

Shan-Tao Zhang

List of Publications by Year in descending order

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131
papers

5,542
citations

94433

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times ranked

4373
citing authors

#	ARTICLE	IF	CITATIONS
1	Tetragonal (Ba, Ca) (Zr, Ti)O ₃ textured ceramics with enhanced piezoelectric response and superior temperature stability. <i>Journal of Materiomics</i> , 2022, 8, 366-374.	5.7	15
2	Novel lead-free NaNbO ₃ -based relaxor antiferroelectric ceramics with ultrahigh energy storage density and high efficiency. <i>Journal of Materiomics</i> , 2022, 8, 295-301.	5.7	39
3	In situ TEM observation on the ferroelectric-antiferroelectric transition in Pb(Nb,Zr,Sn,Ti)O ₃ /ZnO. <i>Journal of the American Ceramic Society</i> , 2022, 105, 794-800.	3.8	4
4	Cu-modified Pb(Mg _{1/3} Nb _{2/3})O ₃ -PbZrO ₃ -PbTiO ₃ textured ceramics with enhanced electromechanical properties and improved thermal stability. <i>Journal of the European Ceramic Society</i> , 2022, 42, 2743-2751.	5.7	13
5	Ultrahigh Energy Storage Density and High Efficiency in Lead-Free (Bi _{0.9} Na _{0.1})(Fe _{0.8} Ti _{0.2})O ₃ -Modified NaNbO ₃ Ceramics via Stabilizing the Antiferroelectric Phase and Enhancing Relaxor Behavior. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 19704-19713.	8.0	35
6	Large pyroelectricity via engineered ferroelectric-relaxor phase boundary. <i>Journal of the American Ceramic Society</i> , 2022, 105, 5230-5239.	3.8	6
7	Relaxor-normal ferroelectric transition in (1-x)Sr _{0.75} Ba _{0.25} Nb ₂ O ₆ -xNaNbO ₃ ceramics. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	2
8	High Energy Storage Performance in Ba _{0.85} Ca _{0.15} Zr _{0.1} Ti _{0.9} O ₃ -ZnO Hybrid Perovskite Solid Solution Thin Films. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	4
9	Simultaneous achievement of ultrahigh energy storage density and high efficiency in BiFeO ₃ -based relaxor ferroelectric ceramics via a highly disordered multicomponent design. <i>Journal of Materials Chemistry A</i> , 2022, 10, 14316-14325.	10.3	30
10	Structural Distortion-Modulated Magnetic and Dielectric Properties in Nonstoichiometric Yb _{2-x} Ti ₂ O ₇ Pyrochlore. <i>Inorganic Chemistry</i> , 2022, 61, 10425-10434.	4.0	2
11	Progress and perspective of high strain NBT-based lead-free piezoceramics and multilayer actuators. <i>Journal of Materiomics</i> , 2021, 7, 508-544.	5.7	76
12	Composition-dependent electrical property of (1-x)Sr _{0.75} Ba _{0.25} Nb ₂ O ₆ -xPbZr _{0.52} Ti _{0.48} O ₃ solid solution ceramics. <i>Journal of the European Ceramic Society</i> , 2021, 41, 2435-2442.	5.7	6
13	Energy storage properties of (1-x)(Pb _{0.97} La _{0.02})(Zr _{0.5} Sn _{0.4} Ti _{0.1})O ₃ :xSnO ₂ composite ceramics. <i>Journal of Alloys and Compounds</i> , 2021, 873, 159768.	5.5	2
14	Enhanced energy storage properties of lead-free NaNbO ₃ -based ceramics via A/B-site substitution. <i>Chemical Engineering Journal</i> , 2021, 422, 130130.	12.7	95
15	Ultrahigh energy storage density in lead-free relaxor antiferroelectric ceramics via domain engineering. <i>Energy Storage Materials</i> , 2021, 43, 383-390.	18.0	119
16	Large, thermally stabilized and fatigue-resistant piezoelectric strain response in textured relaxor-PbTiO ₃ ferroelectric ceramics. <i>Journal of Materials Chemistry C</i> , 2021, 9, 2008-2015.	5.5	22
17	The critical role of spin rotation in the giant magnetostriction of La(Fe,Al) ₁₃ . <i>Science China Materials</i> , 2021, 64, 1238-1245.	6.3	4
18	Non-hydrostatic pressure-dependent structural and transport properties of BiCuSeO and BiCuSO single crystals. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 105702.	1.8	3

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19	Negative thermal expansion in (Sc,Ti)Fe ₂ induced by an unconventional magnetovolume effect. <i>Materials Horizons</i> , 2020, 7, 275-281.	12.2	34
20	Phase/domain structure and enhanced thermal stable ferro-/pyroelectric properties of (1-x)0.94Na0.48Bi0.44TiO3-0.06BaTiO3:xZnO ceramics. <i>Journal of the European Ceramic Society</i> , 2020, 40, 699-705.	5.7	6
21	Phase transition, ferroelectric and piezoelectric properties of B-site complex cations (Fe0.5Nb0.5) ⁴⁺ -modified Ba0.70Ca0.30TiO3 ceramics. <i>Ceramics International</i> , 2020, 46, 9519-9529.	4.8	2
22	Composition-dependent microstructure and electrical property of (1-x)SbNaxBNBT solid solutions. <i>Journal of the American Ceramic Society</i> , 2020, 103, 6913-6921.	3.8	4
23	A review on the development of lead-free ferroelectric energy-storage ceramics and multilayer capacitors. <i>Journal of Materials Chemistry C</i> , 2020, 8, 16648-16667.	5.5	184
24	Microstructure, ferroelectric and piezoelectric properties of MnO2-modified Ba0.70Ca0.30TiO3 lead-free ceramics. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 9352-9365.	2.2	2
25	Enhanced relaxor behavior and thermal- and frequency-insensitive strain of (Na0.5Bi0.5)0.93Ba0.07Ti1-x(Mn1/3Nb2/3)xO3 ceramics. <i>Journal of Applied Physics</i> , 2020, 127, 194101.	2.5	0
26	Realizing a ferroelectric state and high pyroelectric performance in antiferroelectric-oxide composites. <i>Dalton Transactions</i> , 2020, 49, 9728-9734.	3.3	4
27	Thermally stable energy storage properties in relaxor BNT ⁶ -modified antiferroelectric PNZST ceramics. <i>Journal of the American Ceramic Society</i> , 2020, 103, 5769-5777.	3.8	11
28	Energy storage property of (Pb0.97La0.02)(Zr0.5Sn0.4Ti0.1)O3-(Na0.5Bi0.5)0.94Ba0.06TiO3 ceramics: Effects of antiferroelectric-relaxor transition and improved breakdown strength. <i>Journal of the European Ceramic Society</i> , 2020, 40, 2996-3002.	5.7	12
29	Relaxor/antiferroelectric composites: a solution to achieve high energy storage performance in lead-free dielectric ceramics. <i>Journal of Materials Chemistry C</i> , 2020, 8, 5681-5691.	5.5	75
30	MoTe ₂ p-n Homojunctions Defined by Ferroelectric Polarization. <i>Advanced Materials</i> , 2020, 32, e1907937.	21.0	115
31	Transition in temperature scaling behaviors and super temperature stable polarization in BiScO3-PbZrO3-PbTiO3 system. <i>Journal of the American Ceramic Society</i> , 2020, 103, 3691-3697.	3.8	4
32	Two-dimensional series connected photovoltaic cells defined by ferroelectric domains. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	10
33	Programmable transition metal dichalcogenide homojunctions controlled by nonvolatile ferroelectric domains. <i>Nature Electronics</i> , 2020, 3, 43-50.	26.0	167
34	Exchange-biased nanocomposite ferromagnetic insulator. <i>Physical Review B</i> , 2020, 101, .	3.2	6
35	High pyroelectric performance due to ferroelectric-antiferroelectric transition near room temperature. <i>Journal of Materials Chemistry C</i> , 2020, 8, 7820-7827.	5.5	13
36	Structural and electrical properties of ZnO ⁶ -modified (1-x)Pb(Mg _{1/3} Nb _{2/3})O ₃ -xPbTiO ₃ ceramics with wide MPB regions. <i>Journal of the American Ceramic Society</i> , 2019, 102, 1866-1874.	3.8	12

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37	Crossover from negative to positive magnetoresistance in $\text{Sr}_{2-x}\text{CrWO}_6/\text{Sr}_{2-x}\text{Fe}_{10/9}\text{Mo}_8\text{O}_6$ superlattices. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 225001.	1.8	2
38	Highly enhanced thermal stability in quenched $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ -based lead-free piezoceramics. <i>Journal of the European Ceramic Society</i> , 2019, 39, 4705-4711.	5.7	37
39	$\text{Bi}(\text{Zn}_{0.5}\text{Ti}_{0.5})\text{O}_3$ induced domain evolution and its effect on electrical property and thermal stability of $0.8\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3-0.2\text{Bi}_{0.5}\text{K}_{0.5}\text{TiO}_3$ ceramics. <i>Journal of Alloys and Compounds</i> , 2019, 810, 151942.	5.5	6
40	Ultrahigh energy harvesting properties in textured lead-free piezoelectric composites. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3603-3611.	10.3	43
41	Electron-electron scattering dominated electrical and magnetotransport properties in the quasi-two-dimensional Fermi liquid single-crystal B_iO_2 .	3.2	16
42	Bimodal hybrid lightweight sound-absorbing material with high stiffness. <i>Applied Physics Express</i> , 2019, 12, 035002.	2.4	6
43	Composition-sensitive electrical properties of charge nonstoichiometric $0.94\text{Bi}_{0.5+x}\text{Na}_{0.5-x}\text{TiO}_3 \approx 0.06\text{BaTiO}_3$ ceramics. <i>Journal of Advanced Dielectrics</i> , 2019, 09, 1950012.	2.4	4
44	The significant and temperature-insensitive magnetoresistance observed in Co-doped $(\text{La}_{0.7}\text{Sr}_{0.3})\text{MnO}_3$ thin films. <i>AIP Advances</i> , 2019, 9, .	1.3	4
45	Domain structure and evolution in ZnO -modified $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3 \approx 0.32\text{PbTiO}_3$ ceramics. <i>Journal of the American Ceramic Society</i> , 2019, 102, 4874-4881.	3.8	9
46	Copper foam sustained silica aerogel for high-efficiency acoustic absorption. <i>AIP Advances</i> , 2019, 9, 015209.	1.3	0
47	Thermally-stable large strain in $\text{Bi}(\text{Mn}_{0.5}\text{Ti}_{0.5})\text{O}_3$ modified $0.8\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3-0.2\text{Bi}_{0.5}\text{K}_{0.5}\text{TiO}_3$ ceramics. <i>Journal of the European Ceramic Society</i> , 2019, 39, 1827-1836. Mechanisms of enhanced thermal stability of polarization in lead-free	5.7	39
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73	Simultaneously enhanced ferroelectric and magnetic properties in $0.675\text{BiFe}_{1-x}\text{Cr}_x\text{O}_3 \approx 0.325\text{PbTiO}_3$ ($x \approx 0.05$) ceramics. <i>Journal of Materials Science: Materials in Electronics</i> , 2017, 28, 2435-2441.	2.2	1
74	The Microstructural Characterization of Multiferroic $\text{LaFeO}_3\text{-YMnO}_3$ Multilayers Grown on (001)- and (111)- SrTiO_3 Substrates by Transmission Electron Microscopy. <i>Materials</i> , 2017, 10, 839.	2.9	3
75	Composition-Dependent Microstructures and Properties of La , Zn , and Cr -Modified $0.675\text{BiFeO}_3 \approx 0.325\text{BaTiO}_3$ Ceramics. <i>Journal of the American Ceramic Society</i> , 2016, 99, 2989-2994.	3.8	16
76	Dramatically decreased magnetoresistance in non-stoichiometric WTe_2 crystals. <i>Scientific Reports</i> , 2016, 6, 26903.	3.3	32
77	Chemical strain-dependent two-dimensional transport at AlO interfaces		

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91	Formation Mechanism of (001) Oriented Perovskite SrTiO ₃ Microplatelets Synthesized by Topochemical Microcrystal Conversion. Inorganic Chemistry, 2014, 53, 11060-11067.	4.0	18
92	The Competitive and Combining Effects of Grain Boundary and Antisite Defects on the Low-Field Magnetoresistance in Sr ₂ FeMoO ₆ . Journal of the American Ceramic Society, 2014, 97, 1137-1142.	3.8	11
93	Photoluminescence and Temperature Dependent Electrical Properties of Er-Doped 0.94Bi _{0.5} Na _{0.5} TiO ₃ Ceramics. Journal of the American Ceramic Society, 2014, 97, 3877-3882.	3.3	15
94	Enhanced Multiferroic and Magnetocapacitive Properties of (1-x)Ba _{0.7} Ca _{0.3} TiO ₃ Ceramics. Journal of the American Ceramic Society, 2014, 97, 816-825.	3.1	10
95	Phase transition behavior and high piezoelectric properties in lead-free BaTiO ₃ -CaTiO ₃ -BaHfO ₃ ceramics. Journal of Materials Science, 2014, 49, 62-69.	3.7	34
96	Phase Diagram and Enhanced Piezoelectric Response of Lead-Free BaTiO ₃ -CaTiO ₃ -BaHfO ₃ System. Journal of the American Ceramic Society, 2014, 97, 3244-3251.	3.1	11
97	Sensitively Temperature-Dependent Spin-Orbit Coupling in SrIrO ₃ Thin Films. Journal of the Physical Society of Japan, 2014, 83, 054707.	1.6	32
98	The microstructure and magnetic property of TiO ₂ -terminated SrTiO ₃ substrate selected growth cubic phase CaRuO ₃ film. Crystal Research and Technology, 2013, 48, 546-554.	1.3	0
99	High temperature solution growth, chemical depotassiation and growth mechanism of KxRhO ₂ crystals. CrystEngComm, 2013, 15, 5050.	2.6	15
100	Enhanced pyroelectric property in (1-x)(Bi _{0.5} Na _{0.5})TiO ₃ -xBa(Zr _{0.055} Ti _{0.945})O ₃ Role of morphotropic phase boundary and ferroelectric-antiferroelectric phase transition. Applied Physics Letters, 2013, 103, 182906.	3.3	72
101	Morphotropic phase boundary and electric properties in (1-x)Bi _{0.5} Na _{0.5} TiO ₃ -xBaSnO ₃ lead-free piezoelectric ceramics. Journal of Materials Science: Materials in Electronics, 2013, 24, 4080-4084.	2.2	7
102	Room temperature ferromagnetism in triple perovskite Sr ₃ CrFeMoO ₉ . Journal of Materials Science: Materials in Electronics, 2013, 24, 4970-4973.	2.2	4
103	Structural Evolving Sequence and Porous Ba ₆ Zr ₂ Nb ₈ Ferroelectric Ceramics with Ultrahigh Breakdown Field and Zero Strain. Journal of the American Ceramic Society, 2013, 96, 555-560.	3.8	17
104	Thickness dependent microstructures and properties of Sr ₂ Fe _{10/9} Mo _{8/9} O ₆ films grown in N ₂ . Solid State Communications, 2013, 163, 28-32.	1.9	5
105	Quantitative control of Fe/Mo anti-site defect and its effects on the properties of Sr ₂ FeMoO ₆ . CrystEngComm, 2013, 15, 4601.	2.6	15
106	Complete set of material constants of 0.95(Na _{0.5} Bi _{0.5})TiO ₃ -0.05BaTiO ₃ lead-free piezoelectric single crystal and the delineation of extrinsic contributions. Applied Physics Letters, 2013, 103, .	3.3	66
107	The metallic interface between insulating NdGaO ₃ and SrTiO ₃ perovskites. Applied Physics Letters, 2013, 103, 201602.	3.3	25
108	Significant ferrimagnetisms observed in superlattice composed of antiferromagnetic LaFeO ₃ and YMnO ₃ . Applied Physics Letters, 2013, 102, 042403.	3.3	8

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109	Morphotropic phase boundary and electric properties in $(1-x)Bi_{0.5}Na_{0.5}TiO_{3-x}BiCoO_3$ lead-free piezoelectric ceramics. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	24
110	Magnetic and electrical transport properties of $Pb_{1-x}La_xTi_{1-x}Mn_xO_3$ ceramics. <i>AIP Advances</i> , 2012, 2, .	1.3	1
111	Structural stability of layered $(La_{1-x}Bi_x)_{0.5}TiO_{3-x}Bi_{0.5}FeO_3$, $(La_{1-x}Bi_x)_{0.5}TiO_{3-x}Bi_{0.5}FeO_3$, and $(La_{1-x}Bi_x)_{0.5}TiO_{3-x}Bi_{0.5}FeO_3$ thin films. <i>Journal of Materials Research</i> , 2012, 27, 2956-2964.	2.6	11
112	Phase Transition and Electrical Properties of $(Ba_{0.7}Ca_{0.3})_{1-x}TiO_{3-x}Bi_x$ Ceramics. <i>Journal of the American Ceramic Society</i> , 2012, 95, 3901-3905.		
113	Microstructure and magnetic properties of a novel 10-H hexagonal perovskite nanosheet in a $BiFeCrO$ system. <i>RSC Advances</i> , 2012, 2, 5683.	3.6	2
114	Initial growth of $Bi_{0.4}LaTi_{0.3}FeO_{1.5}$ thin films on $SrTiO_3$, MgO and YSZ substrates. <i>Crystal Research and Technology</i> , 2012, 47, 663-670.	1.3	0
115	The temperature-dependent electrical properties of $Bi_{0.5}Na_{0.5}TiO_{3-x}BaTiO_{3-x}Bi_{0.5}K_{0.5}TiO_3$ near the morphotropic phase boundary. <i>Acta Materialia</i> , 2012, 60, 469-475.	7.9	100
116	Significant ferrimagnetism observed in Aurivillius $Bi_4Ti_3O_{12}$ doped by antiferromagnetic $LaFeO_3$. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	30
117	Phase Characteristics and Piezoelectric Properties in the $(Bi_{0.5}Na_{0.5}TiO_3)_x(BaTiO_3)_{1-x}(K_{0.5}Na_{0.5}NbO_3)_y$ System. <i>Journal of the American Ceramic Society</i> , 2010, 93, 1561-1564.		
118	Microstructure and ferromagnetic property in $CaRuO_3$ thin films with pseudoheterostructure. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	11
119	Morphotropic phase boundary and electrical properties in $(1-x)Bi_{0.5}Na_{0.5}TiO_{3-x}Bi_{0.5}(Zn_{0.5}Ti_{0.5})O_3$ lead-free piezoceramics. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	50
120	Phase diagram and electrostrictive properties of $Bi_{0.5}Na_{0.5}TiO_{3-x}BaTiO_{3-x}K_{0.5}Na_{0.5}NbO_3$ ceramics. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	73
121	Morphotropic phase boundary in $(1-x)Bi_{0.5}Na_{0.5}TiO_{3-x}(Bi_{0.8}La_{0.2})FeO_3$ with improved depolarization temperature. <i>Physica Status Solidi - Rapid Research Letters</i> , 2009, 3, 245-247.	2.4	4
122	Temperature-Dependent Electrical Properties of $0.94Bi_{0.5}Na_{0.5}TiO_{3-x}0.06BaTiO_{3-x}$ Ceramics. <i>Journal of the American Ceramic Society</i> , 2008, 91, 3950-3954.	3.8	162
123	Lead-free piezoceramics with giant strain in the system $Bi_{0.5}Na_{0.5}TiO_{3-x}BaTiO_{3-x}K_{0.5}Na_{0.5}NbO_3$. I. Structure and room temperature properties. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	264
124	Morphotropic phase boundary in $(1-x)Bi_{0.5}Na_{0.5}TiO_{3-x}K_{0.5}Na_{0.5}NbO_3$ lead-free piezoceramics. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	224
125	Lead-free piezoceramics with giant strain in the system $Bi_{0.5}Na_{0.5}TiO_{3-x}BaTiO_{3-x}K_{0.5}Na_{0.5}NbO_3$. II. Temperature dependent properties. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	192
126	Giant strain in lead-free piezoceramics $Bi_{0.5}Na_{0.5}TiO_{3-x}BaTiO_{3-x}K_{0.5}Na_{0.5}NbO_3$ system. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	731

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127	Structure, optical, and magnetic properties of sputtered manganese and nitrogen-codoped ZnO films. Applied Physics Letters, 2006, 88, 082111.	3.3	71
128	ELECTRIC PROPERTIES OF LAYERED PEROVSKITE Sr _{0.8} A _{0.1} Bi _{2.1} Ta _{1.5} Nb _{0.5} O ₉ THIN FILMS (A = LA, PR). Integrated Ferroelectrics, 2006, 79, 187-193.	0.7	1
129	Magnetic and transport properties of (Mn, Co)-codoped ZnO films prepared by radio-frequency magnetron cosputtering. Journal of Applied Physics, 2005, 98, 053908.	2.5	60
130	Raman Spectra of Sr _{m-3} Bi ₄ Ti _m O _{3m+3} Thin Films. Materials Research Society Symposia Proceedings, 2003, 784, 3171.	0.1	0
131	Robust ferromagnetic insulating and large exchange bias in LaMnO ₃ :CoO composite thin films. Journal Physics D: Applied Physics, 0, , .	2.8	1