Zev Bryant

List of Publications by Year
in descending order

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34 papers	3,657 citations	257450 24 h-index	395702 33 g-index
36 all docs	36 docs citations	36 times ranked	3534 citing authors

#	Article	IF	Citations
1	Ten years of tension: single-molecule DNA mechanics. Nature, 2003, 421, 423-427.	27.8	1,203
2	Structural transitions and elasticity from torque measurements on DNA. Nature, 2003, 424, 338-341.	27.8	536
3	DNA overwinds when stretched. Nature, 2006, 442, 836-839.	27.8	358
4	Mechanochemical analysis of DNA gyrase using rotor bead tracking. Nature, 2006, 439, 100-104.	27.8	172
5	A Mechanosensitive RhoA Pathway that Protects Epithelia against Acute Tensile Stress. Developmental Cell, 2018, 47, 439-452.e6.	7.0	131
6	Multiple modes of Escherichia coli DNA gyrase activity revealed by force and torque. Nature Structural and Molecular Biology, 2007, 14, 264-271.	8.2	101
7	The power stroke of myosin VI and the basis of reverse directionality. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 772-777.	7.1	93
8	Torque measurements reveal sequence-specific cooperative transitions in supercoiled DNA. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6106-6111.	7.1	84
9	Remote control of myosin and kinesin motors using light-activated gearshifting. Nature Nanotechnology, 2014, 9, 693-697.	31.5	82
10	Gold rotor bead tracking for high-speed measurements of DNA twist, torque and extension. Nature Methods, 2014, 11, 456-462.	19.0	80
11	Recent developments in single-molecule DNA mechanics. Current Opinion in Structural Biology, 2012, 22, 304-312.	5.7	74
12	Spatiotemporal control of liquid crystal structure and dynamics through activity patterning. Nature Materials, 2021, 20, 875-882.	27.5	70
13	Engineering controllable bidirectional molecular motors based on myosin. Nature Nanotechnology, 2012, 7, 252-256.	31.5	69
14	Cas9 interrogates DNA in discrete steps modulated by mismatches and supercoiling. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 5853-5860.	7.1	62
15	ATP binding controls distinct structural transitions of Escherichia coli DNA gyrase in complex with DNA. Nature Structural and Molecular Biology, 2012, 19, 538-546.	8.2	61
16	Cryo-EM structures reveal specialization at the myosin VI-actin interface and a mechanism of force sensitivity. ELife, 2017, 6, .	6.0	58
17	Introduction: Molecular Motors. Chemical Reviews, 2020, 120, 1-4.	47.7	53
18	Machine learning active-nematic hydrodynamics. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	44

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19	Contribution of the myosin VI tail domain to processive stepping and intramolecular tension sensing. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7746-7750.	7.1	43
20	Engineering myosins for long-range transport on actin filaments. Nature Nanotechnology, 2014, 9, 33-38.	31.5	42
21	Detailed Tuning of Structure and Intramolecular Communication Are Dispensable for Processive Motion of Myosin VI. Biophysical Journal, 2011, 100, 430-439.	0.5	39
22	Rotation of endosomes demonstrates coordination of molecular motors during axonal transport. Science Advances, 2018, 4, e1602170.	10.3	38
23	Engineered Myosin VI Motors Reveal Minimal Structural Determinants of Directionality and Processivity. Journal of Molecular Biology, 2009, 392, 862-867.	4.2	33
24	Torque Spectroscopy of DNA: Base-Pair Stability, Boundary Effects, Backbending, and Breathing Dynamics. Physical Review Letters, 2013, 110, 178103.	7.8	33
25	Structural Dynamics and Mechanochemical Coupling in DNA Gyrase. Journal of Molecular Biology, 2016, 428, 1833-1845.	4.2	21
26	Controllable molecular motors engineered from myosin and RNA. Nature Nanotechnology, 2018, 13, 34-40.	31.5	19
27	Dynamic coupling between conformations and nucleotide states in DNA gyrase. Nature Chemical Biology, 2018, 14, 565-574.	8.0	18
28	Optical control of fast and processive engineered myosins in vitro and in living cells. Nature Chemical Biology, 2021, 17, 540-548.	8.0	17
29	Multimodal Measurements of Single-Molecule Dynamics Using FluoRBT. Biophysical Journal, 2018, 114, 278-282.	0.5	14
30	Modulated control of DNA supercoiling balance by the DNA-wrapping domain of bacterial gyrase. Nucleic Acids Research, 2020, 48, 2035-2049.	14.5	3
31	Multi-parameter measurements of conformational dynamics in nucleic acids and nucleoprotein complexes. Methods, 2019, 169, 69-77.	3.8	2
32	Engineering reconfigurable flow patterns via surface-driven light-controlled active matter. Physical Review Fluids, 2021, 6, .	2.5	2
33	Coarse-grained modeling reveals the impact ofÂsupercoiling and loop length in DNA looping kinetics. Biophysical Journal, 2022, 121, 1949-1962.	0.5	2
34	Curiosity-Based Biophysics Projects in a High School Setting with Graduate Student Mentorship. The Biophysicist, 2021, 2, 6-11.	0.3	0