Chirlmin Joo

List of Publications by Year
in descending order

89 papers	7,445 citations	101384 36 h-index	74018 75 g-index
107 all docs	107 docs citations	107 times ranked	7794 citing authors

#	Article	IF	Citations
1	Lin28 Mediates the Terminal Uridylation of let-7 Precursor MicroRNA. Molecular Cell, 2008, 32, 276-284.	4.5	885
2	TUT4 in Concert with Lin28 Suppresses MicroRNA Biogenesis through Pre-MicroRNA Uridylation. Cell, 2009, 138, 696-708.	13.5	730
3	Analysis of Single-Molecule FRET Trajectories Using Hidden Markov Modeling. Biophysical Journal, 2006, 91, 1941-1951.	0.2	690
4	Advances in Single-Molecule Fluorescence Methods for Molecular Biology. Annual Review of Biochemistry, 2008, 77, 51-76.	5.0	673
5	Single-Molecule Three-Color FRET. Biophysical Journal, 2004, 87, 1328-1337.	0.2	320
6	Paving the way to single-molecule protein sequencing. Nature Nanotechnology, 2018, 13, 786-796.	15.6	292
7	Real-Time Observation of RecA Filament Dynamics with Single Monomer Resolution. Cell, 2006, 126, 515-527.	13.5	285
8	Repetitive shuttling of a motor protein on DNA. Nature, 2005, 437, 1321-1325.	13.7	254
9	A Dynamic Search Process Underlies MicroRNA Targeting. Cell, 2015, 162, 96-107.	13.5	241
10	The emerging landscape of single-molecule protein sequencing technologies. Nature Methods, 2021, 18, 604-617.	9.0	198
11	Fueling protein DNA interactions inside porous nanocontainers. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 12646-12650.	3.3	159
12	Surface Passivation for Single-molecule Protein Studies. Journal of Visualized Experiments, 2014, , .	0.2	153
13	FRET-based dynamic structural biology: Challenges, perspectives and an appeal for open-science practices. ELife, 2021, 10, .	2.8	152
14	Singleâ€Molecule Fourâ€Color FRET. Angewandte Chemie - International Edition, 2010, 49, 9922-9925.	7.2	148
15	DNA-guided DNA cleavage at moderate temperatures by Clostridium butyricum Argonaute. Nucleic Acids Research, 2019, 47, 5809-5821.	6.5	115
16	Exploring Rare Conformational Species and Ionic Effects in DNA Holliday Junctions Using Single-molecule Spectroscopy. Journal of Molecular Biology, 2004, 341, 739-751.	2.0	111
17	Autonomous Generation and Loading of DNA Guides by Bacterial Argonaute. Molecular Cell, 2017, 65, 985-998.e6.	4.5	103
18	Two Distinct DNA Binding Modes Guide Dual Roles of a CRISPR-Cas Protein Complex. Molecular Cell, 2015, 58, 60-70.	4.5	100

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19	A single vesicle-vesicle fusion assay for in vitro studies of SNAREs and accessory proteins. Nature Protocols, 2012, 7, 921-934.	5.5	98
20	<scp>TUT</scp> 7 controls the fate of precursor micro <scp>RNA</scp> s by using three different uridylation mechanisms. EMBO Journal, 2015, 34, 1801-1815.	3.5	97
21	Distinct mechanisms regulating mechanical force-induced Ca2+ signals at the plasma membrane and the ER in human MSCs. ELife, 2015, 4, e04876.	2.8	90
22	Label-Free Detection of Post-translational Modifications with a Nanopore. Nano Letters, 2019, 19, 7957-7964.	4.5	88
23	TRBP ensures efficient Dicer processing of precursor microRNA in RNA-crowded environments. Nature Communications, 2016, 7, 13694.	5.8	80
24	<scp>CRISPR</scp> /Cas9 searches for a protospacer adjacent motif by lateral diffusion. EMBO Journal, 2019, 38, .	3.5	80
25	Water-mediated recognition of t1-adenosine anchors Argonaute2 to microRNA targets. ELife, 2015, 4, .	2.8	78
26	Resolving Chemical Modifications to a Single Amino Acid within a Peptide Using a Biological Nanopore. ACS Nano, 2019, 13, 13668-13676.	7.3	76
27	Singleâ€molecule approach to immunoprecipitated protein complexes: insights into miRNA uridylation. EMBO Reports, 2011, 12, 690-696.	2.0	70
28	SDS-assisted protein transport through solid-state nanopores. Nanoscale, 2017, 9, 11685-11693.	2.8	67
29	Real-Time Observation of Strand Exchange Reaction with High Spatiotemporal Resolution. Structure, 2011, 19, 1064-1073.	1.6	64
30	Single-molecule peptide fingerprinting. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3338-3343.	3.3	64
31	Helixâ€7 in Argonaute2 shapes the microRNA seed region for rapid target recognition. EMBO Journal, 2018, 37, 75-88.	3.5	63
32	Preparing Sample Chambers for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot071530.	0.2	59
33	Single-Molecule FRET with Total Internal Reflection Microscopy. Cold Spring Harbor Protocols, 2012, 2012, pdb.top072058.	0.2	57
34	Repetitive DNA Reeling by the Cascade-Cas3 Complex in Nucleotide Unwinding Steps. Molecular Cell, 2018, 70, 385-394.e3.	4.5	54
35	Single-molecule protein sequencing through fingerprinting: computational assessment. Physical Biology, 2015, 12, 055003.	0.8	53
36	Selective loading and processing of prespacers for precise CRISPR adaptation. Nature, 2020, 579, 141-145.	13.7	46

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37	High-Speed Super-Resolution Imaging Using Protein-Assisted DNA-PAINT. Nano Letters, 2020, 20, 2264-2270.	4.5	45
38	Why Argonaute is needed to make microRNA target search fast and reliable. Seminars in Cell and Developmental Biology, 2017, 65, 20-28.	2.3	41
39	Conditional Copperâ€Catalyzed Azideâ€"Alkyne Cycloaddition by Catalyst Encapsulation. Angewandte Chemie - International Edition, 2020, 59, 9340-9344.	7.2	33
40	mRNA structural dynamics shape Argonaute-target interactions. Nature Structural and Molecular Biology, 2020, 27, 790-801.	3.6	32
41	AutoStepfinder: A fast and automated step detection method for single-molecule analysis. Patterns, 2021, 2, 100256.	3.1	29
42	Bringing single-molecule spectroscopy to macromolecular protein complexes. Trends in Biochemical Sciences, 2013, 38, 30-37.	3.7	24
43	Cooperative Conformational Transitions Keep RecA Filament Active During ATPase Cycle. Journal of the American Chemical Society, 2014, 136, 14796-14800.	6.6	24
44	Completing the canvas: advances and challenges for DNA-PAINT super-resolution imaging. Trends in Biochemical Sciences, 2021, 46, 918-930.	3.7	23
45	RecA filament maintains structural integrity using ATP-driven internal dynamics. Science Advances, 2017, 3, e1700676.	4.7	21
46	High-Resolution Single-Molecule FRET via DNA eXchange (FRET X). Nano Letters, 2021, 21, 3295-3301.	4.5	21
47	Labeling DNA (or RNA) for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot071027-pdb.prot071027.	0.2	20
48	Evaluation of FRET X for single-molecule protein fingerprinting. IScience, 2021, 24, 103239.	1.9	18
49	Argonaute bypasses cellular obstacles without hindrance during target search. Nature Communications, 2019, 10, 4390.	5.8	16
50	Electro-Mechanical Conductance Modulation of a Nanopore Using a Removable Gate. ACS Nano, 2019, 13, 2398-2409.	7.3	16
51	Drift correction in localization microscopy using entropy minimization. Optics Express, 2021, 29, 27961.	1.7	14
52	Single-molecule pull-down for investigating proteinâ€"nucleic acid interactions. Methods, 2016, 105, 99-108.	1.9	12
53	Single-Molecule View of Small RNAâ€"Guided Target Search and Recognition. Annual Review of Biophysics, 2018, 47, 569-593.	4.5	12
54	Tetrameric architecture of an active phenol-bound form of the AAA+ transcriptional regulator DmpR. Nature Communications, 2020, 11, 2728.	5.8	12

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55	Multiplex Single-Molecule DNA Barcoding Using an Oligonucleotide Ligation Assay. Biophysical Journal, 2018, 115, 957-967.	0.2	11
56	Targeting G-quadruplex Forming Sequences with Cas9. ACS Chemical Biology, 2021, 16, 596-603.	1.6	11
57	Dynamic Growth and Shrinkage Govern the pH Dependence of RecA Filament Stability. PLoS ONE, 2015, 10, e0115611.	1.1	9
58	Viral suppressors of RNAi employ a rapid screening mode to discriminate viral RNA from cellular small RNA. Nucleic Acids Research, 2018, 46, 3187-3197.	6.5	8
59	Labeling Proteins for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot071035-pdb.prot071035.	0.2	7
60	Facilitated diffusion of Argonaute-mediated target search. RNA Biology, 2019, 16, 1093-1107.	1.5	7
61	FRETboard: Semisupervised classification of FRET traces. Biophysical Journal, 2021, 120, 3253-3260.	0.2	7
62	Molecular mechanism of sequence-dependent stability of RecA filament. Nucleic Acids Research, 2013, 41, 7738-7744.	6.5	6
63	Imaging and Identifying Impurities in Single-Molecule FRET Studies. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot071548-pdb.prot071548.	0.2	5
64	Objective-Type Total Internal Reflection Microscopy (Emission) for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot072033.	0.2	5
65	Prism-Type Total Internal Reflection Microscopy for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot072041-pdb.prot072041.	0.2	5
66	Single-molecule FRET studies of Cas9 endonuclease. Methods in Enzymology, 2019, 616, 313-335.	0.4	5
67	Small RNA-directed DNA elimination: the molecular mechanism and its potential for genome editing. RNA Biology, 2021, 18, 1540-1545.	1.5	3
68	Exploring molecular biology in sequence space: The road to next-generation single-molecule biophysics. Molecular Cell, 2022, 82, 1788-1805.	4.5	3
69	Single-Molecule Peptide Fingerprinting. Biophysical Journal, 2017, 112, 471a.	0.2	2
70	Objective-Type Total Internal Reflection Microscopy (Excitation) for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot072025.	0.2	1
71	Single-Molecule Protein Fingerprinting with Nanopores. Biophysical Journal, 2017, 112, 330a.	0.2	1
72	Engineering ClpXP for Single-Molecule Protein Sequencing. Biophysical Journal, 2017, 112, 151a.	0.2	1

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73	Single-Molecule Protein Fingerprinting using Nanopores. Biophysical Journal, 2019, 116, 316a.	0.2	1
74	Single-Molecule Study on Microrna Machineries: Micrornaprocessing With Immunoprecipitates At the Single-Molecule Level. Biophysical Journal, 2010, 98, 75a.	0.2	0
75	Single Molecule Observation of MicroRNA Processing Enzymes at Action. Biophysical Journal, 2012, 102, 486a.	0.2	0
76	Unfolding and Degradation of Proteins by ClpXP Monitored with Single Molecule FRET. Biophysical Journal, 2013, 104, 515a.	0.2	0
77	RecA Filament Migration on a Single-Stranded DNA. Biophysical Journal, 2013, 104, 77a.	0.2	0
78	The ATP Hydrolysis Cycle and the Corresponding Motion of RecA Filament on Single-Stranded DNA. Biophysical Journal, 2013, 104, 541a.	0.2	0
79	Defense Against Viral Attack: Single-Molecule View on a Bacterial Adaptive Immune System. Biophysical Journal, 2014, 106, 22a.	0.2	0
80	Weak Interactions between Risc and mRNA Promote Optimal Targeting in RNA Interference. Biophysical Journal, 2014, 106, 496a.	0.2	0
81	Single-Molecule View on the Duality of Microrna Uridylation. Biophysical Journal, 2014, 106, 698a.	0.2	0
82	Argonaute Target Search is Facilitated by Long Distance Diffusion. Biophysical Journal, 2017, 112, 314a.	0.2	0
83	Shedding Light on Cas9 Target Search. Biophysical Journal, 2017, 112, 71a.	0.2	0
84	Repetitive Loop Formation by the CRISPR-Cas3 Helicase. Biophysical Journal, 2017, 112, 71a.	0.2	0
85	Single-Molecule Fluorescence Study of RNA Recognition by Viral RNAi Suppressors. Biophysical Journal, 2017, 112, 151a.	0.2	0
86	Probing RNAâ€“Protein Interactions with Single-Molecule Pull-Down Assays. Methods in Molecular Biology, 2018, 1814, 267-285.	0.4	0
87	Leaders of the field: What does the future hold for single molecule technology?. IScience, 2021, 24, 103161.	1.9	0
88	Single Molecule Studies of Protein-DNA Interactions inside Porous Nanocontainers. , 2008, , .		0
89	Biophysics of RNA-Guided CRISPR Immunity. Biological and Medical Physics Series, 2019, , 189-210.	0.3	0