Graham M Gibson

List of Publications by Year
in descending order

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80 papers	6,978 citations	126708 33 h-index	102304 66 g-index
80 all docs	80 docs citations	80 times ranked	5148 citing authors

#	Article	IF	Citations
1	Free-space information transfer using light beams carrying orbital angular momentum. Optics Express, 2004, 12, 5448.	1.7	2,218
2	Principles and prospects for single-pixel imaging. Nature Photonics, 2019, 13, 13-20.	15.6	491
3	Single-pixel three-dimensional imaging with time-based depth resolution. Nature Communications, 2016, 7, 12010.	5.8	382
4	Noninvasive, near-field terahertz imaging of hidden objects using a single-pixel detector. Science Advances, 2016, 2, e1600190.	4.7	336
5	Single-pixel infrared and visible microscope. Optica, 2014, 1, 285.	4.8	300
6	Single-pixel imaging 12 years on: a review. Optics Express, 2020, 28, 28190.	1.7	263
7	Simultaneous real-time visible and infrared video with single-pixel detectors. Scientific Reports, 2015, 5, 10669.	1.6	224
8	Measuring the accuracy of particle position and force in optical tweezers using high-speed video microscopy. Optics Express, 2008, 16, 14561.	1.7	199
9	Adaptive foveated single-pixel imaging with dynamic supersampling. Science Advances, 2017, 3, e1601782.	4.7	184
10	Real-time imaging of methane gas leaks using a single-pixel camera. Optics Express, 2017, 25, 2998.	1.7	168
11	Development of a 3D printer using scanning projection stereolithography. Scientific Reports, 2015, 5, 9875.	1.6	145
12	Interactive approach to optical tweezers control. Applied Optics, 2006, 45, 897.	2.1	137
13	Improving the signal-to-noise ratio of single-pixel imaging using digital microscanning. Optics Express, 2016, 24, 10476.	1.7	132
14	Rotary Photon Drag Enhanced by a Slow-Light Medium. Science, 2011, 333, 65-67.	6.0	100
15	Particle tracking stereomicroscopy in optical tweezers: Control of trap shape. Optics Express, 2010, 18, 11785.	1.7	95
16	Indirect optical trapping using light driven micro-rotors for reconfigurable hydrodynamic manipulation. Nature Communications, 2019, 10, 1215.	5.8	91
17	â€œRed Tweezersâ€: Fast, customisable hologram generation for optical tweezers. Computer Physics Communications, 2014, 185, 268-273.	3.0	88
18	Precision Assembly of Complex Cellular Microenvironments using Holographic Optical Tweezers. Scientific Reports, 2015, 5, 8577.	1.6	88

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19	Aberration correction in holographic optical tweezers. Optics Express, 2006, 14, 4169.	1.7	85
20	Increasing trap stiffness with position clamping in holographic optical tweezers. Optics Express, 2009, 17, 22718.	1.7	79
21	An optical trapped microhand for manipulating micron-sized objects. Optics Express, 2006, 14, 12497.	1.7	75
22	Measuring storage and loss moduli using optical tweezers: Broadband microrheology. Physical Review E, 2010, 81, 026308.	0.8	75
23	Touching the microworld with force-feedback optical tweezers. Optics Express, 2009, 17, 10259.	1.7	72
24	Optical tweezers: wideband microrheology. Journal of Optics (United Kingdom), 2011, 13, 044022.	1.0	65
25	3D single-pixel video. Journal of Optics (United Kingdom), 2016, 18, 035203.	1.0	57
26	Aberration correction in holographic optical tweezers. Optics Express, 2006, 14, 4170.	1.7	54
27	Holographic assembly workstation for optical manipulation. Journal of Optics, 2008, 10, 044009.	1.5	46
28	Amplification of waves from a rotating body. Nature Physics, 2020, 16, 1069-1073.	6.5	45
29	Tissue diagnosis using power-sharing multifocal Raman micro-spectroscopy and auto-fluorescence imaging. Biomedical Optics Express, 2016, 7, 2993.	1.5	42
30	Stereoscopic particle tracking for 3D touch, vision and closed-loop control in optical tweezers. Journal of Optics (United Kingdom), 2011, 13, 044003.	1.0	39
31	Comparing the information capacity of Laguerreâ€“Gaussian and Hermiteâ€“Gaussian modal sets in a finite-aperture system. Optics Express, 2016, 24, 27127.	1.7	39
32	An open-path, hand-held laser system for the detection of methane gas. Journal of Optics, 2005, 7, S420-S424.	1.5	38
33	Position clamping in a holographic counterpropagating optical trap. Optics Express, 2011, 19, 9908.	1.7	38
34	Reversal of orbital angular momentum arising from an extreme Doppler shift. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3800-3803.	3.3	35
35	DMD-based software-configurable spatially-offset Raman spectroscopy for spectral depth-profiling of optically turbid samples. Optics Express, 2016, 24, 12701.	1.7	30
36	Photon Bunching in a Rotating Reference Frame. Physical Review Letters, 2019, 123, 110401.	2.9	30

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37	A fast 3D reconstruction system with a low-cost camera accessory. Scientific Reports, 2015, 5, 10909.	1.6	28
38	Holographic optical trapping Raman micro-spectroscopy for non-invasive measurement and manipulation of live cells. Optics Express, 2018, 26, 25211.	1.7	27
39	What Caging Force Cells Feel in 3D Hydrogels: A Rheological Perspective. Advanced Healthcare Materials, 2020, 9, e2000517.	3.9	23
40	Holographic aberration correction: optimising the stiffness of an optical trap deep in the sample. Optics Express, 2011, 19, 24589.	1.7	21
41	Optical Trapping at Gigapascal Pressures. Physical Review Letters, 2013, 110, 095902.	2.9	21
42	Oil and gas prospecting by ultra-sensitive optical gas detection with inverse gas dispersion modelling. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	19
43	Imaging of methane gas using a scanning, open-path laser system. New Journal of Physics, 2006, 8, 26-26.	1.2	19
44	Manipulation of live mouse embryonic stem cells using holographic optical tweezers. Journal of Modern Optics, 2009, 56, 448-452.	0.6	18
45	Ghost Imaging. Optics and Photonics News, 2016, 27, 38.	0.4	17
46	Mechanical Faraday effect for orbital angular momentum-carrying beams. Optics Express, 2014, 22, 11690.	1.7	16
47	A field-portable, laser-diode spectrometer for the ultra-sensitive detection of hydrocarbon gases. Journal of Modern Optics, 2002, 49, 769-776.	0.6	15
48	Optically Trapped Bacteria Pairs Reveal Discrete Motile Response to Control Aggregation upon Cellâ€“Cell Approach. Current Microbiology, 2014, 69, 669-674.	1.0	15
49	Revealing and concealing entanglement with noninertial motion. Physical Review A, 2020, 101, .	1.0	15
50	Experimental investigation of the transient dynamics of slow light in ruby. New Journal of Physics, 2014, 16, 123054.	1.2	14
51	Sub-shot-noise shadow sensing with quantum correlations. Optics Express, 2017, 25, 21826.	1.7	14
52	Dual-band single-pixel telescope. Optics Express, 2020, 28, 18180.	1.7	14
53	Real time characterization of hydrodynamics in optically trapped networks of microâ€particles. Journal of Biophotonics, 2010, 3, 244-251.	1.1	13
54	Evidence of slow-light effects from rotary drag of structured beams. New Journal of Physics, 2013, 15, 083020.	1.2	12

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55	Measuring nanoparticle flow with the image structure function. Lab on A Chip, 2013, 13, 2359.	3.1	11
56	Developing a portable gas imaging camera using highly tunable active-illumination and computer vision. Optics Express, 2020, 28, 18566.	1.7	9
57	Real-time 3D video utilizing a compressed sensing time-of-flight single-pixel camera. , 2016, , .		8
58	Approach to classify, separate, and enrich objects in groups using ensemble sorting. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5681-5685.	3.3	8
59	Microrheology With an Anisotropic Optical Trap. Frontiers in Physics, 2021, 9, .	1.0	8
60	i-RheoFT: Fourier transforming sampled functions without artefacts. Scientific Reports, 2021, 11, 24047.	1.6	8
61	A spatial light phase modulator with an effective resolution of 4 mega-pixels. Journal of Modern Optics, 2008, 55, 2945-2951.	0.6	5
62	A compact acoustic spanner to rotate macroscopic objects. Scientific Reports, 2019, 9, 6757.	1.6	4
63	Reply to Comment on â€˜Evidence of slow-light effects from rotary drag of structured beamsâ€™. New Journal of Physics, 2014, 16, 038002.	1.2	2
64	Slow light in ruby: delaying energy beyond the input pulse. , 2015, , .		2
65	Simulated assessment of light transport through ischaemic skin flaps. British Journal of Oral and Maxillofacial Surgery, 2022, 60, 969-973.	0.4	2
66	The transition from a coherent optical vortex to a Rankine vortex: beam contrast dependence on topological charge. Journal of Modern Optics, 2016, 63, S51-S56.	0.6	1
67	Experimental demonstration of ray-rotation sheets. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 1160.	0.8	1
68	Fast Compressive 3D Single-pixel Imaging. , 2016, , .		1
69	First-Photon 3D Imaging with a Single-Pixel Camera. , 2016, , .		1
70	Real-time visualisation and optimisation of acoustic waves carrying orbital angular momentum. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 264007.	0.7	1
71	Optically controlled, holographic micro-hand. , 2007, , .		0
72	Holographic control and high-speed imaging for studies of hydrodynamic coupling on a micron scale. , 2011, , .		0

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73	Spatial light modulation for improved microscope stereo vision and 3D tracking. , 2013, , .		0
74	High-Speed AFM with a Light Touch. Biophysical Journal, 2013, 104, 386a.	0.2	0
75	Optical tweezing at extremes. Proceedings of SPIE, 2013, , .	0.8	0
76	Implementing optical tweezers at high pressure in a diamond anvil cell. Proceedings of SPIE, 2013, , .	0.8	0
77	Quad stereo-microscopy. , 2014, , .		0
78	Single-pixel imaging pattern sets and their implications on scene reconstruction. , 2021, , .		0
79	Where fewer pixels give you more image. , 2018, , .		0
80	Hydrodynamic micro-manipulation using optically actuated flow control. , 2018, , .		0