Aaron L Lucius

List of Publications by Year
in descending order

56 papers	1,188 citations	394286 19 h-index	434063 31 g-index
57 all docs	57 docs citations	57 times ranked	815 citing authors

#	Article	IF	Citations
1	General Methods for Analysis of Sequential â€œn-stepâ€•Kinetic Mechanisms: Application to Single Turnover Kinetics of Helicase-Catalyzed DNA Unwinding. Biophysical Journal, 2003, 85, 2224-2239.	0.2	131
2	DNA Unwinding Step-size of E.coli RecBCD Helicase Determined from Single Turnover Chemical Quenched-flow Kinetic Studies. Journal of Molecular Biology, 2002, 324, 409-428.	2.0	87
3	Fluorescence Stopped-flow Studies of Single Turnover Kinetics of E.coli RecBCD Helicase-catalyzed DNA Unwinding. Journal of Molecular Biology, 2004, 339, 731-750.	2.0	76
4	Conformational plasticity of the ClpAP AAA+ protease couples protein unfolding and proteolysis. Nature Structural and Molecular Biology, 2020, 27, 406-416.	3.6	51
5	Effects of Temperature and ATP on the Kinetic Mechanism and Kinetic Step-size for E.coli RecBCD Helicase-catalyzed DNA Unwinding. Journal of Molecular Biology, 2004, 339, 751-771.	2.0	45
6	Identification of novel inhibitors of bacterial surface enzyme Staphylococcus aureus Sortase A. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 380-385.	1.0	45
7	Energetics of DNA End Binding by E.coli RecBC and RecBCD Helicases Indicate Loop Formation in the 3â€²-Single-stranded DNA Tail. Journal of Molecular Biology, 2005, 352, 765-782.	2.0	38
8	E. coli ClpA Catalyzed Polypeptide Translocation Is Allosterically Controlled by the Protease ClpP. Journal of Molecular Biology, 2013, 425, 2795-2812.	2.0	37
9	<i>Escherichia coli</i> ClpB is a non-processive polypeptide translocase. Biochemical Journal, 2015, 470, 39-52.	1.7	37
10	Molecular Mechanism of Polypeptide Translocation Catalyzed by the Escherichia coli ClpA Protein Translocase. Journal of Molecular Biology, 2010, 399, 665-679.	2.0	33
11	Transient-State Kinetic Analysis of the RNA Polymerase I Nucleotide Incorporation Mechanism. Biophysical Journal, 2015, 109, 2382-2393.	0.2	28
12	Comparative Analysis of the Structure and Function of AAA+ Motors ClpA, ClpB, and Hsp104: Common Threads and Disparate Functions. Frontiers in Molecular Biosciences, 2017, 4, 54.	1.6	25
13	TheEscherichia coliPriA Helicase Has Two Nucleotide-Binding Sites Differing Dramatically in Their Affinities for Nucleotide Cofactors. 1. Intrinsic Affinities, Cooperativities, and Base Specificity of Nucleotide Cofactor Bindingâ€. Biochemistry, 2006, 45, 7202-7216.	1.2	24
14	Generally Applicable NMR Titration Methods for the Determination of Equilibrium Constants for Coordination Complexes: Syntheses and Characterizations of Metallacrown Ethers with Î±,Ï‰-Bis(phosphite)-polyether Ligands and Determination of Equilibrium Binding Constants to Li+. Organometallics, 2011, 30, 5695-5709.	1.1	24
15	The A12.2 Subunit Is an Intrinsic Destabilizer of the RNA Polymerase I Elongation Complex. Biophysical Journal, 2018, 114, 2507-2515.	0.2	24
16	The <i>Escherichia coli</i> ClpA Molecular Chaperone Self-Assembles into Tetramers. Biochemistry, 2009, 48, 9221-9233.	1.2	23
17	Synthesis and structure activity relationship studies of novel Staphylococcus aureus Sortase A inhibitors. European Journal of Medicinal Chemistry, 2010, 45, 3752-3761.	2.6	23
18	DNA Polymerase X From African Swine Fever Virus: Quantitative Analysis of the Enzymeâ€“ssDNA Interactions and the Functional Structure of the Complex. Journal of Molecular Biology, 2006, 356, 121-141.	2.0	22

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19	Multisubunit RNA Polymerase Cleavage Factors Modulate the Kinetics and Energetics of Nucleotide Incorporation: An RNA Polymerase I Case Study. Biochemistry, 2017, 56, 5654-5662.	1.2	21
20	Binding of Six Nucleotide Cofactors to the Hexameric Helicase RepA Protein of Plasmid RSF1010. 1. Direct Evidence of Cooperative Interactions between the Nucleotide-Binding Sites of a Hexameric Helicaseâ€. Biochemistry, 2005, 44, 3865-3876.	1.2	18
21	A Novel Assay for RNA Polymerase I Transcription Elongation Sheds Light on the Evolutionary Divergence of Eukaryotic RNA Polymerases. Biochemistry, 2019, 58, 2116-2124.	1.2	18
22	Binding of Six Nucleotide Cofactors to the Hexameric Helicase RepA Protein of Plasmid RSF1010. 2. Base Specificity, Nucleotide Structure, Magnesium, and Salt Effect on the Cooperative Binding of the Cofactorsâ€. Biochemistry, 2005, 44, 3877-3890.	1.2	17
23	Examination of polypeptide substrate specificity for <scp><i>E</i></scp><i>scherichia coli</i><scp>C</scp>lp<scp>B</scp>. Proteins: Structure, Function and Bioinformatics, 2015, 83, 117-134.	1.5	17
24	Hsp104 and Potentiated Variants Can Operate as Distinct Nonprocessive Translocases. Biophysical Journal, 2019, 116, 1856-1872.	0.2	17
25	The N-terminal domain of the A12.2 subunit stimulates RNA polymerase I transcription elongation. Biophysical Journal, 2021, 120, 1883-1893.	0.2	17
26	Implementing and Evaluating a Chemistry Course in Chemical Ethics and Civic Responsibility. Journal of Chemical Education, 2010, 87, 1171-1175.	1.1	16
27	Examination of the Polypeptide Substrate Specificity for <i>Escherichia coli</i> ClpA. Biochemistry, 2013, 52, 4941-4954.	1.2	16
28	Defining the divergent enzymatic properties of RNA polymerases I and II. Journal of Biological Chemistry, 2021, 296, 100051.	1.6	16
29	Downstream sequence-dependent RNA cleavage and pausing by RNA polymerase I. Journal of Biological Chemistry, 2020, 295, 1288-1299.	1.6	16
30	Examination of the dynamic assembly equilibrium for <scp><i>E</i></scp><i>. coli</i> ClpB. Proteins: Structure, Function and Bioinformatics, 2015, 83, 2008-2024.	1.5	15
31	Activity of E. coli ClpA Bound by Nucleoside Diphosphates and Triphosphates. Journal of Molecular Biology, 2011, 409, 333-347.	2.0	14
32	Avidity for Polypeptide Binding by Nucleotide-Bound Hsp104 Structures. Biochemistry, 2017, 56, 2071-2075.	1.2	14
33	Downstream sequence-dependent RNA cleavage and pausing by RNA polymerase I. Journal of Biological Chemistry, 2020, 295, 1288-1299.	1.6	13
34	Multi-start Evolutionary Nonlinear OpTimizeR (MENOTR): A hybrid parameter optimization toolbox. Biophysical Chemistry, 2021, 279, 106682.	1.5	13
35	AAA+ proteins: one motor, multiple ways to work. Biochemical Society Transactions, 2022, 50, 895-906.	1.6	13
36	DNA helicases, motors that move along nucleic acids: Lessons from the SF1 helicase superfamily. The Enzymes, 2003, , 303-VII.	0.7	12

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37	Allosteric Interactions between the Nucleotide-Binding Sites and the ssDNA-Binding Site in the PriA Helicaseâ^'ssDNA Complex. 3â€. Biochemistry, 2006, 45, 7237-7255.	1.2	12
38	Kinetic Mechanisms of the Nucleotide Cofactor Binding to the Strong and Weak Nucleotide-Binding Site of theEscherichia coliPriA Helicase. 2â€. Biochemistry, 2006, 45, 7217-7236.	1.2	12
39	Characterization of Calmodulinâ€"Fas Death Domain Interaction: An Integrated Experimental and Computational Study. Biochemistry, 2014, 53, 2680-2688.	1.2	12
40	Application of the Sequential n-Step Kinetic Mechanism to Polypeptide Translocases. Methods in Enzymology, 2011, 488, 239-264.	0.4	11
41	Examination of ClpB Quaternary Structure and Linkage to Nucleotide Binding. Biochemistry, 2016, 55, 1758-1771.	1.2	11
42	Crystal structures of Hsp104 N-terminal domains from<i>Saccharomyces cerevisiae</i>and<i>Candida albicans</i>suggest the mechanism for the function of Hsp104 in dissolving prions. Acta Crystallographica Section D: Structural Biology, 2017, 73, 365-372.	1.1	10
43	Effect of Temperature on the Self-Assembly of the <i>Escherichia coli</i> ClpA Molecular Chaperone. Biochemistry, 2010, 49, 9820-9829.	1.2	9
44	ATPÎ³S competes with ATP for binding at Domain 1 but not Domain 2 during ClpA catalyzed polypeptide translocation. Biophysical Chemistry, 2014, 185, 58-69.	1.5	9
45	Transient-state kinetic analysis of multi-nucleotide addition catalyzed by RNA polymerase I. Biophysical Journal, 2021, 120, 4378-4390.	0.2	8
46	Correlating the Activity of Rhodium(I)-Phosphite-Lariat Ether Styrene Hydroformylation Catalysts with Alkali Metal Cation Binding through NMR Spectroscopic Titration Methods. Organometallics, 2016, 35, 2609-2620.	1.1	7
47	<i>Escherichia coli</i> DnaK Allosterically Modulates ClpB between High- and Low-Peptide Affinity States. Biochemistry, 2018, 57, 3665-3675.	1.2	7
48	Analysis of Linked Equilibria. Methods in Enzymology, 2015, 562, 161-186.	0.4	4
49	Quantifying the influence of 5â€²-RNA modifications on RNA polymerase I activity. Biophysical Chemistry, 2017, 230, 84-88.	1.5	4
50	Metallathiacrown Ethers: Synthesis and Characterization of Transition-Metal Complexes Containing Î±,Ï‰-Bis(phosphite)-Polythioether Ligands and an Evaluation of Their Soft Metal Binding Capabilities. Organometallics, 2015, 34, 4605-4617.	1.1	3
51	ATP hydrolysis inactivating Walker B mutation perturbs E. coli ClpA self-assembly energetics in the absence of nucleotide. Biophysical Chemistry, 2018, 242, 6-14.	1.5	3
52	Examination of the nucleotideâ€linked assembly mechanism of <i>E</i>. <i>coli</i> ClpA. Protein Science, 2019, 28, 1312-1323.	3.1	2
53	Kinetic Analysis of AAA+ Translocases by Combined Fluorescence and Anisotropy Methods. Biophysical Journal, 2020, 119, 1335-1350.	0.2	2
54	Dynamic Light Scattering to Study Allosteric Regulation. Methods in Molecular Biology, 2012, 796, 175-186.	0.4	1

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55	Polyphosphonates as ionic conducting polymers. Journal of Polymer Science, 2021, 59, 139-145.	2.0	1
56	Molecular Mechanisms of Enzyme Catalyzed Protein Unfolding and Translocation by Class 1 AAA+ Motors. FASEB Journal, 2018, 32, 126.1.	0.2	0