Gavin D M Jeffries

List of Publications by Year
in descending order

57 papers	2,459 citations	331670 21 h-index	197818 49 g-index
57 all docs	57 docs citations	57 times ranked	3124 citing authors

#	Article	IF	Citations
1	Spin-to-Orbital Angular Momentum Conversion in a Strongly Focused Optical Beam. Physical Review Letters, 2007, 99, 073901.	7.8	501
2	Selective Encapsulation of Single Cells and Subcellular Organelles into Picoliter- and Femtoliter-Volume Droplets. Analytical Chemistry, 2005, 77, 1539-1544.	6.5	486
3	Droplets for Ultrasmall-Volume Analysis. Analytical Chemistry, 2009, 81, 5111-5118.	6.5	168
4	Using Polarization-Shaped Optical Vortex Traps for Single-Cell Nanosurgery. Nano Letters, 2007, 7, 415-420.	9.1	123
5	Microfluidic and Optical Systems for the On-Demand Generation and Manipulation of Single Femtoliter-Volume Aqueous Droplets. Analytical Chemistry, 2006, 78, 6433-6439.	6.5	112
6	A multifunctional pipette. Lab on A Chip, 2012, 12, 1255.	6.0	89
7	Fabrication of thermoset polyester microfluidic devices and embossing masters using rapid prototyped polydimethylsiloxane molds. Lab on A Chip, 2003, 3, 158.	6.0	85
8	Endocytic uptake of monomeric amyloid-Î² peptides is clathrin- and dynamin-independent and results in selective accumulation of AÎ²(1â€“42) compared to AÎ²(1â€“40). Scientific Reports, 2017, 7, 2021.	3.3	80
9	Vortex-Trap-Induced Fusion of Femtoliter-Volume Aqueous Droplets. Analytical Chemistry, 2007, 79, 224-228.	6.5	70
10	Tunable generation of Bessel beams with a fluidic axicon. Applied Physics Letters, 2008, 92, 261101.	3.3	63
11	Effect of Cholesterol Depletion on the Pore Dilation of TRPV1. Molecular Pain, 2013, 9, 1744-8069-9-1.	2.1	62
12	Membrane Tubulation in Lipid Vesicles Triggered by the Local Application of Calcium Ions. Langmuir, 2017, 33, 11010-11017.	3.5	51
13	Dynamic Modulation of Chemical Concentration in an Aqueous Droplet. Angewandte Chemie - International Edition, 2007, 46, 1326-1328.	13.8	45
14	Optical gradient flow focusing. Optics Express, 2007, 15, 6167.	3.4	43
15	Simultaneous generation of multiple aqueous droplets in a microfluidic device. Analytica Chimica Acta, 2008, 630, 124-130.	5.4	38
16	A new USP Class VI-compliant substrate for manufacturing disposable microfluidic devices. Lab on A Chip, 2009, 9, 870.	6.0	33
17	Fabrication improvements for thermoset polyester (TPE) microfluidic devices. Lab on A Chip, 2007, 7, 923.	6.0	32
18	Ultrasensitive and High-Throughput Fluorescence Analysis of Droplet Contents with Orthogonal Line Confocal Excitation. Analytical Chemistry, 2010, 82, 9948-9954.	6.5	30

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19	Label-free spatio-temporal monitoring of cytosolic mass, osmolarity, and volume in living cells. Nature Communications, 2019, 10, 340.	12.8	25
20	Formation of giant unilamellar vesicles from spin-coated lipid films by localized IR heating. Soft Matter, 2012, 8, 10823.	2.7	23
21	Quantitative force mapping of an optical vortex trap. Applied Physics Letters, 2008, 92, 161111.	3.3	22
22	Single-cell electroporation using a multifunctional pipette. Lab on A Chip, 2012, 12, 4605.	6.0	22
23	Controlled Shrinkage and Re-expansion of a Single Aqueous Droplet inside an Optical Vortex Trap. Journal of Physical Chemistry B, 2007, 111, 2806-2812.	2.6	20
24	3D micro-organisation printing of mammalian cells to generate biological tissues. Scientific Reports, 2020, 10, 19529.	3.3	20
25	Hydrodynamic Flow Confinement Technology in Microfluidic Perfusion Devices. Micromachines, 2012, 3, 442-461.	2.9	19
26	Radial Sizing of Lipid Nanotubes Using Membrane Displacement Analysis. Nano Letters, 2012, 12, 1372-1378.	9.1	17
27	An Optofluidic Temperature Probe. Sensors, 2013, 13, 4289-4302.	3.8	17
28	Heat-induced formation of single giant unilamellar vesicles. Soft Matter, 2011, 7, 9751.	2.7	16
29	A high-performance lab-on-a-chip liquid sensor employing surface acoustic wave resonance. Journal of Micromechanics and Microengineering, 2017, 27, 114002.	2.6	13
30	A multifunctional pipette for localized drug administration to brain slices. Journal of Neuroscience Methods, 2013, 219, 292-296.	2.5	12
31	Thermal migration of molecular lipid films as a contactless fabrication strategy for lipid nanotube networks. Lab on A Chip, 2013, 13, 3822.	6.0	12
32	A rapid and economical method for profiling feature heights during microfabrication. Lab on A Chip, 2011, 11, 974.	6.0	11
33	Membrane Protrusion Coarsening and Nanotubulation within Giant Unilamellar Vesicles. Journal of the American Chemical Society, 2011, 133, 18046-18049.	13.7	11
34	SU-8 free-standing microfluidic probes. Biomicrofluidics, 2017, 11, 014112.	2.4	11
35	A Heating-Superfusion Platform Technology for the Investigation of Protein Function in Single Cells. Analytical Chemistry, 2015, 87, 381-387.	6.5	9
36	Spontaneous shape transformation of free-floating lipid membrane nanotubes. Soft Matter, 2013, 9, 5155.	2.7	8

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37	Usage of a Localised Microflow Device to Show that Mitochondrial Networks Are Not Extensive in Skeletal Muscle Fibres. PLoS ONE, 2014, 9, e108601.	2.5	8
38	Millimeter-wave sensor based on a Î»/2-line resonator for identification and dielectric characterization of non-ionic surfactants. Scientific Reports, 2016, 6, 19523.	3.3	7
39	Optofluidic generation of Laguerre-Gaussian beams. Optics Express, 2009, 17, 17555.	3.4	6
40	Independent Size and Fluorescence Emission Determination of Individual Biological Nanoparticles Reveals that Lipophilic Dye Incorporation Does Not Scale with Particle Size. Langmuir, 2020, 36, 9693-9700.	3.5	6
41	Probing Enzymatic Activity Inside Single Cells. Analytical Chemistry, 2013, 85, 10126-10133.	6.5	5
42	Artificial nanotube connections and transport of molecular cargo between mammalian cells. Nano Communication Networks, 2013, 4, 197-204.	2.9	5
43	Spatial characterization of a multifunctional pipette for drug delivery in hippocampal brain slices. Journal of Neuroscience Methods, 2015, 241, 132-136.	2.5	5
44	A Multifunctional Pipette for Localized Drug Administration to Brain Slices. Biophysical Journal, 2014, 106, 191a.	0.5	4
45	A rapid microfluidic technique for integrated viability determination of adherent single cells. Analytical and Bioanalytical Chemistry, 2015, 407, 1295-1301.	3.7	3
46	Rational antibody design for undruggable targets using kinetically controlled biomolecular probes. Science Advances, 2021, 7, .	10.3	3
47	Millimetre-wave dielectric spectroscopy for cell analysis. , 2014, , .		2
48	Cellular communication via directed protrusion growth: Critical length-scales and membrane morphology. Nano Communication Networks, 2015, 6, 178-182.	2.9	2
49	Contactless Stimulation and Control of Biomimetic Nanotubes by Calcium Ion Gradients. Small, 2018, 14, e1703541.	10.0	2
50	Single-Molecule Detection and Manipulation in Nanotechnology and Biology. , 2005, , 197-225.		1
51	Membrane Remodeling of Giant Vesicles in Response to Localized Calcium Ion Gradients. Journal of Visualized Experiments, 2018, , .	0.3	1
52	Controlled fusion of femtoliter-volume aqueous droplets using holographic optical tweezers. , 2007, , .		0
53	Mimicking Endocytosis Inside Giant Unilamellar Vesicles. Biophysical Journal, 2012, 102, 94a.	0.5	0
54	Studying Bending Rigidity of Model Vesicles and Cell Plasma Membrane using Lipid Nanotubes. Biophysical Journal, 2013, 104, 43a-44a.	0.5	0

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55	Single-Cell Analysis with the BioPen. , 2018, , 187-219.		0
56	Formation of Membrane Tubular Protrusions upon Localized Application of Calcium Ions to the Surface of Giant Lipid Vesicles. Biophysical Journal, 2018, 114, 562a.	0.5	0
57	Synthetic Lipid Nanotubes: Contactless Stimulation and Control of Biomimetic Nanotubes by Calcium Ion Gradients (Small 21/2018). Small, 2018, 14, 1870098.	10.0	0