Graeme Whyte

List of Publications by Year
in descending order

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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	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
2	Deformability-induced lift force in spiral microchannels for cell separation. Lab on A Chip, 2020, 20, 614-625.	6.0	36
3	Computational optical imaging with a photonic lantern. Nature Communications, 2020, 11, 5217.	12.8	23
4	Image-Based Single Cell Sorting Automation in Droplet Microfluidics. Scientific Reports, 2020, 10, 8736.	3.3	65
5	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
6	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
7	A comparison of methods to assess cell mechanical properties. Nature Methods, 2018, 15, 491-498.	19.0	448
8	Unbiased High-Precision Cell Mechanical Measurements with Microconstrictions. Biophysical Journal, 2017, 112, 1472-1480.	0.5	50
9	Optomechanical measurement of the role of lamins in whole cell deformability. Journal of Biophotonics, 2017, 10, 1657-1664.	2.3	3
10	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
11	High-throughput screening of antibiotic-resistant bacteria in picodroplets. Lab on A Chip, 2016, 16, 1636-1643.	6.0	96
12	Monitoring Earlyâ€Stage Nanoparticle Assembly in Microdroplets by Optical Spectroscopy and SERS. Small, 2016, 12, 1788-1796.	10.0	34
13	Deformation of phospholipid vesicles in an optical stretcher. Soft Matter, 2015, 11, 6075-6088.	2.7	38
14	Microconstriction Arrays for High-Throughput Quantitative Measurements of Cell Mechanical Properties. Biophysical Journal, 2015, 109, 26-34.	0.5	132
15	A monolithic glass chip for active single-cell sorting based on mechanical phenotyping. Lab on A Chip, 2015, 15, 1267-1275.	6.0	32
16	Optofluidic rotation of living cells for singleâ€cell tomography. Journal of Biophotonics, 2015, 8, 239-246.	2.3	31
17	Separation of blood cells with differing deformability using deterministic lateral displacement<sup />. Interface Focus, 2014, 4, 20140011.	3.0	99
18	Dynamic operation of optical fibres beyond the single-mode regime facilitates the orientation of biological cells. Nature Communications, 2014, 5, 5481.	12.8	60

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19	Impact of heating on passive and active biomechanics of suspended cells. Interface Focus, 2014, 4, 20130069.	3.0	39
20	Dynamically reconfigurable fibre optical spanner. Lab on A Chip, 2014, 14, 1186-1190.	6.0	25
21	Elastic theory for the deformation of a solid or layered spheroid under axisymmetric loading. Acta Mechanica, 2013, 224, 819-839.	2.1	6
22	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
23	Validation and perspectives of a femtosecond laser fabricated monolithic optical stretcher. Biomedical Optics Express, 2012, 3, 2658.	2.9	49
24	Viscoelastic Properties of Differentiating Blood Cells Are Fate- and Function-Dependent. PLoS ONE, 2012, 7, e45237.	2.5	162
25	Mechanical Environment Modulates Biological Properties of Oligodendrocyte Progenitor Cells. Stem Cells and Development, 2012, 21, 2905-2914.	2.1	105
26	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
27	Changes in Mechanical Properties Occur During Differentiation Within the Oligodendrocyte Lineage. Biophysical Journal, 2011, 100, 483a.	0.5	0
28	Dual-beam laser traps in biology and medicine: when one beam is not enough. , 2010, , .		2
29	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
30	Coupling Microdroplet Microreactors with Mass Spectrometry: Reading the Contents of Single Droplets Online. Angewandte Chemie - International Edition, 2009, 48, 3665-3668.	13.8	162
31	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
32	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
33	Suzukiâ€“Miyaura coupling reactions in aqueous microdroplets with catalytically active fluorous interfaces. Chemical Communications, 2009, , 6225.	4.1	65
34	Controlling the Retention of Small Molecules in Emulsion Microdroplets for Use in Cell-Based Assays. Analytical Chemistry, 2009, 81, 3008-3016.	6.5	182
35	An Integrated Device for Monitoring Timeâ€Dependent in vitro Expression From Single Genes in Picolitre Droplets. ChemBioChem, 2008, 9, 439-446.	2.6	172
36	From Microdroplets to Microfluidics: Selective Emulsion Separation in Microfluidic Devices. Angewandte Chemie - International Edition, 2008, 47, 2042-2045.	13.8	144

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37	Photorealistic visualization of imaging in canonical optical resonators. American Journal of Physics, 2008, 76, 991-995.	0.7	5
38	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
39	Dynamic control of higher-order modes in hollow-core photonic crystal fibers. Optics Express, 2008, 16, 17972.	3.4	68
40	Development of Quantitative Cell-Based Enzyme Assays in Microdroplets. Analytical Chemistry, 2008, 80, 3890-3896.	6.5	191
41	Simulation of superresolution holography for optical tweezers. New Journal of Physics, 2008, 10, 023015.	2.9	16
42	Holographic assembly workstation for optical manipulation. Journal of Optics, 2008, 10, 044009.	1.5	46
43	Optically controlled grippers for manipulating micron-sized particles. New Journal of Physics, 2007, 9, 14-14.	2.9	24
44	Holographic 3D intensity shaping of evanescent waves. , 2007, , .		1
45	New holographic 3D light shaping. , 2007, , .		0
46	Polarization and image rotation induced by a rotating dielectric rod: an optical angular momentum interpretation. Optics Letters, 2006, 31, 2205.	3.3	50
47	Iterative algorithms for holographic shaping of non-diffracting and self-imaging light beams. Optics Express, 2006, 14, 2108.	3.4	31
48	An optical trapped microhand for manipulating micron-sized objects. Optics Express, 2006, 14, 12497.	3.4	75
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	Experimental demonstration of holographic three-dimensional light shaping using a Gerchbergâ€“Saxton algorithm. New Journal of Physics, 2005, 7, 117-117.	2.9	107
52	Transverse laser modes in Bose-Einstein condensates. Physical Review A, 2004, 69, .	2.5	10
53	Vortex sorter for Bose-Einstein condensates. Physical Review A, 2004, 70, .	2.5	3