Andrew M Minor

List of Publications by Year
in descending order

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263 papers	15,179 citations	18436 62 h-index	19690 117 g-index
269 all docs	269 docs citations	269 times ranked	16606 citing authors

#	Article	IF	Citations
1	Strong interlayer coupling in van der Waals heterostructures built from single-layer chalcogenides. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6198-6202.	3.3	970
2	Mechanical annealing and source-limited deformation in submicrometre-diameter NiÂcrystals. Nature Materials, 2008, 7, 115-119.	13.3	771
3	Observation of polar vortices in oxide superlattices. Nature, 2016, 530, 198-201.	13.7	682
4	Short-range order and its impact on the CrCoNi medium-entropy alloy. Nature, 2020, 581, 283-287.	13.7	672
5	Focused Ion Beam Microscopy and Micromachining. MRS Bulletin, 2007, 32, 389-399.	1.7	534
6	Indentation across size scales and disciplines: Recent developments in experimentation and modeling. Acta Materialia, 2007, 55, 4015-4039.	3.8	403
7	A new view of the onset of plasticity during the nanoindentation of aluminium. Nature Materials, 2006, 5, 697-702.	13.3	398
8	Large field-induced strains in a lead-free piezoelectric material. Nature Nanotechnology, 2011, 6, 98-102.	15.6	292
9	Nanocrystal Diffusion in a Liquid Thin Film Observed by in Situ Transmission Electron Microscopy. Nano Letters, 2009, 9, 2460-2465.	4.5	282
10	In situ nanocompression testing of irradiatedÂcopper. Nature Materials, 2011, 10, 608-613.	13.3	268
11	Detection of Single Atoms and Buried Defects in Three Dimensions by Aberration-Corrected Electron Microscope with 0.5-Ã... Information Limit. Microscopy and Microanalysis, 2008, 14, 469-477.	0.2	266
12	Origin of dramatic oxygen solute strengthening effect in titanium. Science, 2015, 347, 635-639.	6.0	255
13	Effect of Ion Distribution on Conductivity of Block Copolymer Electrolytes. Nano Letters, 2009, 9, 1212-1216.	4.5	228
14	The Nanostructured Origin of Deformation Twinning. Nano Letters, 2012, 12, 887-892.	4.5	218
15	Source Truncation and Exhaustion: Insights from Quantitative in situ TEM Tensile Testing. Nano Letters, 2011, 11, 3816-3820.	4.5	207
16	Mechanics and Dynamics of the Strain-Induced M1â€“M2 Structural Phase Transition in Individual VO₂ Nanowires. Nano Letters, 2011, 11, 3207-3213.	4.5	197
17	Increased Water Retention in Polymer Electrolyte Membranes at Elevated Temperatures Assisted by Capillary Condensation. Nano Letters, 2007, 7, 3547-3552.	4.5	196
18	Ultrahigh stress and strain in hierarchically structured hollow nanoparticles. Nature Materials, 2008, 7, 947-952.	13.3	193

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19	Morphology of Hydrated As-Cast Nafion Revealed through Cryo Electron Tomography. ACS Macro Letters, 2015, 4, 1-5.	2.3	182
20	Optimization of Acetylene Black Conductive Additive and PVDF Composition for High-Power Rechargeable Lithium-Ion Cells. Journal of the Electrochemical Society, 2007, 154, A1129.	1.3	181
21	Current status and future directions for in situ transmission electron microscopy. Ultramicroscopy, 2016, 170, 86-95.	0.8	181
22	Strain mapping at nanometer resolution using advanced nano-beam electron diffraction. Applied Physics Letters, 2015, 106, .	1.5	167
23	Quantitativein situnanoindentation in an electron microscope. Applied Physics Letters, 2001, 79, 1625-1627.	1.5	157
24	Cryoforged nanotwinned titanium with ultrahigh strength and ductility. Science, 2021, 373, 1363-1368.	6.0	155
25	Plastic flow and failure resistance of metallic glass: Insight fromin situcompression of nanopillars. Physical Review B, 2008, 77, .	1.1	149
26	Dislocation starvation and exhaustion hardening in Mo alloy nanofibers. Acta Materialia, 2012, 60, 2258-2264.	3.8	145
27	Defect reconfiguration in a Tiâ€“Al alloy via electroplasticity. Nature Materials, 2021, 20, 468-472.	13.3	142
28	Effects of Various Conductive Additive and Polymeric Binder Contents on the Performance of a Lithium-Ion Composite Cathode. Journal of the Electrochemical Society, 2008, 155, A887.	1.3	138
29	Ferroelastic domain switching dynamics under electrical and mechanical excitations. Nature Communications, 2014, 5, 3801.	5.8	135
30	In situ TEM compression testing of Mg and Mgâ€“0.2 wt.% Ce single crystals. Scripta Materialia, 2011, 64, 292-295.	2.6	128
31	Dislocationâ€“grain boundary interactions in martensitic steel observed through in situ nanoindentation in a transmission electron microscope. Journal of Materials Research, 2004, 19, 3626-3632.	1.2	127
32	py4DSTEM: A Software Package for Four-Dimensional Scanning Transmission Electron Microscopy Data Analysis. Microscopy and Microanalysis, 2021, 27, 712-743.	0.2	121
33	Direct observation of the NiTi martensitic phase transformation in nanoscale volumes. Acta Materialia, 2010, 58, 490-498.	3.8	112
34	Reducing deformation anisotropy to achieve ultrahigh strength and ductility in Mg at the nanoscale. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13289-13293.	3.3	111
35	Large Melting-Point Hysteresis of Ge Nanocrystals Embedded inSiO2. Physical Review Letters, 2006, 97, 155701.	2.9	108
36	A transmission electron microscopy study of mineralization in age-induced transparent dentin. Biomaterials, 2005, 26, 7650-7660.	5.7	104

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37	Extreme mixing in nanoscale transition metal alloys. Matter, 2021, 4, 2340-2353.	5.0	102
38	In situ TEM nanoindentation and dislocation-grain boundary interactions: a tribute to David Brandon. Journal of Materials Science, 2006, 41, 7704-7719.	1.7	101
39	Direct observations of incipient plasticity during nanoindentation of Al. Journal of Materials Research, 2004, 19, 176-182.	1.2	99
40	Diffraction imaging of nanocrystalline structures in organic semiconductor molecular thin films. Nature Materials, 2019, 18, 860-865.	13.3	99
41	Highly mobile ferroelastic domain walls in compositionally graded ferroelectric thin films. Nature Materials, 2016, 15, 549-556.	13.3	98
42	Development of a Nanoindenter for In Situ Transmission Electron Microscopy. Microscopy and Microanalysis, 2001, 7, 507-517.	0.2	97
43	Achieving large uniform tensile elasticity in microfabricated diamond. Science, 2021, 371, 76-78.	6.0	95
44	Helical van der Waals crystals with discretized Eshelby twist. Nature, 2019, 570, 358-362.	13.7	91
45	Diffraction contrast imaging using virtual apertures. Ultramicroscopy, 2015, 155, 1-10.	0.8	86
46	Direct imaging of short-range order and its impact on deformation in Ti-6Al. Science Advances, 2019, 5, eaax2799.	4.7	86
47	Minimization of focused ion beam damage in nanostructured polymer thin films. Ultramicroscopy, 2011, 111, 191-199.	0.8	84
48	In Situ Formed Si Nanoparticle Network with Micron-Sized Si Particles for Lithium-Ion Battery Anodes. Nano Letters, 2013, 13, 5397-5402.	4.5	83
49	Growth of a Au-Ni-Sn intermetallic compound on the solder-substrate interface after aging. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 798-800.	1.1	82
50	Electrochemical Deposition and Stripping Behavior of Lithium Metal across a Rigid Block Copolymer Electrolyte Membrane. Journal of the Electrochemical Society, 2015, 162, A2699-A2706.	1.3	81
51	Application of small-scale testing for investigation of ion-beam-irradiated materials. Journal of Materials Research, 2012, 27, 2724-2736.	1.2	80
52	The mechanical behavior of nanoporous gold thin films. Jom, 2007, 59, 54-58.	0.9	78
53	In situTEM nanomechanics. MRS Bulletin, 2015, 40, 62-70.	1.7	78
54	Synthesis of hierarchical TiO2 nanowires with densely-packed and omnidirectional branches. Nanoscale, 2013, 5, 11147.	2.8	77

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55	In situ TEM observation of FCC Ti formation at elevated temperatures. Scripta Materialia, 2017, 140, 9-12.	2.6	77
56	Effects of cryogenic temperature and grain size on fatigue-crack propagation in the medium-entropy CrCoNi alloy. Acta Materialia, 2020, 200, 351-365.	3.8	76
57	The chain of chirality transfer in tellurium nanocrystals. Science, 2021, 372, 729-733.	6.0	76
58	In situ deformation of silicon nanospheres. Journal of Materials Science, 2006, 41, 4477-4483.	1.7	74
59	Piezoresistive Response of Quasi-One-Dimensional ZnO Nanowires Using an in Situ Electromechanical Device. ACS Omega, 2017, 2, 2985-2993.	1.6	72
60	Optimizing disk registration algorithms for nanobeam electron diffraction strain mapping. Ultramicroscopy, 2017, 176, 170-176.	0.8	71
61	Atomically Altered Hematite for Highly Efficient Perovskite Tandem Waterâ€Splitting Devices. ChemSusChem, 2017, 10, 2449-2456.	3.6	71
62	Void Formation Induced Electrical Switching in Phase-Change Nanowires. Nano Letters, 2008, 8, 4562-4567.	4.5	69
63	Observing and measuring strain in nanostructures and devices with transmission electron microscopy. MRS Bulletin, 2014, 39, 138-146.	1.7	66
64	Inhibiting growth of the Au0.5Ni0.5Sn4 intermetallic layer in Pb-Sn solder joints reflowed on Au/Ni metallization. Journal of Electronic Materials, 2000, 29, 1170-1174.	1.0	65
65	Electron transport and visible light absorption in a plasmonic photocatalyst based on strontium niobate. Nature Communications, 2017, 8, 15070.	5.8	64
66	Twin boundary interactions with grain boundaries investigated in pure rhenium. Acta Materialia, 2014, 81, 1-8.	3.8	63
67	Laser-Induced Reductive Sintering of Nickel Oxide Nanoparticles under Ambient Conditions. Journal of Physical Chemistry C, 2015, 119, 6363-6372.	1.5	63
68	Electromechanical Probing of Li/Li₂CO₃Core/Shell Particles in a TEM. Journal of the Electrochemical Society, 2013, 160, A415-A419.	1.3	61
69	Morphology-Conductivity Relationship in Crystalline and Amorphous Sequence-Defined Peptoid Block Copolymer Electrolytes. Journal of the American Chemical Society, 2014, 136, 14990-14997.	6.6	61
70	Patterned probes for high precision 4D-STEM bragg measurements. Ultramicroscopy, 2020, 209, 112890.	0.8	61
71	Large polarization gradients and temperature-stable responses in compositionally-graded ferroelectrics. Nature Communications, 2017, 8, 14961.	5.8	60
72	Mechanistic basis of oxygen sensitivity in titanium. Science Advances, 2020, 6, .	4.7	59

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73	Orientation mapping of semicrystalline polymers using scanning electron nanobeam diffraction. Micron, 2016, 88, 30-36.	1.1	54
74	In situ nanoindentation in the TEM. Materials Today, 2007, 10, 59-60.	8.3	53
75	Evaluation of using pre-lithiated graphite from recycled Li-ion batteries for new LiB anodes. Resources, Conservation and Recycling, 2018, 129, 129-134.	5.3	53
76	In Situ TEM Near-Field Optical Probing of Nanoscale Silicon Crystallization. Nano Letters, 2012, 12, 2524-2529.	4.5	49
77	The Effect of Size on the Deformation Twinning Behavior in Hexagonal Close-Packed Ti and Mg. Jom, 2012, 64, 1235-1240.	0.9	49
78	Vanadium dioxide nanowire-based microthermometer for quantitative evaluation of electron beam heating. Nature Communications, 2014, 5, 4986.	5.8	48
79	4D-STEM of Beam-Sensitive Materials. Accounts of Chemical Research, 2021, 54, 2543-2551.	7.6	48
80	In-situ transmission electron microscopy study of the nanoindentation behavior of Al. Journal of Electronic Materials, 2002, 31, 958-964.	1.0	47
81	Nanoscale mosaicity revealed in peptide microcrystals by scanning electron nanodiffraction. Communications Biology, 2019, 2, 26.	2.0	47
82	Direct measurement of nanostructural change during in situ deformation of a bulk metallic glass. Nature Communications, 2019, 10, 2445.	5.8	46
83	Incipient plasticity in metallic thin films. Applied Physics Letters, 2007, 90, 181924.	1.5	45
84	Three-Dimensional Biomimetic Mineralization of Dense Hydrogel Templates. Journal of the American Chemical Society, 2009, 131, 9937-9939.	6.6	45
85	Ion Write Microthermotics: Programing Thermal Metamaterials at the Microscale. Nano Letters, 2019, 19, 3830-3837.	4.5	45
86	Development of a Nanoindenter for In Situ Transmission Electron Microscopy. Microscopy and Microanalysis, 2001, 7, 507-517.	0.2	45
87	Local and transient nanoscale strain mapping during in situ deformation. Applied Physics Letters, 2016, 109, .	1.5	43
88	Tunable and low-loss correlated plasmons in Mott-like insulating oxides. Nature Communications, 2017, 8, 15271.	5.8	42
89	In situ nanobeam electron diffraction strain mapping of planar slip in stainless steel. Scripta Materialia, 2018, 146, 87-90.	2.6	41
90	Elimination of oxygen sensitivity in Î±-titanium by substitutional alloying with Al. Nature Communications, 2021, 12, 6158.	5.8	41

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91	Auâ^'Niâ^'Sn intermetallic phase relationships in eutectic Pbâ^'Sn solder formed on Ni/Au metallization. Journal of Electronic Materials, 2001, 30, 409-414.	1.0	39
92	Cryogenic in situ microcompression testing of Sn. Acta Materialia, 2014, 78, 56-64.	3.8	38
93	Proton irradiation-decelerated intergranular corrosion of Ni-Cr alloys in molten salt. Nature Communications, 2020, 11, 3430.	5.8	37
94	Imaging Unstained Synthetic Polymer Crystals and Defects on Atomic Length Scales Using Cryogenic Electron Microscopy. Macromolecules, 2018, 51, 7794-7799.	2.2	36
95	Local nanoscale strain mapping of a metallic glass during in situ testing. Applied Physics Letters, 2018, 112, .	1.5	35
96	Control of Domain Orientation in Block Copolymer Electrolyte Membranes at the Interface with Humid Air. Advanced Materials, 2009, 21, 203-208.	11.1	34
97	Source mechanism of non-basal ã€c+aã€‰ slip in Ti alloy. Scripta Materialia, 2013, 69, 57-60.	2.6	33
98	The 4D Camera: Very High Speed Electron Counting for 4D-STEM. Microscopy and Microanalysis, 2019, 25, 1930-1931.	0.2	33
99	Size effects in the nanoindentation of silicon at ambient temperature. Philosophical Magazine, 2006, 86, 4069-4080.	0.7	32
100	Advances in in situ nanomechanical testing. MRS Bulletin, 2019, 44, 438-442.	1.7	31
101	Impurity and texture driven HCP-to-FCC transformations in Ti-X thin films during in situ TEM annealing and FIB milling. Acta Materialia, 2020, 184, 199-210.	3.8	31
102	Engineering Mesoporous Silica Nanoparticles for Targeted Alpha Therapy against Breast Cancer. ACS Applied Materials & Interfaces, 2020, 12, 40078-40084.	4.0	31
103	Chemical mapping of a block copolymer electrolyte by low-loss EFTEM spectrum-imaging and principal component analysis. Ultramicroscopy, 2011, 111, 239-244.	0.8	30
104	Gallium, neon and helium focused ion beam milling of thin films demonstrated for polymeric materials: study of implantation artifacts. Nanoscale, 2019, 11, 1403-1409.	2.8	30
105	In-situ nanoindentation of epitaxial TiN/MgO (001) in a transmission electron microscope. Journal of Electronic Materials, 2003, 32, 1023-1027.	1.0	29
106	Tribology in Full View. MRS Bulletin, 2008, 33, 1168-1173.	1.7	29
107	High-strength titanium alloy nanopillars with stacking faults and enhanced plastic flow. Applied Physics Letters, 2012, 100, 063109.	1.5	29
108	Conductive Polymer and Silicon Composite Secondary Particles for a High Area-Loading Negative Electrode. Journal of the Electrochemical Society, 2013, 160, A1380-A1383.	1.3	29

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109	In situ indentation of nanoporous gold thin films in the transmission electron microscope. Microscopy Research and Technique, 2009, 72, 232-241.	1.2	28
110	Influence of void-free perovskite capping layer on the charge recombination process in high performance CH₃NH₃PbI₃perovskite solar cells. Nanoscale, 2016, 8, 4181-4193.	2.8	28
111	Ultrafast Relativistic Electron Nanoprobes. Communications Physics, 2019, 2, .	2.0	28
112	Transition metal interaction and Ni-Fe-Cu-Si phases in silicon. Journal of Applied Physics, 2007, 101, 123510.	1.1	27
113	Embedded Binary Eutectic Alloy Nanostructures: A New Class of Phase Change Materials. Nano Letters, 2010, 10, 2794-2798.	4.5	27
114	The 4D Camera â€“ An 87 kHz Frame-rate Detector for Counted 4D-STEM Experiments. Microscopy and Microanalysis, 2020, 26, 1896-1897.	0.2	27
115	Correlative image learning of chemo-mechanics in phase-transforming solids. Nature Materials, 2022, 21, 547-554.	13.3	27
116	Probing Local Electronic Transitions in Organic Semiconductors through Energyâ€Loss Spectrum Imaging in the Transmission Electron Microscope. Advanced Functional Materials, 2015, 25, 6071-6076.	7.8	25
117	Influence of the Ag concentration on the medium-range order in a CuZrAlAg bulk metallic glass. Scientific Reports, 2017, 7, 44903.	1.6	25
118	Selective Lanthanide Sensing with Gold Nanoparticles and Hydroxypyridinone Chelators. Inorganic Chemistry, 2020, 59, 2030-2036.	1.9	25
119	Determining the stress required for deformation twinning in nanocrystalline and ultrafine-grained copper. Jom, 2008, 60, 66-70.	0.9	24
120	Three-dimensional Architecture Enabled by Strained Two-dimensional Material Heterojunction. Nano Letters, 2018, 18, 1819-1825.	4.5	24
121	Statistical analysis of twin/grain boundary interactions in pure rhenium. Acta Materialia, 2019, 173, 44-51.	3.8	24
122	Superglide at an Internal Incommensurate Boundary. Nano Letters, 2010, 10, 695-700.	4.5	23
123	The effect of size on dislocation cell formation and strain hardening in aluminium. Philosophical Magazine, 2014, 94, 2062-2071.	0.7	23
124	Electronic Origins of Anomalous Twin Boundary Energies in Hexagonal Close Packed Transition Metals. Physical Review Letters, 2015, 115, 065501.	2.9	23
125	Evaluation of neon focused ion beam milling for TEM sample preparation. Journal of Microscopy, 2016, 264, 59-63.	0.8	23
126	Visualization and validation of twin nucleation and early-stage growth in magnesium. Nature Communications, 2022, 13, 20.	5.8	23

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127	Revealing deformation mechanisms with nanoindentation. Jom, 2009, 61, 14-23.	0.9	21
128	Oriented Growth of Gold Nanowires on MoS₂. Advanced Functional Materials, 2015, 25, 6257-6264.	7.8	21
129	On Demand Shape-Selective Integration of Individual Vertical Germanium Nanowires on a Si(111) Substrate via Laser-Localized Heating. ACS Nano, 2013, 7, 2090-2098.	7.3	20
130	Size-dependent mechanical properties of Mg nanoparticles used for hydrogen storage. Applied Physics Letters, 2015, 106, .	1.5	20
131	py4DSTEM: Open Source Software for 4D-STEM Data Analysis. Microscopy and Microanalysis, 2019, 25, 124-125.	0.2	20
132	Hierarchically-structured large superelastic deformation in ferroelastic-ferroelectrics. Acta Materialia, 2019, 181, 501-509.	3.8	20
133	In situ transmission electron microscopy investigation of electroplasticity in single crystal nickel. Acta Materialia, 2022, 223, 117461.	3.8	20
134	Strength, Hardening, and Failure Observed by In Situ TEM Tensile Testing. Advanced Engineering Materials, 2012, 14, 960-967.	1.6	19
135	In situ TEM Raman spectroscopy and laser-based materials modification. Ultramicroscopy, 2017, 178, 33-37.	0.8	19
136	Revealing Cation-Exchange-Induced Phase Transformations in Multielemental Chalcogenide Nanoparticles. Chemistry of Materials, 2017, 29, 9192-9199.	3.2	19
137	The Materials Research Platform: Defining the Requirements from User Stories. Matter, 2019, 1, 1433-1438.	5.0	19
138	Measuring temperature-dependent thermal diffuse scattering using scanning transmission electron microscopy. Applied Physics Letters, 2018, 113, .	1.5	18
139	Study of Deformation Behavior of Ultrafine-grained Materials Through in Situ Nanoindentation in a Transmission Electron Microscope. Journal of Materials Research, 2005, 20, 1735-1740.	1.2	17
140	Nanoscale plastic deformation and fracture of polymers studied by in situ nanoindentation in a transmission electron microscope. Applied Physics Letters, 2006, 88, 181908.	1.5	17
141	Nanomechanical actuation from phase transitions in individual VO2 micro-beams. Applied Physics Letters, 2013, 102, .	1.5	17
142	Correlation between Electrical Transport and Nanoscale Strain in InAs/In_{0.6}Ga_{0.4}As Coreâ€“Shell Nanowires. Nano Letters, 2018, 18, 4949-4956.	4.5	17
143	Functional Materials Under Stress: In Situ TEM Observations of Structural Evolution. Advanced Materials, 2020, 32, e1906105.	11.1	17
144	In Situ Transmission Electron Microscopy. Springer Handbooks, 2019, , 101-187.	0.3	17

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145	Automated Crystal Orientation Mapping in py4DSTEM using Sparse Correlation Matching. Microscopy and Microanalysis, 2022, 28, 390-403.	0.2	17
146	Solution-grown crystals of precise acid- and ion-containing polyethylenes. Polymer, 2018, 135, 111-119.	1.8	16
147	Microstructural evolution of rhenium Part I: Compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 732, 251-258.	2.6	16
148	Cryogenic electron microscopy for quantum science. MRS Bulletin, 2019, 44, 961-966.	1.7	16
149	Nano-scale Strain Mapping Using Advanced STEM with a Direct Electron Detector. Microscopy and Microanalysis, 2014, 20, 1046-1047.	0.2	15
150	Limiting Current in Nanostructured Block Copolymer Electrolytes. Macromolecules, 2021, 54, 4010-4022.	2.2	15
151	Ultrafast optical melting of trimer superstructure in layered 1Tâ€²-TaTe2. Communications Physics, 2021, 4, .	2.0	15
152	Absence of amorphous phase in high power femtosecond laser-ablated silicon. Applied Physics Letters, 2009, 94, .	1.5	14
153	FIB Sample Preparation of Polymer Thin Films on Hard Substrates Using the Shadow-FIB Method. Microscopy Today, 2009, 17, 20-23.	0.2	14
154	Generation of single-crystalline domain in nano-scale silicon pillars by near-field short pulsed laser. Applied Physics A: Materials Science and Processing, 2014, 114, 277-285.	1.1	14
155	Effect of Elastic Strain Fluctuation on Atomic Layer Growth of Epitaxial Silicide in Si Nanowires by Point Contact Reactions. Nano Letters, 2015, 15, 4121-4128.	4.5	14
156	Microstructural evolution of rhenium Part II: Tension. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 732, 259-272.	2.6	14
157	Nanomechanical Testing of Gum Metal. Experimental Mechanics, 2010, 50, 37-45.	1.1	13
158	Multiple Twinning and Stacking Faults in Silver Dendrites. Crystal Growth and Design, 2016, 16, 467-474.	1.4	13
159	Laser welding of vertically aligned carbon nanotube arrays on polymer workpieces. Carbon, 2017, 115, 688-693.	5.4	13
160	Plasmonic Lenses for Tunable Ultrafast Electron Emitters at the Nanoscale. Physical Review Applied, 2019, 12, .	1.5	13
161	Effect of salt concentration profiles on protrusion growth in lithium-polymerâ€‘lithium cells. Solid State Ionics, 2020, 358, 115517.	1.3	13
162	Twin nucleation from a single <c+a> dislocation in hexagonal close-packed crystals. Acta Materialia, 2021, 202, 35-41.	3.8	13

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163	Interfacial Concentration Profiles of Rubbery Polyolefin Lamellae Determined by Quantitative Electron Microscopy. Macromolecules, 2008, 41, 156-162.	2.2	12
164	<i>In Situ</i> TEM Concurrent and Successive Au Self-Ion Irradiation and He Implantation. Materials Transactions, 2014, 55, 418-422.	0.4	12
165	Review Article: Case studies in future trends of computational and experimental nanomechanics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	12
166	Fatigue-crack propagation behavior in a high-carbon chromium SUJ2 bearing steel: Role of microstructure. International Journal of Fatigue, 2022, 156, 106693.	2.8	11
167	Disorder recovers the Wiedemann-Franz law in the metallic phase of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="normal">VO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2020, 102, .	1.1	10
168	Architecture-Guided Fluid Flow Directs Renal Biomineralization. Scientific Reports, 2018, 8, 14157.	1.6	9
169	Fast Grain Mapping with Sub-Nanometer Resolution Using 4D-STEM with Grain Classification by Principal Component Analysis and Non-Negative Matrix Factorization. Microscopy and Microanalysis, 2021, 27, 794-803.	0.2	9
170	Multibeam Electron Diffraction. Microscopy and Microanalysis, 2021, 27, 129-139.	0.2	9
171	Knife-edge based measurement of the 4D transverse phase space of electron beams with picometer-scale emittance. Physical Review Accelerators and Beams, 2019, 22, .	0.6	9
172	Optimization of Acetylene Black Conductive Additive and Polyvinylidene Difluoride Composition for High Power Rechargeable Lithium-Ion Cells. ECS Transactions, 2007, 6, 45-56.	0.3	8
173	Identifying rhenium substitute candidate multiprincipal-element alloys from electronic structure and thermodynamic criteria. Journal of Materials Research, 2019, 34, 3296-3304.	1.2	8
174	Atomic structures determined from digitally defined nanocrystalline regions. IUCrJ, 2020, 7, 490-499.	1.0	8
175	Lithium substituted poly(amic acid) as a water-soluble anode binder for high-temperature pre-lithiation. Journal of Power Sources, 2022, 521, 230889.	4.0	8
176	In situ TEM observations of plastic deformation in quartz crystals. Physics and Chemistry of Minerals, 2014, 41, 757-765.	0.3	7
177	Nanobeam Scanning Diffraction for Orientation Mapping of Polymers. Microscopy and Microanalysis, 2017, 23, 1782-1783.	0.2	7
178	In situ transmission electron microscopy investigation on ã€ˆc+aã€‰ slip in Mg. Journal of Materials Research, 2019, 34, 1499-1508.	1.2	7
179	Resolving Enhanced Mn²⁺ Luminescence near the Surface of CsPbCl₃ with Time-Resolved Cathodoluminescence Imaging. Journal of Physical Chemistry Letters, 2020, 11, 2624-2629.	2.1	7
180	Dislocation structures below a nano-indent of the CoCrNi medium-entropy alloy. Materials Letters, 2021, 283, 128821.	1.3	7

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181	Probing electronic structure in berkelium and californium via an electron microscopy nanosampling approach. Nature Communications, 2021, 12, 948.	5.8	7
182	Precise measurement of activation parameters for individual dislocation nucleation during in situ TEM tensile testing of single crystal nickel. Scripta Materialia, 2021, 197, 113764.	2.6	7
183	Cryogenic 4D-STEM analysis of an amorphous-crystalline polymer blend: Combined nanocrystalline and amorphous phase mapping. IScience, 2022, 25, 103882.	1.9	7
184	In-situ metrology and testing of nanotwinned copper pillars for potential air gap applications. Microelectronic Engineering, 2010, 87, 2046-2049.	1.1	6
185	Starting and stopping dislocations. Nature Materials, 2015, 14, 866-867.	13.3	6
186	Extreme Ductility in Freestanding Polystyrene Thin Films. Macromolecules, 2020, 53, 8650-8662.	2.2	6
187	Nanomechanical testing of freestanding polymer films: in situ tensile testing and Tg measurement. Journal of Materials Research, 2021, 36, 2456-2464.	1.2	6
188	Multiscale characterization of dislocation processes in Al 5754. Philosophical Magazine, 2015, 95, 2198-2209.	0.7	5
189	Tunable Anelasticity in Amorphous Si Nanowires. Nano Letters, 2020, 20, 449-455.	4.5	5
190	Tuning Hole Mobility of Individual p-Doped GaAs Nanowires by Uniaxial Tensile Stress. Nano Letters, 2021, 21, 3894-3900.	4.5	5
191	Multidimensional Nano-Imaging of Structure, Coupling, and Disorder in Molecular Materials. Nano Letters, 2021, 21, 6463-6470.	4.5	5
192	Direct Observations of Grain Boundary Phenomena during Indentation of Al and Al-Mg Thin Films. Materials Research Society Symposia Proceedings, 2003, 795, 541.	0.1	4
193	Shadow FIBing- Using Geometry to Prepare TEM Samples. Microscopy and Microanalysis, 2005, 11, .	0.2	4
194	In-situ monitoring of optical near-field material processing by electron microscopes. Applied Physics A: Materials Science and Processing, 2011, 105, 317-321.	1.1	4
195	Embedded Binary Eutectic Alloy Nanostructures. Jom, 2012, 64, 1158-1164.	0.9	4
196	Revealing deformation mechanisms in Mgâ€“Y alloy by in situ deformation of nano-pillars with mediated lateral stiffness. Journal of Materials Research, 2019, 34, 1542-1554.	1.2	4
197	Evaluating the effects of pillar shape and gallium ion beam damage on the mechanical properties of single crystal aluminum nanopillars. Journal of Materials Research, 2021, 36, 2515-2528.	1.2	4
198	Correlative analysis of structure and chemistry of LixFePO4 platelets using 4D-STEM and X-ray ptychography. Materials Today, 2022, 52, 102-111.	8.3	4

#	Article	IF	Citations
199	Solvent processed conductive polymer with single-walled carbon nanotube composites. Journal of Materials Research, 2015, 30, 3403-3411.	1.2	3
200	Direct Observation of SRO effect of Ti-6Al Alloy Using Energy-filtered TEM and Scanning Nanobeam Electron Diffraction. Microscopy and Microanalysis, 2018, 24, 210-211.	0.2	3
201	Improved 4D-STEM Strain Mapping Precision Using Patterned Probes. Microscopy and Microanalysis, 2019, 25, 1958-1959.	0.2	3
202	Trap-Assisted Charge Injection into Large Bandgap Polymer Semiconductors. Materials, 2019, 12, 2427.	1.3	3
203	Early-stage NiCrMo oxidation revealed by cryo-transmission electron microscopy. Ultramicroscopy, 2019, 200, 6-11.	0.8	3
204	Amplified luminescence in organo-curium nanocrystal hybrids. Nanoscale, 2019, 11, 7609-7612.	2.8	3
205	Relativistic Ultrafast Electron Diffraction of Nanomaterials. Microscopy and Microanalysis, 2020, 26, 676-677.	0.2	3
206	Cryogenic in-situ clamped beam testing of Sn96. Journal of Materials Research, 2021, 36, 1751-1761.	1.2	3
207	Nanoscale Holes Formed by In Situ Thin Film Deposition in a FIB. Microscopy and Microanalysis, 2004, 10, 1118-1119.	0.2	2
208	Chapter 78 In situ Nanoindentation in a Transmission Electron Microscope. Dislocations in Solids, 2007, , 453-497.	1.6	2
209	Development of Diffraction Scanning Techniques for Beam Sensitive Polymers.. Microscopy and Microanalysis, 2016, 22, 492-493.	0.2	2
210	Multimodal Acquisition of Properties and Structure with Transmission Electron Reciprocal-space (MAPSTER) Microscopy. Microscopy and Microanalysis, 2016, 22, 1412-1413.	0.2	2
211	Characterization of Dislocation Plasticity in Rhenium using In-Situ TEM Deformation. Microscopy and Microanalysis, 2017, 23, 766-767.	0.2	2
212	In situ TEM Investigation of the Electroplasticity Phenomenon in Metals. Microscopy and Microanalysis, 2019, 25, 1832-1833.	0.2	2
213	4DSTEM of Beam-sensitive Materials: Optimizing SNR and Improving Spatial Resolution. Microscopy and Microanalysis, 2020, 26, 1734-1735.	0.2	2
214	Imaging Short-range Order and Extracting 3-D Strain Tensor Using Energy-filtered 4D-STEM Techniques. Microscopy and Microanalysis, 2020, 26, 936-938.	0.2	2
215	Denoising of Sparse Three- and Four-dimensional Hyperspectral Electron Microscopy Data Using a Total Variational Method. Microscopy and Microanalysis, 2020, 26, 1724-1726.	0.2	2
216	Microstructural dependence of defect formation in iron-oxide thin films. Applied Surface Science, 2022, 589, 152844.	3.1	2

#	Article	IF	Citations
217	Response to Comment on â€œCryoforged nanotwinned titanium with ultrahigh strength and ductilityâ€. Science, 2022, 376, eabo5247.	6.0	2
218	A Method for Extracting Quantitative Data Duringin-situTEM Nanoindentation. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	1
219	Structural Characterization of GeSn Alloy Nanocrystals Embedded in SiO₂. Materials Research Society Symposia Proceedings, 2009, 1184, 154.	0.1	1
220	In Situ and Ex Situ Nanomechanical Analysis of Reactive Nanolayer Solder Joints. Advanced Engineering Materials, 2009, 11, 645-649.	1.6	1
221	Quantitative Structural Analysis of Complex Materials by Scanning Nanobeam Diffraction. Microscopy and Microanalysis, 2016, 22, 502-503.	0.2	1
222	Stability Studies of MAPbI 3 : Identification of Degradation Pathways and Strategies for Observing the Native Structure of Lead Halide Perovskites. Microscopy and Microanalysis, 2016, 22, 1510-1511.	0.2	1
223	Computational Methods for Large Scale Scanning Transmission Electron Microscopy (STEM) Experiments and Simulations. Microscopy and Microanalysis, 2017, 23, 162-163.	0.2	1
224	Development of Quantitative In Situ TEM Nanomechanical Testing for Polymers. Microscopy and Microanalysis, 2017, 23, 742-743.	0.2	1
225	In situ Nanobeam Electron Diffraction of Bulk Metallic Glasses. Microscopy and Microanalysis, 2018, 24, 206-207.	0.2	1
226	Probing Crystalline Defects Using an EBSD-Based Virtual Dark-Field Method. Microscopy and Microanalysis, 2019, 25, 1992-1993.	0.2	1
227	High Throughput Grain Mapping with Sub-Nanometer Resolution by 4D-STEM. Microscopy and Microanalysis, 2019, 25, 1960-1961.	0.2	1
228	Relationship between mechanical strain and chemical composition in LiFePO4 via 4D-scanning transmission electron microscopy and scanning transmission X-ray microscopy. Microscopy and Microanalysis, 2019, 25, 2068-2069.	0.2	1
229	Detailed Investigation of Silicon Nitride Phase Plates Prepared by Focused Ion Beam Milling. Microscopy and Microanalysis, 2019, 25, 900-901.	0.2	1
230	Neon-FIB for the Fabrication of Tips for Atom Probe Tomography and Electron Tomography. Microscopy and Microanalysis, 2020, 26, 184-184.	0.2	1
231	Investigating Strain and Chemistry Evolution of the Solid Electrolyte-electrode Interface via 4D-STEM and EELS. Microscopy and Microanalysis, 2020, 26, 150-151.	0.2	1
232	Towards Automated Classification of Complex 4D-STEM Datasets. Microscopy and Microanalysis, 2020, 26, 722-723.	0.2	1
233	4D-STEM Imaging of nanostructural heterogeneities in Ni-20Cr after corrosion in molten salt. Microscopy and Microanalysis, 2021, 27, 2134-2135.	0.2	1
234	In-situ 4D-STEM imaging to develop a fundamental understanding of coupled transport of vacancies. Microscopy and Microanalysis, 2021, 27, 2202-2202.	0.2	1

#	Article	IF	Citations
235	In situ observations and measurements of plastic deformation, phase transformations and fracture with 4D-STEM. Microscopy and Microanalysis, 2021, 27, 1494-1495.	0.2	1
236	In situ TEM Investigation of the Electroplasticity Phenomenon on Dislocation Behavior in Ti-6wt%Al. Microscopy and Microanalysis, 2021, 27, 3096-3097.	0.2	1
237	Ultrafast optically-induced melting of trimer clusters in 1Tâ€™-TaTe2. , 2021, , .		1
238	Using the Electron Microscope to Explore Reliability in Microelectromechanical Systems and Nanostructured Materials. Microscopy and Microanalysis, 2004, 10, 354-355.	0.2	0
239	Laser processing and in-situ diagnostics for crystallization: from thin films to nanostructures. Proceedings of SPIE, 2014, , .	0.8	0
240	Correction of Linear and Nonlinear Raster Distortion from Orthogonal Image Pairs. Microscopy and Microanalysis, 2015, 21, 1217-1218.	0.2	0
241	Evaluation of Neon Focused Ion Beam Milling for TEM Sample Preparation. Microscopy and Microanalysis, 2016, 22, 146-147.	0.2	0
242	Nanoscale Strain Mapping During in situ Deformation of Annealed Al-Mg Alloys. Microscopy and Microanalysis, 2016, 22, 522-523.	0.2	0
243	In situ Strain Mapping of Planar Slip in 304 Stainless Steel. Microscopy and Microanalysis, 2017, 23, 736-737.	0.2	0
244	Experimental and Simulation Methods in Scanning Electron Nanobeam Diffraction. Microscopy and Microanalysis, 2018, 24, 2320-2321.	0.2	0
245	Local Strain Analysis using Scanning Nanobeam Electron Diffraction during In Situ TEM Nanomechanical Testing. Microscopy and Microanalysis, 2018, 24, 964-965.	0.2	0
246	Electron Energy Loss Spectroscopy of Actinides at the Nanogram Scale. Microscopy and Microanalysis, 2018, 24, 444-445.	0.2	0
247	Deformation localization in metallic glasses studied by in situ TEM deformation. Microscopy and Microanalysis, 2018, 24, 1820-1821.	0.2	0
248	Understanding the Slip Planarity and Residual Strain Field in Ti-6Al using Nanobeam Electron Diffraction and First Principles Calculations. Microscopy and Microanalysis, 2019, 25, 1892-1893.	0.2	0
249	Four Dimensional Scanning Transmission Electron Microscopy during the in situ Annealing of a CuZrAl Bulk Metallic Glass. Microscopy and Microanalysis, 2019, 25, 1470-1471.	0.2	0
250	Determining Atomic Structures from Digitally Defined Regions of Nanocrystals. Microscopy and Microanalysis, 2020, 26, 748-749.	0.2	0
251	In Situ 4D-STEM. Microscopy and Microanalysis, 2020, 26, 934-935.	0.2	0
252	Probing Mobile-point-defect-mediated Nanodomain Evolutions in Ferroelastic-ferroelectrics Under High Stress with In-situ TEM. Microscopy and Microanalysis, 2020, 26, 2418-2419.	0.2	0

#	Article	IF	Citations
253	4D-STEM analysis of an amorphous-crystalline polymer blend: combined nanocrystalline and RDF mapping.. Microscopy and Microanalysis, 2021, 27, 1798-1800.	0.2	0
254	Diffraction imaging of organic materials in extreme environments. Microscopy and Microanalysis, 2021, 27, 1802-1803.	0.2	0
255	The evolution of an open source file format: a version control story. Microscopy and Microanalysis, 2021, 27, 1092-1094.	0.2	0
256	Atomic-resolution Probing of Anion Migration in Perovskites with In-situ (S)TEM. Microscopy and Microanalysis, 2021, 27, 170-171.	0.2	0
257	Materials Science Applications and Analysis of Very Large 4D-STEM Experiments. Microscopy and Microanalysis, 2021, 27, 14-15.	0.2	0
258	Ultrafast photo-induced melting of the trimer superstructure in TaTe2. , 2021, , .		0
259	OS1101 Dynamic observations of Dauphine twinning of Î±-quartz by in-situ TEM compression testing. The Proceedings of the Materials and Mechanics Conference, 2014, 2014, _OS1101-1_-_OS1101-2_.	0.0	0
260	Plasmonic Lenses for Ultrafast Electron Nanoemission. , 2020, , .		0
261	Recording 4D-STEM Datasets at a Range of Beam Tilts Simultaneously with Multi-Beam Electron Diffraction. Microscopy and Microanalysis, 2020, 26, 712-713.	0.2	0
262	Advanced Electron Microscopy Characterization of Intergranular Corrosion in Ni-20Cr Alloy Under Molten Salt Environment. Microscopy and Microanalysis, 2020, 26, 180-182.	0.2	0
263	A strain-driven thermotropic phase boundary in BaTiO3 at room temperature by cycling compression. AIP Advances, 2021, 11, 115122.	0.6	0