

Kenneth A Johnson

List of Publications by Year in descending order

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114
papers

9,991
citations

57681

46
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40945

97
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120
all docs

120
docs citations

120
times ranked

7984
citing authors

#	ARTICLE	IF	CITATIONS
1	Conformational dynamics during misincorporation and mismatch extension defined using a DNA polymerase with a fluorescent artificial amino acid. <i>Journal of Biological Chemistry</i> , 2022, 298, 101451.	1.6	5
2	Substrate specificity and proposed structure of the proofreading complex of T7 DNA polymerase. <i>Journal of Biological Chemistry</i> , 2022, 298, 101627.	1.6	8
3	Structural basis for mismatch surveillance by CRISPR-Cas9. <i>Nature</i> , 2022, 603, 343-347.	13.7	116
4	Leveraging intrinsic flexibility to engineer enhanced enzyme catalytic activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	14
5	Kinetic and thermodynamic analysis defines roles for two metal ions in DNA polymerase specificity and catalysis. <i>Journal of Biological Chemistry</i> , 2021, 296, 100184.	1.6	11
6	Conformational dynamics during high-fidelity DNA replication and translocation defined using a DNA polymerase with a fluorescent artificial amino acid. <i>Journal of Biological Chemistry</i> , 2021, 296, 100143.	1.6	14
7	Expression and purification of tag-free SARS-CoV-2 RNA-dependent RNA polymerase in <i>Escherichia coli</i> . <i>STAR Protocols</i> , 2021, 2, 100357.	0.5	9
8	Remdesivir is a delayed translocation inhibitor of SARS-CoV-2 replication. <i>Molecular Cell</i> , 2021, 81, 1548-1552.e4.	4.5	90
9	Pyrophosphate release acts as a kinetic checkpoint during high-fidelity DNA replication by the <i>Staphylococcus aureus</i> replicative polymerase PolC. <i>Nucleic Acids Research</i> , 2021, 49, 8324-8338.	6.5	9
10	High throughput quantification of short nucleic acid samples by capillary electrophoresis with automated data processing. <i>Analytical Biochemistry</i> , 2021, 629, 114239.	1.1	12
11	Mechanisms of inhibition of viral RNA replication by nucleotide analogs. <i>The Enzymes</i> , 2021, 49, 39-62.	0.7	11
12	Optimized incorporation of an unnatural fluorescent amino acid affords measurement of conformational dynamics governing high-fidelity DNA replication. <i>Journal of Biological Chemistry</i> , 2020, 295, 17265-17280.	1.6	14
13	Engineered CRISPR/Cas9 enzymes improve discrimination by slowing DNA cleavage to allow release of off-target DNA. <i>Nature Communications</i> , 2020, 11, 3576.	5.8	55
14	Conformational Dynamics Contribute to Substrate Selectivity and Catalysis in Human Kynureninase. <i>ACS Chemical Biology</i> , 2020, 15, 3159-3166.	1.6	6
15	Remdesivir Is Effective in Combating COVID-19 because It Is a Better Substrate than ATP for the Viral RNA-Dependent RNA Polymerase. <i>IScience</i> , 2020, 23, 101849.	1.9	51
16	Exploring the Reaction Mechanism of HIV Reverse Transcriptase with a Nucleotide Substrate. <i>Journal of Physical Chemistry B</i> , 2020, 124, 4270-4283.	1.2	7
17	Resistance to excision determines efficiency of hepatitis C virus RNA-dependent RNA polymerase inhibition by nucleotide analogs. <i>Journal of Biological Chemistry</i> , 2020, 295, 10112-10124.	1.6	8
18	Visible Light Mediated Bidirectional Control over Carbonic Anhydrase Activity in Cells and <i>in Vivo</i> Using Azobenzenesulfonamides. <i>Journal of the American Chemical Society</i> , 2020, 142, 14522-14531.	6.6	40

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19	Rate-limiting pyrophosphate release by hepatitis C virus polymerase NS5B improves fidelity. <i>Journal of Biological Chemistry</i> , 2020, 295, 16436-16444.	1.6	5
20	Mechanistic studies of a α -Declick β -reaction. <i>Chemical Science</i> , 2019, 10, 8817-8824.	3.7	10
21	Kinetic characterization of Cas9 enzymes. <i>Methods in Enzymology</i> , 2019, 616, 289-311.	0.4	6
22	New standards for collecting and fitting steady state kinetic data. <i>Beilstein Journal of Organic Chemistry</i> , 2019, 15, 16-29.	1.3	73
23	Teaching Chemical Kinetics with Dynamic Simulations. <i>Trends in Chemistry</i> , 2019, 1, 278-281.	4.4	0
24	Kinetic Basis for Improved Specificity of CRISPR/Cas9 High Fidelity Variants. <i>FASEB Journal</i> , 2019, 33, 620.4.	0.2	0
25	DNA Unwinding Is the Primary Determinant of CRISPR-Cas9 Activity. <i>Cell Reports</i> , 2018, 22, 359-371.	2.9	141
26	The binding of Class II sRNA MgrR to two different sites on matchmaker protein Hfq enables efficient competition for Hfq and annealing to regulated mRNAs. <i>Rna</i> , 2018, 24, 1761-1784.	1.6	19
27	A new general method for simultaneous fitting of temperature and concentration dependence of reaction rates yields kinetic and thermodynamic parameters for HIV reverse transcriptase specificity. <i>Journal of Biological Chemistry</i> , 2017, 292, 6695-6702.	1.6	13
28	The human mitochondrial single-stranded DNA-binding protein displays distinct kinetics and thermodynamics of DNA binding and exchange. <i>Journal of Biological Chemistry</i> , 2017, 292, 13068-13084.	1.6	30
29	Resolution of the uncertainty in the kinetic mechanism for the trans -3-Chloroacrylic acid dehalogenase-catalyzed reaction. <i>Archives of Biochemistry and Biophysics</i> , 2017, 623-624, 9-19.	1.4	2
30	Pyrophosphate Release in the Protein HIV Reverse Transcriptase. <i>Journal of Physical Chemistry B</i> , 2017, 121, 9557-9565.	1.2	15
31	HIV-1 Reverse Transcriptase Polymerase and RNase H (Ribonuclease H) Active Sites Work Simultaneously and Independently. <i>Journal of Biological Chemistry</i> , 2016, 291, 26566-26585.	1.6	21
32	pH-Sensitive fluorophores from locked GFP chromophores by a non-alternant analogue of the photochemical meta effect. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 26703-26711.	1.3	9
33	Rate-limiting Pyrophosphate Release by HIV Reverse Transcriptase Improves Fidelity. <i>Journal of Biological Chemistry</i> , 2016, 291, 26554-26565.	1.6	22
34	Hydrogen/Deuterium Exchange Kinetics Demonstrate Long Range Allosteric Effects of Thumb Site 2 Inhibitors of Hepatitis C Viral RNA-dependent RNA Polymerase. <i>Journal of Biological Chemistry</i> , 2016, 291, 10078-10088.	1.6	22
35	Thumb Site 2 Inhibitors of Hepatitis C Viral RNA-dependent RNA Polymerase Allosterically Block the Transition from Initiation to Elongation. <i>Journal of Biological Chemistry</i> , 2016, 291, 10067-10077.	1.6	15
36	Alpers disease mutations in human DNA polymerase gamma cause catalytic defects in mitochondrial DNA replication by distinct mechanisms. <i>Frontiers in Genetics</i> , 2015, 06, 135.	1.1	13

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37	Trimeric microsomal glutathione transferase 2 displays one third of the sites reactivity. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015, 1854, 1365-1371.	1.1	19
38	Enzyme Selectivity of HIV Reverse Transcriptase: Conformations, Ligands, and Free Energy Partition. <i>Journal of Physical Chemistry B</i> , 2015, 119, 11513-11526.	1.2	28
39	A century of enzyme kinetic analysis, 1913 to 2013. <i>FEBS Letters</i> , 2013, 587, 2753-2766.	1.3	128
40	Towards Efficient Reconstitution of the Human Mitochondrial DNA Replication Complex. <i>Biophysical Journal</i> , 2013, 104, 74a.	0.2	3
41	NTP-mediated nucleotide excision activity of hepatitis C virus RNA-dependent RNA polymerase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E348-57.	3.3	38
42	Assembly, Purification, and Pre-steady-state Kinetic Analysis of Active RNA-dependent RNA Polymerase Elongation Complex. <i>Journal of Biological Chemistry</i> , 2012, 287, 10674-10683.	1.6	49
43	A Pre-Steady State Kinetic Analysis of the Y60W Mutant of <i>trans</i> -3-Chloroacrylic Acid Dehalogenase: Implications for the Mechanism of the Wild-Type Enzyme. <i>Biochemistry</i> , 2012, 51, 9420-9435.	1.2	12
44	Reaction of <i>cis</i> -3-Chloroacrylic Acid Dehalogenase with an Allene Substrate, 2,3-Butadienoate: Hydration via an Enamine. <i>Journal of the American Chemical Society</i> , 2012, 134, 293-304.	6.6	19
45	Binding of the J-Binding Protein to DNA Containing Glucosylated hmU (Base J) or 5-hmC: Evidence for a Rapid Conformational Change upon DNA Binding. <i>Journal of the American Chemical Society</i> , 2012, 134, 13357-13365.	6.6	15
46	How Conformational Dynamics of DNA Polymerase Select Correct Substrates: Experiments and Simulations. <i>Structure</i> , 2012, 20, 618-627.	1.6	107
47	Role of Induced Fit in Limiting Discrimination against AZT by HIV Reverse Transcriptase. <i>Biochemistry</i> , 2011, 50, 5008-5015.	1.2	36
48	Effect of the Y95C Mutation on Mitochondrial DNA Polymerase Nucleotide Incorporation Efficiency and Fidelity. <i>Biochemistry</i> , 2011, 50, 6376-6386.	1.2	22
49	The Original Michaelis Constant: Translation of the 1913 Michaelis-Menten Paper. <i>Biochemistry</i> , 2011, 50, 8264-8269.	1.2	1,008
50	A sequence-specific threading tetra-intercalator with an extremely slow dissociation rate constant. <i>Nature Chemistry</i> , 2011, 3, 875-881.	6.6	64
51	Role of a GAG Hinge in the Nucleotide-induced Conformational Change Governing Nucleotide Specificity by T7 DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2011, 286, 1312-1322.	1.6	9
52	Assembly and Pre-steady-state Kinetic Analysis of the Hepatitis C Virus RNA Polymerase Elongation Complex. <i>FASEB Journal</i> , 2011, 25, 1b68.	0.2	0
53	The kinetic and chemical mechanism of high-fidelity DNA polymerases. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2010, 1804, 1041-1048.	1.1	144
54	Nucleotide-dependent conformational change governs specificity and analog discrimination by HIV reverse transcriptase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 7734-7739.	3.3	85

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55	Role of Histidine 932 of the Human Mitochondrial DNA Polymerase in Nucleotide Discrimination and Inherited Disease. <i>Journal of Biological Chemistry</i> , 2010, 285, 34191-34201.	1.6	13
56	A Single Mutation in Human Mitochondrial DNA Polymerase Pol $\hat{\text{I}}^{\text{A}}$ Affects Both Polymerization and Proofreading Activities of Only the Holoenzyme. <i>Journal of Biological Chemistry</i> , 2010, 285, 28105-28116.	1.6	31
57	Stopped-Flow Kinetic Analysis of the Interaction of Cyclo[8]pyrrole with Anions. <i>Journal of the American Chemical Society</i> , 2010, 132, 16617-16622.	6.6	16
58	Transient kinetic analysis of the elongation mode of Dengue Virus RNA polymerase domain. <i>FASEB Journal</i> , 2010, 24, 1b75.	0.2	0
59	Site-specific labeling of T7 DNA polymerase with a conformationally sensitive fluorophore and its use in detecting single-nucleotide polymorphisms. <i>Analytical Biochemistry</i> , 2009, 384, 136-144.	1.1	17
60	Global Kinetic Explorer: A new computer program for dynamic simulation and fitting of kinetic data. <i>Analytical Biochemistry</i> , 2009, 387, 20-29.	1.1	527
61	FitSpace Explorer: An algorithm to evaluate multidimensional parameter space in fitting kinetic data. <i>Analytical Biochemistry</i> , 2009, 387, 30-41.	1.1	307
62	Pre-Steady-State Kinetic Analysis of <i>cis</i> -3-Chloroacrylic Acid Dehalogenase: Analysis and Implications. <i>Biochemistry</i> , 2009, 48, 11737-11744.	1.2	9
63	High-cell density shake-flask expression and rapid purification of the large fragment of <i>Thermus aquaticus</i> DNA polymerase I using a new chemically and temperature inducible expression plasmid in <i>Escherichia coli</i> . <i>Protein Expression and Purification</i> , 2009, 63, 120-127.	0.6	8
64	Chapter 23 Fitting Enzyme Kinetic Data with KinTek Global Kinetic Explorer. <i>Methods in Enzymology</i> , 2009, 467, 601-626.	0.4	192
65	Catalytic and specificity determinants in <i>cis</i> - β -chloroacrylic acid dehalogenase: pre-steady state kinetic analysis of active site loop mutants. <i>FASEB Journal</i> , 2009, 23, LB222.	0.2	0
66	Real-time measurement of pyrophosphate release kinetics. <i>Analytical Biochemistry</i> , 2008, 372, 125-127.	1.1	21
67	Importance of Hydrogen Bonding for Efficiency and Specificity of the Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2008, 283, 14402-14410.	1.6	41
68	Base Pair Hydrogen Bonds Are Essential for Proofreading Selectivity by the Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2008, 283, 14411-14416.	1.6	16
69	Role of Induced Fit in Enzyme Specificity: A Molecular Forward/Reverse Switch. <i>Journal of Biological Chemistry</i> , 2008, 283, 26297-26301.	1.6	170
70	A novel mechanism of selectivity against AZT by the human mitochondrial DNA polymerase. <i>Nucleic Acids Research</i> , 2007, 35, 6973-6983.	6.5	40
71	Characterization of a T7 DNA Polymerase Mutant with a Completely Rate-limiting Conformational Change Step during Nucleotide Incorporation. <i>FASEB Journal</i> , 2007, 21, A657.	0.2	0
72	A New Paradigm for DNA Polymerase Specificity. <i>Biochemistry</i> , 2006, 45, 9675-9687.	1.2	225

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73	Fidelity of the Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2006, 281, 36236-36240.	1.6	82
74	Incorporation and Replication of 8-Oxo-deoxyguanosine by the Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2006, 281, 36241-36248.	1.6	76
75	Base Pair Hydrogen Bonding and the Selectivity of a DNA Polymerase. <i>FASEB Journal</i> , 2006, 20, A480.	0.2	0
76	Kinetics of T7 DNA polymerase conformational changes during nucleotide incorporation. <i>FASEB Journal</i> , 2006, 20, A480.	0.2	0
77	Analysis of single nucleotide incorporation reactions by capillary electrophoresis. <i>Analytical Biochemistry</i> , 2005, 340, 35-40.	1.1	7
78	Alternating Site ATPase Pathway of Rat Conventional Kinesin. <i>Journal of Biological Chemistry</i> , 2005, 280, 37048-37060.	1.6	29
79	Relationship between Antiviral Activity and Host Toxicity: Comparison of the Incorporation Efficiencies of 2'-Dideoxy-5-Fluoro-3'-Thiacytidine-Triphosphate Analogs by Human Immunodeficiency Virus Type 1 Reverse Transcriptase and Human Mitochondrial DNA Polymerase. <i>Antimicrobial Agents and Chemotherapy</i> , 2004, 48, 1300-1306.	1.4	71
80	Novel Mechanism of Inhibition of HIV-1 Reverse Transcriptase by a New Non-nucleoside Analog, KM-1. <i>Journal of Biological Chemistry</i> , 2004, 279, 38424-38432.	1.6	22
81	Toxicity of Nucleoside Analogues Used to Treat AIDS and the Selectivity of the Mitochondrial DNA Polymerase. <i>Biochemistry</i> , 2003, 42, 14711-14719.	1.2	198
82	Fidelity of Nucleotide Incorporation by Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2001, 276, 38090-38096.	1.6	98
83	Exonuclease Proofreading by Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2001, 276, 38097-38107.	1.6	125
84	Toxicity of Antiviral Nucleoside Analogs and the Human Mitochondrial DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2001, 276, 40847-40857.	1.6	362
85	Human Mitochondrial DNA Polymerase Holoenzyme: Reconstitution and Characterization. <i>Biochemistry</i> , 2000, 39, 1702-1708.	1.2	132
86	The Catalytic Mechanism of EPSP Synthase Revisited. <i>Biochemistry</i> , 1999, 38, 7372-7379.	1.2	19
87	Single d(GpC)/cis-Diammineplatinum(II) Adduct-Induced Inhibition of DNA Polymerization. <i>Biochemistry</i> , 1999, 38, 715-726.	1.2	77
88	Expression, Purification, and Initial Kinetic Characterization of the Large Subunit of the Human Mitochondrial DNA Polymerase. <i>Biochemistry</i> , 1998, 37, 6050-6058.	1.2	84
89	Alternating Site Mechanism of the Kinesin ATPase. <i>Biochemistry</i> , 1998, 37, 792-799.	1.2	163
90	Pathway of ATP Hydrolysis by Monomeric and Dimeric Kinesin. <i>Biochemistry</i> , 1998, 37, 800-813.	1.2	138

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91	Selective Inhibition of HIV-1 Reverse Transcriptase by an Antiviral Inhibitor, (R)-9-(2-Phosphonylmethoxypropyl)adenine. <i>Journal of Biological Chemistry</i> , 1998, 273, 27250-27258.	1.6	61
92	RNA Secondary Structure Switching during DNA Synthesis Catalyzed by HIV-1 Reverse Transcriptase. <i>Biochemistry</i> , 1997, 36, 14778-14785.	1.2	36
93	Effect of RNA Secondary Structure on the Kinetics of DNA Synthesis Catalyzed by HIV-1 Reverse Transcriptase. <i>Biochemistry</i> , 1997, 36, 12459-12467.	1.2	96
94	Effect of RNA Secondary Structure on RNA Cleavage Catalyzed by HIV-1 Reverse Transcriptase. <i>Biochemistry</i> , 1997, 36, 12468-12476.	1.2	37
95	HIV-1 Reverse Transcriptase Resistance to Nonnucleoside Inhibitors. <i>Biochemistry</i> , 1996, 35, 1054-1063.	1.2	75
96	Section Reviews; Anti-infectives: Section Review Anti-infectives: Therapeutic potential of nonnucleoside reverse transcriptase inhibitors in the treatment of HIV infection. <i>Expert Opinion on Investigational Drugs</i> , 1996, 5, 985-1001.	1.9	3
97	[2] Rapid quench kinetic analysis of polymerases, adenosinetriphosphatases, and enzyme intermediates. <i>Methods in Enzymology</i> , 1995, 249, 38-61.	0.4	173
98	Pathway of processive ATP hydrolysis by kinesin. <i>Nature</i> , 1995, 373, 671-676.	13.7	269
99	Mutants Affecting Nucleotide Recognition by T7 DNA Polymerase. <i>Biochemistry</i> , 1994, 33, 14908-14917.	1.2	41
100	Conformational Coupling in DNA Polymerase Fidelity. <i>Annual Review of Biochemistry</i> , 1993, 62, 685-713.	5.0	552
101	1 Transient-State Kinetic Analysis of Enzyme Reaction Pathways. <i>The Enzymes</i> , 1992, , 1-61.	0.7	189
102	Pre-steady-state kinetic analysis of processive DNA replication including complete characterization of an exonuclease-deficient mutant. <i>Biochemistry</i> , 1991, 30, 511-525.	1.2	527
103	Kinetic partitioning between the exonuclease and polymerase sites in DNA error correction. <i>Biochemistry</i> , 1991, 30, 538-546.	1.2	209
104	An induced-fit kinetic mechanism for DNA replication fidelity: direct measurement by single-turnover kinetics. <i>Biochemistry</i> , 1991, 30, 526-537.	1.2	396
105	Observation by carbon-13 NMR of the EPSP synthase tetrahedral intermediate bound to the enzyme active site. <i>Biochemistry</i> , 1990, 29, 1460-1465.	1.2	50
106	Kinetic and structural analysis of enzyme intermediates: lessons from EPSP synthase. <i>Chemical Reviews</i> , 1990, 90, 1131-1149.	23.0	126
107	Structure and mass of mammalian respiratory ciliary outer arm 19S dynein. <i>Cytoskeleton</i> , 1988, 11, 157-166.	4.4	29
108	Isolation and structural elucidation of the tetrahedral intermediate in the EPSP synthase enzymic pathway. <i>Journal of the American Chemical Society</i> , 1988, 110, 6577-6579.	6.6	87

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109	A tetrahedral intermediate in the EPSP synthase reaction observed by rapid quench kinetics. <i>Biochemistry</i> , 1988, 27, 7395-7406.	1.2	156
110	Evaluation of 5-enolpyruvylshikimate-3-phosphate synthase substrate and inhibitor binding by stopped-flow and equilibrium fluorescence measurements. <i>Biochemistry</i> , 1988, 27, 1604-1610.	1.2	123
111	Construction and evaluation of the kinetic scheme associated with dihydrofolate reductase from <i>Escherichia coli</i> . <i>Biochemistry</i> , 1987, 26, 4085-4092.	1.2	516
112	Scanning Transmission Electron Microscopy of Dynein Arms. <i>Annals of the New York Academy of Sciences</i> , 1984, 438, 217-223.	1.8	1
113	Transient state kinetic analysis of the dynein ATPase. <i>Cell Motility</i> , 1982, 2, 101-106.	1.9	19
114	Intermediate states of subfragment 1 and actosubfragment 1 ATPase: reevaluation of the mechanism. <i>Biochemistry</i> , 1978, 17, 3432-3442.	1.2	211