

John M Girkin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Full spectrum fluorescence lifetime imaging with 0.5 nm spectral and 50 ps temporal resolution. <i>Nature Communications</i> , 2021 , 12, 6616	17.4	4
128	Freeform based hYperspectral imager for MOisture Sensing (FYMOS). <i>Optics Express</i> , 2021 , 29, 16007-16018	9.3	1
127	A history of high-power laser research and development in the United Kingdom. <i>High Power Laser Science and Engineering</i> , 2021 , 9,	4.3	2
126	Early stage dental caries detection using near infrared spatial frequency domain imaging. <i>Scientific Reports</i> , 2021 , 11, 2433	4.9	3
125	LightBox: A multiwell plate illumination system for photoactive molecule characterization. <i>Journal of Biophotonics</i> , 2021 , 14, e202000481	3.1	
124	Three-dimensional data capture and analysis of intact eye lenses evidences emmetropia-associated changes in epithelial cell organization. <i>Scientific Reports</i> , 2020 , 10, 16898	4.9	5
123	Cellular localisation of structurally diverse diphenylacetylene fluorophores. <i>Organic and Biomolecular Chemistry</i> , 2020 , 18, 9231-9245	3.9	1
122	Scattering of spoof surface plasmon polaritons in defect-rich THz waveguides. <i>Scientific Reports</i> , 2019 , 9, 6288	4.9	5
121	Photoactivated cell-killing involving a low molecular weight, donor-acceptor diphenylacetylene. <i>Chemical Science</i> , 2019 , 10, 4673-4683	9.4	10
120	VasoTracker, a Low-Cost and Open Source Pressure Myograph System for Vascular Physiology. <i>Frontiers in Physiology</i> , 2019 , 10, 99	4.6	15
119	Leach et al. Reply. <i>Physical Review Letters</i> , 2019 , 122, 139402	7.4	1
118	High-speed dual color fluorescence lifetime endomicroscopy for highly-multiplexed pulmonary diagnostic applications and detection of labeled bacteria. <i>Biomedical Optics Express</i> , 2019 , 10, 181-195	3.5	6
117	Single Cell Ablation in the Zebrafish Kidney using SPIM and a Bessel Beam. <i>FASEB Journal</i> , 2019 , 33, lb536.9	3.6	
116	Rapid Imaging of Signaling between the Endothelium and Smooth Muscle; Development of a Rapid Remote Refocusing Epifluorescence Microscope. <i>FASEB Journal</i> , 2019 , 33, 525.5	0.9	
115	VasoTracker: An open access pressure myography platform. <i>FASEB Journal</i> , 2019 , 33, 525.6	0.9	1
114	Selection Criteria for Optical Microscopy 2019 , 243-254		
113	How to Obtain the Most from Your Data 2019 , 225-242		

112	Multi-plane remote refocusing epifluorescence microscopy to image dynamic events. <i>Biomedical Optics Express</i> , 2019 , 10, 5611-5624	3.5	
111	A CMOS SPAD Line Sensor With Per-Pixel Histogramming TDC for Time-Resolved Multispectral Imaging. <i>IEEE Journal of Solid-State Circuits</i> , 2019 , 54, 1705-1719	5.5	25
110	Mitochondrial ATP production provides long-range control of endothelial inositol trisphosphate-evoked calcium signaling. <i>Journal of Biological Chemistry</i> , 2019 , 294, 737-758	5.4	24
109	The light-sheet microscopy revolution. <i>Journal of Optics (United Kingdom)</i> , 2018 , 20, 053002	1.7	51
108	Non-invasive quantification of the developing optical properties and graded index of the embryonic eye lens using SPIM. <i>Biomedical Optics Express</i> , 2018 , 9, 2176-2188	3.5	3
107	Effects of maternal anxiety and depression on fetal neuro-development. <i>Journal of Affective Disorders</i> , 2018 , 241, 469-474	6.6	13
106	Tandem fluorescence and Raman (fluorRaman) characterisation of a novel photosensitiser in colorectal cancer cell line SW480. <i>Analyst, The</i> , 2018 , 143, 6113-6120	5	10
105	Spatially structured cell populations process multiple sensory signals in parallel in intact vascular endothelium. <i>Science Signaling</i> , 2018 , 11,	8.8	23
104	Towards a high-throughput real-time confocal microfluidic system for monitoring absorbance spectra in mixed-phase chemical reactions. <i>Microfluidics and Nanofluidics</i> , 2017 , 21, 1	2.8	
103	Precise spatio-temporal control of rapid optogenetic cell ablation with mem-KillerRed in Zebrafish. <i>Scientific Reports</i> , 2017 , 7, 5096	4.9	23
102	In vivo, Ex Vivo, and In Vitro Approaches to Study Intermediate Filaments in the Eye Lens. <i>Methods in Enzymology</i> , 2016 , 568, 581-611	1.7	4
101	Advancing Age Decreases Pressure-Sensitive Modulation of Calcium Signaling in the Endothelium of Intact and Pressurized Arteries. <i>Journal of Vascular Research</i> , 2016 , 53, 358-369	1.9	11
100	Clusters of specialized detector cells provide sensitive and high fidelity receptor signaling in the intact endothelium. <i>FASEB Journal</i> , 2016 , 30, 2000-13	0.9	28
99	Shear banding in large amplitude oscillatory shear (LAOStrain and LAOStress) of polymers and wormlike micelles. <i>Journal of Rheology</i> , 2016 , 60, 883-904	4.1	6
98	Two-color widefield fluorescence microendoscopy enables multiplexed molecular imaging in the alveolar space of human lung tissue. <i>Journal of Biomedical Optics</i> , 2016 , 21, 46009	3.5	22
97	Age decreases mitochondrial motility and increases mitochondrial size in vascular smooth muscle. <i>Journal of Physiology</i> , 2016 , 594, 4283-95	3.9	20
96	Realtime wavefront sensing in a SPIM microscope, and active aberration tracking 2015 ,		1
95	Pressure-dependent regulation of Ca ²⁺ signalling in the vascular endothelium. <i>Journal of Physiology</i> , 2015 , 593, 5231-53	3.9	25

94	Flicker-assisted localization microscopy reveals altered mitochondrial architecture in hypertension. <i>Scientific Reports</i> , 2015 , 5, 16875	4.9	12
93	Optical Sectioning Microscopy and Biological Imaging 2015 , 165-195		0
92	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. <i>Journal of the Royal Society Interface</i> , 2015 , 12, 20150391	4.1	17
91	Using SPIM to track the development of the focal power of the zebrafish lens 2015 ,		1
90	Quantitative high dynamic range beam profiling for fluorescence microscopy. <i>Review of Scientific Instruments</i> , 2014 , 85, 103713	1.7	4
89	Enamel erosion and prevention efficacy characterized by confocal laser scanning microscope. <i>Microscopy Research and Technique</i> , 2014 , 77, 439-45	2.8	5
88	Investigating the micro-rheology of the vitreous humor using an optically trapped local probe. <i>Journal of Optics (United Kingdom)</i> , 2014 , 16, 015301	1.7	21
87	Laser-targeted ablation of the zebrafish embryonic ventricle: a novel model of cardiac injury and repair. <i>International Journal of Cardiology</i> , 2013 , 168, 3913-9	3.2	22
86	Single cell and subcellular measurements of intracellular Ca ²⁺ concentration. <i>Methods in Molecular Biology</i> , 2013 , 937, 239-51	1.4	1
85	Light sheet adaptive optics microscope for 3D live imaging 2013 ,		3
84	From structure to function: mitochondrial morphology, motion and shaping in vascular smooth muscle. <i>Journal of Vascular Research</i> , 2013 , 50, 357-71	1.9	79
83	Comparison of closed loop and sensorless adaptive optics in widefield optical microscopy. <i>Journal of the European Optical Society-Rapid Publications</i> , 2013 , 8,	2.5	10
82	AO modal optimization in a live, beating zebrafish heart 2013 ,		1
81	Novel methodology to simultaneously image endothelial and smooth muscle function in pressurized arteries. <i>FASEB Journal</i> , 2013 , 27, 901.12	0.9	
80	Subplasma membrane Ca ²⁺ signals. <i>IUBMB Life</i> , 2012 , 64, 573-85	4.7	8
79	Micro-endoscope for in vivo widefield high spatial resolution fluorescent imaging. <i>Biomedical Optics Express</i> , 2012 , 3, 1274-8	3.5	13
78	High-resolution 3D optical microscopy inside the beating zebrafish heart using prospective optical gating. <i>Biomedical Optics Express</i> , 2012 , 3, 3043-53	3.5	27
77	3D adaptive optics in a light sheet microscope. <i>Optics Express</i> , 2012 , 20, 13252-61	3.3	69

76	Mitochondrial motility and vascular smooth muscle proliferation. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2012 , 32, 3000-11	9.4	48
75	Prospective gating for 3D imaging of the beating zebrafish heart in embryonic development studies 2012 ,		1
74	Tracking ophthalmic drugs in the eye using confocal fluorescence microscopy 2012 ,		1
73	Improved method for kinetic studies in microreactors using flow manipulation and noninvasive Raman spectrometry. <i>Journal of the American Chemical Society</i> , 2011 , 133, 3601-8	16.4	90
72	Impact of wavefront distortion and scattering on 2-photon microscopy in mammalian brain tissue. <i>Optics Express</i> , 2011 , 19, 22755-74	3.3	35
71	A demonstration of the effectiveness of a single aberration correction per optical slice in beam scanned optically sectioning microscopes. <i>Micron</i> , 2011 , 42, 318-23	2.3	5
70	A miniaturised integrated biophotonic point-of-care genotyping system. <i>Faraday Discussions</i> , 2011 , 149, 115-23; discussion 137-57	3.6	9
69	Multidepth, multiparticle tracking for active microrheology using a smart camera. <i>Review of Scientific Instruments</i> , 2011 , 82, 033712	1.7	4
68	Real-time optical gating for three-dimensional beating heart imaging. <i>Journal of Biomedical Optics</i> , 2011 , 16, 116021	3.5	23
67	The viscoelastic properties of the vitreous humor measured using an optically trapped local probe 2011 ,		3
66	Investigating the interaction forces between T cells and antigen-presenting cells using an optical trapping system 2011 ,		1
65	Development of a low-cost confocal instrument to measure the axial dimensions of components in the anterior section of the eye. <i>Clinical Optometry</i> , 2010 , 67	2	
64	Two-photon fluorescence excitation microscopy to assess transscleral diffusional pathways in an isolated perfused bovine eye model 2010 , 51, 5182-9		4
63	A Vertically Integrated CMOS Microsystem for Time-Resolved Fluorescence Analysis. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2010 , 4, 437-44	5.1	23
62	Search-based active optic systems for aberration correction in time-independent applications. <i>Applied Optics</i> , 2010 , 49, 307-14	0.2	11
61	Non-invasive analysis in micro-reactors using Raman spectrometry with a specially designed probe. <i>Lab on A Chip</i> , 2010 , 10, 2101-7	7.2	20
60	Focused ultrasound for early detection of tooth decay 2009 ,		4
59	A CMOS Time-Resolved Fluorescence Lifetime Analysis Micro-System. <i>Sensors</i> , 2009 , 9, 9255-74	3.8	32

58	Elevations of intracellular calcium reflect normal voltage-dependent behavior, and not constitutive activity, of voltage-dependent calcium channels in gastrointestinal and vascular smooth muscle. <i>Journal of General Physiology</i> , 2009 , 133, 439-57	3.4	13
57	A complete miniaturised genotyping system for the detection of single nucleotide polymorphisms in human DNA samples. <i>Sensors and Actuators B: Chemical</i> , 2009 , 139, 83-90	8.5	9
56	Flip-chip, micro-pixelated InGaN light-emitting diode arrays: attractive sources for micro-displays, colour conversion, and fluorescence detection. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, S848-S851		4
55	Investigation of dental samples using a 35MHz focussed ultrasound piezocomposite transducer. <i>Ultrasonics</i> , 2009 , 49, 212-8	3.5	24
54	Adaptive optics for deeper imaging of biological samples. <i>Current Opinion in Biotechnology</i> , 2009 , 20, 106-10	11.4	63
53	Active focus locking in an optically sectioning microscope utilizing a deformable membrane mirror. <i>Optics Letters</i> , 2008 , 33, 419-21	3	9
52	Evaluation of fitness parameters used in an iterative approach to aberration correction in optical sectioning microscopy. <i>Applied Optics</i> , 2008 , 47, 731-6	1.7	21
51	Surface-enhanced Raman scattering spectroscopy as a sensitive and selective technique for the detection of folic acid in water and human serum. <i>Applied Spectroscopy</i> , 2008 , 62, 371-6	3.1	66
50	Transfer of orbital angular momentum from a super-continuum, white-light beam. <i>Optics Express</i> , 2008 , 16, 9495-500	3.3	24
49	Individually-addressable flip-chip AlInGaN micropixelated light emitting diode arrays with high continuous and nanosecond output power. <i>Optics Express</i> , 2008 , 16, 9918-26	3.3	43
48	A Microsystem for Time-Resolved Fluorescence Analysis using CMOS Single-Photon Avalanche Diodes and Micro-LEDs 2008 ,		17
47	Design of diffractive optical elements for beam shaping of micro-pixelated LED light to a tightly focused spot. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 094005	3	2
46	CMOS driven micro-pixel LEDs integrated with single photon avalanche diodes for time resolved fluorescence measurements. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 094011	3	34
45	"Aether drag" and moving images. <i>Physical Review Letters</i> , 2008 , 100, 153902	7.4	29
44	Time-correlated single-photon counting fluorescence lifetime confocal imaging of decayed and sound dental structures with a white-light supercontinuum source. <i>Journal of Microscopy</i> , 2007 , 225, 126-36	1.9	20
43	CMOS-integrated flip-chip, micro-pixel InGaN LED arrays for on-chip microfluorimetry 2007 ,		2
42	Publisher's Note: Parametric Resonance of Optically Trapped Aerosols [Phys. Rev. Lett. 99, 010601 (2007)]. <i>Physical Review Letters</i> , 2007 , 99,	7.4	2
41	Parametric resonance of optically trapped aerosols. <i>Physical Review Letters</i> , 2007 , 99, 010601	7.4	50

40	Characterization of natural carious lesions by fluorescence spectroscopy at 405-nm excitation wavelength. <i>Journal of Biomedical Optics</i> , 2007 , 12, 064013	3.5	20
39	Development of fibre-optic confocal microscopy for detection and diagnosis of dental caries. <i>Caries Research</i> , 2007 , 41, 245-51	4.2	13
38	Adaptive optics in confocal and two-photon microscopy of rat brain: a single correction per optical section 2007 ,		2
37	Optical ferris wheel for ultracold atoms. <i>Optics Express</i> , 2007 , 15, 8619-25	3.3	229
36	Optical sectioning microscopes with no moving parts using a micro-stripe array light emitting diode. <i>Optics Express</i> , 2007 , 15, 11196-206	3.3	40
35	Adaptive optics for enhanced signal in CARS microscopy. <i>Optics Express</i> , 2007 , 15, 18209-19	3.3	84
34	Real-time, ultralow concentration detection of analytes in solution by infrared intracavity laser absorption. <i>Applied Optics</i> , 2007 , 46, 3995-9	1.7	1
33	5B-2 3D Imaging of Teeth Using High Frequency Ultrasound 2007 ,		4
32	Fast wavelength multiplexing of a white-light supercontinuum using a digital micromirror device for improved three-dimensional fluorescence microscopy. <i>Review of Scientific Instruments</i> , 2006 , 77, 013702	1.7	14
31	Polarization and image rotation induced by a rotating dielectric rod: an optical angular momentum interpretation. <i>Optics Letters</i> , 2006 , 31, 2205-7	3	40
30	Dynamic closed-loop system for focus tracking using a spatial light modulator and a deformable membrane mirror. <i>Optics Express</i> , 2006 , 14, 222-8	3.3	24
29	Generation of achromatic Bessel beams using a compensated spatial light modulator. <i>Optics Express</i> , 2006 , 14, 5581-7	3.3	75
28	Beam divergence measurements of InGaNGaN micro-array light-emitting diodes using confocal microscopy. <i>Applied Physics Letters</i> , 2005 , 86, 041111	3.4	24
27	Creating permanent 3D arrangements of isolated cells using holographic optical tweezers. <i>Lab on A Chip</i> , 2005 , 5, 1224-8	7.2	67
26	A preliminary investigation of a spectroscopic technique for the diagnosis of natural caries lesions. <i>Journal of Dentistry</i> , 2005 , 33, 73-8	4.8	27
25	Exploration of the optimisation algorithms used in the implementation of adaptive optics in confocal and multiphoton microscopy. <i>Microscopy Research and Technique</i> , 2005 , 67, 36-44	2.8	65
24	Advances in laser sources for confocal and multiphoton microscopy. <i>Microscopy Research and Technique</i> , 2005 , 67, 8-14	2.8	32
23	Nitride micro-display with integrated micro-lenses. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2903-2906		4

22	Evaluation of enamel dental restoration interface by optical coherence tomography. <i>Journal of Biomedical Optics</i> , 2005 , 10, 064027	3.5	34
21	Fabrication of natural diamond microlenses by plasma etching. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005 , 23, 130		34
20	Fabrication and evaluation of GaN negative and bifocal microlenses. <i>Journal of Applied Physics</i> , 2005 , 97, 063101	2.5	22
19	Optical Microscopy for Cell Imaging 2005 , 1-22		
18	A review of potential new diagnostic modalities for caries lesions. <i>Journal of Dental Research</i> , 2004 , 83 Spec No C, C89-94	8.1	88
17	Use of confocal and multiphoton microscopy for the evaluation of micro-optical components and emitters. <i>Microscopy Research and Technique</i> , 2004 , 64, 293-6	2.8	1
16	GaN micro-light-emitting diode arrays with monolithically integrated sapphire microlenses. <i>Applied Physics Letters</i> , 2004 , 84, 2253-2255	3.4	104
15	Reflection/transmission confocal microscopy characterization of single-crystal diamond microlens arrays. <i>Applied Physics Letters</i> , 2004 , 84, 2754-2756	3.4	47
14	Use of adaptive optics for improved multiphoton imaging 2004 , 5323, 260		2
13	Two-photon microscopy to spatially resolve and quantify fluorophores in single-bead chemistry. <i>ACS Combinatorial Science</i> , 2003 , 5, 215-7		19
12	Two-photon microscopy of fura-2-loaded cardiac myocytes with an all-solid-state tunable and visible femtosecond laser source. <i>Optics Letters</i> , 2003 , 28, 1742-4	3	9
11	Practical implementation of adaptive optics in multiphoton microscopy. <i>Optics Express</i> , 2003 , 11, 1123-30.3	3.3	177
10	Using two photon microscopy to quantify enzymatic reaction rates on polymer beads. <i>Chemical Communications</i> , 2003 , 2790-1	5.8	23
9	Micromachining of gallium nitride, sapphire, and silicon carbide with ultrashort pulses 2003 ,		3
8	Optical physics enables advances in multiphoton imaging. <i>Journal Physics D: Applied Physics</i> , 2003 , 36, R250-R258	3	9
7	Application of a novel confocal imaging technique for early the detection of dental decay 2002 ,		1
6	Active transverse mode control and optimization of an all-solid-state laser using an intracavity adaptive-optic mirror. <i>Optics Express</i> , 2002 , 10, 550-5	3.3	53
5	Measurement of the intracellular distribution of reduced glutathione in cultured rat hepatocytes using monochlorobimane and confocal laser scanning microscopy. <i>Toxicology in Vitro</i> , 2002 , 16, 609-19	3.6	41

4	Novel compact sources for multiphoton microscopy 2001 , 4262, 186		0
3	Confocal microscopy using an InGaN violet laser diode at 406nm. <i>Optics Express</i> , 2000 , 7, 336-41	3.3	35
2	Macroscopic multiphoton biomedical imaging using semiconductor saturable Bragg reflector mode-locked lasers 1999 ,		2
1	Interferometric measurement of the $1S_{1/2}$ - $2S_{1/2}$ transition frequency in atomic hydrogen. <i>Physical Review Letters</i> , 1986 , 56, 580-583	7.4	43