Robert Landick

List of Publications by Citations

113 papers	6,683 citations	46 h-index	80 g-index
125 ext. papers	8,058 ext. citations	14.8 avg, IF	6.08 L-index

#	Paper	IF	Citations
113	Pausing by bacterial RNA polymerase is mediated by mechanistically distinct classes of signals. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 7090-5	11.5	335
112	Single-molecule study of transcriptional pausing and arrest by E. coli RNA polymerase. *Science*, **2000**, 287, 2497-500	33.3	293
111	Structural basis for substrate loading in bacterial RNA polymerase. *Nature*, **2007**, 448, 163-8	50.4	287
110	Sequence-resolved detection of pausing by single RNA polymerase molecules. *Cell*, **2006**, 125, 1083-94	56.2	229
109	A pause sequence enriched at translation start sites drives transcription dynamics in vivo. *Science*, **2014**, 344, 1042-7	33.3	209
108	The transcriptional regulator RfaH stimulates RNA chain synthesis after recruitment to elongation complexes by the exposed nontemplate DNA strand. *Cell*, **2002**, 109, 193-203	56.2	200
107	The regulatory roles and mechanism of transcriptional pausing. *Biochemical Society Transactions*, **2006**, 34, 1062-6	5.1	190
106	Allosteric control of RNA polymerase by a site that contacts nascent RNA hairpins. *Science*, **2001**, 292, 730-3	33.3	185
105	Regulator trafficking on bacterial transcription units in vivo. *Molecular Cell*, **2009**, 33, 97-108	17.6	173
104	Mechanisms of Bacterial Transcription Termination: All Good Things Must End. *Annual Review of Biochemistry*, **2016**, 85, 319-47	29.1	170
103	A central role of the RNA polymerase trigger loop in active-site rearrangement during transcriptional pausing. *Molecular Cell*, **2007**, 27, 406-19	17.6	166
102	RNA polymerase mutants found through adaptive evolution reprogram Escherichia coli for optimal growth in minimal media. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 20500-5	11.5	153
101	An helix to barrel domain switch transforms the transcription factor RfaH into a translation factor. *Cell*, **2012**, 150, 291-303	56.2	147
100	Discontinuous movements of DNA and RNA in RNA polymerase accompany formation of a paused transcription complex. *Cell*, **1995**, 81, 341-50	56.2	147
99	Structure of a bacterial RNA polymerase holoenzyme open promoter complex. *ELife*, **2015**, 4,	8.9	130
98	Structural basis of transcriptional pausing in bacteria. *Cell*, **2013**, 152, 431-41	56.2	117
97	Role of the RNA polymerase trigger loop in catalysis and pausing. *Nature Structural and Molecular Biology*, **2010**, 17, 99-104	17.6	117

96	Folding of a large ribozyme during transcription and the effect of the elongation factor NusA. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 9545-50	11.5	116
95	Co-overexpression of Escherichia coli RNA polymerase subunits allows isolation and analysis of mutant enzymes lacking lineage-specific sequence insertions. *Journal of Biological Chemistry*, **2003**, 278, 12344-55	5.4	115
94	Architecture of a transcribing-translating expressome. *Science*, **2017**, 356, 194-197	33.3	110
93	Translation activates the paused transcription complex and restores transcription of the trp operon leader region. *Proceedings of the National Academy of Sciences of the United States of America*, **1985**, 82, 4663-7	11.5	101
92	Dissection of the his leader pause site by base substitution reveals a multipartite signal that includes a pause RNA hairpin. *Journal of Molecular Biology*, **1993**, 233, 25-42	6.5	100
91	Trigger loop dynamics mediate the balance between the transcriptional fidelity and speed of RNA polymerase II. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 6555-60	11.5	98
90	Correcting direct effects of ethanol on translation and transcription machinery confers ethanol tolerance in bacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, E2576-85	11.5	96
89	RNA Polymerase Accommodates a Pause RNA Hairpin by Global Conformational Rearrangements that Prolong Pausing. *Molecular Cell*, **2018**, 69, 802-815.e5	17.6	85
88	GreA-induced transcript cleavage in transcription complexes containing Escherichia coli RNA polymerase is controlled by multiple factors, including nascent transcript location and structure. *Journal of Biological Chemistry*, **1994**, 269, 22282-94	5.4	85
87	A Two-Way Street: Regulatory Interplay between RNA Polymerase and Nascent RNA Structure. *Trends in Biochemical Sciences*, **2016**, 41, 293-310	10.3	83
86	Bridged filaments of histone-like nucleoid structuring protein pause RNA polymerase and aid termination in bacteria. *ELife*, **2015**, 4,	8.9	82
85	Structural Basis for Transcript Elongation Control by NusG Family Universal Regulators. *Cell*, **2018**, 173, 1650-1662.e14	56.2	81
84	Roles of RNA:DNA hybrid stability, RNA structure, and active site conformation in pausing by human RNA polymerase II. *Journal of Molecular Biology*, **2001**, 311, 265-82	6.5	81
83	Termination-altering amino acid substitutions in the betaW subunit of Escherichia coli RNA polymerase identify regions involved in RNA chain elongation. *Genes and Development*, **1994**, 8, 2913-27	12.6	81
82	The downstream DNA jaw of bacterial RNA polymerase facilitates both transcriptional initiation and pausing. *Journal of Biological Chemistry*, **2002**, 277, 37456-63	5.4	79
81	Multiple interactions stabilize a single paused transcription intermediate in which hairpin to 3W end spacing distinguishes pause and termination pathways. *Journal of Molecular Biology*, **1997**, 268, 54-68	6.5	76
80	RNA polymerase pausing and nascent-RNA structure formation are linked through clamp-domain movement. *Nature Structural and Molecular Biology*, **2014**, 21, 794-802	17.6	70
79	Real-time footprinting of DNA in the first kinetically significant intermediate in open complex formation by Escherichia coli RNA polymerase. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 7833-8	11.5	70

78	The NusA N-terminal domain is necessary and sufficient for enhancement of transcriptional pausing via interaction with the RNA exit channel of RNA polymerase. *Journal of Molecular Biology*, **2010**, 401, 708-25	6.5	68
77	Structure and function of CarD, an essential mycobacterial transcription factor. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 12619-24	11.5	64
76	Engineering and two-stage evolution of a lignocellulosic hydrolysate-tolerant Saccharomyces cerevisiae strain for anaerobic fermentation of xylose from AFEX pretreated corn stover. *PLoS ONE*, **2014**, 9, e107499	3.7	64
75	Mycobacterial RNA polymerase requires a U-tract at intrinsic terminators and is aided by NusG at suboptimal terminators. *MBio*, **2014**, 5, e00931	7.8	61
74	RNA polymerase clamps down. *Cell*, **2001**, 105, 567-70	56.2	58
73	DksA guards elongating RNA polymerase against ribosome-stalling-induced arrest. *Molecular Cell*, **2014**, 53, 766-78	17.6	52
72	RNA transcript 3ʹ-proximal sequence affects translocation bias of RNA polymerase. *Biochemistry*, **2011**, 50, 7002-14	3.2	51
71	The Salmonella typhimurium his operon leader region contains an RNA hairpin-dependent transcription pause site. *Journal of Biological Chemistry*, **1989**, 264, 20796-20804	5.4	51
70	RNA polymerase motions during promoter melting. *Science*, **2017**, 356, 863-866	33.3	50
69	The Salmonella typhimurium his operon leader region contains an RNA hairpin-dependent transcription pause site. Mechanistic implications of the effect on pausing of altered RNA hairpins. *Journal of Biological Chemistry*, **1989**, 264, 20796-804	5.4	49
68	Directed Evolution Reveals Unexpected Epistatic Interactions That Alter Metabolic Regulation and Enable Anaerobic Xylose Use by Saccharomyces cerevisiae. *PLoS Genetics*, **2016**, 12, e1006372	6	49
67	Fidaxomicin jams RNA polymerase motions needed for initiation via RbpA contacts. *ELife*, **2018**, 7,	8.9	46
66	H-NS and RNA polymerase: a love-hate relationship?. *Current Opinion in Microbiology*, **2015**, 24, 53-9	7.9	45
65	The role of the lid element in transcription by E. coli RNA polymerase. *Journal of Molecular Biology*, **2006**, 361, 644-58	6.5	45
64	Direct versus limited-step reconstitution reveals key features of an RNA hairpin-stabilized paused transcription complex. *Journal of Biological Chemistry*, **2007**, 282, 19020-8	5.4	42
63	Mechanism for the Regulated Control of Bacterial Transcription Termination by a Universal Adaptor Protein. *Molecular Cell*, **2018**, 71, 911-922.e4	17.6	41
62	Bacterial RNA polymerase can retain ?70 throughout transcription. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 602-7	11.5	40
61	Cys-pair reporters detect a constrained trigger loop in a paused RNA polymerase. *Molecular Cell*, **2013**, 50, 882-93	17.6	40

60	Complete genome sequence and the expression pattern of plasmids of the model ethanologen ZM4 and its xylose-utilizing derivatives 8b and 2032. *Biotechnology for Biofuels*, **2018**, 11, 125	7.8	39
59	StpA and Hha stimulate pausing by RNA polymerase by promoting DNA-DNA bridging of H-NS filaments. *Nucleic Acids Research*, **2018**, 46, 5525-5546	20.1	36
58	Transcriptional pausing without backtracking. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 8797-8	11.5	35
57	Downstream DNA selectively affects a paused conformation of human RNA polymerase II. *Journal of Molecular Biology*, **2004**, 341, 429-42	6.5	35
56	Genome Sequence and Analysis of a Stress-Tolerant, Wild-Derived Strain of Saccharomyces cerevisiae Used in Biofuels Research. *G3: Genes, Genomes, Genetics*, **2016**, 6, 1757-66	3.2	35
55	Active-site dynamics in RNA polymerases. *Cell*, **2004**, 116, 351-3	56.2	34
54	Pausing guides RNA folding to populate transiently stable RNA structures for riboswitch-based transcription regulation. *ELife*, **2017**, 6,	8.9	32
53	The elemental mechanism of transcriptional pausing. *ELife*, **2019**, 8,	8.9	32
52	Trigger-helix folding pathway and SI3 mediate catalysis and hairpin-stabilized pausing by Escherichia coli RNA polymerase. *Nucleic Acids Research*, **2014**, 42, 12707-21	20.1	31
51	Life times of metastable states guide regulatory signaling in transcriptional riboswitches. *Nature Communications*, **2018**, 9, 944	17.4	30
50	Mechanisms of Transcriptional Pausing in Bacteria. *Journal of Molecular Biology*, **2019**, 431, 4007-4029	6.5	30
49	Transcription of Bacterial Chromatin. *Journal of Molecular Biology*, **2019**, 431, 4040-4066	6.5	30
48	Aromatic inhibitors derived from ammonia-pretreated lignocellulose hinder bacterial ethanologenesis by activating regulatory circuits controlling inhibitor efflux and detoxification. *Frontiers in Microbiology*, **2014**, 5, 402	5.7	30
47	Trigger loop of RNA polymerase is a positional, not acid-base, catalyst for both transcription and proofreading. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E5103-E5112	11.5	29
46	CBR antimicrobials inhibit RNA polymerase via at least two bridge-helix cap-mediated effects on nucleotide addition. *Proceedings of the National Academy of Sciences of the United States of America* , **2015**, 112, E4178-87	11.5	29
45	Functional interplay between the jaw domain of bacterial RNA polymerase and allele-specific residues in the product RNA-binding pocket. *Journal of Molecular Biology*, **2006**, 356, 1163-79	6.5	29
44	Shifting RNA polymerase into overdrive. *Science*, **1999**, 284, 598-9	33.3	29
43	Structural basis for backtracking by the SARS-CoV-2 replication-transcription complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	29

42	Dynamics of GreB-RNA polymerase interaction allow a proofreading accessory protein to patrol for transcription complexes needing rescue. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E1081-E1090	11.5	24
41	The Battle of RNA Synthesis: Virus versus Host. *Viruses*, **2017**, 9,	6.2	21
40	NTP-entry routes in multi-subunit RNA polymerases. *Trends in Biochemical Sciences*, **2005**, 30, 651-4	10.3	21
39	P1 Ref Endonuclease: A Molecular Mechanism for Phage-Enhanced Antibiotic Lethality. *PLoS Genetics*, **2016**, 12, e1005797	6	21
38	Natural Variation in the Multidrug Efflux Pump Underlies Ionic Liquid Tolerance in Yeast. *Genetics*, **2018**, 210, 219-234	4	19
37	OptSSeq explores enzyme expression and function landscapes to maximize isobutanol production rate. *Metabolic Engineering*, **2019**, 52, 324-340	9.7	19
36	Mapping E. coli RNA polymerase and associated transcription factors and identifying promoters genome-wide. *Methods in Enzymology*, **2011**, 498, 449-71	1.7	17
35	Efficient reconstitution of transcription elongation complexes for single-molecule studies of eukaryotic RNA polymerase II. *Transcription*, **2012**, 3, 146-53	4.8	17
34	Alternative transcription cycle for bacterial RNA polymerase. *Nature Communications*, **2020**, 11, 448	17.4	13
33	The Structure of Bacterial RNA Polymerase283-296		13
32	Genome-Wide Mapping of the Distribution of CarD, RNAP and RNAP on the Chromosome using Chromatin Immunoprecipitation Sequencing. *Genomics Data*, **2014**, 2, 110-113		12
31	Regulated redirection of central carbon flux enhances anaerobic production of bioproducts in Zymomonas mobilis. *Metabolic Engineering*, **2020**, 61, 261-274	9.7	11
30	The shrewd grasp of RNA polymerase. *Science*, **1996**, 273, 202-3	33.3	11
29	RNA Polymerase Clamp Movement Aids Dissociation from DNA but Is Not Required for RNA Release at Intrinsic Terminators. *Journal of Molecular Biology*, **2019**, 431, 696-713	6.5	10
28	Genome-Scale Transcription-Translation Mapping Reveals Features of Zymomonas mobilis Transcription Units and Promoters. *MSystems*, **2020**, 5,	7.6	10
27	A Markerless Method for Genome Engineering in ZM4. *Frontiers in Microbiology*, **2019**, 10, 2216	5.7	9
26	Delayed inhibition mechanism for secondary channel factor regulation of ribosomal RNA transcription. *ELife*, **2019**, 8,	8.9	9
25	Trigger loop dynamics can explain stimulation of intrinsic termination by bacterial RNA polymerase without terminator hairpin contact. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E9233-E9242	11.5	8

24	Multiomic Fermentation Using Chemically Defined Synthetic Hydrolyzates Revealed Multiple Effects of Lignocellulose-Derived Inhibitors on Cell Physiology and Xylose Utilization in. *Frontiers in Microbiology*, **2019**, 10, 2596	5.7	8
23	The antibiotic sorangicin A inhibits promoter DNA unwinding in a rifampicin-resistant RNA polymerase. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 30423-30432	11.5	7
22	A majority of promoters lack a crucial RNA polymerase recognition feature, enabling coordinated transcription activation. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 29658-29668	11.5	6
21	Building a better stop sign: understanding the signals that terminate transcription. *Nature Methods*, **2013**, 10, 618-9	21.6	4
20	A long time in the making--the Nobel Prize for RNA polymerase. *Cell*, **2006**, 127, 1087-90	56.2	4
19	Genome-Wide Identification of Transcription Start Sites in Two , Rhodobacter sphaeroides 2.4.1 and Novosphingobium aromaticivorans DSM 12444. *Microbiology Resource Announcements*, **2020**, 9,	1.3	4
18	Systems Metabolic Engineering of Escherichia coli Improves Coconversion of Lignocellulose-Derived Sugars. *Biotechnology Journal*, **2019**, 14, e1800441	5.6	3
17	Crabtree/Warburg-like aerobic xylose fermentation by engineered Saccharomyces cerevisiae. *Metabolic Engineering*, **2021**, 68, 119-130	9.7	3
16	CRISpy-Pop: A Web Tool for Designing CRISPR/Cas9-Driven Genetic Modifications in Diverse Populations. *G3: Genes, Genomes, Genetics*, **2020**, 10, 4287-4294	3.2	2
15	Transcriptional Pausing as a Mediator of Bacterial Gene Regulation. *Annual Review of Microbiology*, **2021**, 75, 291-314	17.5	2
14	Basis of narrow-spectrum activity of fidaxomicin on Clostridioides difficile.. *Nature*, **2022**,	50.4	2
13	Seeing gene expression in cells: the future of structural biology.. *Faculty Reviews*, **2021**, 10, 79	1.2	1
12	The elemental mechanism of transcriptional pausing		1
11	Heterologous glycosyl hydrolase expression and cellular reprogramming resembling sucrose-induction enableZymomonas mobilisgrowth on cellobiose		1
10	Heterologous expression of a glycosyl hydrolase and cellular reprogramming enable Zymomonas mobilis growth on cellobiose. *PLoS ONE*, **2020**, 15, e0226235	3.7	1
9	Chemical-genetic interrogation of RNA polymerase mutants reveals structure-function relationships and physiological tradeoffs. *Molecular Cell*, **2021**, 81, 2201-2215.e9	17.6	1
8	Obligate movements of an active site-linked surface domain control RNA polymerase elongation and pausing via a Phe pocket anchor. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	1
7	Conserved Trigger Loop Histidine of RNA Polymerase II Functions as a Positional Catalyst Primarily through Steric Effects. *Biochemistry*, **2021**, 60, 3323-3336	3.2	0

6	In Vitro Transcription Assay to Quantify Effects of H-NS Filaments on RNA Chain Elongation by RNA Polymerase. *Methods in Molecular Biology*, **2018**, 1837, 351-386	1.4
5	RNA Polymerases from Bacillus subtilis and Escherichia coli Differ in Recognition of Regulatory Signals In Vitro. *Journal of Bacteriology*, **2001**, 183, 1504-1504	3.5
4	Single Molecule Studies Reveal the Mechanism and Energetics of Transcriptional Termination. *FASEB Journal*, **2008**, 22, 399.1	0.9
3	Conserved mechanisms of transcriptional pausing regulate diverse RNA polymerases. *FASEB Journal*, **2019**, 33, 624.2	0.9
2	Role of the RNA polymerase trigger loop in transcript elongation, cleavage, and pausing. *FASEB Journal*, **2009**, 23, 430.2	0.9
1	Bacterial Transcription Continues to Surprise: Activation by Alarmone-Mediated □Factor Tethering. *Molecular Cell*, **2021**, 81, 8-9	17.6