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	Electrically induced structure formation and pattern transfer. Nature, 2000, 403, 874-877.	13.7	738
2	Nanophase-Separated Polymer Films as High-Performance Antireflection Coatings. Science, 1999, 283, 520-522.	6.0	649
3	Enzyme-Powered Hollow Mesoporous Janus Nanomotors. Nano Letters, 2015, 15, 7043-7050.	4.5	366
4	The Distribution of Active Force Generators Controls Mitotic Spindle Position. Science, 2003, 301, 518-521.	6.0	351
5	Calibration of optical tweezers with positional detection in the back focal plane. Review of Scientific Instruments, 2006, 77, 103101.	0.6	294
6	Electrohydrodynamic instabilities in polymer films. Europhysics Letters, 2001, 53, 518-524.	0.7	275
7	Hierarchical structure formation and pattern replication induced by an electric field. Nature Materials, 2003, 2, 48-52.	13.3	258
8	Microtubule Dynamics Reconstituted In Vitro and Imaged by Single-Molecule Fluorescence Microscopy. Methods in Cell Biology, 2010, 95, 221-245.	0.5	239
9	Surface Forces and Drag Coefficients of Microspheres near a Plane Surface Measured with Optical Tweezers. Langmuir, 2007, 23, 3654-3665.	1.6	220
10	Protein Friction Limits Diffusive and Directed Movements of Kinesin Motors on Microtubules. Science, 2009, 325, 870-873.	6.0	196
11	Electric field induced instabilities at liquid/liquid interfaces. Journal of Chemical Physics, 2001, 114, 2377-2381.	1.2	184
12	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
13	Structure Formation at the Interface of Liquid/Liquid Bilayer in Electric Field. Macromolecules, 2002, 35, 3971-3976.	2.2	151
14	Self-Sensing Enzyme-Powered Micromotors Equipped with pH-Responsive DNA Nanoswitches. Nano Letters, 2019, 19, 3440-3447.	4.5	136
15	Nanonewton optical force trap employing anti-reflection coated, high-refractive-index titania microspheres. Nature Photonics, 2012, 6, 469-473.	15.6	108
16	Electric Field Induced Dewetting at Polymer/Polymer Interfaces. Macromolecules, 2002, 35, 6255-6262.	2.2	100
17	Contact line dynamics near the pinning threshold: A capillary rise and fall experiment. Physical Review E, 2000, 61, 5257-5277.	0.8	91
18	Optical trapping of coated microspheres. Optics Express, 2008, 16, 13831.	1.7	88

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19	Thermomechanical Lithography: Pattern Replication Using a Temperature Gradient Driven Instability. Advanced Materials, 2003, 15, 514-517.	11.1	86
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	Morphological Instability of a Confined Polymer Film in a Thermal Gradient. Macromolecules, 2003, 36, 1645-1655.	2.2	78
22	Germanium nanospheres for ultraresolution picotensiometry of kinesin motors. Science, 2021, 371, .	6.0	72
23	Measuring the complete force field of an optical trap. Optics Letters, 2011, 36, 1260.	1.7	69
24	Labelâ€free highâ€speed wideâ€field imaging of single microtubules using interference reflection microscopy. Journal of Microscopy, 2018, 272, 60-66.	0.8	69
25	Optical tweezers with millikelvin precision of temperature-controlled objectives and base-pair resolution. Optics Express, 2009, 17, 17190.	1.7	67
26	Temperature-gradientâ€“induced instability in polymer films. Europhysics Letters, 2002, 60, 255-261.	0.7	63
27	Dynamics of Contact Line Pinning in Capillary Rise and Fall. Physical Review Letters, 1998, 80, 3069-3072.	2.9	62
28	Under-filling trapping objectives optimizes the use of the available laser power in optical tweezers. Optics Express, 2011, 19, 11759.	1.7	60
29	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
30	Kinesin-8 Is a Low-Force Motor Protein with a Weakly Bound Slip State. Biophysical Journal, 2013, 104, 2456-2464.	0.2	57
31	Pattern Replication by Confined Dewetting. Langmuir, 2003, 19, 9714-9718.	1.6	55
32	LED illumination for videoâ€enhanced DIC imaging of single microtubules. Journal of Microscopy, 2007, 226, 1-5.	0.8	50
33	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
34	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
35	Kinesin Kip2 enhances microtubule growth in vitro through length-dependent feedback on polymerization and catastrophe. ELife, 2015, 4, .	2.8	44
36	Molecular Forces Caused by the Confinement of Thermal Noise. Physical Review Letters, 2004, 92, 156102.	2.9	39

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37	The Kinesin-8 Kip3 Switches Protofilaments in a Sideward Random Walk Asymmetrically Biased by Force. Biophysical Journal, 2015, 108, 2019-2027.	0.2	36
38	LED-based interference-reflection microscopy combined with optical tweezers for quantitative three-dimensional microtubule imaging. Optics Express, 2018, 26, 14499.	1.7	34
39	Phragmoplast Orienting Kinesin 2 Is a Weak Motor Switching between Processive and Diffusive Modes. Biophysical Journal, 2018, 115, 375-385.	0.2	29
40	Acoustic instabilities in thin polymer films. European Physical Journal E, 2002, 8, 347-351.	0.7	28
41	Developmentally Regulated GTP binding protein 1 (DRG1) controls microtubule dynamics. Scientific Reports, 2017, 7, 9996.	1.6	26
42	Capillary instabilities by fluctuation induced forces. European Physical Journal E, 2003, 12, 375-381.	0.7	23
43	Seeded Growth of Titania Colloids with Refractive Index Tunability and Fluorophore-Free Luminescence. Langmuir, 2011, 27, 1626-1634.	1.6	23
44	A Single-Strand Annealing Protein Clamps DNA to Detect and Secure Homology. PLoS Biology, 2015, 13, e1002213.	2.6	22
45	Determination of pitch rotation in a spherical birefringent microparticle. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /Overlock	1.0	22
46	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
47	Three-Dimensional Optical Tweezers TrackingÂResolves Random Sideward Steps ofÂtheÂKinesin-8 Kip3. Biophysical Journal, 2018, 115, 1993-2002.	0.2	20
48	Versatile microsphere attachment of GFP-labeled motors and other tagged proteins with preserved functionality. Journal of Biological Methods, 2015, 2, e30.	1.0	19
49	Dynamic domain formation in membranes: Thickness-modulation-induced phase separation. European Physical Journal E, 2004, 14, 169-175.	0.7	18
50	Aspects of electrohydrodynamic instabilities at polymer interfaces. Fibers and Polymers, 2003, 4, 1-7.	1.1	15
51	Supported Solid Lipid Bilayers as a Platform for Single-Molecule Force Measurements. Nano Letters, 2019, 19, 8877-8886.	4.5	14
52	Optical trapping of coated microspheres. Biophysical Journal, 2009, 96, 644a.	0.2	13
53	The Kinesin-8 Kip3 Depolymerizes Microtubules with a Collective Force-Dependent Mechanism. Biophysical Journal, 2020, 118, 1958-1967.	0.2	11
54	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

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55	Implementation and Tuning of an Optical Tweezers Force-Clamp Feedback System. Methods in Molecular Biology, 2017, 1486, 109-136.	0.4	9
56	Coated microspheres as enhanced probes for optical trapping. , 2008, , .		7
57	In Vitro Reconstitution and Imaging of Microtubule Dynamics by Fluorescence and Label-free Microscopy. STAR Protocols, 2020, 1, 100177.	0.5	7
58	Custom-Made Microspheres for Optical Tweezers. Methods in Molecular Biology, 2017, 1486, 137-155.	0.4	7
59	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
60	Single depolymerizing and transport kinesins stabilize microtubule ends. Cytoskeleton, 2021, 78, 177-184.	1.0	4
61	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
62	Breaking of bonds between a kinesin motor and microtubules causes protein friction. , 2010, , .		3
63	Self-organized organic nanostructures: structure formation in thin polymer blend films. Surface and Interface Analysis, 2004, 36, 195-196.	0.8	2
64	Improved antireflection coated microspheres for biological applications of optical tweezers. Proceedings of SPIE, 2016, , .	0.8	2
65	Functional Surface Attachment in a Sandwich Geometry of GFP-Labeled Motor Proteins. Methods in Molecular Biology, 2011, 778, 11-18.	0.4	2
66	Polycationic gold nanorods as multipurpose<i>in vitro</i>microtubule markers. Nanoscale Advances, 2020, 2, 4003-4010.	2.2	1
67	Dynamics of Air-Water Contact Lines and Interfaces Near the Pinning Threshold. Materials Research Society Symposia Proceedings, 1996, 464, 351.	0.1	0
68	A Single-Strand Annealing Protein Clamps DNA to Detect Homology. Biophysical Journal, 2014, 106, 693a.	0.2	0
69	A Nanonewton Optical Force Trap. , 2013, , .		0
70	Determination of rotation in the pitch degree of freedom for a spherical birefringent particle. , 2018, , .		0
71	Determination of twisting of kinesin molecules during stepping. , 2019, , .		0
72	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