

Stephen Jesse

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.

336 papers	14,019 citations	62 h-index	101 g-index
339 ext. papers	15,473 ext. citations	8.2 avg, IF	6.47 L-index

#	Paper	IF	Citations
336	Building an Integrated Ecosystem of Computational and Observational Facilities to Accelerate Scientific Discovery. <i>Communications in Computer and Information Science</i> , 2022 , 58-75	0.3	1
335	Mapping Conductance and Switching Behavior of Graphene Devices In Situ.. <i>Small Methods</i> , 2022 , 6, e2101245	12.45	2
334	Tracking atomic structure evolution during directed electron beam induced Si-atom motion in graphene via deep machine learning. <i>Nanotechnology</i> , 2021 , 32, 035703	3.4	4
333	Oxygen Vacancy Injection as a Pathway to Enhancing Electromechanical Response in Ferroelectrics. <i>Advanced Materials</i> , 2021 , e2106426	24	1
332	Exploring order parameters and dynamic processes in disordered systems via variational autoencoders. <i>Science Advances</i> , 2021 , 7,	14.3	11
331	van der Waals Epitaxy Growth of Bi ₂ Se ₃ on a Freestanding Monolayer Graphene Membrane: Implications for Layered Materials and Heterostructures. <i>ACS Applied Nano Materials</i> , 2021 , 4, 7607-7613	5.6	
330	Atomic-scale Feedback-controlled Electron Beam Fabrication of 2D Materials. <i>Microscopy and Microanalysis</i> , 2021 , 27, 3072-3073	0.5	
329	Autonomous Experiments in Scanning Probe Microscopy and Spectroscopy: Choosing Where to Explore Polarization Dynamics in Ferroelectrics. <i>ACS Nano</i> , 2021 ,	16.7	8
328	Automated and Autonomous Experiments in Electron and Scanning Probe Microscopy. <i>ACS Nano</i> , 2021 ,	16.7	11
327	Doping transition-metal atoms in graphene for atomic-scale tailoring of electronic, magnetic, and quantum topological properties. <i>Carbon</i> , 2021 , 173, 205-214	10.4	12
326	Imaging Secondary Electron Emission from a Single Atomic Layer.. <i>Small Methods</i> , 2021 , 5, e2000950	12.8	2
325	Signal Origin of Electrochemical Strain Microscopy and Link to Local Chemical Distribution in Solid State Electrolytes.. <i>Small Methods</i> , 2021 , 5, e2001279	12.8	4
324	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
323	Probing Metastable Domain Dynamics Automated Experimentation in Piezoresponse Force Microscopy. <i>ACS Nano</i> , 2021 , 15, 15096-15103	16.7	2
322	Piezoresponse amplitude and phase quantified for electromechanical characterization. <i>Journal of Applied Physics</i> , 2020 , 128, 171105	2.5	10
321	Accurately Imaging, Tracking and Moving Single Atoms. <i>Microscopy and Microanalysis</i> , 2020 , 26, 2556-2557	17.5	
320	Twin domains modulate light-matter interactions in metal halide perovskites. <i>APL Materials</i> , 2020 , 8, 011106	5.7	12

319	Strain-Chemical Gradient and Polarization in Metal Halide Perovskites. <i>Advanced Electronic Materials</i> , 2020 , 6, 1901235	6.4	14
318	Electron-beam introduction of heteroatomic PtBi structures in graphene. <i>Carbon</i> , 2020 , 161, 750-757	10.4	13
317	Variable voltage electron microscopy: Toward atom-by-atom fabrication in 2D materials. <i>Ultramicroscopy</i> , 2020 , 211, 112949	3.1	11
316	Imaging mechanism for hyperspectral scanning probe microscopy via Gaussian process modelling. <i>Npj Computational Materials</i> , 2020 , 6,	10.9	9
315	Detection of defects in atomic-resolution images of materials using cycle analysis. <i>Advanced Structural and Chemical Imaging</i> , 2020 , 6,	3.9	10
314	Bayesian Microscopy: Model Selection for Extracting Weak Nonlinearities from Scanning Probe Microscopy Data. <i>Microscopy and Microanalysis</i> , 2020 , 26, 2126-2127	0.5	
313	Doping of Cr in Graphene Using Electron Beam Manipulation for Functional Defect Engineering. <i>ACS Applied Nano Materials</i> , 2020 , 3, 10855-10863	5.6	7
312	Tunable quadruple-well ferroelectric van der Waals crystals. <i>Nature Materials</i> , 2020 , 19, 43-48	27	61
311	Statistical learning of governing equations of dynamics from in-situ electron microscopy imaging data. <i>Materials and Design</i> , 2020 , 195, 108973	8.1	5
310	Nanoscale Mass Spectrometry Multimodal Imaging Tip-Enhanced Photothermal Desorption. <i>ACS Nano</i> , 2020 ,	16.7	3
309	Dynamic Manipulation in Piezoresponse Force Microscopy: Creating Nonequilibrium Phases with Large Electromechanical Response. <i>ACS Nano</i> , 2020 , 14, 10569-10577	16.7	7
308	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
307	Local Strain and Polarization Mapping in Ferrielectric Materials. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 38546-38553	9.5	2
306	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
305	Tensor factorization for elucidating mechanisms of piezoresponse relaxation via dynamic Piezoresponse Force Spectroscopy. <i>Npj Computational Materials</i> , 2020 , 6,	10.9	1
304	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
303	Ferroelectricity in Si-Doped Hafnia: Probing Challenges in Absence of Screening Charges. <i>Nanomaterials</i> , 2020 , 10,	5.4	7
302	To switch or not to switch a machine learning approach for ferroelectricity. <i>Nanoscale Advances</i> , 2020 , 2, 2063-2072	5.1	6

301	Light-Ferroic Interaction in Hybrid Organic-Inorganic Perovskites. <i>Advanced Optical Materials</i> , 2019 , 7, 1901451	8.1	20
300	A self-driving microscope and the Atomic Forge. <i>MRS Bulletin</i> , 2019 , 44, 669-670	3.2	9
299	Unsupervised Machine Learning to Distill Structural-Property Insights from 4D-STEM. <i>Microscopy and Microanalysis</i> , 2019 , 25, 12-13	0.5	
298	Few-cycle Regime Atomic Force Microscopy. <i>Scientific Reports</i> , 2019 , 9, 12721	4.9	3
297	Building and exploring libraries of atomic defects in graphene: Scanning transmission electron and scanning tunneling microscopy study. <i>Science Advances</i> , 2019 , 5, eaaw8989	14.3	41
296	Ferroelectric domain engineering of lithium niobate single crystal confined in glass. <i>MRS Communications</i> , 2019 , 9, 334-339	2.7	5
295	Deep learning analysis of defect and phase evolution during electron beam-induced transformations in WS ₂ . <i>Npj Computational Materials</i> , 2019 , 5,	10.9	74
294	Atom-by-atom fabrication with electron beams. <i>Nature Reviews Materials</i> , 2019 , 4, 497-507	73.3	42
293	Application of pan-sharpening algorithm for correlative multimodal imaging using AFM-IR. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	3
292	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
291	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
290	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
289	Multi-Model Imaging of Local Chemistry and Ferroic Properties of Hybrid Organic-Inorganic Perovskites. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2076-2077	0.5	3
288	A STEM-based Path Towards Atomic-scale Silicon-based Devices. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2290-2291	0.5	
287	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
286	Lab on a beamBig data and artificial intelligence in scanning transmission electron microscopy. <i>MRS Bulletin</i> , 2019 , 44, 565-575	3.2	15
285	From Control of the Electron Beam to Control of Single Atoms. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1678-1679	0.5	
284	Giant negative electrostriction and dielectric tunability in a van der Waals layered ferroelectric. <i>Physical Review Materials</i> , 2019 , 3,	3.2	25

283	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
282	Reply to: On the ferroelectricity of CHNHPbI perovskites. <i>Nature Materials</i> , 2019 , 18, 1051-1053	27	21
281	Manifold learning of four-dimensional scanning transmission electron microscopy. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	19
280	Direct atomic fabrication and dopant positioning in Si using electron beams with active real-time image-based feedback. <i>Nanotechnology</i> , 2018 , 29, 255303	3.4	31
279	Dynamic mechanical control of local vacancies in NiO thin films. <i>Nanotechnology</i> , 2018 , 29, 275709	3.4	7
278	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
277	Feature extraction via similarity search: application to atom finding and denoising in electron and scanning probe microscopy imaging. <i>Advanced Structural and Chemical Imaging</i> , 2018 , 4, 3	3.9	22
276	Machine learning-enabled identification of material phase transitions based on experimental data: Exploring collective dynamics in ferroelectric relaxors. <i>Science Advances</i> , 2018 , 4, eaap8672	14.3	37
275	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
274	Surface Chemistry Controls Anomalous Ferroelectric Behavior in Lithium Niobate. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 29153-29160	9.5	13
273	Locally Controlled Cu-Ion Transport in Layered Ferroelectric CuInPS. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 27188-27194	9.5	35
272	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
271	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	
270	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	
269	Theory-assisted determination of nano-rippling and impurities in atomic resolution images of angle-mismatched bilayer graphene. <i>2D Materials</i> , 2018 , 5, 041008	5.9	3
268	Building Structures Atom by Atom via Electron Beam Manipulation. <i>Small</i> , 2018 , 14, e1801771	11	55
267	Chemical nature of ferroelastic twin domains in CHNHPbI perovskite. <i>Nature Materials</i> , 2018 , 17, 1013-1019	19	114
266	Dynamic behavior of CH ₃ NH ₃ PbI ₃ perovskite twin domains. <i>Applied Physics Letters</i> , 2018 , 113, 072102	3.4	26

265	Time resolved surface photovoltage measurements using a big data capture approach to KPFM. <i>Nanotechnology</i> , 2018 , 29, 445703	3.4	26
264	Direct Probing of Polarization Charge at Nanoscale Level. <i>Advanced Materials</i> , 2018 , 30, 1703675	24	18
263	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
262	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
261	Towards Atomic-Scale Fabrication in Silicon. <i>Microscopy and Microanalysis</i> , 2018 , 24, 158-159	0.5	
260	Compressed Sensing of Scanning Transmission Electron Microscopy (STEM) With Nonrectangular Scans. <i>Microscopy and Microanalysis</i> , 2018 , 24, 623-633	0.5	22
259	Elasticity Modulation Due to Polarization Reversal and Ionic Motion in the Ferroelectric Superionic Conductor KTiOPO. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 32298-32303	9.5	8
258	Machine Detection of Enhanced Electromechanical Energy Conversion in PbZr Ti O Thin Films. <i>Advanced Materials</i> , 2018 , 30, e1800701	24	14
257	High-veracity functional imaging in scanning probe microscopy via Graph-Bootstrapping. <i>Nature Communications</i> , 2018 , 9, 2428	17.4	11
256	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
255	Synergetic effects of K and Mg ion intercalation on the electrochemical and actuation properties of the two-dimensional TiC MXene. <i>Faraday Discussions</i> , 2017 , 199, 393-403	3.6	50
254	Improved spatial resolution for spot sampling in thermal desorption atomic force microscopy - mass spectrometry via rapid heating functions. <i>Nanoscale</i> , 2017 , 9, 5708-5717	7.7	9
253	Mixed electrochemical-Ferroelectric states in nanoscale ferroelectrics. <i>Nature Physics</i> , 2017 , 13, 812-818	16.2	72
252	Ferroelectric or non-ferroelectric: Why so many materials exhibit ferroelectricity in the nanoscale. <i>Applied Physics Reviews</i> , 2017 , 4, 021302	17.3	195
251	Enhancing Ion Migration in Grain Boundaries of Hybrid Organic-Inorganic Perovskites by Chlorine. <i>Advanced Functional Materials</i> , 2017 , 27, 1700749	15.6	51
250	Direct Imaging of the Relaxation of Individual Ferroelectric Interfaces in a Tensile-Strained Film. <i>Advanced Electronic Materials</i> , 2017 , 3, 1600508	6.4	7
249	Precision controlled atomic resolution scanning transmission electron microscopy using spiral scan pathways. <i>Scientific Reports</i> , 2017 , 7, 43585	4.9	16
248	Quantification of in-contact probe-sample electrostatic forces with dynamic atomic force microscopy. <i>Nanotechnology</i> , 2017 , 28, 065704	3.4	37

247	Placing single atoms in graphene with a scanning transmission electron microscope. <i>Applied Physics Letters</i> , 2017 , 111, 113104	3.4	87
246	Atom-by-atom fabrication by electron beam via induced phase transformations. <i>MRS Bulletin</i> , 2017 , 42, 653-659	3.2	16
245	Three-State Ferroelastic Switching and Large Electromechanical Responses in PbTiO Thin Films. <i>Advanced Materials</i> , 2017 , 29, 1702069	24	53
244	Breaking the Time Barrier in Kelvin Probe Force Microscopy: Fast Free Force Reconstruction Using the G-Mode Platform. <i>ACS Nano</i> , 2017 , 11, 8717-8729	16.7	50
243	Automated Interpretation and Extraction of Topographic Information from Time of Flight Secondary Ion Mass Spectrometry Data. <i>Scientific Reports</i> , 2017 , 7, 17099	4.9	18
242	Deep Learning of Atomically Resolved Scanning Transmission Electron Microscopy Images: Chemical Identification and Tracking Local Transformations. <i>ACS Nano</i> , 2017 , 11, 12742-12752	16.7	183
241	Decoding Apparent Ferroelectricity in Perovskite Nanofibers. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 42131-42138	9.5	5
240	G-mode - Full Information Capture Applied to Scanning Probe Microscopy. <i>Microscopy and Microanalysis</i> , 2017 , 23, 184-185	0.5	
239	Atomistic-Scale Simulations of Defect Formation in Graphene under Noble Gas Ion Irradiation. <i>ACS Nano</i> , 2016 , 10, 8376-84	16.7	92
238	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
237	Full data acquisition in Kelvin Probe Force Microscopy: Mapping dynamic electric phenomena in real space. <i>Scientific Reports</i> , 2016 , 6, 30557	4.9	39
236	Nanoforging Single Layer MoSe ₂ Through Defect Engineering with Focused Helium Ion Beams. <i>Scientific Reports</i> , 2016 , 6, 30481	4.9	55
235	Acoustic Detection of Phase Transitions at the Nanoscale. <i>Advanced Functional Materials</i> , 2016 , 26, 478-486	19.6	25
234	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
233	Graphene engineering by neon ion beams. <i>Nanotechnology</i> , 2016 , 27, 125302	3.4	20
232	Multifrequency spectrum analysis using fully digital G Mode-Kelvin probe force microscopy. <i>Nanotechnology</i> , 2016 , 27, 105706	3.4	33
231	Nanoscale mapping of heterogeneity of the polarization reversal in lead-free relaxor-ferroelectric ceramic composites. <i>Nanoscale</i> , 2016 , 8, 2168-76	7.7	25
230	Fire up the atom forge. <i>Nature</i> , 2016 , 539, 485-487	50.4	55

229	Local Crystallography for Quantitative Analysis of Atomically Resolved Images. <i>Microscopy and Microanalysis</i> , 2016 , 22, 948-949	0.5	
228	Local Probing of Ferroelectric and Ferroelastic Switching through Stress-Mediated Piezoelectric Spectroscopy. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500470	4.6	15
227	Nanosculpting of complex oxides by massive ionic transfer. <i>Nanotechnology</i> , 2016 , 27, 505703	3.4	1
226	High Performance Computing Tools for Cross Correlation of Multi-Dimensional Data Sets Across Instrument Platforms. <i>Microscopy and Microanalysis</i> , 2016 , 22, 288-289	0.5	
225	Submicron Spatial Resolution in Thermal Desorption Mass Spectrometry via Rapid Heating Functions using Thermal AFM Probes. <i>Microscopy and Microanalysis</i> , 2016 , 22, 368-369	0.5	1
224	Inverse Problem Solution for Quantitative Investigations of Nanocrystals Formation and Growth. <i>Microscopy and Microanalysis</i> , 2016 , 22, 794-795	0.5	
223	Quantification of surface displacements and electromechanical phenomena via dynamic atomic force microscopy. <i>Nanotechnology</i> , 2016 , 27, 425707	3.4	80
222	Rapid mapping of polarization switching through complete information acquisition. <i>Nature Communications</i> , 2016 , 7, 13290	17.4	15
221	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
220	G-mode magnetic force microscopy: Separating magnetic and electrostatic interactions using big data analytics. <i>Applied Physics Letters</i> , 2016 , 108, 193103	3.4	21
219	Correlation between piezoresponse nonlinearity and hysteresis in ferroelectric crystals at the nanoscale. <i>Applied Physics Letters</i> , 2016 , 108, 172905	3.4	2
218	Directing Matter: Toward Atomic-Scale 3D Nanofabrication. <i>ACS Nano</i> , 2016 , 10, 5600-18	16.7	76
217	Unraveling the Mechanism of Nanoscale Mechanical Reinforcement in Glassy Polymer Nanocomposites. <i>Nano Letters</i> , 2016 , 16, 3630-7	11.5	103
216	Polarization Control via He-Ion Beam Induced Nanofabrication in Layered Ferroelectric Semiconductors. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 7349-55	9.5	17
215	Solid-state electrochemistry on the nanometer and atomic scales: the scanning probe microscopy approach. <i>Nanoscale</i> , 2016 , 8, 13838-58	7.7	22
214	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
213	Big, Deep, and Smart Data in Scanning Probe Microscopy. <i>ACS Nano</i> , 2016 , 10, 9068-9086	16.7	79
212	Direct-write liquid phase transformations with a scanning transmission electron microscope. <i>Nanoscale</i> , 2016 , 8, 15581-8	7.7	21

211	Phases and Interfaces from Real Space Atomically Resolved Data: Physics-Based Deep Data Image Analysis. <i>Nano Letters</i> , 2016 , 16, 5574-81	11.5	26
210	Complete information acquisition in dynamic force microscopy. <i>Nature Communications</i> , 2015 , 6, 6550	17.4	44
209	Bias assisted scanning probe microscopy direct write lithography enables local oxygen enrichment of lanthanum cuprates thin films. <i>Nanotechnology</i> , 2015 , 26, 325302	3.4	1
208	Identification of phases, symmetries and defects through local crystallography. <i>Nature Communications</i> , 2015 , 6, 7801	17.4	51
207	Co-registered Topographical, Band Excitation Nanomechanical, and Mass Spectral Imaging Using a Combined Atomic Force Microscopy/Mass Spectrometry Platform. <i>ACS Nano</i> , 2015 , 9, 4260-9	16.7	27
206	Defective interfaces in yttrium-doped barium zirconate films and consequences on proton conduction. <i>Nano Letters</i> , 2015 , 15, 2343-9	11.5	20
205	Domain pinning near a single-grain boundary in tetragonal and rhombohedral lead zirconate titanate films. <i>Physical Review B</i> , 2015 , 91,	3.3	25
204	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
203	Quantitative 3D-KPFM imaging with simultaneous electrostatic force and force gradient detection. <i>Nanotechnology</i> , 2015 , 26, 175707	3.4	23
202	Quantitative Description of Crystal Nucleation and Growth from in Situ Liquid Scanning Transmission Electron Microscopy. <i>ACS Nano</i> , 2015 , 9, 11784-91	16.7	36
201	Band excitation Kelvin probe force microscopy utilizing photothermal excitation. <i>Applied Physics Letters</i> , 2015 , 106, 104102	3.4	14
200	Big data in reciprocal space: Sliding fast Fourier transforms for determining periodicity. <i>Applied Physics Letters</i> , 2015 , 106, 091601	3.4	29
199	Mesosopic harmonic mapping of electromechanical response in a relaxor ferroelectric. <i>Applied Physics Letters</i> , 2015 , 106, 222901	3.4	8
198	Nanoscale mapping of electromechanical response in ionic conductive ceramics with piezoelectric inclusions. <i>Journal of Applied Physics</i> , 2015 , 118, 072014	2.5	14
197	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
196	Paving the way to nanoionics: atomic origin of barriers for ionic transport through interfaces. <i>Scientific Reports</i> , 2015 , 5, 17229	4.9	31
195	Full information acquisition in piezoresponse force microscopy. <i>Applied Physics Letters</i> , 2015 , 107, 263103	3.4	26
194	Current and surface charge modified hysteresis loops in ferroelectric thin films. <i>Journal of Applied Physics</i> , 2015 , 118, 072013	2.5	49

193	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
192	Deep Data Analysis of Atomic Level Structure-Property Relationship in an Iron Superconductor Fe 105 Te 075 Se 025. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2345-2346	0.5	
191	Sub-nA spatially resolved conductivity profiling of surface and interface defects in ceria films. <i>APL Materials</i> , 2015 , 3, 036106	5.7	3
190	Atomic-Level Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision. <i>Small</i> , 2015 , 11, 5895-900	11	53
189	Quantitative Nanometer-Scale Mapping of Dielectric Tunability. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500088	4.6	6
188	Kelvin probe force microscopy in liquid using electrochemical force microscopy. <i>Beilstein Journal of Nanotechnology</i> , 2015 , 6, 201-14	3	28
187	Differentiating Ferroelectric and Nonferroelectric Electromechanical Effects with Scanning Probe Microscopy. <i>ACS Nano</i> , 2015 , 9, 6484-92	16.7	191
186	A-site stoichiometry and piezoelectric response in thin film PbZr _{1-x} Ti _x O ₃ . <i>Journal of Applied Physics</i> , 2015 , 117, 204104	2.5	12
185	Big data and deep data in scanning and electron microscopies: deriving functionality from multidimensional data sets. <i>Advanced Structural and Chemical Imaging</i> , 2015 , 1, 6	3.9	63
184	Electrocatalysis-induced elasticity modulation in a superionic proton conductor probed by band-excitation atomic force microscopy. <i>Nanoscale</i> , 2015 , 7, 20089-94	7.7	5
183	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
182	Carrier density modulation in a germanium heterostructure by ferroelectric switching. <i>Nature Communications</i> , 2015 , 6, 6067	17.4	64
181	Probing charge screening dynamics and electrochemical processes at the solid-liquid interface with electrochemical force microscopy. <i>Nature Communications</i> , 2014 , 5, 3871	17.4	73
180	Intermittency, quasiperiodicity and chaos in probe-induced ferroelectric domain switching. <i>Nature Physics</i> , 2014 , 10, 59-66	16.2	116
179	Water-mediated electrochemical nano-writing on thin ceria films. <i>Nanotechnology</i> , 2014 , 25, 075701	3.4	11
178	Dual harmonic Kelvin probe force microscopy at the graphene-liquid interface. <i>Applied Physics Letters</i> , 2014 , 104, 133103	3.4	42
177	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
176	Breaking the limits of structural and mechanical imaging of the heterogeneous structure of coal macerals. <i>Nanotechnology</i> , 2014 , 25, 435402	3.4	12

175	Deterministic arbitrary switching of polarization in a ferroelectric thin film. <i>Nature Communications</i> , 2014 , 5, 4971	17.4	31
174	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
173	Band excitation in scanning probe microscopy: recognition and functional imaging. <i>Annual Review of Physical Chemistry</i> , 2014 , 65, 519-36	15.7	88
172	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
171	Mapping internal structure of coal by confocal micro-Raman spectroscopy and scanning microwave microscopy. <i>Fuel</i> , 2014 , 126, 32-37	7.1	30
170	Influence of a Single Grain Boundary on Domain Wall Motion in Ferroelectrics. <i>Advanced Functional Materials</i> , 2014 , 24, 1409-1417	15.6	57
169	Spatially-resolved mapping of history-dependent coupled electrochemical and electronic behaviors of electroresistive NiO. <i>Scientific Reports</i> , 2014 , 4, 6725	4.9	10
168	Research Update: Spatially resolved mapping of electronic structure on atomic level by multivariate statistical analysis. <i>APL Materials</i> , 2014 , 2, 120701	5.7	10
167	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
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