Meganâ€E Holtz

List of Publications by Year
in descending order

54 papers	1,958 citations	393982 19 h-index	253896 43 g-index
54 all docs	54 docs citations	54 times ranked	3432 citing authors

#	Article	IF	Citations
1	Atomically engineered ferroic layers yield a room-temperature magnetoelectric multiferroic. Nature, 2016, 537, 523-527.	13.7	275
2	Nanoscale Imaging of Lithium Ion Distribution During In Situ Operation of Battery Electrode and Electrolyte. Nano Letters, 2014, 14, 1453-1459.	4.5	238
3	Electron ptychography achieves atomic-resolution limits set by lattice vibrations. Science, 2021, 372, 826-831.	6.0	154
4	Real-time imaging of activation and degradation of carbon supported octahedral Ptâ€“Ni alloy fuel cell catalysts at the nanoscale using in situ electrochemical liquid cell STEM. Energy and Environmental Science, 2019, 12, 2476-2485.	15.6	146
5	In Situ Electron Energy-Loss Spectroscopy in Liquids. Microscopy and Microanalysis, 2013, 19, 1027-1035.	0.2	140
6	Mitigation of PEM Fuel Cell Catalyst Degradation with Porous Carbon Supports. Journal of the Electrochemical Society, 2019, 166, F198-F207.	1.3	126
7	Steam-created grain boundaries for methane Câ€“H activation in palladium catalysts. Science, 2021, 373, 1518-1523.	6.0	105
8	Magnetic Structure and Ordering of Multiferroic Hexagonal<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>LuFeO</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub> Physical Review Letters, 2015, 114, 217602.	2.9	92
9	Electrical half-wave rectification at ferroelectric domain walls. Nature Nanotechnology, 2018, 13, 1028-1034.	15.6	77
10	Coalescence in the Thermal Annealing of Nanoparticles: An in Situ STEM Study of the Growth Mechanisms of Ordered Ptâ€“Fe Nanoparticles in a KCl Matrix. Chemistry of Materials, 2013, 25, 1436-1442.	3.2	72
11	Nanoscale assembly processes revealed in the nacroprismatic transition zone of Pinna nobilis mollusc shells. Nature Communications, 2015, 6, 10097.	5.8	69
12	Octahedral spinel electrocatalysts for alkaline fuel cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24425-24432.	3.3	60
13	Topological Defects in Hexagonal Manganites: Inner Structure and Emergent Electrostatics. Nano Letters, 2017, 17, 5883-5890.	4.5	56
14	Ferroelectric Domain Walls in PbTiO₃ Are Effective Regulators of Heat Flow at Room Temperature. Nano Letters, 2019, 19, 7901-7907.	4.5	48
15	The exit-wave power-cepstrum transform for scanning nanobeam electron diffraction: robust strain mapping at subnanometer resolution and subpicometer precision. Ultramicroscopy, 2020, 214, 112994.	0.8	40
16	Growth of PdCoO2 by ozone-assisted molecular-beam epitaxy. APL Materials, 2019, 7, .	2.2	27
17	Targeted chemical pressure yields tuneable millimetre-wave dielectric. Nature Materials, 2020, 19, 176-181.	13.3	27
18	Defectâ€Enhanced Polarization Switching in the Improper Ferroelectric LuFeO₃. Advanced Materials, 2020, 32, e2000508.	11.1	25

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19	Reducing orbital occupancy in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>VO</mml:mi><mml:mn>2</mml:mn></mml:msub></m suppresses Mott physics while Peierls distortions persist. Physical Review B, 2017, 96, .	1.1	28
20	Imaging Polarity in Two Dimensional Materials by Breaking Friedel's Law. Ultramicroscopy, 2020, 215, 113019.	0.8	20
21	Visualizing weak ferromagnetic domains in multiferroic hexagonal ferrite thin film. Physical Review B, 2017, 95, .	1.1	19
22	Improved control of atomic layering in perovskite-related homologous series. APL Materials, 2021, 9, .	2.2	14
23	Dimensionality-Induced Change in Topological Order in Multiferroic Oxide Superlattices. Physical Review Letters, 2021, 126, 157601.	2.9	12
24	Site-specific spectroscopic measurement of spin and charge in (LuFeO3)m/(LuFe2O4)1 multiferroic superlattices. Nature Communications, 2020, 11, 5582.	5.8	9
25	Epitaxial crystals of Bi2Pt2O7 pyrochlore through the transformation of Î´â€“Bi2O3 fluorite. APL Materials, 2015, 3, .	2.2	8
26	Multiferroic LuFeO3 on GaN by molecular-beam epitaxy. Applied Physics Letters, 2020, 116, .	1.5	8
27	Canonical approach to cation flux calibration in oxide molecular-beam epitaxy. Physical Review Materials, 2022, 6, .	0.9	8
28	Conductivity and Microstructure of Combinatorially Sputter-Deposited Taâ€“Tiâ€“Al Nitride Thin Films. Chemistry of Materials, 2015, 27, 4515-4524.	3.2	7
29	In Situ Structural and Electrical Conductivity Characterization of Sr₂MMoO_{6â^Î´} Double Perovskite Solid Oxide Fuel Cell Anode Materials. ACS Applied Energy Materials, 2020, 3, 5353-5360.	2.5	7
30	Phase Transitions, Domains Walls and Defects Dynamics of LaAlO₃ via In Situ Heating in the Transmission Electron Microscope. Microscopy and Microanalysis, 2014, 20, 1556-1557.	0.2	6
31	Spatial Resolution in Scanning Electron Microscopy and Scanning Transmission Electron Microscopy Without a Specimen Vacuum Chamber. Microscopy and Microanalysis, 2016, 22, 754-767.	0.2	6
32	Stromataxic Stabilization of a Metastable Layered ScFeO₃ Polymorph. Chemistry of Materials, 2021, 33, 7423-7431.	3.2	6
33	Decoupling Polarization, Crystal Tilt and Symmetry in Epitaxially-Strained Ferroelectric Thin Films Using 4D-STEM. Microscopy and Microanalysis, 2019, 25, 1938-1939.	0.2	5
34	In Situ TEM for Quantitative Electrochemistry of Energy Systems. Microscopy and Microanalysis, 2015, 21, 1509-1510.	0.2	4
35	Reverse Engineering Cadmium Yellow Paint from Munchâ€™s â€œThe Screamâ€•with Correlative 3-D Spectroscopic and 4-D Crystallographic STEM. Microscopy and Microanalysis, 2016, 22, 258-259.	0.2	3
36	Detection of CdS Nanoparticles and Implications for Cadmium Yellow Paint Degradation in Edvard Munchâ€™s The Scream (c. 1910, Munch Museum). Microscopy and Microanalysis, 2017, 23, 1910-1911.	0.2	3

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37	Grains and Strains from Cepstral Analysis of 4D-STEM Nano-Diffraction Datasets. Microscopy and Microanalysis, 2018, 24, 546-547.	0.2	3
38	Spatial Resolution of Scanning Electron Microscopy without a Vacuum Chamber. Microscopy and Microanalysis, 2014, 20, 26-27.	0.2	2
39	Nanoscale Imaging of Lithium Ion Distribution During In Situ Operation of a Battery Electrode and Electrolyte. Microscopy and Microanalysis, 2014, 20, 1524-1525.	0.2	2
40	Direct Imaging of Tilt Relaxation from the Interface in Epitaxially Strained Ca2RuO4 Thin Films using ABF-STEM. Microscopy and Microanalysis, 2018, 24, 64-65.	0.2	2
41	DyFe₂O₄: A new trigonal rare-earth ferrite grown by molecular-beam epitaxy. APL Materials, 2021, 9, 041106.	2.2	2
42	Breaking Friedelâ€™s Law in Polar Two Dimensional Materials. Microscopy and Microanalysis, 2017, 23, 1738-1739.	0.2	1
43	Atomic Structure of Superconducting Tunnel Junctions using STEM and APT. Microscopy and Microanalysis, 2021, 27, 2460-2462.	0.2	1
44	Tomography and Spectroscopy of Structure and Degradation in Carbon Electrode Materials for Energy Conversion and Storage. Microscopy and Microanalysis, 2014, 20, 504-505.	0.2	0
45	STEM Characterization of Nano-Crystallites in the Nacre Biomineralization of Mollusk Shells (Pinna) Tj ETQq1 1 0.784314 rgBT /Overlo	0.2	0
46	Imaging Local Polarization and Domain Boundaries in Multiferroic (LuFeO3)m/(LuFe2O4)n Superlattices. Microscopy and Microanalysis, 2015, 21, 1303-1304.	0.2	0
47	In Situ TEM for Electrochemical Energy Storage and Conversion Systems. Microscopy and Microanalysis, 2016, 22, 1326-1327.	0.2	0
48	Imaging Local Polarization and Domain Boundaries with Picometer-Precision Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 898-899.	0.2	0
49	In Situ Electrochemical Cell TEM for Battery and Fuel Cell Systems. Microscopy and Microanalysis, 2016, 22, 752-753.	0.2	0
50	Measuring Ferroelectric Order Parameters at Domain Walls and Vortices in Hexagonal Manganites with Atomic Resolution STEM. Microscopy and Microanalysis, 2017, 23, 1636-1637.	0.2	0
51	AirSEM: Electron Microscopy in Air, without a Specimen Chamber. Microscopy and Microanalysis, 2018, 24, 342-343.	0.2	0
52	Understanding and Predicting Cadmium Yellow Pigment Failure Mechanisms in the Works of the Early Modernists Using STEM Methodologies. Microscopy and Microanalysis, 2018, 24, 2122-2123.	0.2	0
53	Multislice electron ptychography enables lattice vibration-limited resolution and linear phase-contrast imaging in thick samples. Microscopy and Microanalysis, 2021, 27, 754-756.	0.2	0
54	4-D STEM Analyses of Cylindrical Specimens for Atom Probe Tomography. Microscopy and Microanalysis, 2021, 27, 184-186.	0.2	0