

# Abhijit Pramanick

## List of Publications by Year in descending order

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430874

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docs citations

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times ranked

1921  
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#	ARTICLE	IF	CITATIONS
1	Origins of Electro-Mechanical Coupling in Polycrystalline Ferroelectrics During Subcoercive Electrical Loading. <i>Journal of the American Ceramic Society</i> , 2011, 94, 293-309.	3.8	310
2	Domains, Domain Walls and Defects in Perovskite Ferroelectric Oxides: A Review of Present Understanding and Recent Contributions. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2012, 37, 243-275.	12.3	88
3	Enhanced piezoelectricity and nature of electric-field induced structural phase transformation in textured lead-free piezoelectric Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> -BaTiO <sub>3</sub> ceramics. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	77
4	Effect of poling on nanodomains and nanoscale structure in A-site disordered lead-free piezoelectric Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> -BaTiO <sub>3</sub> . <i>Journal of Materials Chemistry C</i> , 2014, 2, 8423-8431.	5.5	75
5	Origin of high piezoelectric response in A-site disordered morphotropic phase boundary composition of lead-free piezoelectric 0.93(Na <sub>0.5</sub> Bi <sub>0.5</sub> )TiO <sub>3</sub> -0.07BaTiO <sub>3</sub> . <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	74
6	Self-healable electroluminescent devices. <i>Light: Science and Applications</i> , 2018, 7, 102.	16.6	71
7	Subcoercive Cyclic Electrical Loading of Lead Zirconate Titanate Ceramics II: Time-Resolved X-Ray Diffraction. <i>Journal of the American Ceramic Society</i> , 2009, 92, 2300-2310.	3.8	70
8	Subcoercive Cyclic Electrical Loading of Lead Zirconate Titanate Ceramics I: Nonlinearities and Losses in the Converse Piezoelectric Effect. <i>Journal of the American Ceramic Society</i> , 2009, 92, 2291-2299.	3.8	68
9	Time-Resolved Characterization of Ferroelectrics Using High-Energy X-Ray Diffraction. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009, 56, 1539-1545.	3.0	55
10	Time-resolved and orientation-dependent electric-field-induced strains in lead zirconate titanate ceramics. <i>Applied Physics Letters</i> , 2007, 90, 172909.	3.3	47
11	Stabilization of Polar Nanoregions in Pb-free Ferroelectrics. <i>Physical Review Letters</i> , 2018, 120, 207603.	7.8	46
12	Effect of A-site substitutions on energy storage properties of BaTiO <sub>3</sub> -BiScO <sub>3</sub> weakly coupled relaxor ferroelectrics. <i>Journal of the American Ceramic Society</i> , 2019, 102, 5919-5933.	3.8	36
13	Microdomain dynamics in single-crystal BaTiO <sub>3</sub> during paraelectric-ferroelectric phase transition measured with time-of-flight neutron scattering. <i>Physical Review B</i> , 2015, 92, .	3.2	32
14	Evaluation of Co and perovskite Cr-blocking thin films on SOFC interconnects. <i>Solid State Ionics</i> , 2010, 181, 1294-1302.	2.7	30
15	Structural modulations and magnetic properties of off-stoichiometric Ni-Mn-Ga magnetic shape memory alloys. <i>Physical Review B</i> , 2012, 85, .	3.2	30
16	High-throughput evaluation of domain switching in piezoelectric ceramics and application to PbZr <sub>0.6</sub> Ti <sub>0.4</sub> O <sub>3</sub> doped with La and Fe. <i>Applied Physics Letters</i> , 2008, 93, 152904.	3.3	25
17	In situ neutron diffraction studies of a commercial, soft lead zirconate titanate ceramic: response to electric fields and mechanical stress. <i>Applied Physics A: Materials Science and Processing</i> , 2010, 99, 557-564.	2.3	22
18	Measurement of Structural Changes in Tetragonal PZT Ceramics under Static and Cyclic Electric Fields Using a Laboratory X-ray Diffractometer. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009, 56, 1546-1554.	3.0	18

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19	Soft phonon mode dynamics in Aurivillius-type structures. <i>Physical Review B</i> , 2017, 96, .	3.2	17
20	Perspective on emerging views on microscopic origin of relaxor behavior. <i>Journal of Materials Research</i> , 2021, 36, 1015-1036.	2.6	17
21	Synthesis and Microstructure of Laser Surface Alloyed Al-Sn-Si Layer on Commercial Aluminum Substrate. <i>Journal of Materials Research</i> , 2005, 20, 1580-1589.	2.6	16
22	Lattice parameter determination using a curved position-sensitive detector in reflection geometry and application to $\text{Sm}_{1/2}\text{Nd}_{1/2}\text{CeO}_2$ ceramics. <i>Journal of Applied Crystallography</i> , 2009, 42, 490-495.	4.5	16
23	Origin of dielectric relaxor behavior in PVDF-based copolymer and terpolymer films. <i>AIP Advances</i> , 2018, 8, .	1.3	15
24	Real-space phase field investigation of evolving magnetic domains and twin structures in a ferromagnetic shape memory alloy. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	14
25	Ferroelectric to paraelectric phase transition mechanism in poled PVDF-TrFE copolymer films. <i>Physical Review B</i> , 2017, 96, .	3.2	14
26	Large electromechanical strain and unconventional domain switching near phase convergence in a Pb-free ferroelectric. <i>Communications Physics</i> , 2020, 3, .	5.3	14
27	Kinetics of Magnetoelastic Twin-Boundary Motion in Ferromagnetic Shape-Memory Alloys. <i>Physical Review Letters</i> , 2014, 112, .	7.8	13
28	High energy storage efficiency and thermal stability of A-site deficient and 110 textured $\text{BaTiO}_3$ - $\text{BiScO}_3$ thin films. <i>Journal of the American Ceramic Society</i> , 2020, 103, 3168-3177.	3.8	13
29	In situ neutron diffraction study of twin reorientation and pseudoplastic strain in Ni-Mn-Ga single crystals. <i>Scripta Materialia</i> , 2011, 65, 540-543.	5.2	12
30	Local structural mechanism for phase transition and ferroelectric polarization in the mixed oxide $\text{K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ . <i>Physical Review B</i> , 2021, 103, .	3.2	11
31	Strain incompatibility and residual strains in ferroelectric single crystals. <i>Scientific Reports</i> , 2012, 2, 929.	3.3	10
32	High Energy Efficiency and Thermal Stability of $\text{BaTiO}_3$ - $\text{BiScO}_3$ Thin Films Based on Defects Engineering. <i>ACS Applied Electronic Materials</i> , 2021, 3, 1097-1106.	4.3	9
33	A Local Atomic Mechanism for Monoclinic-Tetragonal Phase Boundary Creation in Li-Doped $\text{Na}_{0.5}\text{K}_{0.5}\text{NbO}_3$ Ferroelectric Solid Solution. <i>Inorganic Chemistry</i> , 2022, 61, 4335-4349.	4.0	9
34	Direct in situ measurement of coupled magnetostructural evolution in a ferromagnetic shape memory alloy and its theoretical modeling. <i>Physical Review B</i> , 2015, 92, .	3.2	8
35	Nanoscale Atomic Displacements Ordering for Enhanced Piezoelectric Properties in Lead-Free $\text{ABO}_3$ Ferroelectrics. <i>Advanced Materials</i> , 2015, 27, 4330-4335.	21.0	8
36	Relaxor behavior and electrothermal properties of Sn- and Nb-modified $(\text{Ba,Ca})\text{TiO}_3$ Pb-free ferroelectric. <i>Journal of Materials Research</i> , 2020, 35, 1017-1027.	2.6	8

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37	Atomic structural mechanism for ferroelectric-antiferroelectric transformation in perovskite <math xmlns:mml="http://www.w3.org/1998/Math/MathML" > NaNbO <sub>3</sub> </math> Physical Review B, 2022, 105.	3.2	8
38	Dynamical origins of weakly coupled relaxor behavior in Sn-doped <math xmlns:mml="http://www.w3.org/1998/Math/MathML" > Ba<sub>1-x</sub>Sr<sub>x</sub>O<sub>3</sub> </math> Physical Review B, 2021, 103, .	3.2	7
39	Characterization of Magnetoelastic Coupling in Ferromagnetic Shape Memory Alloys Using Neutron Diffraction. Jom, 2013, 65, 54-64.	1.9	6
40	Origins of large enhancement in electromechanical coupling for nonpolar directions in ferroelectric BaTiO <sub>3</sub> . Physical Review B, 2013, 88, .	3.2	5
41	Critical Effect of Film-Electrode Interface on Enhanced Energy Storage Performance of BaTiO <sub>3</sub> /BiScO <sub>3</sub> Ferroelectric Thin Films. ACS Applied Electronic Materials, 2021, 3, 4726-4733.	4.3	5
42	Polarization Mechanisms in P(VDF-TrFE) Ferroelectric Thin Films. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800340.	2.4	4
43	Enhanced dielectric permittivity and relaxor behavior in thermally annealed P(VDF-TrFE) copolymer films. Applied Physics Letters, 2020, 117, .	3.3	4
44	Polarized neutron diffraction at a spallation source for magnetic studies. Journal of Applied Crystallography, 2012, 45, 1024-1029.	4.5	3
45	Effects of configurational changes on molecular dynamics in polyvinylidene fluoride and poly(vinylidene fluoride-trifluoroethylene) ferroelectric polymers. Applied Physics Letters, 2015, 107, .	3.3	3
46	Unraveling magneto-structural coupling of Ni <sub>2</sub> MnGa alloy under the application of stress and magnetic field using <i>in situ</i> polarized neutron diffraction. Applied Physics Letters, 2020, 117, .	3.3	3
47	Oxygen octahedral tilt ordering in (Na <sub>1/2</sub> Bi <sub>1/2</sub> )TiO <sub>3</sub> ferroelectric thin films. Applied Physics Letters, 2020, 116, .	3.3	2
48	Time-Resolved, Electric-Field-Induced Domain Switching and Strain in Ferroelectric Ceramics and Crystals. Springer Series in Solid-state Sciences, 2009, , 149-175.	0.3	2
49	Broad Distribution of Local Polar States Generates Large Electrothermal Properties in Pb-Free Relaxor Ferroelectrics. Chemistry of Materials, 0, , .	6.7	2
50	High-resolution 2-D Bragg diffraction reveal heterogeneous domain transformation behavior in a bulk relaxor ferroelectric. Applied Physics Letters, 2016, 109, 092907.	3.3	1
51	Characterization of Pb-Free KNbO <sub>3</sub> - and (Na,Bi)TiO <sub>3</sub> -Based Piezoelectric Single-Crystals Using X-ray and Neutron Diffraction. Crystals, 2018, 8, 49.	2.2	1
52	A Structural Study of 0.06LiNbO <sub>3</sub> -0.94K <sub>0.5</sub> Na <sub>0.5</sub> NbO <sub>3</sub> from Neutron Total Scattering Analysis. Crystals, 2021, 11, 395.	2.2	1
53	Point defect induced incommensurate dipole moments in the <math xmlns:mml="http://www.w3.org/1998/Math/MathML" > K<sub>1-x</sub>Ca<sub>x</sub>Nb <sub>2&lt;/sub&gt;O<sub>10&lt;/sub&gt; &lt;/math&gt; Dion-Jacobson layered perovskite. Physical Review B, 2021, 104, .</sub></sub>	2.2	1
54	Time-resolved characterization of domain switching in ferroelectrics using X-ray and neutron diffraction. , 2008, , .		0

#	ARTICLE	IF	CITATIONS
55	Time-resolved measurement of structural changes in lead zirconate titanate ceramics under cyclic electric fields. , 2008, , .		0
56	Ferroelectric Materials: Nanoscale Atomic Displacements Ordering for Enhanced Piezoelectric Properties in Lead-Free ABO <sub>3</sub> Ferroelectrics (Adv. Mater. 29/2015). Advanced Materials, 2015, 27, 4329-4329.	21.0	0