

Philip C Bevilacqua

List of Publications by Year in descending order

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166
papers

9,909
citations

39113

52
h-index

51423

90
g-index

173
all docs

173
docs citations

173
times ranked

8283
citing authors

#	ARTICLE	IF	CITATIONS
1	In vivo genome-wide profiling of RNA secondary structure reveals novel regulatory features. <i>Nature</i> , 2014, 505, 696-700.	13.7	710
2	Incorporation of pseudouridine into mRNA enhances translation by diminishing PKR activation. <i>Nucleic Acids Research</i> , 2010, 38, 5884-5892.	6.5	400
3	General Acid-Base Catalysis in the Mechanism of a Hepatitis Delta Virus Ribozyme. <i>Science</i> , 2000, 287, 1493-1497.	6.0	398
4	RNA catalysis through compartmentalization. <i>Nature Chemistry</i> , 2012, 4, 941-946.	6.6	297
5	Minor-Groove Recognition of Double-Stranded RNA by the Double-Stranded RNA-Binding Domain from the RNA-Activated Protein Kinase PKR. <i>Biochemistry</i> , 1996, 35, 9983-9994.	1.2	232
6	The double-stranded-RNA-binding motif: interference and much more. <i>Nature Reviews Molecular Cell Biology</i> , 2004, 5, 1013-1023.	16.1	229
7	Bioreactor droplets from liposome-stabilized all-aqueous emulsions. <i>Nature Communications</i> , 2014, 5, 4670.	5.8	210
8	5'-Triphosphate-Dependent Activation of PKR by RNAs with Short Stem-Loops. <i>Science</i> , 2007, 318, 1455-1458.	6.0	206
9	Template-directed RNA polymerization and enhanced ribozyme catalysis inside membraneless compartments formed by coacervates. <i>Nature Communications</i> , 2019, 10, 490.	5.8	195
10	Mechanistic Considerations for General Acid-Base Catalysis by RNA: Revisiting the Mechanism of the Hairpin Ribozyme. <i>Biochemistry</i> , 2003, 42, 2259-2265.	1.2	189
11	Genome-Wide Analysis of RNA Secondary Structure. <i>Annual Review of Genetics</i> , 2016, 50, 235-266.	3.2	186
12	Catalytic roles for proton transfer and protonation in ribozymes. <i>Biopolymers</i> , 2004, 73, 90-109.	1.2	144
13	The RNA structurome: transcriptome-wide structure probing with next-generation sequencing. <i>Trends in Biochemical Sciences</i> , 2015, 40, 221-232.	3.7	137
14	Mechanistic Characterization of the HDV Genomic Ribozyme: Assessing the Catalytic and Structural Contributions of Divalent Metal Ions within a Multichannel Reaction Mechanism. <i>Biochemistry</i> , 2001, 40, 12022-12038.	1.2	136
15	Comparison of binding of mixed ribose-deoxyribose analogs of CUCU to a ribozyme and to GGAGAA by equilibrium dialysis: evidence for ribozyme specific interactions with 2'-hydroxy groups. <i>Biochemistry</i> , 1991, 30, 10632-10640.	1.2	129
16	Exploring the Energy Landscape of a Small RNA Hairpin. <i>Journal of the American Chemical Society</i> , 2006, 128, 1523-1530.	6.6	129
17	A 1.9 Å... Crystal Structure of the HDV Ribozyme Precleavage Suggests both Lewis Acid and General Acid Mechanisms Contribute to Phosphodiester Cleavage. <i>Biochemistry</i> , 2010, 49, 6508-6518.	1.2	123
18	Physical Principles and Extant Biology Reveal Roles for RNA-Containing Membraneless Compartments in Origins of Life Chemistry. <i>Biochemistry</i> , 2018, 57, 2509-2519.	1.2	122

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19	Nucleoside modifications modulate activation of the protein kinase PKR in an RNA structure-specific manner. <i>Rna</i> , 2008, 14, 1201-1213.	1.6	119
20	Regulation of innate immunity through RNA structure and the protein kinase PKR. <i>Current Opinion in Structural Biology</i> , 2011, 21, 119-127.	2.6	118
21	Nucleobase catalysis in ribozyme mechanism. <i>Current Opinion in Chemical Biology</i> , 2006, 10, 455-464.	2.8	117
22	Polyamine/Nucleotide Coacervates Provide Strong Compartmentalization of Mg ²⁺ , Nucleotides, and RNA. <i>Langmuir</i> , 2016, 32, 2041-2049.	1.6	116
23	Determination of in vivo RNA structure in low-abundance transcripts. <i>Nature Communications</i> , 2013, 4, 2971.	5.8	113
24	Bridging the gap between <i>in vitro</i> and <i>in vivo</i> RNA folding. <i>Quarterly Reviews of Biophysics</i> , 2016, 49, e10.	2.4	108
25	Structures, Kinetics, Thermodynamics, and Biological Functions of RNA Hairpins. <i>Annual Review of Physical Chemistry</i> , 2008, 59, 79-103.	4.8	105
26	Structure-seq2: sensitive and accurate genome-wide profiling of RNA structure in vivo. <i>Nucleic Acids Research</i> , 2017, 45, e135-e135.	6.5	104
27	Direct Measurement of a pK _a Near Neutrality for the Catalytic Cytosine in the Genomic HDV Ribozyme Using Raman Crystallography. <i>Journal of the American Chemical Society</i> , 2007, 129, 13335-13342.	6.6	96
28	RNA G-Quadruplexes in the model plant species <i>Arabidopsis thaliana</i> : prevalence and possible functional roles. <i>Nucleic Acids Research</i> , 2010, 38, 8149-8163.	6.5	93
29	Genome-wide profiling of in vivo RNA structure at single-nucleotide resolution using structure-seq. <i>Nature Protocols</i> , 2015, 10, 1050-1066.	5.5	87
30	Activation of the protein kinase PKR by short double-stranded RNAs with single-stranded tails. <i>Rna</i> , 2004, 10, 1934-1945.	1.6	84
31	Genome-wide RNA structurome reprogramming by acute heat shock globally regulates mRNA abundance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 12170-12175.	3.3	83
32	Mechanistic Characterization of the HDV Genomic Ribozyme: A Classifying the Catalytic and Structural Metal Ion Sites within a Multichannel Reaction Mechanism. <i>Biochemistry</i> , 2003, 42, 2982-2994.	1.2	82
33	Charged Nucleobases and Their Potential for RNA Catalysis. <i>Accounts of Chemical Research</i> , 2011, 44, 1270-1279.	7.6	82
34	A role for upstream RNA structure in facilitating the catalytic fold of the genomic hepatitis delta virus ribozyme 1. Edited by J. A. Doudna. <i>Journal of Molecular Biology</i> , 2000, 301, 349-367.	2.0	81
35	Experimental Approaches for Measuring pK _a 's in RNA and DNA. <i>Methods in Enzymology</i> , 2014, 549, 189-219.	0.4	81
36	Folding Thermodynamics and Kinetics of YNMG RNA Hairpins: A Specific Incorporation of 8-Bromoguanosine Leads to Stabilization by Enhancement of the Folding Rate. <i>Biochemistry</i> , 2004, 43, 14004-14014.	1.2	80

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37	Isolation and Characterization of a Family of Stable RNA Tetraloops with the Motif YNMG That Participate in Tertiary Interactions. <i>Biochemistry</i> , 2002, 41, 12062-12075.	1.2	78
38	Prebiotically-relevant low polyion multivalency can improve functionality of membraneless compartments. <i>Nature Communications</i> , 2020, 11, 5949.	5.8	75
39	Effects of substrate structure on the kinetics of circle opening reactions of the self-splicing intervening sequence from <i>Tetrahymena thermophila</i> : evidence for substrate and Mg ²⁺ -binding interactions. <i>Nucleic Acids Research</i> , 1989, 17, 355-371.	6.5	74
40	Folding of a Stable DNA Motif Involves a Highly Cooperative Network of Interactions. <i>Journal of the American Chemical Society</i> , 2003, 125, 16285-16293.	6.6	72
41	Modeling RNA secondary structure folding ensembles using SHAPE mapping data. <i>Nucleic Acids Research</i> , 2018, 46, 314-323.	6.5	72
42	A stable RNA G-quadruplex within the 5' UTR of <i>Arabidopsis thaliana</i> mRNA inhibits translation. <i>Biochemical Journal</i> , 2015, 467, 91-102.	1.7	71
43	5'-Amino pyrene provides a sensitive, nonperturbing fluorescent probe of RNA secondary and tertiary structure formation. <i>Journal of the American Chemical Society</i> , 1993, 115, 4985-4992.	6.6	69
44	Quantum Mechanical/Molecular Mechanical Free Energy Simulations of the Self-Cleavage Reaction in the Hepatitis Delta Virus Ribozyme. <i>Journal of the American Chemical Society</i> , 2014, 136, 1483-1496.	6.6	69
45	Probing RNA structure in vivo. <i>Current Opinion in Structural Biology</i> , 2019, 59, 151-158.	2.6	66
46	A brilliant disguise for self RNA: 5' end and internal modifications of primary transcripts suppress elements of innate immunity. <i>RNA Biology</i> , 2008, 5, 140-144.	1.5	65
47	RNA Dimerization Promotes PKR Dimerization and Activation. <i>Journal of Molecular Biology</i> , 2009, 390, 319-338.	2.0	65
48	The folding pathway of the genomic hepatitis delta virus ribozyme is dominated by slow folding of the pseudoknots 1 Edited by J. Doudna. <i>Journal of Molecular Biology</i> , 2002, 317, 559-575.	2.0	63
49	Molecular crowders and cosolutes promote folding cooperativity of RNA under physiological ionic conditions. <i>Rna</i> , 2014, 20, 331-347.	1.6	60
50	Thermodynamic Analysis of an RNA Combinatorial Library Contained in a Short Hairpin. <i>Biochemistry</i> , 1998, 37, 15877-15884.	1.2	59
51	Discriminating Self and Non-Self by RNA: Roles for RNA Structure, Misfolding, and Modification in Regulating the Innate Immune Sensor PKR. <i>Accounts of Chemical Research</i> , 2016, 49, 1242-1249.	7.6	58
52	Regulation of PKR by HCV IRES RNA: Importance of Domain II and NS5A. <i>Journal of Molecular Biology</i> , 2010, 400, 393-412.	2.0	57
53	Polyanion-Assisted Ribozyme Catalysis Inside Complex Coacervates. <i>ACS Chemical Biology</i> , 2019, 14, 1243-1248.	1.6	57
54	Thermodynamic and activation parameters for binding of a pyrene-labeled substrate by the <i>Tetrahymena</i> ribozyme: docking is not diffusion-controlled and is driven by a favorable entropy change. <i>Biochemistry</i> , 1995, 34, 14394-14399.	1.2	55

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55	Linkage between proton binding and folding in RNA: A thermodynamic framework and its experimental application for investigating pKa shifting. <i>Rna</i> , 2005, 11, 157-172.	1.6	54
56	Proton Inventory of the Genomic HDV Ribozyme in Mg ²⁺ -Containing Solutions. <i>Journal of the American Chemical Society</i> , 2001, 123, 11333-11334.	6.6	52
57	Prevalence of <i>syn</i> nucleobases in the active sites of functional RNAs. <i>Rna</i> , 2011, 17, 1775-1787.	1.6	52
58	Effect of Loop Sequence and Loop Length on the Intrinsic Fluorescence of G-Quadruplexes. <i>Biochemistry</i> , 2013, 52, 3019-3021.	1.2	52
59	A Simple Fluorescence Method for pKa Determination in RNA and DNA Reveals Highly Shifted pKa TM s. <i>Journal of the American Chemical Society</i> , 2013, 135, 7390-7393.	6.6	52
60	Role of the Active Site Guanine in the <i>glmS</i> Ribozyme Self-Cleavage Mechanism: Quantum Mechanical/Molecular Mechanical Free Energy Simulations. <i>Journal of the American Chemical Society</i> , 2015, 137, 784-798.	6.6	52
61	Metal Binding Motif in the Active Site of the HDV Ribozyme Binds Divalent and Monovalent Ions. <i>Biochemistry</i> , 2011, 50, 2672-2682.	1.2	50
62	Thio Effects and an Unconventional Metal Ion Rescue in the Genomic Hepatitis Delta Virus Ribozyme. <i>Biochemistry</i> , 2013, 52, 6499-6514.	1.2	50
63	Inverse Thio Effects in the Hepatitis Delta Virus Ribozyme Reveal that the Reaction Pathway Is Controlled by Metal Ion Charge Density. <i>Biochemistry</i> , 2015, 54, 2160-2175.	1.2	50
64	Cellular conditions of weakly chelated magnesium ions strongly promote RNA stability and catalysis. <i>Nature Communications</i> , 2018, 9, 2149.	5.8	50
65	Design of a Highly Reactive HDV Ribozyme Sequence Uncovers Facilitation of RNA Folding by Alternative Pairings and Physiological Ionic Strength. <i>Journal of Molecular Biology</i> , 2004, 341, 695-712.	2.0	49
66	Fluorescence-Detected Stopped Flow with a Pyrene Labeled Substrate Reveals That Guanosine Facilitates Docking of the 5' Cleavage Site into a High Free Energy Binding Mode in the Tetrahymena Ribozyme. <i>Biochemistry</i> , 1994, 33, 11340-11348.	1.2	47
67	A Mechanistic Framework for Co-transcriptional Folding of the HDV Genomic Ribozyme in the Presence of Downstream Sequence. <i>Journal of Molecular Biology</i> , 2002, 324, 1-16.	2.0	47
68	The Human HDV-like <i>CPEB3</i> Ribozyme Is Intrinsically Fast-Reacting. <i>Biochemistry</i> , 2010, 49, 5321-5330.	1.2	47
69	Driving Forces for Nucleic Acid p <i>K_a</i> Shifting in an A-C Wobble: Effects of Helix Position, Temperature, and Ionic Strength. <i>Biochemistry</i> , 2010, 49, 3225-3236.	1.2	47
70	Wild-type is the optimal sequence of the HDV ribozyme under cotranscriptional conditions. <i>Rna</i> , 2007, 13, 2189-2201.	1.6	46
71	Detection of Innersphere Interactions between Magnesium Hydrate and the Phosphate Backbone of the HDV Ribozyme Using Raman Crystallography. <i>Journal of the American Chemical Society</i> , 2008, 130, 9670-9672.	6.6	46
72	Mechanistic Characterization of the HDV Genomic Ribozyme: Solvent Isotope Effects and Proton Inventories in the Absence of Divalent Metal Ions Support C75 as the General Acid. <i>Journal of the American Chemical Society</i> , 2008, 130, 14504-14520.	6.6	46

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73	Toward a Digital Gene Response: RNA G-Quadruplexes with Fewer Quartets Fold with Higher Cooperativity. <i>Journal of the American Chemical Society</i> , 2012, 134, 812-815.	6.6	46
74	Isolation and Characterization of Thermodynamically Stable and Unstable RNA Hairpins from a Triloop Combinatorial Library. <i>Biochemistry</i> , 1999, 38, 15369-15379.	1.2	45
75	Folding Cooperativity in RNA and DNA Is Dependent on Position in the Helix. <i>Biochemistry</i> , 2007, 46, 172-181.	1.2	45
76	Mechanistic Characterization of the HDV Genomic Ribozyme: A Mutant of the C41 Motif Provides Insight into the Positioning and Thermodynamic Linkage of Metal Ions and Protons. <i>Biochemistry</i> , 2007, 46, 3001-3012.	1.2	45
77	An Ontology for Facilitating Discussion of Catalytic Strategies of RNA-Cleaving Enzymes. <i>ACS Chemical Biology</i> , 2019, 14, 1068-1076.	1.6	45
78	Molecular Crowding Favors Reactivity of a Human Ribozyme Under Physiological Ionic Conditions. <i>Biochemistry</i> , 2013, 52, 8187-8197.	1.2	44
79	The GlcN6P cofactor plays multiple catalytic roles in the glmS ribozyme. <i>Nature Chemical Biology</i> , 2017, 13, 439-445.	3.9	44
80	StructureFold: genome-wide RNA secondary structure mapping and reconstruction <i>in vivo</i> . <i>Bioinformatics</i> , 2015, 31, 2668-2675.	1.8	43
81	Amyloid Precursor Protein Translation Is Regulated by a 3' UTR Guanine Quadruplex. <i>PLoS ONE</i> , 2015, 10, e0143160.	1.1	42
82	A hybridization-based approach for quantitative and low-bias single-stranded DNA ligation. <i>Analytical Biochemistry</i> , 2013, 435, 181-186.	1.1	41
83	Cooperative RNA Folding under Cellular Conditions Arises From Both Tertiary Structure Stabilization and Secondary Structure Destabilization. <i>Biochemistry</i> , 2017, 56, 3422-3433.	1.2	41
84	Thermodynamic Stability of the P4-P6 Domain RNA Tertiary Structure Measured by Temperature Gradient Gel Electrophoresis. <i>Biochemistry</i> , 1998, 37, 11162-11170.	1.2	40
85	Evidence that Folding of an RNA Tetraloop Hairpin Is Less Cooperative than Its DNA Counterpart. <i>Biochemistry</i> , 2004, 43, 7992-7998.	1.2	39
86	Contribution of the Closing Base Pair to Exceptional Stability in RNA Tetraloops: Roles for Molecular Mimicry and Electrostatic Factors. <i>Journal of the American Chemical Society</i> , 2009, 131, 8474-8484.	6.6	38
87	Glyoxals as <i>in vivo</i> RNA structural probes of guanine base-pairing. <i>Rna</i> , 2018, 24, 114-124.	1.6	38
88	mRNA structural elements immediately upstream of the start codon dictate dependence upon eIF4A helicase activity. <i>Genome Biology</i> , 2019, 20, 300.	3.8	38
89	Mechanistic Strategies in the HDV Ribozyme: Chelated and Diffuse Metal Ion Interactions and Active Site Protonation. <i>Journal of Physical Chemistry B</i> , 2011, 115, 8346-8357.	1.2	37
90	<i>In vivo</i> RNA structural probing of uracil and guanine base-pairing by 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC). <i>Rna</i> , 2019, 25, 147-157.	1.6	37

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91	Thermodynamic Coupling of the Loop and Stem in Unusually Stable DNA Hairpins Closed by CG Base Pairs. <i>Journal of the American Chemical Society</i> , 2003, 125, 2032-2033.	6.6	36
92	Identification of the Catalytic Mg ²⁺ Ion in the Hepatitis Delta Virus Ribozyme. <i>Biochemistry</i> , 2013, 52, 557-567.	1.2	36
93	Phase-specific RNA accumulation and duplex thermodynamics in multiphase coacervate models for membraneless organelles. <i>Nature Chemistry</i> , 2022, 14, 1110-1117.	6.6	35
94	Elucidation of Catalytic Strategies of Small Nucleolytic Ribozymes from Comparative Analysis of Active Sites. <i>ACS Catalysis</i> , 2018, 8, 314-327.	5.5	34
95	Restricting the Conformational Heterogeneity of RNA by Specific Incorporation of 8-Bromoguanosine. <i>Journal of the American Chemical Society</i> , 2003, 125, 2390-2391.	6.6	32
96	Molecular Dynamics Study of Twister Ribozyme: Role of Mg ²⁺ Ions and the Hydrogen-Bonding Network in the Active Site. <i>Biochemistry</i> , 2016, 55, 3834-3846.	1.2	32
97	Technique Development for Probing RNA Structure In Vivo and Genome-Wide. <i>Cold Spring Harbor Perspectives in Biology</i> , 2018, 10, a032250.	2.3	32
98	Role of Unsatisfied Hydrogen Bond Acceptors in RNA Energetics and Specificity. <i>Journal of the American Chemical Society</i> , 2010, 132, 5342-5344.	6.6	31
99	Raman crystallography of RNA. <i>Methods</i> , 2009, 49, 101-111.	1.9	30
100	Simple Method for Determining Nucleobase pKa Values by Indirect Labeling and Demonstration of a pKa of Neutrality in dsDNA. <i>Journal of the American Chemical Society</i> , 2004, 126, 10200-10201.	6.6	29
101	Cooperative Interactions in the Hammerhead Ribozyme Drive pK _a Shifting of G12 and Its Stacked Base C17. <i>Biochemistry</i> , 2017, 56, 2537-2548.	1.2	29
102	RNA multimerization as an organizing force for liquid-liquid phase separation. <i>Rna</i> , 2022, 28, 16-26.	1.6	27
103	StructureFold2: Bringing chemical probing data into the computational fold of RNA structural analysis. <i>Methods</i> , 2018, 143, 12-15.	1.9	26
104	Long-Distance Communication in the HDV Ribozyme: Insights from Molecular Dynamics and Experiments. <i>Journal of Molecular Biology</i> , 2010, 402, 278-291.	2.0	25
105	Tissue-specific changes in the RNA structurome mediate salinity response in <i>Arabidopsis</i> . <i>Rna</i> , 2020, 26, 492-511.	1.6	25
106	Native Tertiary Structure and Nucleoside Modifications Suppress tRNA ^{fMet} 's Intrinsic Ability to Activate the Innate Immune Sensor PKR. <i>PLoS ONE</i> , 2013, 8, e57905.	1.1	25
107	Structural and Energetic Consequences of Expanding a Highly Cooperative Stable DNA Hairpin Loop. <i>Journal of the American Chemical Society</i> , 2004, 126, 9570-9577.	6.6	24
108	A Conformationally Restricted Guanosine Analog Reveals the Catalytic Relevance of Three Structures of an RNA Enzyme. <i>Chemistry and Biology</i> , 2007, 14, 23-30.	6.2	24

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109	Chapter 13 Thinking Inside the Box. <i>Methods in Enzymology</i> , 2009, 455, 365-393.	0.4	24
110	Complexity in pH-Dependent Ribozyme Kinetics: Dark pK_a Shifts and Wavy Rate-pH Profiles. <i>Biochemistry</i> , 2018, 57, 483-488.	1.2	24
111	pK_a Shifting in Double-Stranded RNA Is Highly Dependent upon Nearest Neighbors and Bulge Positioning. <i>Biochemistry</i> , 2013, 52, 7470-7476.	1.2	23
112	Decrease in RNA Folding Cooperativity by Deliberate Population of Intermediates in RNA G-Quadruplexes. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 683-686.	7.2	23
113	Activation of PKR by RNA misfolding: HDV ribozyme dimers activate PKR. <i>Rna</i> , 2012, 18, 2157-2165.	1.6	22
114	Functional Roles of Chelated Magnesium Ions in RNA Folding and Function. <i>Biochemistry</i> , 2021, 60, 2374-2386.	1.2	22
115	A Mg ²⁺ -dependent RNA Tertiary Structure Forms in the <i>Bacillus subtilis</i> trp Operon Leader Transcript and Appears to Interfere with trpE Translation Control by Inhibiting TRAP Binding. <i>Journal of Molecular Biology</i> , 2003, 332, 555-574.	2.0	21
116	Assessing the Potential Effects of Active Site Mg ²⁺ Ions in the <i>glmS</i> Ribozyme-Cofactor Complex. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3984-3988.	2.1	20
117	CsrA-Mediated Translational Activation of <i>ymdA</i> Expression in <i>Escherichia coli</i> . <i>MBio</i> , 2020, 11, .	1.8	20
118	Genome-wide analysis of the <i>in vivo</i> tRNA structurome reveals RNA structural and modification dynamics under heat stress. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	20
119	Steady-State and Time-Resolved Studies into the Origin of the Intrinsic Fluorescence of G-Quadruplexes. <i>Journal of Physical Chemistry B</i> , 2016, 120, 5146-5158.	1.2	19
120	Quantum Mechanical/Molecular Mechanical Study of the HDV Ribozyme: Impact of the Catalytic Metal Ion on the Mechanism. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2906-2911.	2.1	18
121	RNA helical imperfections regulate activation of the protein kinase PKR: Effects of bulge position, size, and geometry. <i>Rna</i> , 2011, 17, 957-966.	1.6	18
122	Mechanistic characterization of the HDV genomic ribozyme: The cleavage site base pair plays a structural role in facilitating catalysis. <i>Rna</i> , 2008, 14, 1746-1760.	1.6	17
123	Mechanistic characterization of the 5'-triphosphate-dependent activation of PKR: Lack of 5'-end nucleobase specificity, evidence for a distinct triphosphate binding site, and a critical role for the dsRBD. <i>Rna</i> , 2012, 18, 1862-1874.	1.6	16
124	Role of RNA Structure in Transcription Attenuation in <i>Bacillus subtilis</i> : The trpEDCFBA Operon as a Model System. <i>Methods in Enzymology</i> , 2003, 371, 392-404.	0.4	15
125	Specificity of the Double-Stranded RNA-Binding Domain from the RNA-Activated Protein Kinase PKR for Double-Stranded RNA: Insights from Thermodynamics and Small-Angle X-ray Scattering. <i>Biochemistry</i> , 2012, 51, 9312-9322.	1.2	15
126	Bacterial Riboswitches and Ribozymes Potently Activate the Human Innate Immune Sensor PKR. <i>ACS Chemical Biology</i> , 2016, 11, 1118-1127.	1.6	15

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127	Structure-seq2 probing of RNA structure upon amino acid starvation reveals both known and novel RNA switches in <i>Bacillus subtilis</i> . <i>Rna</i> , 2020, 26, 1431-1447.	1.6	15
128	TRAP-5' stem-loop interaction increases the efficiency of transcription termination in the <i>Bacillus subtilis</i> trpEDCFBA operon leader region. <i>Rna</i> , 2007, 13, 2020-2033.	1.6	14
129	Protein Structure Is Related to RNA Structural Reactivity In Vivo. <i>Journal of Molecular Biology</i> , 2016, 428, 758-766.	2.0	14
130	Activation of the <i>glmS</i> Ribozyme Nucleophile via Overdetermined Hydrogen Bonding. <i>Biochemistry</i> , 2017, 56, 4313-4317.	1.2	14
131	Cellular Concentrations of Nucleotide Diphosphate-Chelated Magnesium Ions Accelerate Catalysis by RNA and DNA Enzymes. <i>Biochemistry</i> , 2019, 58, 3971-3979.	1.2	14
132	Cellular Small Molecules Contribute to Twister Ribozyme Catalysis. <i>Journal of the American Chemical Society</i> , 2018, 140, 10578-10582.	6.6	13
133	RNA sequence and structure control assembly and function of RNA condensates. <i>Rna</i> , 2021, 27, 1589-1601.	1.6	13
134	Mechanistic Analysis of Activation of the Innate Immune Sensor PKR by Bacterial RNA. <i>Journal of Molecular Biology</i> , 2015, 427, 3501-3515.	2.0	12
135	Design of highly active double-pseudoknotted ribozymes: a combined computational and experimental study. <i>Nucleic Acids Research</i> , 2019, 47, 29-42.	6.5	12
136	Single-nucleotide control of tRNA folding cooperativity under near-cellular conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 23075-23082.	3.3	12
137	A Simple Molecular Model for Thermophilic Adaptation of Functional Nucleic Acids. <i>Biochemistry</i> , 2007, 46, 4232-4240.	1.2	10
138	In Vivo Genome-Wide RNA Structure Probing with Structure-seq. <i>Methods in Molecular Biology</i> , 2019, 1933, 305-341.	0.4	10
139	Experimental demonstration and pan-structurome prediction of climate-associated riboSNitches in <i>Arabidopsis</i> . <i>Genome Biology</i> , 2022, 23, 101.	3.8	10
140	Molecular basis of TRAP-5' SL RNA interaction in the <i>Bacillus subtilis</i> trp operon transcription attenuation mechanism. <i>Rna</i> , 2009, 15, 55-66.	1.6	9
141	Molecular Mechanism for Folding Cooperativity of Functional RNAs in Living Organisms. <i>Biochemistry</i> , 2018, 57, 2994-3002.	1.2	8
142	Long Tracts of Guanines Drive Aggregation of RNA G-Quadruplexes in the Presence of Spermine. <i>Biochemistry</i> , 2021, 60, 2715-2726.	1.2	8
143	The Biophysics of RNA. <i>ACS Chemical Biology</i> , 2007, 2, 440-444.	1.6	7
144	Biological solution conditions and flanking sequence modulate LLPS of RNA G-quadruplex structures. <i>Rna</i> , 2022, 28, 1197-1209.	1.6	7

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