

Chirlmin Joo

List of Publications by Year in descending order

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Version: 2024-02-01

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	Exploring molecular biology in sequence space: The road to next-generation single-molecule biophysics. <i>Molecular Cell</i> , 2022, 82, 1788-1805.	4.5	3
2	Small RNA-directed DNA elimination: the molecular mechanism and its potential for genome editing. <i>RNA Biology</i> , 2021, 18, 1540-1545.	1.5	3
3	FRET-based dynamic structural biology: Challenges, perspectives and an appeal for open-science practices. <i>ELife</i> , 2021, 10, .	2.8	152
4	High-Resolution Single-Molecule FRET via DNA eXchange (FRET X). <i>Nano Letters</i> , 2021, 21, 3295-3301.	4.5	21
5	Targeting G-quadruplex Forming Sequences with Cas9. <i>ACS Chemical Biology</i> , 2021, 16, 596-603.	1.6	11
6	AutoStepfinder: A fast and automated step detection method for single-molecule analysis. <i>Patterns</i> , 2021, 2, 100256.	3.1	29
7	The emerging landscape of single-molecule protein sequencing technologies. <i>Nature Methods</i> , 2021, 18, 604-617.	9.0	198
8	Completing the canvas: advances and challenges for DNA-PAINT super-resolution imaging. <i>Trends in Biochemical Sciences</i> , 2021, 46, 918-930.	3.7	23
9	FRETboard: Semisupervised classification of FRET traces. <i>Biophysical Journal</i> , 2021, 120, 3253-3260.	0.2	7
10	Drift correction in localization microscopy using entropy minimization. <i>Optics Express</i> , 2021, 29, 27961.	1.7	14
11	Leaders of the field: What does the future hold for single molecule technology?. <i>IScience</i> , 2021, 24, 103161.	1.9	0
12	Evaluation of FRET X for single-molecule protein fingerprinting. <i>IScience</i> , 2021, 24, 103239.	1.9	18
13	mRNA structural dynamics shape Argonaute-target interactions. <i>Nature Structural and Molecular Biology</i> , 2020, 27, 790-801.	3.6	32
14	Tetrameric architecture of an active phenol-bound form of the AAA+ transcriptional regulator DmpR. <i>Nature Communications</i> , 2020, 11, 2728.	5.8	12
15	Conditional Copper-catalyzed Azide-Alkyne Cycloaddition by Catalyst Encapsulation. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 9340-9344.	7.2	33
16	High-Speed Super-Resolution Imaging Using Protein-Assisted DNA-PAINT. <i>Nano Letters</i> , 2020, 20, 2264-2270.	4.5	45
17	Selective loading and processing of prespacers for precise CRISPR adaptation. <i>Nature</i> , 2020, 579, 141-145.	13.7	46
18	Label-Free Detection of Post-translational Modifications with a Nanopore. <i>Nano Letters</i> , 2019, 19, 7957-7964.	4.5	88

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19	Resolving Chemical Modifications to a Single Amino Acid within a Peptide Using a Biological Nanopore. ACS Nano, 2019, 13, 13668-13676.	7.3	76
20	Argonaute bypasses cellular obstacles without hindrance during target search. Nature Communications, 2019, 10, 4390.	5.8	16
21	Electro-Mechanical Conductance Modulation of a Nanopore Using a Removable Gate. ACS Nano, 2019, 13, 2398-2409.	7.3	16
22	Facilitated diffusion of Argonaute-mediated target search. RNA Biology, 2019, 16, 1093-1107.	1.5	7
23	DNA-guided DNA cleavage at moderate temperatures by Clostridium butyricum Argonaute. Nucleic Acids Research, 2019, 47, 5809-5821.	6.5	115
24	Single-Molecule Protein Fingerprinting using Nanopores. Biophysical Journal, 2019, 116, 316a.	0.2	1
25	<scp>CRISPR</scp> /Cas9 searches for a protospacer adjacent motif by lateral diffusion. EMBO Journal, 2019, 38, .	3.5	80
26	Single-molecule FRET studies of Cas9 endonuclease. Methods in Enzymology, 2019, 616, 313-335.	0.4	5
27	Biophysics of RNA-Guided CRISPR Immunity. Biological and Medical Physics Series, 2019, , 189-210.	0.3	0
28	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
29	Repetitive DNA Reeling by the Cascade-Cas3 Complex in Nucleotide Unwinding Steps. Molecular Cell, 2018, 70, 385-394.e3.	4.5	54
30	Single-Molecule View of Small RNA-Guided Target Search and Recognition. Annual Review of Biophysics, 2018, 47, 569-593.	4.5	12
31	Single-molecule peptide fingerprinting. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3338-3343.	3.3	64
32	Helix α 7 in Argonaute2 shapes the microRNA seed region for rapid target recognition. EMBO Journal, 2018, 37, 75-88.	3.5	63
33	Paving the way to single-molecule protein sequencing. Nature Nanotechnology, 2018, 13, 786-796.	15.6	292
34	Multiplex Single-Molecule DNA Barcoding Using an Oligonucleotide Ligation Assay. Biophysical Journal, 2018, 115, 957-967.	0.2	11
35	Probing RNA-Protein Interactions with Single-Molecule Pull-Down Assays. Methods in Molecular Biology, 2018, 1814, 267-285.	0.4	0
36	Single-Molecule Protein Fingerprinting with Nanopores. Biophysical Journal, 2017, 112, 330a.	0.2	1

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37	Autonomous Generation and Loading of DNA Guides by Bacterial Argonaute. <i>Molecular Cell</i> , 2017, 65, 985-998.e6.	4.5	103
38	Argonaute Target Search is Facilitated by Long Distance Diffusion. <i>Biophysical Journal</i> , 2017, 112, 314a.	0.2	0
39	Single-Molecule Peptide Fingerprinting. <i>Biophysical Journal</i> , 2017, 112, 471a.	0.2	2
40	Shedding Light on Cas9 Target Search. <i>Biophysical Journal</i> , 2017, 112, 71a.	0.2	0
41	Repetitive Loop Formation by the CRISPR-Cas3 Helicase. <i>Biophysical Journal</i> , 2017, 112, 71a.	0.2	0
42	Single-Molecule Fluorescence Study of RNA Recognition by Viral RNAi Suppressors. <i>Biophysical Journal</i> , 2017, 112, 151a.	0.2	0
43	Engineering ClpXP for Single-Molecule Protein Sequencing. <i>Biophysical Journal</i> , 2017, 112, 151a.	0.2	1
44	RecA filament maintains structural integrity using ATP-driven internal dynamics. <i>Science Advances</i> , 2017, 3, e1700676.	4.7	21
45	SDS-assisted protein transport through solid-state nanopores. <i>Nanoscale</i> , 2017, 9, 11685-11693.	2.8	67
46	Why Argonaute is needed to make microRNA target search fast and reliable. <i>Seminars in Cell and Developmental Biology</i> , 2017, 65, 20-28.	2.3	41
47	TRBP ensures efficient Dicer processing of precursor microRNA in RNA-crowded environments. <i>Nature Communications</i> , 2016, 7, 13694.	5.8	80
48	Single-molecule pull-down for investigating protein-nucleic acid interactions. <i>Methods</i> , 2016, 105, 99-108.	1.9	12
49	Water-mediated recognition of t1-adenosine anchors Argonaute2 to microRNA targets. <i>ELife</i> , 2015, 4, .	2.8	78
50	<scp>TUT</scp> 7 controls the fate of precursor micro <scp>RNA</scp> s by using three different uridylation mechanisms. <i>EMBO Journal</i> , 2015, 34, 1801-1815.	3.5	97
51	Two Distinct DNA Binding Modes Guide Dual Roles of a CRISPR-Cas Protein Complex. <i>Molecular Cell</i> , 2015, 58, 60-70.	4.5	100
52	A Dynamic Search Process Underlies MicroRNA Targeting. <i>Cell</i> , 2015, 162, 96-107.	18.5	241
53	Single-molecule protein sequencing through fingerprinting: computational assessment. <i>Physical Biology</i> , 2015, 12, 055003.	0.8	53
54	Dynamic Growth and Shrinkage Govern the pH Dependence of RecA Filament Stability. <i>PLoS ONE</i> , 2015, 10, e0115611.	1.1	9

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55	Distinct mechanisms regulating mechanical force-induced Ca ²⁺ signals at the plasma membrane and the ER in human MSCs. <i>ELife</i> , 2015, 4, e04876.	2.8	90
56	Defense Against Viral Attack: Single-Molecule View on a Bacterial Adaptive Immune System. <i>Biophysical Journal</i> , 2014, 106, 22a.	0.2	0
57	Cooperative Conformational Transitions Keep RecA Filament Active During ATPase Cycle. <i>Journal of the American Chemical Society</i> , 2014, 136, 14796-14800.	6.6	24
58	Weak Interactions between Risc and mRNA Promote Optimal Targeting in RNA Interference. <i>Biophysical Journal</i> , 2014, 106, 496a.	0.2	0
59	Single-Molecule View on the Duality of Microna Uridylation. <i>Biophysical Journal</i> , 2014, 106, 698a.	0.2	0
60	Surface Passivation for Single-molecule Protein Studies. <i>Journal of Visualized Experiments</i> , 2014, , .	0.2	153
61	Unfolding and Degradation of Proteins by ClpXP Monitored with Single Molecule FRET. <i>Biophysical Journal</i> , 2013, 104, 515a.	0.2	0
62	RecA Filament Migration on a Single-Stranded DNA. <i>Biophysical Journal</i> , 2013, 104, 77a.	0.2	0
63	The ATP Hydrolysis Cycle and the Corresponding Motion of RecA Filament on Single-Stranded DNA. <i>Biophysical Journal</i> , 2013, 104, 541a.	0.2	0
64	Bringing single-molecule spectroscopy to macromolecular protein complexes. <i>Trends in Biochemical Sciences</i> , 2013, 38, 30-37.	3.7	24
65	Molecular mechanism of sequence-dependent stability of RecA filament. <i>Nucleic Acids Research</i> , 2013, 41, 7738-7744.	6.5	6
66	Preparing Sample Chambers for Single-Molecule FRET. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot071530.	0.2	59
67	Objective-Type Total Internal Reflection Microscopy (Excitation) for Single-Molecule FRET. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot072025.	0.2	1
68	Single-Molecule FRET with Total Internal Reflection Microscopy. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.top072058.	0.2	57
69	Imaging and Identifying Impurities in Single-Molecule FRET Studies. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot071548-pdb.prot071548.	0.2	5
70	Objective-Type Total Internal Reflection Microscopy (Emission) for Single-Molecule FRET. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot072033.	0.2	5
71	Prism-Type Total Internal Reflection Microscopy for Single-Molecule FRET. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot072041-pdb.prot072041.	0.2	5
72	Single Molecule Observation of MicroRNA Processing Enzymes at Action. <i>Biophysical Journal</i> , 2012, 102, 486a.	0.2	0

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73	Labeling Proteins for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot071035-pdb.prot071035.	0.2	7
74	Labeling DNA (or RNA) for Single-Molecule FRET. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot071027-pdb.prot071027.	0.2	20
75	A single vesicle-vesicle fusion assay for in vitro studies of SNAREs and accessory proteins. Nature Protocols, 2012, 7, 921-934.	5.5	98
76	Real-Time Observation of Strand Exchange Reaction with High Spatiotemporal Resolution. Structure, 2011, 19, 1064-1073.	1.6	64
77	Single-molecule approach to immunoprecipitated protein complexes: insights into miRNA uridylation. EMBO Reports, 2011, 12, 690-696.	2.0	70
78	Single-Molecule Four-Color FRET. Angewandte Chemie - International Edition, 2010, 49, 9922-9925.	7.2	148
79	Single-Molecule Study on MicroRNA Machineries: MicroRNA processing With Immunoprecipitates At the Single-Molecule Level. Biophysical Journal, 2010, 98, 75a.	0.2	0
80	TUT4 in Concert with Lin28 Suppresses MicroRNA Biogenesis through Pre-MicroRNA Uridylation. Cell, 2009, 138, 696-708.	13.5	730
81	Advances in Single-Molecule Fluorescence Methods for Molecular Biology. Annual Review of Biochemistry, 2008, 77, 51-76.	5.0	673
82	Lin28 Mediates the Terminal Uridylation of let-7 Precursor MicroRNA. Molecular Cell, 2008, 32, 276-284.	4.5	885
83	Single Molecule Studies of Protein-DNA Interactions inside Porous Nanocontainers. , 2008, , .		0
84	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
85	Analysis of Single-Molecule FRET Trajectories Using Hidden Markov Modeling. Biophysical Journal, 2006, 91, 1941-1951.	0.2	690
86	Real-Time Observation of RecA Filament Dynamics with Single Monomer Resolution. Cell, 2006, 126, 515-527.	13.5	285
87	Repetitive shuttling of a motor protein on DNA. Nature, 2005, 437, 1321-1325.	13.7	254
88	Single-Molecule Three-Color FRET. Biophysical Journal, 2004, 87, 1328-1337.	0.2	320
89	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