

Qing Zhao

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

93 papers	3,987 citations	32 h-index	61 g-index
95 ext. papers	4,594 ext. citations	8.5 avg, IF	5.58 L-index

#	Paper	IF	Citations
93	Probing the Effect of Ubiquitinated Histone on Mononucleosomes by Translocation Dynamics Study through Solid-State Nanopores.. <i>Nano Letters</i> , 2022 ,	11.5	4
92	A strategic review on processing routes towards scalable fabrication of perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2022 , 64, 538-560	12	9
91	Alkali Metal Chloride-Doped Water-Based TiO for Efficient and Stable Planar Perovskite Photovoltaics Exceeding 23% Efficiency.. <i>Small Methods</i> , 2021 , 5, e2100856	12.8	6
90	Basis and effects of ion migration on photovoltaic performance of perovskite solar cells. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 063001	3	11
89	Mechanisms and Suppression of Photoinduced Degradation in Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2021 , 11, 2002326	21.8	53
88	Effects of ion migration and improvement strategies for the operational stability of perovskite solar cells. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 94-106	3.6	27
87	Recent Progress in Perovskite Solar Cell: Fabrication, Efficiency, and Stability. <i>Challenges and Advances in Computational Chemistry and Physics</i> , 2021 , 1-32	0.7	2
86	Self-Induced Type-I Band Alignment at Surface Grain Boundaries for Highly Efficient and Stable Perovskite Solar Cells. <i>Advanced Materials</i> , 2021 , 33, e2103231	24	17
85	Electro-Optical Detection of Single Molecules Based on Solid-State Nanopores. <i>Small Structures</i> , 2020 , 1, 2000003	8.7	6
84	Four Aspects about Solid-State Nanopores for Protein Sensing: Fabrication, Sensitivity, Selectivity, and Durability. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2000933	10.1	18
83	Critical slowing down and attractive manifold: A mechanism for dynamic robustness in the yeast cell-cycle process. <i>Physical Review E</i> , 2020 , 101, 042405	2.4	2
82	Water-Based TiO ₂ Nanocrystal as an Electronic Transport Layer for Operationally Stable Perovskite Solar Cells. <i>Solar Rrl</i> , 2019 , 3, 1900167	7.1	11
81	Label-free detection of early oligomerization of β -synuclein and its mutants A30P/E46K through solid-state nanopores. <i>Nanoscale</i> , 2019 , 11, 6480-6488	7.7	17
80	Constructing CsPbBr ₃ Cluster Passivated-Triple Cation Perovskite for Highly Efficient and Operationally Stable Solar Cells. <i>Advanced Functional Materials</i> , 2019 , 29, 1809180	15.6	52
79	Halogen Engineering for Operationally Stable Perovskite Solar Cells via Sequential Deposition. <i>Advanced Energy Materials</i> , 2019 , 9, 1902239	21.8	23
78	Reducing Defects in Perovskite Solar Cells with White Light Illumination-Assisted Synthesis. <i>ACS Energy Letters</i> , 2019 , 4, 2821-2829	20.1	20
77	Perovskite Solar Cells: Halogen Engineering for Operationally Stable Perovskite Solar Cells via Sequential Deposition (Adv. Energy Mater. 46/2019). <i>Advanced Energy Materials</i> , 2019 , 9, 1970183	21.8	1

76	Double-Side-Passivated Perovskite Solar Cells with Ultra-low Potential Loss. <i>Solar Rrl</i> , 2019 , 3, 1800296	7.1	74
75	Stability Challenges for Perovskite Solar Cells. <i>ChemNanoMat</i> , 2019 , 5, 253-265	3.5	24
74	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. <i>Nature Communications</i> , 2018 , 9, 1607	17.4	218
73	Differential Enzyme Flexibility Probed Using Solid-State Nanopores. <i>ACS Nano</i> , 2018 , 12, 4494-4502	16.7	55
72	Ultrahigh open-circuit voltage for high performance mixed-cation perovskite solar cells using acetate anions. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 14387-14391	13	13
71	Efficient Perovskite Solar Cells Fabricated Through CsCl-Enhanced Pbi Precursor via Sequential Deposition. <i>Advanced Materials</i> , 2018 , 30, e1803095	24	78
70	Interface Colloidal Deposition of Nanoparticle Wire Structures. <i>Particle and Particle Systems Characterization</i> , 2018 , 35, 1800098	3.1	
69	Probing conformational change of T7 RNA polymerase and DNA complex by solid-state nanopores. <i>Chinese Physics B</i> , 2018 , 27, 118705	1.2	3
68	Photothermally Assisted Thinning of Silicon Nitride Membranes for Ultrathin Asymmetric Nanopores. <i>ACS Nano</i> , 2018 , 12, 12472-12481	16.7	44
67	Atomic scale insights into structure instability and decomposition pathway of methylammonium lead iodide perovskite. <i>Nature Communications</i> , 2018 , 9, 4807	17.4	113
66	Femtosecond photonic viral inactivation probed using solid-state nanopores. <i>Nano Futures</i> , 2018 , 2, 045005	9.05	9
65	Proton Migration in Hybrid Lead Iodide Perovskites: From Classical Hopping to Deep Quantum Tunneling. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 6536-6543	6.4	10
64	Ultrafast Broadband Charge Collection from Clean Graphene/CHNHPbi Interface. <i>Journal of the American Chemical Society</i> , 2018 , 140, 14952-14957	16.4	21
63	In Situ Cesium Modification at Interface Enhances the Stability of Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 33205-33213	9.5	20
62	Enhanced long-term stability of perovskite solar cells by 3-hydroxypyridine dipping. <i>Chemical Communications</i> , 2017 , 53, 1829-1831	5.8	50
61	Tiny protein detection using pressure through solid-state nanopores. <i>Electrophoresis</i> , 2017 , 38, 1130-1138	3.86	9
60	Nanopore-Based Measurements of Protein Size, Fluctuations, and Conformational Changes. <i>ACS Nano</i> , 2017 , 11, 5706-5716	16.7	164
59	Quantification of light-enhanced ionic transport in lead iodide perovskite thin films and its solar cell applications. <i>Light: Science and Applications</i> , 2017 , 6, e16243	16.7	257

58	Enhanced long-term stability of perovskite solar cells using a double-layer hole transport material. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 14881-14886	13	26
57	Label-Free Single-Molecule Thermoscopy Using a Laser-Heated Nanopore. <i>Nano Letters</i> , 2017 , 17, 7067-7074	10.5	24
56	N-Terminal Acetylation Preserves β -Synuclein from Oligomerization by Blocking Intermolecular Hydrogen Bonds. <i>ACS Chemical Neuroscience</i> , 2017 , 8, 2145-2151	5.7	34
55	Light-Independent Ionic Transport in Inorganic Perovskite and Ultrastable Cs-Based Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 4122-4128	6.4	186
54	Mobile-Ion-Induced Degradation of Organic Hole-Selective Layers in Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 14517-14523	3.8	83
53	Solid-state nanopore-based DNA single molecule detection and sequencing. <i>Mikrochimica Acta</i> , 2016 , 183, 941-953	5.8	22
52	Potentials and challenges towards application of perovskite solar cells. <i>Science China Materials</i> , 2016 , 59, 769-778	7.1	13
51	Intrinsic and membrane-facilitated β -synuclein oligomerization revealed by label-free detection through solid-state nanopores. <i>Scientific Reports</i> , 2016 , 6, 20776	4.9	41
50	Correlations between Immobilizing Ions and Suppressing Hysteresis in Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2016 , 1, 266-272	20.1	93
49	Micro-scale hierarchical photoanode for quantum-dot-sensitized solar cells based on TiO ₂ nanowires. <i>Frontiers of Optoelectronics</i> , 2016 , 9, 53-59	2.8	1
48	Reversible Healing Effect of Water Molecules on Fully Crystallized Metal Halide Perovskite Film. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 4759-4765	3.8	45
47	A polymer scaffold for self-healing perovskite solar cells. <i>Nature Communications</i> , 2016 , 7, 10228	17.4	439
46	Non-sticky translocation of bio-molecules through Tween 20-coated solid-state nanopores in a wide pH range. <i>Applied Physics Letters</i> , 2016 , 109, 143105	3.4	15
45	Suppressed hysteresis and improved stability in perovskite solar cells with conductive organic network. <i>Nano Energy</i> , 2016 , 26, 139-147	17.1	83
44	Flexible perovskite solar cells based on the metal-insulator-semiconductor structure. <i>Chemical Communications</i> , 2016 , 52, 10791-4	5.8	22
43	Gel mesh as "brake" to slow down DNA translocation through solid-state nanopores. <i>Nanoscale</i> , 2015 , 7, 13207-14	7.7	20
42	Probing surface hydrophobicity of individual protein at single-molecule resolution using solid-state nanopores. <i>Science China Materials</i> , 2015 , 58, 455-466	7.1	4
41	An all-in-one mesh-typed integrated energy unit for both photoelectric conversion and energy storage in uniform electrochemical system. <i>Nano Energy</i> , 2015 , 13, 670-678	17.1	47

40	Interaction prolonged DNA translocation through solid-state nanopores. <i>Nanoscale</i> , 2015 , 7, 10752-9	7.7	8
39	Hysteresis Analysis Based on the Ferroelectric Effect in Hybrid Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 3937-45	6.4	291
38	Highly-flexible, low-cost, all stainless steel mesh-based dye-sensitized solar cells. <i>Nanoscale</i> , 2014 , 6, 13203-12	7.7	23
37	Low cost and flexible mesh-based supercapacitors for promising large-area flexible/wearable energy storage. <i>Nano Energy</i> , 2014 , 6, 82-91	17.1	39
36	Surface modification of solid-state nanopores for sticky-free translocation of single-stranded DNA. <i>Small</i> , 2014 , 10, 4332-9	11	26
35	Perovskite solar cells: Promise of photovoltaics. <i>Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica</i> , 2014 , 44, 801-821	1.3	7
34	Modifying optical properties of ZnO nanowires via strain-gradient. <i>Frontiers of Physics</i> , 2013 , 8, 509-515	3.7	9
33	Facile synthesis and optical properties of ultrathin Cu-doped ZnSe nanorods. <i>CrystEngComm</i> , 2013 , 15, 10495	3.3	9
32	Formation mechanism of homo-epitaxial morphology on ZnO (0001) polar surfaces. <i>CrystEngComm</i> , 2013 , 15, 4249	3.3	2
31	Novel planar-structure electrochemical devices for highly flexible semitransparent power generation/storage sources. <i>Nano Letters</i> , 2013 , 13, 1271-7	11.5	85
30	Boron nitride nanopores: highly sensitive DNA single-molecule detectors. <i>Advanced Materials</i> , 2013 , 25, 4549-54	24	182
29	Pressure-controlled motion of single polymers through solid-state nanopores. <i>Nano Letters</i> , 2013 , 13, 3048-52	11.5	70
28	Slowing down DNA translocation through solid-state nanopores by pressure. <i>Small</i> , 2013 , 9, 4112-7	11	35
27	Surface coating effect on field emission performance of ZnO nanowires. <i>Applied Physics A: Materials Science and Processing</i> , 2012 , 106, 557-562	2.6	
26	Enhanced field emission from large scale uniform monolayer graphene supported by well-aligned ZnO nanowire arrays. <i>Applied Physics Letters</i> , 2012 , 101, 173107	3.4	28
25	A unique strategy for improving top contact in Si/ZnO hierarchical nanoheterostructure photodetectors. <i>CrystEngComm</i> , 2012 , 14, 3015	3.3	11
24	Size evolution and surface characterization of solid-state nanopores in different aqueous solutions. <i>Nanoscale</i> , 2012 , 4, 1572-6	7.7	7
23	Facile synthesis, optical properties and growth mechanism of elongated Mn-doped ZnSe1-xSx nanocrystals. <i>CrystEngComm</i> , 2012 , 14, 8440	3.3	8

22	Fast and controllable fabrication of suspended graphene nanopore devices. <i>Nanotechnology</i> , 2012 , 23, 085301	3.4	41
21	Transparent, Double-Sided, ITO-Free, Flexible Dye-Sensitized Solar Cells Based on Metal Wire/ZnO Nanowire Arrays. <i>Advanced Functional Materials</i> , 2012 , 22, 2775-2782	15.6	82
20	Effective driving force applied on DNA inside a solid-state nanopore. <i>Physical Review E</i> , 2012 , 86, 011921	12.4	53
19	Surface plasmon on topological insulator/dielectric interface enhanced ZnO ultraviolet photoluminescence. <i>AIP Advances</i> , 2012 , 2, 022105	1.5	12
18	In situ growth and density-functional-theory study of polarity-dependent homo-epitaxial ZnO microwires. <i>CrystEngComm</i> , 2012 , 14, 355-358	3.3	4
17	Growth mechanism study via in situ epitaxial growth of high-oriented ZnO nanowires. <i>CrystEngComm</i> , 2011 , 13, 606-610	3.3	7
16	Crystal engineering and SERS properties of Ag@Fe ₃ O ₄ nanohybrids: from heterodimer to core-shell nanostructures. <i>Journal of Materials Chemistry</i> , 2011 , 21, 17930		56
15	2D planar field emission devices based on individual ZnO nanowires. <i>Solid State Communications</i> , 2011 , 151, 1650-1653	1.6	9
14	Linear strain-gradient effect on the energy bandgap in bent CdS nanowires. <i>Nano Research</i> , 2011 , 4, 308-314	4.1	47
13	Controlled deformation of Si ₃ N ₄ nanopores using focused electron beam in a transmission electron microscope. <i>Nanotechnology</i> , 2011 , 22, 115302	3.4	10
12	A Novel Way for Synthesizing Phosphorus-Doped ZnO Nanowires. <i>Nanoscale Research Letters</i> , 2011 , 6, 45	5	26
11	Ultrahigh field emission current density from nitrogen-implanted ZnO nanowires. <i>Nanotechnology</i> , 2010 , 21, 095701	3.4	18
10	Enhanced near-band-edge emission and field emission properties from plasma treated ZnO nanowires. <i>Applied Physics A: Materials Science and Processing</i> , 2010 , 100, 165-170	2.6	13
9	First-principles study of the formation mechanisms of nitrogen molecule in annealed ZnO. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010 , 374, 3546-3550	2.3	19
8	Gate tunable photoconductivity of p-channel Se nanowire field effect transistors. <i>Applied Physics Letters</i> , 2009 , 95, 093104	3.4	13
7	Novel planar field emission of ultra-thin individual carbon nanotubes. <i>Nanotechnology</i> , 2009 , 20, 405208	3.4	9
6	Annealing effects on the field emission properties of AlN nanorods. <i>Nanotechnology</i> , 2006 , 17, S351-S354	3.4	22
5	Patterned growth of ZnO nanorod arrays on a large-area stainless steel grid. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 1699-702	3.4	26

4	Temperature dependence of Raman scattering of ZnSe nanoparticle grown through vapor phase. <i>Journal of Crystal Growth</i> , 2005 , 274, 530-535	1.6	32
3	Facet Orientation and Intermediate Phase Regulation via a Green Antisolvent for High-Performance Perovskite Solar Cells. <i>Solar Rrl</i> ,2100973	7.1	0
2	Constructing All-Inorganic Perovskite/Fluoride Nanocomposites for Efficient and Ultra-Stable Perovskite Solar Cells. <i>Advanced Functional Materials</i> ,2106386	15.6	8
1	Label-Free Detection and Translocation Dynamics Study of Single-Molecule Herceptin Using Solid-State Nanopores. <i>Advanced Materials Technologies</i> ,2200018	6.8	