Yue Zheng

List of Publications by Year
in descending order

86 papers	1,689 citations	304743 22 h-index	315739 38 g-index
89 all docs	89 docs citations	89 times ranked	1802 citing authors

#	Article	IF	Citations
1	Graphene-like nanoribbons periodically embedded with four- and eight-membered rings. Nature Communications, 2017, 8, 14924.	12.8	139
2	Depolarization in modeling nano-scale ferroelectrics using the Landau free energy functional. Applied Physics A: Materials Science and Processing, 2008, 91, 59-63.	2.3	113
3	Nonpolar resistive switching in Mn-doped BiFeO₃ thin films by chemical solution deposition. Applied Physics Letters, 2012, 101, 062902.	3.3	103
4	Giant piezoelectric resistance in ferroelectric tunnel junctions. Nanotechnology, 2009, 20, 075401.	2.6	78
5	Characteristics and controllability of vortices in ferromagnetics, ferroelectrics, and multiferroics. Reports on Progress in Physics, 2017, 80, 086501.	20.1	70
6	Thermodynamic modeling of critical properties of ferroelectric superlattices in nano-scale. Applied Physics A: Materials Science and Processing, 2009, 97, 617-626.	2.3	67
7	Recent Progress on Vanadium Dioxide Nanostructures and Devices: Fabrication, Properties, Applications and Perspectives. Nanomaterials, 2021, 11, 338.	4.1	66
8	Vortex Domain Structure in Ferroelectric Nanoplatelets and Control of its Transformation by Mechanical Load. Scientific Reports, 2012, 2, 796.	3.3	64
9	Ultrathin Ferroelectric Films: Growth, Characterization, Physics and Applications. Materials, 2014, 7, 6377-6485.	2.9	56
10	Utilizing mechanical loads and flexoelectricity to induce and control complicated evolution of domain patterns in ferroelectric nanofilms. Journal of the Mechanics and Physics of Solids, 2015, 79, 108-133.	4.8	52
11	Tunable Tunneling Electroresistance in Ferroelectric Tunnel Junctions by Mechanical Loads. ACS Nano, 2011, 5, 1649-1656.	14.6	50
12	Vortex switching in ferroelectric nanodots and its feasibility by a homogeneous electric field: Effects of substrate, dislocations and local clamping force. Acta Materialia, 2015, 88, 41-54.	7.9	46
13	Controllability of Vortex Domain Structure in Ferroelectric Nanodot: Fruitful Domain Patterns and Transformation Paths. Scientific Reports, 2014, 4, 3946.	3.3	45
14	Highly uniform bipolar resistive switching characteristics in TiO2/BaTiO3/TiO2 multilayer. Applied Physics Letters, 2013, 103, .	3.3	40
15	Mechanical switching of ferroelectric domains beyond flexoelectricity. Journal of the Mechanics and Physics of Solids, 2018, 111, 43-66.	4.8	37
16	High Current Density and Low Hysteresis Effect of Planar Perovskite Solar Cells via PCBM-doping and Interfacial Improvement. ACS Applied Materials & Interfaces, 2018, 10, 29954-29964.	8.0	35
17	Pulse-Loaded Ferroelectric Nanowire as an Alternating Current Source. Nano Letters, 2008, 8, 3131-3136.	9.1	32
18	Mechanical switching in ferroelectrics by shear stress and its implications on charged domain wall generation and vortex memory devices. RSC Advances, 2018, 8, 4434-4444.	3.6	24

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19	Ab initio study on the size effect of symmetric and asymmetric ferroelectric tunnel junctions: A comprehensive picture with regard to the details of electrode/ferroelectric interfaces. Journal of Applied Physics, 2013, 114, 064105.	2.5	23
20	Effect of Mechanical Loads on Stability of Nanodomains in Ferroelectric Ultrathin Films: Towards Flexible Erasing of the Non-Volatile Memories. Scientific Reports, 2014, 4, 5339.	3.3	23
21	Direct electrical switching of ferroelectric vortices by a sweeping biased tip. Acta Materialia, 2018, 158, 23-37.	7.9	23
22	Phase diagram of ferroelectric nanowires and its mechanical force controllability. Applied Physics Letters, 2010, 96, 232904.	3.3	22
23	Large and Tunable Polar-Toroidal Coupling in Ferroelectric Composite Nanowires toward Superior Electromechanical Responses. Scientific Reports, 2015, 5, 11165.	3.3	22
24	Controlling polar-toroidal multi-order states in twisted ferroelectric nanowires. Npj Computational Materials, 2018, 4, .	8.7	18
25	Stretchable ferroelectric field-effect-transistor with multi-level storage capacity and photo-modulated resistance. Applied Physics Letters, 2019, 115, .	3.3	18
26	Theoretical Methods of Domain Structures in Ultrathin Ferroelectric Films: A Review. Materials, 2014, 7, 6502-6568.	2.9	17
27	First-principles calculations of size-dependent giant electroresistance effect in nanoscale asymmetric ferroelectric tunnel junctions. Journal of Applied Physics, 2012, 111, 074102.	2.5	16
28	Structural transition and temperature-driven conductivity switching of single crystalline VO₂(A) nanowires. RSC Advances, 2014, 4, 64021-64026.	3.6	16
29	Current-Driven Skyrmion Motion Beyond Linear Regime: Interplay between Skyrmion Transport and Deformation. Physical Review Applied, 2020, 14, .	3.8	16
30	Impact of applied strain on the electron transport through ferroelectric tunnel junctions. Applied Physics Letters, 2010, 97, 012905.	3.3	15
31	Effects of the surface charge screening and temperature on the vortex domain patterns of ferroelectric nanodots. Journal of Applied Physics, 2012, 112, 104108.	2.5	15
32	Critical properties of nanoscale asymmetric ferroelectric tunnel junctions or capacitors. Acta Materialia, 2012, 60, 1857-1870.	7.9	15
33	Diverse interface effects on ferroelectricity and magnetoelectric coupling in asymmetric multiferroic tunnel junctions: the role of the interfacial bonding structure. Physical Chemistry Chemical Physics, 2016, 18, 2850-2858.	2.8	14
34	Thermally Induced Transformation of Nonhexagonal Carbon Rings in Graphene-like Nanoribbons. Journal of Physical Chemistry C, 2018, 122, 9586-9592.	3.1	14
35	Torsion-induced vortex switching and skyrmion-like state in ferroelectric nanodisks. Journal of Physics Condensed Matter, 2018, 30, 465304.	1.8	14
36	On the mechanisms of tip-force induced switching in ferroelectric thin films: the crossover of depolarization, shear strain and flexoelectricity. Journal of Physics Condensed Matter, 2019, 31, 145701.	1.8	14

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37	Improvement of pyroelectric figures of merit in zirconia-doped congruent lithium niobate single crystals. Journal of Materials Science, 2016, 51, 3155-3161.	3.7	13
38	Enhanced out-of-plane piezoelectric effect in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>In</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:n /transition metal dichalcogenide heterostructures. Physical Review B, 2021, 104, .	3.2	13
39	Microdynamic Study of Spin-Lattice Coupling Effects on Skyrmion Transport. Physical Review Letters, 2021, 127, 097201.	7.8	12
40	Ab initio study on mechanical-bending-induced ferroelectric phase transition in ultrathin perovskite nanobelts. Acta Materialia, 2014, 76, 472-481.	7.9	11
41	Structure-dependent electrical conductivity of protein: its differences between alpha-domain and beta-domain structures. Nanotechnology, 2015, 26, 125702.	2.6	11
42	Crossover of polar and toroidal orders in ferroelectric nanodots with a morphotropic phase boundary and nonvolatile polar-vortex transformations. Physical Review B, 2019, 100, .	3.2	10
43	Domain structures of ferroelectric thin film controlled by oxidizing atmosphere. Applied Physics Letters, 2011, 99, 142908.	3.3	9
44	Switchable diode effect in ferroelectric thin film: High dependence on poling process and temperature. AIP Advances, 2014, 4, .	1.3	9
45	Nonvolatile ferroelectric field effect transistor based on a vanadium dioxide nanowire with large on- and off-field resistance switching. Physical Chemistry Chemical Physics, 2020, 22, 4685-4691.	2.8	9
46	Giant magnetoresistance and tunneling electroresistance in multiferroic tunnel junctions with 2D ferroelectrics. Nanoscale, 2022, 14, 8849-8857.	5.6	9
47	Strain Engineering the Ferroelectric Polarization and Optical Absorption in the FEÎ²-In₂Se₃ Monolayer. Journal of Physical Chemistry C, 2022, 126, 10181-10189.	3.1	9
48	Bidirectional mechanical switching window in ferroelectric thin films predicted by first-principle-based simulations. Npj Computational Materials, 2022, 8, .	8.7	9
49	Prediction of ferroelectric stability and magnetoelectric effect of asymmetric multiferroic tunnel junctions. Applied Physics Letters, 2013, 102, 152906.	3.3	8
50	Charge carrier transition in an ambipolar single-molecule junction: Its mechanical-modulation and reversibility. Npj Computational Materials, 2016, 2, .	8.7	8
51	Tip-force-induced ultrafast polarization switching in ferroelectric thin film: A dynamical phase field simulation. Journal of Applied Physics, 2020, 128, .	2.5	8
52	Exotic Quad-Domain Textures and Transport Characteristics of Self-Assembled BiFeO₃ Nanoislands on Nb-Doped SrTiO₃. ACS Applied Materials & Interfaces, 2021, 13, 12331-12340.	8.0	8
53	Revisiting the switching characteristics and electroresistance effect in ferroelectric thin film towards an optimized hybrid switching strategy. Journal of Applied Physics, 2020, 128, .	2.5	7
54	Flexoresponses of Synthetic Antiferromagnetic Systems Hosting Skyrmions. Physical Review Letters, 2022, 128, .	7.8	7

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55	Morphology-controlled epitaxial vanadium dioxide low-dimensional structures: the delicate effects on the phase transition behaviors. Physical Chemistry Chemical Physics, 2018, 20, 14339-14347.	2.8	6
56	Atomistic simulations of spin-lattice coupling effects on magnetomechanics in skyrmion materials. Physical Review B, 2019, 100, .	3.2	6
57	Molecular rotors with designed polar rotating groups possess mechanics-controllable wide-range rotational speed. Npj Computational Materials, 2020, 6, .	8.7	6
58	Characterization and control of vortex and antivortex domain defects in quadrilateral ferroelectric nanodots. Physical Review Materials, 2019, 3, .	2.4	6
59	The dynamic conductance response and mechanics-modulated memristive behavior of the Azurin monolayer under cyclic loads. Physical Chemistry Chemical Physics, 2017, 19, 6757-6767.	2.8	5
60	Atomistic studies of temporal characteristics of polarization relaxation in ferroelectrics. Physical Review B, 2021, 103, .	3.2	5
61	Highly reliable bipolar resistive switching in sol-gel derived lanthanum-doped PbTiO3 thin film: Coupling with ferroelectricity?. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 526-532.	3.4	4
62	Length-dependent rectification and negative differential resistance in heterometallic n-alkanedithiol junctions. RSC Advances, 2015, 5, 13917-13922.	3.6	4
63	Bipolar resistive switching and its temperature dependence in the composite structure of BiFeO3 bilayer. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	4
64	Phase field study on the effect of substrate elasticity on tip-force-induced domain switching in ferroelectric thin films. Journal of Applied Physics, 2021, 129, .	2.5	4
65	Phase field study on the performance of artificial synapse device based on the motion of domain wall in ferroelectric thin films. Applied Physics Letters, 2021, 118, .	3.3	4
66	Investigating effects of nano-particles infiltration on mechanical properties of cell membrane using atomic force microscopy. Science China: Physics, Mechanics and Astronomy, 2012, 55, 989-995.	5.1	3
67	Large controllability of domain evolution in ferroelectric nanodot via isotropic surface charge screening. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	3
68	Stretchable ferroelectric nanoribbon and the mechanical stability of its domain structures. Applied Physics Letters, 2018, 113, 062901.	3.3	3
69	Activating Basal Surface of Palladium by Electronic Modulation via Atomically Dispersed Nitrogen Doping for High-Efficiency Hydrogen Evolution Reaction. Journal of Physical Chemistry Letters, 2021, 12, 7373-7378.	4.6	3
70	Donorâ€“Acceptor Competition via Halide Vacancy Filling for Oxygen Detection of High Sensitivity and Stability by Allâ€inorganic Perovskite Films. Small, 2021, 17, 2102733.	10.0	3
71	Shear-induced low-dimension electron transport in (LaMnO3)2/(SrMnO3)2 superlattice. Applied Physics A: Materials Science and Processing, 2012, 106, 119-124.	2.3	2
72	Misfit strain-temperature phase diagrams and domain stability of asymmetric ferroelectric capacitors: Thermodynamic calculation and phase-field simulation. Journal of Applied Physics, 2014, 115, 094101.	2.5	2

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73	Diverse polarization bi-stability in ferroelectric tunnel junctions due to the effects of the electrode and strain: an ab initio study. Physical Chemistry Chemical Physics, 2017, 19, 20147-20159.	2.8	2
74	Quaterrylene molecules on Ag(111): self-assembly behavior and voltage pulse induced trimer formation. Physical Chemistry Chemical Physics, 2018, 20, 12217-12222.	2.8	2
75	A comprehensive picture in the view of atomic scale on piezoelectricity of ZnO tunnel junctions: The first principles simulation. AIP Advances, 2016, 6, 065217.	1.3	1
76	Strong Polarity Asymmetry and Abnormal Mechanical Electroresistance Effect in the Organic Monolayer Tunnel Junction. ACS Applied Electronic Materials, 2019, 1, 1084-1090.	4.3	1
77	Thermal stability of resistive switching effect in ZnO/BiFeO3 bilayer structure. AIP Advances, 2019, 9, 035121.	1.3	1
78	Skyrmion Transport Modified by Surface Terraces in Magnetic Multilayers. Physical Review Applied, 2021, 16, .	3.8	1
79	CH₃NH₃⁺ and Pb Immobilization Through PbI₂ Binding by Organic Molecule Doping for Homogeneous Organometal Halide Perovskite Films. Journal of Materials Chemistry A, 0, , .	10.3	1
80	Organic Cation Diffusion-Induced Heterogeneous Viscoelasticity in Organicâ€“Inorganic Hybrid Perovskite Polycrystalline Films. ACS Applied Materials & Interfaces, 2022, 14, 22582-22592.	8.0	1
81	Intriguing heterophase domain patterns in correlated electron material via tip force engineering. Acta Materialia, 2022, 235, 118089.	7.9	1
82	Reliable resistive switching and its tunability in La-doped PbTiO3TiO2 composite bilayer. Functional Materials Letters, 2015, 08, 1550033.	1.2	0
83	First-principle study of CO adsorption influence on the properties of ferroelectric tunnel junctions. Physical Chemistry Chemical Physics, 2016, 18, 31115-31124.	2.8	0
84	The mechanics-modulated tunneling spectrum and low-pass effect of viscoelastic molecular monolayer. AIP Advances, 2017, 7, 105326.	1.3	0
85	Tailoring nanoscale polarization patterns and transport properties in ferroelectric tunnel junctions by octahedral tilts in electrodes. RSC Advances, 2020, 10, 35367-35373.	3.6	0
86	Effect of Pre-Polarization Process on the Apparent Piezoelectric Response Measured by Point-Ring Method in Ferroelectric Perovskite Oxide Ceramics. Energies, 2022, 15, 3627.	3.1	0