Colin Ophus

List of Publications by Year
in descending order

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233 papers	8,215 citations	61984 43 h-index	54911 84 g-index
237 all docs	237 docs citations	237 times ranked	9671 citing authors

#	Article	IF	Citations
1	Simultaneous Successive Twinning Captured by Atomic Electron Tomography. ACS Nano, 2022, 16, 588-596.	14.6	12
2	Electric field control of chirality. Science Advances, 2022, 8, eabj8030.	10.3	35
3	Imaging atomic-scale chemistry from fused multi-modal electron microscopy. Npj Computational Materials, 2022, 8, .	8.7	9
4	Automated Crystal Orientation Mapping in py4DSTEM using Sparse Correlation Matching. Microscopy and Microanalysis, 2022, 28, 390-403.	0.4	17
5	Visualizing Grain Statistics in MOCVD WSe₂ through Four-Dimensional Scanning Transmission Electron Microscopy. Nano Letters, 2022, 22, 2578-2585.	9.1	9
6	Cryogenic 4D-STEM analysis of an amorphous-crystalline polymer blend: Combined nanocrystalline and amorphous phase mapping. IScience, 2022, 25, 103882.	4.1	7
7	Correlative analysis of structure and chemistry of LixFePO4 platelets using 4D-STEM and X-ray ptychography. Materials Today, 2022, 52, 102-111.	14.2	4
8	Correlative image learning of chemo-mechanics in phase-transforming solids. Nature Materials, 2022, 21, 547-554.	27.5	27
9	Machine learning in scanning transmission electron microscopy. Nature Reviews Methods Primers, 2022, 2, .	21.2	59
10	Mapping 1D Confined Electromagnetic Edge States in 2D Monolayer Semiconducting MoS₂ Using 4D-STEM. ACS Nano, 2022, 16, 6657-6665.	14.6	9
11	Reversible writing/deleting of magnetic skyrmions through hydrogen adsorption/desorption. Nature Communications, 2022, 13, 1350.	12.8	30
12	Seeing structural evolution of organic molecular nano-crystallites using 4D scanning confocal electron diffractionÂ(4D-SCED). Nature Communications, 2022, 13, .	12.8	6
13	A Three-Dimensional Reconstruction Algorithm for Scanning Transmission Electron Microscopy Data from a Single Sample Orientation. Microscopy and Microanalysis, 2022, 28, 1632-1640.	0.4	6
14	Ion complexation waves emerge at the curved interfaces of layered minerals. Nature Communications, 2022, 13, .	12.8	10
15	Towards data-driven next-generation transmission electron microscopy. Nature Materials, 2021, 20, 274-279.	27.5	130
16	Intrinsic helical twist and chirality in ultrathin tellurium nanowires. Nanoscale, 2021, 13, 9606-9614.	5.6	15
17	Local Lattice Deformation of Tellurene Grain Boundaries by Four-Dimensional Electron Microscopy. Journal of Physical Chemistry C, 2021, 125, 3396-3405.	3.1	4
18	Strain fields in twisted bilayer graphene. Nature Materials, 2021, 20, 956-963.	27.5	126

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19	Observation of Hydrogen-Induced Dzyaloshinskii-Moriya Interaction and Reversible Switching of Magnetic Chirality. Physical Review X, 2021, 11, .	8.9	34
20	Phase-contrast imaging of multiply-scattering extended objects at atomic resolution by reconstruction of the scattering matrix. Physical Review Research, 2021, 3, .	3.6	11
21	py4DSTEM: A Software Package for Four-Dimensional Scanning Transmission Electron Microscopy Data Analysis. Microscopy and Microanalysis, 2021, 27, 712-743.	0.4	121
22	The chain of chirality transfer in tellurium nanocrystals. Science, 2021, 372, 729-733.	12.6	76
23	4D-STEM of Beam-Sensitive Materials. Accounts of Chemical Research, 2021, 54, 2543-2551.	15.6	48
24	Deep Learning Segmentation of Complex Features in Atomic-Resolution Phase-Contrast Transmission Electron Microscopy Images. Microscopy and Microanalysis, 2021, 27, 804-814.	0.4	16
25	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.	0.4	9
26	Percolation of Ion-Irradiation-Induced Disorder in Complex Oxide Interfaces. Nano Letters, 2021, 21, 5353-5359.	9.1	6
27	Impact of the Synthesis Kinetics of Entropy-stabilized Oxide Thin Films Probed with 4D-STEM and STEM-EELS. Microscopy and Microanalysis, 2021, 27, 352-354.	0.4	1
28	4D-STEM analysis of an amorphous-crystalline polymer blend: combined nanocrystalline and RDF mapping.. Microscopy and Microanalysis, 2021, 27, 1798-1800.	0.4	0
29	Open-Source Tools and Containers for the Production of Large-Scale S/TEM Datasets. Microscopy and Microanalysis, 2021, 27, 62-63.	0.4	1
30	Extreme mixing in nanoscale transition metal alloys. Matter, 2021, 4, 2340-2353.	10.0	102
31	4D >Crystal: Deep Learning Crystallographic Information From Electron Diffraction Images. Microscopy and Microanalysis, 2021, 27, 2774-2776.	0.4	2
32	Ultrafast optical melting of trimer superstructure in layered 1Tâ€²-TaTe2. Communications Physics, 2021, 4, .	5.3	15
33	Diffraction imaging of organic materials in extreme environments. Microscopy and Microanalysis, 2021, 27, 1802-1803.	0.4	0
34	In situ observations and measurements of plastic deformation, phase transformations and fracture with 4D-STEM. Microscopy and Microanalysis, 2021, 27, 1494-1495.	0.4	1
35	A Fast Algorithm for Scanning Transmission Electron Microscopy Imaging and 4D-STEM Diffraction Simulations. Microscopy and Microanalysis, 2021, 27, 835-848.	0.4	11
36	Atomic-resolution Probing of Anion Migration in Perovskites with In-situ (S)TEM. Microscopy and Microanalysis, 2021, 27, 170-171.	0.4	0

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37	Scattering Matrix Determination in Crystalline Materials from 4D Scanning Transmission Electron Microscopy at a Single Defocus Value. Microscopy and Microanalysis, 2021, 27, 744-757.	0.4	5
38	A faster image simulation algorithm for scanning transmission electron microscopy. Microscopy and Microanalysis, 2021, 27, 1272-1275.	0.4	0
39	Materials Science Applications and Analysis of Very Large 4D-STEM Experiments. Microscopy and Microanalysis, 2021, 27, 14-15.	0.4	0
40	Theory and application of the vector pair correlation function for real-space crystallographic analysis of order/disorder correlations from STEM images. APL Materials, 2021, 9, .	5.1	9
41	Switching between Magnetic Bloch and NÃ©el Domain Walls with Anisotropy Modulations. Physical Review Letters, 2021, 127, 127203.	7.8	12
42	Prismatic 2.0 â€“ Simulation software for scanning and high resolution transmission electron microscopy (STEM and HRTEM). Micron, 2021, 151, 103141.	2.2	42
43	Multibeam Electron Diffraction. Microscopy and Microanalysis, 2021, 27, 129-139.	0.4	9
44	Nanoscale characterization of crystalline and amorphous phases in silicon oxycarbide ceramics using 4D-STEM. Materials Characterization, 2021, 181, 111512.	4.4	11
45	Atomic scale crystal field mapping of polar vortices in oxide superlattices. Nature Communications, 2021, 12, 6273.	12.8	13
46	Ultrafast optically-induced melting of trimer clusters in 1Tâ€™-TaTe2. , 2021, , .		1
47	Functional Materials Under Stress: In Situ TEM Observations of Structural Evolution. Advanced Materials, 2020, 32, e1906105.	21.0	17
48	Patterned probes for high precision 4D-STEM bragg measurements. Ultramicroscopy, 2020, 209, 112890.	1.9	61
49	A multiple scattering algorithm for three dimensional phase contrast atomic electron tomography. Ultramicroscopy, 2020, 208, 112860.	1.9	36
50	Tilted fluctuation electron microscopy. Applied Physics Letters, 2020, 117, .	3.3	6
51	4DSTEM of Beam-sensitive Materials: Optimizing SNR and Improving Spatial Resolution. Microscopy and Microanalysis, 2020, 26, 1734-1735.	0.4	2
52	1D to 2D Transition in Tellurium Observed by 4D Electron Microscopy. Small, 2020, 16, e2005447.	10.0	10
53	Capturing the Atomic Coordinates of Surface and Subsurface Structure in 4D with Atomic Electron Tomography. Microscopy and Microanalysis, 2020, 26, 1794-1796.	0.4	0
54	Imaging Nucleation, Growth and Disorder at the Single-atom Level by Atomic Electron Tomography (AET). Microscopy and Microanalysis, 2020, 26, 1848-1850.	0.4	0

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55	3D Tomography for Multiple-scattering Samples Using Phase Contrast Electron Microscopy. Microscopy and Microanalysis, 2020, 26, 932-933.	0.4	0
56	Hybrid nanocapsules for in situ TEM imaging of gas evolution reactions in confined liquids. Nanoscale, 2020, 12, 18606-18615.	5.6	4
57	Creation of skyrmions in van der Waals ferromagnet Fe ₃ GeTe ₂ on (Co/Pd) _n superlattice. Science Advances, 2020, 6, .	10.3	89
58	A Python Based Open-source Multislice Simulation Package for Transmission Electron Microscopy. Microscopy and Microanalysis, 2020, 26, 2954-2956.	0.4	10
59	Phase-Contrast-Based Structure Retrieval Methods in Atomic Resolution Scanning Transmission Electron Microscopy â€“ When They Hold and When They Don't. Microscopy and Microanalysis, 2020, 26, 442-443.	0.4	1
60	Improving the Speed and Accuracy of Large-scale Scanning Transmission Electron Microscopy (STEM) Electron Scattering Simulations. Microscopy and Microanalysis, 2020, 26, 456-458.	0.4	1
61	Phase Contrast Imaging in Thick, Heterogeneous Samples via S-Matrix Phase Retrieval and Depth Sectioning. Microscopy and Microanalysis, 2020, 26, 462-464.	0.4	1
62	Atomic Electron Tomography: Past, Present and Future. Microscopy and Microanalysis, 2020, 26, 652-654.	0.4	1
63	Determining Atomic Structures from Digitally Defined Regions of Nanocrystals. Microscopy and Microanalysis, 2020, 26, 748-749.	0.4	0
64	Imaging Short-range Order and Extracting 3-D Strain Tensor Using Energy-filtered 4D-STEM Techniques. Microscopy and Microanalysis, 2020, 26, 936-938.	0.4	2
65	Towards an End-to-end Radiation Defect Quantitative Characterization Workflow Using Advanced Microscopy Images. Microscopy and Microanalysis, 2020, 26, 1112-1114.	0.4	0
66	Achieving High-resolution of Large Specimens Using Aberration-corrected Tomography. Microscopy and Microanalysis, 2020, 26, 1860-1862.	0.4	0
67	Probing Mobile-point-defect-mediated Nanodomain Evolutions in Ferroelastic-ferroelectrics Under High Stress with In-situ TEM. Microscopy and Microanalysis, 2020, 26, 2418-2419.	0.4	0
68	Atomic Resolution Crystal Field Splitting Mapping in Polar Vortices Oxide Superlattices. Microscopy and Microanalysis, 2020, 26, 3178-3180.	0.4	1
69	Short-range order and its impact on the CrCoNi medium-entropy alloy. Nature, 2020, 581, 283-287.	27.8	672
70	Structural Implications of Interfacial Hydrogen Bonding in Hydrated Wyoming-Montmorillonite Clay. Journal of Physical Chemistry C, 2020, 124, 8697-8705.	3.1	16
71	Highly Active Rutile TiO₂ Nanocrystalline Photocatalysts. ACS Applied Materials & Interfaces, 2020, 12, 33058-33068.	8.0	46
72	Design and synthesis of multigrain nanocrystals via geometric misfit strain. Nature, 2020, 577, 359-363.	27.8	59

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73	The 4D Camera â€“ An 87 kHz Frame-rate Detector for Counted 4D-STEM Experiments. Microscopy and Microanalysis, 2020, 26, 1896-1897.	0.4	27
74	Atomic structures determined from digitally defined nanocrystalline regions. IUCrJ, 2020, 7, 490-499.	2.2	8
75	Recording 4D-STEM Datasets at a Range of Beam Tilts Simultaneously with Multi-Beam Electron Diffraction. Microscopy and Microanalysis, 2020, 26, 712-713.	0.4	0
76	Nanodiffraction Strain Mapping of Metallic Glasses During In Situ Deformation. Structural Integrity, 2019, , 356-357.	1.4	0
77	3D Structure Determination of Pt-based Nanocatalysts at Atomic Resolution. Microscopy and Microanalysis, 2019, 25, 398-399.	0.4	0
78	Mapping Cation Disorder in Irradiated Gd₂Ti₂O₇ Pyrochlore by 4D-STEM. Microscopy and Microanalysis, 2019, 25, 1560-1561.	0.4	4
79	py4DSTEM: Open Source Software for 4D-STEM Data Analysis. Microscopy and Microanalysis, 2019, 25, 124-125.	0.4	20
80	Shape Determination in Lithium-Ion Battery Cathode Materials Using Electron Diffraction-Assisted Electron Tomography. Microscopy and Microanalysis, 2019, 25, 1824-1825.	0.4	0
81	Simultaneous Identification of Low and High Atomic Number Atoms in Monolayer 2D Materials Using 4D Scanning Transmission Electron Microscopy. Nano Letters, 2019, 19, 6482-6491.	9.1	36
82	Atomic Resolution Probing of Phase Transformations and Domain Evolution During Large Superelastic Deformation in Ferroelectrics with in situ TEM. Microscopy and Microanalysis, 2019, 25, 1850-1851.	0.4	2
83	Formation of two-dimensional transition metal oxide nanosheets with nanoparticles as intermediates. Nature Materials, 2019, 18, 970-976.	27.5	169
84	Hierarchically-structured large superelastic deformation in ferroelastic-ferroelectrics. Acta Materialia, 2019, 181, 501-509.	7.9	20
85	Rapid Simulation of Elemental Maps in Core-Loss Electron Energy Loss Spectroscopy. Microscopy and Microanalysis, 2019, 25, 574-575.	0.4	1
86	High Throughput Grain Mapping with Sub-Nanometer Resolution by 4D-STEM. Microscopy and Microanalysis, 2019, 25, 1960-1961.	0.4	1
87	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.	0.4	1
88	Structure Retrieval of Strongly Scattering Materials in the Transmission Electron Microscope. Microscopy and Microanalysis, 2019, 25, 76-77.	0.4	0
89	Improved 4D-STEM Strain Mapping Precision Using Patterned Probes. Microscopy and Microanalysis, 2019, 25, 1958-1959.	0.4	3
90	Real time imaging of two-dimensional iron oxide spherulite nanostructure formation. Nano Research, 2019, 12, 2889-2893.	10.4	8

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91	The 4D Camera: Very High Speed Electron Counting for 4D-STEM. Microscopy and Microanalysis, 2019, 25, 1930-1931.	0.4	33
92	3D Imaging Using HAADF-STEM and HRTEM Atomic Electron Tomography. Microscopy and Microanalysis, 2019, 25, 394-395.	0.4	0
93	Detailed Investigation of Silicon Nitride Phase Plates Prepared by Focused Ion Beam Milling. Microscopy and Microanalysis, 2019, 25, 900-901.	0.4	1
94	In Situ Analysis of nm-Scale Alpha Formation in Titanium Alloys. Microscopy and Microanalysis, 2019, 25, 1490-1491.	0.4	1
95	Automated Quantitative Analysis of Extended Irradiation Defects - Dislocations, Voids and Precipitates in Neutron Irradiated HT-9 Steel. Microscopy and Microanalysis, 2019, 25, 1564-1565.	0.4	1
96	4D Atomic Electron Tomography. Microscopy and Microanalysis, 2019, 25, 1814-1815.	0.4	0
97	Advanced Phase Reconstruction Methods Enabled by Four-Dimensional Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 10-11.	0.4	7
98	Four Dimensional Scanning Transmission Electron Microscopy during the in situ Annealing of a CuZrAl Bulk Metallic Glass. Microscopy and Microanalysis, 2019, 25, 1470-1471.	0.4	0
99	Data Acquisition in 4D Atomic Electron Tomography. Microscopy and Microanalysis, 2019, 25, 1816-1817.	0.4	0
100	Nanoscale stacking faultâ€“assisted room temperature plasticity in flash-sintered TiO ₂. Science Advances, 2019, 5, eaaw5519.	10.3	82
101	Nanoscale mosaicity revealed in peptide microcrystals by scanning electron nanodiffraction. Communications Biology, 2019, 2, 26.	4.4	47
102	Interplay between Shortâ€•and Longâ€Ranged Forces Leading to the Formation of Ag Nanoparticle Superlattice. Small, 2019, 15, 1901966.	10.0	19
103	Observing crystal nucleation in four dimensions using atomic electron tomography. Nature, 2019, 570, 500-503.	27.8	219
104	Direct measurement of nanostructural change during in situ deformation of a bulk metallic glass. Nature Communications, 2019, 10, 2445.	12.8	46
105	Dynamic deformability of individual PbSe nanocrystals during superlattice phase transitions. Science Advances, 2019, 5, eaaw5623.	10.3	52
106	Diffraction imaging of nanocrystalline structures in organic semiconductor molecular thin films. Nature Materials, 2019, 18, 860-865.	27.5	99
107	Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): From Scanning Nanodiffraction to Ptychography and Beyond. Microscopy and Microanalysis, 2019, 25, 563-582.	0.4	470
108	Observation of room-temperature polar skyrmions. Nature, 2019, 568, 368-372.	27.8	417

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109	Atomic electrostatic maps of 1D channels in 2D semiconductors using 4D scanning transmission electron microscopy. Nature Communications, 2019, 10, 1127.	12.8	62
110	Hidden structural and chemical order controls lithium transport in cation-disordered oxides for rechargeable batteries. Nature Communications, 2019, 10, 592.	12.8	162
111	Nanoscale oxygen defect gradients in UO2+x surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17181-17186.	7.1	17
112	The Materials Research Platform: Defining the Requirements from User Stories. Matter, 2019, 1, 1433-1438.	10.0	19
113	Direct imaging of short-range order and its impact on deformation in Ti-6Al. Science Advances, 2019, 5, eaax2799.	10.3	86
114	Resolving the Morphology of Peptoid Vesicles at the 1 nm Length Scale Using Cryogenic Electron Microscopy. Journal of Physical Chemistry B, 2019, 123, 1195-1205.	2.6	15
115	Linear-scaling algorithm for rapid computation of inelastic transitions in the presence of multiple electron scattering. Physical Review Research, 2019, 1, .	3.6	13
116	Determination of the structural phase and octahedral rotation angle in halide perovskites. Applied Physics Letters, 2018, 112, .	3.3	38
117	Effect of composition on the structure of lithium- and manganese-rich transition metal oxides. Energy and Environmental Science, 2018, 11, 830-840.	30.8	41
118	Local nanoscale strain mapping of a metallic glass during in situ testing. Applied Physics Letters, 2018, 112, .	3.3	35
119	Multiscale analysis of nanoindentation-induced defect structures in gum metal. Acta Materialia, 2018, 151, 334-346.	7.9	6
120	In situ nanobeam electron diffraction strain mapping of planar slip in stainless steel. Scripta Materialia, 2018, 146, 87-90.	5.2	41
121	Automated Labeling of Electron Microscopy Images Using Deep Learning. , 2018, , .		10
122	A Next Generation Electron Microscopy Detector Aimed at Enabling New Scanning Diffraction Techniques and Online Data Reconstruction. Microscopy and Microanalysis, 2018, 24, 166-167.	0.4	6
123	ScienceSearch: Enabling Search through Automatic Metadata Generation. , 2018, , .		9
124	Experimental and Simulation Methods in Scanning Electron Nanobeam Diffraction. Microscopy and Microanalysis, 2018, 24, 2320-2321.	0.4	0
125	Linear and Nonlinear Reconstruction Algorithms for Atomic-Resolution Tomography Using Phase Contrast Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 110-111.	0.4	1
126	An Autonomous Microscopy Workflow for Structure Determination from Atomic-Resolution Images. Microscopy and Microanalysis, 2018, 24, 510-511.	0.4	3

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127	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.	0.4	3
128	Structure Retrieval at Atomic Resolution in the Presence of Multiple Scattering of the Electron Probe. Physical Review Letters, 2018, 121, 266102.	7.8	29
129	Interpretable and Efficient Interferometric Contrast in Scanning Transmission Electron Microscopy with a Diffraction-Grating Beam Splitter. Physical Review Applied, 2018, 10, .	3.8	20
130	Segregation-Induced Nanofaceting Transition at an Asymmetric Tilt Grain Boundary in Copper. Physical Review Letters, 2018, 121, 255502.	7.8	40
131	Imaging Unstained Synthetic Polymer Crystals and Defects on Atomic Length Scales Using Cryogenic Electron Microscopy. Macromolecules, 2018, 51, 7794-7799.	4.8	36
132	Dynamics of Nanoscale Dendrite Formation in Solution Growth Revealed Through in Situ Liquid Cell Electron Microscopy. Nano Letters, 2018, 18, 6427-6433.	9.1	38
133	Probing Light Atoms at Subnanometer Resolution: Realization of Scanning Transmission Electron Microscope Holography. Nano Letters, 2018, 18, 7118-7123.	9.1	24
134	Atomic Electron Tomography: Adding a New Dimension to See Single Atoms in Materials. Microscopy and Microanalysis, 2018, 24, 558-559.	0.4	0
135	Experimental Evidence of Chiral Ferrimagnetism in Amorphous GdCo Films. Advanced Materials, 2018, 30, e1800199.	21.0	42
136	Subsampled STEM-ptychography. Applied Physics Letters, 2018, 113, .	3.3	31
137	Deformation localization in metallic glasses studied by in situ TEM deformation. Microscopy and Microanalysis, 2018, 24, 1820-1821.	0.4	0
138	In situ Nanobeam Electron Diffraction of Bulk Metallic Glasses. Microscopy and Microanalysis, 2018, 24, 206-207.	0.4	1
139	The Merits of In situ Environmental STEM for the Study of Complex Oxide Catalysts at Work. Microscopy and Microanalysis, 2018, 24, 238-239.	0.4	2
140	Towards bend-contour-free dislocation imaging via diffraction contrast STEM. Ultramicroscopy, 2018, 193, 12-23.	1.9	37
141	Tomographic reconstruction of 3D atomic potentials from intensity-only TEM measurements. , 2018, , .		0
142	Quantitative determination of polarization from 4D scanning electron diffraction experiments. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, a327-a327.	0.1	0
143	Deciphering chemical order/disorder and material properties at the single-atom level. Nature, 2017, 542, 75-79.	27.8	243
144	Non-spectroscopic composition measurements of SrTiO3-La0.7Sr0.3MnO3 multilayers using scanning convergent beam electron diffraction. Applied Physics Letters, 2017, 110, .	3.3	25

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145	Optimizing disk registration algorithms for nanobeam electron diffraction strain mapping. Ultramicroscopy, 2017, 176, 170-176.	1.9	71
146	Large polarization gradients and temperature-stable responses in compositionally-graded ferroelectrics. Nature Communications, 2017, 8, 14961.	12.8	60
147	Electron ptychographic phase imaging of light elements in crystalline materials using Wigner distribution deconvolution. Ultramicroscopy, 2017, 180, 173-179.	1.9	67
148	Out-of-plane chiral domain wall spin-structures in ultrathin in-plane magnets. Nature Communications, 2017, 8, 15302.	12.8	36
149	Streamlined approach to mapping the magnetic induction of skyrmionic materials. Ultramicroscopy, 2017, 177, 78-83.	1.9	14
150	Identifying and Engineering the Stacking Sequence in CVD Grown Few-layer MoS2 via Aberration-corrected STEM. Microscopy and Microanalysis, 2017, 23, 2006-2007.	0.4	0
151	Unraveling the Crystal Structure of All-Inorganic Halide Perovskites using CBED and Electron Ptychography. Microscopy and Microanalysis, 2017, 23, 1468-1469.	0.4	0
152	Formation of Oxygen Radical Sites on MoVNbTeOx by Cooperative Electron Redistribution. Journal of the American Chemical Society, 2017, 139, 12342-12345.	13.7	41
153	Dynamics of Symmetry-Breaking Stacking Boundaries in Bilayer MoS₂. Journal of Physical Chemistry C, 2017, 121, 22559-22566.	3.1	22
154	Computational Methods for Large Scale Scanning Transmission Electron Microscopy (STEM) Experiments and Simulations. Microscopy and Microanalysis, 2017, 23, 162-163.	0.4	1
155	3D Imaging of Nanoalloy Catalysts at Atomic Resolution. Microscopy and Microanalysis, 2017, 23, 2032-2033.	0.4	0
156	Low temperature solid-state wetting and formation of nanowelds in silver nanowires. Nanotechnology, 2017, 28, 385701.	2.6	7
157	Multi-pass transmission electron microscopy. Scientific Reports, 2017, 7, 1699.	3.3	44
158	The effect of film thickness on Curie temperature distribution and magnetization reversal mechanism for granular L1₀FePt films. Journal Physics D: Applied Physics, 2017, 50, 285003.	2.8	7
159	A fast image simulation algorithm for scanning transmission electron microscopy. Advanced Structural and Chemical Imaging, 2017, 3, 13.	4.0	121
160	Quantitative Mapping of Strain, Polarization, and Octahedral Distortion at unit cell resolution by Scanning Electron Diffraction. Microscopy and Microanalysis, 2017, 23, 434-435.	0.4	0
161	Reducing Electron Beam Damage with Multipass Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 1794-1795.	0.4	2
162	Atomic Electron Tomography: Probing 3D Structure and Material Properties at the Single-Atom Level. Microscopy and Microanalysis, 2017, 23, 1886-1887.	0.4	0

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163	Electron Microscopy with Structured Electrons. Microscopy and Microanalysis, 2017, 23, 448-449.	0.4	0
164	Near-concentric Fabry-PÃ©rot cavity for continuous-wave laser control of electron waves. Optics Express, 2017, 25, 14453.	3.4	19
165	A streaming multi-GPU implementation of image simulation algorithms for scanning transmission electron microscopy. Advanced Structural and Chemical Imaging, 2017, 3, 15.	4.0	77
166	Nanobeam Scanning Diffraction for Orientation Mapping of Polymers. Microscopy and Microanalysis, 2017, 23, 1782-1783.	0.4	7
167	Simultaneous imaging of light and heavy elements at atomic resolution using electron ptychography and fast pixelated detectors. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, a168-a168.	0.1	0
168	Symmetry group determination and direct imaging of all-inorganic halide perovskites CsPbBr3â^'x Cl x. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, a217-a217.	0.1	0
169	Development of a fast framing detector for electron microscopy. , 2016, , .		0
170	Revealing Point Defects in a Large-Scale Scanning Diffraction Dataset. Microscopy and Microanalysis, 2016, 22, 470-471.	0.4	1
171	Probing Stress-Induced Grain Boundary Migration and Hypofriction at High Resolution. Microscopy and Microanalysis, 2016, 22, 712-713.	0.4	0
172	Local strain measurements during in situ TEM deformation with nanobeam electron diffraction. Microscopy and Microanalysis, 2016, 22, 710-711.	0.4	0
173	Multimodal Acquisition of Properties and Structure with Transmission Electron Reciprocal-space (MAPSTER) Microscopy. Microscopy and Microanalysis, 2016, 22, 1412-1413.	0.4	2
174	Automatic software correction of residual aberrations in reconstructed HRTEM exit waves of crystalline samples. Advanced Structural and Chemical Imaging, 2016, 2, 15.	4.0	14
175	Atomic scale imaging of competing polar states in a Ruddlesdenâ€“Popper layered oxide. Nature Communications, 2016, 7, 12572.	12.8	26
176	Nanomaterial datasets to advance tomography in scanning transmission electron microscopy. Scientific Data, 2016, 3, 160041.	5.3	42
177	Phase Contrast Imaging of Weakly-Scattering Samples with Matched Illumination and Detector Interferometryâ€“Scanning Transmission Electron Microscopy (MIDIâ€“STEM). Microscopy and Microanalysis, 2016, 22, 460-461.	0.4	1
178	Efficient linear phase contrast in scanning transmission electron microscopy with matched illumination and detector interferometry. Nature Communications, 2016, 7, 10719.	12.8	102
179	Three-Dimensional Determination of the Coordinates of Individual Atoms in Materials. Microscopy and Microanalysis, 2016, 22, 916-917.	0.4	0
180	Study of Structure of Li- and Mn-rich Transition Metal Oxides Using 4D-STEM. Microscopy and Microanalysis, 2016, 22, 494-495.	0.4	10

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