Yang Liu

List of Publications by Year
in descending order

81 papers	4,618 citations	109321 35 h-index	102487 66 g-index
81 all docs	81 docs citations	81 times ranked	3654 citing authors

#	Article	IF	Citations
1	Perspective on scalable high-energy-density polymer dielectrics with ultralow loadings of inorganic nanofillers. Applied Physics Letters, 2022, 120, .	3.3	9
2	Enhanced Piezoelectricity in Poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 Td (fluoride-co-trifluoroethylene-co Mixed Ferroelectric Phases. Macromolecules, 2022, 55, 2703-2713.	4.8	5
3	Enhanced breakdown strength and energy density over a broad temperature range in polyimide dielectrics using oxidized MXenes filler. Journal of Power Sources, 2022, 535, 231415.	7.8	38
4	Realizing enhanced energy density in ternary polymer blends by intermolecular structure design. Chemical Engineering Journal, 2022, 446, 136980.	12.7	8
5	Synthesis of dielectric polystyrene via one-step nitration reaction for large-scale energy storage. Chemical Engineering Journal, 2022, 446, 137281.	12.7	38
6	Dielectric polymers for high-temperature capacitive energy storage. Chemical Society Reviews, 2021, 50, 6369-6400.	38.1	262
7	Significantly enhancing the dielectric constant and breakdown strength of linear dielectric polymers by utilizing ultralow loadings of nanofillers. Journal of Materials Chemistry A, 2021, 9, 23028-23036.	10.3	54
8	Emerging Opportunities for 2D Semiconductor/Ferroelectric Transistorâ€Structure Devices. Advanced Materials, 2021, 33, e2005620.	21.0	76
9	Relaxor Ferroelectric Polymers: Insight into High Electrical Energy Storage Properties from a Molecular Perspective. Small Science, 2021, 1, 2000061.	9.9	26
10	Significant Improvements in Dielectric Constant and Energy Density of Ferroelectric Polymer Nanocomposites Enabled by Ultralow Contents of Nanofillers. Advanced Materials, 2021, 33, e2102392.	21.0	102
11	Ultrahigh Energy Storage Performance of Layered Polymer Nanocomposites over a Broad Temperature Range. Advanced Materials, 2021, 33, e2103338.	21.0	96
12	Improper molecular ferroelectrics with simultaneous ultrahigh pyroelectricity and figures of merit. Science Advances, 2021, 7, .	10.3	32
13	Enabling Highâ€Energyâ€Density Highâ€Efficiency Ferroelectric Polymer Nanocomposites with Rationally Designed Nanofillers. Advanced Functional Materials, 2021, 31, .	14.9	80
14	Ternary polymer nanocomposites with concurrently enhanced dielectric constant and breakdown strength for highâ€temperature electrostatic capacitors. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 389-400.	17.3	114
15	Three-phases Fe3O4@TiO2-P(VDF-HFP) composite films with high energy storage density at low filler fraction under low operating electric field. Journal Physics D: Applied Physics, 2020, 53, 055504.	2.8	10
16	The Dependence of Acoustic Emission Performance on the Crystal Structures, Dielectric, Ferroelectric, and Piezoelectric Properties of the P(VDF-TrFE) Sensors. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 975-983.	3.0	10
17	Structural Insight in the Interfacial Effect in Ferroelectric Polymer Nanocomposites. Advanced Materials, 2020, 32, e2005431.	21.0	84
18	Chirality-induced relaxor properties in ferroelectric polymers. Nature Materials, 2020, 19, 1169-1174.	27.5	93

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19	Ferroelectric Polymers Exhibiting Negative Longitudinal Piezoelectric Coefficient: Progress and Prospects. Advanced Science, 2020, 7, 1902468.	11.2	66
20	Significant Enhancement of Energy Storage Performances by Regulating the Dielectric Contrast between Adjacent Layers in the Heterostructural Composites. ACS Applied Energy Materials, 2020, 3, 3015-3023.	5.1	20
21	Self-Powered Infrared-Responsive Electronic Skin Employing Piezoelectric Nanofiber Nanocomposites Driven by Microphase Transition. ACS Applied Materials & Interfaces, 2020, 12, 13165-13173.	8.0	10
22	Excellent Energy Storage Performance in Bilayer Composites Combining Aligned TiO₂ Nanoarray and Random TiO₂ Nanowires with Poly(vinylidene fluoride). Journal of Physical Chemistry C, 2020, 124, 2864-2871.	3.1	14
23	Observation of a Negative Thermal Hysteresis in Relaxor Ferroelectric Polymers. Advanced Functional Materials, 2020, 30, 2000648.	14.9	12
24	Composition Dependence of Microstructures and Ferroelectric Properties in Poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 T Macromolecules, 2020, 53, 3139-3147.	4.8	5
25	Composition-Dependent Dielectric Properties of Poly(vinylidene fluoride-trifluoroethylene)s Near the Morphotropic Phase Boundary. Macromolecules, 2019, 52, 6741-6747.	4.8	19
26	Plasmonic-enhanced ferroelectric photovoltaic effect in 0â€“3 type BaTiO3-Au ceramics. Journal of Alloys and Compounds, 2019, 785, 584-589.	5.5	9
27	Tuning the electrocaloric reversibility in ferroelectric copolymers by a blend approach. Europhysics Letters, 2019, 125, 57001.	2.0	8
28	Insights into the Morphotropic Phase Boundary in Ferroelectric Polymers from the Molecular Perspective. Journal of Physical Chemistry C, 2019, 123, 8727-8730.	3.1	16
29	High cyclic stability of electrocaloric effect in relaxor poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 347 Td (fluoride-tri transition. Journal of Applied Physics, 2019, 126, .	2.5	14
30	Nanoconfinementâ€Induced Giant Electrocaloric Effect in Ferroelectric Polymer Nanowire Array Integrated with Aluminum Oxide Membrane to Exhibit Record Cooling Power Density. Advanced Materials, 2019, 31, e1806642.	21.0	56
31	High-Temperature Dielectric Materials for Electrical Energy Storage. Annual Review of Materials Research, 2018, 48, 219-243.	9.3	540
32	Ferroelectric Polymer Nanocomposites with Complementary Nanostructured Fillers for Electrocaloric Cooling with High Power Density and Great Efficiency. ACS Applied Energy Materials, 2018, 1, 1344-1354.	5.1	42
33	Crystal phase transition dependence of the energy storage performance of poly(vinylidene fluoride) and poly(vinylidene fluorideâ€hexafluoropropene) copolymers. Journal of Applied Polymer Science, 2018, 135, 46306.	2.6	24
34	Size effects of electrocaloric cooling in ferroelectric nanowires. Journal of the American Ceramic Society, 2018, 101, 1566-1575.	3.8	38
35	Giant electrocaloric effect of free-standing Pb0.85La0.1(Zr0.65Ti0.35)O3 thick films fabricated by the self-lift-off screen printing method. Ceramics International, 2018, 44, 193-200.	4.8	5
36	Ferroelectric polymers exhibiting behaviour reminiscent of a morphotropic phase boundary. Nature, 2018, 562, 96-100.	27.8	200

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37	Low Youngâ€™s moduli inducedDâ€“Eloop dispersion and its effect on the energy discharging performance of PVDF and P(VDF-co-HFP) films. AIP Advances, 2018, 8, 035211.	1.3	3
38	Enhanced electrocaloric effect in lead-free organic and inorganic relaxor ferroelectric composites near room temperature. Applied Physics Letters, 2018, 112, .	3.3	31
39	Poly(methyl methacrylate)/boron nitride nanocomposites with enhanced energy density as high temperature dielectrics. Composites Science and Technology, 2017, 142, 139-144.	7.8	153
40	High electrocaloric effect in hotâ€pressed Pb_{0.85}La_{0.1}(Zr_{0.65}Ti_{0.35})O₃ ceramics with a wide operating temperature range. Journal of the American Ceramic Society, 2017, 100, 4581-4589.	3.8	30
41	Developing a ferroelectric nanohybrid for enhanced photocatalysis. Chemical Communications, 2017, 53, 7596-7599.	4.1	29
42	Highâ€Energyâ€Density Dielectric Polymer Nanocomposites with Trilayered Architecture. Advanced Functional Materials, 2017, 27, 1606292.	14.9	338
43	Direct measurement of electrocaloric effect in lead-free Ba(SnxTi1-x)O3 ceramics. Applied Physics Letters, 2017, 111, .	3.3	43
44	Space-charge Effect on Electroresistance in Metal-Ferroelectric-Metal capacitors. Scientific Reports, 2016, 5, 18297.	3.3	30
45	Towards multicaloric effect with ferroelectrics. Physical Review B, 2016, 94, .	3.2	33
46	Direct and indirect measurements on electrocaloric effect: Recent developments and perspectives. Applied Physics Reviews, 2016, 3, 031102.	11.3	206
47	Insight into electrocaloric cooling power in multilayer capacitors using infra-red camera. Applied Physics Letters, 2016, 109, .	3.3	12
48	Some strategies for improving caloric responses with ferroelectrics. APL Materials, 2016, 4, 064109.	5.1	57
49	Structural, electronic and magnetic properties of metalâ€“organic-framework perovskites [AmH][Mn(HCOO)3]: a first-principles study. RSC Advances, 2016, 6, 48779-48787.	3.6	11
50	Crystal structure, leakage conduction mechanism evolution and enhanced multiferroic properties in Y-doped BiFeO3 ceramics. Ceramics International, 2016, 42, 13395-13403.	4.8	43
51	Phase transition, leakage conduction mechanism evolution and enhanced ferroelectric properties in multiferroic Mn-doped BiFeO3 thin films. Journal of Materials Science: Materials in Electronics, 2016, 27, 3095-3102.	2.2	29
52	Novel lead-free ferroelectric film by ultra-small Ba_{0.8}Sr_{0.2}TiO₃nanocubes assembled for a large electrocaloric effect. Physical Chemistry Chemical Physics, 2016, 18, 29033-29040.	2.8	18
53	Spatially Resolved Imaging of Electrocaloric Effect and the Resultant Heat Flux in Multilayer Capacitors. ACS Energy Letters, 2016, 1, 521-528.	17.4	38
54	Large reversible caloric effect in FeRh thin films via a dual-stimulus multicaloric cycle. Nature Communications, 2016, 7, 11614.	12.8	108

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55	Tunnel electroresistance through organic ferroelectrics. Nature Communications, 2016, 7, 11502.	12.8	104
56	High Energy Density Performance of Polymer Nanocomposites Induced by Designed Formation of BaTiO₃@sheet-likeTiO₂ Hybrid Nanofillers. Journal of Physical Chemistry C, 2016, 120, 11769-11776.	3.1	64
57	Size Effect on Optical and Photocatalytic Properties in BiFeO₃ Nanoparticles. Journal of Physical Chemistry C, 2016, 120, 3595-3601.	3.1	119
58	Antiferroelectric Thin Films: Giant Negative Electrocaloric Effect in Antiferroelectric La-Doped Pb(ZrTi)O3Thin Films Near Room Temperature (Adv. Mater. 20/2015). Advanced Materials, 2015, 27, 3164-3164.	21.0	3
59	Homogeneous switching mechanism in pure polyvinylidene fluoride ultrathin films. Physical Review B, 2015, 92, .	3.2	11
60	Giant electrocaloric effect in lead-free Ba0.94Ca0.06Ti1â^'xSnxO3 ceramics with tunable Curie temperature. Applied Physics Letters, 2015, 107, .	3.3	60
61	Polarization fatigue in antiferroelectric (Pb,La)(Zr,Ti)O3 thin films: The role of the effective strength of driving waveform. Ceramics International, 2015, 41, S289-S295.	4.8	6
62	Influence of epitaxial strain on elastocaloric effect in ferroelectric thin films. Applied Physics Letters, 2015, 106, .	3.3	17
63	Giant Negative Electrocaloric Effect in Antiferroelectric Laâ€Doped Pb(ZrTi)O₃ Thin Films Near Room Temperature. Advanced Materials, 2015, 27, 3165-3169.	21.0	241
64	Î² phase instability in poly(vinylidene fluoride/trifluoroethylene) thin films near Î² relaxation temperature. Applied Physics Letters, 2015, 106, .	3.3	12
65	Confinement effect on coercive field in relaxor terpolymer nanowires. Applied Surface Science, 2015, 355, 473-476.	6.1	0
66	Effective driving voltage on polarization fatigue in (Pb,La)(Zr,Ti)O3 antiferroelectric thin films. Ceramics International, 2015, 41, 109-114.	4.8	9
67	Effect of polarization fatigue on the Rayleigh coefficients of ferroelectric lead zirconate titanate thin films: Experimental evidence and implications. Applied Physics Letters, 2014, 105, .	3.3	13
68	Giant electrocaloric effect in asymmetric ferroelectric tunnel junctions at room temperature. Applied Physics Letters, 2014, 104, .	3.3	17
69	Enhanced electrocaloric effect in lead-free BaTi1â^'xSnxO3 ceramics near room temperature. Applied Physics Letters, 2014, 105, .	3.3	165
70	Rayleigh-like nonlinear dielectric response and its evolution during electrical fatigue in antiferroelectric (Pb,La)(Zr,Ti)O₃ thin film. Applied Physics Letters, 2014, 104, 142904.	3.3	23
71	Giant mechanically-mediated electrocaloric effect in ultrathin ferroelectric capacitors at room temperature. Applied Physics Letters, 2014, 104, .	3.3	36
72	Giant room-temperature barocaloric effect and pressure-mediated electrocaloric effect in BaTiO3 single crystal. Applied Physics Letters, 2014, 104, .	3.3	43

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73	Giant Roomâ€Temperature Elastocaloric Effect in Ferroelectric Ultrathin Films. Advanced Materials, 2014, 26, 6132-6137.	21.0	86
74	Prediction of giant elastocaloric strength and stress-mediated electrocaloric effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">BaTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>single crystals. Physical Review B, 2014, 90, .	3.2	47
75	Effect of a built-in electric field in asymmetric ferroelectric tunnel junctions. Physical Review B, 2013, 88, .	3.2	45
76	Validity of Nonlinear Thermo dynamic Models in Ferroelectric-Paraelectric Bilayers and Superlattices. Chinese Physics Letters, 2012, 29, 057701.	3.3	3
77	Intrinsic electrocaloric effect in ultrathin ferroelectric capacitors. Applied Physics Letters, 2012, 100, 192902.	3.3	28
78	Space Charge Effect on the Ferroelectricity in Epitaxial Ferroelectricâ€“Paraelectric Superlattices. Applied Physics Express, 2012, 5, 011501.	2.4	6
79	Strain Effects of the Structural Characteristics of Ferroelectric Transition in Single-Domain Epitaxial BiFeO ₃ Films. Chinese Physics Letters, 2011, 28, 067702.	3.3	5
80	Electrostatic coupling with interfacial free charge in ferroelectricâ€“paraelectric bilayers and superlattices. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 4091-4094.	2.1	6
81	The elimination of deviations of the mean-field Landau-type theory from the fancy size effect experiment in nanoscale ferroelectric BaTiO3 capacitors. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 4915-4918.	2.1	2