Mark P Oxley

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6983397/publications.pdf

Version: 2024-02-01

85 papers	5,823 citations	117453 34 h-index	82410 72 g-index
87 all docs	87 docs citations	87 times ranked	6341 citing authors

#	Article	IF	Citations
1	Atom-by-atom structural and chemical analysis by annular dark-field electron microscopy. Nature, 2010, 464, 571-574.	13.7	1,138
2	Phase retrieval from series of images obtained by defocus variation. Optics Communications, 2001, 199, 65-75.	1.0	377
3	Suppression of Octahedral Tilts and Associated Changes in Electronic Properties at Epitaxial Oxide Heterostructure Interfaces. Physical Review Letters, 2010, 105, 087204.	2.9	308
4	Spectroscopic Imaging of Single Atoms Within a Bulk Solid. Physical Review Letters, 2004, 92, 095502.	2.9	299
5	Atomic-resolution imaging of oxidation states in manganites. Physical Review B, 2009, 79, .	1.1	274
6	Grain-Boundary-Enhanced Carrier Collection in CdTe Solar Cells. Physical Review Letters, 2014, 112, 156103.	2.9	258
7	Direct observation of ferroelectric field effect andÂvacancy-controlled screening at the BiFeO3/LaxSr1â”xMnO3 interface. Nature Materials, 2014, 13, 1019-1025.	13.3	218
8	Three-dimensional imaging of individual hafnium atoms inside a semiconductor device. Applied Physics Letters, 2005, 87, 034104.	1.5	206
9	Lattice-resolution contrast from a focused coherent electron probe. Part I. Ultramicroscopy, 2003, 96, 47-63.	0.8	193
10	Insulating Ferromagnetic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>LaCoO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> A Phase Induced by Ordering of Oxygen Vacancies. Physical Review Letters, 2014, 112, .	2.9	151
11	Mapping Octahedral Tilts and Polarization Across a Domain Wall in BiFeO₃ from Z-Contrast Scanning Transmission Electron Microscopy Image Atomic Column Shape Analysis. ACS Nano, 2010, 4, 6071-6079.	7.3	150
12	Exit wave reconstruction at atomic resolution. Ultramicroscopy, 2004, 100, 91-104.	0.8	149
13	Atomic-Scale Compensation Phenomena at Polar Interfaces. Physical Review Letters, 2010, 105, 197602.	2.9	146
14	Three-dimensional ADF imaging of individual atoms by through-focal series scanning transmission electron microscopy. Ultramicroscopy, 2006, 106, 1062-1068.	0.8	122
15	Atomic-Resolution Electron Energy Loss Spectroscopy Imaging in Aberration Corrected Scanning Transmission Electron Microscopy. Physical Review Letters, 2003, 91, 105503.	2.9	101
16	Atomic-Resolution Imaging of Spin-State Superlattices in Nanopockets within Cobaltite Thin Films. Nano Letters, 2011, 11, 973-976.	4.5	90
17	Aberration-corrected scanning transmission electron microscopy: from atomic imaging and analysis to solving energy problems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 3709-3733.	1.6	89
18	Lattice-resolution contrast from a focused coherent electron probe. Part II. Ultramicroscopy, 2003, 96, 65-81.	0.8	81

#	Article	IF	Citations
19	Atomicâ€Łevel Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision. Small, 2015, 11, 5895-5900.	5.2	73
20	Delocalization of the effective interaction for inner-shell ionization in crystals. Physical Review B, 1998, 57, 3273-3282.	1.1	69
21	Atomic-resolution spectroscopic imaging: past, present and future. Journal of Electron Microscopy, 2009, 58, 87-97.	0.9	66
22	Interpreting atomic-resolution spectroscopic images. Physical Review B, 2007, 76, .	1.1	64
23	Single Atom Microscopy. Microscopy and Microanalysis, 2012, 18, 1342-1354.	0.2	63
24	Phase retrieval from images in the presence of first-order vortices. Physical Review E, 2001, 63, 037602.	0.8	62
25	The spatial resolution of imaging using core-loss spectroscopy in the scanning transmission electron microscope. Ultramicroscopy, 2005, 102, 317-326.	0.8	62
26	Phase retrieval and aberration correction in the presence of vortices in high-resolution transmission electron microscopy. Ultramicroscopy, 2001, 88, 85-97.	0.8	59
27	Nonlocality in Imaging. Physical Review Letters, 2005, 94, 203906.	2.9	59
28	Machine learning in scanning transmission electron microscopy. Nature Reviews Methods Primers, 2022, 2, .	11.8	59
29	Channelling effects in atomic resolution STEM. Ultramicroscopy, 2003, 96, 299-312.	0.8	58
30	Seeing oxygen disorder in YSZ/SrTiO₃colossal ionic conductor heterostructures using EELS. EPJ Applied Physics, 2011, 54, 33507.	0.3	52
31	Depth sectioning in scanning transmission electron microscopy based on core-loss spectroscopy. Ultramicroscopy, 2007, 108, 17-28.	0.8	43
32	Atomic scattering factors forK-shell andL-shell ionization by fast electrons. Acta Crystallographica Section A: Foundations and Advances, 2000, 56, 470-490.	0.3	39
33	Exploring Mesoscopic Physics of Vacancy-Ordered Systems through Atomic Scale Observations of Topological Defects. Physical Review Letters, 2012, 109, 065702.	2.9	36
34	Modelling imaging based on core-loss spectroscopy in scanning transmission electron microscopy. Ultramicroscopy, 2005, 104, 126-140.	0.8	35
35	Volcano structure in atomic resolution core-loss images. Ultramicroscopy, 2008, 108, 677-687.	0.8	35
36	Computational Aberration Correction for an Arbitrary Linear Imaging System. Physical Review Letters, 2001, 87, 123902.	2.9	32

#	Article	IF	Citations
37	Low-loss electron energy loss spectroscopy: An atomic-resolution complement to optical spectroscopies and application to graphene. Physical Review B, 2015, 92, .	1.1	29
38	Modelling high-resolution electron microscopy based on core-loss spectroscopy. Ultramicroscopy, 2006, 106, 1001-1011.	0.8	28
39	Modeling Atomic-Resolution Scanning Transmission Electron Microscopy Images. Microscopy and Microanalysis, 2008, 14, 48-59.	0.2	28
40	Spatial Resolution and Information Transfer in Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2008, 14, 36-47.	0.2	27
41	Excess carbon in silicon carbide. Journal of Applied Physics, 2010, 108, 123705.	1.1	26
42	Simulation of Spatially Resolved Electron Energy Loss Near-Edge Structure for Scanning Transmission Electron Microscopy. Physical Review Letters, 2012, 109, 246101.	2.9	21
43	Ultra-high resolution electron microscopy. Reports on Progress in Physics, 2017, 80, 026101.	8.1	21
44	Direct Cation Exchange in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></ via Recombination-Enhanced Migration. Physical Review Letters, 2019, 122, 106101.	2.9	21
45	Local Observation of the Site Occupancy of Mn in a MnFePSi Compound. Physical Review Letters, 2015, 114, 106101.	2.9	20
46	Correction terms and approximations for atom location by channelling enhanced microanalysis. Ultramicroscopy, 1999, 80, 109-124.	0.8	19
47	Chapter 9 Materials Applications of Aberration-Corrected Scanning Transmission Electron Microscopy. Advances in Imaging and Electron Physics, 2008, , 327-384.	0.1	19
48	Channeling effects in high-angular-resolution electron spectroscopy. Physical Review B, 2006, 73, .	1.1	18
49	Image simulation for electron energy loss spectroscopy. Micron, 2008, 39, 676-684.	1.1	18
50	Examining the structure and bonding in complex oxides using aberration-corrected imaging and spectroscopy. Physical Review B, 2012, 85, .	1.1	17
51	Atomic scattering factors forK-shell electron energy-loss spectroscopy. Acta Crystallographica Section A: Foundations and Advances, 2001, 57, 713-728.	0.3	16
52	Probing atomic-scale symmetry breaking by rotationally invariant machine learning of multidimensional electron scattering. Npj Computational Materials, 2021, 7, .	3.5	15
53	Deep Bayesian local crystallography. Npj Computational Materials, 2021, 7, .	3.5	15
54	Impact parameters for ionization by high-energy electrons. Ultramicroscopy, 1999, 80, 125-131.	0.8	14

#	Article	IF	Citations
55	Inversion of dynamical electron scattering to obtain the crystal potential using data from two thicknesses. Acta Crystallographica Section A: Foundations and Advances, 2001, 57, 473-474.	0.3	14
56	Theory of dynamical scattering in near-edge electron energy loss spectroscopy. Physical Review B, 2009, 80, .	1.1	14
57	Investigation of the effects of partial coherence on exit wave reconstruction. Journal of Microscopy, 2004, 216, 70-75.	0.8	13
58	Simulation of Probe Position-Dependent Electron Energy-Loss Fine Structure. Microscopy and Microanalysis, 2014, 20, 784-797.	0.2	12
59	Computational aberration determination and correction. Optics Communications, 2003, 216, 89-98.	1.0	10
60	Identification and lattice location of oxygen impurities in Î±-Si3N4. Applied Physics Letters, 2009, 95, 164101.	1.5	10
61	Atomic Scale Studies of La/Sr Ordering in Colossal Magnetoresistant La_{2â^'2x}Sr_{1+2x}Mn₂O₇ Single Crystals. Microscopy and Microanalysis, 2014, 20, 1791-1797.	0.2	9
62	Simulation and Interpretation of Images. , 2011, , 247-289.		8
63	Signatures of distinct impurity configurations in atomic-resolution valence electron-energy-loss spectroscopy: Application to graphene. Physical Review B, 2016, 94, .	1.1	8
64	Investigating phase transitions from local crystallographic analysis based on statistical learning of atomic environments in 2D MoS2-ReS2. Applied Physics Reviews, 2021, 8, 011409.	5.5	7
65	The importance of temporal and spatial incoherence in quantitative interpretation of 4D-STEM. Ultramicroscopy, 2020, 215, 113015.	0.8	6
66	Structure determination at the atomic level from dynamical electron diffraction data under systematic row conditions. Ultramicroscopy, 2001, 88, 195-209.	0.8	5
67	Applications of Aberration-Corrected Scanning Transmission Electron Microscopy and Electron Energy Loss Spectroscopy to Complex Oxide Materials. , 2011, , 429-466.		5
68	Deep learning ferroelectric polarization distributions from STEM data via with and without atom finding. Npj Computational Materials, 2021, 7, .	3.5	5
69	Patterning: Atomicâ€Łevel Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision (Small 44/2015). Small, 2015, 11, 5854-5854.	5.2	2
70	Accurate Calculation of CBED Patterns for 4D STEM Using Electron Densities Calculated by Density Functional Theory.. Microscopy and Microanalysis, 2018, 24, 116-117.	0.2	2
71	The spatial resolution of core-loss imaging in the STEM. Journal of Physics: Conference Series, 2006, 26, 13-16.	0.3	1
72	Depth sectioning using electron energy loss spectroscopy. Journal of Physics: Conference Series, 2008, 126, 012037.	0.3	1

#	Article	IF	Citations
73	Understanding Individual Defects in CdTe Solar Cells: From Atomic Structure to Electrical Activity. Microscopy and Microanalysis, 2014, 20, 518-519.	0.2	1
74	Identifying Novel Polar Distortion Modes in Engineered Magnetic Oxide Superlattices. Microscopy and Microanalysis, 2017, 23, 1590-1591.	0.2	1
75	Atomic Resolution Mapping of Inequivalent O Sites in Complex Oxides. Microscopy and Microanalysis, 2009, 15, 434-435.	0.2	0
76	The Treatment of Spatial Incoherence in the Aberration Corrected STEM. Microscopy and Microanalysis, 2009, 15, 1468-1469.	0.2	0
77	Structural and Chemical Details of La05Sr0.5CoO3-Î´ Thin Films. Microscopy and Microanalysis, 2009, 15, 440-441.	0.2	0
78	Direct Imaging of Light Elements in Aberration-Corrected Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2009, 15, 1480-1481.	0.2	0
79	Inelastic STEM Imaging Based on Low-Loss Spectroscopy. Microscopy and Microanalysis, 2014, 20, 90-91.	0.2	0
80	Inversion of STEM EELS Data to Obtain Site Occupancy and Near Edge Structure. Microscopy and Microanalysis, 2015, 21, 2251-2252.	0.2	0
81	Low-Loss Imaging of Defect Structures in Two Dimensional Materials Using Aberration Corrected Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 1410-1411.	0.2	0
82	Single Atom Imaging and Spectroscopy of Impurities in 2D Materials. Microscopy and Microanalysis, 2016, 22, 862-863.	0.2	0
83	Quantification of Low Voltage Images of 2-dimensional Materials in Aberration Corrected Scanning Transmission Electron Microscopy.. Microscopy and Microanalysis, 2017, 23, 464-465.	0.2	0
84	Unsupervised Machine Learning to Distill Structural-Property Insights from 4D-STEM. Microscopy and Microanalysis, 2019, 25, 12-13.	0.2	0
85	Direct mapping of polarization fields from STEM images: A Deep Learning based exploration of ferroelectrics. Microscopy and Microanalysis, 2021, 27, 2990-2992.	0.2	0