Jochen Arlt

List of Publications by Year
in descending order

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83	7,151	94433	98798
papers	citations	37 h-index	67 g-index

84	84	84	5574
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Controlled Rotation of Optically Trapped Microscopic Particles. Science, 2001, 292, 912-914.	12.6	960
2	Generation of high-order Bessel beams by use of an axicon. Optics Communications, 2000, 177, 297-301.	2.1	710
3	Optical micromanipulation using a Bessel light beam. Optics Communications, 2001, 197, 239-245.	2.1	531
4	Creation and Manipulation of Three-Dimensional Optically Trapped Structures. Science, 2002, 296, 1101-1103.	12.6	481
5	Generation of a beam with a dark focus surrounded by regions of higher intensity:â€ƒthe optical bottle beam. Optics Letters, 2000, 25, 191.	3.3	415
6	Orbital angular momentum of a high-order Bessel light beam. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, S82-S89.	1.4	357
7	The production of multiringed Laguerreâ€“Gaussian modes by computer-generated holograms. Journal of Modern Optics, 1998, 45, 1231-1237.	1.3	269
8	An experiment to observe the intensity and phase structure of Laguerreâ€“Gaussian laser modes. American Journal of Physics, 1996, 64, 77-82.	0.7	219
9	Atom guiding along Laguerre-Gaussian and Bessel light beams. Applied Physics B: Lasers and Optics, 2000, 71, 549-554.	2.2	190
10	Cell Biology of Conidial Anastomosis Tubes in Neurospora crassa. Eukaryotic Cell, 2005, 4, 911-919.	3.4	157
11	Toroidal optical dipole traps for atomic Bose-Einstein condensates using Laguerre-Gaussian beams. Physical Review A, 2000, 63, .	2.5	141
12	High-order Laguerreâ€“Gaussian laser modes for studies of cold atoms. Optics Communications, 1998, 156, 300-306.	2.1	121
13	Optical dipole traps and atomic waveguides based on Bessel light beams. Physical Review A, 2001, 63, .	2.5	118
14	The generation of Bessel beams at millimetre-wave frequencies by use of an axicon. Optics Communications, 1999, 170, 213-215.	2.1	116
15	Painting with light-powered bacteria. Nature Communications, 2018, 9, 768.	12.8	116
16	Real-time fluorescence lifetime imaging system with a 32 Ã— 32 013Î¼m CMOS low dark-count single-photon avalanche diode array. Optics Express, 2010, 18, 10257.	3.4	108
17	Parametric down-conversion for light beams possessing orbital angular momentum. Physical Review A, 1999, 59, 3950-3952.	2.5	105
18	Colloids in a bacterial bath: simulations and experiments. Soft Matter, 2011, 7, 5228.	2.7	99

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19	Escherichia coli as a model active colloid: A practical introduction. Colloids and Surfaces B: Biointerfaces, 2016, 137, 2-16.	5.0	99
20	Handedness and azimuthal energy flow of optical vortex beams. Journal of Modern Optics, 2003, 50, 1573-1580.	1.3	92
21	Video-rate fluorescence lifetime imaging camera with CMOS single-photon avalanche diode arrays and high-speed imaging algorithm. Journal of Biomedical Optics, 2011, 16, 1.	2.6	89
22	Revolving interference patterns for the rotation of optically trapped particles. Optics Communications, 2002, 201, 21-28.	2.1	88
23	Passive and Active Microrheology of Hard-sphere Colloids. Journal of Physical Chemistry B, 2009, 113, 3806-3812.	2.6	88
24	Probing the Spatiotemporal Dynamics of Catalytic Janus Particles with Single-Particle Tracking and Differential Dynamic Microscopy. Physical Review Letters, 2018, 121, 078001.	7.8	72
25	A study of pile-up in integrated time-correlated single photon counting systems. Review of Scientific Instruments, 2013, 84, 103105.	1.3	71
26	A High-Throughput Time-Resolved Mini-Silicon Photomultiplier With Embedded Fluorescence Lifetime Estimation in 0.13 <formula formulatype="inline"> <tex Notation="TeX">mu</tex></formula>m CMOS. IEEE Transactions on Biomedical Circuits and Systems, 2012, 6, 562-570.	4.0	69
27	Spherical aberration correction for optical tweezers. Optics Communications, 2004, 236, 145-150.	2.1	64
28	Optically trapped microsensors for microfluidic temperature measurement by fluorescence lifetime imaging microscopy. Lab on A Chip, 2011, 11, 3821.	6.0	62
29	Filling an Emulsion Drop with Motile Bacteria. Physical Review Letters, 2014, 113, 268101.	7.8	61
30	An experiment to study a â€œnondiffractingâ€•light beam. American Journal of Physics, 1999, 67, 912-915.	0.7	57
31	Time-Domain Fluorescence Lifetime Imaging Techniques Suitable for Solid-State Imaging Sensor Arrays. Sensors, 2012, 12, 5650-5669.	3.8	51
32	Efficiency of second-harmonic generation with Bessel beams. Physical Review A, 1999, 60, 2438-2441.	2.5	49
33	Time-Multiplexed Laguerre-Gaussian holographic optical tweezers for biological applications. Optics Express, 2006, 14, 3065.	3.4	49
34	Hardware implementation algorithm and error analysis of high-speed fluorescence lifetime sensing systems using center-of-mass method. Journal of Biomedical Optics, 2010, 15, 017006.	2.6	49
35	Bacteria as living patchy colloids: Phenotypic heterogeneity in surface adhesion. Science Advances, 2018, 4, eaao1170.	10.3	48
36	TricarbocyanineN-triazoles: the scaffold-of-choice for long-term near-infrared imaging of immune cellsin vivo. Chemical Science, 2018, 9, 7261-7270.	7.4	48

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37	A combined rheometry and imaging study of viscosity reduction in bacterial suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2326-2331.	7.1	42
38	Guiding a cold atomic beam along a co-propagating and oblique hollow light guide. Optics Communications, 2002, 214, 247-254.	2.1	39
39	Optical tweezer micromanipulation of filamentous fungi. Fungal Genetics and Biology, 2007, 44, 1-13.	2.1	38
40	In vivo single cell analysis reveals Gata2 dynamics in cells transitioning to hematopoietic fate. Journal of Experimental Medicine, 2018, 215, 233-248.	8.5	37
41	Moving interference patterns created using the angular Doppler-effect. Optics Express, 2002, 10, 844.	3.4	36
42	Tunable Whiteâ€Light Emission from Conjugated Polymerâ€Diâ€Ureasil Materials. Advanced Functional Materials, 2016, 26, 532-542.	14.9	33
43	Bethâ€™s experiment using optical tweezers. American Journal of Physics, 2001, 69, 271-276.	0.7	32
44	Dynamic and static quenching of 2-aminopurine fluorescence by the natural DNA nucleotides in solution. Methods and Applications in Fluorescence, 2020, 8, 025002.	2.3	32
45	Fluorescence lifetime biosensing with DNA microarrays and a CMOS-SPAD imager. Biomedical Optics Express, 2010, 1, 1302.	2.9	29
46	Switching of Swimming Modes in Magnetospirillium gryphiswaldense. Biophysical Journal, 2014, 106, 37-46.	0.5	29
47	Trapping multiple particles in single optical tweezers. Optics Communications, 2008, 281, 135-140.	2.1	28
48	Dynamics-dependent density distribution in active suspensions. Nature Communications, 2019, 10, 2321.	12.8	28
49	Synergistic photoluminescence enhancement in conjugated polymer-di-ureasil organicâ€“inorganic composites. Chemical Science, 2015, 6, 7227-7237.	7.4	27
50	Anisotropic dynamics and kinetic arrest of dense colloidal ellipsoids in the presence of an external field studied by differential dynamic microscopy. Science Advances, 2020, 6, eaaw9733.	10.3	27
51	A polarisation spectrometer locked diode laser for trapping cold atoms. Optics Communications, 1999, 170, 79-84.	2.1	26
52	Spontaneous shrinking of soft nanoparticles boosts their diffusion in confined media. Nature Communications, 2019, 10, 4294.	12.8	26
53	Spatial transformation of Laguerre-Gaussian laser modes. Journal of Modern Optics, 2001, 48, 783-787.	1.3	24
54	Targeted design leads to tunable photoluminescence from perylene dicarboxdiimideâ€“poly(oxyalkylene)/siloxane hybrids for luminescent solar concentrators. Journal of Materials Chemistry C, 2016, 4, 4049-4059.	5.5	23

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55	Spectral imaging in a snapshot. , 2005, , .		20
56	Intracellular imaging of hostâ€pathogen interactions using combined CARS and twoâ€photon fluorescence microscopies. Journal of Biophotonics, 2010, 3, 138-146.	2.3	19
57	Ureasil organicâ€“inorganic hybrids as photoactive waveguides for conjugated polyelectrolyte luminescent solar concentrators. Materials Chemistry Frontiers, 2017, 1, 2271-2282.	5.9	18
58	Coherent Pulse Propagation and the Dynamics of Rydberg Wave Packets. Physical Review Letters, 1997, 79, 4774-4777.	7.8	15
59	Experimentally manipulating fungi with optical tweezers*. Mycoscience, 2007, 48, 15-19.	0.8	13
60	Changes to lipid droplet configuration in mCMV-infected fibroblasts: live cell imaging with simultaneous CARS and two-photon fluorescence microscopy. Biomedical Optics Express, 2011, 2, 2504.	2.9	12
61	High-throughput characterisation of bull semen motility using differential dynamic microscopy. PLoS ONE, 2019, 14, e0202720.	2.5	12
62	Run-to-Tumble Variability Controls the Surface Residence Times of E. coli Bacteria. Physical Review Letters, 2022, 128, .	7.8	12
63	A 100Mphoton/s time-resolved mini-silicon photomultiplier with on-chip fluorescence lifetime estimation in 0.13μm CMOS imaging technology. , 2012, , .		11
64	Taking Two-Photon Excitation to Exceptional Path-Lengths in Photonic Crystal Fiber. ACS Photonics, 2014, 1, 790-793.	6.6	9
65	Single Molecule Fluorescence Imaging and Its Application to the Study of DNA Condensation. Journal of Fluorescence, 2004, 14, 65-69.	2.5	8
66	Dynamic optical rectification and delivery of active particles. Soft Matter, 2019, 15, 7026-7032.	2.7	7
67	Probing the dynamics of turbid colloidal suspensions using differential dynamic microscopy. Soft Matter, 2022, 18, 1858-1867.	2.7	6
68	Particle sizing for flowing colloidal suspensions using flow-differential dynamic microscopy. Soft Matter, 2021, 17, 3945-3953.	2.7	5
69	Characterising shear-induced dynamics in flowing complex fluids using differential dynamic microscopy. Soft Matter, 2021, 17, 8838-8849.	2.7	4
70	<title>Laguerre-Gaussian laser modes for biophotonics and micromanipulation</title>. , 2003, 5147, 48.		1
71	Continuous motion of interference patterns using the angular Doppler effect. , 2003, 5121, 98.		1
72	Spherical aberration correction for optical tweezers. , 2004, , .		1

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73	Condensation of hydrodynamically stretched DNA using single-molecule fluorescence imaging and optical tweezers. , 2004, , .		1
74	Measuring fungal growth forces with optical tweezers. , 2005, , .		1
75	Toroidal optical dipole traps for two-dimensional Bose-Einstein condensates. , 0, , .		0
76	Study of DNA deformation under flow using optical tweezers. , 2004, , .		0
77	Hydrodynamics of bacterial suspensions. , 2005, , .		0
78	Force measurement in colloidal glasses using optical tweezers. , 2005, , .		0
79	Multiple trap Laguerre-Gaussian holographic optical tweezers using a multiplexed ferroelectric SLM. , 2006, , .		0
80	Linear and nonlinear microrheology of dense colloidal suspensions. , 2006, , .		0
81	Single cells undergoing cell fate change during endothelial-to-hematopoietic cell transition show pulsatile Gata2 expression. Experimental Hematology, 2017, 53, S43.	0.4	0
82	Aberration corrected fully steerable optical tweezers. , 2003, , .		0
83	Handedness and azimuthal energy flow of optical vortex beams. Journal of Modern Optics, 2003, 50, 1573-1580.	1.3	0