

# David McGloin

## List of Publications by Year in descending order

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150  
papers

6,259  
citations

117453

34  
h-index

66788

78  
g-index

155  
all docs

155  
docs citations

155  
times ranked

4648  
citing authors

#	ARTICLE	IF	CITATIONS
1	3-D Printed All-Dielectric Dual-Band Broadband Reflectarray With a Large Frequency Ratio. IEEE Transactions on Antennas and Propagation, 2021, 69, 7035-7040.	3.1	27
2	Additively Manufactured Millimeter-Wave Dual-Band Single-Polarization Shared Aperture Fresnel Zone Plate Metalens Antenna. IEEE Transactions on Antennas and Propagation, 2021, 69, 6261-6272.	3.1	32
3	Effects of spatial confinement on migratory properties of Dictyostelium discoideum cells. Communicative and Integrative Biology, 2021, 14, 5-14.	0.6	5
4	Sub-Terahertz 3-D Printed All-Dielectric Low-Cost Low-Profile Lens-Integrated Polarization Beam Splitter. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 433-442.	2.0	5
5	Self-evolving ghost imaging. Optica, 2021, 8, 1340.	4.8	15
6	Single-Pixel Diffuser Camera. IEEE Photonics Journal, 2021, 13, 1-5.	1.0	2
7	Examining the Effect of Kindlin-3 Binding Site Mutation on LFA-1-ICAM-1 Bonds by Force Measuring Optical Tweezers. Frontiers in Immunology, 2021, 12, 792813.	2.2	0
8	Numerically Enhanced Stimulated Emission Depletion Microscopy with Adaptive Optics for Deep-Tissue Super-Resolved Imaging. ACS Nano, 2020, 14, 394-405.	7.3	15
9	Analysis of barotactic and chemotactic guidance cues on directional decision-making of <i>Dictyostelium discoideum</i> cells in confined environments. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25553-25559.	3.3	12
10	Measurement of junctional tension in epithelial cells at the onset of primitive streak formation in the chick embryo via non-destructive optical manipulation. Development (Cambridge), 2020, 147, .	1.2	10
11	Terahertz Reconfigurable Metasurface for Dynamic Non-Diffractive Orbital Angular Momentum Beams using Vanadium Dioxide. IEEE Photonics Journal, 2020, 12, 1-12.	1.0	12
12	3-D Printed Planar Dielectric Linear-to-Circular Polarization Conversion and Beam-Shaping Lenses Using Coding Polarizer. IEEE Transactions on Antennas and Propagation, 2020, 68, 4332-4343.	3.1	27
13	0.32 THz dual circularly polarized reflectarray. , 2020, , .		0
14	Self-optimizing ghost imaging with a genetic algorithm. , 2020, , .		0
15	A Flexible Hair-Like Laser Induced Graphitic Sensor for Low Flow Rate Sensing Applications. , 2020, , .		0
16	High-Throughput, Time-Resolved Mechanical Phenotyping of Prostate Cancer Cells. Scientific Reports, 2019, 9, 5742.	1.6	13
17	Full volume super-resolution imaging of thick mitotic spindle using 3D AO STED microscope. Biomedical Optics Express, 2019, 10, 1999.	1.5	24
18	Quasi-noise-free stimulated emission depletion microscopy imaging of thick samples using adaptive optics and block-matching 3D filtering. , 2019, , .		0

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19	Microscale characterization of prostate biopsies tissues using optical coherence elastography and second harmonic generation imaging. <i>Laboratory Investigation</i> , 2018, 98, 380-390.	1.7	18
20	Raman spectroscopy for accurately characterizing biomolecular changes in androgen-independent prostate cancer cells. <i>Journal of Biophotonics</i> , 2018, 11, e201700166.	1.1	20
21	Quantitative assessment of the mechanical properties of prostate tissue with optical coherence elastography. , 2018, , .		0
22	Droplet lasers: a review of current progress. <i>Reports on Progress in Physics</i> , 2017, 80, 054402.	8.1	20
23	Intermediate phases during solid to liquid transitions in long-chain n-alkanes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 13941-13950.	1.3	27
24	Microfluidics-based, time-resolved mechanical phenotyping of cells using high-speed imaging. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
25	Second harmonic generation (SHG) imaging of cancer heterogeneity in ultrasound guided biopsies of prostate in men suspected with prostate cancer. <i>Journal of Biophotonics</i> , 2017, 10, 911-918.	1.1	31
26	Optical redox ratio and endogenous porphyrins in the detection of urinary bladder cancer: A patient biopsy analysis. <i>Journal of Biophotonics</i> , 2017, 10, 1062-1073.	1.1	21
27	High-throughput, imaging based mechanical phenotyping of prostate cancer cells. , 2017, , .		0
28	Transport of intensity microscopy for distinguishing single and bundled microtubules. , 2017, , .		1
29	Colloidal Interactions with Optical Fields: Optical Tweezers. , 2016, , 111-130.		0
30	Changes in autofluorescence based organoid model of muscle invasive urinary bladder cancer. <i>Biomedical Optics Express</i> , 2016, 7, 1193.	1.5	14
31	Improved antireflection coated microspheres for biological applications of optical tweezers. <i>Proceedings of SPIE</i> , 2016, , .	0.8	2
32	Comparison of Raman and IR spectroscopy for quantitative analysis of gasoline/ethanol blends. <i>Fuel</i> , 2016, 166, 488-494.	3.4	24
33	Bubble wrap for optical trapping and cell culturing. <i>Biomedical Optics Express</i> , 2015, 6, 3757.	1.5	3
34	Hydrodynamic stretching for prostate cancer detection. , 2015, , .		1
35	Probing the Evaporation Dynamics of Ethanol/Gasoline Biofuel Blends Using Single Droplet Manipulation Techniques. <i>Journal of Physical Chemistry A</i> , 2015, 119, 12797-12804.	1.1	19
36	Low-cost optical manipulation using hanging droplets of PDMS. <i>RSC Advances</i> , 2015, 5, 55561-55565.	1.7	17

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37	Cellular lasers. Nature Photonics, 2015, 9, 559-560.	15.6	7
38	Characterization of gasoline/ethanol blends by infrared and excess infrared spectroscopy. Fuel, 2015, 141, 136-142.	3.4	62
39	Droplet Lasers. Optics and Photonics News, 2015, 26, 36.	0.4	4
40	Studying biofuel aerosol evaporation rates with single particle manipulation. , 2014, , .		0
41	Characterizing conical refraction optical tweezers. Optics Letters, 2014, 39, 6691.	1.7	14
42	Droplet resonator based optofluidic microlasers. , 2014, , .		2
43	Optical trapping for space mirrors. Nature, 2014, 506, 437-438.	13.7	0
44	In vitro and in vivo biolasing of fluorescent proteins suspended in liquid microdroplet cavities. Lab on A Chip, 2014, 14, 3093-3100.	3.1	91
45	Biological lasing in liquid microdroplets deposited on a superhydrophobic surface. , 2014, , .		0
46	Resolving Stable Axial Trapping Points of Nanowires in an Optical Tweezers Using Photoluminescence Mapping. Nano Letters, 2013, 13, 1185-1191.	4.5	36
47	HoloHands: games console interface for controlling holographic optical manipulation. Journal of Optics (United Kingdom), 2013, 15, 035708.	1.0	14
48	Axial Localization Improvements when Trapping Aerosol Droplets using an Annular Beam. , 2013, , .		0
49	Introduction: Optical trapping and applications feature issue. Biomedical Optics Express, 2013, 4, 2710.	1.5	1
50	Aerosol droplet optical trap loading using surface acoustic wave nebulization. Optics Express, 2013, 21, 30148.	1.7	14
51	Dye lasing in optically manipulated liquid aerosols. , 2013, , .		1
52	A nano-mechanical study on the influence of ultrasound exposure on cellular elasticity. , 2013, , .		2
53	Dye lasing in optically manipulated liquid aerosols. Optics Letters, 2013, 38, 1669.	1.7	16
54	The Spontaneously Adhesive Leukocyte Function-associated Antigen-1 (LFA-1) Integrin in Effector T Cells Mediates Rapid Actin- and Calmodulin-dependent Adhesion Strengthening to Ligand under Shear Flow. Journal of Biological Chemistry, 2013, 288, 14698-14708.	1.6	25

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55	Directed jetting from collapsing cavities exposed to focused ultrasound. Applied Physics Letters, 2012, 100, 024104.	1.5	17
56	HoloHands: games console interface for controlling holographic optical manipulation. Proceedings of SPIE, 2012, , .	0.8	1
57	Analysis of optical trap mediated aerosol coalescence. , 2012, , .		0
58	Flexible particle manipulation techniques with conical refraction-based optical tweezers. , 2012, , .		8
59	Mapping optical process in semiconductor nanowires using dynamic optical tweezers. , 2012, , .		0
60	An optical trampoline. Nature, 2012, 492, 51-52.	13.7	0
61	Single aerosol trapping with an annular beam: improved particle localisation. Physical Chemistry Chemical Physics, 2012, 14, 15826.	1.3	13
62	Observation of the Binary Coalescence and Equilibration of Micrometer-Sized Droplets of Aqueous Aerosol in a Single-Beam Gradient-Force Optical Trap. Journal of Physical Chemistry A, 2012, 116, 8873-8884.	1.1	21
63	Combining rails and anchors with laser forcing for selective manipulation within 2D droplet arrays. Lab on A Chip, 2011, 11, 4228.	3.1	92
64	Modeling of optical traps for aerosols. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 2856.	0.9	31
65	On the accuracy of framing-rate measurements in ultra-high speed rotating mirror cameras. Optics Express, 2011, 19, 16432.	1.7	7
66	Role of mirror dynamics in determining the accuracy of framing rate in an ultra high speed rotating mirror camera. Proceedings of SPIE, 2011, , .	0.8	2
67	Laser-nucleated acoustic cavitation in focused ultrasound. Review of Scientific Instruments, 2011, 82, 044902.	0.6	33
68	Optically written optofluidic ice channels. Journal of Optics (United Kingdom), 2011, 13, 044005.	1.0	4
69	Optical manipulation of aerosols using surface acoustic wave nebulisation. Proceedings of SPIE, 2011, , .	0.8	2
70	Optical manipulation of 'drops on rails' in two dimensional microfluidic devices. , 2011, , .		2
71	Towards cooling of optically trapped aerosols. , 2011, , .		0
72	Parameter exploration of optically trapped liquid aerosols. Physical Review E, 2010, 82, 051123.	0.8	16

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73	Forty Years of Optical Manipulation. Optics and Photonics News, 2010, 21, 20.	0.4	29
74	Observation of bistability of trapping position in aerosol optical tweezers. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 582.	0.9	25
75	Underdamped modes in a hydrodynamically coupled microparticle system. New Journal of Physics, 2009, 11, 053007.	1.2	13
76	Mixing via thermocapillary generation of flow patterns inside a microfluidic drop. New Journal of Physics, 2009, 11, 075033.	1.2	37
77	Radius measurements of optically trapped aerosols through Brownian motion. New Journal of Physics, 2009, 11, 063022.	1.2	17
78	Direct observation of the transfer of orbital angular momentum to metal particles from a focused circularly polarized Gaussian beam. Optics Express, 2009, 17, 23316.	1.7	64
79	Thermo-optical resonance locking of an optically trapped salt-water microdroplet. New Journal of Physics, 2009, 11, 103041.	1.2	27
80	Manipulation and characterisation of accumulation and coarse mode aerosol particles using a Bessel beam trap. Physical Chemistry Chemical Physics, 2009, 11, 11333.	1.3	28
81	The influence of resonant absorption and heating on the equilibrium size of aqueous-solute aerosol droplets. Physical Chemistry Chemical Physics, 2009, 11, 7312.	1.3	22
82	Towards airborne optofluidics. , 2009, , .		0
83	Spectroscopic characterisation and manipulation of arrays of sub-picolitre aerosol droplets. Lab on A Chip, 2009, 9, 521-528.	3.1	43
84	Modelling aerosol optical tweezers. , 2009, , .		0
85	Manipulating Aerosols with Light. Imaging & Microscopy, 2008, 10, 50-52.	0.1	0
86	Optical trapping and spectral analysis of aerosols with a supercontinuum laser source. Optics Express, 2008, 16, 7655.	1.7	33
87	Trapping solid aerosols with optical tweezers: A comparison between gas and liquid phase optical traps. Optics Express, 2008, 16, 7739.	1.7	68
88	Phase dynamics of continuous topological upconversion in vortex beams. Optics Express, 2008, 16, 11411.	1.7	24
89	Fiber based optical trapping of aerosols. Optics Express, 2008, 16, 14550.	1.7	37
90	Thermocapillary manipulation of droplets using holographic beam shaping: Microfluidic pin ball. Applied Physics Letters, 2008, 93, .	1.5	75

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91	Optical manipulation of airborne particles: techniques and applications. Faraday Discussions, 2008, 137, 335-350.	1.6	102
92	Studying Aerosols Using Optical Traps. , 2008, , .		0
93	Dynamics of airborne tweezing. , 2008, , .		0
94	Aerosol tweezing with a super-continuum laser beam. , 2008, , .		0
95	Holographic control of droplet microfluidics. , 2008, , .		1
96	Quantitative force mapping of an optical vortex trap. Applied Physics Letters, 2008, 92, 161111.	1.5	22
97	Accurate phase mapping of nondiffracting singular beams. , 2008, , .		0
98	Parametric excitation of optically trapped aerosols. , 2007, 6644, 274.		0
99	Laserless Optical Trapping. , 2007, , FWP6.		1
100	Holographic optical manipulation of hyphal growth in filamentous fungi. , 2007, , .		0
101	Holographic optical manipulation of aerosols. , 2007, , .		0
102	Controlled fusion of femtoliter-volume aqueous droplets using holographic optical tweezers. , 2007, , .		0
103	Publisher's Note: Parametric Resonance of Optically Trapped Aerosols [Phys. Rev. Lett.99, 010601 (2007)]. Physical Review Letters, 2007, 99, .	2.9	2
104	Parametric Resonance of Optically Trapped Aerosols. Physical Review Letters, 2007, 99, 010601.	2.9	60
105	Spin-to-Orbital Angular Momentum Conversion in a Strongly Focused Optical Beam. Physical Review Letters, 2007, 99, 073901.	2.9	501
106	Holographic and single beam optical manipulation of hyphal growth in filamentous fungi. Journal of Optics, 2007, 9, S172-S179.	1.5	13
107	Studies of droplet manipulation in optical traps. , 2007, , .		0
108	Direct detection of optical phase conjugation in a colloidal medium. Optics Express, 2007, 15, 6330.	1.7	16

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109	Transverse particle dynamics in a Bessel beam. <i>Optics Express</i> , 2007, 15, 13972.	1.7	80
110	Vortex-Trap-Induced Fusion of Femtoliter-Volume Aqueous Droplets. <i>Analytical Chemistry</i> , 2007, 79, 224-228.	3.2	70
111	Optical tweezers: 20 years on. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2006, 364, 3521-3537.	1.6	99
112	Atom guiding along high order Laguerre-Gaussian light beams formed by spatial light modulation. <i>Journal of Modern Optics</i> , 2006, 53, 547-556.	0.6	50
113	Holographic optical trapping of aerosol droplets. <i>Optics Express</i> , 2006, 14, 4175.	1.7	122
114	Holographic optical trapping of aerosol droplets. <i>Optics Express</i> , 2006, 14, 4176.	1.7	29
115	Optical guiding of aerosol droplets. <i>Optics Express</i> , 2006, 14, 6373.	1.7	68
116	Controlled aerosol manipulation using holographic optical tweezers. , 2006, , .		2
117	Phase conjugation and four-wave mixing in a colloidal medium. , 2006, , .		0
118	Optical guiding of aerosols. , 2006, , .		0
119	Controlling and characterizing the coagulation of liquid aerosol droplets. <i>Journal of Chemical Physics</i> , 2006, 125, 114506.	1.2	48
120	Four-Wave Mixing in Colloidal Media. , 2006, , .		0
121	Light-induced separation and flow of microscopic and biological particles. , 2005, 5736, 46.		0
122	Colloidal dynamics in the circularly symmetric optical potential of a Bessel beam. , 2005, , .		0
123	Bessel beams: Diffraction in a new light. <i>Contemporary Physics</i> , 2005, 46, 15-28.	0.8	1,112
124	The reconstruction of optical angular momentum after distortion in amplitude, phase and polarization. <i>Journal of Optics</i> , 2004, 6, S235-S238.	1.5	33
125	Micromanipulation with Bessel beams: studies of angular momentum and reconstruction. , 2004, , .		0
126	Optically bound microscopic particles in one dimension. <i>Physical Review E</i> , 2004, 69, 021403.	0.8	50



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127	Optical levitation in a Bessel light beam. Applied Physics Letters, 2004, 85, 4001-4003.	1.5	131
128	Imaging in optical micromanipulation using two-photon excitation. New Journal of Physics, 2004, 6, 136-136.	1.2	25
129	Rectifying transport of a mixture of Brownian particles on an asymmetric periodic optical potential. , 2004, , .		0
130	Optically bound arrays of microscopic particles in one dimension. , 2004, 5514, 318.		0
131	Three-dimensional arrays of optical bottle beams. Optics Communications, 2003, 225, 215-222.	1.0	119
132	Coherent effects in a driven Vee scheme. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 2861-2871.	0.6	44
133	Interfering Bessel beams for optical micromanipulation. Optics Letters, 2003, 28, 657.	1.7	212
134	Applications of spatial light modulators in atom optics. Optics Express, 2003, 11, 158.	1.7	175
135	Optical trapping of three-dimensional structures using dynamic holograms. Optics Express, 2003, 11, 3562.	1.7	118
136	Transient response of a cold atomic beam in the presence of a far-off resonance light guide. Journal of Modern Optics, 2003, 50, 1751-1755.	0.6	5
137	Guiding a cold atomic beam along a co-propagating and oblique hollow light guide. Optics Communications, 2002, 214, 247-254.	1.0	39
138	Simultaneous micromanipulation in multiple planes using a self-reconstructing light beam. Nature, 2002, 419, 145-147.	13.7	962
139	Electromagnetically induced transparency in N-level cascade schemes. Optics Communications, 2001, 190, 221-229.	1.0	51
140	Extended mode-hop-free tuning using a dual-cavity, pump-enhanced optical parametric oscillator. , 2000, , .		0
141	Polarization effects in electromagnetically induced transparency. Physical Review A, 2000, 62, .	1.0	55
142	Extended mode-hop-free tuning by use of a dual-cavity, pump-enhanced optical parametric oscillator. Optics Letters, 2000, 25, 341.	1.7	34
143	Simple theory of microwave induced transparency in atomic and molecular systems. Journal of Modern Optics, 2000, 47, 1887-1897.	0.6	14
144	Comparison of wavelength dependence in cascade-, $\hat{\mu}$ -, and Vee-type schemes for electromagnetically induced transparency. Physical Review A, 1999, 59, 4675-4684.	1.0	57

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145	Transfer of orbital angular momentum from a stressed fiber-optic waveguide to a light beam. Applied Optics, 1998, 37, 469.	2.1	106
146	Optical tweezers with increased axial trapping efficiency. Journal of Modern Optics, 1998, 45, 1943-1949.	0.6	113
147	Prediction of inversionless gain in a mismatched Doppler-broadened medium. Physical Review A, 1998, 58, 2560-2566.	1.0	17
148	Radio frequency field manipulation of electromagnetically induced transparency. , 0, , .		0
149	Methods for extending mode-hop-free tuning using a dual-cavity, pump-enhanced optical parametric oscillator. , 0, , .		0
150	Advanced micromanipulation using bessel beams. , 0, , .		0