Graeme Whyte

List of Publications by Year
in descending order

53 papers	3,530 citations	159585 30 h-index	197818 49 g-index
57 all docs	57 docs citations	57 times ranked	4482 citing authors

#	Article	IF	Citations
1	A comparison of methods to assess cell mechanical properties. Nature Methods, 2018, 15, 491-498.	19.0	448
2	Static microdroplet arrays: a microfluidic device for droplet trapping, incubation and release for enzymatic and cell-based assays. Lab on A Chip, 2009, 9, 692-698.	6.0	303
3	Development of Quantitative Cell-Based Enzyme Assays in Microdroplets. Analytical Chemistry, 2008, 80, 3890-3896.	6.5	191
4	Controlling the Retention of Small Molecules in Emulsion Microdroplets for Use in Cell-Based Assays. Analytical Chemistry, 2009, 81, 3008-3016.	6.5	182
5	An Integrated Device for Monitoring Timeâ€Dependent in vitro Expression From Single Genes in Picolitre Droplets. ChemBioChem, 2008, 9, 439-446.	2.6	172
6	Coupling Microdroplet Microreactors with Mass Spectrometry: Reading the Contents of Single Droplets Online. Angewandte Chemie - International Edition, 2009, 48, 3665-3668.	13.8	162
7	Viscoelastic Properties of Differentiating Blood Cells Are Fate- and Function-Dependent. PLoS ONE, 2012, 7, e45237.	2.5	162
8	Simultaneous Determination of Gene Expression and Enzymatic Activity in Individual Bacterial Cells in Microdroplet Compartments. Journal of the American Chemical Society, 2009, 131, 15251-15256.	13.7	151
9	From Microdroplets to Microfluidics: Selective Emulsion Separation in Microfluidic Devices. Angewandte Chemie - International Edition, 2008, 47, 2042-2045.	13.8	144
10	Microconstriction Arrays for High-Throughput Quantitative Measurements of Cell Mechanical Properties. Biophysical Journal, 2015, 109, 26-34.	0.5	132
11	Experimental demonstration of holographic three-dimensional light shaping using a Gerchbergâ€"Saxton algorithm. New Journal of Physics, 2005, 7, 117-117.	2.9	107
12	Mechanical Environment Modulates Biological Properties of Oligodendrocyte Progenitor Cells. Stem Cells and Development, 2012, 21, 2905-2914.	2.1	105
13	Separation of blood cells with differing deformability using deterministic lateral displacement<sup />. Interface Focus, 2014, 4, 20140011.	3.0	99
14	High-throughput screening of antibiotic-resistant bacteria in picodroplets. Lab on A Chip, 2016, 16, 1636-1643.	6.0	96
15	An optical trapped microhand for manipulating micron-sized objects. Optics Express, 2006, 14, 12497.	3.4	75
16	Dynamic control of higher-order modes in hollow-core photonic crystal fibers. Optics Express, 2008, 16, 17972.	3.4	68
17	Suzukiâ€"Miyaura coupling reactions in aqueous microdroplets with catalytically active fluorous interfaces. Chemical Communications, 2009, , 6225.	4.1	65
18	Image-Based Single Cell Sorting Automation in Droplet Microfluidics. Scientific Reports, 2020, 10, 8736.	3.3	65

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19	Dynamic operation of optical fibres beyond the single-mode regime facilitates the orientation of biological cells. Nature Communications, 2014, 5, 5481.	12.8	60
20	Polarization and image rotation induced by a rotating dielectric rod: an optical angular momentum interpretation. Optics Letters, 2006, 31, 2205.	3.3	50
21	Unbiased High-Precision Cell Mechanical Measurements with Microconstrictions. Biophysical Journal, 2017, 112, 1472-1480.	0.5	50
22	Validation and perspectives of a femtosecond laser fabricated monolithic optical stretcher. Biomedical Optics Express, 2012, 3, 2658.	2.9	49
23	Holographic assembly workstation for optical manipulation. Journal of Optics, 2008, 10, 044009.	1.5	46
24	Generation of Picoliter Droplets with Defined Contents and Concentration Gradients from the Separation of Chemical Mixtures. Analytical Chemistry, 2010, 82, 3449-3453.	6.5	44
25	Impact of heating on passive and active biomechanics of suspended cells. Interface Focus, 2014, 4, 20130069.	3.0	39
26	Deformation of phospholipid vesicles in an optical stretcher. Soft Matter, 2015, 11, 6075-6088.	2.7	38
27	Deformability-induced lift force in spiral microchannels for cell separation. Lab on A Chip, 2020, 20, 614-625.	6.0	36
28	Monitoring Earlyâ€Stage Nanoparticle Assembly in Microdroplets by Optical Spectroscopy and SERS. Small, 2016, 12, 1788-1796.	10.0	34
29	A monolithic glass chip for active single-cell sorting based on mechanical phenotyping. Lab on A Chip, 2015, 15, 1267-1275.	6.0	32
30	Iterative algorithms for holographic shaping of non-diffracting and self-imaging light beams. Optics Express, 2006, 14, 2108.	3.4	31
31	Optofluidic rotation of living cells for singleâ€cell tomography. Journal of Biophotonics, 2015, 8, 239-246.	2.3	31
32	Dynamically reconfigurable fibre optical spanner. Lab on A Chip, 2014, 14, 1186-1190.	6.0	25
33	Optically controlled grippers for manipulating micron-sized particles. New Journal of Physics, 2007, 9, 14-14.	2.9	24
34	Computational optical imaging with a photonic lantern. Nature Communications, 2020, 11, 5217.	12.8	23
35	Comparison of stresses on homogeneous spheroids in the optical stretcher computed with geometrical optics and generalized Lorenzâ€“Mie theory. Applied Optics, 2012, 51, 7934.	1.8	21
36	High-throughput assessment of mechanical properties of stem cell derived red blood cells, toward cellular downstream processing. Scientific Reports, 2017, 7, 14457.	3.3	20

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37	Assessment of nanomaterial-induced hepatotoxicity using a 3D human primary multi-cellular microtissue exposed repeatedly over 21â€‰days - the suitability of the in vitro system as an in vivo surrogate. Particle and Fibre Toxicology, 2019, 16, 42.	6.2	18
38	Simulation of superresolution holography for optical tweezers. New Journal of Physics, 2008, 10, 023015.	2.9	16
39	Purifying stem cellâ€derived red blood cells: a highâ€throughput labelâ€free downstream processing strategy based on microfluidic spiral inertial separation and membrane filtration. Biotechnology and Bioengineering, 2020, 117, 2032-2045.	3.3	13
40	Transverse laser modes in Bose-Einstein condensates. Physical Review A, 2004, 69, .	2.5	10
41	Simulated holographic three-dimensional intensity shaping of evanescent-wave fields. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 849.	2.1	10
42	Elastic theory for the deformation of a solid or layered spheroid under axisymmetric loading. Acta Mechanica, 2013, 224, 819-839.	2.1	6
43	Particulate and drug-induced toxicity assessed in novel quadruple cell human primary hepatic disease models of steatosis and pre-fibrotic NASH. Archives of Toxicology, 2022, 96, 287-303.	4.2	6
44	Photorealistic visualization of imaging in canonical optical resonators. American Journal of Physics, 2008, 76, 991-995.	0.7	5
45	Vortex sorter for Bose-Einstein condensates. Physical Review A, 2004, 70, .	2.5	3
46	Optomechanical measurement of the role of lamins in whole cell deformability. Journal of Biophotonics, 2017, 10, 1657-1664.	2.3	3
47	Dual-beam laser traps in biology and medicine: when one beam is not enough. , 2010, , .		2
48	Holographic 3D intensity shaping of evanescent waves. , 2007, , .		1
49	An optical trapped nanohand for manipulating micron-sized particles. , 2006, , .		0
50	Fourier transforming a trapped Boseâ€“Einstein condensate by waiting a quarter of the trap period: simulation and applications. New Journal of Physics, 2006, 8, 196-196.	2.9	0
51	Changes in Mechanical Properties Occur During Differentiation Within the Oligodendrocyte Lineage. Biophysical Journal, 2011, 100, 483a.	0.5	0
52	Differentiation, Migration, Proliferation, and Survival of Oligodendrocyte Precursor Cells is Modulated by Mechanical Properties of their Environment. Biophysical Journal, 2012, 102, 704a.	0.5	0
53	New holographic 3D light shaping. , 2007, , .		0