Hang Luo

List of Publications by Year
in descending order

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103 papers	4,743 citations	101384 36 h-index	110170 64 g-index
103 all docs	103 docs citations	103 times ranked	2510 citing authors

#	Article	IF	Citations
1	Interface design for high energy density polymer nanocomposites. Chemical Society Reviews, 2019, 48, 4424-4465.	18.7	531
2	Improved Dielectric Properties and Energy Storage Density of Poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 Td (fluoride-<i> BaTiO₃. ACS Applied Materials & Interfaces, 2015, 7, 8061-8069.	4.0	253
3	Superior Thermal Stability of High Energy Density and Power Density in Domain-Engineered Bi_{0.5}Na_{0.5}TiO₃â€“NaTaO₃ Relaxor Ferroelectrics. ACS Applied Materials & Interfaces, 2019, 11, 43107-43115.	4.0	189
4	Significantly enhanced breakdown strength and energy density in sandwich-structured nanocomposites with low-level BaTiO3 nanowires. Nano Energy, 2021, 79, 105412.	8.2	167
5	Ultra-high discharged energy density capacitor using high aspect ratio Na_{0.5}Bi_{0.5}TiO₃ nanofibers. Journal of Materials Chemistry A, 2017, 5, 7091-7102.	5.2	157
6	High Discharge Energy Density at Low Electric Field Using an Aligned Titanium Dioxide/Lead Zirconate Titanate Nanowire Array. Advanced Science, 2018, 5, 1700512.	5.6	154
7	Phase structure and properties of sodium bismuth titanate lead-free piezoelectric ceramics. Progress in Materials Science, 2021, 122, 100836.	16.0	139
8	Silver niobate based lead-free ceramics with high energy storage density. Journal of Materials Chemistry A, 2019, 7, 10702-10711.	5.2	135
9	Interfacial Design in Dielectric Nanocomposite Using Liquid-Crystalline Polymers. Macromolecules, 2017, 50, 5132-5137.	2.2	124
10	Piezo-photoelectronic coupling effect of BaTiO3@TiO2 nanowires for highly concentrated dye degradation. Nano Energy, 2022, 92, 106702.	8.2	100
11	Coreâ€“Shell Nanostructure Design in Polymer Nanocomposite Capacitors for Energy Storage Applications. ACS Sustainable Chemistry and Engineering, 2019, 7, 3145-3153.	3.2	96
12	Excellent catalytic performance of molten-salt-synthesized Bi0.5Na0.5TiO3 nanorods by the piezo-phototronic coupling effect. Nano Energy, 2021, 84, 105936.	8.2	89
13	Large energy density with excellent stability in fine-grained (Bi0.5Na0.5)TiO3-based lead-free ceramics. Journal of the European Ceramic Society, 2019, 39, 4053-4059.	2.8	85
14	Enhanced performance of all-organic sandwich structured dielectrics with linear dielectric and ferroelectric polymers. Journal of Materials Chemistry A, 2021, 9, 8674-8684.	5.2	82
15	Significantly enhanced permittivity and energy density in dielectric composites with aligned BaTiO₃ lamellar structures. Journal of Materials Chemistry A, 2020, 8, 3135-3144.	5.2	75
16	Significantly enhanced energy storage density of sandwich-structured (Na_{0.5}Bi_{0.5})_{0.93}Ba_{0.07}TiO₃/P(VDFâ€“HFP) composites induced by PVP-modified two-dimensional platelets. Journal of Materials Chemistry A, 2016, 4, 18050-18059.	5.2	65
17	Sandwich-structured all-organic composites with high breakdown strength and high dielectric constant for film capacitor. Composites Part A: Applied Science and Manufacturing, 2019, 117, 369-376.	3.8	65
18	Significantly Enhanced Energy Storage Density by Modulating the Aspect Ratio of BaTiO3 Nanofibers. Scientific Reports, 2017, 7, 45179.	1.6	61

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19	Enhanced energy density in P(VDF-HFP) nanocomposites with gradient dielectric fillers and interfacial polarization. Journal of Alloys and Compounds, 2017, 696, 1220-1227.	2.8	60
20	Polymer-based dielectric nanocomposites with high energy density via using natural sepiolite nanofibers. Chemical Engineering Journal, 2020, 401, 126095.	6.6	60
21	Highly enhanced dielectric strength and energy storage density in hydantoin@BaTiO3â€“P(VDF-HFP) composites with a sandwich-structure. RSC Advances, 2015, 5, 52809-52816.	1.7	57
22	High performance capacitors via aligned TiO2 nanowire array. Applied Physics Letters, 2017, 110, .	1.5	56
23	Significantly improved energy density of BaTiO₃ nanocomposites by accurate interfacial tailoring using a novel rigid-fluoro-polymer. Polymer Chemistry, 2018, 9, 548-557.	1.9	55
24	Transitional Suspensions Containing Thermosensitive Dispersant for Three-Dimensional Printing. ACS Applied Materials & Interfaces, 2015, 7, 26131-26136.	4.0	54
25	Direct ink writing of zirconia three-dimensional structures. Journal of Materials Chemistry C, 2017, 5, 5867-5871.	2.7	54
26	HfO2-based ferroelectrics: From enhancing performance, material design, to applications. Applied Physics Reviews, 2022, 9, .	5.5	49
27	Grain oriented Na 0.5 Bi 0.5 TiO 3 -BaTiO 3 ceramics with giant strain response derived from single-crystalline Na 0.5 Bi 0.5 TiO 3 -BaTiO 3 templates. Journal of the European Ceramic Society, 2016, 36, 1377-1383.	2.8	47
28	All-Organic Polymer Dielectrics Containing Sulfonyl Dipolar Groups and Ï€â€“Ï€ Stacking Interaction in Side-Chain Architectures. Macromolecules, 2021, 54, 8195-8206.	2.2	46
29	Morphology control and piezoelectric response of Na_{0.5}Bi_{0.5}TiO₃synthesized via a hydrothermal method. CrystEngComm, 2016, 18, 1302-1310.	1.3	44
30	Ultrahigh energy density of poly(vinylidene fluoride) from synergistically improved dielectric constant and withstand voltage by tuning the crystallization behavior. Journal of Materials Chemistry A, 2021, 9, 27660-27671.	5.2	43
31	Enhancement of dielectric properties and energy storage density in poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 267 T 68515-68522.	1.7	41
32	High Performance Capacitors Using BaTiO₃ Nanowires Engineered by Rigid Liquid-crystalline Polymers. Journal of Physical Chemistry C, 2017, 121, 20075-20083.	1.5	41
33	Obvious ferroelectricity in undoped HfO₂ films by chemical solution deposition. Journal of Materials Chemistry C, 2020, 8, 2820-2826.	2.7	40
34	Methoxypolyethylene glycol functionalized carbon nanotube composites with high permittivity and low dielectric loss. Composites Part A: Applied Science and Manufacturing, 2016, 86, 57-65.	3.8	39
35	Electrical properties and relaxor phase evolution of Nb-Modified Bi0.5Na0.5TiO3-Bi0.5K0.5TiO3-SrTiO3 lead-free ceramics. Journal of the European Ceramic Society, 2019, 39, 2310-2317.	2.8	39
36	Dual-Purpose Magnesium-Incorporated Titanium Nanotubes for Combating Bacterial Infection and Ameliorating Osteolysis to Realize Better Osseointegration. ACS Biomaterials Science and Engineering, 2019, 5, 5368-5383.	2.6	38

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37	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.	4.0	38
38	Synthesis of dielectric polystyrene via one-step nitration reaction for large-scale energy storage. Chemical Engineering Journal, 2022, 446, 137281.	6.6	38
39	Bilayer structured PVDF-based composites via integrating BaTiO3 nanowire arrays and BN nanosheets for high energy density capacitors. Chemical Engineering Journal, 2022, 437, 135497.	6.6	37
40	Graphene Oxide/Copper Nanoderivatives-Modified Chitosan/Hyaluronic Acid Dressings for Facilitating Wound Healing in Infected Full-Thickness Skin Defects . International Journal of Nanomedicine, 2020, Volume 15, 8231-8247.	3.3	36
41	Using a novel rigid-fluoride polymer to control the interfacial thickness of graphene and tailor the dielectric behavior of poly(vinylidene fluorideâ€“trifluoroethyleneâ€“chlorotrifluoroethylene) nanocomposites. Physical Chemistry Chemical Physics, 2018, 20, 2826-2837.	1.3	35
42	Enhanced performance of P(VDF-HFP) composites using two-dimensional BaTiO3 platelets and graphene hybrids. Composites Science and Technology, 2018, 160, 237-244.	3.8	34
43	Significant improvement of ferroelectricity and reliability in Hf0.5Zr0.5O2 films by inserting an ultrathin Al2O3 buffer layer. Applied Surface Science, 2021, 542, 148737.	3.1	34
44	Achieving Superior Energy Storage Properties of All-Organic Dielectric Polystyrene-Based Composites by Blending Rodâ€“Coil Block Copolymers. ACS Sustainable Chemistry and Engineering, 2021, 9, 8156-8169.	3.2	34
45	High-temperature dielectric polymers with high breakdown strength and energy density via constructing the electron traps in blends. Composites Part A: Applied Science and Manufacturing, 2022, 152, 106679.	3.8	34
46	High energy density in P(VDF-HFP) nanocomposite with paraffin engineered BaTiO3 nanoparticles. Sensors and Actuators A: Physical, 2017, 260, 228-235.	2.0	33
47	Regulating crystal structure and ferroelectricity in Sr doped HfO2 thin films fabricated by metallo-organic decomposition. Ceramics International, 2019, 45, 3140-3147.	2.3	33
48	Superior photo-piezoelectric catalytic performance using Bi_{0.5}Na_{0.5}TiO₃@BiVO₄ based cloth. Journal of Materials Chemistry A, 2021, 9, 17841-17854.	5.2	33
49	BaTiO3 platelets and poly(vinylidene fluoride-trifluoroethylene-chlorofluoroethylene) hybrid composites for energy storage application. Mechanical Systems and Signal Processing, 2018, 108, 48-57.	4.4	31
50	Enhanced permittivity in polymer blends via tailoring the orderliness of semiconductive liquid crystalline polymers and intermolecular interactions. Journal of Materials Chemistry C, 2020, 8, 8440-8450.	2.7	31
51	Suppressed polarization by epitaxial growth of SrTiO₃ on BaTiO₃ nanoparticles for high discharged energy density and efficiency nanocomposites. Nanoscale, 2020, 12, 8230-8236.	2.8	31
52	Enhanced piezoresponse and electric field induced relaxor-ferroelectric phase transition in NBT-0.06BT ceramic prepared from hydrothermally synthesized nanoparticles. Ceramics International, 2016, 42, 18631-18640.	2.3	30
53	Tunable phase transitions in NaNbO₃ ceramics through bismuth/vacancy modification. Journal of Materials Chemistry C, 2021, 9, 4289-4299.	2.7	28
54	Concurrently enhanced dielectric properties and energy density in poly(vinylidene fluoride)-based coreâ€“shell BaTiO₃ nanocomposites via constructing a polar and rigid polymer interfacial layer. Journal of Materials Chemistry C, 2022, 10, 6323-6333.	2.7	28

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55	Achieving high breakdown strength and energy density in all-organic sandwich-structured dielectrics by introducing polyacrylate elastomers. Journal of Materials Chemistry A, 2022, 10, 9103-9113.	5.2	28
56	High energy density in PVDF nanocomposites using an optimized nanowire array. Physical Chemistry Chemical Physics, 2018, 20, 18031-18037.	1.3	26
57	Core-shell TiO2@HfO2 nanowire arrays with designable shell thicknesses for improved permittivity and energy density in polymer nanocomposites. Composites Part A: Applied Science and Manufacturing, 2020, 137, 106012.	3.8	26
58	Extremely low loading of carbon quantum dots for high energy density in polyetherimide nanocomposites. Chemical Engineering Journal, 2022, 433, 133601.	6.6	26
59	Building Hierarchical Interfaces Using BaSrTiO₃ Nanocuboid Dotted Graphene Sheets in an Optimized Percolative Nanocomposite with Outstanding Dielectric Properties. Advanced Materials Interfaces, 2016, 3, 1600157.	1.9	25
60	Three dimensional BaTiO3 piezoelectric ceramics coated with TiO2 nanoarray for high performance of piezo-photoelectric catalysis. Nano Energy, 2022, 98, 107267.	8.2	25
61	Enhanced dielectric properties of poly(vinylidene fluoride-co-hexafluoropropylene) nanocomposites using oriented nickel nanowires. Composites Communications, 2019, 16, 11-19.	3.3	24
62	Piezo-assisted photoelectric catalysis degradation for dyes and antibiotics by Ag dots-modified NaNbO3 powders. Ceramics International, 2022, 48, 23182-23194.	2.3	23
63	Na2Ti6O13@TiO2 core-shell nanorods with controllable mesoporous shells and their enhanced photocatalytic performance. Applied Surface Science, 2018, 427, 1183-1192.	3.1	22
64	Enhanced performance in multilayer-structured nanocomposites using BaTiO3 and Ba0.8Sr0.2TiO3 decorated graphene hybrids. Ceramics International, 2018, 44, 20871-20876.	2.3	22
65	Enhanced dielectric constant of PVDF-based nanocomposites with one-dimensional core-shell polypyrrole/sepiolite nanofibers. Composites Part A: Applied Science and Manufacturing, 2021, 145, 106384.	3.8	22
66	Improved Energy Density and Energy Efficiency of Poly(vinylidene difluoride) Nanocomposite Dielectrics Using 0.93Na_{0.5}Bi_{0.5}TiO₃-0.07BaTiO₃ Nanofibers. ACS Applied Materials & Interfaces, 2022, 14, 19376-19387.	4.0	22
67	Interfacial engineering tailoring the dielectric behavior and energy density of BaTiO3/P(VDF-TrFE-CTFE) nanocomposites by regulating a liquid-crystalline polymer modifier structure. Dalton Transactions, 2018, 47, 12759-12768.	1.6	20
68	High Breakdown Strength and Energy Density in Multilayer-Structured Ferroelectric Composite. ACS Omega, 2020, 5, 32660-32666.	1.6	19
69	n-Type Semiconductive Polymer and Poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 187 Td (fluoride-trifluoroethylene-ch Applied Polymer Materials, 2021, 3, 879-887.	2.0	18
70	Constructing High-Performance Dielectrics via Molecular and Phase Engineering in Dipolar Polymers. ACS Applied Energy Materials, 2021, 4, 2451-2462.	2.5	18
71	Symmetric Trilayer Dielectric Composites with High Energy Density Using a Low Loading of KNbO₃ Nanosheets. ACS Sustainable Chemistry and Engineering, 2021, 9, 15983-15994.	3.2	18
72	Enhanced permittivity and energy density of P(VDF-HFP)-based capacitor using core-shell structured BaTiO3@TiO2 fillers. Ionics, 2018, 24, 3975-3982.	1.2	17

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73	Thickness-dependent ferroelectric properties of HfO2/ZrO2 nanolaminates using atomic layer deposition. Journal of Materials Science, 2021, 56, 6064-6072.	1.7	17
74	Enhanced actuation performance of piezoelectric fiber composites induced by incorporated BaTiO 3 nanoparticles in epoxy resin. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1641-1647.	0.9	16
75	Improved energy density and dielectric properties of P(VDF-HFP) composites with TiO2 nanowire clusters. Journal of Electroceramics, 2018, 40, 65-71.	0.8	16
76	All-organic polymer dielectrics prepared via optimization of sequential structure of polystyrene-based copolymers. Chemical Engineering Journal, 2022, 446, 137106.	6.6	16
77	Influence of main chain on the phase behaviors of sideâ€chain liquidâ€crystalline polymers with triphenylene mesogens of long alkyl tail substituents. Journal of Polymer Science Part A, 2017, 55, 754-766.	2.5	15
78	Temperature-stable Na0.5Bi0.5TiO3-based relaxor ceramics with high permittivity and large energy density under low electric fields. Journal of Alloys and Compounds, 2021, 882, 160755.	2.8	15
79	Synthesis of mesogen-jacketed liquid crystalline polymers with long symmetry mesogenic core containing two biphenyls. Polymer, 2013, 54, 1794-1802.	1.8	14
80	Optimising the dielectric property of carbon nanotubes/P(VDFâ€CTFE) nanocomposites by tailoring the shell thickness of liquid crystalline polymer modified layer. IET Nanodielectrics, 2019, 2, 142-150.	2.0	14
81	3D printing of anisotropic polymer nanocomposites with aligned BaTiO₃ nanowires for enhanced energy density. Materials Advances, 2020, 1, 14-19.	2.6	14
82	Dielectric nanocomposites with high energy density by doping core-double shell structured fillers. Composites Part A: Applied Science and Manufacturing, 2022, 159, 107019.	3.8	14
83	Synergistic enhancement of piezoelectricity and thermal stability in AlN-doped Bi0.5Na0.5TiO3-based ceramics. Journal of the European Ceramic Society, 2022, 42, 1425-1433.	2.8	13
84	Enhanced dielectric constant and breakdown strength in dielectric composites using TiO2@HfO2 nanowires with gradient dielectric constant. Ceramics International, 2022, 48, 12483-12489.	2.3	12
85	Multiple Effects Tailoring the Self-organization Behaviors of Triphenylene Side-chain Liquid Crystalline Polymers via Changing the Spacer Length. Chinese Journal of Polymer Science (English) Tj ETQq1 1 0.784314 rgBT /Overlock	4.3	11
86	Constructing a correlation between ferroelectricity and grain sizes in Hf_{0.5}Zr_{0.5}O₂ ferroelectric thin films. CrystEngComm, 2022, 24, 1731-1737.	1.3	11
87	Phase transitions in RbPrNb2O7, a layer structuredÂferroelectric with a high Curie point. Acta Materialia, 2020, 200, 971-979.	3.8	10
88	Terahertz Probing Irreversible Phase Transitions Related to Polar Clusters in Bi_{0.5}Na_{0.5}TiO₃â€Based Ferroelectric. Advanced Electronic Materials, 2020, 6, 1901373.	2.6	10
89	Enhanced energy density in sandwich-structured P(VDF-HFP) nanocomposites containing Hf0.5Zr0.5O2 nanofibers. Chemical Engineering Journal, 2022, 436, 131123.	6.6	10
90	Direct ink writing of 3D piezoelectric ceramics with complex unsupported structures. Journal of the European Ceramic Society, 2022, 42, 3841-3847.	2.8	10

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91	Self-organization behaviours of hemiphasmidic side-chain liquid-crystalline polymers with different spacer lengths. New Journal of Chemistry, 2017, 41, 7553-7561.	1.4	9
92	Ultrafast Electric Field-Induced Phase Transition in Bulk Bi_{0.5}Na_{0.5}TiO₃ under High-Intensity Terahertz Irradiation. ACS Photonics, 2021, 8, 147-151.	3.2	8
93	The effects of precursors on the morphology and microstructure of potassium sodium niobate nanorods synthesized by molten salt synthesis. CrystEngComm, 2015, 17, 8710-8719.	1.3	7
94	Influence of alkyl tail length on self-organisation of side-chain liquid crystalline polymers with biphenyl hemiphasmidic mesogens. Liquid Crystals, 2017, 44, 1031-1043.	0.9	7
95	Molten salt synthesis and characterization of lead-free (1-x)Na0.5Bi0.5TiO3-xSrTiO3 (xâ€¯=â€¯0, 0.10, 0.26) whiskers. Ceramics International, 2018, 44, 9174-9180.	2.3	7
96	Self-organization of cholesterol-side-chain liquid crystalline polymers by tailoring the main chain structure and flexible spacer length. New Journal of Chemistry, 2019, 43, 5429-5440.	1.4	7
97	High piezoelectric response and excellent fatigue resistance in Rb-substituted BNTâ€“BKTâ€“BT ceramics. Journal of Materials Science, 2020, 55, 7634-7644.	1.7	7
98	Surface-Decorated Graphene Oxide Sheets with Copper Nanoderivatives for Bone Regeneration: An In Vitro and In Vivo Study Regarding Molecular Mechanisms, Osteogenesis, and Anti-infection Potential. ACS Infectious Diseases, 2022, 8, 499-515.	1.8	7
99	Electrospinning Synthesis of Na0.5Bi0.5TiO3 Nanofibers for Dielectric Capacitors in Energy Storage Application. Nanomaterials, 2022, 12, 906.	1.9	6
100	Novel Therapeutic Strategy for Bacteriaâ€Contaminated Bone Defects: Reconstruction with Multiâ€Biofunctional GO/Cuâ€Incorporated 3D Scaffolds. Advanced Therapeutics, 2022, 5, .	1.6	4
101	Improved dielectric constant and energy density of P(VDF-HFP) composites using NBT-xST (x=0, 0.10,) Tj ETQq1 1 0.784314 rgBT /Ov	1.5	3
102	Effects of doping concentration and annealing temperatures on the ferroelectric memory properties of yttrium doped HfO₂. Journal Physics D: Applied Physics, 2022, 55, 394001.	1.3	3
103	Significantly Improved Dielectric Breakdown Strength and Energy Density in P(VDF-TrFE-CTFE) Polymer via a Facile Uniaxial Drawing Process. ACS Applied Polymer Materials, 0, , .	2.0	1