Alexander B Stilgoe

List of Publications by Year
in descending order

34	2,216	430874 18	414414 32
papers	citations	h-index	g-index

34	34	34	2148
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Roadmap on structured light. Journal of Optics (United Kingdom), 2017, 19, 013001.	2.2	888
2	Optical tweezers computational toolbox. Journal of Optics, 2007, 9, S196-S203.	1.5	317
3	Angular momentum of a strongly focused Gaussian beam. Journal of Optics, 2008, 10, 115005.	1.5	134
4	Optical trapping in vivo: theory, practice, and applications. Nanophotonics, 2019, 8, 1023-1040.	6.0	91
5	The effect of Mie resonances on trapping in optical tweezers. Optics Express, 2008, 16, 15039.	3.4	85
6	Optical tweezers: Theory and modelling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 146, 59-80.	2.3	83
7	Optical trapping of otoliths drives vestibular behaviours in larval zebrafish. Nature Communications, 2017, 8, 630.	12.8	82
8	T-matrix method for modelling optical tweezers. Journal of Modern Optics, 2011, 58, 528-544.	1.3	74
9	Enhanced optical trapping via structured scattering. Nature Photonics, 2015, 9, 669-673.	31.4	73
10	Equilibrium orientations and positions of non-spherical particles in optical traps. Optics Express, 2012, 20, 12987.	3.4	45
11	Theory and practice of simulation of optical tweezers. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 195, 66-75.	2.3	43
12	Controlled transfer of transverse orbital angular momentum to optically trapped birefringent microparticles. Nature Photonics, 2022, 16, 346-351.	31.4	28
13	Ultrafast viscosity measurement with ballistic optical tweezers. Nature Photonics, 2021, 15, 386-392.	31.4	25
14	Calibration of force detection for arbitrarily shaped particles in optical tweezers. Scientific Reports, 2018, 8, 10798.	3.3	24
15	Orientation of swimming cells with annular beam optical tweezers. Optics Communications, 2020, 459, 124864.	2.1	22
16	Ultrasensitive rotating photonic probes for complex biological systems. Optica, 2017, 4, 1103.	9.3	21
17	Swimming force and behavior of optically trapped micro-organisms. Optica, 2020, 7, 989.	9.3	21
18	Calibration of nonspherical particles in optical tweezers using only position measurement. Optics Letters, 2013, 38, 1244.	3.3	19

#	Article	IF	Citations
19	Determination of motility forces on isolated chromosomes with laser tweezers. Scientific Reports, 2014, 4, 6866.	3.3	19
20	An interpretation and guide to single-pass beam shaping methods using SLMs and DMDs. Journal of Optics (United Kingdom), 2016, 18, 065609.	2.2	17
21	Machine learning reveals complex behaviours in optically trapped particles. Machine Learning: Science and Technology, 2020, 1, 045009.	5.0	17
22	Measuring local properties inside a cellâ€mimicking structure using rotating optical tweezers. Journal of Biophotonics, 2019, 12, e201900022.	2.3	13
23	Energy, momentum and propagation of non-paraxial high-order Gaussian beams in the presence of an aperture. Journal of Optics (United Kingdom), 2015, 17, 125601.	2.2	12
24	Escape forces and trajectories in optical tweezers and their effect on calibration. Optics Express, 2015, 23, 24317.	3.4	12
25	Active rotational and translational microrheology beyond the linear spring regime. Physical Review E, 2017, 95, 042608.	2.1	11
26	Deep learning in lightâ€“matter interactions. Nanophotonics, 2022, 11, 3189-3214.	6.0	10
27	High-speed transverse and axial optical force measurements using amplitude filter masks. Optics Express, 2019, 27, 10034.	3.4	9
28	Strong Transient Flows Generated by Thermoplasmonic Bubble Nucleation. ACS Nano, 2020, 14, 17468-17475.	14.6	8
29	Machine learning wall effects of eccentric spheres for convenient computation. Physical Review E, 2019, 99, 043304.	2.1	3
30	Optical Force Measurements Illuminate Dynamics of Escherichia coli in Viscous Media. Frontiers in Physics, 2020, 8, .	2.1	3
31	Wave characterisation and aberration correction using hybrid direct search. Journal of Optics (United Kingdom), 2021, 23, 085602.	2.2	3
32	Enhanced Signal-to-Noise and Fast Calibration of Optical Tweezers Using Single Trapping Events. Micromachines, 2021, 12, 570.	2.9	2
33	Design of Optically Driven Microrotors. , 2012, , 277-306.		2
34	Thermodynamics of optical tweezers. , 2011, , .		0