Nagarajan Valanoor

List of Publications by Citations

216 papers	13,606 citations	52 h-index	114 g-index
229 ext. papers	14,738 ext. citations	6.9 avg, IF	5.95 L-index

#	Paper	IF	Citations
216	Epitaxial BiFeO3 multiferroic thin film heterostructures. *Science*, **2003**, 299, 1719-22	33.3	4944
215	Dynamics of ferroelastic domains in ferroelectric thin films. *Nature Materials*, **2003**, 2, 43-7	27	457
214	Unit-cell scale mapping of ferroelectricity and tetragonality in epitaxial ultrathin ferroelectric films. *Nature Materials*, **2007**, 6, 64-9	27	322
213	Universal Behavior and Electric-Field-Induced Structural Transition in Rare-Earth-Substituted BiFeO3. *Advanced Functional Materials*, **2010**, 20, 1108-1115	15.6	312
212	Doping BiFeO3: approaches and enhanced functionality. *Physical Chemistry Chemical Physics*, **2012**, 14, 15953-62	3.6	286
211	Nanoshell tubes of ferroelectric lead zirconate titanate and barium titanate. *Applied Physics Letters*, **2003**, 83, 440-442	3.4	259
210	Combinatorial discovery of a lead-free morphotropic phase boundary in a thin-film piezoelectric perovskite. *Applied Physics Letters*, **2008**, 92, 202904	3.4	231
209	Nonvolatile ferroelectric domain wall memory. *Science Advances*, **2017**, 3, e1700512	14.3	183
208	Polarization relaxation kinetics and 180° domain wall dynamics in ferroelectric thin films. *Physical Review B*, **2001**, 65,	3.3	163
207	Structural transitions and complex domain structures across a ferroelectric-to-antiferroelectric phase boundary in epitaxial Sm-doped BiFeO3 thin films. *Physical Review B*, **2009**, 80,	3.3	153
206	Role of 90° domains in lead zirconate titanate thin films. *Applied Physics Letters*, **2000**, 77, 292-294	3.4	151
205	TiO2–Au plasmonic nanocomposite for enhanced dye-sensitized solar cell (DSSC) performance. *Solar Energy*, **2012**, 86, 1428-1434	6.8	149
204	Can interface dislocations degrade ferroelectric properties?. *Applied Physics Letters*, **2004**, 85, 2044-2046	3.4	144
203	Atomic-scale evolution of modulated phases at the ferroelectric-antiferroelectric morphotropic phase boundary controlled by flexoelectric interaction. *Nature Communications*, **2012**, 3, 775	17.4	135
202	Thickness dependence of structural and electrical properties in epitaxial lead zirconate titanate films. *Journal of Applied Physics*, **1999**, 86, 595-602	2.5	129
201	Imaging three-dimensional polarization in epitaxial polydomain ferroelectric thin films. *Journal of Applied Physics*, **2002**, 91, 1477-1481	2.5	125
200	Crossing an Interface: Ferroelectric Control of Tunnel Currents in Magnetic Complex Oxide Heterostructures. *Advanced Functional Materials*, **2010**, 20, 2436-2441	15.6	116

199	Misfit dislocations in nanoscale ferroelectric heterostructures. *Applied Physics Letters*, **2005**, 86, 192910	3.4	116
198	Measurement of internal stresses via the polarization in epitaxial ferroelectric films. *Physical Review Letters*, **2000**, 85, 190-3	7.4	116
197	Thickness dependence of structural and piezoelectric properties of epitaxial Pb(Zr0.52Ti0.48)O3 films on Si and SrTiO3 substrates. *Applied Physics Letters*, **2006**, 88, 142904	3.4	107
196	Realizing intrinsic piezoresponse in epitaxial submicron lead zirconate titanate capacitors on Si. *Applied Physics Letters*, **2002**, 81, 4215-4217	3.4	105
195	Domain wall geometry controls conduction in ferroelectrics. *Nano Letters*, **2012**, 12, 5524-31	11.5	103
194	Exploring topological defects in epitaxial BiFeO3 thin films. *ACS Nano*, **2011**, 5, 879-87	16.7	102
193	Scaling of structure and electrical properties in ultrathin epitaxial ferroelectric heterostructures. *Journal of Applied Physics*, **2006**, 100, 051609	2.5	101
192	Size effects in ultrathin epitaxial ferroelectric heterostructures. *Applied Physics Letters*, **2004**, 84, 5225-5227	3.4	100
191	Chemical route derived bismuth ferrite thin films and nanomaterials. *Journal of Materials Chemistry C*, **2016**, 4, 4092-4124	7.1	99
190	Role of substrate on the dielectric and piezoelectric behavior of epitaxial lead magnesium niobate-lead titanate relaxor thin films. *Applied Physics Letters*, **2000**, 77, 438-440	3.4	97
189	Domain Wall Conduction and Polarization-Mediated Transport in Ferroelectrics. *Advanced Functional Materials*, **2013**, 23, 2592-2616	15.6	96
188	Depolarizing-field-mediated 180□switching in ferroelectric thin films with 90□domains. *Applied Physics Letters*, **2002**, 80, 1424-1426	3.4	94
187	Effect of mechanical constraint on the dielectric and piezoelectric behavior of epitaxial Pb(Mg1/3Nb2/3)O3(90%)PbTiO3(10%) relaxor thin films. *Applied Physics Letters*, **1999**, 75, 4183-4185	3.4	86
186	Method to distinguish ferroelectric from nonferroelectric origin in case of resistive switching in ferroelectric capacitors. *Applied Physics Letters*, **2008**, 92, 062907	3.4	83
185	Three-domain architecture of stress-free epitaxial ferroelectric films. *Journal of Applied Physics*, **2001**, 89, 553-556	2.5	83
184	Effect of the electrode layer on the polydomain structure of epitaxial PbZr0.2Ti0.8O3 thin films. *Journal of Applied Physics*, **1999**, 85, 3271-3277	2.5	83
183	A multiferroic on the brink: Uncovering the nuances of strain-induced transitions in BiFeO3. *Applied Physics Reviews*, **2016**, 3, 011106	17.3	80
182	Domain nucleation and relaxation kinetics in ferroelectric thin films. *Applied Physics Letters*, **2000**, 77, 3275-3277	3.4	74

181	Direct hysteresis measurements of single nanosized ferroelectric capacitors contacted with an atomic force microscope. *Applied Physics Letters*, **2001**, 79, 3678-3680	3.4	71
180	Nanoscale control of phase variants in strain-engineered BiFeO□ *Nano Letters*, **2011**, 11, 3346-54	11.5	70
179	Microstructure-electromechanical property correlations in rare-earth-substituted BiFeO3 epitaxial thin films at morphotropic phase boundaries. *Applied Physics Letters*, **2010**, 97, 212905	3.4	69
178	Topological Structures in Multiferroics □Domain Walls, Skyrmions and Vortices. *Advanced Electronic Materials*, **2016**, 2, 1500292	6.4	66
177	Phase coexistence near a morphotropic phase boundary in Sm-doped BiFeO3 films. *Applied Physics Letters*, **2010**, 97, 152902	3.4	65
176	Nanoscale Structural and Chemical Properties of Antipolar Clusters in Sm-Doped BiFeO3 Ferroelectric Epitaxial Thin Films. *Chemistry of Materials*, **2010**, 22, 2588-2596	9.6	65
175	Finite element modeling of piezoresponse in nanostructured ferroelectric films. *Applied Physics Letters*, **2004**, 84, 2626-2628	3.4	65
174	Nanoscale Bubble Domains and Topological Transitions in Ultrathin Ferroelectric Films. *Advanced Materials*, **2017**, 29, 1702375	24	64
173	Giant strain in PbZr0.2Ti0.8O3 nanowires. *Applied Physics Letters*, **2007**, 90, 052902	3.4	61
172	Nonlinear electric field dependence of piezoresponse in epitaxial ferroelectric lead zirconate titanate thin films. *Journal of Applied Physics*, **2003**, 94, 5147	2.5	61
171	Film thickness versus misfit strain phase diagrams for epitaxial PbTiO3 ultrathin ferroelectric films. *Physical Review B*, **2008**, 78,	3.3	58
170	Enhanced nonvolatile resistive switching in dilutely cobalt doped TiO2. *Applied Physics Letters*, **2009**, 95, 203502	3.4	57
169	Scaling Behavior of Resistive Switching in Epitaxial Bismuth Ferrite Heterostructures. *Advanced Functional Materials*, **2014**, 24, 3962-3969	15.6	56
168	Labile Ferroelastic Nanodomains in Bilayered Ferroelectric Thin Films. *Advanced Materials*, **2009**, 21, 3497-3502	24	55
167	Interface mediated resistive switching in epitaxial NiO nanostructures. *Applied Physics Letters*, **2012**, 100, 203115	3.4	54
166	Epitaxial Bi5Ti3FeO15-CoFe2O4 pillar-matrix multiferroic nanostructures. *ACS Nano*, **2013**, 7, 11079-86	16.7	52
165	Piezoelectric membranes for separation processes: Fabrication and piezoelectric properties. *Journal of Membrane Science*, **2013**, 434, 184-192	9.6	52
164	Direct evidence for cation non-stoichiometry and cottrell atmospheres around dislocation cores in functional oxide interfaces. *Advanced Materials*, **2010**, 22, 2430-4	24	52

163	Epitaxial La-doped SrTiO3 on silicon: A conductive template for epitaxial ferroelectrics on silicon. *Applied Physics Letters*, **2002**, 80, 4801-4803	3.4	51
162	Electrical control of multiferroic orderings in mixed-phase BiFeO□ films. *Advanced Materials*, **2012**, 24, 3070-5	24	49
161	Dual strain mechanisms in a lead-free morphotropic phase boundary ferroelectric. *Scientific Reports* , **2016**, 6, 19630	4.9	49
160	Formation of 90□ elastic domains during local 180□ switching in epitaxial ferroelectric thin films. *Applied Physics Letters*, **2004**, 84, 254-256	3.4	48
159	Synthesis-phase□omposition relationship and high electric-field-induced electromechanical behavior of samarium-modified BiFeO3 ceramics. *Acta Materialia*, **2015**, 83, 149-159	8.4	47
158	Strain-induced magnetic phase transition in SrCoO3□ thin films. *Physical Review B*, **2015**, 91,	3.3	46
157	Defect engineering of ZnS thin films for photoelectrochemical water-splitting under visible light. *Solar Energy Materials and Solar Cells*, **2016**, 153, 179-185	6.4	46
156	Composition and temperature-induced structural evolution in La, Sm, and Dy substituted BiFeO3 epitaxial thin films at morphotropic phase boundaries. *Journal of Applied Physics*, **2011**, 110, 014106	2.5	45
155	Phase field simulations of ferroelectrics domain structures in PbZrxTi1□O3 bilayers. *Acta Materialia*, **2013**, 61, 2909-2918	8.4	44
154	Deterministic optical control of room temperature multiferroicity in BiFeO thin films. *Nature Materials*, **2019**, 18, 580-587	27	41
153	Self-similar nested flux closure structures in a tetragonal ferroelectric. *Nano Letters*, **2013**, 13, 2553-7	11.5	41
152	A template and catalyst-free metal-etching-oxidation method to synthesize aligned oxide nanowire arrays: NiO as an example. *ACS Nano*, **2010**, 4, 4785-91	16.7	41
151	Epitaxial (001) BiFeO3 thin-films with excellent ferroelectric properties by chemical solution deposition-the role of gelation. *Journal of Materials Chemistry C*, **2015**, 3, 582-595	7.1	39
150	Ferroelectric Lead Zirconate Titanate and Barium Titanate Nanotubes. *Integrated Ferroelectrics*, **2003**, 59, 1513-1520	0.8	39
149	Ferroelectric field-effect transistor with a SrRuxTi1□O3 channel. *Applied Physics Letters*, **2003**, 82, 4770-4772	3.4	39
148	The Effects of Multiphase Formation on Strain Relaxation and Magnetization in Multiferroic BiFeO3 Thin Films. *Advanced Functional Materials*, **2007**, 17, 2594-2599	15.6	38
147	Positive Effect of an Internal Depolarization Field in Ultrathin Epitaxial Ferroelectric Films. *Advanced Electronic Materials*, **2016**, 2, 1500288	6.4	36
146	Fabrication of multiferroic epitaxial BiCrO3 thin films. *Applied Physics Letters*, **2006**, 88, 152902	3.4	36

145	Scaling of the piezoelectric response in ferroelectric nanostructures: An effective clamping stress model. *Applied Physics Letters*, **2005**, 87, 242905	3.4	36
144	Controlling magnetoelectric coupling by nanoscale phase transformation in strain engineered bismuth ferrite. *Nanoscale*, **2012**, 4, 3175-83	7.7	34
143	Temperature dependent piezoelectric response and strain–electric-field hysteresis of rare-earth modified bismuth ferrite ceramics. *Journal of Materials Chemistry C*, **2016**, 4, 7859-7868	7.1	34
142	Misfit strain–film thickness phase diagrams and related electromechanical properties of epitaxial ultra-thin lead zirconate titanate films. *Acta Materialia*, **2010**, 58, 823-835	8.4	33
141	Controlling crystallization of Pb(Zr,Ti)O3 thin films on IrO2 electrodes at low temperature through interface engineering. *Applied Physics Letters*, **2003**, 82, 1263-1265	3.4	33
140	Conformational Domain Wall Switch. *Advanced Functional Materials*, **2019**, 29, 1807523	15.6	32
139	Low-temperature integration of lead-based ferroelectric capacitors on Si with diffusion barrier layer. *Applied Physics Letters*, **2002**, 80, 3599-3601	3.4	32
138	Morphotropic Phase Elasticity of Strained BiFeO3. *Advanced Materials Interfaces*, **2016**, 3, 1600033	4.6	32
137	Revisiting the Optical Band Gap in Epitaxial BiFeO3 Thin Films. *Advanced Optical Materials*, **2018**, 6, 1700836	8.1	31
136	Deterministic arbitrary switching of polarization in a ferroelectric thin film. *Nature Communications*, **2014**, 5, 4971	17.4	31
135	Interface control of surface photochemical reactivity in ultrathin epitaxial ferroelectric films. *Applied Physics Letters*, **2013**, 102, 182904	3.4	31
134	Ferroelectric nanostructures via a modified focused ion beam technique. *Nanotechnology*, **2006**, 17, 338-343	3.4	31
133	Thermodynamic and electrostatic analysis of threading dislocations in epitaxial ferroelectric films. *Applied Physics Letters*, **2006**, 88, 102906	3.4	31
132	Synthesis of epitaxial metal oxide nanocrystals via a phase separation approach. *ACS Nano*, **2010**, 4, 5139-46	16.7	30
131	Direct evidence for the spin cycloid in strained nanoscale bismuth ferrite thin films. *Nature Communications*, **2016**, 7, 12664	17.4	29
130	Misfit strain driven cation inter-diffusion across an epitaxial multiferroic thin film interface. *Journal of Applied Physics*, **2014**, 115, 054103	2.5	28
129	Unraveling the origins of electromechanical response in mixed-phase bismuth ferrite. *Physical Review B*, **2013**, 88,	3.3	28
128	Ferroelastic domain wall dynamics in ferroelectric bilayers. *Acta Materialia*, **2010**, 58, 5316-5325	8.4	28

127	Superior polarization retention through engineered domain wall pinning. *Nature Communications*, **2020**, 11, 349	17.4	27
126	Theory of giant electromechanical response from ferroelectric bilayers with polydomain structures due to interlayer and interdomain coupling. *Physical Review Letters*, **2010**, 105, 197601	7.4	26
125	Epitaxial ferroelectric oxide thin films for optical applications. *Applied Physics Reviews*, **2018**, 5, 041108	17.3	26
124	Defect thermodynamics and kinetics in thin strained ferroelectric films: The interplay of possible mechanisms. *Physical Review B*, **2014**, 89,	3.3	25
123	Ferroelastic domain switching fatigue in lead zirconate titanate ceramics. *Acta Materialia*, **2008**, 56, 1577-1587	8.4	25
122	Epitaxial Magnetic Oxide Nanocrystals Via Phase Decomposition of Bismuth Perovskite Precursors. *Advanced Functional Materials*, **2012**, 22, 5224-5230	15.6	24
121	Collective dynamics in nanostructured polycrystalline ferroelectric thin films using local time-resolved measurements and switching spectroscopy. *Acta Materialia*, **2010**, 58, 67-75	8.4	24
120	ZnS Thin Films for Visible-Light Active Photoelectrodes: Effect of Film Morphology and Crystal Structure. *Crystal Growth and Design*, **2016**, 16, 2461-2465	3.5	24
119	Mobile Ferroelastic Domain Walls in Nanocrystalline PZT Films: the Direct Piezoelectric Effect. *Advanced Functional Materials*, **2011**, 21, 3104-3110	15.6	23
118	Control of domain structure of epitaxial PbZr0.2Ti0.8O3 thin films grown on vicinal (001) SrTiO3 substrates. *Applied Physics Letters*, **2001**, 79, 2805-2807	3.4	23
117	Nanostructuring Ferroelectrics via Focused Ion Beam Methodologies. *Advanced Functional Materials*, **2016**, 26, 8367-8381	15.6	23
116	Deterministic Switching of Ferroelectric Bubble Nanodomains. *Advanced Functional Materials*, **2019**, 29, 1808573	15.6	21
115	Expansion of the spin cycloid in multiferroic BiFeO3 thin films. *Npj Quantum Materials*, **2019**, 4,	5	21
114	Phase diagrams, dielectric response, and piezoelectric properties of epitaxial ultrathin (001) lead zirconate titanate films under anisotropic misfit strains. *Journal of Applied Physics*, **2010**, 107, 114105	2.5	21
113	In-situ observation of ultrafast 90° domain switching under application of an electric field in (100)/(001)-oriented tetragonal epitaxial Pb(ZrTi)O thin films. *Scientific Reports*, **2017**, 7, 9641	4.9	19
112	Interface control of a morphotropic phase boundary in epitaxial samarium modified bismuth ferrite superlattices. *Physical Review B*, **2014**, 90,	3.3	19
111	Chemical solution deposition derived (001)-oriented epitaxial BiFeO3 thin films with robust ferroelectric properties using stoichiometric precursors (invited). *Journal of Applied Physics*, **2014**, 116, 066810	2.5	19
110	Mechanical stress-induced switching kinetics of ferroelectric thin films at the nanoscale. *Nanotechnology*, **2017**, 28, 075709	3.4	18

109	Nanoscale Origins of Nonlinear Behavior in Ferroic Thin Films. *Advanced Functional Materials*, **2013**, 23, 81-90	15.6	18
108	Ultrafast switching of ferroelastic nanodomains in bilayered ferroelectric thin films. *Applied Physics Letters*, **2011**, 99, 182906	3.4	18
107	Probing La0.7Sr0.3MnO3 multilayers via spin wave resonances. *Physical Review B*, **2011**, 84,	3.3	18
106	Nanoscale domain switching behaviour in polycrystalline ferroelectric thin films. *Nanotechnology*, **2007**, 18, 465502	3.4	18
105	Element-specific depth profile of magnetism and stoichiometry at the La0.67Sr0.33MnO3/BiFeO3 interface. *Physical Review B*, **2014**, 90,	3.3	16
104	Robust polarization and strain behavior of Sm-modified BiFeO3 piezoelectric ceramics. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2015**, 62, 83-7	3.2	16
103	Morphology-dependent photo-induced polarization recovery in ferroelectric thin films. *Applied Physics Letters*, **2017**, 111, 092902	3.4	15
102	Higher order harmonic detection for exploring nonlinear interactions with nanoscale resolution. *Scientific Reports*, **2013**, 3, 2677	4.9	15
101	Creation of damage-free ferroelectric nanostructures via focused ion beam milling. *Nanotechnology* , **2008**, 19, 175302	3.4	15
100	Polarization switching of submicron ferroelectric capacitors using an atomic force microscope. *Applied Physics Letters*, **2004**, 84, 3130-3132	3.4	15
99	The Experimentalist's Guide to the Cycloid, or Noncollinear Antiferromagnetism in Epitaxial BiFeO. *Advanced Materials*, **2020**, 32, e2003711	24	15
98	Recent progress in artificial synaptic devices: materials, processing and applications. *Journal of Materials Chemistry C*, **2021**, 9, 8372-8394	7.1	15
97	Strain Dependent Electronic Structure and Band Offset Tuning at Heterointerfaces of ASnO (A=Ca, Sr, and Ba) and SrTiO. *Scientific Reports*, **2017**, 7, 41725	4.9	14
96	Interface-dependent electrochemical behavior of nanostructured manganese (IV) oxide (Mn3O4). *Electrochimica Acta*, **2014**, 130, 810-817	6.7	14
95	Structural defects and local chemistry across ferroelectric□electrode interfaces in epitaxial heterostructures. *Journal of Materials Science*, **2009**, 44, 5297-5306	4.3	14
94	Depth profile study of ferroelectric PbZr0.2Ti0.8O3 films. *Journal of Applied Physics*, **2002**, 92, 6762-6767	2.5	14
93	Designer defect stabilization of the super tetragonal phase in >70-nm-thick BiFeO3 films on LaAlO3 substrates. *Japanese Journal of Applied Physics*, **2018**, 57, 0902B2	1.4	14
92	Epitaxial PbZrxTi1□O3 Ferroelectric Bilayers with Giant Electromechanical Properties. *Advanced Materials Interfaces*, **2015**, 2, 1500075	4.6	13

91	Chemistry of Ruddlesden–Popper planar faults at a ferroelectric–ferromagnet perovskite interface. *Journal of Applied Physics*, **2011**, 109, 084101	2.5	13
90	Ferroelastic domains in bilayered ferroelectric thin films. *Journal of Applied Physics*, **2008**, 104, 124103	2.5	13
89	Mapping strain modulated electronic structure perturbations in mixed phase bismuth ferrite thin films. *Journal of Materials Chemistry C*, **2015**, 3, 1835-1845	7.1	12
88	High-resolution piezoresponse force microscopy investigation of imprint in ferroelectric thin films. *Applied Physics Letters*, **2006**, 89, 132912	3.4	12
87	Piezoelectric and dielectric tunabilities of ultra-thin ferroelectric heterostructures. *Journal of Materials Research*, **2006**, 21, 1600-1606	2.5	12
86	Interfacial Strain Gradients Control Nanoscale Domain Morphology in Epitaxial BiFeO3 Multiferroic Films. *Advanced Functional Materials*, **2020**, 30, 2000343	15.6	11
85	Structural, magnetic, and ferroelectric properties of T-like cobalt-doped BiFeO3 thin films. *APL Materials*, **2018**, 6, 026102	5.7	11
84	Reversible Polarization Rotation in Epitaxial Ferroelectric Bilayers. *Advanced Materials Interfaces*, **2016**, 3, 1600444	4.6	11
83	Microstructural analysis of interfaces in a ferromagnetic-multiferroic epitaxial heterostructure. *Journal of Applied Physics*, **2011**, 109, 034103	2.5	11
82	Improved PbZr0.52Ti0.48O3 film quality on SrRuO3/SrTiO3 substrates. *Journal of Crystal Growth*, **2005**, 277, 210-217	1.6	11
81	Near-field second harmonic imaging of the c/a/c/a polydomain structure of epitaxial PbZrxTi(1-x)O3 thin films. *Journal of Microscopy*, **2001**, 202, 250-4	1.9	11
80	Large-scale multiferroic complex oxide epitaxy with magnetically switched polarization enabled by solution processing. *National Science Review*, **2020**, 7, 84-91	10.8	11
79	Nondestructive Mapping of Long-Range Dislocation Strain Fields in an Epitaxial Complex Metal Oxide. *Nano Letters*, **2019**, 19, 1445-1450	11.5	10
78	Mixed-phase bismuth ferrite thin films by chemical solution deposition. *Journal of Materials Chemistry C*, **2018**, 6, 2882-2888	7.1	10
77	Stability and dewetting kinetics of thin gold films on Ti, TiOx and ZnO adhesion layers. *Acta Materialia*, **2013**, 61, 7841-7848	8.4	10
76	In-situ investigation of thermal instabilities and solid state dewetting in polycrystalline platinum thin films via confocal laser microscopy. *Journal of Applied Physics*, **2014**, 116, 163511	2.5	10
75	Electrical domain morphologies in compositionally graded ferroelectric films. *Journal of Physics Condensed Matter*, **2012**, 24, 024215	1.8	10
74	The Effect of Substrate Material and Postannealing on the Photoluminescence and Piezo Properties of DC-Sputtered ZnO. *Journal of Electronic Materials*, **2007**, 36, 507-518	1.9	10

73	Topology and control of self-assembled domain patterns in low-dimensional ferroelectrics. *Nature Communications*, **2020**, 11, 5779	17.4	10
72	Anisotropic epitaxial stabilization of a low-symmetry ferroelectric with enhanced electromechanical response. *Nature Materials*, **2021**,	27	10
71	Nanoscale Origins of Ferroelastic Domain Wall Mobility in Ferroelectric Multilayers. *ACS Nano*, **2016**, 10, 10126-10134	16.7	9
70	Deterministic Ferroelastic Domain Switching Using Ferroelectric Bilayers. *Nano Letters*, **2019**, 19, 5319-5326	12.5	9
69	Role of interface structure and chemistry in resistive switching of NiO nanocrystals on SrTiO3. *APL Materials*, **2014**, 2, 032109	5.7	9
68	Self-Template Growth of Ferroelectric Bi4Ti3O12 Nanoplates via Flux-Mediated Epitaxy with VOx. *Crystal Growth and Design*, **2010**, 10, 5233-5237	3.5	9
67	Recent developments in ferroelectric nanostructures and multilayers. *Journal of Materials Science*, **2009**, 44, 5021-5024	4.3	9
66	Ferroelectric and electrical characterization of multiferroic BiFeO3 at the single nanoparticle level. *Applied Physics Letters*, **2011**, 99, 252905	3.4	9
65	Theoretical investigation of polarization scaling in ultrathin epitaxial PbZrxTi1−xO3 films. *Journal of Applied Physics*, **2007**, 102, 104113	2.5	9
64	Microstructure and texture development in single layered and heterolayered PZT thin films. *Journal of Materials Science*, **2010**, 45, 6187-6199	4.3	8
63	Simultaneous measurement of the piezoelectric and dielectric response of nanoscale ferroelectric capacitors by an atomic force microscopy based approach. *Applied Physics A: Materials Science and Processing*, **2006**, 84, 67-71	2.6	8
62	Epitaxial Pb(Zr,Ti)O3 Capacitors on Si by Liquid Delivery Metalorganic Chemical Vapor Deposition. *Journal of Electroceramics*, **2005**, 14, 37-44	1.5	8
61	Electrode Dependence of Local Electrical Properties of Chemical-Solution-Deposition-Derived BiFeO3 Thin Films. *ACS Applied Electronic Materials*, **2019**, 1, 154-162	4	8
60	Increase of power conversion efficiency in dye-sensitized solar cells through ferroelectric substrate induced charge transport enhancement. *Scientific Reports*, **2018**, 8, 17389	4.9	8
59	Magnetic and Magnetodielectric Properties of Epitaxial Iron Vanadate Thin Films. *Advanced Electronic Materials*, **2017**, 3, 1600295	6.4	7
58	Enhancement of Dielectric Properties in Epitaxial Bismuth Ferrite–Bismuth Samarium Ferrite Superlattices. *Advanced Electronic Materials*, **2016**, 2, 1600170	6.4	7
57	Sub-critical field domain reversal in epitaxial ferroelectric films. *Journal of Applied Physics*, **2014**, 116, 124109	2.5	7
56	Nanoscale Probing of Elastic-Electronic Response to Vacancy Motion in NiO Nanocrystals. *ACS Nano*, **2017**, 11, 8387-8394	16.7	7

55	Nanoscale modulation of electronic states across unit cell steps on the surface of an epitaxial colossal magnetoresistance manganite film. *Applied Physics Letters*, **2010**, 96, 263108	3.4	7
54	Edge and finite size effects in polycrystalline ferroelectrics. *Acta Materialia*, **2011**, 59, 191-201	8.4	7
53	Role of oxygen partial pressure and seed layer chemistry in flux mediated epitaxy of single phase multiferroic BiFeO3 thin films. *Applied Physics Letters*, **2008**, 93, 192906	3.4	7
52	Nanoscale phenomena in synthetic functional oxide heterostructures. *Microscopy and Microanalysis*, **2002**, 8, 333-49	0.5	7
51	GaP/ZnS Multilayer Films: Visible-Light Photoelectrodes by Interface Engineering. *Journal of Physical Chemistry C*, **2019**, 123, 3336-3342	3.8	6
50	Phase evolution of magnetite nanocrystals on oxide supports via template-free bismuth ferrite precursor approach. *Journal of Applied Physics*, **2012**, 112, 104321	2.5	6
49	Influence of flexoelectricity on the spin cycloid in (110)-oriented BiFeO3 films. *Physical Review Materials*, **2019**, 3,	3.2	6
48	Ambient effect on the Curie temperatures and magnetic domains in metallic two-dimensional magnets. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	6
47	Localised nanoscale resistive switching in GaP thin films with low power consumption. *Journal of Materials Chemistry C*, **2017**, 5, 2153-2159	7.1	5
46	Fowler–Nordheim tunneling-assisted enhancement of tunneling electroresistance effect through a composite barrier. *Applied Physics Letters*, **2020**, 116, 202901	3.4	5
45	Self-Assembled Epitaxial Core-Shell Nanocrystals with Tunable Magnetic Anisotropy. *Small*, **2015**, 11, 4117-22	11	5
44	Effect of processing kinetics on the structure of ferromagnetic-ferroelectric-ferromagnetic interfaces. *Journal of Applied Physics*, **2012**, 112, 104102	2.5	5
43	Chemistry of the Fe□/BiFeO□ Interface in BiFeO□ Thin Film Heterostructures. *Materials*, **2010**, 3, 5274-5282	3.5	5
42	Nanoscale polarization relaxation kinetics in polycrystalline ferroelectric thin films. *Journal of Applied Physics*, **2007**, 101, 084104	2.5	5
41	Comment on "Simulation of interface dislocations effect on polarization distribution of ferroelectric thin films" [Appl. Phys. Lett. 88, 092903 (2006)]. *Applied Physics Letters*, **2007**, 90, 236101	3.4	5
40	Controlled Nucleation and Stabilization of Ferroelectric Domain Wall Patterns in Epitaxial (110) Bismuth Ferrite Heterostructures. *Advanced Functional Materials*, **2020**, 30, 2003571	15.6	5
39	A perspective on electrode engineering in ultrathin ferroelectric heterostructures for enhanced tunneling electroresistance. *Applied Physics Reviews*, **2020**, 7, 041316	17.3	4
38	Universal Approach for Predicting Crystallography of Heterogeneous Epitaxial Nanocrystals with Multiple Orientation Relationships. *ACS Applied Materials & Interfaces*, **2016**, 8, 34844-34853	9.5	4

37	Direct observation of domain dynamics in lead zirconate titanate thin films. *Integrated Ferroelectrics*, **2001**, 32, 199-208	0.8	4
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