

Sergei V Kalinin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

263
papers

13,566
citations

65
h-index

107
g-index

270
ext. papers

14,849
ext. citations

9.1
avg. IF

6.56
L-index

#	Paper	IF	Citations
263	Hypothesis learning in automated experiment: application to combinatorial materials libraries.. <i>Advanced Materials</i> , 2022 , e2201345	24	3
262	Tunable Microwave Conductance of Nanodomains in Ferroelectric PbZr 0.2 Ti 0.8 O 3 Thin Film. <i>Advanced Electronic Materials</i> , 2022 , 8, 2100952	6.4	0
261	Highly enhanced ferroelectricity in HfO-based ferroelectric thin film by light ion bombardment.. <i>Science</i> , 2022 , 376, 731-738	33.3	6
260	Multi-objective Bayesian optimization of ferroelectric materials with interfacial control for memory and energy storage applications. <i>Journal of Applied Physics</i> , 2021 , 130, 204102	2.5	0
259	Ferroelectric and Charge Transport Properties in Strain-Engineered Two-Dimensional Lead Iodide Perovskites. <i>Chemistry of Materials</i> , 2021 , 33, 4077-4088	9.6	2
258	Exploring Responses of Contact Kelvin Probe Force Microscopy in Triple-Cation Double-Halide Perovskites. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 12355-12365	3.8	0
257	Ensemble learning-iterative training machine learning for uncertainty quantification and automated experiment in atom-resolved microscopy. <i>Npj Computational Materials</i> , 2021 , 7,	10.9	4
256	Automated and Autonomous Experiments in Electron and Scanning Probe Microscopy. <i>ACS Nano</i> , 2021 ,	16.7	11
255	Ferroelastic Nanodomain-mediated Mechanical Switching of Ferroelectricity in Thick Epitaxial Films. <i>Nano Letters</i> , 2021 , 21, 445-452	11.5	2
254	Toward Decoding the Relationship between Domain Structure and Functionality in Ferroelectrics via Hidden Latent Variables. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 1693-1703	9.5	14
253	Reducing Time to Discovery: Materials and Molecular Modeling, Imaging, Informatics, and Integration. <i>ACS Nano</i> , 2021 , 15, 3971-3995	16.7	11
252	Predictability as a probe of manifest and latent physics: The case of atomic scale structural, chemical, and polarization behaviors in multiferroic Sm-doped BiFeO ₃ . <i>Applied Physics Reviews</i> , 2021 , 8, 011403	17.3	2
251	A combined theoretical and experimental study of the phase coexistence and morphotropic boundaries in ferroelectric-antiferroelectric-antiferrodistortive multiferroics. <i>Acta Materialia</i> , 2021 , 213, 116939	8.4	1
250	Disentangling Ferroelectric Wall Dynamics and Identification of Pinning Mechanisms via Deep Learning. <i>Advanced Materials</i> , 2021 , 33, e2103680	24	7
249	Probing polarization dynamics at specific domain configurations: Computer-vision based automated experiment in piezoresponse force microscopy. <i>Applied Physics Letters</i> , 2021 , 119, 132902	3.4	3
248	Probing Metastable Domain Dynamics Automated Experimentation in Piezoresponse Force Microscopy. <i>ACS Nano</i> , 2021 , 15, 15096-15103	16.7	2
247	Unraveling the hysteretic behavior at double cations-double halides perovskite - electrode interfaces. <i>Nano Energy</i> , 2021 , 89, 106428	17.1	3

246	Piezoresponse amplitude and phase quantified for electromechanical characterization. <i>Journal of Applied Physics</i> , 2020 , 128, 171105	2.5	10
245	Machine learning-based multidomain processing for texture-based image segmentation and analysis. <i>Applied Physics Letters</i> , 2020 , 116, 044103	3.4	12
244	High-Pressure, High-Temperature Synthesis and Characterization of Polar and Magnetic LuCrWO. <i>Inorganic Chemistry</i> , 2020 , 59, 3579-3584	5.1	3
243	Imaging mechanism for hyperspectral scanning probe microscopy via Gaussian process modelling. <i>Npj Computational Materials</i> , 2020 , 6,	10.9	9
242	Mesoscopic structure of mixed type domain walls in multiaxial ferroelectrics. <i>Physical Review Materials</i> , 2020 , 4,	3.2	2
241	Mesoscopic theory of defect ordering-disordering transitions in thin oxide films. <i>Scientific Reports</i> , 2020 , 10, 22377	4.9	
240	Reconstruction and uncertainty quantification of lattice Hamiltonian model parameters from observations of microscopic degrees of freedom. <i>Journal of Applied Physics</i> , 2020 , 128, 214103	2.5	1
239	Dynamic Manipulation in Piezoresponse Force Microscopy: Creating Nonequilibrium Phases with Large Electromechanical Response. <i>ACS Nano</i> , 2020 , 14, 10569-10577	16.7	7
238	Fast Scanning Probe Microscopy via Machine Learning: Non-Rectangular Scans with Compressed Sensing and Gaussian Process Optimization. <i>Small</i> , 2020 , 16, e2002878	11	19
237	Super-resolution and signal separation in contact Kelvin probe force microscopy of electrochemically active ferroelectric materials. <i>Journal of Applied Physics</i> , 2020 , 128, 055101	2.5	3
236	Melting of spatially modulated phases at domain wall/surface junctions in antiferrodistortive multiferroics. <i>Physical Review B</i> , 2020 , 102,	3.3	5
235	Tensor factorization for elucidating mechanisms of piezoresponse relaxation via dynamic Piezoresponse Force Spectroscopy. <i>Npj Computational Materials</i> , 2020 , 6,	10.9	1
234	Bayesian inference in band excitation scanning probe microscopy for optimal dynamic model selection in imaging. <i>Journal of Applied Physics</i> , 2020 , 128, 054105	2.5	4
233	Self-Assembled Room Temperature Multiferroic BiFeO ₃ -LiFe ₅ O ₈ Nanocomposites. <i>Advanced Functional Materials</i> , 2020 , 30, 1906849	15.6	10
232	FerroNet: Machine Learning Flow for Analysis of Ferroelectric and Ferroelastic Materials. <i>Microscopy and Microanalysis</i> , 2019 , 25, 170-171	0.5	
231	Unsupervised Machine Learning to Distill Structural-Property Insights from 4D-STEM. <i>Microscopy and Microanalysis</i> , 2019 , 25, 12-13	0.5	
230	Intrinsic structural instabilities of domain walls driven by gradient coupling: Meandering antiferrodistortive-ferroelectric domain walls in BiFeO ₃ . <i>Physical Review B</i> , 2019 , 99,	3.3	18
229	Application of pan-sharpening algorithm for correlative multimodal imaging using AFM-IR. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	3

228	Deep neural networks for understanding noisy data applied to physical property extraction in scanning probe microscopy. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	28
227	Time-Resolved Electrical Scanning Probe Microscopy of Layered Perovskites Reveals Spatial Variations in Photoinduced Ionic and Electronic Carrier Motion. <i>ACS Nano</i> , 2019 , 13, 2812-2821	16.7	30
226	Spectral Map Reconstruction Using Pan-Sharpener Algorithm: Enhancing Chemical Imaging with AFM-IR. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1024-1025	0.5	0
225	Compressive Sensing on Diverse STEM Scans: Real-time Feedback, Low-dose and Dynamic Range. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1688-1689	0.5	0
224	Toward Electrochemical Studies on the Nanometer and Atomic Scales: Progress, Challenges, and Opportunities. <i>ACS Nano</i> , 2019 , 13, 9735-9780	16.7	18
223	Ferromagnetic-like behavior of BiLaFeO-KBr nanocomposites. <i>Scientific Reports</i> , 2019 , 9, 10417	4.9	7
222	The ORNL Lectures on Scanning Probe Microscopy, Part 1: Piezoresponse Force Microscopy and Spectroscopy of Ferroelectrics, Energy Materials, and Biological Systems. <i>Microscopy Today</i> , 2019 , 27, 12-16	0.4	
221	Giant negative electrostriction and dielectric tunability in a van der Waals layered ferroelectric. <i>Physical Review Materials</i> , 2019 , 3,	3.2	25
220	Atomic Mechanisms for the Si Atom Dynamics in Graphene: Chemical Transformations at the Edge and in the Bulk. <i>Advanced Functional Materials</i> , 2019 , 29, 1904480	15.6	17
219	Nanoscale Transport Imaging of Active Lateral Devices: Static and Frequency Dependent Modes. <i>Springer Series in Surface Sciences</i> , 2018 , 251-329	0.4	3
218	Subtractive fabrication of ferroelectric thin films with precisely controlled thickness. <i>Nanotechnology</i> , 2018 , 29, 155302	3.4	6
217	Photothermoelastic contrast in nanoscale infrared spectroscopy. <i>Applied Physics Letters</i> , 2018 , 112, 033105	10.5	6
216	Surface-screening mechanisms in ferroelectric thin films and their effect on polarization dynamics and domain structures. <i>Reports on Progress in Physics</i> , 2018 , 81, 036502	14.4	93
215	Mitigating e-beam-induced hydrocarbon deposition on graphene for atomic-scale scanning transmission electron microscopy studies. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018 , 36, 011801	1.3	20
214	Defect-driven flexochemical coupling in thin ferroelectric films. <i>Physical Review B</i> , 2018 , 97,	3.3	31
213	YCrWO ₆ : Polar and Magnetic Oxide with CaTa ₂ O ₆ -Related Structure. <i>Chemistry of Materials</i> , 2018 , 30, 1045-1054	9.6	14
212	Dynamic Modes in Kelvin Probe Force Microscopy: Band Excitation and G-Mode. <i>Springer Series in Surface Sciences</i> , 2018 , 49-99	0.4	3
211	Surface Chemistry Controls Anomalous Ferroelectric Behavior in Lithium Niobate. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 29153-29160	9.5	13

210	Labyrinthine domains in ferroelectric nanoparticles: Manifestation of a gradient-induced morphological transition. <i>Physical Review B</i> , 2018 , 98,	3.3	24
209	Locally Controlled Cu-Ion Transport in Layered Ferroelectric CuInPS. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 27188-27194	9.5	35
208	Towards nanoscale electrical measurements in liquid by advanced KPFM techniques: a review. <i>Reports on Progress in Physics</i> , 2018 , 81, 086101	14.4	45
207	E-beam manipulation of Si atoms on graphene edges with an aberration-corrected scanning transmission electron microscope. <i>Nano Research</i> , 2018 , 11, 6217-6226	10	17
206	Atom-by-Atom Assembly in Aberration Corrected STEM and the Role of Chemistry at the Surface of Graphene. <i>Microscopy and Microanalysis</i> , 2018 , 24, 326-327	0.5	
205	Automated Atom-by-Atom Assembly of Structures in Graphene: The Rise of STEM for Atomic Scale Control. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1594-1595	0.5	
204	Chemical nature of ferroelastic twin domains in CHNHPbI perovskite. <i>Nature Materials</i> , 2018 , 17, 1013-1019	11.9	114
203	Dynamic behavior of CH ₃ NH ₃ PbI ₃ perovskite twin domains. <i>Applied Physics Letters</i> , 2018 , 113, 072102	3.4	26
202	Electronic switching by metastable polarization states in BiFeO ₃ thin films. <i>Physical Review Materials</i> , 2018 , 2,	3.2	4
201	Direct Probing of Polarization Charge at Nanoscale Level. <i>Advanced Materials</i> , 2018 , 30, 1703675	24	18
200	Graphene Defect Editing, Deposition, and Growth via E-Beam-Induced Organic Reactions in Aberration Corrected STEM. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1994-1995	0.5	1
199	Multimodal Chemical and Functional Imaging of Nanoscale Transformations Away from Equilibrium. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1042-1043	0.5	
198	Exploring the Magnetoelectric Coupling at the Composite Interfaces of FE/FM/FE Heterostructures. <i>Scientific Reports</i> , 2018 , 8, 17381	4.9	17
197	Decoupling Mesoscale Functional Response in PLZT across the Ferroelectric-Relaxor Phase Transition with Contact Kelvin Probe Force Microscopy and Machine Learning. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 42674-42680	9.5	6
196	Deep Data Analytics in Structural and Functional Imaging of Nanoscale Materials. <i>Springer Series in Materials Science</i> , 2018 , 103-128	0.9	3
195	Nanoscale Electrochemical Phenomena of Polarization Switching in Ferroelectrics. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 38217-38222	9.5	12
194	High-veracity functional imaging in scanning probe microscopy via Graph-Bootstrapping. <i>Nature Communications</i> , 2018 , 9, 2428	17.4	11
193	Mapping mesoscopic phase evolution during E-beam induced transformations via deep learning of atomically resolved images. <i>Npj Computational Materials</i> , 2018 , 4,	10.9	24

192	Mixed electrochemical ferroelectric states in nanoscale ferroelectrics. <i>Nature Physics</i> , 2017 , 13, 812-818	16.2	72
191	Ferroelectric or non-ferroelectric: Why so many materials exhibit ferroelectricity in the nanoscale. <i>Applied Physics Reviews</i> , 2017 , 4, 021302	17.3	195
190	Piezoresponse of ferroelectric films in ferroionic states: Time and voltage dynamics. <i>Applied Physics Letters</i> , 2017 , 110, 182907	3.4	13
189	In Situ Observation of Oxygen Vacancy Dynamics and Ordering in the Epitaxial LaCoO System. <i>ACS Nano</i> , 2017 , 11, 6942-6949	16.7	70
188	Exploring Electro-Chemo-Mechanical Phenomena on the Nanoscale Using Scanning Probe Microscopy. <i>Kluwer International Series in Electronic Materials: Science and Technology</i> , 2017 , 137-160		
187	Quantification of in-contact probe-sample electrostatic forces with dynamic atomic force microscopy. <i>Nanotechnology</i> , 2017 , 28, 065704	3.4	37
186	Knowledge Extraction from Atomically Resolved Images. <i>ACS Nano</i> , 2017 , 11, 10313-10320	16.7	24
185	Electronic-Reconstruction-Enhanced Tunneling Conductance at Terrace Edges of Ultrathin Oxide Films. <i>Advanced Materials</i> , 2017 , 29, 1702001	24	6
184	Single-atom fabrication with electron and ion beams: From surfaces and two-dimensional materials toward three-dimensional atom-by-atom assembly. <i>MRS Bulletin</i> , 2017 , 42, 637-643	3.2	22
183	Nanoscale Probing of Elastic-Electronic Response to Vacancy Motion in NiO Nanocrystals. <i>ACS Nano</i> , 2017 , 11, 8387-8394	16.7	7
182	Magnetostriction-polarization coupling in multiferroic MnMnWO. <i>Nature Communications</i> , 2017 , 8, 2037	17.4	25
181	Pressure-induced switching in ferroelectrics: Phase-field modeling, electrochemistry, flexoelectric effect, and bulk vacancy dynamics. <i>Physical Review B</i> , 2017 , 96,	3.3	34
180	Decoding Apparent Ferroelectricity in Perovskite Nanofibers. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 42131-42138	9.5	5
179	Field enhancement of electronic conductance at ferroelectric domain walls. <i>Nature Communications</i> , 2017 , 8, 1318	17.4	22
178	Lost surface waves in nonpiezoelectric solids. <i>Physical Review B</i> , 2017 , 96,	3.3	18
177	Ferroionic states in ferroelectric thin films. <i>Physical Review B</i> , 2017 , 95,	3.3	41
176	G-mode - Full Information Capture Applied to Scanning Probe Microscopy. <i>Microscopy and Microanalysis</i> , 2017 , 23, 184-185	0.5	
175	Exploring Polarization Rotation Instabilities in Super-Tetragonal BiFeO ₃ Epitaxial Thin Films and Their Technological Implications. <i>Advanced Electronic Materials</i> , 2016 , 2, 1600307	6.4	9

174	Acoustic Detection of Phase Transitions at the Nanoscale. <i>Advanced Functional Materials</i> , 2016 , 26, 478-486	4.6	25
173	Nanoscale Elastic Changes in 2D Ti ₃ C ₂ T _x (MXene) Pseudocapacitive Electrodes. <i>Advanced Energy Materials</i> , 2016 , 6, 1502290	21.8	92
172	Multifrequency spectrum analysis using fully digital G Mode-Kelvin probe force microscopy. <i>Nanotechnology</i> , 2016 , 27, 105706	3.4	33
171	Topological Defects in Ferroic Materials. <i>Springer Series in Materials Science</i> , 2016 , 181-197	0.9	1
170	Piezoresponse Force Microscopy and Spectroscopy 2016 , 3252-3263		
169	Local Probing of Ferroelectric and Ferroelastic Switching through Stress-Mediated Piezoelectric Spectroscopy. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500470	4.6	15
168	Quantification of surface displacements and electromechanical phenomena via dynamic atomic force microscopy. <i>Nanotechnology</i> , 2016 , 27, 425707	3.4	80
167	Size-effect in layered ferrielectric CuInP ₂ S ₆ . <i>Applied Physics Letters</i> , 2016 , 109, 172901	3.4	39
166	Rapid mapping of polarization switching through complete information acquisition. <i>Nature Communications</i> , 2016 , 7, 13290	17.4	15
165	Microwave a.c. conductivity of domain walls in ferroelectric thin films. <i>Nature Communications</i> , 2016 , 7, 11630	17.4	63
164	Decoupling indirect topographic cross-talk in band excitation piezoresponse force microscopy imaging and spectroscopy. <i>Applied Physics Letters</i> , 2016 , 108, 252902	3.4	13
163	Directing Matter: Toward Atomic-Scale 3D Nanofabrication. <i>ACS Nano</i> , 2016 , 10, 5600-18	16.7	76
162	Solid-state electrochemistry on the nanometer and atomic scales: the scanning probe microscopy approach. <i>Nanoscale</i> , 2016 , 8, 13838-58	7.7	22
161	Imaging via complete cantilever dynamic detection: general dynamic mode imaging and spectroscopy in scanning probe microscopy. <i>Nanotechnology</i> , 2016 , 27, 414003	3.4	12
160	Big, Deep, and Smart Data in Scanning Probe Microscopy. <i>ACS Nano</i> , 2016 , 10, 9068-9086	16.7	79
159	Chemical State Evolution in Ferroelectric Films during Tip-Induced Polarization and Electroresistive Switching. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 29588-29593	9.5	31
158	Identification of phases, symmetries and defects through local crystallography. <i>Nature Communications</i> , 2015 , 6, 7801	17.4	51
157	A review of molecular beam epitaxy of ferroelectric BaTiO films on Si, Ge and GaAs substrates and their applications. <i>Science and Technology of Advanced Materials</i> , 2015 , 16, 036005	7.1	67

156	Finite size effects in ferroelectric-semiconductor thin films under open-circuit electric boundary conditions. <i>Journal of Applied Physics</i> , 2015 , 117, 034102	2.5	24
155	Domain Wall Motion Across Various Grain Boundaries in Ferroelectric Thin Films. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 1848-1857	3.8	29
154	Big-deep-smart data in imaging for guiding materials design. <i>Nature Materials</i> , 2015 , 14, 973-80	27	219
153	Constraining Data Mining with Physical Models: Voltage- and Oxygen Pressure-Dependent Transport in Multiferroic Nanostructures. <i>Nano Letters</i> , 2015 , 15, 6650-7	11.5	23
152	Ion transport and softening in a polymerized ionic liquid. <i>Nanoscale</i> , 2015 , 7, 947-55	7.7	14
151	Patterning: Atomic-Level Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision (Small 44/2015). <i>Small</i> , 2015 , 11, 5854-5854	11	2
150	Paving the way to nanoionics: atomic origin of barriers for ionic transport through interfaces. <i>Scientific Reports</i> , 2015 , 5, 17229	4.9	31
149	Intrinsic space charge layers and field enhancement in ferroelectric nanojunctions. <i>Applied Physics Letters</i> , 2015 , 107, 022903	3.4	3
148	Full information acquisition in piezoresponse force microscopy. <i>Applied Physics Letters</i> , 2015 , 107, 263103	3.4	26
147	A bridge for accelerating materials by design. <i>Npj Computational Materials</i> , 2015 , 1,	10.9	33
146	Current and surface charge modified hysteresis loops in ferroelectric thin films. <i>Journal of Applied Physics</i> , 2015 , 118, 072013	2.5	49
145	Multidimensional dynamic piezoresponse measurements: Unraveling local relaxation behavior in relaxor-ferroelectrics via big data. <i>Journal of Applied Physics</i> , 2015 , 118, 072003	2.5	15
144	Coupling of electrical and mechanical switching in nanoscale ferroelectrics. <i>Applied Physics Letters</i> , 2015 , 107, 202905	3.4	18
143	Thickness, humidity, and polarization dependent ferroelectric switching and conductivity in Mg doped lithium niobate. <i>Journal of Applied Physics</i> , 2015 , 118, 244103	2.5	16
142	Quantitative Nanometer-Scale Mapping of Dielectric Tunability. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500088	4.6	6
141	Differentiating Ferroelectric and Nonferroelectric Electromechanical Effects with Scanning Probe Microscopy. <i>ACS Nano</i> , 2015 , 9, 6484-92	16.7	191
140	Finite-size effects of hysteretic dynamics in multilayer graphene on a ferroelectric. <i>Physical Review B</i> , 2015 , 91,	3.3	17
139	Probing local bias-induced transitions using photothermal excitation contact resonance atomic force microscopy and voltage spectroscopy. <i>ACS Nano</i> , 2015 , 9, 1848-57	16.7	35

138	Carrier density modulation in a germanium heterostructure by ferroelectric switching. <i>Nature Communications</i> , 2015 , 6, 6067	17.4	64
137	Thermotropic phase boundaries in classic ferroelectrics. <i>Nature Communications</i> , 2014 , 5, 3172	17.4	105
136	Dual harmonic Kelvin probe force microscopy at the graphene-liquid interface. <i>Applied Physics Letters</i> , 2014 , 104, 133103	3.4	42
135	Exploring local electrostatic effects with scanning probe microscopy: implications for piezoresponse force microscopy and triboelectricity. <i>ACS Nano</i> , 2014 , 8, 10229-36	16.7	110
134	Direct observation of ferroelectric field effect and vacancy-controlled screening at the BiFeO ₃ /La _x Sr _{1-x} MnO ₃ interface. <i>Nature Materials</i> , 2014 , 13, 1019-25	27	195
133	Direct probing of charge injection and polarization-controlled ionic mobility on ferroelectric LiNbO ₃ surfaces. <i>Advanced Materials</i> , 2014 , 26, 958-63	24	44
132	Deep data analysis of conductive phenomena on complex oxide interfaces: physics from data mining. <i>ACS Nano</i> , 2014 , 8, 6449-57	16.7	63
131	Electrochemical strain microscopy of local electrochemical processes in solids: mechanism of imaging and spectroscopy in the diffusion limit. <i>Journal of Electroceramics</i> , 2014 , 32, 51-59	1.5	20
130	Spatially-resolved mapping of history-dependent coupled electrochemical and electrical behaviors of electroresistive NiO. <i>Scientific Reports</i> , 2014 , 4, 6725	4.9	10
129	Effect of doping on surface reactivity and conduction mechanism in samarium-doped ceria thin films. <i>ACS Nano</i> , 2014 , 8, 12494-501	16.7	29
128	Reply to "Comment on "Origin of piezoelectric response under a biased scanning probe microscopy tip across a 180° ferroelectric domain wall" <i>Physical Review B</i> , 2014 , 89,	3.3	3
127	Preface to Special Topic: Piezoresponse force microscopy and nanoscale phenomena in polar materials. <i>Journal of Applied Physics</i> , 2014 , 116, 066701	2.5	1
126	Interrelation between Structure and Magnetic Properties in La _{0.5} Sr _{0.5} CoO ₃ . <i>Advanced Materials Interfaces</i> , 2014 , 1, 1400203	4.6	18
125	Space- and time-resolved mapping of ionic dynamic and electroresistive phenomena in lateral devices. <i>ACS Nano</i> , 2013 , 7, 6806-15	16.7	38
124	Probing local ionic dynamics in functional oxides at the nanoscale. <i>Nano Letters</i> , 2013 , 13, 3455-62	11.5	49
123	Domain Wall Conduction and Polarization-Mediated Transport in Ferroelectrics. <i>Advanced Functional Materials</i> , 2013 , 23, 2592-2616	15.6	96
122	Mechanical control of electroresistive switching. <i>Nano Letters</i> , 2013 , 13, 4068-74	11.5	48
121	Nanoscale Probing of Voltage Activated Oxygen Reduction/Evolution Reactions in Nanopatterned (La _x Sr _{1-x})CoO ₃ -Cathodes. <i>Advanced Energy Materials</i> , 2013 , 3, 788-797	21.8	18

120	Switching of ferroelectric polarization in epitaxial BaTiO ₃ films on silicon without a conducting bottom electrode. <i>Nature Nanotechnology</i> , 2013 , 8, 748-54	28.7	184
119	Frequency spectroscopy of irreversible electrochemical nucleation kinetics on the nanoscale. <i>Nanoscale</i> , 2013 , 5, 11964-70	7.7	11
118	Probing Bias-Dependent Electrochemical Gas/Solid Reactions in (La _x Sr _{1-x})CoO ₃ Cathode Materials. <i>Advanced Functional Materials</i> , 2013 , 23, 5027-5036	15.6	9
117	Electrical modulation of the local conduction at oxide tubular interfaces. <i>ACS Nano</i> , 2013 , 7, 8627-33	16.7	39
116	Materials science. Functional ion defects in transition metal oxides. <i>Science</i> , 2013 , 341, 858-9	33.3	199
115	Direct probe of interplay between local structure and superconductivity in FeTe _{1-x} Se _x . <i>ACS Nano</i> , 2013 , 7, 2634-41	16.7	23
114	Structural phase transitions and electronic phenomena at 180-degree domain walls in rhombohedral BaTiO ₃ . <i>Physical Review B</i> , 2013 , 87,	3.3	43
113	Local probing of electrochemically induced negative differential resistance in TiO ₂ memristive materials. <i>Nanotechnology</i> , 2013 , 24, 085702	3.4	17
112	Interplay of octahedral tilts and polar order in BiFeO ₃ films. <i>Advanced Materials</i> , 2013 , 25, 2497-504	24	94
111	Polarization Dynamics in Ferroelectric Capacitors: Local Perspective on Emergent Collective Behavior and Memory Effects. <i>Advanced Functional Materials</i> , 2013 , 23, 2490-2508	15.6	21
110	Variable temperature electrochemical strain microscopy of Sm-doped ceria. <i>Nanotechnology</i> , 2013 , 24, 145401	3.4	17
109	Universality of Polarization Switching Dynamics in Ferroelectric Capacitors Revealed by 5D Piezoresponse Force Microscopy. <i>Advanced Functional Materials</i> , 2013 , 23, 3971-3979	15.6	20
108	Mesoscopic mechanism of the domain wall interaction with elastic defects in uniaxial ferroelectrics. <i>Journal of Applied Physics</i> , 2013 , 113, 187203	2.5	7
107	Large resistive switching in ferroelectric BiFeO ₃ nano-island based switchable diodes. <i>Advanced Materials</i> , 2013 , 25, 2339-43	24	163
106	Tunneling electroresistance induced by interfacial phase transitions in ultrathin oxide heterostructures. <i>Nano Letters</i> , 2013 , 13, 5837-43	11.5	106
105	Nanoscale Origins of Nonlinear Behavior in Ferroic Thin Films. <i>Advanced Functional Materials</i> , 2013 , 23, 81-90	15.6	18
104	Influence of the interfacing with an electrically inhomogeneous bottom electrode on the ferroelectric properties of epitaxial PbTiO ₃ . <i>Applied Physics Letters</i> , 2013 , 103, 192901	3.4	3
103	Indentation of a punch with chemical or heat distribution at its base into transversely isotropic half-space: Application to local thermal and electrochemical probes. <i>Journal of Applied Physics</i> , 2013 , 113, 187201	2.5	11

102	LOCAL PROBES IN THE NEXT DECADE OF ENERGY RESEARCH: BRIDGING MACROSCOPIC AND ATOMIC WORLDS. <i>World Scientific Series in Nanoscience and Nanotechnology</i> , 2013 , 3-35	0.1	1
101	Scanning Probe Microscopy in US Department of Energy Nanoscale Science Research Centers: Status, Perspectives, and Opportunities. <i>Advanced Functional Materials</i> , 2013 , 23, 2468-2476	15.6	2
100	ELECTROCHEMICAL STRAIN MICROSCOPY OF LI-ION AND LI-AIR BATTERY MATERIALS. <i>World Scientific Series in Nanoscience and Nanotechnology</i> , 2013 , 393-454	0.1	2
99	Beyond condensed matter physics on the nanoscale: the role of ionic and electrochemical phenomena in the physical functionalities of oxide materials. <i>ACS Nano</i> , 2012 , 6, 10423-37	16.7	83
98	Electrochemical strain microscopy: Probing ionic and electrochemical phenomena in solids at the nanometer level. <i>MRS Bulletin</i> , 2012 , 37, 651-658	3.2	77
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