John M Girkin

List of Publications by Citations

129 papers	2,900 citations	30 h-index	49 g-index
172 ext. papers	3,556 ext. citations	3.8 avg, IF	4.94 L-index

#	Paper	IF	Citations
129	Optical ferris wheel for ultracold atoms. *Optics Express*, **2007**, 15, 8619-25	3.3	229
128	Practical implementation of adaptive optics in multiphoton microscopy. *Optics Express*, **2003**, 11, 1123-30	3.3	177
127	GaN micro-light-emitting diode arrays with monolithically integrated sapphire microlenses. *Applied Physics Letters*, **2004**, 84, 2253-2255	3.4	104
126	Improved method for kinetic studies in microreactors using flow manipulation and noninvasive Raman spectrometry. *Journal of the American Chemical Society*, **2011**, 133, 3601-8	16.4	90
125	A review of potential new diagnostic modalities for caries lesions. *Journal of Dental Research*, **2004**, 83 Spec No C, C89-94	8.1	88
124	Adaptive optics for enhanced signal in CARS microscopy. *Optics Express*, **2007**, 15, 18209-19	3.3	84
123	From structure to function: mitochondrial morphology, motion and shaping in vascular smooth muscle. *Journal of Vascular Research*, **2013**, 50, 357-71	1.9	79
122	Generation of achromatic Bessel beams using a compensated spatial light modulator. *Optics Express*, **2006**, 14, 5581-7	3.3	75
121	3D adaptive optics in a light sheet microscope. *Optics Express*, **2012**, 20, 13252-61	3.3	69
120	Creating permanent 3D arrangements of isolated cells using holographic optical tweezers. *Lab on A Chip*, **2005**, 5, 1224-8	7.2	67
119	Surface-enhanced Raman scattering spectroscopy as a sensitive and selective technique for the detection of folic acid in water and human serum. *Applied Spectroscopy*, **2008**, 62, 371-6	3.1	66
118	Exploration of the optimisation algorithms used in the implementation of adaptive optics in confocal and multiphoton microscopy. *Microscopy Research and Technique*, **2005**, 67, 36-44	2.8	65
117	Adaptive optics for deeper imaging of biological samples. *Current Opinion in Biotechnology*, **2009**, 20, 106-10	11.4	63
116	Active transverse mode control and optimization of an all-solid-state laser using an intracavity adaptive-optic mirror. *Optics Express*, **2002**, 10, 550-5	3.3	53
115	The light-sheet microscopy revolution. *Journal of Optics (United Kingdom)*, **2018**, 20, 053002	1.7	51
114	Parametric resonance of optically trapped aerosols. *Physical Review Letters*, **2007**, 99, 010601	7.4	50
113	Mitochondrial motility and vascular smooth muscle proliferation. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2012**, 32, 3000-11	9.4	48

112	Reflection/transmission confocal microscopy characterization of single-crystal diamond microlens arrays. *Applied Physics Letters*, **2004**, 84, 2754-2756	3.4	47
111	Individually-addressable flip-chip AlInGaN micropixelated light emitting diode arrays with high continuous and nanosecond output power. *Optics Express*, **2008**, 16, 9918-26	3.3	43
110	Interferometric measurement of the 1S1/2-2S1/2 transition frequency in atomic hydrogen. *Physical Review Letters*, **1986**, 56, 580-583	7.4	43
109	Measurement of the intracellular distribution of reduced glutathione in cultured rat hepatocytes using monochlorobimane and confocal laser scanning microscopy. *Toxicology in Vitro*, **2002**, 16, 609-19	3.6	41
108	Optical sectioning microscopes with no moving parts using a micro-stripe array light emitting diode. *Optics Express*, **2007**, 15, 11196-206	3.3	40
107	Polarization and image rotation induced by a rotating dielectric rod: an optical angular momentum interpretation. *Optics Letters*, **2006**, 31, 2205-7	3	40
106	Impact of wavefront distortion and scattering on 2-photon microscopy in mammalian brain tissue. *Optics Express*, **2011**, 19, 22755-74	3.3	35
105	Confocal microscopy using an InGaN violet laser diode at 406nm. *Optics Express*, **2000**, 7, 336-41	3.3	35
104	CMOS driven micro-pixel LEDs integrated with single photon avalanche diodes for time resolved fluorescence measurements. *Journal Physics D: Applied Physics*, **2008**, 41, 094011	3	34
103	Evaluation of enamel dental restoration interface by optical coherence tomography. *Journal of Biomedical Optics*, **2005**, 10, 064027	3.5	34
102	Fabrication of natural diamond microlenses by plasma etching. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2005**, 23, 130		34
101	A CMOS Time-Resolved Fluorescence Lifetime Analysis Micro-System. *Sensors*, **2009**, 9, 9255-74	3.8	32
100	Advances in laser sources for confocal and multiphoton microscopy. *Microscopy Research and Technique*, **2005**, 67, 8-14	2.8	32
99	"Aether drag" and moving images. *Physical Review Letters*, **2008**, 100, 153902	7.4	29
98	Clusters of specialized detector cells provide sensitive and high fidelity receptor signaling in the intact endothelium. *FASEB Journal*, **2016**, 30, 2000-13	0.9	28
97	High-resolution 3D optical microscopy inside the beating zebrafish heart using prospective optical gating. *Biomedical Optics Express*, **2012**, 3, 3043-53	3.5	27
96	A preliminary investigation of a spectroscopic technique for the diagnosis of natural caries lesions. *Journal of Dentistry*, **2005**, 33, 73-8	4.8	27
95	Pressure-dependent regulation of Ca2+ signalling in the vascular endothelium. *Journal of Physiology*, **2015**, 593, 5231-53	3.9	25

94	A CMOS SPAD Line Sensor With Per-Pixel Histogramming TDC for Time-Resolved Multispectral Imaging. *IEEE Journal of Solid-State Circuits*, **2019**, 54, 1705-1719	5.5	25
93	Investigation of dental samples using a 35MHz focussed ultrasound piezocomposite transducer. *Ultrasonics*, **2009**, 49, 212-8	3.5	24
92	Transfer of orbital angular momentum from a super-continuum, white-light beam. *Optics Express*, **2008**, 16, 9495-500	3.3	24
91	Beam divergence measurements of InGaN/GaN micro-array light-emitting diodes using confocal microscopy. *Applied Physics Letters*, **2005**, 86, 041111	3.4	24
90	Dynamic closed-loop system for focus tracking using a spatial light modulator and a deformable membrane mirror. *Optics Express*, **2006**, 14, 222-8	3.3	24
89	Mitochondrial ATP production provides long-range control of endothelial inositol trisphosphate-evoked calcium signaling. *Journal of Biological Chemistry*, **2019**, 294, 737-758	5.4	24
88	Precise spatio-temporal control of rapid optogenetic cell ablation with mem-KillerRed in Zebrafish. *Scientific Reports*, **2017**, 7, 5096	4.9	23
87	A Vertically Integrated CMOS Microsystem for Time-Resolved Fluorescence Analysis. *IEEE Transactions on Biomedical Circuits and Systems*, **2010**, 4, 437-44	5.1	23
86	Real-time optical gating for three-dimensional beating heart imaging. *Journal of Biomedical Optics*, **2011**, 16, 116021	3.5	23
85	Using two photon microscopy to quantify enzymatic reaction rates on polymer beads. *Chemical Communications*, **2003**, 2790-1	5.8	23
84	Spatially structured cell populations process multiple sensory signals in parallel in intact vascular endothelium. *Science Signaling*, **2018**, 11,	8.8	23
83	Laser-targeted ablation of the zebrafish embryonic ventricle: a novel model of cardiac injury and repair. *International Journal of Cardiology*, **2013**, 168, 3913-9	3.2	22
82	Fabrication and evaluation of GaN negative and bifocal microlenses. *Journal of Applied Physics*, **2005**, 97, 063101	2.5	22
81	Two-color widefield fluorescence microendoscopy enables multiplexed molecular imaging in the alveolar space of human lung tissue. *Journal of Biomedical Optics*, **2016**, 21, 46009	3.5	22
80	Investigating the micro-rheology of the vitreous humor using an optically trapped local probe. *Journal of Optics (United Kingdom)*, **2014**, 16, 015301	1.7	21
79	Evaluation of fitness parameters used in an iterative approach to aberration correction in optical sectioning microscopy. *Applied Optics*, **2008**, 47, 731-6	1.7	21
78	Non-invasive analysis in micro-reactors using Raman spectrometry with a specially designed probe. *Lab on A Chip*, **2010**, 10, 2101-7	7.2	20
77	Time-correlated single-photon counting fluorescence lifetime confocal imaging of decayed and sound dental structures with a white-light supercontinuum source. *Journal of Microscopy*, **2007**, 225, 126-36	1.9	20

76	Characterization of natural carious lesions by fluorescence spectroscopy at 405-nm excitation wavelength. *Journal of Biomedical Optics*, **2007**, 12, 064013	3.5	20
75	Age decreases mitochondrial motility and increases mitochondrial size in vascular smooth muscle. *Journal of Physiology*, **2016**, 594, 4283-95	3.9	20
74	Two-photon microscopy to spatially resolve and quantify fluorophores in single-bead chemistry. *ACS Combinatorial Science*, **2003**, 5, 215-7		19
73	A dimensionless ordered pull-through model of the mammalian lens epithelium evidences scaling across species and explains the age-dependent changes in cell density in the human lens. *Journal of the Royal Society Interface*, **2015**, 12, 20150391	4.1	17
72	A Microsystem for Time-Resolved Fluorescence Analysis using CMOS Single-Photon Avalanche Diodes and Micro-LEDs **2008**,		17
71	VasoTracker, a Low-Cost and Open Source Pressure Myograph System for Vascular Physiology. *Frontiers in Physiology*, **2019**, 10, 99	4.6	15
70	Fast wavelength multiplexing of a white-light supercontinuum using a digital micromirror device for improved three-dimensional fluorescence microscopy. *Review of Scientific Instruments*, **2006**, 77, 013702	1.7	14
69	Effects of maternal anxiety and depression on fetal neuro-development. *Journal of Affective Disorders*, **2018**, 241, 469-474	6.6	13
68	Elevations of intracellular calcium reflect normal voltage-dependent behavior, and not constitutive activity, of voltage-dependent calcium channels in gastrointestinal and vascular smooth muscle. *Journal of General Physiology*, **2009**, 133, 439-57	3.4	13
67	Micro-endoscope for in vivo widefield high spatial resolution fluorescent imaging. *Biomedical Optics Express*, **2012**, 3, 1274-8	3.5	13
66	Development of fibre-optic confocal microscopy for detection and diagnosis of dental caries. *Caries Research*, **2007**, 41, 245-51	4.2	13
65	Flicker-assisted localization microscopy reveals altered mitochondrial architecture in hypertension. *Scientific Reports*, **2015**, 5, 16875	4.9	12
64	Search-based active optic systems for aberration correction in time-independent applications. *Applied Optics*, **2010**, 49, 307-14	0.2	11
63	Advancing Age Decreases Pressure-Sensitive Modulation of Calcium Signaling in the Endothelium of Intact and Pressurized Arteries. *Journal of Vascular Research*, **2016**, 53, 358-369	1.9	11
62	Photoactivated cell-killing involving a low molecular weight, donor-acceptor diphenylacetylene. *Chemical Science*, **2019**, 10, 4673-4683	9.4	10
61	Comparison of closed loop and sensorless adaptive optics in widefield optical microscopy. *Journal of the European Optical Society-Rapid Publications*, **2013**, 8,	2.5	10
60	Tandem fluorescence and Raman (fluoRaman) characterisation of a novel photosensitiser in colorectal cancer cell line SW480. *Analyst, The*, **2018**, 143, 6113-6120	5	10
59	A miniaturised integrated biophotonic point-of-care genotyping system. *Faraday Discussions*, **2011**, 149, 115-23; discussion 137-57	3.6	9

58	A complete miniaturised genotyping system for the detection of single nucleotide polymorphisms in human DNA samples. *Sensors and Actuators B: Chemical*, **2009**, 139, 83-90	8.5	9
57	Active focus locking in an optically sectioning microscope utilizing a deformable membrane mirror. *Optics Letters*, **2008**, 33, 419-21	3	9
56	Two-photon microscopy of fura-2-loaded cardiac myocytes with an all-solid-state tunable and visible femtosecond laser source. *Optics Letters*, **2003**, 28, 1742-4	3	9
55	Optical physics enables advances in multiphoton imaging. *Journal Physics D: Applied Physics*, **2003**, 36, R250-R258	3	9
54	Subplasma membrane Ca2+ signals. *IUBMB Life*, **2012**, 64, 573-85	4.7	8
53	High-speed dual color fluorescence lifetime endomicroscopy for highly-multiplexed pulmonary diagnostic applications and detection of labeled bacteria. *Biomedical Optics Express*, **2019**, 10, 181-195	3.5	6
52	Shear banding in large amplitude oscillatory shear (LAOStrain and LAOStress) of polymers and wormlike micelles. *Journal of Rheology*, **2016**, 60, 883-904	4.1	6
51	Scattering of spoof surface plasmon polaritons in defect-rich THz waveguides. *Scientific Reports*, **2019**, 9, 6288	4.9	5
50	Enamel erosion and prevention efficacy characterized by confocal laser scanning microscope. *Microscopy Research and Technique*, **2014**, 77, 439-45	2.8	5
49	A demonstration of the effectiveness of a single aberration correction per optical slice in beam scanned optically sectioning microscopes. *Micron*, **2011**, 42, 318-23	2.3	5
48	Three-dimensional data capture and analysis of intact eye lenses evidences emmetropia-associated changes in epithelial cell organization. *Scientific Reports*, **2020**, 10, 16898	4.9	5
47	In vivo, Ex Vivo, and In Vitro Approaches to Study Intermediate Filaments in the Eye Lens. *Methods in Enzymology*, **2016**, 568, 581-611	1.7	4
46	Quantitative high dynamic range beam profiling for fluorescence microscopy. *Review of Scientific Instruments*, **2014**, 85, 103713	1.7	4
45	Two-photon fluorescence excitation microscopy to assess transscleral diffusional pathways in an isolated perfused bovine eye model **2010**, 51, 5182-9		4
44	Focused ultrasound for early detection of tooth decay **2009**,		4
43	Flip-chip, micro-pixellated InGaN light-emitting diode arrays: attractive sources for micro-displays, colour conversion, and fluorescence detection. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2009**, 6, S848-S851		4
42	Multidepth, multiparticle tracking for active microrheology using a smart camera. *Review of Scientific Instruments*, **2011**, 82, 033712	1.7	4
41	5B-2 3D Imaging of Teeth Using High Frequency Ultrasound **2007**,		4

40	Nitride micro-display with integrated micro-lenses. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2005**, 2, 2903-2906		4
39	Full spectrum fluorescence lifetime imaging with 0.5 nm spectral and 50 ps temporal resolution. *Nature Communications*, **2021**, 12, 6616	17.4	4
38	Non-invasive quantification of the developing optical properties and graded index of the embryonic eye lens using SPIM. *Biomedical Optics Express*, **2018**, 9, 2176-2188	3.5	3
37	Light sheet adaptive optics microscope for 3D live imaging **2013**,		3
36	The viscoelastic properties of the vitreous humor measured using an optically trapped local probe **2011**,		3
35	Micromachining of gallium nitride, sapphire, and silicon carbide with ultrashort pulses **2003**,		3
34	Early stage dental caries detection using near infrared spatial frequency domain imaging. *Scientific Reports*, **2021**, 11, 2433	4.9	3
33	Design of diffractive optical elements for beam shaping of micro-pixellated LED light to a tightly focused spot. *Journal Physics D: Applied Physics*, **2008**, 41, 094005	3	2
32	CMOS-integrated flip-chip, micro-pixel InGaN LED arrays for on-chip microfluorimetry **2007**,		2
31	Publisher Note: Parametric Resonance of Optically Trapped Aerosols [Phys. Rev. Lett. 99, 010601 (2007)]. *Physical Review Letters*, **2007**, 99,	7.4	2
30	Adaptive optics in confocal and two-photon microscopy of rat brain: a single correction per optical section **2007**,		2
29	Use of adaptive optics for improved multiphoton imaging **2004**, 5323, 260		2
28	Macroscopic multiphoton biomedical imaging using semiconductor saturable Bragg reflector mode-locked lasers **1999**,		2
27	A history of high-power laser research and development in the United Kingdom. *High Power Laser Science and Engineering*, **2021**, 9,	4.3	2
26	Leach et al. Reply. *Physical Review Letters*, **2019**, 122, 139402	7.4	1
25	Realtime wavefront sensing in a SPIM microscope, and active aberration tracking **2015**,		1
24	Using SPIM to track the development of the focal power of the zebrafish lens **2015**,		1
23	Single cell and subcellular measurements of intracellular Ca2+ concentration. *Methods in Molecular Biology*, **2013**, 937, 239-51	1.4	1

22	Investigating the interaction forces between T cells and antigen-presenting cells using an optical trapping system **2011**,		1
21	Prospective gating for 3D imaging of the beating zebrafish heart in embryonic development studies **2012**,		1
20	Tracking ophthalmic drugs in the eye using confocal fluorescence microscopy **2012**,		1
19	Real-time, ultralow concentration detection of analytes in solution by infrared intracavity laser absorption. *Applied Optics*, **2007**, 46, 3995-9	1.7	1
18	Use of confocal and multiphoton microscopy for the evaluation of micro-optical components and emitters. *Microscopy Research and Technique*, **2004**, 64, 293-6	2.8	1
17	Application of a novel confocal imaging technique for early the detection of dental decay **2002**,		1
16	VasoTracker: An open access pressure myography platform. *FASEB Journal*, **2019**, 33, 525.6	0.9	1
15	AO modal optimization in a live, beating zebrafish heart **2013**,		1
14	Cellular localisation of structurally diverse diphenylacetylene fluorophores. *Organic and Biomolecular Chemistry*, **2020**, 18, 9231-9245	3.9	1
13	Freeform based hYperspectral imager for MOisture Sensing (FYMOS). *Optics Express*, **2021**, 29, 16007-16018	3.8	1
12	Optical Sectioning Microscopy and Biological Imaging **2015**, 165-195		0
11	Novel compact sources for multiphoton microscopy **2001**, 4262, 186		0
10	Towards a high-throughput real-time confocal microfluidic system for monitoring absorbance spectra in mixed-phase chemical reactions. *Microfluidics and Nanofluidics*, **2017**, 21, 1	2.8	
9	Development of a low-cost confocal instrument to measure the axial dimensions of components in the anterior section of the eye. *Clinical Optometry*, **2010**, 67	2	
8	Optical Microscopy for Cell Imaging **2005**, 1-22		
7	Single Cell Ablation in the Zebrafish Kidney using SPIM and a Bessel Beam. *FASEB Journal*, **2019**, 33, lb536.9		
6	Rapid Imaging of Signaling between the Endothelium and Smooth Muscle; Development of a Rapid Remote Refocusing Epifluorescence Microscope. *FASEB Journal*, **2019**, 33, 525.5	0.9	
5	Selection Criteria for Optical Microscopy **2019**, 243-254		

4	How to Obtain the Most from Your Data **2019**, 225-242	
3	Multi-plane remote refocusing epifluorescence microscopy to image dynamic events. *Biomedical Optics Express*, **2019**, 10, 5611-5624	3.5
2	Novel methodology to simultaneously image endothelial and smooth muscle function in pressurized arteries. *FASEB Journal*, **2013**, 27, 901.12	0.9
1	LightBox: A multiwell plate illumination system for photoactive molecule characterization. *Journal of Biophotonics*, **2021**, 14, e202000481	3.1