Nils G Walter

List of Publications by Year
in descending order

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223 papers	11,818 citations	26567 56 h-index	33814 99 g-index

257 all docs	257 docs citations	257 times ranked	9640 citing authors

#	Article	IF	Citations
1	A guide to accelerated direct digital counting of single nucleic acid molecules by FRET-based intramolecular kinetic fingerprinting. Methods, 2022, 197, 63-73.	1.9	4
2	An anionic ligand snap-locks a long-range interaction in a magnesium-folded riboswitch. Nature Communications, 2022, 13, 207.	5.8	15
3	Attomolar Sensitivity in Single Biomarker Counting upon Aqueous Two-Phase Surface Enrichment. ACS Sensors, 2022, , .	4.0	4
4	Hyperosmotic phase separation: Condensates beyond inclusions, granules and organelles. Journal of Biological Chemistry, 2021, 296, 100044.	1.6	31
5	Sisyphus observed: Unraveling the high ATP usage of an RNA chaperone. Journal of Biological Chemistry, 2021, 296, 100265.	1.6	0
6	Single bacterial resolvases first exploit, then constrain intrinsic dynamics of the Holliday junction to direct recombination. Nucleic Acids Research, 2021, 49, 2803-2815.	6.5	7
7	Regulating DNA Self-Assembly Dynamics with Controlled Nucleation. ACS Nano, 2021, 15, 5384-5396.	7.3	8
8	A translational riboswitch coordinates nascent transcriptionâ€“translation coupling. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	38
9	Rapid kinetic fingerprinting of single nucleic acid molecules by a FRET-based dynamic nanosensor. Biosensors and Bioelectronics, 2021, 190, 113433.	5.3	10
10	From Flatland to Jupiter: Searching for Rules of Interaction Across Biological Scales. Integrative and Comparative Biology, 2021, , .	0.9	1
11	Direct Kinetic Fingerprinting for High-Accuracy Single-Molecule Counting of Diverse Disease Biomarkers. Accounts of Chemical Research, 2021, 54, 388-402.	7.6	30
12	The International Society of RNA Nanotechnology and Nanomedicine (ISRNN): The Present and Future of the Burgeoning Field. ACS Nano, 2021, 15, 16957-16973.	7.3	19
13	Dynamic competition between a ligand and transcription factor NusA governs riboswitch-mediated transcription regulation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	20
14	Protein unties the pseudoknot: S1-mediated unfolding of RNA higher order structure. Nucleic Acids Research, 2020, 48, 2107-2125.	6.5	23
15	Ultraspecific analyte detection by direct kinetic fingerprinting of single molecules. TrAC - Trends in Analytical Chemistry, 2020, 123, 115764.	5.8	14
16	Multivalent Proteins Rapidly and Reversibly Phase-Separate upon Osmotic Cell Volume Change. Molecular Cell, 2020, 79, 978-990.e5.	4.5	86
17	RNA Trafficking between Membraneless Organelles at Single-Molecule Resolution in Live Cells. Biophysical Journal, 2020, 118, 467a-468a.	0.2	0
18	Competition between Ligand Binding and Transcription Rate Modulates Riboswitch-Mediated Regulation of Transcription. Biophysical Journal, 2020, 118, 68a.	0.2	2

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19	Direct Identification and Counting of Mirnas in Single Cells by Transient Hybridization and Kinetic Fingerprinting. Biophysical Journal, 2020, 118, 349a.	0.2	0
20	Direct kinetic fingerprinting and digital counting of single protein molecules. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 22815-22822.	3.3	35
21	Automatic classification and segmentation of single-molecule fluorescence time traces with deep learning. Nature Communications, 2020, 11, 5833.	5.8	26
22	The University of Michigan SMART Center: A Case Study of a Specialized Single Molecule Core Facility's Role in Synergistic Enhancement of Institutional Research. Microscopy and Microanalysis, 2020, 26, 2246-2246.	0.2	0
23	Cytoplasmic TDP43 Binds microRNAs: New Disease Targets in Amyotrophic Lateral Sclerosis. Frontiers in Cellular Neuroscience, 2020, 14, 117.	1.8	17
24	Macromolecular Condensation Facilitates Largely 3D mRNA Target Search by Micrornas. Biophysical Journal, 2020, 118, 223a.	0.2	0
25	Interaction between Transcription and Translation Machineries on a Nascent RNA with Higher Order Structure. Biophysical Journal, 2020, 118, 544a.	0.2	0
26	CpG Methylation Detection with Single-Molecule Recognition through Equilibrium Poisson Sampling. Biophysical Journal, 2020, 118, 466a.	0.2	0
27	Export/Import of Exosomal cIRS-7: A Single Molecule Analysis of Circular RNA Trafficking. Biophysical Journal, 2020, 118, 573a.	0.2	0
28	Following the messenger: Recent innovations in live cell single molecule fluorescence imaging. Wiley Interdisciplinary Reviews RNA, 2020, 11, e1587.	3.2	24
29	Transcriptional Riboswitches Integrate Timescales for Bacterial Gene Expression Control. Frontiers in Molecular Biosciences, 2020, 7, 607158.	1.6	38
30	A guide to nucleic acid detection by single-molecule kinetic fingerprinting. Methods, 2019, 153, 3-12.	1.9	31
31	Versatile transcription control based on reversible dCas9 binding. Rna, 2019, 25, 1457-1469.	1.6	13
32	Biological Pathway Specificity in the Cellâ€”Does Molecular Diversity Matter?. BioEssays, 2019, 41, 1800244.	1.2	9
33	Local-to-global signal transduction at the core of a Mn2+ sensing riboswitch. Nature Communications, 2019, 10, 4304.	5.8	24
34	Introduction to â€œConvergence of Science and Technology: Fluorescent Resolution of Single RNA Moleculesâ€• Methods, 2019, 153, 1-2.	1.9	0
35	Quantitative Mapping of Endosomal DNA Processing by Single Molecule Counting. Angewandte Chemie, 2019, 131, 3105-3108.	1.6	4
36	Quantitative Mapping of Endosomal DNA Processing by Single Molecule Counting. Angewandte Chemie - International Edition, 2019, 58, 3073-3076.	7.2	16

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37	Coming Together: RNAs and Proteins Assemble under the Single-Molecule Fluorescence Microscope. Cold Spring Harbor Perspectives in Biology, 2019, 11, a032441.	2.3	10
38	Dynamic Recruitment of Single RNAs to Processing Bodies Depends on RNA Functionality. Molecular Cell, 2019, 74, 521-533.e6.	4.5	100
39	Probing RNA structure and interaction dynamics at the single molecule level. Methods, 2019, 162-163, 3-11.	1.9	15
40	Single-Molecule Kinetic Fingerprinting for the Ultrasensitive Detection of Small Molecules with Aptasensors. Analytical Chemistry, 2019, 91, 1424-1431.	3.2	24
41	Kinetics coming into focus: single-molecule microscopy of riboswitch dynamics. RNA Biology, 2019, 16, 1077-1085.	1.5	25
42	Super-resolution imaging identifies PARP1 and the Ku complex acting as DNA double-strand break sensors. Nucleic Acids Research, 2018, 46, 3446-3457.	6.5	88
43	Introductionâ€"RNA: From Single Molecules to Medicine. Chemical Reviews, 2018, 118, 4117-4119.	23.0	7
44	A bio-hybrid DNA rotorâ€"stator nanoengine that moves along predefined tracks. Nature Nanotechnology, 2018, 13, 496-503.	15.6	100
45	Life under the Microscope: Single-Molecule Fluorescence Highlights the RNA World. Chemical Reviews, 2018, 118, 4120-4155.	23.0	56
46	RNA Structural Dynamics As Captured by Molecular Simulations: A Comprehensive Overview. Chemical Reviews, 2018, 118, 4177-4338.	23.0	408
47	From â€œCellularâ€•RNA to â€œSmartâ€•RNA: Multiple Roles of RNA in Genome Stability and Beyond. Chemical Reviews, 2018, 118, 4365-4403.	23.0	63
48	Soft Interactions with Model Crowders and Non-canonical Interactions with Cellular Proteins Stabilize RNA Folding. Journal of Molecular Biology, 2018, 430, 509-523.	2.0	25
49	Ligand Modulates Cross-Coupling between Riboswitch Folding and Transcriptional Pausing. Molecular Cell, 2018, 72, 541-552.e6.	4.5	48
50	Hierarchical mechanism of amino acid sensing by the T-box riboswitch. Nature Communications, 2018, 9, 1896.	5.8	30
51	Exploring the speed limit of toehold exchange with a cartwheeling DNA acrobat. Nature Nanotechnology, 2018, 13, 723-729.	15.6	109
52	Ultraspecific and Amplification-Free Quantification of Mutant DNA by Single-Molecule Kinetic Fingerprinting. Journal of the American Chemical Society, 2018, 140, 11755-11762.	6.6	43
53	Single-Molecule Fluorescence Resonance Energy Transfer. , 2018, , 1-9.		0
54	Resolving Subcellular miRNA Trafficking and Turnover at Single-Molecule Resolution. Cell Reports, 2017, 19, 630-642.	2.9	74

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55	Tracking Single DNA Nanodevices in Hierarchically Meso-Macroporous Antimony-Doped Tin Oxide Demonstrates Finite Confinement. Langmuir, 2017, 33, 6410-6418.	1.6	3
56	Single Molecules in Focus: From RNA Splicing to Silencing. Biophysical Journal, 2017, 112, 6a.	0.2	0
57	In vitro labeling strategies for in cellulo fluorescence microscopy of single ribonucleoprotein machines. Protein Science, 2017, 26, 1363-1379.	3.1	14
58	Damage-induced lncRNAs control the DNA damage response through interaction with DDRNAs at individual double-strand breaks. Nature Cell Biology, 2017, 19, 1400-1411.	4.6	288
59	Tuning RNA folding and function through rational design of junction topology. Nucleic Acids Research, 2017, 45, 9706-9715.	6.5	7
60	Putting Humptyâ€“Dumpty Together. Methods in Enzymology, 2016, 581, 257-283.	0.4	3
61	Double-Stranded RNA Interacts With Toll-Like Receptor 3 in Driving the Acute Inflammatory Response Following Lung Contusion. Critical Care Medicine, 2016, 44, e1054-e1066.	0.4	24
62	A novel method to accurately locate and count large numbers of steps by photobleaching. Molecular Biology of the Cell, 2016, 27, 3601-3615.	0.9	56
63	Assembly of multienzyme complexes on DNA nanostructures. Nature Protocols, 2016, 11, 2243-2273.	5.5	100
64	Introductory editorial: Special section on single-molecule and super-resolution microscopy of biopolymers. Biopolymers, 2016, 105, 669-669.	1.2	1
65	The Shine-Dalgarno sequence of riboswitch-regulated single mRNAs shows ligand-dependent accessibility bursts. Nature Communications, 2016, 7, 8976.	5.8	56
66	Nanocaged enzymes with enhanced catalytic activity and increased stability against protease digestion. Nature Communications, 2016, 7, 10619.	5.8	346
67	KRAS Engages AGO2 to Enhance Cellular Transformation. Cell Reports, 2016, 14, 1448-1461.	2.9	41
68	Spliceosomal DEAH-Box ATPases Remodel Pre-mRNA to Activate Alternative Splice Sites. Cell, 2016, 164, 985-998.	13.5	133
69	Rational design of DNA-actuated enzyme nanoreactors guided by single molecule analysis. Nanoscale, 2016, 8, 3125-3137.	2.8	21
70	Abstract LB-008: KRAS engages AGO2 to enhance cellular transformation. , 2016, , .		0
71	Mechanical Modulation of Enzyme Activity by Rationally Designed DNA Tweezers: From the Ensemble to the Single-Molecule Level. Biophysical Journal, 2015, 108, 186a-187a.	0.2	0
72	Meeting report: <scp>SMART</scp> timingâ€”principles of single molecule techniques course at the University of Michigan 2014. Biopolymers, 2015, 103, 296-302.	1.2	0

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73	The kinase activity of the Ser/Thr kinase BUB1 promotes TGF-Î² signaling. Science Signaling, 2015, 8, ra1.	1.6	72
74	Single-Molecule Pull-Down FRET to Dissect the Mechanisms of Biomolecular Machines. Methods in Enzymology, 2015, 558, 539-570.	0.4	7
75	The role of an active site Mg²⁺ in HDV ribozyme self-cleavage: insights from QM/MM calculations. Physical Chemistry Chemical Physics, 2015, 17, 670-679.	1.3	28
76	Kinetic fingerprinting to identify and count single nucleic acids. Nature Biotechnology, 2015, 33, 730-732.	9.4	120
77	Electron Microscopic Visualization of Protein Assemblies on Flattened DNA Origami. ACS Nano, 2015, 9, 7133-7141.	7.3	20
78	Going viral: riding the RNA wave to discovery. Rna, 2015, 21, 756-757.	1.6	3
79	Structural analysis of a class III preQ ₁ riboswitch reveals an aptamer distant from a ribosome-binding site regulated by fast dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3485-94.	3.3	62
80	Synthesis and thermal stability of zirconia and yttria-stabilized zirconia microspheres. Journal of Colloid and Interface Science, 2015, 448, 582-592.	5.0	70
81	Reactive Conformation of the Active Site in the Hairpin Ribozyme Achieved by Molecular Dynamics Simulations with Îµ/Î¶ Force Field Reparametrizations. Journal of Physical Chemistry B, 2015, 119, 4220-4229.	1.2	45
82	Single Molecule Cluster Analysis dissects splicing pathway conformational dynamics. Nature Methods, 2015, 12, 1077-1084.	9.0	34
83	Chemical feasibility of the general acid/base mechanism of glmS ribozyme selfâ€cleavage. Biopolymers, 2015, 103, 550-562.	1.2	9
84	6 Metal Ions: Supporting Actors in the Playbook of Small Ribozymes. , 2015, , 175-196.		0
85	Mg²⁺ Shifts Ligand-Mediated Folding of a Riboswitch from Induced-Fit to Conformational Selection. Journal of the American Chemical Society, 2015, 137, 14075-14083.	6.6	86
86	Wobble pairs of the HDV ribozyme play specific roles in stabilization of active site dynamics. Physical Chemistry Chemical Physics, 2015, 17, 5887-5900.	1.3	6
87	Native Purification and Labeling of RNA for Single Molecule Fluorescence Studies. Methods in Molecular Biology, 2015, 1240, 63-95.	0.4	29
88	Abstract LB-058: Novel interactions of the RAS oncoprotein. , 2015, , .		0
89	Riboswitch Structure and Dynamics by smFRET Microscopy. Methods in Enzymology, 2014, 549, 343-373.	0.4	27
90	Singleâ€molecule enzymology Ã la Michaelisâ€“Menten. FEBS Journal, 2014, 281, 518-530.	2.2	56

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91	Single-molecule tools for enzymology, structural biology, systems biology and nanotechnology: an update. Archives of Toxicology, 2014, 88, 1965-1985.	1.9	19
92	Single Molecule Characterization of Pre-mRNA Dynamics throughout Spliceosome Assembly and Catalysis. Biophysical Journal, 2014, 106, 494a.	0.2	0
93	Discovering anomalous hybridization kinetics on DNA nanostructures using single-molecule fluorescence microscopy. Methods, 2014, 67, 177-184.	1.9	22
94	Introduction to Single Molecule Imaging and Mechanics: Seeing and Touching Molecules One at a Time. Chemical Reviews, 2014, 114, 3069-3071.	23.0	18
95	DNAâ€“Cholesterol Barges as Programmable Membrane-Exploring Agents. ACS Nano, 2014, 8, 5641-5649.	7.3	85
96	Single Molecule Fluorescence Approaches Shed Light on Intracellular RNAs. Chemical Reviews, 2014, 114, 3224-3265.	23.0	73
97	Disparate HDV ribozyme crystal structures represent intermediates on a rugged free-energy landscape. Rna, 2014, 20, 1112-1128.	1.6	15
98	Multi-enzyme complexes on DNA scaffolds capable of substrate channelling with an artificial swinging arm. Nature Nanotechnology, 2014, 9, 531-536.	15.6	423
99	Abstract 1137: Bub1 is a key regulator of TGF-Î² signaling. , 2014, , .		0
100	Introductory editorial:Biopolymerscelebrates 50 years of nucleic acids research. Biopolymers, 2013, 99, n/a-n/a.	1.2	0
101	Super-Resolution Fingerprinting Detects Chemical Reactions and Idiosyncrasies of Single DNA Pegboards. Nano Letters, 2013, 13, 728-733.	4.5	33
102	High-resolution three-dimensional mapping of mRNA export through the nuclear pore. Nature Communications, 2013, 4, 2414.	5.8	99
103	Biased Brownian ratcheting leads to pre-mRNA remodeling and capture prior to first-step splicing. Nature Structural and Molecular Biology, 2013, 20, 1450-1457.	3.6	66
104	The Most Recent, Catalytically Fit HDV Ribozyme Exhibits Minimal Global and Small-Scale Conformational Change upon Cleavage. Biophysical Journal, 2013, 104, 264a.	0.2	0
105	Dissecting non-coding RNA mechanisms in cellulo by Single-molecule High-Resolution Localization and Counting. Methods, 2013, 63, 188-199.	1.9	31
106	Investigating the Role of an Extended Hydrogen Bonding Network within the Hairpin Ribozyme Active Site. Biophysical Journal, 2013, 104, 333a-334a.	0.2	0
107	Editorial for â€œNon-coding RNA methodsâ€• Methods, 2013, 63, 93-94.	1.9	1
108	Paclitaxel-Conjugated PAMAM Dendrimers Adversely Affect Microtubule Structure through Two Independent Modes of Action. Biomacromolecules, 2013, 14, 654-664.	2.6	47

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109	Multifactorial Modulation of Binding and Dissociation Kinetics on Two-Dimensional DNA Nanostructures. Nano Letters, 2013, 13, 2754-2759.	4.5	42
110	Secondary structure of bacteriophage T4 gene 60 mRNA: Implications for translational bypassing. Rna, 2013, 19, 685-700.	1.6	14
111	Single transcriptional and translational preQ1 riboswitches adopt similar pre-folded ensembles that follow distinct folding pathways into the same ligand-bound structure. Nucleic Acids Research, 2013, 41, 10462-10475.	6.5	81
112	Unraveling the structural complexity in a single-stranded RNA tail: implications for efficient ligand binding in the prequeuosine riboswitch. Nucleic Acids Research, 2012, 40, 1345-1355.	6.5	52
113	The Development of Methods for the Site-Specific Fluorescent Labeling of Spliceosomal Proteins for use in Single-Molecule Studies. Biophysical Journal, 2012, 102, 484a.	0.2	0
114	Structure-Function Relationships Within the Hepatitis Delta Virus Ribozyme. Biophysical Journal, 2012, 102, 277a.	0.2	0
115	Single Molecule FRET Characterization of Pre-mRNA Splicing: Substrate Dynamics during Recognition and Catalysis. Biophysical Journal, 2012, 102, 278a.	0.2	0
116	Disease-linked microRNA-21 exhibits drastically reduced mRNA binding and silencing activity in healthy mouse liver. Rna, 2012, 18, 1510-1526.	1.6	43
117	Taxol-Conjugated Pamam Dendrimers Utilize Three Modes of Action on Microtubule Structure. Biophysical Journal, 2012, 102, 187a.	0.2	1
118	Beyond DNA origami: the unfolding prospects of nucleic acid nanotechnology. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2012, 4, 139-152.	3.3	36
119	Intracellular single molecule microscopy reveals two kinetically distinct pathways for microRNA assembly. EMBO Reports, 2012, 13, 709-715.	2.0	61
120	Mutagenisis of Argonaute 2 in studying microRNA loading. FASEB Journal, 2012, 26, 944.1.	0.2	0
121	Flexible casting of modular self-aligning microfluidic assembly blocks. Lab on A Chip, 2011, 11, 1679.	3.1	205
122	The shape-shifting quasispecies of RNA: one sequence, many functional folds. Physical Chemistry Chemical Physics, 2011, 13, 11524.	1.3	19
123	QM/MM Studies of Hairpin Ribozyme Self-Cleavage Suggest the Feasibility of Multiple Competing Reaction Mechanisms. Journal of Physical Chemistry B, 2011, 115, 13911-13924.	1.2	33
124	Cooperative and Directional Folding of the preQ₁ Riboswitch Aptamer Domain. Journal of the American Chemical Society, 2011, 133, 4196-4199.	6.6	52
125	Imaging an Expanding Molecular Robot World Using Super-Accuracy Single-Molecule Fluorescence Microscopy. Biophysical Journal, 2011, 100, 153a-154a.	0.2	0
126	Structural Landmarks of the Hepatitis Delta Virus (HDV) Ribozyme. Biophysical Journal, 2011, 100, 236a.	0.2	0

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127	Viral RNAi Suppressor Reversibly Binds siRNA to Outcompete Dicer and RISC via Multiple Turnover. Journal of Molecular Biology, 2011, 408, 262-276.	2.0	25
128	Motor myosin V caught on video: Foot stomping in biology. Biopolymers, 2011, 95, v.	1.2	1
129	Solution structure of an alternate conformation of helix27 from Escherichia coli16S rRNA. Biopolymers, 2011, 95, 653-668.	1.2	0
130	Versatile single-molecule multi-color excitation and detection fluorescence setup for studying biomolecular dynamics. Review of Scientific Instruments, 2011, 82, 113702.	0.6	23
131	6. Metal Ions: Supporting Actors in the Playbook of Small Ribozymes. Metal Ions in Life Sciences, 2011, 9, 175-196.	1.0	41
132	siRNA-Like Double-Stranded RNAs Are Specifically Protected Against Degradation in Human Cell Extract. PLoS ONE, 2011, 6, e20359.	1.1	30
133	Conformational dynamics of single pre-mRNA molecules during in vitro splicing. Nature Structural and Molecular Biology, 2010, 17, 504-512.	3.6	90
134	Molecular robots guided by prescriptive landscapes. Nature, 2010, 465, 206-210.	13.7	843
135	Nondenaturing Purification of Co-Transcriptionally Folded RNA Avoids Common Folding Heterogeneity. PLoS ONE, 2010, 5, e12953.	1.1	24
136	Preface. Methods in Enzymology, 2010, 472, xxi-xxii.	0.4	2
137	Analysis of Complex Single-Molecule FRET Time Trajectories. Methods in Enzymology, 2010, 472, 153-178.	0.4	142
138	Preface. Methods in Enzymology, 2010, 475, xxi-xxii.	0.4	0
139	Long-range tertiary interactions in single hammerhead ribozymes bias motional sampling toward catalytically active conformations. Rna, 2010, 16, 2414-2426.	1.6	34
140	Single-Molecule Tracking of Nanorobots on Pseudo-One-Dimensional DNA Origami Tracks. Biophysical Journal, 2010, 98, 590a.	0.2	0
141	Real-Time Super-Resolution Tracking of Single Deoxyribozyme Based Molecular Robots. Biophysical Journal, 2010, 98, 590a.	0.2	0
142	Molecular Dynamics and Quantum Mechanics of RNA: Conformational and Chemical Change We Can Believe In. Accounts of Chemical Research, 2010, 43, 40-47.	7.6	155
143	Extensive Molecular Dynamics Simulations Showing That Canonical G8 and Protonated A38H⁺ Forms Are Most Consistent with Crystal Structures of Hairpin Ribozyme. Journal of Physical Chemistry B, 2010, 114, 6642-6652.	1.2	81
144	Protonation States of the Key Active Site Residues and Structural Dynamics of the glmS Riboswitch As Revealed by Molecular Dynamics. Journal of Physical Chemistry B, 2010, 114, 8701-8712.	1.2	54

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145	A Divalent Cation Stabilizes the Active Conformation of the B. subtilis RNase PÂ·Pre-tRNA Complex: A Role for an Inner-Sphere Metal Ion in RNase P. Journal of Molecular Biology, 2010, 400, 38-51.	2.0	28
146	A Bird's Eye View. Methods in Enzymology, 2010, 475, 121-148.	0.4	34
147	Leakage and slow allostery limit performance of single drug-sensing aptazyme molecules based on the hammerhead ribozyme. Rna, 2009, 15, 76-84.	1.6	30
148	Molecular dynamics suggest multifunctionality of an adenine imino group in acid-base catalysis of the hairpin ribozyme. Rna, 2009, 15, 560-575.	1.6	40
149	Purification and Functional Reconstitution of Monomeric Î¼-Opioid Receptors. Journal of Biological Chemistry, 2009, 284, 26732-26741.	1.6	159
150	Theoretical studies of RNA catalysis: Hybrid QM/MM methods and their comparison with MD and QM. Methods, 2009, 49, 202-216.	1.9	82
151	The blessing and curse of RNA dynamics: past, present, and future. Methods, 2009, 49, 85-86.	1.9	10
152	RNA Chaperones Stimulate Formation and Yield of the U3 snoRNAâ€“Pre-rRNA Duplexes Needed for Eukaryotic Ribosome Biogenesis. Journal of Molecular Biology, 2009, 390, 991-1006.	2.0	21
153	The Small Ribozymes: Common and Diverse Features Observed Through the FRET Lens. Springer Series in Biophysics, 2009, 13, 103-127.	0.4	5
154	Small RNA, Big Impact: Probing miRNA pathways in living cells using single particle tracking. FASEB Journal, 2009, 23, 665.6.	0.2	0
155	The Interdisciplinary Biophysics Graduate Program at the University of Michigan. Biopolymers, 2008, 89, 256-261.	1.2	1
156	Do-it-yourself guide: how to use the modern single-molecule toolkit. Nature Methods, 2008, 5, 475-489.	9.0	303
157	RNA dynamics: it is about time. Current Opinion in Structural Biology, 2008, 18, 321-329.	2.6	279
158	Single VS Ribozyme Molecules Reveal Dynamic and Hierarchical Folding Toward Catalysis. Journal of Molecular Biology, 2008, 382, 496-509.	2.0	55
159	General Base Catalysis for Cleavage by the Active-Site Cytosine of the Hepatitis Delta Virus Ribozyme: QM/MM Calculations Establish Chemical Feasibility. Journal of Physical Chemistry B, 2008, 112, 11177-11187.	1.2	46
160	Assay for Glucosamine 6-Phosphate Using a Ligand-Activated Ribozyme with Fluorescence Resonance Energy Transfer or CE-Laser-Induced Fluorescence Detection. Analytical Chemistry, 2008, 80, 8195-8201.	3.2	7
161	A rugged free energy landscape separates multiple functional RNA folds throughout denaturation. Nucleic Acids Research, 2008, 36, 7088-7099.	6.5	73
162	Focus on Function: Single Molecule Enzymology of the VS ribozyme. FASEB Journal, 2008, 22, 259.3.	0.2	0

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163	Dissecting the multistep reaction pathway of an RNA enzyme by single-molecule kinetic "fingerprinting". Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 12634-12639.	3.3	81
164	Chemical modification resolves the asymmetry of siRNA strand degradation in human blood serum. Rna, 2007, 13, 1887-1893.	1.6	61
165	The genomic HDV ribozyme utilizes a previously unnoticed U-turn motif to accomplish fast site-specific catalysis. Nucleic Acids Research, 2007, 35, 1933-1946.	6.5	29
166	Long-range impact of peripheral joining elements on structure and function of the hepatitis delta virus ribozyme. Biological Chemistry, 2007, 388, 705-15.	1.2	13
167	Trans-acting glmS catalytic riboswitch: Locked and loaded. Rna, 2007, 13, 468-477.	1.6	58
168	Ribozyme Catalysis Revisited: Is Water Involved?. Molecular Cell, 2007, 28, 923-929.	4.5	56
169	Structural Modeling of Sequence Specificity by an Autoantibody against Single-Stranded DNAâ€. Biochemistry, 2007, 46, 6753-6765.	1.2	4
170	Molecular dynamics simulations of RNA: Anin silico single molecule approach. Biopolymers, 2007, 85, 169-184.	1.2	137
171	Future of biomedical sciences: Single molecule microscopy. Biopolymers, 2007, 85, 103-105.	1.2	6
172	Impact of an extruded nucleotide on cleavage activity and dynamic catalytic core conformation of the hepatitis delta virus ribozyme. Biopolymers, 2007, 85, 392-406.	1.2	27
173	Focus on function: Single molecule RNA enzymology. Biopolymers, 2007, 87, 302-316.	1.2	44
174	Mg2+-Induced Compaction of Single RNA Molecules Monitored by Tethered Particle Microscopy. Biophysical Journal, 2006, 90, 3672-3685.	0.2	36
175	Cations and Hydration in Catalytic RNA: Molecular Dynamics of the Hepatitis Delta Virus Ribozyme. Biophysical Journal, 2006, 91, 626-638.	0.2	122
176	Catalytic Core Structure of the trans-Acting HDV Ribozyme Is Subtly Influenced by Sequence Variation Outside the Core. Biochemistry, 2006, 45, 7563-7573.	1.2	31
177	Michaelis-Menten is dead, long live Michaelis-Menten!. Nature Chemical Biology, 2006, 2, 66-67.	3.9	16
178	Fluorescent Energy Transfer Readout of an Aptazyme-Based Biosensor. , 2006, 335, 289-310.		33
179	Pyrrolo-C as a fluorescent probe for monitoring RNA secondary structure formation. Rna, 2006, 12, 522-529.	1.6	72
180	Trapped water molecules are essential to structural dynamics and function of a ribozyme. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 13380-13385.	3.3	92

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181	Single Molecule Fluorescence Control for Nanotechnology. Journal of Nanoscience and Nanotechnology, 2005, 5, 1990-2000.	0.9	20
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