Edgar Meyhofer

List of Publications by Year in Descending Order

89 papers	5,976 citations	38 h-index	77 g-index
117 ext. papers	6,959 ext. citations	9.6 avg, IF	5.7 L-index

#	Paper	IF	Citations
89	Microwatt-Resolution Calorimeter for Studying the Reaction Thermodynamics of Nanomaterials at High Temperature and Pressure. *ACS Sensors*, **2021**, 6, 387-398	9.2	2
88	Quantifying the temperature of heated microdevices using scanning thermal probes. *Applied Physics Letters*, **2021**, 118, 163102	3.4	2
87	Near-field thermophotovoltaics for efficient heat to electricity conversion at high power density. *Nature Communications*, **2021**, 12, 4364	17.4	15
86	Quantitative Mapping of Unmodulated Temperature Fields with Nanometer Resolution.. *ACS Nano*, **2021**,	16.7	2
85	Determining plasmonic hot-carrier energy distributions via single-molecule transport measurements. *Science*, **2020**, 369, 423-426	33.3	46
84	Nanoscale radiative thermal switching via multi-body effects. *Nature Nanotechnology*, **2020**, 15, 99-104	28.7	21
83	Sub-nanowatt resolution direct calorimetry for probing real-time metabolic activity of individual C. elegans worms. *Nature Communications*, **2020**, 11, 2983	17.4	13
82	Thermal and Thermoelectric Properties of Molecular Junctions. *Advanced Functional Materials*, **2020**, 30, 1904534	15.6	37
81	Thermal conductance of single-molecule junctions. *Nature*, **2019**, 572, 628-633	50.4	68
80	Near-field photonic cooling through control of the chemical potential of photons. *Nature*, **2019**, 566, 239-244	50.4	49
79	Circadian clock neurons constantly monitor environmental temperature to set sleep timing. *Nature*, **2018**, 555, 98-102	50.4	54
78	Peltier cooling in molecular junctions. *Nature Nanotechnology*, **2018**, 13, 122-127	28.7	81
77	Giant Enhancement in Radiative Heat Transfer in Sub-30 nm Gaps of Plane Parallel Surfaces. *Nano Letters*, **2018**, 18, 3711-3715	11.5	76
76	Influence of Quantum Interference on the Thermoelectric Properties of Molecular Junctions. *Nano Letters*, **2018**, 18, 5666-5672	11.5	54
75	Nanogap near-field thermophotovoltaics. *Nature Nanotechnology*, **2018**, 13, 806-811	28.7	148
74	Parallelized, real-time, metabolic-rate measurements from individual Drosophila. *Scientific Reports*, **2018**, 8, 14452	4.9	7
73	Hundred-fold enhancement in far-field radiative heat transfer over the blackbody limit. *Nature*, **2018**, 561, 216-221	50.4	57

72	A Thermal Diode Based on Nanoscale Thermal Radiation. *ACS Nano*, **2018**, 12, 5774-5779	16.7	95
71	Quantized thermal transport in single-atom junctions. *Science*, **2017**, 355, 1192-1195	33.3	124
70	Study of radiative heat transfer in ngstrm- and nanometre-sized gaps. *Nature Communications*, **2017**, 8,	17.4	85
69	A novel dual-color bifocal imaging system for single-molecule studies. *Review of Scientific Instruments*, **2017**, 88, 053705	1.7	2
68	Perspective: Thermal and thermoelectric transport in molecular junctions. *Journal of Chemical Physics*, **2017**, 146, 092201	3.9	104
67	Thermal transport: Harmony with superatoms. *Nature Materials*, **2016**, 16, 10-11	27	2
66	Radiative heat conductances between dielectric and metallic parallel plates with nanoscale gaps. *Nature Nanotechnology*, **2016**, 11, 509-514	28.7	147
65	Electromagnetic tweezers with independent force and torque control. *Review of Scientific Instruments*, **2016**, 87, 084304	1.7	8
64	Temperature dependence of thermopower in molecular junctions. *Applied Physics Letters*, **2016**, 109, 033102	3.4	14
63	Enhancement of near-field radiative heat transfer using polar dielectric thin films. *Nature Nanotechnology*, **2015**, 10, 253-8	28.7	186
62	Photovoltaic response in pristine WSe2 layers modulated by metal-induced surface-charge-transfer doping. *Applied Physics Letters*, **2015**, 107, 062102	3.4	26
61	Scanning Probe Microscopy for Thermal Transport Measurements. *Nanoscale and Microscale Thermophysical Engineering*, **2015**, 19, 279-302	3.7	12
60	Near-field radiative thermal transport: From theory to experiment. *AIP Advances*, **2015**, 5, 053503	1.5	153
59	Control of microtubule trajectory within an electric field by altering surface charge density. *Scientific Reports*, **2015**, 5, 7669	4.9	22
58	Radiative heat transfer in the extreme near field. *Nature*, **2015**, 528, 387-91	50.4	242
57	Enhancement of photovoltaic response in multilayer MoS2 induced by plasma doping. *ACS Nano*, **2014**, 8, 5270-81	16.7	274
56	A Kinesin Driven Enzyme Linked Immunosorbant Assay (ELISA) for Ultra Low Protein Detection Applications. *Biophysical Journal*, **2014**, 106, 622a	2.9	3
55	Quantification of thermal and contact resistances of scanning thermal probes. *Applied Physics Letters*, **2014**, 105, 203107	3.4	16

54	High blue-near ultraviolet photodiode response of vertically stacked graphene-MoS2-metal heterostructures. *Applied Physics Letters*, **2014**, 104, 232103	3.4	29
53	Resistance thermometry-based picowatt-resolution heat-flow calorimeter. *Applied Physics Letters*, **2013**, 102, 163110	3.4	31
52	Paclitaxel-conjugated PAMAM dendrimers adversely affect microtubule structure through two independent modes of action. *Biomacromolecules*, **2013**, 14, 654-64	6.9	44
51	Fabrication of nanoscale zero-mode waveguides using microlithography for single molecule sensing. *Nanotechnology*, **2012**, 23, 455301	3.4	5
50	A platform to parallelize planar surfaces and control their spatial separation with nanometer resolution. *Review of Scientific Instruments*, **2012**, 83, 105101	1.7	15
49	Room temperature picowatt-resolution calorimetry. *Applied Physics Letters*, **2011**, 99, 043106	3.4	38
48	Cooperative kinking at distant sites in mechanically stressed DNA. *Nucleic Acids Research*, **2011**, 39, 9820-32	2.21	32
47	Predicting the stochastic guiding of kinesin-driven microtubules in microfabricated tracks: a statistical-mechanics-based modeling approach. *Physical Review E*, **2010**, 81, 011919	2.4	5
46	Recording single motor proteins in the cytoplasm of mammalian cells. *Methods in Enzymology*, **2010** , 475, 81-107	1.7	5
45	Highly Bent DNA: A Novel Repressor of T7 RNA Polymerase. *Biophysical Journal*, **2010**, 98, 69a	2.9	2
44	Bending the rules of transcriptional repression: tightly looped DNA directly represses T7 RNA polymerase. *Biophysical Journal*, **2010**, 99, 1139-48	2.9	10
43	Surface landing of microtubule nanotracks influenced by lithographically patterned channels. *Applied Physics Letters*, **2009**, 95, 103701	3.4	1
42	Collective dynamics of kinesin. *Physical Review E*, **2009**, 79, 031929	2.4	18
41	Single molecule imaging reveals differences in microtubule track selection between Kinesin motors. *PLoS Biology*, **2009**, 7, e1000216	9.7	222
40	Cooperativity of multiple kinesin-1 motors mechanically coupled through a shared load. *Physica D: Nonlinear Phenomena*, **2009**, 238, 677-686	3.3	4
39	Biomolecular motor-driven molecular sorter. *Lab on A Chip*, **2009**, 9, 1282-5	7.2	31
38	Mammalian Kinesin-3 motors are dimeric in vivo and move by processive motility upon release of autoinhibition. *PLoS Biology*, **2009**, 7, e72	9.7	127
37	Nanomechanical model of microtubule translocation in the presence of electric fields. *Biophysical Journal*, **2008**, 94, 3880-92	2.9	36

36	Computational analysis of looping of a large family of highly bent DNA by LacI. *Biophysical Journal*, **2008**, 95, 5832-42	2.9	22
35	Nanofluidic concentration of selectively extracted biomolecule analytes by microtubules. *Analytical Chemistry*, **2008**, 80, 5383-90	7.8	21
34	Self-contained, biomolecular motor-driven protein sorting and concentrating in an ultrasensitive microfluidic chip. *Nano Letters*, **2008**, 8, 1041-6	11.5	90
33	Mechanistic mathematical model of kinesin under time and space fluctuating loads. *Nonlinear Dynamics*, **2008**, 53, 303-320	5	11
32	Electrically Programmable Surfaces for Configurable Patterning of Cells. *Advanced Materials*, **2008**, 20, 1418-1423	24	28
31	Tracking single Kinesin molecules in the cytoplasm of mammalian cells. *Biophysical Journal*, **2007**, 92, 4137-44	2.9	118
30	Intrinsic curvature of DNA influences LacR-mediated looping. *Biophysical Journal*, **2007**, 93, 4342-59	2.9	36
29	Biomolecular motor-driven microtubule translocation in the presence of shear flow: modeling microtubule deflection due to shear. *Biomedical Microdevices*, **2007**, 9, 501-11	3.7	13
28	Biomolecular motor-driven microtubule translocation in the presence of shear flow: analysis of redirection behaviours. *Nanotechnology*, **2007**, 18, 025101	3.4	24
27	Active alignment of microtubules with electric fields. *Nano Letters*, **2007**, 7, 211-7	11.5	61
26	Microtubule acetylation promotes kinesin-1 binding and transport. *Current Biology*, **2006**, 16, 2166-72	6.3	670
25	Protein pattern assembly by active control of a triblock copolymer monolayer. *Nano Letters*, **2006**, 6, 2763-7	11.5	19
24	Efficient designs for powering microscale devices with nanoscale biomolecular motors. *Small*, **2006**, 2, 281-7	11	46
23	Back on track - on the role of the microtubule for kinesin motility and cellular function. *Journal of Muscle Research and Cell Motility*, **2006**, 27, 161-71	3.5	14
22	The E-hook of tubulin interacts with kinesin's head to increase processivity and speed. *Biophysical Journal*, **2005**, 89, 3223-34	2.9	43
21	A theoretical model of a molecular-motor-powered pump. *Biomedical Microdevices*, **2005**, 7, 21-33	3.7	23
20	Highly efficient guiding of microtubule transport with imprinted CYTOP nanotracks. *Small*, **2005**, 1, 409-14	11	57
19	Optics at critical intensity: applications to nanomorphing. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 5856-61	11.5	197

18	Nanoscale Protein Patterning by Imprint Lithography. *Nano Letters*, **2004**, 4, 853-857	11.5	251
17	A study of the deterministic character of optical damage by femtosecond laser pulses and applications to nanomachining. *Applied Physics B: Lasers and Optics*, **2003**, 77, 25-30	1.9	152
16	Single fungal kinesin motor molecules move processively along microtubules. *Biophysical Journal*, **2003**, 84, 1833-43	2.9	31
15	Different degrees of lever arm rotation control myosin step size. *Journal of Cell Biology*, **2003**, 161, 237-41	7.3	22
14	Toxoplasma gondii myosin A and its light chain: a fast, single-headed, plus-end-directed motor. *EMBO Journal*, **2002**, 21, 2149-58	13	185
13	Unusual properties of the fungal conventional kinesin neck domain from Neurospora crassa. *EMBO Journal*, **2001**, 20, 6226-35	13	30
12	Single-molecule tracking of myosins with genetically engineered amplifier domains. *Nature Structural Biology*, **2001**, 8, 226-9		102
11	Directional loading of the kinesin motor molecule as it buckles a microtubule. *Biophysical Journal*, **1996**, 70, 418-29	2.9	121
10	Characterization of the Bivalve Ultrafiltration System in Mytilus edulis, Chlamys hastata, and Mercenaria mercenaria. *Invertebrate Biology*, **1996**, 115, 20	1	6
9	The force generated by a single kinesin molecule against an elastic load. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 574-8	11.5	183
8	Kinesin follows the microtubule's protofilament axis. *Journal of Cell Biology*, **1993**, 121, 1083-93	7.3	303
7	Mechanical determinants of nectar-feeding energetics in butterflies: muscle mechanics, feeding geometry, and functional equivalence. *Oecologia*, **1989**, 79, 66-75	2.9	41
6	SIZE LIMITS IN ESCAPE LOCOMOTION OF CARRIDEAN SHRIMP. *Journal of Experimental Biology*, **1989**, 143, 245-265	3	53
5	Bivalve hemocyanins--a comparison with other molluscan hemocyanins. *Comparative Biochemistry and Physiology Part B: Comparative Biochemistry*, **1988**, 89, 189-95		8
4	Autoradiographic measurement of tritiated agmatine as an indicator of physiologic activity in Hermissenda visual and vestibular neurons. *Journal of Neurocytology*, **1986**, 15, 629-43		24
3	Hemocyanin respiratory pigment in bivalve mollusks. *Science*, **1986**, 231, 1302-4	33.3	31
2	Podocytes in bivalve molluscs: Morphological evidence for ultrafiltration. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **1985**, 156, 151-161	2.2	25
1	Accumulation of 109cadmium in extracellular granules in the kidney of the bivalve mollusc Mercenaria mercenaria (L.). *Marine Environmental Research*, **1985**, 17, 172-175	3.3	7