Xiaoli Tan

List of Publications by Year
in descending order

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166 papers	8,952 citations	53939 47 h-index	51423 90 g-index
170 all docs	170 docs citations	170 times ranked	5005 citing authors

#	Article	IF	Citations
1	In situ TEM observation on the ferroelectricâ€antiferroelectric transition in Pb(Nb,Zr,Sn,Ti)O₃/ZnO. Journal of the American Ceramic Society, 2022, 105, 794-800.	1.9	4
2	In situ TEM measurement of electrical properties of individual BaTiO3 nanocubes. Applied Physics Letters, 2021, 118, 192901.	1.5	3
3	Control of polarization in bulk ferroelectrics by mechanical dislocation imprint. Science, 2021, 372, 961-964.	6.0	84
4	Precipitation Hardening in Ferroelectric Ceramics. Advanced Materials, 2021, 33, e2102421.	11.1	46
5	Structure, ferroelectric, and dielectric properties of (Na1â^'2xCax)NbO3 ceramics. Journal of Materials Research, 2021, 36, 1076-1085.	1.2	2
6	Effect of electric hysteresis on fatigue behavior in antiferroelectric bulk ceramics under bipolar loading. Journal of Materials Chemistry C, 2021, 9, 15542-15551.	2.7	6
7	A comparative study of the polarization degradation mechanisms during electric cycling in (Bi1/2Na1/2)TiO3-based relaxors. Scripta Materialia, 2020, 178, 334-338.	2.6	5
8	Phase-composition dependent domain responses in (K0.5Na0.5)NbO3-based piezoceramics. Journal of the European Ceramic Society, 2020, 40, 1217-1222.	2.8	11
9	Electric-field-induced structure and domain texture evolution in PbZrO3-based antiferroelectric by in-situ high-energy synchrotron X-ray diffraction. Acta Materialia, 2020, 184, 41-49.	3.8	36
10	Atomic Structure of the Polarization Modulations in Perovskite Antiferroelectrics. Microscopy and Microanalysis, 2020, 26, 1190-1191.	0.2	0
11	In Situ Transmission Electron Microscopy Study of Conductive Filament Formation in Copper Oxides. IEEE Transactions on Device and Materials Reliability, 2020, 20, 609-612.	1.5	0
12	Structural Instability in Electrically Stressed, Oxygen Deficient BaTiO₃ Nanocrystals. Advanced Functional Materials, 2020, 30, 2004607.	7.8	9
13	Direct Observations of Field-Intensity-Dependent Dielectric Breakdown Mechanisms in TiO2 Single Nanocrystals. ACS Nano, 2020, 14, 8328-8334.	7.3	3
14	Ultrahigh piezoelectricity in lead-free piezoceramics by synergistic design. Nano Energy, 2020, 76, 104944.	8.2	99
15	TEM investigation of the domain structure in PbHfO3 and PbZrO3 antiferroelectric perovskites. Journal of Materials Science, 2020, 55, 4953-4961.	1.7	26
16	Motion of phase boundary during antiferroelectricâ€“ferroelectric transition in a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>PbZrO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> -based ceramic. Physical Review Materials, 2020, 4, .	3.1	9
17	In situ TEM study of the transitions between crystalline Si and nonstoichiometric amorphous oxide under bipolar voltage bias. Journal of Applied Physics, 2019, 125, .	1.1	5
18	Relaxor antiferroelectric ceramics with ultrahigh efficiency for energy storage applications. Journal of the European Ceramic Society, 2019, 39, 4735-4742.	2.8	49

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19	Origin of the large electrostrain in BiFeO₃-BaTiO₃ based lead-free ceramics. Journal of Materials Chemistry A, 2019, 7, 21254-21263.	5.2	101
20	Atomically resolved domain boundary structure in lead zirconate-based antiferroelectrics. Applied Physics Letters, 2019, 115, .	1.5	22
21	Polarization reversal via a transient relaxor state in nonergodic relaxors near freezing temperature. Journal of Materiomics, 2019, 5, 634-640.	2.8	19
22	In Situ TEM Study of the Amorphous-to-Crystalline Transition during Dielectric Breakdown in TiO₂ Film. ACS Applied Materials & Interfaces, 2019, 11, 40726-40733.	4.0	13
23	Ultrahigh energy storage density lead-free multilayers by controlled electrical homogeneity. Energy and Environmental Science, 2019, 12, 582-588.	15.6	393
24	Interaction Dynamics Between Ferroelectric and Antiferroelectric Domains in a PbZrO3 -Based Ceramic. Physical Review Applied, 2019, 11, .	1.5	19
25	Structure and High Performance of Lead-Free (K_{0.5}Na_{0.5})NbO₃ Piezoelectric Nanofibers with Surface-Induced Crystallization at Lowered Temperature. ACS Applied Materials & Interfaces, 2019, 11, 23503-23511.	4.0	18
26	Dual-stimuli in-situ TEM study on the nonergodic/ergodic crossover in the 0.75(Bi1/2Na1/2)TiO3â€“0.25SrTiO3 relaxor. Applied Physics Letters, 2019, 114, .	1.5	8
27	Uncompensated Polarization in Incommensurate Modulations of Perovskite Antiferroelectrics. Physical Review Letters, 2019, 123, 217602.	2.9	50
28	Mechanisms of enhanced thermal stability of polarization in lead-free <mml:math		

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37	High Energy Storage Density and Large Strain in Bi(Zn_{2/3}Nb_{1/3})O₃-Doped BiFeO₃â€“BaTiO₃ Ceramics. ACS Applied Energy Materials, 2018, 1, 4403-4412.	2.5	229
38	High strain (0.4%) Bi(Mg_{2/3}Nb_{1/3})O₃â€“BaTiO₃â€“BiFeO₃ leadâ€free piezoelectric ceramics and multilayers. Journal of the American Ceramic Society, 2018, 101, 5428-5442.	3.9	106
39	Relaxor-ferroelectric transitions: Sodium bismuth titanate derivatives. MRS Bulletin, 2018, 43, 600-606.	1.7	111
40	Impact of phase transition sequence on the electrocaloric effect in Pb(Nb,Zr,Sn,Ti)O3 ceramics. Applied Physics Letters, 2017, 110, .	1.5	40
41	Giant strain with low hysteresis in A-site-deficient (Bi0.5Na0.5)TiO3-based lead-free piezoceramics. Acta Materialia, 2017, 128, 337-344.	3.8	222
42	Large electrocaloric responses in [Bi_{1/2}(Na,K)_{1/2}]TiO₃â€based ceramics with giant electroâ€strains. Journal of the American Ceramic Society, 2017, 100, 2088-2097.	1.9	30
43	Polarization reversal and memory effect in anti-ferroelectric materials. Scripta Materialia, 2017, 128, 61-64.	2.6	23
44	Domain disruption and defect accumulation during unipolar electric fatigue in a BZT-BCT ceramic. Applied Physics Letters, 2017, 111, .	1.5	21
45	Giant strain with low cycling degradation in Ta-doped [Bi1/2(Na0.8K0.2)1/2]TiO3 lead-free ceramics. Journal of Applied Physics, 2016, 120, .	1.1	50
46	Four-State Anti-Ferroelectric Random Access Memory. IEEE Electron Device Letters, 2016, 37, 1551-1554.	2.2	18
47	Disrupting long-range polar order with an electric field. Physical Review B, 2016, 93, .	1.1	50
48	Giant Strains in Nonâ€Textured (Bi_{1/2}Na_{1/2})TiO₃â€Based Leadâ€Free Ceramics. Advanced Materials, 2016, 28, 574-578.	11.1	472
49	Silanized-silicon/epoxy nanocomposites for structural capacitors with enhanced electrical energy storage capability. Composites Science and Technology, 2015, 121, 34-40.	3.8	18
50	In situ TEM study on the microstructural evolution during electric fatigue in 0.7Pb(Mg1/3Nb2/3)O3â€“0.3PbTiO3 ceramic. Journal of Materials Research, 2015, 30, 364-372.	1.2	10
51	Wide Compositional RangeIn‐Situ Electric Field Investigations on Lead‐Free<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Ba</mml:mi><mml:mo mathvariant="bold" stretchy="false">(</mml:mo><mml:msub><mml:mrow><mml:mi>Zr</mml:mi></mml:mrow><mml:mrow><mml:mn>0.2</mml:mn></mml:mrow>	1.5	37
52	Direct observation of the recovery of an antiferroelectric phase during polarization reversal of an induced ferroelectric phase. Physical Review B, 2015, 91, .	1.1	33
53	Nanofragmentation of Ferroelectric Domains During Polarization Fatigue. Advanced Functional Materials, 2015, 25, 270-277.	7.8	47
54	Suppression of the antiferroelectric phase during polarization cycling of an induced ferroelectric phase. Applied Physics Letters, 2015, 107, .	1.5	5

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55	Effect of <scp><scp>Ba</scp></scp> Content on the Stress Sensitivity of the Antiferroelectric to Ferroelectric Phase Transition in (<scp><scp>Pb</scp></scp>,<scp><scp>La</scp></scp>,<scp><scp>Ba</scp></scp>,)(<scp><scp>Zr</scp></scp>,<scp><scp>Sn</ Ceramics. Journal of the American Ceramic Society, 2014, 97, 206-212.	1.9	44
56	Antiferroelectricity induced by electric field in NaNbO3-based lead-free ceramics. Applied Physics Letters, 2014, 104, .	1.5	35
57	Transformation toughening in an antiferroelectric ceramic. Acta Materialia, 2014, 62, 114-121.	3.8	42
58	Evolution of structure and electrical properties with lanthanum content in [(Bi1/2Na1/2)0.95Ba0.05]1â^'xLaxTiO3 ceramics. Journal of the European Ceramic Society, 2014, 34, 2997-3006.	2.8	71
59	Thermal analysis of phase transitions in perovskite electroceramics. Journal of Thermal Analysis and Calorimetry, 2014, 115, 587-593.	2.0	15
60	Modeling the interphase of a polymer-based nanodielectric. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 488-496.	1.8	26
61	Special quasirandom structures to study the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mo>(</mml:mo><mml:msub><mml:mi) Tj ETQq1 1 0.784314 rgBT /Ove mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>random alloy.	1.1	17
62	Polarization alignment, phase transition, and piezoelectricity development in polycrystalline<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>0.5Ba</mml:mi><mml:mo>(</mml:mo><mml:msub><mml:mi>Zr</mm Physical Review B, 2014, 90, .	1.1	76
63	Unique single-domain state in a polycrystalline ferroelectric ceramic. Physical Review B, 2014, 89, .	1.1	59
64	Block copolymer/ferroelectric nanoparticle nanocomposites. Nanoscale, 2013, 5, 8695.	2.8	54
65	Microstructural origin for the piezoelectricity evolution in (K0.5Na0.5)NbO3-based lead-free ceramics. Journal of Applied Physics, 2013, 114, .	1.1	56
66	Electric-field-induced polarization and strain in 0.94(Bi1/2Na1/2)TiO3â€“0.06BaTiO3 under uniaxial stress. Acta Materialia, 2013, 61, 1350-1358.	3.8	61
67	A New Phase Boundary in (Bi_{1/2}Na_{1/2})TiO₃â^'BaTiO₃ Revealed via a Novel Method of Electron Diffraction Analysis. Advanced Functional Materials, 2013, 23, 5261-5266.	7.8	127
68	Crystal Structure and Electrical Properties of Leadâ€Free (1Ââ^'Âx)<scp><scp>BaTiO</scp></scp>₃â€“x(<scp><scp>Bi</scp></scp>_{1/2}A_{1/2} (AÂ=Â<scp><scp>Ag</scp></scp>,<scp><scp>Li</scp></scp>,<scp><scp>Na</scp></scp>,<scp><scp>K</scp></scp>,<scp><scp>Rb</ Ceramics. Journal of the American Ceramic Society, 2013, 96, 3425-3429.	1.9	10
69	Mechanical self-confinement to enhance energy storage density of antiferroelectric capacitors. Journal of Applied Physics, 2013, 113, .	1.1	79
70	Dynamics of polystyrene-block-poly(methylmethacrylate) (PS-b-PMMA) diblock copolymers and PS/PMMA blends: A dielectric study. Journal of Non-Crystalline Solids, 2013, 359, 27-32.	1.5	7
71	Multifunctional Properties of Cyanate Ester Composites with SiO₂ Coated Fe₃O₄ Fillers. ACS Applied Materials & Interfaces, 2013, 5, 1636-1642.	4.0	28
72	Electrical poling below coercive field for large piezoelectricity. Applied Physics Letters, 2013, 102, .	1.5	73

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73	Optimal working regime of leadâ€“zirconateâ€“titanate for actuation applications. Sensors and Actuators A: Physical, 2013, 189, 187-194.	2.0	36
74	Evolution of the tetragonal to rhombohedral transition in (1 â^') Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 Td (x)(Bi<sub>1/2</su	2.8	20
75	Silicon/epoxy nanocomposites for capacitors as the energy storage element. , 2013, , .		0
76	Dielectric properties of cyanate ester/silicon nanocomposites for multifunctional structural capacitors. , 2012, , .		2
77	Dielectric and mechanical properties of polyimide-barium titanate nanocomposites. , 2012, , .		0
78	Introduction to the IEEE International Symposium on Applications of Ferroelectrics and International Symposium on Piezoresponse Force Microscopy and Nanoscale Phenomena in Polar Materials. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 1853-4.	1.7	0
79	Novel Si/cyanate ester nanocomposites with multifunctional properties. Composites Science and Technology, 2012, 72, 1692-1696.	3.8	19
80	Creation and Destruction of Morphotropic Phase Boundaries through Electrical Poling: A Case Study of Lead-Free<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo mathvariant="bold"		

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91	Dielectric aging behavior in A-site hybrid-doped BaTiO3 ceramics. Current Applied Physics, 2011, 11, S90-S94.	1.1	16
92	BiFeO3â€“PbZrO3â€“PbTiO3 ternary system for high Curie temperature piezoceramics. Journal of the European Ceramic Society, 2011, 31, 801-807.	2.8	33
93	Multifunctional fiberglass-reinforced PMMA-BaTiO3 structural/dielectric composites. Polymer, 2011, 52, 2016-2024.	1.8	65
94	DIELECTRIC AND FERROELECTRIC PROPERTIES OF (1 - x) Pb(Mg1/3Nb2/3)O3â€“xPbZrO3 CERAMICS WITH CATION ORDER. Journal of Advanced Dielectrics, 2011, 01, 99-106.	1.5	2
95	Domain structure-dielectric property relationship in lead-free (1â^'x)(Bi1/2Na1/2)TiO3î—¸xBaTiO3 ceramics. Journal of Applied Physics, 2010, 108, .	1.1	359
96	Combinatorial processing libraries for bulk BiFeO3â€“PbTiO3 piezoelectric ceramics. Applied Physics A: Materials Science and Processing, 2010, 99, 427-431.	1.1	20
97	Multifunctional PMMA-Ceramic composites as structural dielectrics. Polymer, 2010, 51, 5823-5832.	1.8	72
98	Phase diagram of unpoled lead-free â€“ ceramics. Solid State Communications, 2010, 150, 1497-1500.	0.9	200
99	In Situ Transmission Electron Microscopy of Electric Fieldâ€Triggered Reversible Domain Formation in Biâ€Based Leadâ€Free Piezoceramics. Journal of the American Ceramic Society, 2010, 93, 2452-2455.	1.9	185
100	Morphotropic phase boundary and electrical properties of lead-free (1â^'x)BaTiO3â^'xBi(Li1/3Ti2/3)O3 ceramics. Journal of Applied Physics, 2010, 107, .	1.1	13
101	Electric-field-induced antiferroelectric to ferroelectric phase transition in mechanically confined<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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109	In situ transmission electron microscopy study on Nbâ€doped Pb(Zr_{0.95}Ti_{0.05})O₃ ceramics. Microscopy Research and Technique, 2009, 72, 216-222.	1.2	5
110	The morphotropic phase boundary and electrical properties of (1Ââ^'Âx)Pb(Zn1/2W1/2)O3â€"xPb(Zr0.5Ti0.5)O3 ceramics. Journal of Materials Science, 2009, 44, 1868-1872.	1.7	3
111	Ferroelectric properties of (1Ââ^'Âx)Bi(Zn1/2Ti1/2)O3â€"xPbZrO3 ceramics. Journal of Materials Science, 2009, 44, 4321-4325.	1.7	12
112	Synthesis, thermal stability and magnetic properties of the Lu1â^'xLaxMn2O5 solid solution. Journal of Solid State Chemistry, 2009, 182, 3013-3020.	1.4	2
113	Influence of adsorbed moisture on the properties of cyanate ester/BaTiO3 composites. Composites Part A: Applied Science and Manufacturing, 2009, 40, 1266-1271.	3.8	33
114	Effect of oxygen content on the magnetic properties of multiferroic YMn₂O_{5+Î´}. Journal of Physics Condensed Matter, 2009, 21, 346002.	0.7	9
115	Influence of long-range cation order on relaxor properties of doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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127	Ferroelectric and magnetic properties of Pb(Fe2âˆ•3W1âˆ•3)O3-based multiferroic compounds with cation order. Journal of Applied Physics, 2007, 102, 104114.	1.1	6
128	Evolution of nanodomains during the electric-field-induced relaxor to normal ferroelectric phase transition in a Sc-doped Pb(Mg1âˆ•3Nb2âˆ•3)O3 ceramic. Journal of Applied Physics, 2007, 102, 084101.	1.1	35
129	In situ TEM Study of Electric Field-Induced Phenomena in Ferroelectric Ceramics. Applications of Ferroelectrics, IEEE International Symposium on, 2007, , .	0.0	0
130	A Comparative Study of the Structure and Properties of Sn-Modified Lead Zirconate Titanate Ferroelectric and Antiferroelectric Ceramics. Journal of the American Ceramic Society, 2007, 90, 2090-2094.	1.9	19
131	Preparation of fine-grain lead indium niobate ceramics with wolframite precursor method and resulting electrical properties. Applied Physics A: Materials Science and Processing, 2007, 88, 323-328.	1.1	8
132	Effect of Ba-substitution on the structure and properties of Pb0.8Ba0.2[(In1/2Nb1/2)1-xTix]O3 ceramics. Applied Physics A: Materials Science and Processing, 2007, 88, 757-761.	1.1	1
133	Dielectric and Ferroelectric Properties of Pb<inf>0.8</inf>Ba<inf>0.2</inf>[(In<inf>1/2</inf>Nb<inf>1/2</inf>)<inf>1-x</inf> Ceramics. Applications of Ferroelectrics, IEEE International Symposium on, 2006, , .		
134	Influence of Cation Order on the Electric Field-Induced Phase Transition in Pb(Mg1/3Nb2/3)O3-Based Relaxor Ferroelectrics. Journal of the American Ceramic Society, 2006, 89, 202-209.	1.9	40
135	Dielectric properties and morphotropic phase boundaries in the		

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145	Partial dislocations at domain intersections in a tetragonal ferroelectric crystal. Journal of Physics Condensed Matter, 2004, 16, 1455-1466.	0.7	9
146	Field-induced domain interpenetration in tetragonal ferroelectric crystal. Journal of Applied Physics, 2004, 95, 635-639.	1.1	15
147	Influence of processing conditions on the phase transition and ferroelectric properties of Pb(Zn1/3Nb2/3)O3â^'Pb(Zr1/2Ti1/2)O3 ceramics. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 108, 258-265.	1.7	46
148	Intersection of a domains in the c-domain matrix driven by electric field in tetragonal ferroelectric crystal. Journal of Applied Physics, 2004, 96, 2805-2810.	1.1	19
149	In situ transmission electron microscopy study of the electric field-induced transformation of incommensurate modulations in a Sn-modified lead zirconate titanate ceramic. Applied Physics Letters, 2004, 85, 3187-3189.	1.5	28
150	The morphotropic phase boundary and dielectric properties of the xPb(Zr1â^•2Ti1â^•2)O3-(1â^'x)Pb(Ni1â^•3Nb2â^•3)O3 perovskite solid solution. Journal of Applied Physics, 2004, 96, 5103-5109.	1.1	158
151	Perovskite phase formation and ferroelectric properties of the lead nickel niobateâ€“lead zinc niobateâ€“lead zirconate titanate ternary system. Journal of Materials Research, 2003, 18, 2882-2889.	1.2	59
152	Piezoelectric in situ transmission electron microscopy technique for direct observations of fatigue damage accumulation in constrained metallic thin films. Applied Physics Letters, 2002, 80, 3946-3948.	1.5	13
153	In-situtransmission electron microscopy study of electric-field-induced grain-boundary cracking in lead zirconate titanate. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 1463-1478.	0.8	38
154	A maximum strain criterion for electric-field-induced fatigue crack propagation in ferroelectric ceramics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 301, 131-139.	2.6	27
155	In situ transmission electron microscopy observations of electric-field-induced domain switching and microcracking in ferroelectric ceramics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 314, 157-161.	2.6	28
156	Indentation-induced domain switching in Pb(Mg1/3Nb2/3)O3â€“PbTiO3 crystal. Acta Materialia, 2001, 49, 2993-2999.	3.8	67
157	Direct observations of electric field-induced domain boundary cracking in ã€^001ã€‰ oriented piezoelectric Pb(Mg1/3Nb2/3)O3â€“PbTiO3 single crystal. Applied Physics Letters, 2000, 77, 1529-1531.	1.5	84
158	In situ transmission electron microscopy study of electric-field-induced microcracking in single crystal Pb(Mg1/3Nb2/3)O3â€“PbTiO3. Applied Physics Letters, 2000, 76, 3732-3734.	1.5	43
159	Crack deflection in relaxor ferroelectric plzt under inclined cyclic electric field. Scripta Materialia, 2000, 43, 925-928.	2.6	9
160	Cyclic deformation behavior of high-purity titanium single crystals: Part I. Orientation dependence of stress-strain response. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 507-512.	1.1	39
161	Cyclic deformation behavior of high-purity titanium single crystals: Part II. Microstructure and mechanism. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 513-518.	1.1	30
162	Low-cycle fatigue behaviors of commercial-purity titanium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 252, 85-92.	2.6	57

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163	Orientation dependence of slip and twinning in HCP metals. Scripta Materialia, 1997, 36, 1383-1386.	2.6	88
164	Fatigue crack initatiin in high-purity titanium crystals. International Journal of Fatigue, 1996, 18, 329-333.	2.8	16
165	Influence of processing conditions on the morphotropic phase boundaries and ferroelectric properties of Pb(Zn/sub 1/3/Nb/sub 2/3/)O/sub 3/-Pb(Ni/sub 1/3/Nb/sub 2/3/)O/sub 3/-Pb(Zr/sub 1/2/Ti/sub) Tj ETQq1 1 0.784314 rgBT/O		
166	In-situ transmission electron microscopy study of electric-field-induced grain-boundary cracking in lead zirconate titanate. , 0, .		2