Erik SchÃ¤ffer

List of Publications by Year
in descending order

72 papers	6,154 citations	109264 35 h-index	106281 65 g-index
81 all docs	81 docs citations	81 times ranked	5678 citing authors

#	Article	IF	Citations
1	Germanium nanospheres for ultraresolution picotensiometry of kinesin motors. Science, 2021, 371, .	6.0	72
2	Single depolymerizing and transport kinesins stabilize microtubule ends. Cytoskeleton, 2021, 78, 177-184.	1.0	4
3	Anisotropic and Amphiphilic Mesoporous Coreâ€"Shell Silica Microparticles Provide Chemically Selective Environments for Simultaneous Delivery of Curcumin and Quercetin. Langmuir, 2021, 37, 13460-13470.	1.6	5
4	Fast 3D imaging of giant unilamellar vesicles using reflected lightâ€sheet microscopy with single molecule sensitivity. Journal of Microscopy, 2021, 285, 40.	0.8	0
5	Polycationic gold nanorods as multipurpose<i>in vitro</i>microtubule markers. Nanoscale Advances, 2020, 2, 4003-4010.	2.2	1
6	In Vitro Reconstitution and Imaging of Microtubule Dynamics by Fluorescence and Label-free Microscopy. STAR Protocols, 2020, 1, 100177.	0.5	7
7	The Kinesin-8 Kip3 Depolymerizes Microtubules with a Collective Force-Dependent Mechanism. Biophysical Journal, 2020, 118, 1958-1967.	0.2	11
8	Self-Sensing Enzyme-Powered Micromotors Equipped with pH-Responsive DNA Nanoswitches. Nano Letters, 2019, 19, 3440-3447.	4.5	136
9	Supported Solid Lipid Bilayers as a Platform for Single-Molecule Force Measurements. Nano Letters, 2019, 19, 8877-8886.	4.5	14
10	High performance passive vibration isolation system for optical tables using six-degree-of-freedom viscous damping combined with steel springs. Review of Scientific Instruments, 2019, 90, 015113.	0.6	11
11	Determination of twisting of kinesin molecules during stepping. , 2019, , .		0
12	Determination of pitch rotation in a spherical birefringent microparticle. Journal of Optics (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.0	22
13	Measuring Microtubule Supertwist and Defects by Three-Dimensional-Force-Clamp Tracking of Single Kinesin-1 Motors. Nano Letters, 2018, 18, 1290-1295.	4.5	21
14	Three-Dimensional Optical Tweezers TrackingÂResolves Random Sideward Steps ofÂtheÂKinesin-8 Kip3. Biophysical Journal, 2018, 115, 1993-2002.	0.2	20
15	Influence of Enzyme Quantity and Distribution on the Self-Propulsion of Non-Janus Urease-Powered Micromotors. Journal of the American Chemical Society, 2018, 140, 7896-7903.	6.6	161
16	LED-based interference-reflection microscopy combined with optical tweezers for quantitative three-dimensional microtubule imaging. Optics Express, 2018, 26, 14499.	1.7	34
17	Labelâ€free highâ€speed wideâ€field imaging of single microtubules using interference reflection microscopy. Journal of Microscopy, 2018, 272, 60-66.	0.8	69
18	Phragmoplast Orienting Kinesin 2 Is a Weak Motor Switching between Processive and Diffusive Modes. Biophysical Journal, 2018, 115, 375-385.	0.2	29

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19	Determination of rotation in the pitch degree of freedom for a spherical birefringent particle. , 2018, , .		0
20	Kinesin rotates unidirectionally and generates torque while walking on microtubules. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10894-10899.	3.3	84
21	Developmentally Regulated GTP binding protein 1 (DRG1) controls microtubule dynamics. Scientific Reports, 2017, 7, 9996.	1.6	26
22	Implementation and Tuning of an Optical Tweezers Force-Clamp Feedback System. Methods in Molecular Biology, 2017, 1486, 109-136.	0.4	9
23	Custom-Made Microspheres for Optical Tweezers. Methods in Molecular Biology, 2017, 1486, 137-155.	0.4	7
24	Improved antireflection coated microspheres for biological applications of optical tweezers. Proceedings of SPIE, 2016, , .	0.8	2
25	Directed Rotational Motion of Birefringent Particles by Randomly Changing the Barrier Height at the Threshold in a Washboard Potential. Current Science, 2016, 111, 2005.	0.4	4
26	A Single-Strand Annealing Protein Clamps DNA to Detect and Secure Homology. PLoS Biology, 2015, 13, e1002213.	2.6	22
27	The Kinesin-8 Kip3 Switches Protofilaments in a Sideward Random Walk Asymmetrically Biased by Force. Biophysical Journal, 2015, 108, 2019-2027.	0.2	36
28	Enzyme-Powered Hollow Mesoporous Janus Nanomotors. Nano Letters, 2015, 15, 7043-7050.	4.5	366
29	Versatile microsphere attachment of GFP-labeled motors and other tagged proteins with preserved functionality. Journal of Biological Methods, 2015, 2, e30.	1.0	19
30	Kinesin Kip2 enhances microtubule growth in vitro through length-dependent feedback on polymerization and catastrophe. ELife, 2015, 4, .	2.8	44
31	A Single-Strand Annealing Protein Clamps DNA to Detect Homology. Biophysical Journal, 2014, 106, 693a.	0.2	0
32	Kinesin-8 Is a Low-Force Motor Protein with a Weakly Bound Slip State. Biophysical Journal, 2013, 104, 2456-2464.	0.2	57
33	The growth speed of microtubules with XMAP215-coated beads coupled to their ends is increased by tensile force. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14670-14675.	3.3	44
34	A Nanonewton Optical Force Trap. , 2013, , .		0
35	Nanonewton optical force trap employing anti-reflection coated, high-refractive-index titania microspheres. Nature Photonics, 2012, 6, 469-473.	15.6	108
36	Seeded Growth of Titania Colloids with Refractive Index Tunability and Fluorophore-Free Luminescence. Langmuir, 2011, 27, 1626-1634.	1.6	23

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37	Under-filling trapping objectives optimizes the use of the available laser power in optical tweezers. Optics Express, 2011, 19, 11759.	1.7	60
38	Measuring the complete force field of an optical trap. Optics Letters, 2011, 36, 1260.	1.7	69
39	Inertial Effects of a Small Brownian Particle Cause a Colored Power Spectral Density of Thermal Noise. Physical Review Letters, 2011, 107, 228301.	2.9	59
40	Functional Surface Attachment in a Sandwich Geometry of GFP-Labeled Motor Proteins. Methods in Molecular Biology, 2011, 778, 11-18.	0.4	2
41	Breaking of bonds between a kinesin motor and microtubules causes protein friction. , 2010, , .		3
42	Microtubule Dynamics Reconstituted In Vitro and Imaged by Single-Molecule Fluorescence Microscopy. Methods in Cell Biology, 2010, 95, 221-245.	0.5	239
43	Protein Friction Limits Diffusive and Directed Movements of Kinesin Motors on Microtubules. Science, 2009, 325, 870-873.	6.0	196
44	Optical tweezers with millikelvin precision of temperature-controlled objectives and base-pair resolution. Optics Express, 2009, 17, 17190.	1.7	67
45	Optical trapping of coated microspheres. Biophysical Journal, 2009, 96, 644a.	0.2	13
46	Optical trapping of coated microspheres. Optics Express, 2008, 16, 13831.	1.7	88
47	Coated microspheres as enhanced probes for optical trapping. , 2008, , .		7
48	Surface Forces and Drag Coefficients of Microspheres near a Plane Surface Measured with Optical Tweezers. Langmuir, 2007, 23, 3654-3665.	1.6	220
49	LED illumination for videoâ€enhanced DIC imaging of single microtubules. Journal of Microscopy, 2007, 226, 1-5.	0.8	50
50	Calibration of optical tweezers with positional detection in the back focal plane. Review of Scientific Instruments, 2006, 77, 103101.	0.6	294
51	Molecular Forces Caused by the Confinement of Thermal Noise. Physical Review Letters, 2004, 92, 156102.	2.9	39
52	Dynamic domain formation in membranes: Thickness-modulation-induced phase separation. European Physical Journal E, 2004, 14, 169-175.	0.7	18
53	Self-organized organic nanostructures: structure formation in thin polymer blend films. Surface and Interface Analysis, 2004, 36, 195-196.	0.8	2
54	Capillary instabilities by fluctuation induced forces. European Physical Journal E, 2003, 12, 375-381.	0.7	23

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55	The Distribution of Active Force Generators Controls Mitotic Spindle Position. Science, 2003, 301, 518-521.	6.0	351
56	Aspects of electrohydrodynamic instabilities at polymer interfaces. Fibers and Polymers, 2003, 4, 1-7.	1.1	15
57	Thermomechanical Lithography: Pattern Replication Using a Temperature Gradient Driven Instability. Advanced Materials, 2003, 15, 514-517.	11.1	86
58	Hierarchical structure formation and pattern replication induced by an electric field. Nature Materials, 2003, 2, 48-52.	13.3	258
59	Morphological Instability of a Confined Polymer Film in a Thermal Gradient. Macromolecules, 2003, 36, 1645-1655.	2.2	78
60	Pattern Replication by Confined Dewetting. Langmuir, 2003, 19, 9714-9718.	1.6	55
61	Temperature-gradientâ€“induced instability in polymer films. Europhysics Letters, 2002, 60, 255-261.	0.7	63
62	Electric Field Induced Dewetting at Polymer/Polymer Interfaces. Macromolecules, 2002, 35, 6255-6262.	2.2	100
63	Structure Formation at the Interface of Liquid/Liquid Bilayer in Electric Field. Macromolecules, 2002, 35, 3971-3976.	2.2	151
64	Acoustic instabilities in thin polymer films. European Physical Journal E, 2002, 8, 347-351.	0.7	28
65	Electric field induced instabilities at liquid/liquid interfaces. Journal of Chemical Physics, 2001, 114, 2377-2381.	1.2	184
66	Spreading Dynamics of Polydimethylsiloxane Drops: Crossover from Laplace to Van der Waals Spreading. Journal of Colloid and Interface Science, 2001, 234, 178-193.	5.0	44
67	Electrohydrodynamic instabilities in polymer films. Europhysics Letters, 2001, 53, 518-524.	0.7	275
68	Electrically induced structure formation and pattern transfer. Nature, 2000, 403, 874-877.	13.7	738
69	Contact line dynamics near the pinning threshold: A capillary rise and fall experiment. Physical Review E, 2000, 61, 5257-5277.	0.8	91
70	Nanophase-Separated Polymer Films as High-Performance Antireflection Coatings. Science, 1999, 283, 520-522.	6.0	649
71	Dynamics of Contact Line Pinning in Capillary Rise and Fall. Physical Review Letters, 1998, 80, 3069-3072.	2.9	62
72	Dynamics of Air-Water Contact Lines and Interfaces Near the Pinning Threshold. Materials Research Society Symposia Proceedings, 1996, 464, 351.	0.1	0