Neocles B Leontis

List of Publications by Year
in descending order

94 papers	9,395 citations	61984 43 h-index	42399 92 g-index
103 all docs	103 docs citations	103 times ranked	7105 citing authors

#	Article	IF	Citations
1	An RNA-centric historical narrative around the Protein Data Bank. Journal of Biological Chemistry, 2021, 296, 100555.	3.4	17
2	Context-sensitivity of isosteric substitutions of non-Watsonâ€“Crick basepairs in recurrent RNA 3D motifs. Nucleic Acids Research, 2021, 49, 9574-9593.	14.5	4
3	Functional analysis reveals G/U pairs critical for replication and trafficking of an infectious non-coding viroid RNA. Nucleic Acids Research, 2020, 48, 3134-3155.	14.5	18
4	A three-dimensional RNA motif mediates directional trafficking of Potato spindle tuber viroid from epidermal to palisade mesophyll cells in Nicotiana benthamiana. PLoS Pathogens, 2019, 15, e1008147.	4.7	28
5	How to fold and protect mitochondrial ribosomal RNA with fewer guanines. Nucleic Acids Research, 2018, 46, 10946-10968.	14.5	14
6	Allelic RNA Motifs in Regulating Systemic Trafficking of Potato Spindle Tuber Viroid. Viruses, 2018, 10, 160.	3.3	15
7	RNA 3-dimensional structural motifs as a critical constraint of viroid RNA evolution. PLoS Pathogens, 2018, 14, e1006801.	4.7	27
8	The RNA 3D Motif Atlas: Computational methods for extraction, organization and evaluation of RNA motifs. Methods, 2016, 103, 99-119.	3.8	31
9	JAR3D Webserver: Scoring and aligning RNA loop sequences to known 3D motifs. Nucleic Acids Research, 2016, 44, W320-W327.	14.5	20
10	R3D-2-MSA: the RNA 3D structure-to-multiple sequence alignment server. Nucleic Acids Research, 2015, 43, W15-W23.	14.5	4
11	Identifying novel sequence variants of RNA 3D motifs. Nucleic Acids Research, 2015, 43, 7504-7520.	14.5	43
12	A pyrene dihydrodioxin with pyridinium â€œarmsâ€: A photochemically active DNA cleaving agent with unusual duplex stabilizing and electron trapping properties. Journal of Photochemistry and Photobiology A: Chemistry, 2015, 307-308, 131-146.	3.9	6
13	An introduction to recurrent nucleotide interactions in RNA. Wiley Interdisciplinary Reviews RNA, 2015, 6, 17-45.	6.4	31
14	The Nucleic Acid Database: new features and capabilities. Nucleic Acids Research, 2014, 42, D114-D122.	14.5	194
15	Self-assembled RNA nanostructures. Science, 2014, 345, 732-733.	12.6	17
16	Automated classification of RNA 3D motifs and the RNA 3D Motif Atlas. Rna, 2013, 19, 1327-1340.	3.5	131
17	Isosteric and Nonisosteric Base Pairs in RNA Motifs: Molecular Dynamics and Bioinformatics Study of the Sarcinâ€“Ricin Internal Loop. Journal of Physical Chemistry B, 2013, 117, 14302-14319.	2.6	23
18	R3D Align web server for global nucleotide to nucleotide alignments of RNA 3D structures. Nucleic Acids Research, 2013, 41, W15-W21.	14.5	12

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19	Conference Scene: Advances in RNA nanotechnology promise to transform medicine. Nanomedicine, 2013, 8, 1051-1054.	3.3	9
20	RNA nanotechnology for computer design and <i>in vivo</i> computation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120310.	3.4	92
21	15. Analyzing, searching, and annotating recurrent RNA three-dimensional motifs. , 2013, , 363-398.		2
22	Comprehensive survey and geometric classification of base triples in RNA structures. Nucleic Acids Research, 2012, 40, 1407-1423.	14.5	79
23	<i>RNA-Puzzles</i>: A CASP-like evaluation of RNA three-dimensional structure prediction. Rna, 2012, 18, 610-625.	3.5	241
24	Nonredundant 3D Structure Datasets for RNA Knowledge Extraction and Benchmarking. Nucleic Acids and Molecular Biology, 2012, , 281-298.	0.2	80
25	Quantum Chemical Studies of Recurrent Interactions in RNA 3D Motifs. Nucleic Acids and Molecular Biology, 2012, , 239-279.	0.2	0
26	Noncanonical Hydrogen Bonding in Nucleic Acids. Benchmark Evaluation of Key Baseâ€"Phosphate Interactions in Folded RNA Molecules Using Quantum-Chemical Calculations and Molecular Dynamics Simulations. Journal of Physical Chemistry A, 2011, 115, 11277-11292.	2.5	26
27	Meeting report of the RNA Ontology Consortium January 8-9, 2011. Standards in Genomic Sciences, 2011, 4, 252-256.	1.5	1
28	WebFR3D--a server for finding, aligning and analyzing recurrent RNA 3D motifs. Nucleic Acids Research, 2011, 39, W50-W55.	14.5	54
29	The RNA Ontology (RNAO): An ontology for integrating RNA sequence and structure data. Applied Ontology, 2011, 6, 53-89.	2.0	23
30	Sharing and archiving nucleic acid structure mapping data. Rna, 2011, 17, 1204-1212.	3.5	28
31	A Three-Dimensional RNA Motif in<i>Potato spindle tuber viroid</i>Mediates Trafficking from Palisade Mesophyll to Spongy Mesophyll in<i>Nicotiana benthamiana</i>Â. Plant Cell, 2011, 23, 258-272.	6.6	69
32	Engineering cooperative tectoâ€"RNA complexes having programmable stoichiometries. Nucleic Acids Research, 2011, 39, 2903-2917.	14.5	30
33	Molecular dynamics simulations suggest that RNA three-way junctions can act as flexible RNA structural elements in the ribosome. Nucleic Acids Research, 2010, 38, 6247-6264.	14.5	37
34	R3D Align: global pairwise alignment of RNA 3D structures using local superpositions. Bioinformatics, 2010, 26, 2689-2697.	4.1	50
35	Quantum Chemical Studies of Nucleic Acids: Can We Construct a Bridge to the RNA Structural Biology and Bioinformatics Communities?. Journal of Physical Chemistry B, 2010, 114, 15723-15741.	2.6	57
36	The RNA Ontology (RNAO): An ontology for integrating RNA sequence and structure data. Nature Precedings, 2009, , .	0.1	3

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37	Classification and energetics of the base-phosphate interactions in RNA. Nucleic Acids Research, 2009, 37, 4898-4918.	14.5	156
38	RNA 3D Structural Motifs: Definition, Identification, Annotation, and Database Searching. Springer Series in Biophysics, 2009, , 1-26.	0.4	15
39	The RNA structure alignment ontology. Rna, 2009, 15, 1623-1631.	3.5	34
40	Frequency and isostericity of RNA base pairs. Nucleic Acids Research, 2009, 37, 2294-2312.	14.5	190
41	Understanding Sequence Variability of RNA Motifs Using Geometric Search and IsoDiscrepancy Matrices. , 2009, , .		1
42	TokenRNA: A New Type of Sequenceâ€Specific, Labelâ€Free Fluorescent Biosensor for Folded RNA Molecules. ChemBioChem, 2008, 9, 1902-1905.	2.6	45
43	Specific RNA Self-Assembly with Minimal Paranemic Motifs. Journal of the American Chemical Society, 2008, 130, 93-102.	13.7	60
44	Annotation of tertiary interactions in RNA structures reveals variations and correlations. Rna, 2008, 14, 2465-2477.	3.5	63
45	The OBO Foundry: coordinated evolution of ontologies to support biomedical data integration. Nature Biotechnology, 2007, 25, 1251-1255.	17.5	1,955
46	Tertiary structure and function of an RNA motif required for plant vascular entry to initiate systemic trafficking. EMBO Journal, 2007, 26, 3836-3846.	7.8	111
47	FR3D: finding local and composite recurrent structural motifs in RNA 3D structures. Journal of Mathematical Biology, 2007, 56, 215-252.	1.9	231
48	Generating New Specific RNA Interaction Interfaces Using C-Loops. Journal of the American Chemical Society, 2006, 128, 16131-16137.	13.7	34
49	The building blocks and motifs of RNA architecture. Current Opinion in Structural Biology, 2006, 16, 279-287.	5.7	315
50	Ribostral: an RNA 3D alignment analyzer and viewer based on basepair isostericities. Bioinformatics, 2006, 22, 2168-2170.	4.1	13
51	The RNA Ontology Consortium: An open invitation to the RNA community. Rna, 2006, 12, 533-541.	3.5	59
52	Controlling RNA self-assembly to form filaments. Nucleic Acids Research, 2006, 34, 1381-1392.	14.5	123
53	Structural and evolutionary classification of G/U wobble basepairs in the ribosome. Nucleic Acids Research, 2006, 34, 1326-1341.	14.5	49
54	Tertiary Structural and Functional Analyses of a Viroid RNA Motif by Isostericity Matrix and Mutagenesis Reveal Its Essential Role in Replication. Journal of Virology, 2006, 80, 8566-8581.	3.4	80

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55	Recurrent structural RNA motifs, Isostericity Matrices and sequence alignments. Nucleic Acids Research, 2005, 33, 2395-2409.	14.5	210
56	Hinge-Like Motions in RNA Kink-Turns: The Role of the Second A-Minor Motif and Nominally Unpaired Bases. Biophysical Journal, 2005, 88, 3466-3485.	0.5	91
57	Ribosomal RNA Kink-turn Motifâ€"A Flexible Molecular Hinge. Journal of Biomolecular Structure and Dynamics, 2004, 22, 183-193.	3.5	48
58	Long-Residency Hydration, Cation Binding, and Dynamics of Loop E/Helix IV rRNA-L25 Protein Complex. Biophysical Journal, 2004, 87, 3397-3412.	0.5	48
59	Analysis of RNA motifs. Current Opinion in Structural Biology, 2003, 13, 300-308.	5.7	274
60	Tools for the automatic identification and classification of RNA base pairs. Nucleic Acids Research, 2003, 31, 3450-3460.	14.5	240
61	Unique Tertiary and Neighbor Interactions Determine Conservation Patterns of Cis Watsonâ€"Crick A/G Base-pairs. Journal of Molecular Biology, 2003, 330, 967-978.	4.2	69
62	Non-Watson-Crick Basepairing and Hydration in RNA Motifs: Molecular Dynamics of 5S rRNA Loop E. Biophysical Journal, 2003, 84, 3564-3582.	0.5	108
63	The non-Watson-Crick base pairs and their associated isostericity matrices. Nucleic Acids Research, 2002, 30, 3497-3531.	14.5	679
64	Computational Simulation of the Docking of Prochlorothrix hollandica Plastocyanin to Photosystem I: Modeling the Electron Transfer Complex. Biophysical Journal, 2002, 82, 3305-3313.	0.5	19
65	RNAML: A standard syntax for exchanging RNA information. Rna, 2002, 8, 707-717.	3.5	91
66	The Annotation of RNA Motifs. Comparative and Functional Genomics, 2002, 3, 518-524.	2.0	35
67	Molecular dynamics of the frame-shifting pseudoknot from beet western yellows virus: the role of non-Watson-Crick base-pairing, ordered hydration, cation binding and base mutations on stability and unfolding 1 1Edited by J. Doudna. Journal of Molecular Biology, 2001, 313, 1073-1091.	4.2	70
68	Geometric nomenclature and classification of RNA base pairs. Rna, 2001, 7, 499-512.	3.5	877
69	TectoRNA: modular assembly units for the construction of RNA nano-objects. Nucleic Acids Research, 2001, 29, 455-463.	14.5	242
70	Atomic Glimpses on a Billion-Year-Old Molecular Machine. Angewandte Chemie - International Edition, 2000, 39, 1587-1591.	13.8	15
71	Tecto-RNA: One-Dimensional Self-Assembly through Tertiary Interactions. Angewandte Chemie - International Edition, 2000, 39, 2521-2524.	13.8	190
72	Self-assembled complexes of oligopeptides and metalloporphyrins: measurements of the reorganization and electronic interaction energies for photoinduced electron-transfer reactions. Biophysical Chemistry, 2000, 83, 121-140.	2.8	21

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73	Solution conformation of a bulged adenosine base in an RNA duplex by relaxation matrix refinement11Edited by I. Tinoco. Journal of Molecular Biology, 2000, 300, 1143-1154.	4.2	13
74	Hybrid-hybrid matrix structural refinement of a DNA three-way junction from 3D NOESY-NOESY. Journal of Biomolecular NMR, 1999, 14, 209-221.	2.8	21
75	Cationic 5,10,15,20-Tetrakis(N-methylpyridinium-4-yl)porphyrin Fully Intercalates at 5â€˜-CG-3â€˜ Steps of Duplex DNA in Solutionâ€. Biochemistry, 1999, 38, 15425-15437.	2.5	109
76	Structure and dynamics of ribosomal RNA. Current Opinion in Structural Biology, 1998, 8, 294-300.	5.7	17
77	A common motif organizes the structure of multi-helix loops in 16 S and 23 S ribosomal RNAs. Journal of Molecular Biology, 1998, 283, 571-583.	4.2	175
78	Conserved geometrical base-pairing patterns in RNA. Quarterly Reviews of Biophysics, 1998, 31, 399-455.	5.7	130
79	The 5S rRNA loop E: Chemical probing and phylogenetic data versus crystal structure. Rna, 1998, 4, 1134-1153.	3.5	107
80	Three-Dimensional NOESY-NOESY Hybrid-Hybrid Matrix Refinement of a DNA Three-Way Junction. ACS Symposium Series, 1997, , 167-180.	0.5	0
81	The Control of DNA Structure. , 1997, , 95-104.		0
82	[8] Structural studies of DNA three-way junctions. Methods in Enzymology, 1995, 261, 183-207.	1.0	6
83	Relative stabilities of DNA three-way, four-way and five-way junctions (multi-helix junction loops): unpaired nucleotides can be stabilizing or destabilizing. Nucleic Acids Research, 1995, 23, 2212-2222.	14.5	47
84	STRUCTURE-SPECIFIC BINDING and PHOTOSENSITIZED CLEAVAGE OF BRANCHED DNA THREE-WAY JUNCTION COMPLEXES BY CATIONIC PORPHYRINS. Photochemistry and Photobiology, 1994, 59, 515-528.	2.5	22
85	The Thermodynamics of Formation of a Three-Strand, DNA Three-Way Junction Complex. Biochemistry, 1994, 33, 6828-6833.	2.5	36
86	Effects of Unpaired Bases on the Conformation and Stability of Three-Arm DNA Junctions. Biochemistry, 1994, 33, 3660-3667.	2.5	36
87	A Model for the Solution Structure of a Branched, Three-strand DNA Complex. Journal of Biomolecular Structure and Dynamics, 1993, 11, 215-223.	3.5	30
88	Stability and structure of three-way DNA junctions containing unpaired nucleotides. Nucleic Acids Research, 1991, 19, 759-766.	14.5	117
89	Effects of tRNA-intron structure on cleavage of precursor tRNAs by RNase P fromSaccharomyces cerevisiae. Nucleic Acids Research, 1988, 16, 2537-2552.	14.5	38
90	[10] Preparation of 5S RNA-related materials for nuclear magnetic resonance and crystallography studies. Methods in Enzymology, 1988, 164, 158-174.	1.0	18

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91	NMR evidence for dynamic secondary structure in helixes II and III of the 5S RNA of Escherichia coli. Biochemistry, 1986, 25, 3916-3925.	2.5	30
92	Imino proton exchange in the 5S RNA of Escherichia coli and its complex with protein L25 at 490 MHz. Biochemistry, 1986, 25, 5736-5744.	2.5	17
93	Effect of magnesium ion on the structure of the 5S RNA from Escherichia coli. An imino proton magnetic resonance study of the helix I, IV, and V regions of the molecule. Biochemistry, 1986, 25, 7386-7392.	2.5	30
94	A small angle X-ray scattering study of a fragment derived fromE. coli5S RNA. Nucleic Acids Research, 1984, 12, 2193-2203.	14.5	13