

Michelle D Wang

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

63

papers

3,883

citations

32

h-index

62

g-index

69

ext. papers

4,554

ext. citations

14.7

avg, IF

5.49

L-index

#	Paper	IF	Citations
63	Mechanical disruption of individual nucleosomes reveals a reversible multistage release of DNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 1960-5	11.5	368
62	High-resolution dynamic mapping of histone-DNA interactions in a nucleosome. <i>Nature Structural and Molecular Biology</i> , 2009 , 16, 124-9	17.6	290
61	Optical torque wrench: angular trapping, rotation, and torque detection of quartz microparticles. <i>Physical Review Letters</i> , 2004 , 92, 190801	7.4	258
60	Single-molecule studies reveal dynamics of DNA unwinding by the ring-shaped T7 helicase. <i>Cell</i> , 2007 , 129, 1299-309	56.2	199
59	Transcription under torsion. <i>Science</i> , 2013 , 340, 1580-3	33.3	190
58	Specific contributions of histone tails and their acetylation to the mechanical stability of nucleosomes. <i>Journal of Molecular Biology</i> , 2005 , 346, 135-46	6.5	152
57	Abrupt buckling transition observed during the plectoneme formation of individual DNA molecules. <i>Physical Review Letters</i> , 2008 , 100, 148301	7.4	149
56	Single molecule analysis of RNA polymerase elongation reveals uniform kinetic behavior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 13538-43	11.5	145
55	Nanofabricated quartz cylinders for angular trapping: DNA supercoiling torque detection. <i>Nature Methods</i> , 2007 , 4, 223-5	21.6	138
54	Sequence-dependent kinetic model for transcription elongation by RNA polymerase. <i>Journal of Molecular Biology</i> , 2004 , 344, 335-49	6.5	131
53	Nanophotonic trapping for precise manipulation of biomolecular arrays. <i>Nature Nanotechnology</i> , 2014 , 9, 448-52	28.7	111
52	Probing protein-DNA interactions by unzipping a single DNA double helix. <i>Biophysical Journal</i> , 2002 , 83, 1098-105	2.9	107
51	Synergistic action of RNA polymerases in overcoming the nucleosomal barrier. <i>Nature Structural and Molecular Biology</i> , 2010 , 17, 745-52	17.6	98
50	Structure and Scm3-mediated assembly of budding yeast centromeric nucleosomes. <i>Nature Communications</i> , 2011 , 2, 313	17.4	95
49	Torque modulates nucleosome stability and facilitates H2A/H2B dimer loss. <i>Nature Communications</i> , 2013 , 4, 2579	17.4	91
48	Probing SWI/SNF remodeling of the nucleosome by unzipping single DNA molecules. <i>Nature Structural and Molecular Biology</i> , 2006 , 13, 549-54	17.6	83
47	ATP-induced helicase slippage reveals highly coordinated subunits. <i>Nature</i> , 2011 , 478, 132-5	50.4	82

46	Underwound DNA under tension: structure, elasticity, and sequence-dependent behaviors. <i>Physical Review Letters</i> , 2011 , 107, 108102	7.4	76
45	Dynamic force spectroscopy of protein-DNA interactions by unzipping DNA. <i>Physical Review Letters</i> , 2003 , 91, 028103	7.4	67
44	Mechanochemical kinetics of transcription elongation. <i>Physical Review Letters</i> , 2007 , 98, 068103	7.4	64
43	Torque measurement at the single-molecule level. <i>Annual Review of Biophysics</i> , 2013 , 42, 583-604	21.1	63
42	Dynamic regulation of transcription factors by nucleosome remodeling. <i>ELife</i> , 2015 , 4,	8.9	62
41	Twist-stretch coupling and phase transition during DNA supercoiling. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 4800-3	3.6	51
40	DNA supercoiling during transcription. <i>Biophysical Reviews</i> , 2016 , 8, 75-87	3.7	48
39	A single-molecule technique to study sequence-dependent transcription pausing. <i>Biophysical Journal</i> , 2004 , 87, 3945-53	2.9	47
38	Detection of high-affinity and sliding clamp modes for MSH2-MSH6 by single-molecule unzipping force analysis. <i>Molecular Cell</i> , 2005 , 20, 771-81	17.6	45
37	Detection of forces and displacements along the axial direction in an optical trap. <i>Biophysical Journal</i> , 2006 , 90, 657-67	2.9	42
36	Recent advances in single molecule studies of nucleosomes. <i>Current Opinion in Structural Biology</i> , 2012 , 22, 80-7	8.1	41
35	Optical tweezers in single-molecule biophysics. <i>Nature Reviews Methods Primers</i> , 2021 , 1,		39
34	Optical Tweezers: A Force to Be Reckoned With. <i>Cell</i> , 2018 , 175, 1445-1448	56.2	39
33	Mfd Dynamically Regulates Transcription via a Release and Catch-Up Mechanism. <i>Cell</i> , 2018 , 172, 344-357.e15	56.15	35
32	T7 replisome directly overcomes DNA damage. <i>Nature Communications</i> , 2015 , 6, 10260	17.4	34
31	Passive torque wrench and angular position detection using a single-beam optical trap. <i>Optics Letters</i> , 2010 , 35, 2949-51	3	28
30	Synergistic Coordination of Chromatin Torsional Mechanics and Topoisomerase Activity. <i>Cell</i> , 2019 , 179, 619-631.e15	56.2	26
29	Discontinuities at the DNA supercoiling transition. <i>Physical Review E</i> , 2009 , 80, 040901	2.4	26

28	Nanophotonic trapping: precise manipulation and measurement of biomolecular arrays. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2018 , 10, e1477	9.2	24
27	DNA looping mediates nucleosome transfer. <i>Nature Communications</i> , 2016 , 7, 13337	17.4	24
26	Single-molecule perspectives on helicase mechanisms and functions. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 2016 , 51, 15-25	8.7	22
25	DNA Y structure: a versatile, multidimensional single molecule assay. <i>Nano Letters</i> , 2014 , 14, 6475-80	11.5	22
24	Transcription factor regulation of RNA polymerase's torque generation capacity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 2583-2588	11.5	22
23	Unzipping single DNA molecules to study nucleosome structure and dynamics. <i>Methods in Enzymology</i> , 2012 , 513, 29-58	1.7	21
22	The Chd1 chromatin remodeler can sense both entry and exit sides of the nucleosome. <i>Nucleic Acids Research</i> , 2016 , 44, 7580-91	20.1	21
21	Electro-optofluidics: achieving dynamic control on-chip. <i>Optics Express</i> , 2012 , 20, 22314-26	3.3	19
20	Use of optical trapping techniques to study single-nucleosome dynamics. <i>Methods in Enzymology</i> , 2004 , 376, 62-72	1.7	18
19	Biocompatible and High Stiffness Nanophotonic Trap Array for Precise and Versatile Manipulation. <i>Nano Letters</i> , 2016 , 16, 6661-6667	11.5	18
18	Helicase promotes replication re-initiation from an RNA transcript. <i>Nature Communications</i> , 2018 , 9, 23067.4	16	
17	A257T linker region mutant of T7 helicase-primase protein is defective in DNA loading and rescued by T7 DNA polymerase. <i>Journal of Biological Chemistry</i> , 2011 , 286, 20490-9	5.4	14
16	Dextran-coated iron oxide nanoparticle-induced nanotoxicity in neuron cultures. <i>Scientific Reports</i> , 2020 , 10, 11239	4.9	14
15	Direct measurements of torque during Holliday junction migration. <i>Biophysical Journal</i> , 2011 , 101, L5-7	2.9	13
14	Single-molecule unzipping force analysis of HU-DNA complexes. <i>ChemBioChem</i> , 2013 , 14, 1954-7	3.8	12
13	Discovering the power of single molecules. <i>Cell</i> , 2014 , 157, 4-7	56.2	11
12	High Trap Stiffness Microcylinders for Nanophotonic Trapping. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 25074-25080	9.5	10
11	Towards biological applications of nanophotonic tweezers. <i>Current Opinion in Chemical Biology</i> , 2019 , 53, 158-166	9.7	10

10	High-Performance Image-Based Measurements of Biological Forces and Interactions in a Dual Optical Trap. <i>ACS Nano</i> , 2018 , 12, 11963-11974	16.7	10
9	Comparison of Pause Predictions of Two Sequence-Dependent Transcription Models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010 , 2010,	1.9	7
8	Single-Molecule Angular Optical Trapping for Studying Transcription Under Torsion. <i>Methods in Molecular Biology</i> , 2018 , 1805, 301-332	1.4	6
7	Tunable nanophotonic array traps with enhanced force and stability. <i>Optics Express</i> , 2017 , 25, 7907-7918	3.3	6
6	Molecular Highways-Navigating Collisions of DNA Motor Proteins. <i>Journal of Molecular Biology</i> , 2018 , 430, 4513-4524	6.5	3
5	Biochemistry. A DNA twist diffuses and hops. <i>Science</i> , 2012 , 338, 56-7	33.3	3
4	Torsional Stiffness of Extended and Plectonemic DNA. <i>Physical Review Letters</i> , 2021 , 127, 028101	7.4	3
3	Resonator nanophotonic standing-wave array trap for single-molecule manipulation and measurement.. <i>Nature Communications</i> , 2022 , 13, 77	17.4	1
2	A biophysicist marvels at the idea of grabbing microscopic particles with light by tweaking its phase. <i>Nature</i> , 2008 , 454, 921	50.4	
1	T7 DNA Polymerase Rescues the DNA Loading Defect of the A257T Linker Region Mutant of T7 Helicase-Primase Protein. <i>FASEB Journal</i> , 2011 , 25, 880.5	0.9	