

David McGloin

List of Publications by Year in descending order

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151
papers

6,259
citations

117625

34
h-index

66911

78
g-index

155
all docs

155
docs citations

155
times ranked

4648
citing authors

#	ARTICLE	IF	CITATIONS
1	Bessel beams: Diffraction in a new light. <i>Contemporary Physics</i> , 2005, 46, 15-28.	1.8	1,112
2	Simultaneous micromanipulation in multiple planes using a self-reconstructing light beam. <i>Nature</i> , 2002, 419, 145-147.	27.8	962
3	Spin-to-Orbital Angular Momentum Conversion in a Strongly Focused Optical Beam. <i>Physical Review Letters</i> , 2007, 99, 073901.	7.8	501
4	Interfering Bessel beams for optical micromanipulation. <i>Optics Letters</i> , 2003, 28, 657.	3.3	212
5	Applications of spatial light modulators in atom optics. <i>Optics Express</i> , 2003, 11, 158.	3.4	175
6	Optical levitation in a Bessel light beam. <i>Applied Physics Letters</i> , 2004, 85, 4001-4003.	3.3	131
7	Holographic optical trapping of aerosol droplets. <i>Optics Express</i> , 2006, 14, 4175.	3.4	122
8	Three-dimensional arrays of optical bottle beams. <i>Optics Communications</i> , 2003, 225, 215-222.	2.1	119
9	Optical trapping of three-dimensional structures using dynamic holograms. <i>Optics Express</i> , 2003, 11, 3562.	3.4	118
10	Optical tweezers with increased axial trapping efficiency. <i>Journal of Modern Optics</i> , 1998, 45, 1943-1949.	1.3	113
11	Transfer of orbital angular momentum from a stressed fiber-optic waveguide to a light beam. <i>Applied Optics</i> , 1998, 37, 469.	2.1	106
12	Optical manipulation of airborne particles: techniques and applications. <i>Faraday Discussions</i> , 2008, 137, 335-350.	3.2	102
13	Optical tweezers: 20 years on. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2006, 364, 3521-3537.	3.4	99
14	Combining rails and anchors with laser forcing for selective manipulation within 2D droplet arrays. <i>Lab on A Chip</i> , 2011, 11, 4228.	6.0	92
15	In vitro and in vivo biolasing of fluorescent proteins suspended in liquid microdroplet cavities. <i>Lab on A Chip</i> , 2014, 14, 3093-3100.	6.0	91
16	Transverse particle dynamics in a Bessel beam. <i>Optics Express</i> , 2007, 15, 13972.	3.4	80
17	Thermocapillary manipulation of droplets using holographic beam shaping: Microfluidic pin ball. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	75
18	Vortex-Trap-Induced Fusion of Femtoliter-Volume Aqueous Droplets. <i>Analytical Chemistry</i> , 2007, 79, 224-228.	6.5	70

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19	Optical guiding of aerosol droplets. Optics Express, 2006, 14, 6373.	3.4	68
20	Trapping solid aerosols with optical tweezers: A comparison between gas and liquid phase optical traps. Optics Express, 2008, 16, 7739.	3.4	68
21	Direct observation of the transfer of orbital angular momentum to metal particles from a focused circularly polarized Gaussian beam. Optics Express, 2009, 17, 23316.	3.4	64
22	Characterization of gasoline/ethanol blends by infrared and excess infrared spectroscopy. Fuel, 2015, 141, 136-142.	6.4	62
23	Parametric Resonance of Optically Trapped Aerosols. Physical Review Letters, 2007, 99, 010601.	7.8	60
24	Comparison of wavelength dependence in cascade-, λ -, and Vee-type schemes for electromagnetically induced transparency. Physical Review A, 1999, 59, 4675-4684.	2.5	57
25	Polarization effects in electromagnetically induced transparency. Physical Review A, 2000, 62, .	2.5	55
26	Electromagnetically induced transparency in N-level cascade schemes. Optics Communications, 2001, 190, 221-229.	2.1	51
27	Optically bound microscopic particles in one dimension. Physical Review E, 2004, 69, 021403.	2.1	50
28	Atom guiding along high order Laguerre-Gaussian light beams formed by spatial light modulation. Journal of Modern Optics, 2006, 53, 547-556.	1.3	50
29	Controlling and characterizing the coagulation of liquid aerosol droplets. Journal of Chemical Physics, 2006, 125, 114506.	3.0	48
30	Coherent effects in a driven Vee scheme. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 2861-2871.	1.5	44
31	Spectroscopic characterisation and manipulation of arrays of sub-picolitre aerosol droplets. Lab on A Chip, 2009, 9, 521-528.	6.0	43
32	Guiding a cold atomic beam along a co-propagating and oblique hollow light guide. Optics Communications, 2002, 214, 247-254.	2.1	39
33	Fiber based optical trapping of aerosols. Optics Express, 2008, 16, 14550.	3.4	37
34	Mixing via thermocapillary generation of flow patterns inside a microfluidic drop. New Journal of Physics, 2009, 11, 075033.	2.9	37
35	Resolving Stable Axial Trapping Points of Nanowires in an Optical Tweezers Using Photoluminescence Mapping. Nano Letters, 2013, 13, 1185-1191.	9.1	36
36	Extended mode-hop-free tuning by use of a dual-cavity, pump-enhanced optical parametric oscillator. Optics Letters, 2000, 25, 341.	3.3	34

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37	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
38	Optical trapping and spectral analysis of aerosols with a supercontinuum laser source. <i>Optics Express</i> , 2008, 16, 7655.	3.4	33
39	Laser-nucleated acoustic cavitation in focused ultrasound. <i>Review of Scientific Instruments</i> , 2011, 82, 044902.	1.3	33
40	Additively Manufactured Millimeter-Wave Dual-Band Single-Polarization Shared Aperture Fresnel Zone Plate Metalens Antenna. <i>IEEE Transactions on Antennas and Propagation</i> , 2021, 69, 6261-6272.	5.1	32
41	Modeling of optical traps for aerosols. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011, 28, 2856.	2.1	31
42	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.	2.3	31
43	Holographic optical trapping of aerosol droplets. <i>Optics Express</i> , 2006, 14, 4176.	3.4	29
44	Forty Years of Optical Manipulation. <i>Optics and Photonics News</i> , 2010, 21, 20.	0.5	29
45	Manipulation and characterisation of accumulation and coarse mode aerosol particles using a Bessel beam trap. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 11333.	2.8	28
46	Thermo-optical resonance locking of an optically trapped salt-water microdroplet. <i>New Journal of Physics</i> , 2009, 11, 103041.	2.9	27
47	Intermediate phases during solid to liquid transitions in long-chain n-alkanes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 13941-13950.	2.8	27
48	3-D Printed Planar Dielectric Linear-to-Circular Polarization Conversion and Beam-Shaping Lenses Using Coding Polarizer. <i>IEEE Transactions on Antennas and Propagation</i> , 2020, 68, 4332-4343.	5.1	27
49	3-D Printed All-Dielectric Dual-Band Broadband Reflectarray With a Large Frequency Ratio. <i>IEEE Transactions on Antennas and Propagation</i> , 2021, 69, 7035-7040.	5.1	27
50	Imaging in optical micromanipulation using two-photon excitation. <i>New Journal of Physics</i> , 2004, 6, 136-136.	2.9	25
51	Observation of bistability of trapping position in aerosol optical tweezers. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, 582.	2.1	25
52	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. <i>Journal of Biological Chemistry</i> , 2013, 288, 14698-14708.	3.4	25
53	Phase dynamics of continuous topological upconversion in vortex beams. <i>Optics Express</i> , 2008, 16, 11411.	3.4	24
54	Comparison of Raman and IR spectroscopy for quantitative analysis of gasoline/ethanol blends. <i>Fuel</i> , 2016, 166, 488-494.	6.4	24

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55	Full volume super-resolution imaging of thick mitotic spindle using 3D AO STED microscope. <i>Biomedical Optics Express</i> , 2019, 10, 1999.	2.9	24
56	Quantitative force mapping of an optical vortex trap. <i>Applied Physics Letters</i> , 2008, 92, 161111.	3.3	22
57	The influence of resonant absorption and heating on the equilibrium size of aqueous-solute aerosol droplets. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 7312.	2.8	22
58	Observation of the Binary Coalescence and Equilibration of Micrometer-Sized Droplets of Aqueous Aerosol in a Single-Beam Gradient-Force Optical Trap. <i>Journal of Physical Chemistry A</i> , 2012, 116, 8873-8884.	2.5	21
59	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.	2.3	21
60	Droplet lasers: a review of current progress. <i>Reports on Progress in Physics</i> , 2017, 80, 054402.	20.1	20
61	Raman spectroscopy for accurately characterizing biomolecular changes in androgen-independent prostate cancer cells. <i>Journal of Biophotonics</i> , 2018, 11, e201700166.	2.3	20
62	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.	2.5	19
63	Microscale characterization of prostate biopsies tissues using optical coherence elastography and second harmonic generation imaging. <i>Laboratory Investigation</i> , 2018, 98, 380-390.	3.7	18
64	Prediction of inversionless gain in a mismatched Doppler-broadened medium. <i>Physical Review A</i> , 1998, 58, 2560-2566.	2.5	17
65	Radius measurements of optically trapped aerosols through Brownian motion. <i>New Journal of Physics</i> , 2009, 11, 063022.	2.9	17
66	Directed jetting from collapsing cavities exposed to focused ultrasound. <i>Applied Physics Letters</i> , 2012, 100, 024104.	3.3	17
67	Low-cost optical manipulation using hanging droplets of PDMS. <i>RSC Advances</i> , 2015, 5, 55561-55565.	3.6	17
68	Direct detection of optical phase conjugation in a colloidal medium. <i>Optics Express</i> , 2007, 15, 6330.	3.4	16
69	Parameter exploration of optically trapped liquid aerosols. <i>Physical Review E</i> , 2010, 82, 051123.	2.1	16
70	Dye lasing in optically manipulated liquid aerosols. <i>Optics Letters</i> , 2013, 38, 1669.	3.3	16
71	Numerically Enhanced Stimulated Emission Depletion Microscopy with Adaptive Optics for Deep-Tissue Super-Resolved Imaging. <i>ACS Nano</i> , 2020, 14, 394-405.	14.6	15
72	Self-evolving ghost imaging. <i>Optica</i> , 2021, 8, 1340.	9.3	15

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73	Simple theory of microwave induced transparency in atomic and molecular systems. Journal of Modern Optics, 2000, 47, 1887-1897.	1.3	14
74	HoloHands: games console interface for controlling holographic optical manipulation. Journal of Optics (United Kingdom), 2013, 15, 035708.	2.2	14
75	Aerosol droplet optical trap loading using surface acoustic wave nebulization. Optics Express, 2013, 21, 30148.	3.4	14
76	Characterizing conical refraction optical tweezers. Optics Letters, 2014, 39, 6691.	3.3	14
77	Changes in autofluorescence based organoid model of muscle invasive urinary bladder cancer. Biomedical Optics Express, 2016, 7, 1193.	2.9	14
78	Holographic and single beam optical manipulation of hyphal growth in filamentous fungi. Journal of Optics, 2007, 9, S172-S179.	1.5	13
79	Underdamped modes in a hydrodynamically coupled microparticle system. New Journal of Physics, 2009, 11, 053007.	2.9	13
80	Single aerosol trapping with an annular beam: improved particle localisation. Physical Chemistry Chemical Physics, 2012, 14, 15826.	2.8	13
81	High-Throughput, Time-Resolved Mechanical Phenotyping of Prostate Cancer Cells. Scientific Reports, 2019, 9, 5742.	3.3	13
82	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.	7.1	12
83	Terahertz Reconfigurable Metasurface for Dynamic Non-Diffractive Orbital Angular Momentum Beams using Vanadium Dioxide. IEEE Photonics Journal, 2020, 12, 1-12.	2.0	12
84	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, .	2.5	10
85	Flexible particle manipulation techniques with conical refraction-based optical tweezers. , 2012, , .		8
86	On the accuracy of framing-rate measurements in ultra-high speed rotating mirror cameras. Optics Express, 2011, 19, 16432.	3.4	7
87	Cellular lasers. Nature Photonics, 2015, 9, 559-560.	31.4	7
88	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.	1.3	5
89	Effects of spatial confinement on migratory properties of <i>Dictyostelium discoideum</i> cells. Communicative and Integrative Biology, 2021, 14, 5-14.	1.4	5
90	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.	3.1	5

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91	Optically written optofluidic ice channels. <i>Journal of Optics (United Kingdom)</i> , 2011, 13, 044005.	2.2	4
92	Droplet Lasers. <i>Optics and Photonics News</i> , 2015, 26, 36.	0.5	4
93	Bubble wrap for optical trapping and cell culturing. <i>Biomedical Optics Express</i> , 2015, 6, 3757.	2.9	3
94	Controlled aerosol manipulation using holographic optical tweezers. , 2006, , .		2
95	Publisher's Note: Parametric Resonance of Optically Trapped Aerosols [Phys. Rev. Lett.99, 010601 (2007)]. <i>Physical Review Letters</i> , 2007, 99, .	7.8	2
96	Role of mirror dynamics in determining the accuracy of framing rate in an ultra high speed rotating mirror camera. <i>Proceedings of SPIE</i> , 2011, , .	0.8	2
97	Optical manipulation of aerosols using surface acoustic wave nebulisation. <i>Proceedings of SPIE</i> , 2011, , .	0.8	2
98	Optical manipulation of 'drops on rails' in two dimensional microfluidic devices. , 2011, , .		2
99	A nano-mechanical study on the influence of ultrasound exposure on cellular elasticity. , 2013, , .		2
100	Droplet resonator based optofluidic microlasers. , 2014, , .		2
101	Improved antireflection coated microspheres for biological applications of optical tweezers. <i>Proceedings of SPIE</i> , 2016, , .	0.8	2
102	Single-Pixel Diffuser Camera. <i>IEEE Photonics Journal</i> , 2021, 13, 1-5.	2.0	2
103	Laserless Optical Trapping. , 2007, , FWP6.		1
104	Holographic control of droplet microfluidics. , 2008, , .		1
105	HoloHands: games console interface for controlling holographic optical manipulation. <i>Proceedings of SPIE</i> , 2012, , .	0.8	1
106	Introduction: Optical trapping and applications feature issue. <i>Biomedical Optics Express</i> , 2013, 4, 2710.	2.9	1
107	Dye lasing in optically manipulated liquid aerosols. , 2013, , .		1
108	Hydrodynamic stretching for prostate cancer detection. , 2015, , .		1

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109	Transport of intensity microscopy for distinguishing single and bundled microtubules. , 2017, , .		1
110	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.	1.3	1
111	Radio frequency field manipulation of electromagnetically induced transparency. , 0, , .		0
112	Methods for extending mode-hop-free tuning using a dual-cavity, pump-enhanced optical parametric oscillator. , 0, , .		0
113	Extended mode-hop-free tuning using a dual-cavity, pump-enhanced optical parametric oscillator. , 2000, , .		0
114	Advanced micromanipulation using Bessel beams. , 0, , .		0
115	Micromanipulation with Bessel beams: studies of angular momentum and reconstruction. , 2004, , .		0
116	Rectifying transport of a mixture of Brownian particles on an asymmetric periodic optical potential. , 2004, , .		0
117	Optically bound arrays of microscopic particles in one dimension. , 2004, 5514, 318.		0
118	Light-induced separation and flow of microscopic and biological particles. , 2005, 5736, 46.		0
119	Colloidal dynamics in the circularly symmetric optical potential of a Bessel beam. , 2005, , .		0
120	Phase conjugation and four-wave mixing in a colloidal medium. , 2006, , .		0
121	Optical guiding of aerosols. , 2006, , .		0
122	Parametric excitation of optically trapped aerosols. , 2007, 6644, 274.		0
123	Holographic optical manipulation of hyphal growth in filamentous fungi. , 2007, , .		0
124	Holographic optical manipulation of aerosols. , 2007, , .		0
125	Controlled fusion of femtoliter-volume aqueous droplets using holographic optical tweezers. , 2007, , .		0
126	Studies of droplet manipulation in optical traps. , 2007, , .		0

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127	Manipulating Aerosols with Light. <i>Imaging & Microscopy</i> , 2008, 10, 50-52.	0.1	0
128	Studying Aerosols Using Optical Traps. , 2008, , .		0
129	Dynamics of airborne tweezing. , 2008, , .		0
130	Aerosol tweezing with a super-continuum laser beam. , 2008, , .		0
131	Accurate phase mapping of nondiffracting singular beams. , 2008, , .		0
132	Towards airborne optofluidics. , 2009, , .		0
133	Analysis of optical trap mediated aerosol coalescence. , 2012, , .		0
134	Mapping optical process in semiconductor nanowires using dynamic optical tweezers. , 2012, , .		0
135	An optical trampoline. <i>Nature</i> , 2012, 492, 51-52.	27.8	0
136	Axial Localization Improvements when Trapping Aerosol Droplets using an Annular Beam. , 2013, , .		0
137	Studying biofuel aerosol evaporation rates with single particle manipulation. , 2014, , .		0
138	Optical trapping for space mirrors. <i>Nature</i> , 2014, 506, 437-438.	27.8	0
139	Biological lasing in liquid microdroplets deposited on a superhydrophobic surface. , 2014, , .		0
140	Colloidal Interactions with Optical Fields: Optical Tweezers. , 2016, , 111-130.		0
141	Microfluidics-based, time-resolved mechanical phenotyping of cells using high-speed imaging. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
142	High-throughput, imaging based mechanical phenotyping of prostate cancer cells. , 2017, , .		0
143	Four-Wave Mixing in Colloidal Media. , 2006, , .		0
144	Modelling aerosol optical tweezers. , 2009, , .		0

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145	Towards cooling of optically trapped aerosols. , 2011, , .		0
146	Quantitative assessment of the mechanical properties of prostate tissue with optical coherence elastography. , 2018, , .		0
147	Quasi-noise-free stimulated emission depletion microscopy imaging of thick samples using adaptive optics and block-matching 3D filtering. , 2019, , .		0
148	0.32 THz dual circularly polarized reflectarray. , 2020, , .		0
149	Self-optimizing ghost imaging with a genetic algorithm. , 2020, , .		0
150	A Flexible Hair-Like Laser Induced Graphitic Sensor for Low Flow Rate Sensing Applications. , 2020, , .		0
151	Examining the Effect of Kindlin-3 Binding Site Mutation on LFA-1-ICAM-1 Bonds by Force Measuring Optical Tweezers. <i>Frontiers in Immunology</i> , 2021, 12, 792813.	4.8	0