Nils G Walter

List of Publications by Year
in descending order

223 papers	11,818 citations	26630 56 h-index	33894 99 g-index
257 all docs	257 docs citations	257 times ranked	9640 citing authors

#	Article	IF	Citations
1	Molecular robots guided by prescriptive landscapes. Nature, 2010, 465, 206-210.	27.8	843
2	Correlating Structural Dynamics and Function in Single Ribozyme Molecules. Science, 2002, 296, 1473-1476.	12.6	489
3	Multi-enzyme complexes on DNA scaffolds capable of substrate channelling with an artificial swinging arm. Nature Nanotechnology, 2014, 9, 531-536.	31.5	423
4	RNA Structural Dynamics As Captured by Molecular Simulations: A Comprehensive Overview. Chemical Reviews, 2018, 118, 4177-4338.	47.7	408
5	The hammerhead, hairpin and VS ribozymes are catalytically proficient in monovalent cations alone. Chemistry and Biology, 1998, 5, 587-595.	6.0	352
6	Nanocaged enzymes with enhanced catalytic activity and increased stability against protease digestion. Nature Communications, 2016, 7, 10619.	12.8	346
7	Do-it-yourself guide: how to use the modern single-molecule toolkit. Nature Methods, 2008, 5, 475-489.	19.0	303
8	Damage-induced lncRNAs control the DNA damage response through interaction with DDRNAs at individual double-strand breaks. Nature Cell Biology, 2017, 19, 1400-1411.	10.3	288
9	RNA dynamics: it is about time. Current Opinion in Structural Biology, 2008, 18, 321-329.	5.7	279
10	Flexible casting of modular self-aligning microfluidic assembly blocks. Lab on A Chip, 2011, 11, 1679.	6.0	205
11	Single-molecule transition-state analysis of RNA folding. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9302-9307.	7.1	201
12	Tertiary structure formation in the hairpin ribozyme monitored by fluorescence resonance energy transfer. EMBO Journal, 1998, 17, 2378-2391.	7.8	159
13	Purification and Functional Reconstitution of Monomeric Î¼-Opioid Receptors. Journal of Biological Chemistry, 2009, 284, 26732-26741.	3.4	159
14	Molecular Dynamics and Quantum Mechanics of RNA: Conformational and Chemical Change We Can Believe In. Accounts of Chemical Research, 2010, 43, 40-47.	15.6	155
15	Analysis of Complex Single-Molecule FRET Time Trajectories. Methods in Enzymology, 2010, 472, 153-178.	1.0	142
16	Stability of hairpin ribozyme tertiary structure is governed by the interdomain junction. Nature Structural Biology, 1999, 6, 544-549.	9.7	140
17	Molecular dynamics simulations of RNA: Anin silico single molecule approach. Biopolymers, 2007, 85, 169-184.	2.4	137
18	Single-molecule enzymology of RNA: Essential functional groups impact catalysis from a distance. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10066-10071.	7.1	136

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19	Spliceosomal DEAH-Box ATPases Remodel Pre-mRNA to Activate Alternative Splice Sites. Cell, 2016, 164, 985-998.	28.9	133
20	Quantitative Hybridization Kinetics of DNA Probes to RNA in Solution Followed by Diffusional Fluorescence Correlation Analysisâ€. Biochemistry, 1996, 35, 10182-10193.	2.5	131
21	Cations and Hydration in Catalytic RNA: Molecular Dynamics of the Hepatitis Delta Virus Ribozyme. Biophysical Journal, 2006, 91, 626-638.	0.5	122
22	Kinetic fingerprinting to identify and count single nucleic acids. Nature Biotechnology, 2015, 33, 730-732.	17.5	120
23	The hairpin ribozyme: structure, assembly and catalysis. Current Opinion in Chemical Biology, 1998, 2, 24-30.	6.1	117
24	Exploring the speed limit of toehold exchange with a cartwheeling DNA acrobat. Nature Nanotechnology, 2018, 13, 723-729.	31.5	109
25	Assembly of multienzyme complexes on DNA nanostructures. Nature Protocols, 2016, 11, 2243-2273.	12.0	100
26	A bio-hybrid DNA rotorâ€“stator nanoengine that moves along predefined tracks. Nature Nanotechnology, 2018, 13, 496-503.	31.5	100
27	Dynamic Recruitment of Single RNAs to Processing Bodies Depends on RNA Functionality. Molecular Cell, 2019, 74, 521-533.e6.	9.7	100
28	High-resolution three-dimensional mapping of mRNA export through the nuclear pore. Nature Communications, 2013, 4, 2414.	12.8	99
29	Probing non-selective cation binding in the hairpin ribozyme with Tb(III). Journal of Molecular Biology, 2000, 298, 539-555.	4.2	96
30	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.	7.1	92
31	Conformational dynamics of single pre-mRNA molecules during in vitro splicing. Nature Structural and Molecular Biology, 2010, 17, 504-512.	8.2	90
32	Super-resolution imaging identifies PARP1 and the Ku complex acting as DNA double-strand break sensors. Nucleic Acids Research, 2018, 46, 3446-3457.	14.5	88
33	Reaction Pathway of the Trans-Acting Hepatitis Delta Virus Ribozyme:Â A Conformational Change Accompanies Catalysisâ€. Biochemistry, 2002, 41, 730-740.	2.5	87
34	Mg²⁺ Shifts Ligand-Mediated Folding of a Riboswitch from Induced-Fit to Conformational Selection. Journal of the American Chemical Society, 2015, 137, 14075-14083.	13.7	86
35	Multivalent Proteins Rapidly and Reversibly Phase-Separate upon Osmotic Cell Volume Change. Molecular Cell, 2020, 79, 978-990.e5.	9.7	86
36	DNAâ€“Cholesterol Barges as Programmable Membrane-Exploring Agents. ACS Nano, 2014, 8, 5641-5649.	14.6	85

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37	Theoretical studies of RNA catalysis: Hybrid QM/MM methods and their comparison with MD and QM. Methods, 2009, 49, 202-216.	3.8	82
38	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.	7.1	81
39	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.	2.6	81
40	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.	14.5	81
41	Local Conformational Changes in the Catalytic Core of the Trans-Acting Hepatitis Delta Virus Ribozyme Accompany Catalysis. Biochemistry, 2002, 41, 12051-12061.	2.5	74
42	Resolving Subcellular miRNA Trafficking and Turnover at Single-Molecule Resolution. Cell Reports, 2017, 19, 630-642.	6.4	74
43	A rugged free energy landscape separates multiple functional RNA folds throughout denaturation. Nucleic Acids Research, 2008, 36, 7088-7099.	14.5	73
44	Single Molecule Fluorescence Approaches Shed Light on Intracellular RNAs. Chemical Reviews, 2014, 114, 3224-3265.	47.7	73
45	Pyrrolo-C as a fluorescent probe for monitoring RNA secondary structure formation. Rna, 2006, 12, 522-529.	3.5	72
46	The kinase activity of the Ser/Thr kinase BUB1 promotes TGF-Î² signaling. Science Signaling, 2015, 8, ra1.	3.6	72
47	Synthesis and thermal stability of zirconia and yttria-stabilized zirconia microspheres. Journal of Colloid and Interface Science, 2015, 448, 582-592.	9.4	70
48	Structural Dynamics of Catalytic RNA Highlighted by Fluorescence Resonance Energy Transfer. Methods, 2001, 25, 19-30.	3.8	67
49	Biased Brownian ratcheting leads to pre-mRNA remodeling and capture prior to first-step splicing. Nature Structural and Molecular Biology, 2013, 20, 1450-1457.	8.2	66
50	Structural Dynamics of Precursor and Product of the RNA Enzyme from the Hepatitis Delta Virus as Revealed by Molecular Dynamics Simulations. Journal of Molecular Biology, 2005, 351, 731-748.	4.2	65
51	Diffusely Bound Mg2+Ions Slightly Reorient Stems I and II of the Hammerhead Ribozyme To Increase the Probability of Formation of the Catalytic Coreâ€. Biochemistry, 2003, 42, 9924-9936.	2.5	63
52	From â€œCellularâ€•RNA to â€œSmartâ€•RNA: Multiple Roles of RNA in Genome Stability and Beyond. Chemical Reviews, 2018, 118, 4365-4403.	47.7	63
53	The Solvent-Protected Core of the Hairpin Ribozymeâˆ'Substrate Complexâ€. Biochemistry, 1998, 37, 14672-14682.	2.5	62
54	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.	7.1	62

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55	Chemical modification resolves the asymmetry of siRNA strand degradation in human blood serum. Rna, 2007, 13, 1887-1893.	3.5	61
56	Intracellular single molecule microscopy reveals two kinetically distinct pathways for microRNA assembly. EMBO Reports, 2012, 13, 709-715.	4.5	61
57	Structural Basis for the Guanosine Requirement of the Hairpin Ribozymeâ€. Biochemistry, 1999, 38, 16035-16039.	2.5	60
58	The 5â€˜ Leader of Precursor tRNAAspBound to theBacillus subtilisRNase P Holoenzyme Has an Extended Conformationâ€. Biochemistry, 2005, 44, 16130-16139.	2.5	59
59	Fluorescence correlation analysis of probe diffusion simplifies quantitative pathogen detection by PCR. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 12805-12810.	7.1	58
60	Trans-acting glmS catalytic riboswitch: Locked and loaded. Rna, 2007, 13, 468-477.	3.5	58
61	In the fluorescent spotlight: Global and local conformational changes of small catalytic RNAs. Biopolymers, 2002, 61, 224-242.	2.4	57
62	Structural basis for heterogeneous kinetics: Reengineering the hairpin ribozyme. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 6091-6096.	7.1	56
63	Ribozyme Catalysis Revisited: Is Water Involved?. Molecular Cell, 2007, 28, 923-929.	9.7	56
64	Singleâ€molecule enzymology Ã la Michaelisâ€"Menten. FEBS Journal, 2014, 281, 518-530.	4.7	56
65	A novel method to accurately locate and count large numbers of steps by photobleaching. Molecular Biology of the Cell, 2016, 27, 3601-3615.	2.1	56
66	The Shine-Dalgarno sequence of riboswitch-regulated single mRNAs shows ligand-dependent accessibility bursts. Nature Communications, 2016, 7, 8976.	12.8	56
67	Life under the Microscope: Single-Molecule Fluorescence Highlights the RNA World. Chemical Reviews, 2018, 118, 4120-4155.	47.7	56
68	Single VS Ribozyme Molecules Reveal Dynamic and Hierarchical Folding Toward Catalysis. Journal of Molecular Biology, 2008, 382, 496-509.	4.2	55
69	Protonation States of the Key Active Site Residues and Structural Dynamics of the <i>glmS</i> Riboswitch As Revealed by Molecular Dynamics. Journal of Physical Chemistry B, 2010, 114, 8701-8712.	2.6	54
70	Cooperative and Directional Folding of the preQ₁ Riboswitch Aptamer Domain. Journal of the American Chemical Society, 2011, 133, 4196-4199.	13.7	52
71	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.	14.5	52
72	Ligand Modulates Cross-Coupling between Riboswitch Folding and Transcriptional Pausing. Molecular Cell, 2018, 72, 541-552.e6.	9.7	48

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73	Paclitaxel-Conjugated PAMAM Dendrimers Adversely Affect Microtubule Structure through Two Independent Modes of Action. Biomacromolecules, 2013, 14, 654-664.	5.4	47
74	Trans-Acting Hepatitis Delta Virus Ribozyme:Â Catalytic Core and Global Structure Are Dependent on the 5â€˜ Substrate Sequenceâ€. Biochemistry, 2003, 42, 7727-7740.	2.5	46
75	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.	2.6	46
76	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.	2.6	45
77	A biosensor for theophylline based on fluorescence detection of ligand-induced hammerhead ribozyme cleavage. Rna, 2002, 8, 1242-1252.	3.5	44
78	Terbium-mediated Footprinting Probes a Catalytic Conformational Switch in the Antigenomic Hepatitis Delta Virus Ribozyme. Journal of Molecular Biology, 2004, 341, 389-403.	4.2	44
79	Focus on function: Single molecule RNA enzymology. Biopolymers, 2007, 87, 302-316.	2.4	44
80	Disease-linked microRNA-21 exhibits drastically reduced mRNA binding and silencing activity in healthy mouse liver. Rna, 2012, 18, 1510-1526.	3.5	43
81	Ultraspecific and Amplification-Free Quantification of Mutant DNA by Single-Molecule Kinetic Fingerprinting. Journal of the American Chemical Society, 2018, 140, 11755-11762.	13.7	43
82	Capillary electrophoresis of RNA in dilute and semidilute polymer solutions. Electrophoresis, 2001, 22, 2442-2447.	2.4	42
83	Multifactorial Modulation of Binding and Dissociation Kinetics on Two-Dimensional DNA Nanostructures. Nano Letters, 2013, 13, 2754-2759.	9.1	42
84	KRAS Engages AGO2 to Enhance Cellular Transformation. Cell Reports, 2016, 14, 1448-1461.	6.4	41
85	6. Metal Ions: Supporting Actors in the Playbook of Small Ribozymes. Metal Ions in Life Sciences, 2011, 9, 175-196.	1.0	41
86	Molecular dynamics suggest multifunctionality of an adenine imino group in acid-base catalysis of the hairpin ribozyme. Rna, 2009, 15, 560-575.	3.5	40
87	A Base Change in the Catalytic Core of the Hairpin Ribozyme Perturbs Function but Not Domain Docking. Biochemistry, 2001, 40, 2580-2587.	2.5	38
88	Transcriptional Riboswitches Integrate Timescales for Bacterial Gene Expression Control. Frontiers in Molecular Biosciences, 2020, 7, 607158.	3.5	38
89	A translational riboswitch coordinates nascent transcriptionâ€"translation coupling. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	38
90	Mg2+-Induced Compaction of Single RNA Molecules Monitored by Tethered Particle Microscopy. Biophysical Journal, 2006, 90, 3672-3685.	0.5	36

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91	Beyond DNA origami: the unfolding prospects of nucleic acid nanotechnology. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2012, 4, 139-152.	6.1	36
92	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.	7.1	35
93	Strand displacement amplification as an in vitro model for rolling-circle replication: deletion formation and evolution during serial transfer.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 7937-7941.	7.1	34
94	Long-range tertiary interactions in single hammerhead ribozymes bias motional sampling toward catalytically active conformations. Rna, 2010, 16, 2414-2426.	3.5	34
95	A Bird's Eye View. Methods in Enzymology, 2010, 475, 121-148.	1.0	34
96	Single Molecule Cluster Analysis dissects splicing pathway conformational dynamics. Nature Methods, 2015, 12, 1077-1084.	19.0	34
97	Fluorescent Energy Transfer Readout of an Aptazyme-Based Biosensor. , 2006, 335, 289-310.		33
98	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.	2.6	33
99	Super-Resolution Fingerprinting Detects Chemical Reactions and Idiosyncrasies of Single DNA Pegboards. Nano Letters, 2013, 13, 728-733.	9.1	33
100	Magnesium Dependence of the Amplified Conformational Switch in the Trans-Acting Hepatitis Delta Virus Ribozymeâ€. Biochemistry, 2004, 43, 8935-8945.	2.5	31
101	Catalytic Core Structure of the trans-Acting HDV Ribozyme Is Subtly Influenced by Sequence Variation Outside the Core. Biochemistry, 2006, 45, 7563-7573.	2.5	31
102	Dissecting non-coding RNA mechanisms in cellulo by Single-molecule High-Resolution Localization and Counting. Methods, 2013, 63, 188-199.	3.8	31
103	A guide to nucleic acid detection by single-molecule kinetic fingerprinting. Methods, 2019, 153, 3-12.	3.8	31
104	Hyperosmotic phase separation: Condensates beyond inclusions, granules and organelles. Journal of Biological Chemistry, 2021, 296, 100044.	3.4	31
105	Leakage and slow allostery limit performance of single drug-sensing aptazyme molecules based on the hammerhead ribozyme. Rna, 2009, 15, 76-84.	3.5	30
106	Hierarchical mechanism of amino acid sensing by the T-box riboswitch. Nature Communications, 2018, 9, 1896.	12.8	30
107	Direct Kinetic Fingerprinting for High-Accuracy Single-Molecule Counting of Diverse Disease Biomarkers. Accounts of Chemical Research, 2021, 54, 388-402.	15.6	30
108	siRNA-Like Double-Stranded RNAs Are Specifically Protected Against Degradation in Human Cell Extract. PLoS ONE, 2011, 6, e20359.	2.5	30

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109	[25] Fluorescence assays to study structure, dynamics, and function of RNA and RNA-ligand complexes. Methods in Enzymology, 2000, 317, 409-440.	1.0	29
110	Probing RNA Structural Dynamics and Function by Fluorescence Resonance Energy Transfer (FRET). , 2002, Chapter 11, 11.10.1-11.10.23.		29
111	The genomic HDV ribozyme utilizes a previously unnoticed U-turn motif to accomplish fast site-specific catalysis. Nucleic Acids Research, 2007, 35, 1933-1946.	14.5	29
112	Native Purification and Labeling of RNA for Single Molecule Fluorescence Studies. Methods in Molecular Biology, 2015, 1240, 63-95.	0.9	29
113	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.	4.2	28
114	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.	2.8	28
115	The hairpin ribozyme substrate binding-domain: A highly constrained D-shaped conformation. Journal of Molecular Biology, 2001, 307, 51-65.	4.2	27
116	Impact of an extruded nucleotide on cleavage activity and dynamic catalytic core conformation of the hepatitis delta virus ribozyme. Biopolymers, 2007, 85, 392-406.	2.4	27
117	Riboswitch Structure and Dynamics by smFRET Microscopy. Methods in Enzymology, 2014, 549, 343-373.	1.0	27
118	Automatic classification and segmentation of single-molecule fluorescence time traces with deep learning. Nature Communications, 2020, 11, 5833.	12.8	26
119	Viral RNAi Suppressor Reversibly Binds siRNA to Outcompete Dicer and RISC via Multiple Turnover. Journal of Molecular Biology, 2011, 408, 262-276.	4.2	25
120	Soft Interactions with Model Crowders and Non-canonical Interactions with Cellular Proteins Stabilize RNA Folding. Journal of Molecular Biology, 2018, 430, 509-523.	4.2	25
121	Kinetics coming into focus: single-molecule microscopy of riboswitch dynamics. RNA Biology, 2019, 16, 1077-1085.	3.1	25
122	Nondenaturing Purification of Co-Transcriptionally Folded RNA Avoids Common Folding Heterogeneity. PLoS ONE, 2010, 5, e12953.	2.5	24
123	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.	0.9	24
124	Local-to-global signal transduction at the core of a Mn2+ sensing riboswitch. Nature Communications, 2019, 10, 4304.	12.8	24
125	Single-Molecule Kinetic Fingerprinting for the Ultrasensitive Detection of Small Molecules with Aptasensors. Analytical Chemistry, 2019, 91, 1424-1431.	6.5	24
126	Following the messenger: Recent innovations in live cell single molecule fluorescence imaging. Wiley Interdisciplinary Reviews RNA, 2020, 11, e1587.	6.4	24

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127	Versatile single-molecule multi-color excitation and detection fluorescence setup for studying biomolecular dynamics. Review of Scientific Instruments, 2011, 82, 113702.	1.3	23
128	Protein unties the pseudoknot: S1-mediated unfolding of RNA higher order structure. Nucleic Acids Research, 2020, 48, 2107-2125.	14.5	23
129	Discovering anomalous hybridization kinetics on DNA nanostructures using single-molecule fluorescence microscopy. Methods, 2014, 67, 177-184.	3.8	22
130	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.	4.2	21
131	Rational design of DNA-actuated enzyme nanoreactors guided by single molecule analysis. Nanoscale, 2016, 8, 3125-3137.	5.6	21
132	Significant Kinetic Solvent Isotope Effects in Folding of the Catalytic RNA from the Hepatitis Delta Virus. Journal of the American Chemical Society, 2003, 125, 13972-13973.	13.7	20
133	Single Molecule Fluorescence Control for Nanotechnology. Journal of Nanoscience and Nanotechnology, 2005, 5, 1990-2000.	0.9	20
134	Electron Microscopic Visualization of Protein Assemblies on Flattened DNA Origami. ACS Nano, 2015, 9, 7133-7141.	14.6	20
135	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, .	7.1	20
136	The shape-shifting quasispecies of RNA: one sequence, many functional folds. Physical Chemistry Chemical Physics, 2011, 13, 11524.	2.8	19
137	Single-molecule tools for enzymology, structural biology, systems biology and nanotechnology: an update. Archives of Toxicology, 2014, 88, 1965-1985.	4.2	19
138	The International Society of RNA Nanotechnology and Nanomedicine (ISRNN): The Present and Future of the Burgeoning Field. ACS Nano, 2021, 15, 16957-16973.	14.6	19
139	Introduction to Single Molecule Imaging and Mechanics: Seeing and Touching Molecules One at a Time. Chemical Reviews, 2014, 114, 3069-3071.	47.7	18
140	Probing RNA-protein interactions using pyrene-labeled oligodeoxynucleotides: QÎ² replicase efficiently binds small RNAs by recognizing pyrimidine residues 1 1Edited by I. Tinoco. Journal of Molecular Biology, 1997, 273, 600-613.	4.2	17
141	Probing RNA Structure and Metalâ€Binding Sites Using Terbium(III) Footprinting. Current Protocols in Nucleic Acid Chemistry, 2003, 13, Unit 6.8.	0.5	17
142	Cytoplasmic TDP43 Binds microRNAs: New Disease Targets in Amyotrophic Lateral Sclerosis. Frontiers in Cellular Neuroscience, 2020, 14, 117.	3.7	17
143	Michaelis-Menten is dead, long live Michaelis-Menten!. Nature Chemical Biology, 2006, 2, 66-67.	8.0	16
144	Quantitative Mapping of Endosomal DNA Processing by Single Molecule Counting. Angewandte Chemie - International Edition, 2019, 58, 3073-3076.	13.8	16

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145	Ribozymes: catalytic RNAs that cut things, make things, and do odd and useful jobs. Biologist, 2002, 49, 199-203.	2.0	16
146	Disparate HDV ribozyme crystal structures represent intermediates on a rugged free-energy landscape. Rna, 2014, 20, 1112-1128.	3.5	15
147	Probing RNA structure and interaction dynamics at the single molecule level. Methods, 2019, 162-163, 3-11.	3.8	15
148	An anionic ligand snap-locks a long-range interaction in a magnesium-folded riboswitch. Nature Communications, 2022, 13, 207.	12.8	15
149	RNA Degradation in Cell Extracts:Â Real-Time Monitoring by Fluorescence Resonance Energy Transfer. Journal of the American Chemical Society, 2003, 125, 14230-14231.	13.7	14
150	Secondary structure of bacteriophage T4 gene <i>60</i> mRNA: Implications for translational bypassing. Rna, 2013, 19, 685-700.	3.5	14
151	<i>In vitro</i> labeling strategies for <i>in cellulo</i> fluorescence microscopy of single ribonucleoprotein machines. Protein Science, 2017, 26, 1363-1379.	7.6	14
152	Ultraspecific analyte detection by direct kinetic fingerprinting of single molecules. TrAC - Trends in Analytical Chemistry, 2020, 123, 115764.	11.4	14
153	Global Structure and Flexibility of Hairpin Ribozymes with Extended Terminal Helices. Journal of Molecular Biology, 1999, 289, 799-813.	4.2	13
154	Long-range impact of peripheral joining elements on structure and function of the hepatitis delta virus ribozyme. Biological Chemistry, 2007, 388, 705-15.	2.5	13
155	Versatile transcription control based on reversible dCas9 binding. Rna, 2019, 25, 1457-1469.	3.5	13
156	Dynamics Inherent in Helix 27 from Escherichia coli 16S Ribosomal RNA. Biochemistry, 2004, 43, 14624-14636.	2.5	12
157	The hairpin ribozyme: structure, assembly and catalysis. Current Opinion in Chemical Biology, 1998, 2, 303.	6.1	10
158	The blessing and curse of RNA dynamics: past, present, and future. Methods, 2009, 49, 85-86.	3.8	10
159	Coming Together: RNAs and Proteins Assemble under the Single-Molecule Fluorescence Microscope. Cold Spring Harbor Perspectives in Biology, 2019, 11, a032441.	5.5	10
160	Rapid kinetic fingerprinting of single nucleic acid molecules by a FRET-based dynamic nanosensor. Biosensors and Bioelectronics, 2021, 190, 113433.	10.1	10
161	Imaging of single hairpin ribozymes in solution by atomic force microscopy. Rna, 2001, 7, 887-895.	3.5	9
162	Chemical feasibility of the general acid/base mechanism of <i>glmS</i> ribozyme selfâ€cleavage. Biopolymers, 2015, 103, 550-562.	2.4	9

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163	Biological Pathway Specificity in the Cellâ€"Does Molecular Diversity Matter?. BioEssays, 2019, 41, 1800244.	2.5	9
164	Solution probing of metal ion binding by helix 27 from Escherichia coli 16S rRNA. Rna, 2005, 11, 1688-1700.	3.5	8
165	Regulating DNA Self-Assembly Dynamics with Controlled Nucleation. ACS Nano, 2021, 15, 5384-5396.	14.6	8
166	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.	6.5	7
167	Single-Molecule Pull-Down FRET to Dissect the Mechanisms of Biomolecular Machines. Methods in Enzymology, 2015, 558, 539-570.	1.0	7
168	Tuning RNA folding and function through rational design of junction topology. Nucleic Acids Research, 2017, 45, 9706-9715.	14.5	7
169	Introductionâ€"RNA: From Single Molecules to Medicine. Chemical Reviews, 2018, 118, 4117-4119.	47.7	7
170	Single bacterial resolvases first exploit, then constrain intrinsic dynamics of the Holliday junction to direct recombination. Nucleic Acids Research, 2021, 49, 2803-2815.	14.5	7
171	Future of biomedical sciences: Single molecule microscopy. Biopolymers, 2007, 85, 103-105.	2.4	6
172	Wobble pairs of the HDV ribozyme play specific roles in stabilization of active site dynamics. Physical Chemistry Chemical Physics, 2015, 17, 5887-5900.	2.8	6
173	Modelling Viral Evolutionin VitroUsing exoâ^'Klenow Polymerase: Continuous Selection of Strand Displacement Amplified DNA that Binds an Oligodeoxynucleotide to Form a Triple-helix. Journal of Molecular Biology, 1995, 254, 856-868.	4.2	5
174	The Small Ribozymes: Common and Diverse Features Observed Through the FRET Lens. Springer Series in Biophysics, 2009, 13, 103-127.	0.4	5
175	Structural Modeling of Sequence Specificity by an Autoantibody against Single-Stranded DNAâ€. Biochemistry, 2007, 46, 6753-6765.	2.5	4
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