Joseph D Puglisi

List of Publications by Year
in descending order

138 papers	12,437 citations	26567 56 h-index	26548 107 g-index
150 all docs	150 docs citations	150 times ranked	9866 citing authors

#	Article	IF	Citations
1	An Oxygen Scavenging System for Improvement of Dye Stability in Single-Molecule Fluorescence Experiments. Biophysical Journal, 2008, 94, 1826-1835.	0.2	716
2	Conformation of the TAR RNA-arginine complex by NMR spectroscopy. Science, 1992, 257, 76-80.	6.0	607
3	[22] absorbance melting curves of RNA. Methods in Enzymology, 1989, 180, 304-325.	0.4	591
4	tRNA dynamics on the ribosome during translation. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12893-12898.	3.3	435
5	Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor. Nature, 2010, 463, 108-112.	13.7	432
6	tRNA selection and kinetic proofreading in translation. Nature Structural and Molecular Biology, 2004, 11, 1008-1014.	3.6	426
7	Real-time tRNA transit on single translating ribosomes at codon resolution. Nature, 2010, 464, 1012-1017.	13.7	329
8	Preparation of isotopically labeled ribonucleotides for multidimensional NMR spectroscopy of RNA. Nucleic Acids Research, 1992, 20, 4515-4523.	6.5	288
9	Paromomycin binding induces a local conformational change in the A-site of 16 s rRNA. Journal of Molecular Biology, 1998, 277, 333-345.	2.0	288
10	Structure of HCV IRES domain II determined by NMR. Nature Structural and Molecular Biology, 2003, 10, 1033-1038.	3.6	260
11	RNA Sequence Determinants for Aminoglycoside Binding to an A-site rRNA Model Oligonucleotide. Journal of Molecular Biology, 1996, 262, 421-436.	2.0	252
12	Binding of neomycin-class aminoglycoside antibiotics to the A-site of 16 s rRNA. Journal of Molecular Biology, 1998, 277, 347-362.	2.0	241
13	The Pathway of HCV IRES-Mediated Translation Initiation. Cell, 2004, 119, 369-380.	13.5	241
14	Cotranslational Protein Folding inside the Ribosome Exit Tunnel. Cell Reports, 2015, 12, 1533-1540.	2.9	234
15	Recognition of the Codon-Anticodon Helix by Ribosomal RNA. Science, 1999, 285, 1722-1725.	6.0	221
16	tRNA Structure and Aminoacylation Efficiency. Progress in Molecular Biology and Translational Science, 1993, 45, 129-206.	1.9	218
17	N6-methyladenosine in mRNA disrupts tRNA selection and translation-elongation dynamics. Nature Structural and Molecular Biology, 2016, 23, 110-115.	3.6	202
18	Structures of two RNA domains essential for hepatitis C virus internal ribosome entry site function. Nature Structural Biology, 2000, 7, 1105-1110.	9.7	185

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19	Dynamic pathways of â^'1 translational frameshifting. Nature, 2014, 512, 328-332.	13.7	147
20	Dynamic competition between SARS-CoV-2 NSP1 and mRNA on the human ribosome inhibits translation initiation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	145
21	The noncoding RNAs SNORD50A and SNORD50B bind K-Ras and are recurrently deleted in human cancer. Nature Genetics, 2016, 48, 53-58.	9.4	143
22	RNA pseudoknots. Journal of Molecular Biology, 1990, 214, 455-470.	2.0	141
23	Conformation of an RNA pseudoknot. Journal of Molecular Biology, 1990, 214, 437-453.	2.0	134
24	Structural origins of aminoglycoside specificity for prokaryotic ribosomes. Journal of Molecular Biology, 2001, 306, 1037-1058.	2.0	132
25	High-throughput platform for real-time monitoring of biological processes by multicolor single-molecule fluorescence. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 664-669.	3.3	123
26	Translation at the Single-Molecule Level. Annual Review of Biochemistry, 2008, 77, 177-203.	5.0	117
27	Coordinated conformational and compositional dynamics drive ribosome translocation. Nature Structural and Molecular Biology, 2013, 20, 718-727.	3.6	117
28	Large-scale preparation and purification of polyacrylamide-free RNA oligonucleotides. Rna, 2004, 10, 889-893.	1.6	115
29	Mechanism of ribosome stalling during translation of a poly(A) tail. Nature Structural and Molecular Biology, 2019, 26, 1132-1140.	3.6	114
30	Quantitative polysome analysis identifies limitations in bacterial cell-free protein synthesis. Biotechnology and Bioengineering, 2005, 91, 425-435.	1.7	113
31	Irreversible chemical steps control intersubunit dynamics during translation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15364-15369.	3.3	112
32	Site-specific labeling of the ribosome for single-molecule spectroscopy. Nucleic Acids Research, 2005, 33, 182-189.	6.5	111
33	A short translational ramp determines the efficiency of protein synthesis. Nature Communications, 2019, 10, 5774.	5.8	109
34	Peptide bond formation destabilizes Shineâ€“Dalgarno interaction on the ribosome. Nature, 2007, 446, 454-457.	13.7	107
35	Solution structure and proposed domainâ€“domain recognition interface of an acyl carrier protein domain from a modular polyketide synthase. Protein Science, 2007, 16, 2093-2107.	3.1	107
36	A pseudoknotted RNA oligonucleotide. Nature, 1988, 331, 283-286.	13.7	106

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37	Concentric-flow electrokinetic injector enables serial crystallography of ribosome and photosystem II. Nature Methods, 2016, 13, 59-62.	9.0	103
38	Effect of mutations in the A site of 16 S rRNA on aminoglycoside antibiotic-ribosome interaction. Journal of Molecular Biology, 1999, 286, 33-43.	2.0	99
39	Comparison of X-Ray Crystal Structure of the 30S Subunit-Antibiotic Complex with NMR Structure of Decoding Site Oligonucleotide-Paromomycin Complex. Structure, 2003, 11, 43-53.	1.6	97
40	Following the intersubunit conformation of the ribosome during translation in real time. Nature Structural and Molecular Biology, 2010, 17, 793-800.	3.6	97
41	The role of fluctuations in tRNA selection by the ribosome. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13661-13665.	3.3	96
42	2â€²-O-methylation in mRNA disrupts tRNA decoding during translation elongation. Nature Structural and Molecular Biology, 2018, 25, 208-216.	3.6	92
43	Fluctuations of Transfer RNAs between Classical and Hybrid States. Biophysical Journal, 2007, 93, 3575-3582.	0.2	91
44	NMR Study of 100 kDa HCV IRES RNA Using Segmental Isotope Labeling. Journal of the American Chemical Society, 2002, 124, 9338-9339.	6.6	90
45	Rapid purification of RNAs using fast performance liquid chromatography (FPLC). Rna, 2006, 13, 289-294.	1.6	90
46	Purification and characterization of transcribed RNAs using gel filtration chromatography. Nature Protocols, 2007, 2, 3270-3277.	5.5	88
47	Ribosomal proteins mediate the hepatitis C virus IRES???HeLa 40S interaction. Rna, 2002, 8, 913-923.	1.6	88
48	GTP Hydrolysis by IF2 Guides Progression of the Ribosome into Elongation. Molecular Cell, 2009, 35, 37-47.	4.5	87
49	RPS25 is required for efficient RAN translation of C9orf72 and other neurodegenerative disease-associated nucleotide repeats. Nature Neuroscience, 2019, 22, 1383-1388.	7.1	87
50	Single Ribosome Dynamics and the Mechanism of Translation. Annual Review of Biophysics, 2010, 39, 491-513.	4.5	84
51	Heterogeneous pathways and timing of factor departure during translation initiation. Nature, 2012, 487, 390-393.	13.7	83
52	Dynamics of IRES-mediated translation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160177.	1.8	80
53	The Impact of Aminoglycosides on the Dynamics of Translation Elongation. Cell Reports, 2013, 3, 497-508.	2.9	72
54	Interaction of translation initiation factor IF1 with the E. coli ribosomal A site 1 1Edited by D. E. Draper. Journal of Molecular Biology, 2000, 299, 1-15.	2.0	63

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55	HIV-1 A-rich RNA loop mimics the tRNA anticodon structure. Nature Structural Biology, 1998, 5, 1033-1036.	9.7	62
56	How Messenger RNA and Nascent Chain Sequences Regulate Translation Elongation. Annual Review of Biochemistry, 2018, 87, 421-449.	5.0	62
57	Transient Protein-RNA Interactions Guide Nascent Ribosomal RNA Folding. Cell, 2019, 179, 1357-1369.e16.	13.5	61
58	Uncoupling of RNA Binding and PKR Kinase Activation by Viral Inhibitor RNAs. Journal of Molecular Biology, 2006, 358, 1270-1285.	2.0	60
59	eIF5B gates the transition from translation initiation to elongation. Nature, 2019, 573, 605-608.	13.7	60
60	Multiple Parallel Pathways of Translation Initiation on the CrPV IRES. Molecular Cell, 2016, 62, 92-103.	4.5	59
61	Unraveling the dynamics of ribosome translocation. Current Opinion in Structural Biology, 2012, 22, 804-814.	2.6	58
62	RNA folding: Pseudoknots, loops and bulges. BioEssays, 1989, 11, 100-106.	1.2	57
63	Aminoglycoside Resistance with Homogeneous and Heterogeneous Populations of Antibiotic-Resistant Ribosomes. Antimicrobial Agents and Chemotherapy, 2001, 45, 2414-2419.	1.4	57
64	Molecular Framework for the Activation of RNA-dependent Protein Kinase. Journal of Biological Chemistry, 2007, 282, 11474-11486.	1.6	56
65	Translational insensitivity to potent activation of PKR by HCV IRES RNA. Antiviral Research, 2009, 83, 228-237.	1.9	56
66	Influence of tRNA tertiary structure and stability on aminoacylation by yeast aspartyl-tRNA synthetase. Nucleic Acids Research, 1993, 21, 41-49.	6.5	54
67	Structure Determination of Large Biological RNAs. Methods in Enzymology, 2005, 394, 399-416.	0.4	53
68	Precursor Directed Biosynthesis of an Orthogonally Functional Erythromycin Analogue: Selectivity in the Ribosome Macrolide Binding Pocket. Journal of the American Chemical Society, 2012, 134, 12259-12265.	6.6	53
69	Structure of a eukaryotic decoding region A-site RNA. Journal of Molecular Biology, 2001, 306, 1023-1035.	2.0	52
70	The energy landscape of â^'1 ribosomal frameshifting. Science Advances, 2020, 6, eaax6969.	4.7	51
71	Specific Recognition of HIV TAR RNA by the dsRNA Binding Domains (dsRBD1â€“dsRBD2) of PKR. Journal of Molecular Biology, 2006, 358, 430-442.	2.0	50
72	Thiostrepton inhibition of tRNA delivery to the ribosome. Rna, 2007, 13, 2091-2097.	1.6	50

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73	[14] Biochemical and NMR studies of RNA conformation with an emphasis on RNA pseudoknots. Methods in Enzymology, 1995, 261, 323-350.	0.4	49
74	Involvement of protein IF2 N domain in ribosomal subunit joining revealed from architecture and function of the full-length initiation factor. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15656-15661.	3.3	48
75	The Dynamics of SecM-Induced Translational Stalling. Cell Reports, 2014, 7, 1521-1533.	2.9	48
76	Viral dsRNA Inhibitors Prevent Self-association and Autophosphorylation of PKR. Journal of Molecular Biology, 2007, 372, 103-113.	2.0	46
77	Kinetic pathway of 40S ribosomal subunit recruitment to hepatitis C virus internal ribosome entry site. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 319-325.	3.3	46
78	Solution mapping of T cell receptor docking footprints on peptide-MHC. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13080-13085.	3.3	45
79	De novo computational RNA modeling into cryo-EM maps of large ribonucleoprotein complexes. Nature Methods, 2018, 15, 947-954.	9.0	45
80	Architecture of an HIV-1 reverse transcriptase initiation complex. Nature, 2018, 557, 118-122.	13.7	44
81	Real-time assembly of ribonucleoprotein complexes on nascent RNA transcripts. Nature Communications, 2018, 9, 5087.	5.8	43
82	Dynamics of the context-specific translation arrest by chloramphenicol and linezolid. Nature Chemical Biology, 2020, 16, 310-317.	3.9	43
83	Approaching translation at atomic resolution. Nature Structural Biology, 2000, 7, 855-861.	9.7	42
84	Coupling of mRNA Structure Rearrangement to Ribosome Movement during Bypassing of Non-coding Regions. Cell, 2015, 163, 1267-1280.	13.5	42
85	Single-molecule imaging of full protein synthesis by immobilized ribosomes. Nucleic Acids Research, 2008, 36, e70-e70.	6.5	41
86	Real-time observation of signal recognition particle binding to actively translating ribosomes. ELife, 2014, 3, .	2.8	41
87	Nonfluorescent Quenchers To Correlate Single-Molecule Conformational and Compositional Dynamics. Journal of the American Chemical Society, 2012, 134, 5734-5737.	6.6	39
88	Signal Recognition Particle-ribosome Binding Is Sensitive to Nascent Chain Length. Journal of Biological Chemistry, 2014, 289, 19294-19305.	1.6	39
89	Post-termination Ribosome Intermediate Acts as the Gateway to Ribosome Recycling. Cell Reports, 2017, 20, 161-172.	2.9	39
90	Three tRNAs on the ribosome slow translation elongation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13691-13696.	3.3	38

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91	RACK1 on and off the ribosome. Rna, 2019, 25, 881-895.	1.6	38
92	Dynamic Recognition of the mRNA Cap by Saccharomyces cerevisiae eIF4E. Structure, 2013, 21, 2197-2207.	1.6	36
93	Sequence-Dependent Elongation Dynamics on Macrolide-Bound Ribosomes. Cell Reports, 2014, 7, 1534-1546.	2.9	36
94	Structure of a conserved RNA component of the peptidyl transferase centre. Nature Structural Biology, 1997, 4, 775-778.	9.7	35
95	Mechanisms that ensure speed and fidelity in eukaryotic translation termination. Science, 2021, 373, 876-882.	6.0	33
96	RNA pseudoknots. Accounts of Chemical Research, 1991, 24, 152-158.	7.6	31
97	Single-Molecule Analysis of Translational Dynamics. Cold Spring Harbor Perspectives in Biology, 2012, 4, a011551-a011551.	2.3	31
98	Dynamic basis of fidelity and speed in translation: Coordinated multistep mechanisms of elongation and termination. Protein Science, 2017, 26, 1352-1362.	3.1	30
99	Single-Molecule Fluorescence Applied to Translation. Cold Spring Harbor Perspectives in Biology, 2019, 11, a032714.	2.3	26
100	Structural basis for the transition from translation initiation to elongation by an 80S-eIF5B complex. Nature Communications, 2020, 11, 5003.	5.8	26
101	eIF5B and eIF1A reorient initiator tRNA to allow ribosomal subunit joining. Nature, 2022, 607, 185-190.	13.7	25
102	[16] Biochemical and nuclear magnetic resonance studies of aminoglycoside-RNA complexes. Methods in Enzymology, 2000, 317, 240-261.	0.4	24
103	Secondary Structure of the HIV Reverse Transcription Initiation Complex by NMR. Journal of Molecular Biology, 2011, 410, 863-874.	2.0	23
104	Design of a Cyclic Peptide that Targets a Viral RNA. Journal of the American Chemical Society, 2003, 125, 15704-15705.	6.6	22
105	Site-specific labeling of Saccharomyces cerevisiae ribosomes for single-molecule manipulations. Nucleic Acids Research, 2010, 38, e143-e143.	6.5	22
106	Relating Structure and Dynamics in RNA Biology. Cold Spring Harbor Perspectives in Biology, 2019, 11, a032474.	2.3	21
107	A simple real-time assay for in vitro translation. Rna, 2015, 21, 296-305.	1.6	20
108	Application of Residual Dipolar Coupling Measurements To Identify Conformational Changes in RNA Induced by Antibiotics. Journal of the American Chemical Society, 2000, 122, 7853-7854.	6.6	16

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109	Biophysical and Biochemical Investigations of dsRNA-Activated Kinase PKR. Methods in Enzymology, 2007, 430, 373-396.	0.4	15
110	Amino acid sequence repertoire of the bacterial proteome and the occurrence of untranslatable sequences. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7166-7170.	3.3	15
111	The molecular choreography of protein synthesis: translational control, regulation, and pathways. Quarterly Reviews of Biophysics, 2016, 49, e11.	2.4	14
112	Heterogeneous structures formed by conserved RNA sequences within the HIV reverse transcription initiation site. Rna, 2016, 22, 1689-1698.	1.6	13
113	Probing the Translation Dynamics of Ribosomes Using Zero-Mode Waveguides. Progress in Molecular Biology and Translational Science, 2016, 139, 1-43.	0.9	13
114	Probing the conformation of human tRNA₃^{Lys} in solution by NMR. FEBS Letters, 2007, 581, 5307-5314.	1.3	12
115	Fluorescently-tagged human eIF3 for single-molecule spectroscopy. Nucleic Acids Research, 2018, 46, e8-e8.	6.5	12
116	Dynamic Interplay of RNA and Protein in the Human Immunodeficiency Virus-1 Reverse Transcription Initiation Complex. Journal of Molecular Biology, 2018, 430, 5137-5150.	2.0	11
117	The ribosome revealed. , 1999, 6, 999-1003.		10
118	Initiation factor 2, tRNA, and 50S subunits cooperatively stabilize mRNAs on the ribosome during initiation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4881-4885.	3.3	10
119	Aminoglycoside Antibiotics and Decoding. , 2014, , 419-429.		10
120	N 6-Methyladenosines in mRNAs reduce the accuracy of codon reading by transfer RNAs and peptide release factors. Nucleic Acids Research, 2021, 49, 2684-2699.	6.5	10
121	The delicate dance of translation and folding. Science, 2015, 348, 399-400.	6.0	8
122	Resolving the Elegant Architecture of the Ribosome. Molecular Cell, 2009, 36, 720-723.	4.5	6
123	Expanding single-molecule fluorescence spectroscopy to capture complexity in biology. Current Opinion in Structural Biology, 2019, 58, 233-240.	2.6	6
124	Polysomes Bypass a 50-Nucleotide Coding Gap Less Efficiently Than Monosomes Due to Attenuation of a 5â€² mRNA Stemâ€“Loop and Enhanced Drop-off. Journal of Molecular Biology, 2020, 432, 4369-4387.	2.0	5
125	PKR: A NMR perspective. Progress in Nuclear Magnetic Resonance Spectroscopy, 2007, 51, 199-215.	3.9	4
126	A memory of eS25 loss drives resistance phenotypes. Nucleic Acids Research, 2020, 48, 7279-7297.	6.5	4

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127	mRNA processing: the 3'-end justifies the means. , 2000, 7, 263-264.		3
128	The dance of domains. Nature, 2007, 450, 1171-1172.	13.7	3
129	RNA dances to center stage. Rna, 2015, 21, 712-713.	1.6	2
130	Ribosomal ties that bind. Nature, 2015, 524, 45-46.	13.7	1
131	Ribosomal Protein Dynamics on the Human Ribosome. Biophysical Journal, 2018, 114, 595a.	0.2	1
132	1P557 Peptide bond formation induces the breakage of Shine-Dalgarno interaction on the ribosome(26.) Tj ETQq0 0 0 rgBT /Overlock 10 Butsuri, 2006, 46, S286.	0.0	0
133	2P-126 Real time imaging of tRNA dynamics with a zero-mode waveguides during translation(The 46th) Tj ETQq1 1 0.784314 rgBT /O	0.0	0
134	Realtime Observation of tRNA Dynamics at High Concentrations in Single Molecule Translation. Biophysical Journal, 2010, 98, 260a-261a.	0.2	0
135	1SBP-03 Dynamics of translation elongation in real time(1SBP Advanced Single Molecule Sequencing) Tj ETQq1 1 0.784314 rgBT /Ov 53, S87.	0.0	0
136	Single-Molecule Profiling of Ribosome Translational Phenomena. Biophysical Journal, 2014, 106, 239a.	0.2	0
137	Dynamics of Translation. FASEB Journal, 2006, 20, A889.	0.2	0
138	Direct tracking of eukaryotic translation termination dynamics. Biophysical Journal, 2022, 121, 202a.	0.2	0