

Benjamin J McMorran

List of Publications by Year in descending order

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81
papers

2,680
citations

394421

19
h-index

182427

51
g-index

83
all docs

83
docs citations

83
times ranked

3038
citing authors

#	ARTICLE	IF	CITATIONS
1	Discretized evolution of solitons in the achiral stripe phase of a Fe/Gd thin film. Physical Review B, 2022, 105, .	3.2	1
2	Inelastic Mach-Zehnder Interferometry with Free Electrons. Physical Review Letters, 2022, 128, 147401.	7.8	8
3	Material Sputtering with a Multi-Ion Species Plasma Focused Ion Beam. Advances in Materials Science and Engineering, 2021, 2021, 1-9.	1.8	6
4	Beam shaping and probe characterization in the scanning electron microscope. Ultramicroscopy, 2021, 225, 113268.	1.9	9
5	2-Grating Inelastic Free Electron Interferometry. Microscopy and Microanalysis, 2021, 27, 1474-1477.	0.4	2
6	A flexible electron interferometer demonstrating live phase imaging and interaction-free measurements. Microscopy and Microanalysis, 2021, 27, 2120-2122.	0.4	1
7	3D Morphology of Magnetic Bubbles in Layered Ferromagnetic Materials. Microscopy and Microanalysis, 2021, 27, 150-152.	0.4	0
8	Chiral spin textures in Fe/Gd based multilayer thin films. Microscopy and Microanalysis, 2021, 27, 2404-2407.	0.4	2
9	Optimized Amplitude-Dividing Beam Splitter Gratings for 4D STEM Holography. Microscopy and Microanalysis, 2021, 27, 746-747.	0.4	0
10	Interaction-Free Measurement with Electrons. Physical Review Letters, 2021, 127, 110401.	7.8	19
11	Scanning two-grating free electron Mach-Zehnder interferometer. Physical Review Research, 2021, 3, .	3.6	9
12	Quantitative Phase Imaging with an Electron Mach-Zehnder Interferometer. , 2021, , .		0
13	Corrected Off-axis Diffraction Holograms for Electrons. Microscopy and Microanalysis, 2020, 26, 426-427.	0.4	0
14	Interaction-free Interferometry with Electrons. Microscopy and Microanalysis, 2020, 26, 1744-1746.	0.4	1
15	Magnetic Phase Imaging Using Interferometric STEM. Microscopy and Microanalysis, 2020, 26, 2480-2482.	0.4	3
16	Improved control of electron computer-generated holographic grating groove profiles using ion beam gas-assisted etching. Applied Optics, 2020, 59, 1594.	1.8	15
17	Exact design of complex amplitude holograms for producing arbitrary scalar fields. Optics Express, 2020, 28, 17334.	3.4	10
18	Single Electron Interferometry: A Step Toward Quantum Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 1712-1713.	0.4	2

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19	Feasibility of an Electron Orbital Angular Momentum Sorter. <i>Microscopy and Microanalysis</i> , 2019, 25, 90-91.	0.4	1
20	Seeing with Phase: Interferometric Electron Microscopy for Magnetic Materials and Biological Specimens. <i>Microscopy and Microanalysis</i> , 2019, 25, 1210-1211.	0.4	3
21	Lorentz Implementation of STEM Holography. <i>Microscopy and Microanalysis</i> , 2019, 25, 96-97.	0.4	2
22	Average Atomic Number and Electron Backscattering in Compounds. <i>Microscopy and Microanalysis</i> , 2019, 25, 2314-2315.	0.4	3
23	Advanced Phase Reconstruction Methods Enabled by Four-Dimensional Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2019, 25, 10-11.	0.4	7
24	Transforming a Thermionic Transmission Electron Microscope into an Electron Interferometer. <i>Microscopy and Microanalysis</i> , 2019, 25, 94-95.	0.4	0
25	Electron-Beam Shaping in the Transmission Electron Microscope: Control of Electron-Beam Propagation Along Atomic Columns. <i>Physical Review Applied</i> , 2019, 11, .	3.8	10
26	Laguerreâ€Gauss and Hermiteâ€Gauss soft X-ray states generated using diffractive optics. <i>Nature Photonics</i> , 2019, 13, 205-209.	31.4	61
27	Path-separated electron interferometry in a scanning transmission electron microscope. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 205104.	2.8	17
28	Single-Photon Emitters in Boron Nitride Nanococoons. <i>Nano Letters</i> , 2018, 18, 2683-2688.	9.1	20
29	Demonstration of STEM Holography Using Diffraction Gratings. <i>Microscopy and Microanalysis</i> , 2018, 24, 200-201.	0.4	2
30	Interpretable and Efficient Interferometric Contrast in Scanning Transmission Electron Microscopy with a Diffraction-Grating Beam Splitter. <i>Physical Review Applied</i> , 2018, 10, .	3.8	20
31	A tunable path-separated electron interferometer with an amplitude-dividing grating beamsplitter. <i>Applied Physics Letters</i> , 2018, 113, 233102.	3.3	8
32	Probing Light Atoms at Subnanometer Resolution: Realization of Scanning Transmission Electron Microscope Holography. <i>Nano Letters</i> , 2018, 18, 7118-7123.	9.1	24
33	The colossal hats (pukao) of monumental statues on Rapa Nui (Easter Island, Chile): Analyses of pukao variability, transport, and emplacement. <i>Journal of Archaeological Science</i> , 2018, 100, 148-157.	2.4	9
34	Holographically Probing Longitudinal Magnetic Fields with Electron Vortex Beams. <i>Microscopy and Microanalysis</i> , 2018, 24, 938-939.	0.4	1
35	Investigation of mechanical torque applied by electron vortex beams in a liquid cell. , 2018, , .		0
36	Origins and demonstrations of electrons with orbital angular momentum. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20150434.	3.4	39

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37	Aberration corrected STEM by means of diffraction gratings. <i>Ultramicroscopy</i> , 2017, 182, 36-43.	1.9	15
38	Streamlined approach to mapping the magnetic induction of skyrmionic materials. <i>Ultramicroscopy</i> , 2017, 177, 78-83.	1.9	14
39	Determination of domain wall chirality using <i>in situ</i> Lorentz transmission electron microscopy. <i>AIP Advances</i> , 2017, 7, .	1.3	8
40	Tailoring magnetic energies to form dipole skyrmions and skyrmion lattices. <i>Physical Review B</i> , 2017, 95, .	3.2	160
41	Observation of nanoscale magnetic fields using twisted electron beams. <i>Nature Communications</i> , 2017, 8, 689.	12.8	47
42	Stern-Gerlach-like approach to electron orbital angular momentum measurement. <i>Physical Review A</i> , 2017, 95, .	2.5	13
43	Efficient sorting of free electron orbital angular momentum. <i>New Journal of Physics</i> , 2017, 19, 023053.	2.9	35
44	Resonant properties of dipole skyrmions in amorphous Fe/Gd multilayers. <i>Physical Review B</i> , 2017, 95, .	3.2	44
45	Roadmap on structured light. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 013001.	2.2	888
46	Electron Microscopy with Structured Electrons. <i>Microscopy and Microanalysis</i> , 2017, 23, 448-449.	0.4	0
47	Development of STEM-Holography. <i>Microscopy and Microanalysis</i> , 2016, 22, 506-507.	0.4	5
48	Proposal for Magnetic Dichroism With a Standard STEM Probe Beam. <i>Microscopy and Microanalysis</i> , 2016, 22, 1708-1709.	0.4	1
49	Synthesizing skyrmion bound pairs in Fe-Gd thin films. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	67
50	Phase Contrast Imaging of Weakly-Scattering Samples with Matched Illumination and Detector Interferometryâ€“Scanning Transmission Electron Microscopy (MIDIâ€“STEM). <i>Microscopy and Microanalysis</i> , 2016, 22, 460-461.	0.4	1
51	Efficient linear phase contrast in scanning transmission electron microscopy with matched illumination and detector interferometry. <i>Nature Communications</i> , 2016, 7, 10719.	12.8	102
52	An Orbital Angular Momentum Spectrometer for Electrons. <i>Microscopy and Microanalysis</i> , 2015, 21, 23-24.	0.4	0
53	Structured Electron Beam Illumination: A New Control Over the Electron Probe Weird Probes and New Experiments. <i>Microscopy and Microanalysis</i> , 2015, 21, 25-26.	0.4	1
54	Electron holograms encoding amplitude and phase for the generation of arbitrary wavefunctions. <i>Microscopy and Microanalysis</i> , 2015, 21, 503-504.	0.4	5

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55	Propagation of Bessel Beams along Atomic Columns in Crystal: a Bloch Wave and Multi-slice Analysis. <i>Microscopy and Microanalysis</i> , 2015, 21, 1889-1890.	0.4	1
56	Spin-Multislice Applied to the Electron Spin Interaction with Materials. <i>Microscopy and Microanalysis</i> , 2015, 21, 1961-1962.	0.4	0
57	Efficient diffractive phase optics for electrons. <i>New Journal of Physics</i> , 2014, 16, 093039.	2.9	67
58	Characterization of Electron Orbital Angular Momentum Transfer to Nanoparticle Plasmon Modes. <i>Microscopy and Microanalysis</i> , 2014, 20, 68-69.	0.4	2
59	Propagation of Free Electrons Carrying Orbital Angular Momentum Through Magnetic Lenses. <i>Microscopy and Microanalysis</i> , 2014, 20, 292-293.	0.4	0
60	Efficient Diffractive Phase Optics for Electrons. <i>Microscopy and Microanalysis</i> , 2014, 20, 356-357.	0.4	0
61	Aberration-Corrected STEM by Means of Diffraction Gratings. <i>Microscopy and Microanalysis</i> , 2014, 20, 946-947.	0.4	7
62	Atomic-resolution Imaging Using Cs-corrected Vortex Beams. <i>Microscopy and Microanalysis</i> , 2014, 20, 84-85.	0.4	3
63	High Efficiency Electron Diffractive Optics. <i>Microscopy and Microanalysis</i> , 2013, 19, 1188-1189.	0.4	9
64	Electron Orbital Angular Momentum Transfer to Nanoparticle Plasmon Modes. <i>Microscopy and Microanalysis</i> , 2013, 19, 1186-1187.	0.4	0
65	Addition, Subtraction, and Analysis of Orbital Angular Momentum in Electron Vortex Beams. <i>Microscopy and Microanalysis</i> , 2013, 19, 1166-1167.	0.4	3
66	Optimization of Spin-Triplet Supercurrent in Ferromagnetic Josephson Junctions. <i>Physical Review Letters</i> , 2012, 108, 127002.	7.8	117
67	Propagation of vortex electron wave functions in a magnetic field. <i>Physical Review A</i> , 2012, 86, .	2.5	44
68	An Integrated Electrochromic Nanoplasmonic Optical Switch. <i>Nano Letters</i> , 2011, 11, 2774-2778.	9.1	41
69	Electron Vortex Beams with High Quanta of Orbital Angular Momentum. <i>Science</i> , 2011, 331, 192-195.	12.6	492
70	Electron Laguerre-Gaussian beams. , 2011, , .		2
71	Reversal of patterned Co/Pd multilayers with graded magnetic anisotropy. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	14
72	Magnetization textures in NiPd nanostructures. <i>Physical Review B</i> , 2011, 84, .	3.2	12

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73	Electron Beams Carrying Quantized Orbital Angular Momentum. , 2011, , .		1
74	Measuring the effects of low energy ion milling on the magnetization of Co/Pd multilayers using scanning electron microscopy with polarization analysis. Journal of Applied Physics, 2010, 107, 09D305.	2.5	9
75	An electron Talbot interferometer. New Journal of Physics, 2009, 11, 033021.	2.9	61
76	Measurement of Electron Beam Coherence Using a Lau Interferometer. Microscopy and Microanalysis, 2008, 14, 828-829.	0.4	0
77	Model for partial coherence and wavefront curvature in grating interferometers. Physical Review A, 2008, 78, .	2.5	18
78	Very Low Energy TEM Diffraction of Nanostructures. Microscopy and Microanalysis, 2008, 14, 824-825.	0.4	0
79	Low Energy Electron Holography of Charged Tip. Microscopy and Microanalysis, 2008, 14, 350-351.	0.4	2
80	Diffraction of 0.5keV electrons from free-standing transmission gratings. Ultramicroscopy, 2006, 106, 356-364.	1.9	30
81	Electron interferometry with nanogratings. Physical Review A, 2006, 74, .	2.5	23