Eugene A Eliseev

List of Publications by Year
in descending order

254	10,061	28274 55	45317 90
papers	citations	h-index	g-index

257	257	257	6947
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanoscale mapping of ion diffusion in a lithium-ion battery cathode. Nature Nanotechnology, 2010, 5, 749-754.	31.5	513
2	Observation of a periodic array of flux-closure quadrants in strained ferroelectric PbTiO ₃ films. Science, 2015, 348, 547-551.	12.6	430
3	CuInP₂S₆ Room Temperature Layered Ferroelectric. Nano Letters, 2015, 15, 3808-3814.	9.1	328
4	Enhanced electric conductivity at ferroelectric vortex cores in BiFeO3. Nature Physics, 2012, 8, 81-88.	16.7	324
5	Direct imaging of the spatial and energy distribution of nucleation centres in ferroelectric materials. Nature Materials, 2008, 7, 209-215.	27.5	250
6	Spontaneous flexoelectric/flexomagnetic effect in nanoferroics. Physical Review B, 2009, 79, .	3.2	234
7	Direct observation of ferroelectric field effect andÂvacancy-controlled screening at the BiFeO3/LaxSr1â”xMnO3 interface. Nature Materials, 2014, 13, 1019-1025.	27.5	218
8	Static conductivity of charged domain walls in uniaxial ferroelectric semiconductors. Physical Review B, 2011, 83, .	3.2	214
9	Nanoscale Electromechanics of Ferroelectric and Biological Systems: A New Dimension in Scanning Probe Microscopy. Annual Review of Materials Research, 2007, 37, 189-238.	9.3	204
10	Tunable Metallic Conductance in Ferroelectric Nanodomains. Nano Letters, 2012, 12, 209-213.	9.1	153
11	Mapping Octahedral Tilts and Polarization Across a Domain Wall in BiFeO₃ from Z-Contrast Scanning Transmission Electron Microscopy Image Atomic Column Shape Analysis. ACS Nano, 2010, 4, 6071-6079.	14.6	150
12	Atomic-scale evolution of modulated phases at the ferroelectricâ€“antiferroelectric morphotropic phase boundary controlled by flexoelectric interaction. Nature Communications, 2012, 3, 775.	12.8	145
13	Ferroelectricity enhancement in confined nanorods: Direct variational method. Physical Review B, 2006, 73, .	3.2	142
14	Local probing of ionic diffusion by electrochemical strain microscopy: Spatial resolution and signal formation mechanisms. Journal of Applied Physics, 2010, 108, .	2.5	138
15	Intermittency, quasiperiodicity and chaos in probe-induced ferroelectric domain switching. Nature Physics, 2014, 10, 59-66.	16.7	129
16	Phase transitions induced by confinement of ferroic nanoparticles. Physical Review B, 2007, 76, .	3.2	126
17	Domain Wall Geometry Controls Conduction in Ferroelectrics. Nano Letters, 2012, 12, 5524-5531.	9.1	125
18	Domain Wall Conduction and Polarizationâ€Mediated Transport in Ferroelectrics. Advanced Functional Materials, 2013, 23, 2592-2616.	14.9	113

#	Article	IF	Citations
19	Thermodynamics of electromechanically coupled mixed ionic-electronic conductors: Deformation potential, Vegard strains, and flexoelectric effect. Physical Review B, 2011, 83, .	3.2	110
20	Interplay of Octahedral Tilts and Polar Order in BiFeO₃ Films. Advanced Materials, 2013, 25, 2497-2504.	21.0	101
21	Flexoelectricity and ferroelectric domain wall structures: Phase-field modeling and DFT calculations. Physical Review B, 2014, 89, .	3.2	101
22	Interfacial polarization and pyroelectricity in antiferrodistortive structures induced by a flexoelectric effect and rotostriction. Physical Review B, 2012, 85, .	3.2	100
23	Mixed electrochemicalâ€“ferroelectric states in nanoscale ferroelectrics. Nature Physics, 2017, 13, 812-818.	16.7	98
24	Domain wall conduction in multiaxial ferroelectrics. Physical Review B, 2012, 85, .	3.2	95
25	Resolution-function theory in piezoresponse force microscopy: Wall imaging, spectroscopy, and lateral resolution. Physical Review B, 2007, 75, .	3.2	93
26	The depolarization field effect on the thin ferroelectric films properties. Physica B: Condensed Matter, 2002, 322, 356-370.	2.7	90
27	Ferroelectric Control of the Conduction at the LaAlO₃/SrTiO₃ Heterointerface. Advanced Materials, 2013, 25, 3357-3364.	21.0	90
28	Probing the Role of Single Defects on the Thermodynamics of Electric-Field Induced Phase Transitions. Physical Review Letters, 2008, 100, 155703.	7.8	83
29	Electromechanical detection in scanning probe microscopy: Tip models and materials contrast. Journal of Applied Physics, 2007, 102, .	2.5	80
30	Atomically Resolved Mapping of Polarization and Electric Fields Across Ferroelectric/Oxide Interfaces by Zâ€contrast Imaging. Advanced Materials, 2011, 23, 2474-2479.	21.0	79
31	Ionically-Mediated Electromechanical Hysteresis in Transition Metal Oxides. ACS Nano, 2012, 6, 7026-7033.	14.6	75
32	Conductivity of twin-domain-wall/surface junctions in ferroelastics: Interplay of deformation potential, octahedral rotations, improper ferroelectricity, and flexoelectric coupling. Physical Review B, 2012, 86, .	3.2	74
33	Intrinsic single-domain switching in ferroelectric materials on a nearly ideal surface. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20204-20209.	7.1	73
34	Piezoresponse force spectroscopy of ferroelectric-semiconductor materials. Journal of Applied Physics, 2007, 102, 114108.	2.5	73
35	Nanoscale electromechanics of paraelectric materials with mobile charges: Size effects and nonlinearity of electromechanical response of SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>films. Physical Review B, 2011, 84, .	3.2	73
36	Ferroelectric thin film propertiesâ€”Depolarization field and renormalization of a â€œbulkâ€•free energy coefficients. Journal of Applied Physics, 2003, 93, 1150-1159.	2.5	72

#	Article	IF	Citations
37	Materials contrast in piezoresponse force microscopy. Applied Physics Letters, 2006, 88, 232904.	3.3	71
38	Pyroelectric response of ferroelectric nanowires: Size effect and electric energy harvesting. Journal of Applied Physics, 2010, 108, .	2.5	67
39	Size-effect in layered ferrielectric CuInP2S6. Applied Physics Letters, 2016, 109, .	3.3	66
40	Giant magnetoelectric effect induced by intrinsic surface stress in ferroic nanorods. Physical Review B, 2008, 77, .	3.2	65
41	General approach for the description of size effects in ferroelectric nanosystems. Journal of Materials Science, 2009, 44, 5149-5160.	3.7	65
42	Correlated polarization switching in the proximity of a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>180</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>domain wall. Physical Review B, 2010, 82, .	3.2	65
43	Electromechanical probing of ionic currents in energy storage materials. Applied Physics Letters, 2010, 96, .	3.3	65
44	Anisotropic conductivity of uncharged domain walls in BiFeO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	3.2	64
45	Thermodynamics of nanodomain formation and breakdown in scanning probe microscopy: Landau-Ginzburg-Devonshire approach. Physical Review B, 2009, 80, .	3.2	63
46	Thermodynamic potential and phase diagram for multiferroic bismuth ferrite (BiFeO 3). Npj Computational Materials, 2017, 3, .	8.7	62
47	Direct Mapping of Ionic Transport in a Si Anode on the Nanoscale: Time Domain Electrochemical Strain Spectroscopy Study. ACS Nano, 2011, 5, 9682-9695.	14.6	61
48	Surface effect on domain wall width in ferroelectrics. Journal of Applied Physics, 2009, 106, .	2.5	59
49	Symmetry Breaking and Electrical Frustration during Tip-Induced Polarization Switching in the Nonpolar Cut of Lithium Niobate Single Crystals. ACS Nano, 2015, 9, 769-777.	14.6	58
50	Highly enhanced ferroelectricity in HfO ₂ -based ferroelectric thin film by light ion bombardment. Science, 2022, 376, 731-738.	12.6	58
51	Finite size and intrinsic field effect on the polar-active properties of ferroelectric-semiconductor heterostructures. Physical Review B, 2010, 81, .	3.2	57
52	Room-temperature paramagnetoelectric effect in magnetoelectric multiferroics Pb(Fe1/2Nb1/2)O3 and its solid solution with PbTiO3. Journal of Materials Science, 2016, 51, 5330-5342.	3.7	57
53	Ferroionic states in ferroelectric thin films. Physical Review B, 2017, 95, .	3.2	57
54	Ferroelectric thin films phase diagrams with self-polarized phase and electret state. Journal of Applied Physics, 2006, 99, 114102.	2.5	56

#	Article	IF	Citations
55	Imaging mechanism of piezoresponse force microscopy in capacitor structures. Applied Physics Letters, 2008, 92, .	3.3	56
56	Bichiral structure of ferroelectric domain walls driven by flexoelectricity. Physical Review B, 2012, 86, .	3.2	56
57	Interface dipole between two metallic oxides caused by localized oxygen vacancies. Physical Review B, 2012, 86, .	3.2	56
58	Domain nucleation and hysteresis loop shape in piezoresponse force spectroscopy. Applied Physics Letters, 2006, 89, 192901.	3.3	55
59	Mechanical Control of Electroresistive Switching. Nano Letters, 2013, 13, 4068-4074.	9.1	55
60	Epitaxial Bi₅Ti₃FeO₁₅â€“CoFe₂O₄ Pillarâ€“Matrix Multiferroic Nanostructures. ACS Nano, 2013, 7, 11079-11086.	14.6	55
61	The influence of 180Â° ferroelectric domain wall width on the threshold field for wall motion. Journal of Applied Physics, 2008, 104, 084107.	2.5	53
62	Superparaelectric phase in the ensemble of noninteracting ferroelectric nanoparticles. Physical Review B, 2008, 78, .	3.2	53
63	Spatially resolved mapping of ferroelectric switching behavior in self-assembled multiferroic nanostructures: strain, size, and interface effects. Nanotechnology, 2007, 18, 405701.	2.6	51
64	The piezoresponse force microscopy of surface layers and thin films: Effective response and resolution function. Journal of Applied Physics, 2007, 102, 074105.	2.5	51
65	Linear magnetoelectric coupling and ferroelectricity induced by the flexomagnetic effect in ferroics. Physical Review B, 2011, 84, .	3.2	51
66	Tuning the polar states of ferroelectric films via surface charges and flexoelectricity. Acta Materialia, 2017, 137, 85-92.	7.9	51
67	Structural phase transitions and electronic phenomena at 180-degree domain walls in rhombohedral BaTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	3.2	49
68	Size effects and depolarization field influence on the phase diagrams of cylindrical ferroelectric nanoparticles. Physica B: Condensed Matter, 2007, 387, 358-366.	2.7	48
69	Ionic field effect and memristive phenomena in single-point ferroelectric domain switching. Nature Communications, 2014, 5, 4545.	12.8	48
70	Piezoelectric domain walls in van der Waals antiferroelectric CuInP2Se6. Nature Communications, 2020, 11, 3623.	12.8	47
71	Giant negative electrostriction and dielectric tunability in a van der Waals layered ferroelectric. Physical Review Materials, 2019, 3, .	2.4	47
72	Screening and retardation effects on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>180</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>-domain wall motion in ferroelectrics: Wall velocity and nonlinear dynamics due to polarization-screening charge interactions. Physical Review B, 2008, 78, .	3.2	44

#	Article	IF	Citations
73	Electrostrictive and electrostatic responses in contact mode voltage modulated scanning probe microscopies. Applied Physics Letters, 2014, 104, 232901.	3.3	44
74	Nanoscale polarization profile across a 180Â° ferroelectric domain wall extracted by quantitative piezoelectric force microscopy. Journal of Applied Physics, 2008, 104, 074110.	2.5	43
75	Interaction of a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>180</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>ferroelectric domain wall with a biased scanning probe microscopy tip: Effective wall geometry and thermodynamics in Ginzburg-Landau-Devonshire theory. Physical Review B, 2008, 78, .	3.2	43
76	Probing the temperature dependence of the mechanical properties of polymers at the nanoscale with band excitation thermal scanning probe microscopy. Nanotechnology, 2009, 20, 395709.	2.6	42
77	Extrinsic size effect in piezoresponse force microscopy of thin films. Physical Review B, 2007, 76, .	3.2	40
78	Defect-driven flexochemical coupling in thin ferroelectric films. Physical Review B, 2018, 97, .	3.2	39
79	Surface polar states and pyroelectricity in ferroelastics induced by flexo-roto field. Applied Physics Letters, 2012, 100, .	3.3	38
80	Universal emergence of spatially modulated structures induced by flexoantiferrodistortive coupling in multiferroics. Physical Review B, 2013, 88, .	3.2	37
81	Exploring Mesoscopic Physics of Vacancy-Ordered Systems through Atomic Scale Observations of Topological Defects. Physical Review Letters, 2012, 109, 065702.	7.8	36
82	Influence of elastic strain gradient on the upper limit of flexocoupling strength, spatially modulated phases, and soft phonon dispersion in ferroics. Physical Review B, 2016, 94, .	3.2	36
83	Surface and finite size effects impact on the phase diagrams, polar, and dielectric properties of (Sr,Bi)Ta2O9 ferroelectric nanoparticles. Journal of Applied Physics, 2016, 119, .	2.5	35
84	Ferroelectricity induced by oxygen vacancies in relaxors with perovskite structure. Physical Review B, 2018, 98, .	3.2	35
85	Labyrinthine domains in ferroelectric nanoparticles: Manifestation of a gradient-induced morphological transition. Physical Review B, 2018, 98, .	3.2	35
86	Surface-induced piezomagnetic, piezoelectric, and linear magnetoelectric effects in nanosystems. Physical Review B, 2010, 82, .	3.2	34
87	Effect of Vegard strains on the extrinsic size effects in ferroelectric nanoparticles. Physical Review B, 2014, 90, .	3.2	34
88	Quantitative determination of tip parameters in piezoresponse force microscopy. Applied Physics Letters, 2007, 90, 212905.	3.3	32
89	Local polarization switching in the presence of surface-charged defects: Microscopic mechanisms and piezoresponse force spectroscopy observations. Physical Review B, 2008, 78, .	3.2	32
90	Strain effect on phase transitions of BaTiO3 nanowires. Acta Materialia, 2011, 59, 7189-7198.	7.9	32

#	Article	IF	Citations
91	Flexocoupling impact on size effects of piezoresponse and conductance in mixed-type ferroelectric semiconductors under applied pressure. Physical Review B, 2016, 94, .	3.2	32
92	Novel room temperature multiferroics on the base of single-phase nanostructured perovskites. Journal of Applied Physics, 2014, 116, .	2.5	31
93	Frequency dependent dynamical electromechanical response of mixed ionic-electronic conductors. Journal of Applied Physics, 2012, 111, 014107.	2.5	30
94	Misfit strain driven cation inter-diffusion across an epitaxial multiferroic thin film interface. Journal of Applied Physics, 2014, 115, .	2.5	30
95	Hypothesis Learning in Automated Experiment: Application to Combinatorial Materials Libraries. Advanced Materials, 2022, 34, e2201345.	21.0	30
96	Nonlinear space charge dynamics in mixed ionic-electronic conductors: Resistive switching and ferroelectric-like hysteresis of electromechanical response. Journal of Applied Physics, 2014, 116, 066808.	2.5	29
97	Flexocoupling impact on the generalized susceptibility and soft phonon modes in the ordered phase of ferroics. Physical Review B, 2015, 92, .	3.2	29
98	Finite size effects in ferroelectric-semiconductor thin films under open-circuit electric boundary conditions. Journal of Applied Physics, 2015, 117, .	2.5	29
99	Defect thermodynamics and kinetics in thin strained ferroelectric films: The interplay of possible mechanisms. Physical Review B, 2014, 89, .	3.2	28
100	Anion vacancy-driven magnetism in incipient ferroelectric SrTiO3 and KTaO3 nanoparticles. Journal of Applied Physics, 2011, 109, 094105.	2.5	26
101	Origin of piezoelectric response under a biased scanning probe microscopy tip across a 180<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mo>â˜</mml:mo></mml:msup></mml:math>ferroelectric domain wall. Physical Review B, 2012, 86, .	3.2	26
102	Effect of surface ionic screening on the polarization reversal scenario in ferroelectric thin films: Crossover from ferroionic to antiferroionic states. Physical Review B, 2017, 96, .	3.2	26
103	Ferroelectricity enhancement in ferroelectric nanotubes. Phase Transitions, 2007, 80, 71-77.	1.3	25
104	Three-dimensional vector electrochemical strain microscopy. Journal of Applied Physics, 2012, 112, .	2.5	25
105	Spatially Resolved Mapping of Oxygen Reduction/Evolution Reaction on Solid-Oxide Fuel Cell Cathodes with Sub-10 nm Resolution. ACS Nano, 2013, 7, 3808-3814.	14.6	25
106	Surface-induced magnetism of the solids with impurities and vacancies. Physica B: Condensed Matter, 2011, 406, 1673-1688.	2.7	24
107	Landau-Ginzburg-Devonshire theory for electromechanical hysteresis loop formation in piezoresponse force microscopy of thin films. Journal of Applied Physics, 2011, 110, .	2.5	24
108	New multiferroics based on EuxSr1â˜'xTiO3 nanotubes and nanowires. Journal of Applied Physics, 2013, 113, 024107.	2.5	24

#	Article	IF	Citations
109	Analytical description of domain morphology and phase diagrams of ferroelectric nanoparticles. Acta Materialia, 2018, 160, 109-120.	7.9	24
110	Modelling of dielectric hysteresis loops in ferroelectric semiconductors with charged defects. Journal of Physics Condensed Matter, 2004, 16, 8937-8956.	1.8	23
111	Phase diagram and domain splitting in thin ferroelectric films with incommensurate phase. Physical Review B, 2010, 81, .	3.2	23
112	Probing Local and Global Ferroelectric Phase Stability and Polarization Switching in Ordered Macroporous PZT. Advanced Functional Materials, 2011, 21, 941-947.	14.9	23
113	Lost surface waves in nonpiezoelectric solids. Physical Review B, 2017, 96, .	3.2	23
114	Ferroelectricity and ferromagnetism in EuTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>nanowires. Physical Review B, 2011, 84, .	3.2	22
115	Electric-field induced ferromagnetic phase in paraelectric antiferromagnets. Physical Review B, 2014, 89, .	3.2	22
116	Self-consistent modeling of electrochemical strain microscopy of solid electrolytes. Nanotechnology, 2014, 25, 445701.	2.6	22
117	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>p</mml:mi><mml:mtext>â^'</mml:mtext><mml:mi>n</mml:mi></mml:mrow></mml:math> Junction Dynamics Induced in a Graphene Channel by Ferroelectric-Domain Motion in the Substrate. Physical Review Applied, 2017, 8, .	3.8	22
118	Rotomagnetic coupling in fine-grained multiferroic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>BiFe</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> : Theory and experiment. Physical Review B, 2018, 97, .	3.2	22
119	Intrinsic structural instabilities of domain walls driven by gradient coupling: Meandering antiferrodistortive-ferroelectric domain walls inBiFeO3. Physical Review B, 2019, 99, .	3.2	22
120	Effect of the intrinsic width on the piezoelectric force microscopy of a single ferroelectric domain wall. Journal of Applied Physics, 2008, 103, 124110.	2.5	21
121	Electrochemical strain microscopy with blocking electrodes: The role of electromigration and diffusion. Journal of Applied Physics, 2012, 111, 014114.	2.5	21
122	Causal analysis of competing atomistic mechanisms in ferroelectric materials from high-resolution scanning transmission electron microscopy data. Npj Computational Materials, 2020, 6, .	8.7	21
123	Electric field control of three-dimensional vortex states in core-shell ferroelectric nanoparticles. Acta Materialia, 2020, 200, 256-273.	7.9	21
124	Screening and size effects on the nanodomain tailoring in ferroelectrics semiconductors. Physical Review B, 2006, 73, .	3.2	20
125	Oxygen Vacancy Injection as a Pathway to Enhancing Electromechanical Response in Ferroelectrics. Advanced Materials, 2022, 34, e2106426.	21.0	20
126	Variable temperature electrochemical strain microscopy of Sm-doped ceria. Nanotechnology, 2013, 24, 145401.	2.6	19

#	Article	IF	Citations
127	Interface control of a morphotropic phase boundary in epitaxial samarium modified bismuth ferrite superlattices. Physical Review B, 2014, 90, .	3.2	19
128	Ballistic conductivity of graphene channel with p-n junction at ferroelectric domain wall. Applied Physics Letters, 2016, 108, .	3.3	19
129	Recent Advances in Electromechanical Imaging on the Nanometer Scale: Polarization Dynamics in Ferroelectrics, Biopolymers, and Liquid Imaging. Japanese Journal of Applied Physics, 2007, 46, 5674-5685.	1.5	18
130	Analytical prediction of size-induced ferroelectricity in BaO nanowires under stress. Physical Review B, 2010, 81, .	3.2	18
131	Roto-flexoelectric coupling impact on the phase diagrams and pyroelectricity of thin SrTiO3 films. Journal of Applied Physics, 2012, 112, .	2.5	18
132	Controlling the domain structure of ferroelectric nanoparticles using tunable shells. Acta Materialia, 2020, 183, 36-50.	7.9	18
133	Local ferroelectric properties in polyvinylidene fluoride/barium lead zirconate titanate nanocomposites: Interface effect. Journal of Applied Physics, 2013, 114, .	2.5	17
134	Finite-size effects of hysteretic dynamics in multilayer graphene on a ferroelectric. Physical Review B, 2015, 91, .	3.2	17
135	Flexocoupling-induced soft acoustic modes and the spatially modulated phases in ferroelectrics. Physical Review B, 2017, 96, .	3.2	17
136	Control of polarization reversal temperature behavior by surface screening in thin ferroelectric films. Acta Materialia, 2018, 160, 57-71.	7.9	17
137	Exploring physics of ferroelectric domain walls via Bayesian analysis of atomically resolved STEM data. Nature Communications, 2020, 11, 6361.	12.8	17
138	Effective piezoelectric response of twin walls in ferroelectrics. Journal of Applied Physics, 2013, 113, .	2.5	16
139	Low symmetry monoclinic ferroelectric phase stabilized by oxygen octahedra rotations in strained Eu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Sr<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>TiO<mml:. Physical Review B, 2013, 87,	3.2	16
140	Ferroelectric domain triggers the charge modulation in semiconductors (invited). Journal of Applied Physics, 2014, 116, 066817.	2.5	16
141	Piezoresponse of ferroelectric films in ferroionic states: Time and voltage dynamics. Applied Physics Letters, 2017, 110, 182907.	3.3	16
142	Nontrivial temperature behavior of the carrier concentration in graphene on ferroelectric substrate with domain walls. Acta Materialia, 2018, 155, 302-317.	7.9	16
143	Self-consistent modelling of electrochemical strain microscopy in mixed ionic-electronic conductors: Nonlinear and dynamic regimes. Journal of Applied Physics, 2015, 118, .	2.5	15
144	Flexoinduced ferroelectricity in low-dimensional transition metal dichalcogenides. Physical Review B, 2020, 102, .	3.2	15

#	Article	IF	Citations
145	Analytical description of the size effect on pyroelectric and electrocaloric properties of ferroelectric nanoparticles. Physical Review Materials, 2019, 3, .	2.4	15
146	Multi-objective Bayesian optimization of ferroelectric materials with interfacial control for memory and energy storage applications. Journal of Applied Physics, 2021, 130, .	2.5	15
147	Local Polarization Switching in Piezoresponse Force Microscopy. Ferroelectrics, 2007, 354, 198-207.	0.6	14
148	Linear antiferrodistortive-antiferromagnetic effect in multiferroics: Physical manifestations. Physical Review B, 2015, 92, .	3.2	14
149	Size effects of ferroelectric and magnetoelectric properties of semi-ellipsoidal bismuth ferrite nanoparticles. Journal of Alloys and Compounds, 2017, 714, 303-310.	5.5	14
150	Dynamic Manipulation in Piezoresponse Force Microscopy: Creating Nonequilibrium Phases with Large Electromechanical Response. ACS Nano, 2020, 14, 10569-10577.	14.6	14
151	Stress-induced phase transitions in nanoscale <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Cu</mml:mi><mml:mi>In</mml:mi><mml:msub><mml:mi mathvariant="normal">P</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2021, 104, .	3.2	14
152	Phenomenological description of coercive field decrease in ferroelectric semiconductors with charged inhomogeneities. Physica B: Condensed Matter, 2005, 355, 236-243.	2.7	13
153	Self-consistent theory of nanodomain formation on nonpolar surfaces of ferroelectrics. Physical Review B, 2016, 93, .	3.2	13
154	3D polarization texture of a symmetric 4-fold flux closure domain in strained ferroelectric PbTiO₃ films. Journal of Materials Research, 2017, 32, 957-967.	2.6	13
155	Flexoelectricity induced spatially modulated phases in ferroics and liquid crystals. Journal of Molecular Liquids, 2018, 267, 550-559.	4.9	13
156	Chiral polarization textures induced by the flexoelectric effect in ferroelectric nanocylinders. Physical Review B, 2021, 104, .	3.2	13
157	Optical refraction index and polarization profile of ferroelectric thin films. Integrated Ferroelectrics, 2001, 38, 101-110.	0.7	12
158	Influence of Built-In Internal Electric Field on Ferroelectric Film Properties and Phase Diagram. Ferroelectrics, 2007, 354, 86-98.	0.6	12
159	Elastic Coupling between Nonferroelastic Domain Walls. Physical Review Letters, 2014, 113, 207601.	7.8	12
160	Correlation Between Corrugation-Induced Flexoelectric Polarization and Conductivity of Low-Dimensional Transition Metal Dichalcogenides. Physical Review Applied, 2021, 15, .	3.8	12
161	Size-induced appearance of ferroelectricity in thin antiferroelectric films. Physica B: Condensed Matter, 2007, 400, 106-113.	2.7	11
162	Building a free-energy functional from atomically resolved imaging: Atomic-scale phenomena in La-doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>BiFe</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 99, .	3.2	11

#	Article	IF	Citations
163	Complete Symmetry Analyses of the Surface-Induced Piezomagnetic, Piezoelectric and Linear Magnetoelectric Effects. Ferroelectrics, 2011, 417, 100-109.	0.6	10
164	Ferromagnetism induced by magnetic vacancies as a size effect in thin films of nonmagnetic oxides. Thin Solid Films, 2013, 534, 685-692.	1.8	10
165	Quantitative lateral and vertical piezoresponse force microscopy on a PbTiO3 single crystal. Journal of Applied Physics, 2016, 120, 124106.	2.5	10
166	Phenomenological description of bright domain walls in ferroelectric-antiferroelectric layered chalcogenides. Physical Review B, 2020, 102, .	3.2	10
167	Dynamical dielectric susceptibility of ferroelectric thin films and multilayers. Physics of the Solid State, 2002, 44, 953-963.	0.6	9
168	Phenomenological description of domain recording in ferroelectric semiconductors by using atomic force microscopy. Physica Status Solidi (B): Basic Research, 2005, 242, R79-R81.	1.5	9
169	Appearance of ferroelectricity in thin films of incipient ferroelectric. Physica Status Solidi (B): Basic Research, 2007, 244, 3660-3672.	1.5	9
170	Surface and finite size effect on fluctuations dynamics in nanoparticles with long-range order. Journal of Applied Physics, 2010, 107, 044101.	2.5	9
171	Impact of Free Charges on Polarization and Pyroelectricity in Antiferrodistortive Structures and Surfaces Induced by a Flexoelectric Effect. Ferroelectrics, 2012, 438, 32-44.	0.6	9
172	Mesoscopic mechanism of the domain wall interaction with elastic defects in uniaxial ferroelectrics. Journal of Applied Physics, 2013, 113, .	2.5	9
173	Landau-Ginzburg description of anomalous properties of novel room temperature multiferroics Pb(Fe1/2Ta1/2)x(Zr0.53Ti0.47)1-xO3 and Pb(Fe1/2Nb1/2)x(Zr0.53Ti0.47)1â^'xO3. Journal of Applied Physics, 2016, 119, .	2.5	9
174	Spontaneous flexoelectric effect in nanosystems (topical review). Ferroelectrics, 2016, 500, 90-98.	0.6	9
175	Effective flexoelectric and flexomagnetic response of ferroics. Solid State Physics, 2019, 70, 237-289.	0.5	9
176	Flexo-elastic control factors of domain morphology in core-shell ferroelectric nanoparticles: Soft and rigid shells. Acta Materialia, 2021, 212, 116889.	7.9	9
177	Flexosensitive polarization vortices in thin ferroelectric films. Physical Review B, 2021, 104, .	3.2	9
178	Effect of Surface Ionic Screening on Polarization Reversal and Phase Diagrams in Thin Antiferroelectric Films for Information and Energy Storage. Physical Review Applied, 2021, 16, .	3.8	9
179	Correlation radius of polarization fluctuations in the disordered ferroelectrics. Applied Physics Letters, 2002, 80, 646-648.	3.3	8
180	Phenomenological description of polarization switching in ferroelectric semiconductors with charged defects. Physica Status Solidi (B): Basic Research, 2005, 242, 947-961.	1.5	8

#	Article	IF	Citations
181	The study of screening phenomena under the nano-domain formation in ferroelectric semiconductors. Physica Status Solidi (B): Basic Research, 2006, 243, 1996-2011.	1.5	8
182	Modeling of micro- and nano-scale domain recording by high-voltage atomic force microscopy in ferroelectric semiconductors. Physica B: Condensed Matter, 2006, 373, 54-63.	2.7	8
183	Controlled mechnical modification of manganite surface with nanoscale resolution. Nanotechnology, 2014, 25, 475302.	2.6	8
184	Rotomagnetic couplings influence on the magnetic properties of antiferrodistortive antiferromagnets. Journal of Applied Physics, 2015, 118, .	2.5	8
185	Enhancement of Dielectric Properties in Epitaxial Bismuth Ferriteâ€“Bismuth Samarium Ferrite Superlattices. Advanced Electronic Materials, 2016, 2, 1600170.	5.1	8
186	Photothermoelastic contrast in nanoscale infrared spectroscopy. Applied Physics Letters, 2018, 112, 033105.	3.3	8
187	Bayesian inference in band excitation scanning probe microscopy for optimal dynamic model selection in imaging. Journal of Applied Physics, 2020, 128, 054105.	2.5	8
188	Description of ferroelectric phase transitions in solid solutions of relaxors in the framework of the random-field theory. Physics of the Solid State, 2001, 43, 1299-1306.	0.6	7
189	Static properties of relaxor ferroelectric thin films. Journal of Applied Physics, 2007, 102, 104110.	2.5	7
190	Antiferroelectric thin films phase diagrams. Phase Transitions, 2007, 80, 47-54.	1.3	7
191	Misfit strain induced magnetoelectric coupling in thin ferroic films. Journal of Applied Physics, 2009, 105, 084108.	2.5	7
192	Flexocoupling impact on the kinetics of polarization reversal. Physical Review B, 2017, 95, .	3.2	7
193	Hidden symmetry of flexoelectric coupling. Physical Review B, 2018, 98, .	3.2	7
194	Phase diagrams of single-layer two-dimensional transition metal dichalcogenides: Landau theory. Physical Review B, 2020, 101, .	3.2	7
195	Strain-polarization coupling mechanism of enhanced conductivity at the grain boundaries in BiFeO3thin films. Applied Materials Today, 2020, 20, 100740.	4.3	7
196	Predictability as a probe of manifest and latent physics: The case of atomic scale structural, chemical, and polarization behaviors in multiferroic Sm-doped BiFeO3. Applied Physics Reviews, 2021, 8, .	11.3	7
197	Investigating phase transitions from local crystallographic analysis based on statistical learning of atomic environments in 2D MoS2-ReS2. Applied Physics Reviews, 2021, 8, 011409.	11.3	7
198	Distribution of correlation radii in disordered ferroelectrics. Applied Physics Letters, 2002, 81, 4808-4810.	3.3	6

#	Article	IF	Citations
199	Top electrode size effect on hysteresis loops in piezoresponse force microscopy of Pb(Zr,Ti)O3-film on silicon structures. Journal of Applied Physics, 2012, 112, 052015.	2.5	6
200	The description of size effects in films of order-disorder ferroelectrics on the basis of the renormalized free energy. Physica Status Solidi (B): Basic Research, 2004, 241, 3495-3504.	1.5	5
201	Size effects in thin films of orderâ€“disorder ferroelectrics allowing for the depolarization field. Physica Status Solidi (B): Basic Research, 2004, 241, R52-R55.	1.5	5
202	Theoretical description of ferroelectric and pyroelectric hystereses in the disordered ferroelectric-semiconductor films. Journal of Applied Physics, 2006, 100, 014109.	2.5	5
203	Optimization of the technological conditions of producing thin sheets and strips from corrosion-resistant VNS9-Sh steel. Russian Metallurgy (Metally), 2014, 2014, 39-43.	0.5	5
204	Effect of annealing on the chargeâ€“voltage characteristics of SrBi2(TaxNb1â^'x)2O9 films. Physica B: Condensed Matter, 2015, 464, 1-8.	2.7	5
205	Effect of the removal of the surface layer of a TRIP steel sheet on its phase composition after static tension at various strain rates. Russian Metallurgy (Metally), 2016, 2016, 34-38.	0.5	5
206	Extrinsic size effect of pyroelectric response of ferroelectric films. Journal of Applied Physics, 2016, 120, 174102.	2.5	5
207	Fixed volume effect on polar properties and phase diagrams of ferroelectric semi-ellipsoidal nanoparticles. European Physical Journal B, 2018, 91, 1.	1.5	5
208	Melting of spatially modulated phases at domain wall/surface junctions in antiferrodistortive multiferroics. Physical Review B, 2020, 102, .	3.2	5
209	Strain Engineering of Ferromagnetic-Graphene-Ferroelectric Nanostructures. Physical Review Applied, 2020, 14, .	3.8	5
210	Phase diagram of mixed ferroelectrics. Ferroelectrics, 2001, 254, 27-39.	0.6	4
211	Modified Landau-Ginzburg-Devonshire Description of Disordered Ferroelectrics with Static Charged Defects. Ferroelectrics, 2004, 298, 199-209.	0.6	4
212	Random Field Distribution Function in the Relaxor Ferroelectric Thin Films. Ferroelectrics, 2004, 298, 69-81.	0.6	4
213	Random Field Based Model for Calculation of the Properties of Relaxor Ferroelectric Thin Films. Ferroelectrics, 2005, 316, 167-175.	0.6	4
214	Correlation Radius in Thin Ferroelectric Films. Ferroelectrics, 2010, 400, 243-254.	0.6	4
215	Oxide nanomaterials with properties absent in bulk (Author Review). Powder Metallurgy and Metal Ceramics, 2013, 52, 32-38.	0.8	4
216	New trends in fundamental research due to the spontaneous flexoelectric effect in nanosized and bulk ferroelectrics. Ferroelectrics, 2018, 532, 67-88.	0.6	4

#	Article	IF	Citations
217	Mixed systems of ferroelectric relaxors. Ferroelectrics, 2001, 254, 13-26.	0.6	3
218	Ferroelectric Thin Film Properties: Peculiarities Related to Mismatch-Induced Polarization. Ferroelectrics, 2005, 314, 85-95.	0.6	3
219	PREDICTED AND REALIZED IMPROVED PERFORMANCES OF PZT FILMâ€“SILICON BASED STRUCTURES FOR INTEGRATED PYROSENSORICS. Integrated Ferroelectrics, 2006, 80, 3-9.	0.7	3
220	Reply to â€œComment on â€˜Origin of piezoelectric response under a biased scanning probe microscopy tip across a 180Â° ferroelectric domain wallâ€™â€• Physical Review B, 2014, 89, .	3.2	3
221	Size effect of soft phonon dispersion in nanosized ferroics. Physical Review B, 2019, 99, .	3.2	3
222	Exploring Responses of Contact Kelvin Probe Force Microscopy in Triple-Cation Double-Halide Perovskites. Journal of Physical Chemistry C, 2021, 125, 12355-12365.	3.1	3
223	A combined theoretical and experimental study of the phase coexistence and morphotropic boundaries in ferroelectric-antiferroelectric-antiferrodistortive multiferroics. Acta Materialia, 2021, 213, 116939.	7.9	3
224	Mesoscopic structure of mixed type domain walls in multiaxial ferroelectrics. Physical Review Materials, 2020, 4, .	2.4	3
225	Size effects of static and dynamic polarization in ferroelectric thin film multilayers. Integrated Ferroelectrics, 2001, 38, 143-151.	0.7	2
226	Light Induced Micro-Domains in Ferroelectrics. Ferroelectrics, 2003, 288, 265-275.	0.6	2
227	Topological Defects in Ferroic Materials. Springer Series in Materials Science, 2016, , 181-197.	0.6	2
228	Influence of the tempering temperature on the mechanical properties and the phase composition of thin sheet TRIP steel. Russian Metallurgy (Metally), 2017, 2017, 867-870.	0.5	2
229	Control of Domain States in Rhombohedral Lead Zirconate Titanate Films via Misfit Strains and Surface Charges. Advanced Electronic Materials, 2022, 8, 2100386.	5.1	2
230	Phenomenological theory of defect driven flexo-chemical phenomena in ferroics. Ferroelectrics, 2020, 569, 62-69.	0.6	2
231	Chemical control of polarization in thin strained films of a multiaxial ferroelectric: Phase diagrams and polarization rotation. Physical Review B, 2022, 105, .	3.2	2
232	Observability of negative capacitance of a ferroelectric film: Theoretical predictions. Physical Review B, 2022, 105, .	3.2	2
233	Dynamic control of ferroionic states in ferroelectric nanoparticles. Acta Materialia, 2022, 237, 118138.	7.9	2
234	The Influence of Mismatch-Induced Field on Thin Ferroelectric Film Size Effects. Integrated Ferroelectrics, 2004, 64, 17-38.	0.7	1

#	Article	IF	Citations
235	Ferroelectric Materials: Probing Local and Global Ferroelectric Phase Stability and Polarization Switching in Ordered Macroporous PZT (Adv. Funct. Mater. 5/2011). Advanced Functional Materials, 2011, 21, 802-802.	14.9	1
236	Untangling Coupled Order Parameters at Complex Oxide Interfaces with Aberration-Corrected STEM and EELS. Microscopy and Microanalysis, 2012, 18, 318-319.	0.4	1
237	Ferroic properties of nanosized SnO₂. Phase Transitions, 2013, 86, 903-909.	1.3	1
238	Effect of the phase composition of the surface layer on the mechanical properties of 23Kh15N5AM3-Sh TRIP steel sheets. Russian Metallurgy (Metally), 2016, 2016, 361-364.	0.5	1
239	Calculation of phase diagrams for solid solutions of ferroelectrics. Physics of the Solid State, 2001, 43, 916-922.	0.6	0
240	Origin of giant dielectric response in ferroelectric thin film multilayers. Integrated Ferroelectrics, 2001, 38, 181-188.	0.7	0
241	Temperature Dependence of Correlation Radius in Ferroelectric Relaxors. Ferroelectrics, 2002, 270, 227-234.	0.6	0
242	<title>Correlation effects in the disordered ferroelectrics</title>. , 2003, , .		0
243	Mismatch-Induced Electric Field as Reason of Self-Polarization Phenomenon and Electret State Appearance in the Strained Ultrathin Ferroelectric Films. Ferroelectrics, 2006, 335, 257-268.	0.6	0
244	Electrode size effect under PFM characterization of PZT-film on silicon structures with micro- and nanometric top electrodes. , 2011, , .		0
245	Unconventional Antiferroelectric Phase Stabilization in Thin Film BiFeO3 by Interface-Induced Rotoelectric Coupling Effect. Microscopy and Microanalysis, 2012, 18, 412-413.	0.4	0
246	Publisherâ€™s Note: Bichiral structure of ferroelectric domain walls driven by flexoelectricity [Phys. Rev. B86, 134102 (2012)]. Physical Review B, 2012, 86, .	3.2	0
247	Effect of the strain rate on the mechanical properties of a sheet TRIP steel with a high martensite content. Russian Metallurgy (Metally), 2017, 2017, 319-321.	0.5	0
248	Kinetics of interfacial microstructural variation across insulator-thermoelectric semiconductor interface and its effects on thermoelectric properties of magnesium silicide thin films. Materialia, 2019, 7, 100375.	2.7	0
249	The Structure of a 180-Degree Domain Wall near the Surface of Ferroics. Ukrainian Journal of Physics, 2015, 60, 627-633.	0.2	0
250	Influence of Electrocapillarity on the Water Meniscus Shape In The Atomic Force Microscopy. Ukrainian Journal of Physics, 2015, 60, 799-807.	0.2	0
251	Polarization-dependent Conductivity of Grain Boundaries in BiFeO3 Thin Films. , 0, , .		0
252	Mesoscopic theory of defect orderingâ€“disordering transitions in thin oxide films. Scientific Reports, 2020, 10, 22377.	3.3	0

#	Article	IF	Citations
253	Bayesian Microscopy: Model Selection for Extracting Weak Nonlinearities from Scanning Probe Microscopy Data. Microscopy and Microanalysis, 2020, 26, 2126-2127.	0.4	0
254	Size Effect of Local Current-Voltage Characteristics of MX ₂ Nanoflakes: Local Density of States Reconstruction from Scanning Tunneling Microscopy Experiments. Physical Review Applied, 2022, 17, .	3.8	0