

# Stephen Jesse

## List of Publications by Year in descending order

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337  
papers

16,707  
citations

13068

68  
h-index

23472

111  
g-index

339  
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339  
docs citations

339  
times ranked

12818  
citing authors

#	ARTICLE	IF	CITATIONS
1	Oxygen Vacancy Injection as a Pathway to Enhancing Electromechanical Response in Ferroelectrics. <i>Advanced Materials</i> , 2022, 34, e2106426.	11.1	20
2	Mapping Conductance and Switching Behavior of Graphene Devices In Situ. <i>Small Methods</i> , 2022, 6, e2101245.	4.6	7
3	Strain-Induced asymmetry and on-site dynamics of silicon defects in graphene. <i>Carbon Trends</i> , 2022, 9, 100189.	1.4	0
4	Doping transition-metal atoms in graphene for atomic-scale tailoring of electronic, magnetic, and quantum topological properties. <i>Carbon</i> , 2021, 173, 205-214.	5.4	35
5	Imaging Secondary Electron Emission from a Single Atomic Layer. <i>Small Methods</i> , 2021, 5, 2000950.	4.6	5
6	Signal Origin of Electrochemical Strain Microscopy and Link to Local Chemical Distribution in Solid State Electrolytes. <i>Small Methods</i> , 2021, 5, 2001279.	4.6	10
7	Exploring order parameters and dynamic processes in disordered systems via variational autoencoders. <i>Science Advances</i> , 2021, 7, .	4.7	38
8	van der Waals Epitaxy Growth of Bi <sub>2</sub> Se <sub>3</sub> on a Freestanding Monolayer Graphene Membrane: Implications for Layered Materials and Heterostructures. <i>ACS Applied Nano Materials</i> , 2021, 4, 7607-7613.	2.4	0
9	Atomic-scale Feedback-controlled Electron Beam Fabrication of 2D Materials. <i>Microscopy and Microanalysis</i> , 2021, 27, 3072-3073.	0.2	0
10	Autonomous Experiments in Scanning Probe Microscopy and Spectroscopy: Choosing Where to Explore Polarization Dynamics in Ferroelectrics. <i>ACS Nano</i> , 2021, 15, 11253-11262.	7.3	23
11	Automated and Autonomous Experiments in Electron and Scanning Probe Microscopy. <i>ACS Nano</i> , 2021, 15, 12604-12627.	7.3	49
12	Probing polarization dynamics at specific domain configurations: Computer-vision based automated experiment in piezoresponse force microscopy. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	5
13	Probing Metastable Domain Dynamics <i>via</i> Automated Experimentation in Piezoresponse Force Microscopy. <i>ACS Nano</i> , 2021, 15, 15096-15103.	7.3	6
14	Tracking atomic structure evolution during directed electron beam induced Si-atom motion in graphene via deep machine learning. <i>Nanotechnology</i> , 2021, 32, 035703.	1.3	10
15	Tunable quadruple-well ferroelectric van der Waals crystals. <i>Nature Materials</i> , 2020, 19, 43-48.	13.3	140
16	Statistical learning of governing equations of dynamics from in-situ electron microscopy imaging data. <i>Materials and Design</i> , 2020, 195, 108973.	3.3	8
17	Nanoscale Mass Spectrometry Multimodal Imaging <i>via</i> Tip-Enhanced Photothermal Desorption. <i>ACS Nano</i> , 2020, 14, 16791-16802.	7.3	6
18	Dynamic Manipulation in Piezoresponse Force Microscopy: Creating Nonequilibrium Phases with Large Electromechanical Response. <i>ACS Nano</i> , 2020, 14, 10569-10577.	7.3	14

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19	Fast Scanning Probe Microscopy via Machine Learning: Non-Rectangular Scans with Compressed Sensing and Gaussian Process Optimization. <i>Small</i> , 2020, 16, e2002878.	5.2	37
20	Local Strain and Polarization Mapping in Ferrielectric Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 38546-38553.	4.0	14
21	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.	1.1	6
22	Tensor factorization for elucidating mechanisms of piezoresponse relaxation via dynamic Piezoresponse Force Spectroscopy. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	2
23	Bayesian inference in band excitation scanning probe microscopy for optimal dynamic model selection in imaging. <i>Journal of Applied Physics</i> , 2020, 128, 054105.	1.1	8
24	Ferroelectricity in Si-Doped Hafnia: Probing Challenges in Absence of Screening Charges. <i>Nanomaterials</i> , 2020, 10, 1576.	1.9	16
25	Piezoresponse amplitude and phase quantified for electromechanical characterization. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	31
26	Accurately Imaging, Tracking and Moving Single Atoms. <i>Microscopy and Microanalysis</i> , 2020, 26, 2556-2557.	0.2	0
27	Twin domains modulate light-matter interactions in metal halide perovskites. <i>APL Materials</i> , 2020, 8, .	2.2	17
28	Strain-Chemical Gradient and Polarization in Metal Halide Perovskites. <i>Advanced Electronic Materials</i> , 2020, 6, 1901235.	2.6	19
29	Electron-beam introduction of heteroatomic Pt-Si structures in graphene. <i>Carbon</i> , 2020, 161, 750-757.	5.4	34
30	Variable voltage electron microscopy: Toward atom-by-atom fabrication in 2D materials. <i>Ultramicroscopy</i> , 2020, 211, 112949.	0.8	14
31	Imaging mechanism for hyperspectral scanning probe microscopy via Gaussian process modelling. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	19
32	To switch or not to switch – a machine learning approach for ferroelectricity. <i>Nanoscale Advances</i> , 2020, 2, 2063-2072.	2.2	12
33	Doping of Cr in Graphene Using Electron Beam Manipulation for Functional Defect Engineering. <i>ACS Applied Nano Materials</i> , 2020, 3, 10855-10863.	2.4	24
34	Detection of defects in atomic-resolution images of materials using cycle analysis. <i>Advanced Structural and Chemical Imaging</i> , 2020, 6, .	4.0	11
35	Bayesian Microscopy: Model Selection for Extracting Weak Nonlinearities from Scanning Probe Microscopy Data. <i>Microscopy and Microanalysis</i> , 2020, 26, 2126-2127.	0.2	0
36	Spectral Map Reconstruction Using Pan-Sharpening Algorithm: Enhancing Chemical Imaging with AFM-IR. <i>Microscopy and Microanalysis</i> , 2019, 25, 1024-1025.	0.2	2

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37	Multi-Model Imaging of Local Chemistry and Ferroic Properties of Hybrid Organic-Inorganic Perovskites. <i>Microscopy and Microanalysis</i> , 2019, 25, 2076-2077.	0.2	3
38	A STEM-based Path Towards Atomic-scale Silicon-based Devices. <i>Microscopy and Microanalysis</i> , 2019, 25, 2290-2291.	0.2	0
39	Compressive Sensing on Diverse STEM Scans: Real-time Feedback, Low-dose and Dynamic Range. <i>Microscopy and Microanalysis</i> , 2019, 25, 1688-1689.	0.2	3
40	Lab on a beam—Big data and artificial intelligence in scanning transmission electron microscopy. <i>MRS Bulletin</i> , 2019, 44, 565-575.	1.7	24
41	From Control of the Electron Beam to Control of Single Atoms. <i>Microscopy and Microanalysis</i> , 2019, 25, 1678-1679.	0.2	0
42	Light—Ferroic Interaction in Hybrid Organic—Inorganic Perovskites. <i>Advanced Optical Materials</i> , 2019, 7, 1901451.	3.6	24
43	A self-driving microscope and the Atomic Forge. <i>MRS Bulletin</i> , 2019, 44, 669-670.	1.7	17
44	Unsupervised Machine Learning to Distill Structural-Property Insights from 4D-STEM. <i>Microscopy and Microanalysis</i> , 2019, 25, 12-13.	0.2	0
45	Few-cycle Regime Atomic Force Microscopy. <i>Scientific Reports</i> , 2019, 9, 12721.	1.6	7
46	Building and exploring libraries of atomic defects in graphene: Scanning transmission electron and scanning tunneling microscopy study. <i>Science Advances</i> , 2019, 5, eaaw8989.	4.7	70
47	Ferroelectric domain engineering of lithium niobate single crystal confined in glass. <i>MRS Communications</i> , 2019, 9, 334-339.	0.8	9
48	Deep learning analysis of defect and phase evolution during electron beam-induced transformations in WS <sub>2</sub> . <i>Npj Computational Materials</i> , 2019, 5, .	3.5	113
49	Atom-by-atom fabrication with electron beams. <i>Nature Reviews Materials</i> , 2019, 4, 497-507.	23.3	73
50	Application of pan-sharpening algorithm for correlative multimodal imaging using AFM-IR. <i>Npj Computational Materials</i> , 2019, 5, .	3.5	9
51	Deep neural networks for understanding noisy data applied to physical property extraction in scanning probe microscopy. <i>Npj Computational Materials</i> , 2019, 5, .	3.5	43
52	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.	7.3	38
53	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.	7.8	25
54	Reply to: On the ferroelectricity of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskites. <i>Nature Materials</i> , 2019, 18, 1051-1053.	13.3	21

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55	Manifold learning of four-dimensional scanning transmission electron microscopy. Npj Computational Materials, 2019, 5, .	3.5	37
56	Giant negative electrostriction and dielectric tunability in a van der Waals layered ferroelectric. Physical Review Materials, 2019, 3, .	0.9	47
57	Direct atomic fabrication and dopant positioning in Si using electron beams with active real-time image-based feedback. Nanotechnology, 2018, 29, 255303.	1.3	46
58	Dynamic mechanical control of local vacancies in NiO thin films. Nanotechnology, 2018, 29, 275709.	1.3	8
59	Mitigating e-beam-induced hydrocarbon deposition on graphene for atomic-scale scanning transmission electron microscopy studies. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	0.6	32
60	Feature extraction via similarity search: application to atom finding and denoising in electron and scanning probe microscopy imaging. Advanced Structural and Chemical Imaging, 2018, 4, 3.	4.0	31
61	Machine learning-enabled identification of material phase transitions based on experimental data: Exploring collective dynamics in ferroelectric relaxors. Science Advances, 2018, 4, eaap8672.	4.7	54
62	Dynamic Modes in Kelvin Probe Force Microscopy: Band Excitation and G-Mode. Springer Series in Surface Sciences, 2018, , 49-99.	0.3	3
63	Direct Probing of Polarization Charge at Nanoscale Level. Advanced Materials, 2018, 30, 1703675.	11.1	23
64	Graphene Defect Editing, Deposition, and Growth via E-Beam-Induced Organic Reactions in Aberration Corrected STEM. Microscopy and Microanalysis, 2018, 24, 1994-1995.	0.2	1
65	Decoupling Mesoscale Functional Response in PLZT across the Ferroelectric-Relaxor Phase Transition with Contact Kelvin Probe Force Microscopy and Machine Learning. ACS Applied Materials & Interfaces, 2018, 10, 42674-42680.	4.0	8
66	Towards Atomic-Scale Fabrication in Silicon. Microscopy and Microanalysis, 2018, 24, 158-159.	0.2	0
67	Compressed Sensing of Scanning Transmission Electron Microscopy (STEM) With Nonrectangular Scans. Microscopy and Microanalysis, 2018, 24, 623-633.	0.2	34
68	Elasticity Modulation Due to Polarization Reversal and Ionic Motion in the Ferroelectric Superionic Conductor $\text{KTiOPO}_4$ . ACS Applied Materials & Interfaces, 2018, 10, 32298-32303.	4.0	11
69	Machine Detection of Enhanced Electromechanical Energy Conversion in $\text{PbZr}_{0.2}\text{Ti}_{0.8}\text{O}_3$ Thin Films. Advanced Materials, 2018, 30, e1800701.	11.1	23
70	High-veracity functional imaging in scanning probe microscopy via Graph-Bootstrapping. Nature Communications, 2018, 9, 2428.	5.8	12
71	Mapping mesoscopic phase evolution during E-beam induced transformations via deep learning of atomically resolved images. Npj Computational Materials, 2018, 4, .	3.5	31
72	Surface Chemistry Controls Anomalous Ferroelectric Behavior in Lithium Niobate. ACS Applied Materials & Interfaces, 2018, 10, 29153-29160.	4.0	20

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73	Locally Controlled Cu-Ion Transport in Layered Ferroelectric $\text{CuInP}_2\text{S}_6$ . ACS Applied Materials & Interfaces, 2018, 10, 27188-27194.	4.0	68
74	E-beam manipulation of Si atoms on graphene edges with an aberration-corrected scanning transmission electron microscope. Nano Research, 2018, 11, 6217-6226.	5.8	21
75	Atom-by-Atom Assembly in Aberration Corrected STEM and the Role of Chemistry at the Surface of Graphene. Microscopy and Microanalysis, 2018, 24, 326-327.	0.2	0
76	Automated Atom-by-Atom Assembly of Structures in Graphene: The Rise of STEM for Atomic Scale Control. Microscopy and Microanalysis, 2018, 24, 1594-1595.	0.2	0
77	Theory-assisted determination of nano-rippling and impurities in atomic resolution images of angle-mismatched bilayer graphene. 2D Materials, 2018, 5, 041008.	2.0	5
78	Building Structures Atom by Atom via Electron Beam Manipulation. Small, 2018, 14, e1801771.	5.2	81
79	Chemical nature of ferroelastic twin domains in $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite. Nature Materials, 2018, 17, 1013-1019.	13.3	183
80	Dynamic behavior of $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite twin domains. Applied Physics Letters, 2018, 113, .	1.5	27
81	Time resolved surface photovoltage measurements using a big data capture approach to KPFM. Nanotechnology, 2018, 29, 445703.	1.3	36
82	Synergetic effects of $\text{K}^+$ and $\text{Mg}^{2+}$ ion intercalation on the electrochemical and actuation properties of the two-dimensional $\text{Ti}_3\text{C}_2\text{MXene}$ . Faraday Discussions, 2017, 199, 393-403.	1.6	55
83	Improved spatial resolution for spot sampling in thermal desorption atomic force microscopy – mass spectrometry via rapid heating functions. Nanoscale, 2017, 9, 5708-5717.	2.8	9
84	Mixed electrochemical – ferroelectric states in nanoscale ferroelectrics. Nature Physics, 2017, 13, 812-818.	6.5	98
85	Ferroelectric or non-ferroelectric: Why so many materials exhibit –ferroelectricity– on the nanoscale. Applied Physics Reviews, 2017, 4, .	5.5	240
86	Enhancing Ion Migration in Grain Boundaries of Hybrid Organic – Inorganic Perovskites by Chlorine. Advanced Functional Materials, 2017, 27, 1700749.	7.8	74
87	Direct Imaging of the Relaxation of Individual Ferroelectric Interfaces in a Tensile – Strained Film. Advanced Electronic Materials, 2017, 3, 1600508.	2.6	7
88	Precision controlled atomic resolution scanning transmission electron microscopy using spiral scan pathways. Scientific Reports, 2017, 7, 43585.	1.6	23
89	Quantification of in-contact probe-sample electrostatic forces with dynamic atomic force microscopy. Nanotechnology, 2017, 28, 065704.	1.3	43
90	Placing single atoms in graphene with a scanning transmission electron microscope. Applied Physics Letters, 2017, 111, .	1.5	119

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91	Atom-by-atom fabrication by electron beam via induced phase transformations. MRS Bulletin, 2017, 42, 653-659.	1.7	18
92	Three-€State Ferroelastic Switching and Large Electromechanical Responses in PbTiO <sub>3</sub> Thin Films. Advanced Materials, 2017, 29, 1702069.	11.1	74
93	Breaking the Time Barrier in Kelvin Probe Force Microscopy: Fast Free Force Reconstruction Using the G-Mode Platform. ACS Nano, 2017, 11, 8717-8729.	7.3	67
94	Automated Interpretation and Extraction of Topographic Information from Time of Flight Secondary Ion Mass Spectrometry Data. Scientific Reports, 2017, 7, 17099.	1.6	21
95	Deep Learning of Atomically Resolved Scanning Transmission Electron Microscopy Images: Chemical Identification and Tracking Local Transformations. ACS Nano, 2017, 11, 12742-12752.	7.3	282
96	Decoding Apparent Ferroelectricity in Perovskite Nanofibers. ACS Applied Materials & Interfaces, 2017, 9, 42131-42138.	4.0	6
97	G-mode - Full Information Capture Applied to Scanning Probe Microscopy. Microscopy and Microanalysis, 2017, 23, 184-185.	0.2	1
98	Local Crystallography for Quantitative Analysis of Atomically Resolved Images. Microscopy and Microanalysis, 2016, 22, 948-949.	0.2	0
99	Local Probing of Ferroelectric and Ferroelastic Switching through Stress-Mediated Piezoelectric Spectroscopy. Advanced Materials Interfaces, 2016, 3, 1500470.	1.9	17
100	Nanosculpting of complex oxides by massive ionic transfer. Nanotechnology, 2016, 27, 505703.	1.3	1
101	High Performance Computing Tools for Cross Correlation of Multi-Dimensional Data Sets Across Instrument Platforms. Microscopy and Microanalysis, 2016, 22, 288-289.	0.2	0
102	Submicron Spatial Resolution in Thermal Desorption Mass Spectrometry via Rapid Heating Functions using Thermal AFM Probes. Microscopy and Microanalysis, 2016, 22, 368-369.	0.2	1
103	Inverse Problem Solution for Quantitative Investigations of Nanocrystals Formation and Growth. Microscopy and Microanalysis, 2016, 22, 794-795.	0.2	0
104	Quantification of surface displacements and electromechanical phenomena via dynamic atomic force microscopy. Nanotechnology, 2016, 27, 425707.	1.3	92
105	Rapid mapping of polarization switching through complete information acquisition. Nature Communications, 2016, 7, 13290.	5.8	21
106	Decoupling indirect topographic cross-talk in band excitation piezoresponse force microscopy imaging and spectroscopy. Applied Physics Letters, 2016, 108, .	1.5	17
107	G-mode magnetic force microscopy: Separating magnetic and electrostatic interactions using big data analytics. Applied Physics Letters, 2016, 108, .	1.5	24
108	Correlation between piezoresponse nonlinearity and hysteresis in ferroelectric crystals at the nanoscale. Applied Physics Letters, 2016, 108, .	1.5	3

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109	Directing Matter: Toward Atomic-Scale 3D Nanofabrication. <i>ACS Nano</i> , 2016, 10, 5600-5618.	7.3	99
110	Unraveling the Mechanism of Nanoscale Mechanical Reinforcement in Glassy Polymer Nanocomposites. <i>Nano Letters</i> , 2016, 16, 3630-3637.	4.5	142
111	Polarization Control via He-Ion Beam Induced Nanofabrication in Layered Ferroelectric Semiconductors. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 7349-7355.	4.0	19
112	Solid-state electrochemistry on the nanometer and atomic scales: the scanning probe microscopy approach. <i>Nanoscale</i> , 2016, 8, 13838-13858.	2.8	27
113	Imaging via complete cantilever dynamic detection: general dynamic mode imaging and spectroscopy in scanning probe microscopy. <i>Nanotechnology</i> , 2016, 27, 414003.	1.3	14
114	Big, Deep, and Smart Data in Scanning Probe Microscopy. <i>ACS Nano</i> , 2016, 10, 9068-9086.	7.3	103
115	Direct-write liquid phase transformations with a scanning transmission electron microscope. <i>Nanoscale</i> , 2016, 8, 15581-15588.	2.8	29
116	Phases and Interfaces from Real Space Atomically Resolved Data: Physics-Based Deep Data Image Analysis. <i>Nano Letters</i> , 2016, 16, 5574-5581.	4.5	40
117	Atomistic-Scale Simulations of Defect Formation in Graphene under Noble Gas Ion Irradiation. <i>ACS Nano</i> , 2016, 10, 8376-8384.	7.3	113
118	Exploring Polarization Rotation Instabilities in Superâ€¢tetragonal BiFeO<sub>3</sub> Epitaxial Thin Films and Their Technological Implications. <i>Advanced Electronic Materials</i> , 2016, 2, 1600307.	2.6	9
119	Full data acquisition in Kelvin Probe Force Microscopy: Mapping dynamic electric phenomena in real space. <i>Scientific Reports</i> , 2016, 6, 30557.	1.6	47
120	Nanoforging Single Layer MoSe2 Through Defect Engineering with Focused Helium Ion Beams. <i>Scientific Reports</i> , 2016, 6, 30481.	1.6	82
121	Acoustic Detection of Phase Transitions at the Nanoscale. <i>Advanced Functional Materials</i> , 2016, 26, 478-486.	7.8	28
122	Nanoscale Elastic Changes in 2D Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> (MXene) Pseudocapacitive Electrodes. <i>Advanced Energy Materials</i> , 2016, 6, 1502290.	10.2	117
123	Graphene engineering by neon ion beams. <i>Nanotechnology</i> , 2016, 27, 125302.	1.3	21
124	Multifrequency spectrum analysis using fully digital G Mode-Kelvin probe force microscopy. <i>Nanotechnology</i> , 2016, 27, 105706.	1.3	36
125	Nanoscale mapping of heterogeneity of the polarization reversal in lead-free relaxorâ€¢ferroelectric ceramic composites. <i>Nanoscale</i> , 2016, 8, 2168-2176.	2.8	33
126	Fire up the atom forge. <i>Nature</i> , 2016, 539, 485-487.	13.7	79



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127	Patterning: Atomic-Level Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision (Small 44/2015). Small, 2015, 11, 5854-5854.	5.2	2
128	Paving the way to nanoionics: atomic origin of barriers for ionic transport through interfaces. Scientific Reports, 2015, 5, 17229.	1.6	35
129	Full information acquisition in piezoresponse force microscopy. Applied Physics Letters, 2015, 107, 263102.	1.5	28
130	Current and surface charge modified hysteresis loops in ferroelectric thin films. Journal of Applied Physics, 2015, 118, .	1.1	60
131	Multidimensional dynamic piezoresponse measurements: Unraveling local relaxation behavior in relaxor-ferroelectrics via big data. Journal of Applied Physics, 2015, 118, .	1.1	17
132	Deep Data Analysis of Atomic Level Structure-Property Relationship in an Iron Superconductor Fe 105 Te 075 Se 025. Microscopy and Microanalysis, 2015, 21, 2345-2346.	0.2	0
133	Sub-nA spatially resolved conductivity profiling of surface and interface defects in ceria films. APL Materials, 2015, 3, 036106.	2.2	3
134	Atomic-Level Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision. Small, 2015, 11, 5895-5900.	5.2	73
135	Quantitative Nanometer-Scale Mapping of Dielectric Tunability. Advanced Materials Interfaces, 2015, 2, 1500088.	1.9	7
136	Kelvin probe force microscopy in liquid using electrochemical force microscopy. Beilstein Journal of Nanotechnology, 2015, 6, 201-214.	1.5	38
137	Differentiating Ferroelectric and Nonferroelectric Electromechanical Effects with Scanning Probe Microscopy. ACS Nano, 2015, 9, 6484-6492.	7.3	231
138	A-site stoichiometry and piezoelectric response in thin film $\text{PbZr}_{1-x}\text{Ti}_x\text{O}_3$ . Journal of Applied Physics, 2015, 117, 204104.	1.1	13
139	Big data and deep data in scanning and electron microscopies: deriving functionality from multidimensional data sets. Advanced Structural and Chemical Imaging, 2015, 1, 6.	4.0	74
140	Electrocatalysis-induced elasticity modulation in a superionic proton conductor probed by band-excitation atomic force microscopy. Nanoscale, 2015, 7, 20089-20094.	2.8	5
141	Probing Local Bias-Induced Transitions Using Photothermal Excitation Contact Resonance Atomic Force Microscopy and Voltage Spectroscopy. ACS Nano, 2015, 9, 1848-1857.	7.3	37
142	Carrier density modulation in a germanium heterostructure by ferroelectric switching. Nature Communications, 2015, 6, 6067.	5.8	75
143	Complete information acquisition in dynamic force microscopy. Nature Communications, 2015, 6, 6550.	5.8	49
144	Bias assisted scanning probe microscopy direct write lithography enables local oxygen enrichment of lanthanum cuprates thin films. Nanotechnology, 2015, 26, 325302.	1.3	1

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145	Identification of phases, symmetries and defects through local crystallography. Nature Communications, 2015, 6, 7801.	5.8	63
146	Co-registered Topographical, Band Excitation Nanomechanical, and Mass Spectral Imaging Using a Combined Atomic Force Microscopy/Mass Spectrometry Platform. ACS Nano, 2015, 9, 4260-4269.	7.3	31
147	Defective Interfaces in Yttrium-Doped Barium Zirconate Films and Consequences on Proton Conduction. Nano Letters, 2015, 15, 2343-2349.	4.5	25
148	Domain pinning near a single-grain boundary in tetragonal and rhombohedral lead zirconate titanate films. Physical Review B, 2015, 91, .	1.1	31
149	Domain Wall Motion Across Various Grain Boundaries in Ferroelectric Thin Films. Journal of the American Ceramic Society, 2015, 98, 1848-1857.	1.9	42
150	Quantitative 3D-KPFM imaging with simultaneous electrostatic force and force gradient detection. Nanotechnology, 2015, 26, 175707.	1.3	29
151	Quantitative Description of Crystal Nucleation and Growth from in Situ Liquid Scanning Transmission Electron Microscopy. ACS Nano, 2015, 9, 11784-11791.	7.3	41
152	Band excitation Kelvin probe force microscopy utilizing photothermal excitation. Applied Physics Letters, 2015, 106, .	1.5	18
153	Big data in reciprocal space: Sliding fast Fourier transforms for determining periodicity. Applied Physics Letters, 2015, 106, .	1.5	35
154	Mesoscopic harmonic mapping of electromechanical response in a relaxor ferroelectric. Applied Physics Letters, 2015, 106, 222901.	1.5	9
155	Nanoscale mapping of electromechanical response in ionic conductive ceramics with piezoelectric inclusions. Journal of Applied Physics, 2015, 118, .	1.1	17
156	Research Update: Spatially resolved mapping of electronic structure on atomic level by multivariate statistical analysis. APL Materials, 2014, 2, .	2.2	14
157	Effect of Doping on Surface Reactivity and Conduction Mechanism in Samarium-Doped Ceria Thin Films. ACS Nano, 2014, 8, 12494-12501.	7.3	34
158	Chemically induced Jahn-Teller ordering on manganite surfaces. Nature Communications, 2014, 5, 4528.	5.8	28
159	Second harmonic detection in the electrochemical strain microscopy of Ag-ion conducting glass. Applied Physics Letters, 2014, 105, 193106.	1.5	10
160	Controlled mechanical modification of manganite surface with nanoscale resolution. Nanotechnology, 2014, 25, 475302.	1.3	8
161	Tuning Susceptibility via Misfit Strain in Relaxed Morphotropic Phase Boundary $\text{PbZr}_{1-x}\text{Ti}_x\text{O}_3$ Epitaxial Thin Films. Advanced Materials Interfaces, 2014, 1, 1400098.	1.9	16
162	Fundamental limitation to the magnitude of piezoelectric response of $\text{Pb}(\text{Zr}_{0.5}\text{Ti}_{0.5})_{1-x}\text{O}_3$ textured $\text{K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ ceramic. Applied Physics Letters, 2014, 104, .	1.5	26

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163	Probing charge screening dynamics and electrochemical processes at the solid-liquid interface with electrochemical force microscopy. <i>Nature Communications</i> , 2014, 5, 3871.	5.8	97
164	Intermittency, quasiperiodicity and chaos in probe-induced ferroelectric domain switching. <i>Nature Physics</i> , 2014, 10, 59-66.	6.5	129
165	Water-mediated electrochemical nano-writing on thin ceria films. <i>Nanotechnology</i> , 2014, 25, 075701.	1.3	12
166	Dual harmonic Kelvin probe force microscopy at the graphene-liquid interface. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	50
167	Exploring Local Electrostatic Effects with Scanning Probe Microscopy: Implications for Piezoresponse Force Microscopy and Triboelectricity. <i>ACS Nano</i> , 2014, 8, 10229-10236.	7.3	123
168	Breaking the limits of structural and mechanical imaging of the heterogeneous structure of coal macerals. <i>Nanotechnology</i> , 2014, 25, 435402.	1.3	19
169	Deterministic arbitrary switching of polarization in a ferroelectric thin film. <i>Nature Communications</i> , 2014, 5, 4971.	5.8	35
170	Direct Probing of Charge Injection and Polarization-Controlled Ionic Mobility on Ferroelectric $\text{LiNbO}_3$ Surfaces. <i>Advanced Materials</i> , 2014, 26, 958-963.	11.1	49
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