

# Edgar Meyhofer

## List of Publications by Year in descending order

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109  
papers

7,738  
citations

66315

42  
h-index

51562

86  
g-index

117  
all docs

117  
docs citations

117  
times ranked

7831  
citing authors

#	ARTICLE	IF	CITATIONS
1	Microtubule Acetylation Promotes Kinesin-1 Binding and Transport. <i>Current Biology</i> , 2006, 16, 2166-2172.	1.8	784
2	Enhancement of Photovoltaic Response in Multilayer MoS <sub>2</sub> Induced by Plasma Doping. <i>ACS Nano</i> , 2014, 8, 5270-5281.	7.3	344
3	Kinesin follows the microtubule's protofilament axis.. <i>Journal of Cell Biology</i> , 1993, 121, 1083-1093.	2.3	343
4	Radiative heat transfer in the extreme near field. <i>Nature</i> , 2015, 528, 387-391.	13.7	332
5	Nanoscale Protein Patterning by Imprint Lithography. <i>Nano Letters</i> , 2004, 4, 853-857.	4.5	276
6	Single Molecule Imaging Reveals Differences in Microtubule Track Selection Between Kinesin Motors. <i>PLoS Biology</i> , 2009, 7, e1000216.	2.6	271
7	Optics at critical intensity: Applications to nanomorphing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 5856-5861.	3.3	244
8	Enhancement of near-field radiative heat transfer using polar dielectric thin films. <i>Nature Nanotechnology</i> , 2015, 10, 253-258.	15.6	237
9	Nanogap near-field thermophotovoltaics. <i>Nature Nanotechnology</i> , 2018, 13, 806-811.	15.6	235
10	Toxoplasma gondii myosin A and its light chain: a fast, single-headed, plus-end-directed motor. <i>EMBO Journal</i> , 2002, 21, 2149-2158.	3.5	225
11	Near-field radiative thermal transport: From theory to experiment. <i>AIP Advances</i> , 2015, 5, 053503.	0.6	210
12	The force generated by a single kinesin molecule against an elastic load.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995, 92, 574-578.	3.3	207
13	Radiative heat conductances between dielectric and metallic parallel plates with nanoscale gaps. <i>Nature Nanotechnology</i> , 2016, 11, 509-514.	15.6	201
14	A study of the deterministic character of optical damage by femtosecond laser pulses and applications to nanomachining. <i>Applied Physics B: Lasers and Optics</i> , 2003, 77, 25-30.	1.1	196
15	A Thermal Diode Based on Nanoscale Thermal Radiation. <i>ACS Nano</i> , 2018, 12, 5774-5779.	7.3	167
16	Mammalian Kinesin-3 Motors Are Dimeric In Vivo and Move by Processive Motility upon Release of Autoinhibition. <i>PLoS Biology</i> , 2009, 7, e1000072.	2.6	166
17	Quantized thermal transport in single-atom junctions. <i>Science</i> , 2017, 355, 1192-1195.	6.0	165
18	Directional loading of the kinesin motor molecule as it buckles a microtubule. <i>Biophysical Journal</i> , 1996, 70, 418-429.	0.2	147

#	ARTICLE	IF	CITATIONS
19	Perspective: Thermal and thermoelectric transport in molecular junctions. Journal of Chemical Physics, 2017, 146, .	1.2	144
20	Tracking Single Kinesin Molecules in the Cytoplasm of Mammalian Cells. Biophysical Journal, 2007, 92, 4137-4144.	0.2	139
21	Thermal conductance of single-molecule junctions. Nature, 2019, 572, 628-633.	13.7	127
22	Peltier cooling in molecular junctions. Nature Nanotechnology, 2018, 13, 122-127.	15.6	120
23	Study of radiative heat transfer in Å...ngstrÅm- and nanometre-sized gaps. Nature Communications, 2017, 8, .	5.8	117
24	Single-molecule tracking of myosins with genetically engineered amplifier domains. Nature Structural Biology, 2001, 8, 226-229.	9.7	113
25	Giant Enhancement in Radiative Heat Transfer in Sub-30 nm Gaps of Plane Parallel Surfaces. Nano Letters, 2018, 18, 3711-3715.	4.5	111
26	Self-Contained, Biomolecular Motor-Driven Protein Sorting and Concentrating in an Ultrasensitive Microfluidic Chip. Nano Letters, 2008, 8, 1041-1046.	4.5	104
27	Determining plasmonic hot-carrier energy distributions via single-molecule transport measurements. Science, 2020, 369, 423-426.	6.0	100
28	Circadian clock neurons constantly monitor environmental temperature to set sleep timing. Nature, 2018, 555, 98-102.	13.7	96
29	Near-field photonic cooling through control of the chemical potential of photons. Nature, 2019, 566, 239-244.	13.7	96
30	Influence of Quantum Interference on the Thermoelectric Properties of Molecular Junctions. Nano Letters, 2018, 18, 5666-5672.	4.5	93
31	Hundred-fold enhancement in far-field radiative heat transfer over the blackbody limit. Nature, 2018, 561, 216-221.	13.7	81
32	Size Limits in Escape Locomotion of Caridean Shrimp. Journal of Experimental Biology, 1989, 143, 245-265.	0.8	76
33	Active Alignment of Microtubules with Electric Fields. Nano Letters, 2007, 7, 211-217.	4.5	73
34	Thermal and Thermoelectric Properties of Molecular Junctions. Advanced Functional Materials, 2020, 30, 1904534.	7.8	72
35	Near-field thermophotovoltaics for efficient heat to electricity conversion at high power density. Nature Communications, 2021, 12, 4364.	5.8	67
36	Highly Efficient Guiding of Microtubule Transport with Imprinted CYTOP Nanotracks. Small, 2005, 1, 409-414.	5.2	64

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37	Efficient Designs for Powering Microscale Devices with Nanoscale Biomolecular Motors. <i>Small</i> , 2006, 2, 281-287.	5.2	52
38	The E-Hook of Tubulin Interacts with Kinesin's Head to Increase Processivity and Speed. <i>Biophysical Journal</i> , 2005, 89, 3223-3234.	0.2	50
39	Paclitaxel-Conjugated PAMAM Dendrimers Adversely Affect Microtubule Structure through Two Independent Modes of Action. <i>Biomacromolecules</i> , 2013, 14, 654-664.	2.6	47
40	Mechanical determinants of nectar-feeding energetics in butterflies: muscle mechanics, feeding geometry, and functional equivalence. <i>Oecologia</i> , 1989, 79, 66-75.	0.9	46
41	Intrinsic Curvature of DNA Influences LacR-Mediated Looping. <i>Biophysical Journal</i> , 2007, 93, 4342-4359.	0.2	44
42	Room temperature picowatt-resolution calorimetry. <i>Applied Physics Letters</i> , 2011, 99, 043106.	1.5	42
43	Cooperative kinking at distant sites in mechanically stressed DNA. <i>Nucleic Acids Research</i> , 2011, 39, 9820-9832.	6.5	41
44	Nanomechanical Model of Microtubule Translocation in the Presence of Electric Fields. <i>Biophysical Journal</i> , 2008, 94, 3880-3892.	0.2	39
45	Nanoscale radiative thermal switching via multi-body effects. <i>Nature Nanotechnology</i> , 2020, 15, 99-104.	15.6	39
46	Hemocyanin respiratory pigment in bivalve mollusks. <i>Science</i> , 1986, 231, 1302-1304.	6.0	36
47	Single Fungal Kinesin Motor Molecules Move Processively along Microtubules. <i>Biophysical Journal</i> , 2003, 84, 1833-1843.	0.2	35
48	Unusual properties of the fungal conventional kinesin neck domain from <i>Neurospora crassa</i> . <i>EMBO Journal</i> , 2001, 20, 6226-6235.	3.5	34
49	Podocytes in bivalve molluscs: Morphological evidence for ultrafiltration. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 1985, 156, 151-161.	0.7	33
50	Resistance thermometry-based picowatt-resolution heat-flow calorimeter. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	33
51	High blue-near ultraviolet photodiode response of vertically stacked graphene-MoS <sub>2</sub> -metal heterostructures. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	33
52	Biomolecular motor-driven molecular sorter. <i>Lab on A Chip</i> , 2009, 9, 1282.	3.1	31
53	Biomolecular motor-driven microtubule translocation in the presence of shear flow: analysis of redirection behaviours. <i>Nanotechnology</i> , 2007, 18, 025101.	1.3	30
54	Photovoltaic response in pristine WSe <sub>2</sub> layers modulated by metal-induced surface-charge-transfer doping. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	30

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55	Autoradiographic measurement of tritiated agmatine as an indicator of physiologic activity in <i>Hermissenda</i> visual and vestibular neurons. <i>Journal of Neurocytology</i> , 1986, 15, 629-643.	1.6	29
56	Electrically Programmable Surfaces for Configurable Patterning of Cells. <i>Advanced Materials</i> , 2008, 20, 1418-1423.	11.1	29
57	Control of microtubule trajectory within an electric field by altering surface charge density. <i>Scientific Reports</i> , 2015, 5, 7669.	1.6	27
58	A Theoretical Model of a Molecular-Motor-Powered Pump. <i>Biomedical Microdevices</i> , 2005, 7, 21-33.	1.4	26
59	Computational Analysis of Looping of a Large Family of Highly Bent DNA by <i>Lacl</i> . <i>Biophysical Journal</i> , 2008, 95, 5832-5842.	0.2	26
60	Different degrees of lever arm rotation control myosin step size. <i>Journal of Cell Biology</i> , 2003, 161, 237-241.	2.3	25
61	Nanofluidic Concentration of Selectively Extracted Biomolecule Analytes by Microtubules. <i>Analytical Chemistry</i> , 2008, 80, 5383-5390.	3.2	23
62	Collective dynamics of kinesin. <i>Physical Review E</i> , 2009, 79, 031929.	0.8	22
63	Sub-nanowatt resolution direct calorimetry for probing real-time metabolic activity of individual <i>C. elegans</i> worms. <i>Nature Communications</i> , 2020, 11, 2983.	5.8	22
64	Protein Pattern Assembly by Active Control of a Triblock Copolymer Monolayer. <i>Nano Letters</i> , 2006, 6, 2763-2767.	4.5	20
65	A platform to parallelize planar surfaces and control their spatial separation with nanometer resolution. <i>Review of Scientific Instruments</i> , 2012, 83, 105101.	0.6	19
66	Quantification of thermal and contact resistances of scanning thermal probes. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	17
67	Temperature dependence of thermopower in molecular junctions. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	17
68	Back on track – On the role of the microtubule for kinesin motility and cellular function. <i>Journal of Muscle Research and Cell Motility</i> , 2006, 27, 161-171.	0.9	16
69	Biomolecular motor-driven microtubule translocation in the presence of shear flow: modeling microtubule deflection due to shear. <i>Biomedical Microdevices</i> , 2007, 9, 501-511.	1.4	15
70	Scanning Probe Microscopy for Thermal Transport Measurements. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2015, 19, 279-302.	1.4	15
71	Parallelized, real-time, metabolic-rate measurements from individual <i>Drosophila</i> . <i>Scientific Reports</i> , 2018, 8, 14452.	1.6	15
72	Mechanistic mathematical model of kinesin under time and space fluctuating loads. <i>Nonlinear Dynamics</i> , 2008, 53, 303-320.	2.7	14

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73	Nanokelvin-resolution thermometry with a photonic microscale sensor at room temperature. <i>Nature Photonics</i> , 2022, 16, 422-427.	15.6	13
74	Bivalve hemocyanins—a comparison with other molluscan hemocyanins. <i>Comparative Biochemistry and Physiology Part B: Comparative Biochemistry</i> , 1988, 89, 189-195.	0.2	12
75	Electromagnetic tweezers with independent force and torque control. <i>Review of Scientific Instruments</i> , 2016, 87, 084304.	0.6	12
76	Bending the Rules of Transcriptional Repression: Tightly Looped DNA Directly Represses T7 RNA Polymerase. <i>Biophysical Journal</i> , 2010, 99, 1139-1148.	0.2	10
77	Characterization of the Bivalve Ultrafiltration System in <i>Mytilus edulis</i> , <i>Chlamys hastata</i> , and <i>Mercenaria mercenaria</i> . <i>Invertebrate Biology</i> , 1996, 115, 20.	0.3	9
78	Quantitative Mapping of Unmodulated Temperature Fields with Nanometer Resolution. <i>ACS Nano</i> , 2022, 16, 939-950.	7.3	9
79	Accumulation of <sup>109</sup> cadmium in extracellular granules in the kidney of the bivalve mollusc <i>Mercenaria mercenaria</i> (L.). <i>Marine Environmental Research</i> , 1985, 17, 172-175.	1.1	7
80	Recording Single Motor Proteins in the Cytoplasm of Mammalian Cells. <i>Methods in Enzymology</i> , 2010, 475, 81-107.	0.4	7
81	Cooperativity of multiple kinesin-1 motors mechanically coupled through a shared load. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 677-686.	1.3	6
82	Predicting the stochastic guiding of kinesin-driven microtubules in microfabricated tracks: A statistical-mechanics-based modeling approach. <i>Physical Review E</i> , 2010, 81, 011919.	0.8	6
83	Fabrication of nanoscale zero-mode waveguides using microlithography for single molecule sensing. <i>Nanotechnology</i> , 2012, 23, 455301.	1.3	6
84	A novel dual-color bifocal imaging system for single-molecule studies. <i>Review of Scientific Instruments</i> , 2017, 88, 053705.	0.6	4
85	Microwatt-Resolution Calorimeter for Studying the Reaction Thermodynamics of Nanomaterials at High Temperature and Pressure. <i>ACS Sensors</i> , 2021, 6, 387-398.	4.0	4
86	A Kinesin Driven Enzyme Linked Immunosorbant Assay (ELISA) for Ultra Low Protein Detection Applications. <i>Biophysical Journal</i> , 2014, 106, 622a.	0.2	3
87	Quantifying the temperature of heated microdevices using scanning thermal probes. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	3
88	Surface landing of microtubule nanotracks influenced by lithographically patterned channels. <i>Applied Physics Letters</i> , 2009, 95, 103701.	1.5	2
89	Highly Bent DNA: A Novel Repressor of T7 RNA Polymerase. <i>Biophysical Journal</i> , 2010, 98, 69a.	0.2	2
90	Harmony with superatoms. <i>Nature Materials</i> , 2017, 16, 10-11.	13.3	2

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91	Characterization of the bivalve ultrafiltration barrier: What pollutants pass through?. Marine Environmental Research, 1988, 24, 174-175.	1.1	1
92	Taxol-Conjugated Pamam Dendrimers Utilize Three Modes of Action on Microtubule Structure. Biophysical Journal, 2012, 102, 187a.	0.2	1
93	Characterizing the Effects of Highly Bent DNA on Transcription. Biophysical Journal, 2009, 96, 56a.	0.2	0
94	The Effect Of Loads on the Collective Behavior of Neurospora Kinesin. Biophysical Journal, 2009, 96, 138a.	0.2	0
95	A Novel Experimental Platform for DNA Mechanics Assays. Biophysical Journal, 2009, 96, 290a.	0.2	0
96	A Direct Observation of Highly Bent and Twisted DNA at the Single Molecule Level. Biophysical Journal, 2010, 98, 467a.	0.2	0
97	Characterizing the Relationship Between DNA Bending and Transcription Elongation By T7 RNA Polymerase. Biophysical Journal, 2010, 98, 68a.	0.2	0
98	Development of a Plasmonic Nanoparticle-Based Assay to Observe Nanoscale Biological Dynamic Interactions. Biophysical Journal, 2010, 98, 587a.	0.2	0
99	Structural Characterization of Torsional Destabilization in DNA. Biophysical Journal, 2011, 100, 176a.	0.2	0
100	Acetylation of Alpha Tubulin Lysine-40 Alone is not Sufficient for Changes in Kinesin-1 Motility. Biophysical Journal, 2011, 100, 121a.	0.2	0
101	In Vitro Study of the Direct Effect of Microtubule Acetylation and Detyrosination on Kinesin Motility. Biophysical Journal, 2012, 102, 369a-370a.	0.2	0
102	High-Bandwidth Magnetic Tweezers for Applying Torsion to Single DNA Molecules. Biophysical Journal, 2012, 102, 274a.	0.2	0
103	Covalent Conjugation of Antibodies to Biomolecular-Motor Driven Shuttles. Biophysical Journal, 2012, 102, 701a.	0.2	0
104	A Kinesin Driven Microfluidic Concentrator Device for Ultrasensitive Detection of Analyte. Biophysical Journal, 2013, 104, 523a.	0.2	0
105	Mechanical Strain Generated by RNA Polymerase during Transcription Initiation can Drive Structural Changes in DNA Topology that Relieve Repression. Biophysical Journal, 2014, 106, 488a.	0.2	0
106	Asymmetric Illumination of Optically Anisotropic Beads for Detecting Rotational Motion. Biophysical Journal, 2014, 106, 385a.	0.2	0
107	Microtubule sorting within a given electric field by designing flexural rigidity. , 2015, , .		0
108	Electromagnetic Tweezers with Independent Force and Torque Control. Biophysical Journal, 2015, 108, 355a.	0.2	0

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109	Temperature Sensation and Integration in the Drosophila Circadian Clock. Biophysical Journal, 2017, 112, 135a.	0.2	0