William G Scott

List of Publications by Year
in descending order

56 papers	4,513 citations	136950 32 h-index	182427 51 g-index
56 all docs	56 docs citations	56 times ranked	2526 citing authors

#	Article	IF	Citations
1	The crystal structure of an All-RNAhammerhead ribozyme: A proposed mechanism for RNA catalytic cleavage. Cell, 1995, 81, 991-1002.	28.9	761
2	Tertiary Contacts Distant from the Active Site Prime a Ribozyme for Catalysis. Cell, 2006, 126, 309-320.	28.9	458
3	The hammerhead, hairpin and VS ribozymes are catalytically proficient in monovalent cations alone. Chemistry and Biology, 1998, 5, 587-595.	6.0	352
4	Structure of Escherichia coli RNase E catalytic domain and implications for RNA turnover. Nature, 2005, 437, 1187-1191.	27.8	259
5	The Structural Basis of Hammerhead Ribozyme Self-Cleavage. Cell, 1998, 92, 665-673.	28.9	225
6	Small Self-cleaving Ribozymes. Cold Spring Harbor Perspectives in Biology, 2010, 2, a003574-a003574.	5.5	164
7	A discontinuous hammerhead ribozyme embedded in a mammalian messenger RNA. Nature, 2008, 454, 899-902.	27.8	156
8	The Structure of a Rigorously Conserved RNA Element within the SARS Virus Genome. PLoS Biology, 2004, 3, e5.	5.6	137
9	Inhibition of the Hammerhead Ribozyme Cleavage Reaction by Site-Specific Binding of Tb(III). Science, 1998, 279, 81-84.	12.6	131
10	Rapid Crystallization of Chemically Synthesized Hammerhead RNAs using a Double Screening Procedure. Journal of Molecular Biology, 1995, 250, 327-332.	4.2	118
11	Ribozymes. Current Opinion in Structural Biology, 2007, 17, 280-286.	5.7	117
12	Solvent Structure and Hammerhead RibozymeÂCatalysis. Chemistry and Biology, 2008, 15, 332-342.	6.0	104
13	Role of Mg²⁺ in Hammerhead Ribozyme Catalysis from Molecular Simulation. Journal of the American Chemical Society, 2008, 130, 3053-3064.	13.7	102
14	The Structural Basis of Ribozyme-Catalyzed RNA Assembly. Science, 2007, 315, 1549-1553.	12.6	98
15	Ribozymes: structure and mechanism in RNA catalysis. Trends in Biochemical Sciences, 1996, 21, 220-224.	7.5	91
16	Capture and Visualization of a Catalytic RNA Enzyme-Product Complex Using Crystal Lattice Trapping and X-Ray Holographic Reconstruction. Molecular Cell, 2000, 5, 279-287.	9.7	81
17	Refined Structures of the Ligand-binding Domain of the Aspartate Receptor from Salmonella typhimurium. Journal of Molecular Biology, 1993, 232, 555-573.	4.2	78
18	Capturing Hammerhead Ribozyme Structures in Action by Modulating General Base Catalysis. PLoS Biology, 2008, 6, e234.	5.6	78

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19	The Crystal Structure of the Escherichia coli RNase E Apoprotein and a Mechanism for RNA Degradation. Structure, 2008, 16, 1238-1244.	3.3	74
20	A pH-dependent conformational change, rather than the chemical step, appears to be rate-limiting in the hammerhead ribozyme cleavage reaction 1 1Edited by J. Doudna. Journal of Molecular Biology, 2002, 315, 121-130.	4.2	67
21	The RNA WikiProject: Community annotation of RNA families. Rna, 2008, 14, 2462-2464.	3.5	66
22	The Hammerhead Ribozyme. Progress in Molecular Biology and Translational Science, 2013, 120, 1-23.	1.7	58
23	Crystal structure of the Ffh and EF-G binding sites in the conserved domain IV of Escherichia coli 4.5S RNA. Structure, 2000, 8, 527-540.	3.3	56
24	Does a single metal ion bridge the A-9 and scissile phosphate groups in the catalytically active hammerhead ribozyme structure? 1 1Edited by J. Karn. Journal of Molecular Biology, 2000, 296, 33-41.	4.2	53
25	Biophysical and biochemical investigations of RNA catalysis in the hammerhead ribozyme. Quarterly Reviews of Biophysics, 1999, 32, 241-284.	5.7	51
26	A Helical Twist-induced Conformational Switch Activates Cleavage in the Hammerhead Ribozyme. Journal of Molecular Biology, 2003, 332, 327-336.	4.2	50
27	RNA structure, metal ions, and catalysis. Current Opinion in Chemical Biology, 1999, 3, 705-710.	6.1	49
28	RNA catalysis. Current Opinion in Structural Biology, 1998, 8, 720-726.	5.7	45
29	Threshold Occupancy and Specific Cation Binding Modes in the Hammerhead Ribozyme Active Site are Required for Active Conformation. Journal of Molecular Biology, 2009, 388, 195-206.	4.2	43
30	Ribozymes: structure and mechanism in RNA catalysis. Trends in Biochemical Sciences, 1996, 21, 220-224.	7.5	42
31	Insight into the Role of Mg2+ in Hammerhead Ribozyme Catalysis from X-ray Crystallography and Molecular Dynamics Simulation. Journal of Chemical Theory and Computation, 2007, 3, 325-327.	5.3	38
32	Transmembrane signalling and the aspartate receptor. Structure, 1994, 2, 877-887.	3.3	35
33	Active-Site Monovalent Cations Revealed in a 1.55-Ã…-Resolution Hammerhead Ribozyme Structure. Journal of Molecular Biology, 2013, 425, 3790-3798.	4.2	34
34	A general method for phasing novel complex RNA crystal structures without heavy-atom derivatives. Acta Crystallographica Section D: Biological Crystallography, 2008, 64, 738-744.	2.5	30
35	Structure and function of regulatory RNA elements: Ribozymes that regulate gene expression. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2009, 1789, 634-641.	1.9	29
36	Solving novel RNA structures using only secondary structural fragments. Methods, 2010, 52, 168-172.	3.8	22

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37	Catalysis, evolution and life. FEBS Letters, 2003, 553, 18-20.	2.8	18
38	Morphing the minimal and full-length hammerhead ribozymes: implications for the cleavage mechanism. Biological Chemistry, 2007, 388, 727-35.	2.5	18
39	Ribozyme catalysis via orbital steering11Edited by J. Doudna. Journal of Molecular Biology, 2001, 311, 989-999.	4.2	17
40	Visualizing the structure and mechanism of a small nucleolytic ribozyme. Methods, 2002, 28, 302-306.	3.8	15
41	RNA Catalysis, Thermodynamics and the Origin of Life. Life, 2014, 4, 131-141.	2.4	15
42	Minimal Hammerhead Ribozymes with Uncompromised Catalytic Activity. Journal of Molecular Biology, 2015, 427, 2340-2347.	4.2	14
43	Structural Variations and Solvent Structure of r(UGGGGU) Quadruplexes Stabilized by Sr2+ Ions. Journal of Molecular Biology, 2015, 427, 2205-2219.	4.2	11
44	Crystallographic Analyses of Chemically Synthesized Modified Hammerhead RNA Sequences as a General Approach Toward Understanding Ribozyme Structure and Function. , 1997, 74, 387-392.		9
45	[13] Conventional and time-resolved ribozyme X-ray crystallography. Methods in Enzymology, 2000, 317, 180-198.	1.0	8
46	Structural Simplicity and Mechanistic Complexity in the Hammerhead Ribozyme. Progress in Molecular Biology and Translational Science, 2018, 159, 177-202.	1.7	8
47	Identification of dynamical hinge points of the L1 ligase molecular switch. Rna, 2010, 16, 769-780.	3.5	7
48	Mapping L1 Ligase Ribozyme Conformational Switch. Journal of Molecular Biology, 2012, 423, 106-122.	4.2	6
49	Structural and catalytic effects of an invariant purine substitution in the hammerhead ribozyme: implications for the mechanism of acidâ€“base catalysis. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 2256-2263.	2.5	6
50	Challenges and surprises that arise with nucleic acids during model building and refinement. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 441-445.	2.5	4
51	What can the New Hammerhead Ribozyme Structures Teach us About Design?. , 2010, , 305-323.		3
52	How fluorescent RNA gets its glow. Nature, 2014, 513, 42-43.	27.8	1
53	Recruiting more proteins to the RNA world. Science, 2018, 362, 644-645.	12.6	1
54	RNA. , 2014, , 1-4.		0

#	Article	IF	Citations
55	RNA. , 2015, , 2190-2192.		0
56	Ribozyme Catalysis of Phosphodiester Bond Isomerization: The Hammerhead RNA and Its Relatives. Springer Series in Biophysics, 2009, , 73-102.	0.4	0