Jabez J Mcclelland

List of Publications by Year
in descending order

96	3,775	126708 33	128067 60
papers	citations	h-index	g-index

97	97	97	2466
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Implementation of a Binary Neural Network on a Passive Array of Magnetic Tunnel Junctions. Physical Review Applied, 2022, 18, .	1.5	3
2	Impact ionization-induced bistability in CMOS transistors at cryogenic temperatures for capacitorless memory applications. Applied Physics Letters, 2021, 119, .	1.5	3
3	Mutual control of stochastic switching for two electrically coupled superparamagnetic tunnel junctions. Physical Review B, 2021, 104, .	1.1	8
4	Transport dynamics in a high-brightness magneto-optical-trap Li ion source. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, .	0.6	1
5	Direct-Write Lithiation of Silicon Using a Focused Ion Beam of Li⁺. ACS Nano, 2019, 13, 8012-8022.	7.3	6
6	Spontaneous current constriction in threshold switching devices. Nature Communications, 2019, 10, 1628.	5.8	51
7	Characterization of a high-brightness, laser-cooled Li+ ion source. Journal of Applied Physics, 2019, 125, .	1.1	8
8	Defect Evolution of Ion-Exposed Single-Wall Carbon Nanotubes. Journal of Physical Chemistry C, 2019, 123, 2496-2505.	1.5	4
9	Multimodal Characterization of the Morphology and Functional Interfaces in Composite Electrodes for Liâ€“S Batteries by Li Ion and Electron Beams. Langmuir, 2017, 33, 9361-9377.	1.6	9
10	Stateful characterization of resistive switching TiO2 with electron beam induced currents. Nature Communications, 2017, 8, 1972.	5.8	28
11	High-brightness Cs focused ion beam from a cold-atomic-beam ion source. Nano Futures, 2017, 1, 015005.	1.0	23
12	Two-dimensional imaging and modification of nanophotonic resonator modes using a focused ion beam. Optica, 2017, 4, 1444.	4.8	10
13	Uncovering Structural Organization of a Solid Electrolyte Interphase Using Thin Window Si Membrane Negative Electrodes. ECS Meeting Abstracts, 2017, , .	0.0	0
14	Nanoscale Electrochemistry Via Lithium Focused Ion Beam. ECS Meeting Abstracts, 2017, , .	0.0	0
15	Editors' Choice Communicationâ€”Comparison of Nanoscale Focused Ion Beam and Electrochemical Lithiation inÎ²-Sn Microspheres. Journal of the Electrochemical Society, 2016, 163, A1010-A1012.	1.3	11
16	Bright focused ion beam sources based on laser-cooled atoms. Applied Physics Reviews, 2016, 3, 011302.	5.5	41
17	Giant Surface Conductivity Enhancement in a Carbon Nanotube Composite by Ultraviolet Light Exposure. ACS Applied Materials & Interfaces, 2016, 8, 23230-23235.	4.0	13
18	Cure temperature influences composite electrical properties by carbon nanotube-rich domain formation. Composites Science and Technology, 2016, 133, 23-32.	3.8	9

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19	Imaging nanophotonic modes of microresonators using a focused ion beam. Nature Photonics, 2016, 10, 35-39.	15.6	16
20	Focused Ion Beams for Lithiation of High Capacity Host Materials for Negative Electrodes. ECS Meeting Abstracts, 2016, , .	0.0	0
21	Focused Ion and Electron Beam Nanometrologies for Probing Structures and Properties of Sulfur Copolymer-Based Nanocomposite Cathodes for Next Generation of High-Energy Density Li-S Batteries. ECS Meeting Abstracts, 2016, , .	0.0	0
22	Imaging of Carbon Nanotubes Embedded in Polymer Composites via Low Energy Scanning Electron Microscopy and Scanning Lithium Ion Microscopy. Microscopy and Microanalysis, 2015, 21, 513-514.	0.2	1
23	Direct imaging of nanophotonic cavity modes using Li ion microscope. , 2014, , .		0
24	Scanning ion microscopy with low energy lithium ions. Ultramicroscopy, 2014, 142, 24-31.	0.8	35
25	Cold atomic beam ion source for focused ion beam applications. Journal of Applied Physics, 2013, 114, .	1.1	61
26	Nanoscale focused ion beam from laser-cooled lithium atoms. New Journal of Physics, 2011, 13, 103035.	1.2	35
27	Electron Vortex Beams with High Quanta of Orbital Angular Momentum. Science, 2011, 331, 192-195.	6.0	492
28	Electron Laguerre-Gaussian beams. , 2011, , .		2
29	Inter-ion coulomb interactions in a magneto-optical trap ion source. Journal of Applied Physics, 2011, 109, .	1.1	15
30	MOTIS: A Focused Ion Beam Source Based On Laser-Cooled Atoms. AIP Conference Proceedings, 2011, , .	0.3	2
31	Electron Beams Carrying Quantized Orbital Angular Momentum. , 2011, , .		1
32	Theoretical model of errors in micromirror-based three-dimensional particle tracking. Optics Letters, 2010, 35, 1905.	1.7	8
33	Focused chromium ion beam. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6F1-C6F5.	0.6	22
34	3D Particle Trajectories Observed by Orthogonal Tracking Microscopy. ACS Nano, 2009, 3, 609-614.	7.3	44
35	Fast, bias-free algorithm for tracking single particles with variable size and shape. Optics Express, 2008, 16, 14064.	1.7	59
36	Magneto-Optical-Trap-Based, High Brightness Ion Source for Use as a Nanoscale Probe. Nano Letters, 2008, 8, 2844-2850.	4.5	54

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37	Narrow-Line Magneto-Optical Cooling and Trapping of Strongly Magnetic Atoms. Physical Review Letters, 2008, 100, 113002.	2.9	46
38	Sub-Doppler laser cooling and magnetic trapping of erbium. Physical Review A, 2007, 76, .	1.0	33
39	Laser Cooling without Repumping: A Magneto-Optical Trap for Erbium Atoms. Physical Review Letters, 2006, 96, 143005.	2.9	159
40	Using laser-cooled atoms as a focused ion beam source. Journal of Vacuum Science & Technology B, 2006, 24, 2907.	1.3	15
41	Laser-cooled atoms as a focused ion-beam source. Physical Review A, 2006, 74, .	1.0	41
42	Natural linewidth of the401â^'nmlaser-cooling transition inErI. Physical Review A, 2006, 73, .	1.0	13
43	Laser cooling transitions in atomic erbium. Optics Express, 2005, 13, 3185.	1.7	32
44	Nanotechnology with atom optics. Science and Technology of Advanced Materials, 2004, 5, 575-580.	2.8	19
45	Performance of a feedback-controlled, deterministic source of single chromium atoms. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 473.	0.9	4
46	Atoms on demand: Fast, deterministic production of single Cr atoms. Applied Physics Letters, 2003, 82, 3128-3130.	1.5	43
47	Accuracy of nanoscale pitch standards fabricated by laser-focused atomic deposition. Journal of Research of the National Institute of Standards and Technology, 2003, 108, 99.	0.4	39
48	Laser-focused nanofabrication: Beating of two atomic resonances. Applied Physics Letters, 2002, 80, 4443-4445.	1.5	12
49	Laser-focused atomic deposition â€“ nanofabrication via atom optics. Thin Solid Films, 2000, 367, 25-27.	0.8	14
50	Magneto-optical trapping of chromium atoms. Physical Review A, 2000, 61, .	1.0	46
51	Patterning of octadecylsiloxane self-assembled monolayers on Si(100) using Ar([sup 3]P[sub 0,2]) atoms. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 1087.	1.6	17
52	Minimizing feature width in atom optically fabricated chromium nanostructures. Physical Review A, 1999, 59, 2476-2485.	1.0	79
53	Surface growth in laser-focused atomic deposition. Physical Review B, 1999, 60, 1543-1546.	1.1	18
54	Patterning of hydrogen-passivated Si(100) using Ar(3P0,2) metastable atoms. Applied Physics Letters, 1999, 74, 2239-2241.	1.5	28

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55	Nanofabrication via atom optics. Applied Surface Science, 1999, 141, 210-218.	3.1	31
56	Atom Optics: Using Light to Position Atoms. , 1999, , 403-423.		1
57	Nanostructure fabrication by reactive-ion etching of laser-focused chromium on silicon. Applied Physics B: Lasers and Optics, 1998, 66, 95-98.	1.1	12
58	Fabrication and domain imaging of iron magnetic nanowire arrays. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 1817-1819.	0.9	15
59	Self-assembled monolayers exposed by metastable argon and metastable helium for neutral atom lithography and atomic beam imaging. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 1805.	1.6	50
60	Laser collimation of a chromium beam. Physical Review A, 1997, 55, 1331-1338.	1.0	43
61	‹title›Nanofabrication via atom optics with chromium‹/title›. , 1997, 2995, 90.		3
62	Replica molding using polymeric materials: A practical step toward nanomanufacturing. Advanced Materials, 1997, 9, 147-149.	11.1	285
63	Optical State-Preparation of Atoms. Experimental Methods in the Physical Sciences, 1996, , 145-170.	0.1	4
64	Nanostructure fabrication via laser-focused atomic deposition (invited). Journal of Applied Physics, 1996, 79, 6079.	1.1	50
65	Raman-Induced Avoided Crossings in Adiabatic Optical Potentials: Observation ofÎ»/8Spatial Frequency in the Distribution of Atoms. Physical Review Letters, 1996, 76, 4689-4692.	2.9	66
66	Microlithography by using neutral metastable atoms and self-assembled monolayers. Science, 1995, 269, 1255-1257.	6.0	212
67	Nanofabrication of a twoâ€dimensional array using laserâ€focused atomic deposition. Applied Physics Letters, 1995, 67, 1378-1380.	1.5	106
68	Atom-optical properties of a standing-wave light field. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1761.	0.9	83
69	Using Atom Optics to Fabricate Nanostructures. , 1995, , 75-78.		0
70	Nanostructure fabrication via direct writing with atoms focused in laser fields. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1994, 12, 1847.	1.6	10
71	‹title›Laser-focused atomic deposition‹/title›. , 1994, , .		0
72	Laser-Focused Atomic Deposition. Science, 1993, 262, 877-880.	6.0	372

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73	Uncertainty intervals for polarized beam scattering asymmetry statistics. Review of Scientific Instruments, 1993, 64, 1888-1894.	0.6	1
74	Spin-resolved superelastic electron scattering from laser-excited chromium atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, L753-L758.	0.6	13
75	Simple, compact, highâ€purity Cr evaporator for ultrahigh vacuum. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1993, 11, 2863-2864.	0.9	13
76	Spin-resolved elastic scattering of electrons from sodium. Physical Review A, 1993, 47, 3000-3006.	1.0	8
77	Determination of complex scattering amplitudes in low-energy elastic electron-sodium scattering. Physical Review A, 1992, 46, 6079-6082.	1.0	26
78	Laser focusing of atoms: a particle-optics approach. Journal of the Optical Society of America B: Optical Physics, 1991, 8, 1974.	0.9	88
79	Spin-resolved superelastic scattering from sodium at 10 and 40 eV. Journal of Physics B: Atomic, Molecular and Optical Physics, 1991, 24, L653-L659.	0.6	40
80	Spin-resolved elastic scattering of electrons from sodium below the inelastic threshold. Physical Review Letters, 1991, 67, 3761-3763.	2.9	19
81	Search for a joint spin-orbit and exchange asymmetry in elastic electron scattering from spin-polarised sodium. Journal of Physics B: Atomic, Molecular and Optical Physics, 1990, 23, L21-L24.	0.6	9
82	Use of thorium as a target in electronâ€spin analyzers. Review of Scientific Instruments, 1989, 60, 683-687.	0.6	20
83	Improved lowâ€energy diffuse scattering electronâ€spin polarization analyzer. Review of Scientific Instruments, 1989, 60, 1-11.	0.6	75
84	Superelastic scattering of spin-polarized electrons from sodium. Physical Review A, 1989, 40, 2321-2329.	1.0	88
85	Spin sensitivity of a channel electron multiplier. Review of Scientific Instruments, 1988, 59, 506-508.	0.6	1
86	Large-angle superelastic electron scattering from Na(3P). Journal of Physics B: Atomic and Molecular Physics, 1987, 20, L385-L388.	1.6	16
87	Spin-Orbit and Exchange Effects in Elastic Scattering of Spin-Polarized Electrons from Spin-Polarized Na Atoms. Physical Review Letters, 1987, 58, 2198-2200.	2.9	23
88	Analysis of collisional alignment and orientation studied by scattering of spin-polarized electrons from laser excited atoms. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1987, 6, 163-183.	1.0	32
89	Spin-Dependent Superelastic Scattering from Pure Angular Momentum States ofNa(3P). Physical Review Letters, 1986, 56, 1362-1365.	2.9	42
90	Spin-Dependent Superelastic Scattering from Pure Angular Momentum States of Na(3P). Physical Review Letters, 1986, 56, 2771-2771.	2.9	2

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91	Electron Correlation and Binding Effects in Measured Electron-Scattering Cross Sections of CO2. Physical Review Letters, 1985, 54, 2218-2221.	2.9	24
92	Spin Dependence in Superelastic Electron Scattering fromNa(3P). Physical Review Letters, 1985, 55, 688-691.	2.9	50
93	Correlation effects in neon studied by elastic and inelastic high-energy electron scattering. Physical Review A, 1985, 31, 1328-1335.	1.0	20
94	Detailed look at aspects of optical pumping in sodium. Physical Review A, 1985, 31, 3704-3710.	1.0	73
95	Infrared laser-emission study in a resonantly excited sodium vapor. Applied Physics B, Photophysics and Laser Chemistry, 1983, 31, 131-134.	1.5	10
96	Measurements and calculations of the anomalous energy broadening of a 300â€eV electron beam. Journal of Applied Physics, 1981, 52, 7039-7043.	1.1	6