3456-60	11.5	373
99	Enhancing Electrocatalytic Water Splitting by Strain Engineering. <i>Advanced Materials</i> , 2019 , 31, e180700	14	240
98	Optoelectronic crystal of artificial atoms in strain-textured molybdenum disulphide. <i>Nature Communications</i> , 2015 , 6, 7381	17.4	237
97	Boosting the solar water oxidation performance of a BiVO ₄ photoanode by crystallographic orientation control. <i>Energy and Environmental Science</i> , 2018 , 11, 1299-1306	35.4	227
96	Codoping titanium dioxide nanowires with tungsten and carbon for enhanced photoelectrochemical performance. <i>Nature Communications</i> , 2013 , 4, 1723	17.4	213
95	Kinetic Study of Hydrogen Evolution Reaction over Strained MoS ₂ with Sulfur Vacancies Using Scanning Electrochemical Microscopy. <i>Journal of the American Chemical Society</i> , 2016 , 138, 5123-9	16.4	198
94	Understanding activity trends in electrochemical water oxidation to form hydrogen peroxide. <i>Nature Communications</i> , 2017 , 8, 701	17.4	193
93	Rapid and controllable flame reduction of TiO ₂ nanowires for enhanced solar water-splitting. <i>Nano Letters</i> , 2014 , 14, 24-31	11.5	153
92	Hybrid Si microwire and planar solar cells: passivation and characterization. <i>Nano Letters</i> , 2011 , 11, 2704-8	11.5	140
91	Enhancing Catalytic CO Oxidation over Co ₃ O ₄ Nanowires by Substituting Co ²⁺ with Cu ²⁺ . <i>ACS Catalysis</i> , 2015 , 5, 4485-4491	13.1	139
90	Morphology-controlled flame synthesis of single, branched, and flower-like HMoO ₃ nanobelt arrays. <i>Nano Letters</i> , 2011 , 11, 872-7	11.5	139
89	Plasma-enhanced catalytic CuO nanowires for CO oxidation. <i>Nano Letters</i> , 2010 , 10, 4762-6	11.5	130

88	Interwoven three-dimensional architecture of cobalt oxide nanobrush-graphene@Ni(x)Co(2x)(OH)(6x) for high-performance supercapacitors. <i>Nano Letters</i> , 2015 , 15, 2037-44	11.5	129
87	Enhancing Low-Bias Performance of Hematite Photoanodes for Solar Water Splitting by Simultaneous Reduction of Bulk, Interface, and Surface Recombination Pathways. <i>Advanced Energy Materials</i> , 2016 , 6, 1501840	21.8	125
86	Titanium incorporation into hematite photoelectrodes: theoretical considerations and experimental observations. <i>Energy and Environmental Science</i> , 2014 , 7, 3100-3121	35.4	105
85	Fabricating nanowire devices on diverse substrates by simple transfer-printing methods. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 9950-5	11.5	105
84	Rapid catalyst-free flame synthesis of dense, aligned alpha-Fe ₂ O ₃ nanoflake and CuO nanoneedle arrays. <i>Nano Letters</i> , 2009 , 9, 3001-6	11.5	100
83	ZnO As an Active and Selective Catalyst for Electrochemical Water Oxidation to Hydrogen Peroxide. <i>ACS Catalysis</i> , 2019 , 9, 4593-4599	13.1	95
82	Flash ignition of Al nanoparticles: Mechanism and applications. <i>Combustion and Flame</i> , 2011 , 158, 2544-2548	25.48	95
81	Fabrication of nanowire electronics on nonconventional substrates by water-assisted transfer printing method. <i>Nano Letters</i> , 2011 , 11, 3435-9	11.5	86
80	Flame-Engraved Nickel-Iron Layered Double Hydroxide Nanosheets for Boosting Oxygen Evolution Reactivity. <i>Small Methods</i> , 2018 , 2, 1800083	12.8	86
79	Highly Efficient Solar Water Splitting from Transferred TiO ₂ Nanotube Arrays. <i>Nano Letters</i> , 2015 , 15, 5709-15	11.5	85
78	Rapid Flame Synthesis of Atomically Thin MoO down to Monolayer Thickness for Effective Hole Doping of WSe. <i>Nano Letters</i> , 2017 , 17, 3854-3861	11.5	84
77	One-Step Hydrothermal Deposition of Ni:FeOOH onto Photoanodes for Enhanced Water Oxidation. <i>ACS Energy Letters</i> , 2016 , 1, 624-632	20.1	84
76	Enhancing Catalytic Activity of MoS ₂ Basal Plane S-Vacancy by Co Cluster Addition. <i>ACS Energy Letters</i> , 2018 , 3, 2685-2693	20.1	79
75	CaSnO ₃ : An Electrocatalyst for Two-Electron Water Oxidation Reaction to Form H ₂ O ₂ . <i>ACS Energy Letters</i> , 2019 , 4, 352-357	20.1	77
74	Selective and Efficient Gd-Doped BiVO ₄ Photoanode for Two-Electron Water Oxidation to H ₂ O ₂ . <i>ACS Energy Letters</i> , 2019 , 4, 720-728	20.1	76
73	Flame synthesis of WO ₃ nanotubes and nanowires for efficient photoelectrochemical water-splitting. <i>Proceedings of the Combustion Institute</i> , 2013 , 34, 2187-2195	5.9	76
72	Transfer printing methods for flexible thin film solar cells: basic concepts and working principles. <i>ACS Nano</i> , 2014 , 8, 8746-56	16.7	71
71	Unique magnetic properties of single crystal Fe ₂ O ₃ nanowires synthesized by flame vapor deposition. <i>Nano Letters</i> , 2011 , 11, 2390-5	11.5	70

70	Quasi-ballistic Electronic Thermal Conduction in Metal Inverse Opals. <i>Nano Letters</i> , 2016 , 16, 2754-61	11.5	65
69	Synthesis and ignition of energetic CuO/Al core/shell nanowires. <i>Proceedings of the Combustion Institute</i> , 2011 , 33, 1909-1915	5.9	65
68	Probing flow velocity with silicon nanowire sensors. <i>Nano Letters</i> , 2009 , 9, 1984-8	11.5	65
67	Light-Driven BiVO ₄ Fuel Cell with Simultaneous Production of H ₂ O ₂ . <i>Advanced Energy Materials</i> , 2018 , 8, 1801158	21.8	64
66	Enhancing Mo:BiVO ₄ Solar Water Splitting with Patterned Au Nanospheres by Plasmon-Induced Energy Transfer. <i>Advanced Energy Materials</i> , 2018 , 8, 1701765	21.8	60
65	High-Performance Ultrathin BiVO ₄ Photoanode on Textured Polydimethylsiloxane Substrates for Solar Water Splitting. <i>ACS Energy Letters</i> , 2016 , 1, 68-75	20.1	55
64	Resolving Hysteresis in Perovskite Solar Cells with Rapid Flame-Processed Cobalt-Doped TiO ₂ . <i>Advanced Energy Materials</i> , 2018 , 8, 1801717	21.8	54
63	Thermal conductivity in porous silicon nanowire arrays. <i>Nanoscale Research Letters</i> , 2012 , 7, 554	5	52
62	General Characterization Methods for Photoelectrochemical Cells for Solar Water Splitting. <i>ChemSusChem</i> , 2015 , 8, 3192-203	8.3	51
61	Energetic Performance of Optically Activated Aluminum/Graphene Oxide Composites. <i>ACS Nano</i> , 2018 , 12, 11366-11375	16.7	51
60	Stabilizing Silicon Photocathodes by Solution-Deposited NiFe Layered Double Hydroxide for Efficient Hydrogen Evolution in Alkaline Media. <i>ACS Energy Letters</i> , 2017 , 2, 1939-1946	20.1	50
59	Peel-and-stick: fabricating thin film solar cell on universal substrates. <i>Scientific Reports</i> , 2012 , 2, 1000	4.9	49
58	Peel-and-stick: mechanism study for efficient fabrication of flexible/transparent thin-film electronics. <i>Scientific Reports</i> , 2013 , 3, 2917	4.9	47
57	Rapid flame doping of Co to WS ₂ for efficient hydrogen evolution. <i>Energy and Environmental Science</i> , 2018 , 11, 2270-2277	35.4	45
56	Electrochemical Synthesis of H ₂ O ₂ by Two-Electron Water Oxidation Reaction. <i>Chem</i> , 2021 , 7, 38-63	16.2	45
55	Laminar flame speeds, counterflow ignition, and kinetic modeling of the butene isomers. <i>Proceedings of the Combustion Institute</i> , 2015 , 35, 309-316	5.9	44
54	Sol-flame synthesis: a general strategy to decorate nanowires with metal oxide/noble metal nanoparticles. <i>Nano Letters</i> , 2013 , 13, 855-60	11.5	44
53	A Zn:BiVO ₄ /Mo:BiVO ₄ homojunction as an efficient photoanode for photoelectrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 9019-9024	13	43

52	Flame synthesis of tungsten oxide nanostructures on diverse substrates. <i>Proceedings of the Combustion Institute</i> , 2011 , 33, 1891-1898	5.9	40
51	Sol-flame synthesis of cobalt-doped TiO ₂ nanowires with enhanced electrocatalytic activity for oxygen evolution reaction. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 12299-306	3.6	36
50	Methane oxidation over catalytic copper oxides nanowires. <i>Proceedings of the Combustion Institute</i> , 2011 , 33, 3169-3175	5.9	36
49	Rapid Flame-Annealed CuFe ₂ O ₄ as Efficient Photocathode for Photoelectrochemical Hydrogen Production. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 5867-5874	8.3	34
48	Flash ignition of freestanding porous silicon films: effects of film thickness and porosity. <i>Nano Letters</i> , 2013 , 13, 5528-33	11.5	33
47	Orientation-controlled alignment of axially modulated pn silicon nanowires. <i>Nano Letters</i> , 2010 , 10, 5116-23	11.5	33
46	Rapid Formation of a Disordered Layer on Monoclinic BiVO ₄ : Co-Catalyst-Free Photoelectrochemical Solar Water Splitting. <i>ChemSusChem</i> , 2018 , 11, 933-940	8.3	31
45	Wafer-recyclable, environment-friendly transfer printing for large-scale thin-film nanoelectronics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E7236-E7244	11.5	31
44	Ignition of premixed hydrogen/air by heated counterflow under reduced and elevated pressures. <i>Combustion and Flame</i> , 2004 , 136, 168-179	5.3	30
43	Electroassisted transfer of vertical silicon wire arrays using a sacrificial porous silicon layer. <i>Nano Letters</i> , 2013 , 13, 4362-8	11.5	27
42	Enhancing ignition and combustion of micron-sized aluminum by adding porous silicon. <i>Proceedings of the Combustion Institute</i> , 2017 , 36, 2317-2324	5.9	26
41	Direct growth of nanowire logic gates and photovoltaic devices. <i>Nano Letters</i> , 2010 , 10, 1050-4	11.5	26
40	Methanol Photo-Oxidation on Rutile TiO ₂ Nanowires: Probing Reaction Pathways on Complex Materials. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 9910-9919	3.8	23
39	Tuning the morphological, ignition and combustion properties of micron-Al/CuO thermites through different synthesis approaches. <i>Combustion and Flame</i> , 2018 , 195, 303-310	5.3	23
38	Experimental effective metal oxides to enhance boron combustion. <i>Combustion and Flame</i> , 2019 , 205, 278-285	5.3	22
37	Synergistically Chemical and Thermal Coupling between Graphene Oxide and Graphene Fluoride for Enhancing Aluminum Combustion. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 7451-7458	9.5	22
36	Enabling silicon photoanodes for efficient solar water splitting by electroless-deposited nickel. <i>Nano Research</i> , 2018 , 11, 3499-3508	10	21
35	Thermoplasmonic Ignition of Metal Nanoparticles. <i>Nano Letters</i> , 2018 , 18, 1699-1706	11.5	20

34	Thermochemical and kinetic analyses on oxidation of isobutenyl radical and 2-hydroperoxymethyl-2-propenyl radical. <i>Journal of Physical Chemistry A</i> , 2005 , 109, 9044-53	2.8	19
33	Shrinking and growing: grain boundary density reduction for efficient polysilicon thin-film solar cells. <i>Nano Letters</i> , 2012 , 12, 6485-91	11.5	18
32	Enhancing combustion performance of nano-Al/PVDF composites with β -PVDF. <i>Combustion and Flame</i> , 2020 , 219, 467-477	5.3	17
31	Comparing Methods for Quantifying Electrochemically Accumulated H ₂ O ₂ . <i>Chemistry of Materials</i> , 2020 , 32, 6285-6294	9.6	17
30	Facile Thermal and Optical Ignition of Silicon Nanoparticles and Micron Particles. <i>Nano Letters</i> , 2017 , 17, 5925-5930	11.5	16
29	Electroless Deposition and Ignition Properties of Si/FeO Core/Shell Nanothermites. <i>ACS Omega</i> , 2017 , 2, 3596-3600	3.9	16
28	Epitaxial growth of WO ₃ nanoneedles achieved using a facile flame surface treatment process engineering of hole transport and water oxidation reactivity. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 19542-19546	13	16
27	The Role of Bicarbonate-Based Electrolytes in H ₂ O ₂ Production through Two-Electron Water Oxidation. <i>ACS Energy Letters</i> , 2021 , 6, 2854-2862	20.1	16
26	Flame synthesis of 1-D complex metal oxide nanomaterials. <i>Proceedings of the Combustion Institute</i> , 2013 , 34, 2229-2236	5.9	15
25	Reducing minimum flash ignition energy of Al microparticles by addition of WO ₃ nanoparticles. <i>Applied Physics Letters</i> , 2013 , 102, 043108	3.4	15
24	Modified Micro-Emulsion Synthesis of Highly Dispersed Al/PVDF Composites with Enhanced Combustion Properties. <i>Advanced Engineering Materials</i> , 2019 , 21, 1801330	3.5	14
23	Sol-flame synthesis of hybrid metal oxide nanowires. <i>Proceedings of the Combustion Institute</i> , 2013 , 34, 2179-2186	5.9	13
22	Ultrafast Flame Annealing of TiO ₂ Paste for Fabricating Dye-Sensitized and Perovskite Solar Cells with Enhanced Efficiency. <i>Small</i> , 2017 , 13, 1702260	11	13
21	Copper Ion Enhanced Synthesis of Nanostructured Cobalt Oxide Catalyst for Oxidation of Methane. <i>ChemCatChem</i> , 2012 , 4, 1551-1554	5.2	13
20	Thermal conduction in nanoporous copper inverse opal films 2014 ,		10
19	Effect of Interfacial Blocking Layer Morphology on the Solar Peroxydisulfate Production of WO ₃ Nanoflakes. <i>Electrochimica Acta</i> , 2017 , 244, 184-191	6.7	9
18	Ultrahigh Doping of Graphene Using Flame-Deposited MoO ₃ . <i>IEEE Electron Device Letters</i> , 2020 , 41, 15924-15957	4.4	9
17	Three-Dimensional Hetero-Integration of Faceted GaN on Si Pillars for Efficient Light Energy Conversion Devices. <i>ACS Nano</i> , 2017 , 11, 6853-6859	16.7	6

16	Conformal Electroless Nickel Plating on Silicon Wafers, Convex and Concave Pyramids, and Ultralong Nanowires. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 22834-22840	9.5	6
15	Morphological control of heterostructured nanowires synthesized by sol-flame method. <i>Nanoscale Research Letters</i> , 2013 , 8, 347	5	6
14	Operando Study of Thermal Oxidation of Monolayer MoS. <i>Advanced Science</i> , 2021 , 8, 2002768	13.6	6
13	High thermoelectric figure of merit of porous Si nanowires from 300 to 700 K. <i>Nature Communications</i> , 2021 , 12, 3926	17.4	6
12	Enhancing Mechanical and Combustion Performance of Boron/Polymer Composites via Boron Particle Functionalization. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 28908-28915	9.5	6
11	Encapsulation of Single Nanoparticle in Fast-Evaporating Micro-droplets Prevents Particle Agglomeration in Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 26602-26609	9.5	5
10	Facilitating laser ignition and combustion of boron with a mixture of graphene oxide and graphite fluoride. <i>Applications in Energy and Combustion Science</i> , 2020 , 1-4, 100013	0.8	5
9	Effect of Adventitious Carbon on Pit Formation of Monolayer MoS. <i>Advanced Materials</i> , 2020 , 32, e2003024	14	5
8	Molybdenum disulfide catalyzed tungsten oxide for on-chip acetone sensing. <i>Applied Physics Letters</i> , 2016 , 109, 133103	3.4	5
7	Probing boron thermite energy release at rapid heating rates. <i>Combustion and Flame</i> , 2021 , 231, 111491	5.3	5
6	Ignition and combustion of Perfluoroalkyl-functionalized aluminum nanoparticles and nanothermite. <i>Combustion and Flame</i> , 2022 , 242, 112170	5.3	5
5	On-demand production of hydrogen by reacting porous silicon nanowires with water. <i>Nano Research</i> , 2020 , 13, 1459-1464	10	3
4	Ultrahigh-Quality Infrared Polaritonic Resonators Based on Bottom-Up-Synthesized van der Waals Nanoribbons.. <i>ACS Nano</i> , 2022 ,	16.7	3
3	Sub-Thermionic Steep Switching in Hole-Doped WSe2 Transistors 2018 ,		2
2	Coaxial silicon nanowires as solar cells and nanoelectronic power sources 2010 , 58-62		1
1	Swelling-Induced Interface Crease Instabilities at Hydrogel Bilayers. <i>Journal of Elasticity</i> , 2021 , 145, 31-47	1.5	1