

Nikolay A Pertsev

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5056226/publications.pdf>

Version: 2024-02-01

80
papers

5,884
citations

147566

31
h-index

71532

76
g-index

80
all docs

80
docs citations

80
times ranked

4020
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Mechanical Boundary Conditions on Phase Diagrams of Epitaxial Ferroelectric Thin Films. Physical Review Letters, 1998, 80, 1988-1991.	2.9	1,518
2	Phase transitions and strain-induced ferroelectricity in SrTiO ₃ epitaxial thin films. Physical Review B, 2000, 61, R825-R829.	1.1	475
3	Theoretical current-voltage characteristics of ferroelectric tunnel junctions. Physical Review B, 2005, 72, .	1.1	369
4	Phase diagrams and physical properties of single-domain epitaxial Pb(Zr _{1-x} Ti _x)O ₃ thin films. Physical Review B, 2003, 67, .	1.1	282
5	Resistive switching in metal/ferroelectric/metal junctions. Applied Physics Letters, 2003, 83, 4595-4597.	1.5	270
6	Thermodynamic theory of epitaxial ferroelectric thin films with dense domain structures. Physical Review B, 2001, 64, .	1.1	227
7	Ferroelectric thin films grown on tensile substrates: Renormalization of the Curie-Weiss law and apparent absence of ferroelectricity. Journal of Applied Physics, 1999, 85, 1698-1701.	1.1	143
8	Energetics and geometry of 90° domain structures in epitaxial ferroelectric and ferroelastic films. Journal of Applied Physics, 1995, 78, 6170-6180.	1.1	137
9	Ultrathin epitaxial ferroelectric films grown on compressive substrates: Competition between the surface and strain effects. Journal of Applied Physics, 2002, 91, 2247-2254.	1.1	135
10	Polarization Instability in Polydomain Ferroelectric Epitaxial Thin Films and the Formation of Heterophase Structures. Physical Review Letters, 2000, 84, 3722-3725.	2.9	134
11	Giant electrode effect on tunnelling electroresistance in ferroelectric tunnel junctions. Nature Communications, 2014, 5, 5414.	5.8	123
12	Crossing an Interface: Ferroelectric Control of Tunnel Currents in Magnetic Complex Oxide Heterostructures. Advanced Functional Materials, 2010, 20, 2436-2441.	7.8	120
13	Coercive field of ultrathin Pb(Zr _{0.52} Ti _{0.48})O ₃ epitaxial films. Applied Physics Letters, 2003, 83, 3356-3358.	1.5	116
14	Depolarizing-field-mediated 180° switching in ferroelectric thin films with 90° domains. Applied Physics Letters, 2002, 80, 1424-1426.	1.5	101
15	Equilibrium states and phase transitions in epitaxial ferroelectric thin films. Ferroelectrics, 1999, 223, 79-90.	0.3	96
16	Giant magnetoelectric effect via strain-induced spin reorientation transitions in ferromagnetic films. Physical Review B, 2008, 78, .	1.1	93
17	Effect of external stress on ferroelectricity in epitaxial thin films. Physical Review B, 2002, 66, .	1.1	83
18	Dynamics of ferroelectric nanodomains in BaTiO ₃ epitaxial thin films via piezoresponse force microscopy. Nanotechnology, 2008, 19, 375703.	1.3	79

#	ARTICLE	IF	CITATIONS
19	Effect of anisotropic in-plane strains on phase states and dielectric properties of epitaxial ferroelectric thin films. Applied Physics Letters, 2005, 86, 052903.	1.5	78
20	Elastic Stabilization of a Single-Domain Ferroelectric State in Nanoscale Capacitors and Tunnel Junctions. Physical Review Letters, 2007, 98, 257603.	2.9	71
21	Magnetic tunnel junction on a ferroelectric substrate. Applied Physics Letters, 2009, 95, .	1.5	70
22	Resistive switching via the converse magnetoelectric effect in ferromagnetic multilayers on ferroelectric substrates. Nanotechnology, 2010, 21, 475202.	1.3	70
23	Polarization states of polydomain epitaxial $\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ thin films and their dielectric properties. Physical Review B, 2006, 73, .	1.1	68
24	Electric-field switching of perpendicularly magnetized multilayers. NPG Asia Materials, 2015, 7, e198-e198.	3.8	65
25	Nonlinear local piezoelectric deformation in ferroelectric thin films studied by scanning force microscopy. Journal of Applied Physics, 2005, 97, 104105.	1.1	64
26	Polarization and lattice strains in epitaxial BaTiO_3 films grown by high-pressure sputtering. Journal of Applied Physics, 2007, 101, 114106.	1.1	58
27	Impact of the top-electrode material on the permittivity of single-crystalline $\text{Ba}_{0.7}\text{Sr}_{0.3}\text{TiO}_3$ thin films. Applied Physics Letters, 2005, 86, 202908.	1.5	41
28	Sharp ferroelectric phase transition in strained single-crystalline $\text{SrRuO}_3/\text{Ba}_{0.7}\text{Sr}_{0.3}\text{TiO}_3/\text{SrRuO}_3$ capacitors. Applied Physics Letters, 2003, 83, 5011-5013.	1.5	38
29	Phase diagrams of single-domain ferroelectric-dielectric superlattices. Applied Physics Letters, 2007, 90, 252910.	1.5	35
30	Thermodynamics of pseudoproper and improper ferroelastic inclusions and polycrystals: Effect of elastic clamping on phase transitions. Physical Review B, 2000, 61, 902-908.	1.1	33
31	Quasi-one-dimensional domain walls in ferroelectric ceramics: Evidence from domain dynamics and wall roughness measurements. Journal of Applied Physics, 2011, 110, .	1.1	33
32	Strong enhancement of the direct magnetoelectric effect in strained ferroelectric-ferromagnetic thin-film heterostructures. Physical Review B, 2009, 80, .	1.1	32
33	Wedgelike ultrathin epitaxial BaTiO_3 films for studies of scaling effects in ferroelectrics. Applied Physics Letters, 2008, 93, 072902.	1.5	31
34	Strain sensitivity of polarization in perovskite ferroelectrics. Applied Physics Letters, 2008, 93, 122903.	1.5	30
35	Origin of easy magnetization switching in magnetic tunnel junctions with voltage-controlled interfacial anisotropy. Scientific Reports, 2013, 3, 2757.	1.6	29
36	Phase states of nanocrystalline ferroelectric ceramics and their dielectric properties. Journal of Applied Physics, 2005, 97, 114315.	1.1	28

#	ARTICLE	IF	CITATIONS
37	Magnetoresistive Memory with Ultralow Critical Current for Magnetization Switching. <i>Advanced Functional Materials</i> , 2012, 22, 4696-4703.	7.8	27
38	Magnetization dynamics and spin pumping induced by standing elastic waves. <i>Physical Review B</i> , 2016, 94, .	1.1	26
39	Thickness dependence of intrinsic dielectric response and apparent interfacial capacitance in ferroelectric thin films. <i>Journal of Applied Physics</i> , 2007, 101, 074102.	1.1	25
40	Thermodynamic theory of strain-mediated direct magnetoelectric effect in multiferroic film-substrate hybrids. <i>Nanotechnology</i> , 2010, 21, 265701.	1.3	25
41	Subsurface nanodomains with in-plane polarization in uniaxial ferroelectrics via scanning force microscopy. <i>Physical Review B</i> , 2013, 88, .	1.1	25
42	Effect of finite domain-wall width on the domain structures of epitaxial ferroelectric and ferroelastic thin films. <i>Journal of Applied Physics</i> , 2001, 89, 1355-1366.	1.1	23
43	In-plane polarization states and their instabilities in polydomain epitaxial ferroelectric thin films. <i>Applied Physics Letters</i> , 2001, 78, 530-532.	1.5	22
44	Optical Excitation of Propagating Magnetostatic Waves in an Epitaxial Galfenol Film by Ultrafast Magnetic Anisotropy Change. <i>Physical Review Applied</i> , 2019, 12, .	1.5	21
45	Enhancing permittivity of ferroelectric superlattices via composition tuning. <i>Physical Review B</i> , 2010, 81, .	1.1	20
46	Giant magnetocapacitance of strained ferroelectric-ferromagnetic hybrids. <i>Physical Review B</i> , 2012, 85, .	1.1	20
47	Piezoelectric nonlinearity of Pb(Zr,Ti)O ₃ thin films probed by scanning force microscopy. <i>Applied Physics Letters</i> , 2002, 81, 3025-3027.	1.5	19
48	Giant direct magnetoelectric effect in strained multiferroic heterostructures. <i>Physical Review B</i> , 2012, 85, .	1.1	18
49	Ferromagnetic resonance in epitaxial films: Effects of lattice strains and voltage control via ferroelectric substrate. <i>Physical Review B</i> , 2011, 84, .	1.1	16
50	Dynamical spin phenomena generated by longitudinal elastic waves traversing CoFe_2O_4 films and heterostructures. <i>Physical Review B</i> , 2019, 100, .	1.1	16
51	Strain-mediated electric-field control of multiferroic domain structures in ferromagnetic films. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	13
52	<i>In situ</i> hard x-ray photoemission spectroscopy of barrier-height control at metal/PMN-PT interfaces. <i>Physical Review B</i> , 2016, 93, .	1.1	13
53	Coupled magnetic and elastic dynamics generated by a shear wave propagating in ferromagnetic heterostructure. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	12
54	Converse magnetoelectric effect via strain-driven magnetization reorientations in ultrathin ferromagnetic films on ferroelectric substrates. <i>Physical Review B</i> , 2015, 92, .	1.1	11

#	ARTICLE	IF	CITATIONS
55	Interfacial nanolayers and permittivity of ferroelectric superlattices. Journal of Applied Physics, 2011, 109, 126101.	1.1	10
56	Low-temperature evolution of local polarization properties of PbZr _{0.65} Ti _{0.35} O ₃ thin films probed by piezoresponse force microscopy. Applied Physics Letters, 2014, 104, .	1.5	10
57	Dynamic converse magnetoelectric effect in ferromagnetic nanostructures with electric-field-dependent interfacial anisotropy. Physical Review B, 2014, 90, .	1.1	9
58	Energy-efficient spin injector into semiconductors driven by elastic waves. Physical Review Materials, 2021, 5, .	0.9	9
59	Spin-orbit torque control of spin waves in a ferromagnetic waveguide. Physical Review B, 2021, 104, .	1.1	9
60	Ferroelectric-ferromagnetic multilayers: A magnetoelectric heterostructure with high output charge signal. Journal of Applied Physics, 2014, 116, .	1.1	8
61	Blockage of domain growth by nanoscale heterogeneities in a relaxor ferroelectric Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ . Journal of Applied Physics, 2015, 117, 034101.	1.1	8
62	Magnetic tunnel junction on a magnetostrictive substrate: An ultrasensitive magnetic-field sensor. Applied Physics Letters, 2016, 109, .	1.5	8
63	Phase diagrams of ferroelectric nanocrystals strained by an elastic matrix. Journal of Physics Condensed Matter, 2018, 30, 015701.	0.7	8
64	Laser-Induced Magnetization Precession in Individual Magnetoelastic Domains of a Multiferroic $\langle \text{Co} \rangle_{40} \langle \text{Fe} \rangle_{15} \langle \text{Mn} \rangle_{8} \langle \text{B} \rangle_{20} \langle \text{O} \rangle$ Physical Review Applied, 2020, 14, .	1.5	8
65	Elastic interaction between 90° domain walls and misfit dislocations in epitaxial ferroelectric thin films. Integrated Ferroelectrics, 2001, 32, 343-354.	0.3	7
66	Effects of domain formation on the dielectric properties of ferroelectric thin films. Integrated Ferroelectrics, 2001, 32, 235-249.	0.3	7
67	Free-standing ferroelectric multilayers: Crossover from thin-film to bulk behavior. Journal of Applied Physics, 2011, 110, .	1.1	7
68	Low-temperature dynamics of ferroelectric domains in PbZr _{0.3} Ti _{0.7} O ₃ epitaxial thin films studied by piezoresponse force microscopy. Applied Physics Letters, 2015, 107, .	1.5	6
69	Nanoscale Spin Injector Driven by a Microwave Voltage. Physical Review Applied, 2020, 14, .	1.5	6
70	Polarization-controlled spin reorientation transition and resistive switching in ferromagnetic-ferroelectric nanostructures and tunnel junctions. Physical Review B, 2014, 90, .	1.1	5
71	Electrical Tuning of Ferromagnetic Resonance in Thin-Film Nanomagnets Coupled to Piezoelectrically Active Substrates. Physical Review Applied, 2018, 10, .	1.5	5
72	Excitation of high-frequency magnon modes in magnetoelastic films by short strain pulses. Physical Review Materials, 2020, 4, .	0.9	5

#	ARTICLE	IF	CITATIONS
73	Spin reorientation transition in CoFeB/MgO/CoFeB tunnel junction enabled by ultrafast laser-induced suppression of perpendicular magnetic anisotropy. <i>Nanoscale</i> , 2022, 14, 8153-8162.	2.8	5
74	Polarization states and dielectric responses of elastically clamped ferroelectric nanocrystals. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	4
75	Spin injection and pumping generated by a direct current flowing through a magnetic tunnel junction. <i>Physical Review B</i> , 2019, 99, .	1.1	4
76	Dielectric properties of ferroelectric nanocomposites: effects of thermal stresses and filler shape anisotropy. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 435301.	0.7	3
77	Superconducting straintronics via the proximity effect in superconductor-ferromagnet nanostructures. <i>Nanoscale</i> , 2020, 12, 648-657.	2.8	3
78	Acoustically Excited Magnetic Dynamics and Spin Flow in Spin-Valve Structures. <i>Physical Review Applied</i> , 2022, 17, .	1.5	2
79	Comment on "Theory of Giant Electromechanical Response from Ferroelectric Bilayers with Polydomain Structures due to Interlayer and Interdomain Coupling". <i>Physical Review Letters</i> , 2011, 107, 139701; author reply 139702.	2.9	1
80	Current-driven magnetization switching and dynamic spin reorientation transition in magnetic tunnel junctions. <i>Journal of Physics: Conference Series</i> , 2019, 1400, 077005.	0.3	0