

Tina L Amyes

List of Publications by Year in descending order

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papers

2,423
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185998

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all docs

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docs citations

57
times ranked

1655
citing authors

#	ARTICLE	IF	CITATIONS
1	Phosphodianion Activation of Enzymes for Catalysis of Central Metabolic Reactions. <i>Journal of the American Chemical Society</i> , 2021, 143, 2694-2698.	6.6	12
2	Linear Free Energy Relationships for Enzymatic Reactions: Fresh Insight from a Venerable Probe. <i>Accounts of Chemical Research</i> , 2021, 54, 2532-2542.	7.6	6
3	Role of the Carboxylate in Enzyme-Catalyzed Decarboxylation of Orotidine 5â€²-Monophosphate: Transition State Stabilization Dominates Over Ground State Destabilization. <i>Journal of the American Chemical Society</i> , 2019, 141, 13468-13478.	6.6	9
4	Uncovering the Role of Key Active-Site Side Chains in Catalysis: An Extended Brønsted Relationship for Substrate Deprotonation Catalyzed by Wild-Type and Variants of Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2019, 141, 16139-16150.	6.6	15
5	Role of Ligand-Driven Conformational Changes in Enzyme Catalysis: Modeling the Reactivity of the Catalytic Cage of Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2018, 140, 3854-3857.	6.6	27
6	Enzyme Architecture: The Role of a Flexible Loop in Activation of Glycerol-3-phosphate Dehydrogenase for Catalysis of Hydride Transfer. <i>Biochemistry</i> , 2018, 57, 3227-3236.	1.2	21
7	Orotidine 5â€²-Monophosphate Decarboxylase: Probing the Limits of the <i>Possible</i> for Enzyme Catalysis. <i>Accounts of Chemical Research</i> , 2018, 51, 960-969.	7.6	31
8	Enzyme Architecture: Breaking Down the Catalytic Cage that Activates Orotidine 5â€²-Monophosphate Decarboxylase for Catalysis. <i>Journal of the American Chemical Society</i> , 2018, 140, 17580-17590.	6.6	11
9	Primary Deuterium Kinetic Isotope Effects: A Probe for the Origin of the Rate Acceleration for Hydride Transfer Catalyzed by Glycerol-3-Phosphate Dehydrogenase. <i>Biochemistry</i> , 2018, 57, 4338-4348.	1.2	11
10	Enzyme Architecture: Amino Acid Side-Chains That Function To Optimize the Basicity of the Active Site Glutamate of Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2018, 140, 8277-8286.	6.6	25
11	Substituent Effects on Carbon Acidity in Aqueous Solution and at Enzyme Active Sites. <i>Synlett</i> , 2017, 28, 1407-1421.	1.0	6
12	Enzyme Architecture: Erection of Active Orotidine 5â€²-Monophosphate Decarboxylase by Substrate-Induced Conformational Changes. <i>Journal of the American Chemical Society</i> , 2017, 139, 16048-16051.	6.6	14
13	A reevaluation of the origin of the rate acceleration for enzyme-catalyzed hydride transfer. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 8856-8866.	1.5	4
14	Enzyme Architecture: Modeling the Operation of a Hydrophobic Clamp in Catalysis by Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2017, 139, 10514-10525.	6.6	38
15	Enzyme Architecture: Self-Assembly of Enzyme and Substrate Pieces of Glycerol-3-Phosphate Dehydrogenase into a Robust Catalyst of Hydride Transfer. <i>Journal of the American Chemical Society</i> , 2016, 138, 15251-15259.	6.6	19
16	Structureâ€”Reactivity Effects on Intrinsic Primary Kinetic Isotope Effects for Hydride Transfer Catalyzed by Glycerol-3-phosphate Dehydrogenase. <i>Journal of the American Chemical Society</i> , 2016, 138, 14526-14529.	6.6	10
17	Structureâ€”Function Studies of Hydrophobic Residues That Clamp a Basic Glutamate Side Chain during Catalysis by Triosephosphate Isomerase. <i>Biochemistry</i> , 2016, 55, 3036-3047.	1.2	21
18	Enzyme Architecture: A Startling Role for Asn270 in Glycerol 3-Phosphate Dehydrogenase-Catalyzed Hydride Transfer. <i>Biochemistry</i> , 2016, 55, 1429-1432.	1.2	12

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19	The Activating Oxydianion Binding Domain for Enzyme-Catalyzed Proton Transfer, Hydride Transfer, and Decarboxylation: Specificity and Enzyme Architecture. <i>Journal of the American Chemical Society</i> , 2015, 137, 1372-1382.	6.6	45
20	Rate and Equilibrium Constants for an Enzyme Conformational Change during Catalysis by Orotidine 5â€²-Monophosphate Decarboxylase. <i>Biochemistry</i> , 2015, 54, 4555-4564.	1.2	18
21	Enzyme Architecture: Optimization of Transition State Stabilization from a Cationâ€“Phosphodianion Pair. <i>Journal of the American Chemical Society</i> , 2015, 137, 5312-5315.	6.6	29
22	Role of Loop-Clamping Side Chains in Catalysis by Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2015, 137, 15185-15197.	6.6	38
23	Mechanistic imperatives for deprotonation of carbon catalyzed by triosephosphate isomerase: enzyme activation by phosphite dianion,. <i>Journal of Physical Organic Chemistry</i> , 2014, 27, 269-276.	0.9	10
24	Enzyme architecture: on the importance of being in a protein cage. <i>Current Opinion in Chemical Biology</i> , 2014, 21, 1-10.	2.8	91
25	The use of reaction timecourses to determine the level of minor contaminants in enzyme preparations. <i>Analytical Biochemistry</i> , 2014, 450, 20-26.	1.1	0
26	Enzyme Architecture: The Effect of Replacement and Deletion Mutations of Loop 6 on Catalysis by Triosephosphate Isomerase. <i>Biochemistry</i> , 2014, 53, 3486-3501.	1.2	23
27	Enzyme Architecture: Remarkably Similar Transition States for Triosephosphate Isomerase-Catalyzed Reactions of the Whole Substrate and the Substrate in Pieces. <i>Journal of the American Chemical Society</i> , 2014, 136, 4145-4148.	6.6	33
28	Enzyme Architecture: Deconstruction of the Enzyme-Activating Phosphodianion Interactions of Orotidine 5â€²-Monophosphate Decarboxylase. <i>Journal of the American Chemical Society</i> , 2014, 136, 10156-10165.	6.6	31
29	Role of a Guanidinium Cationâ€“Phosphodianion Pair in Stabilizing the Vinyl Carbanion Intermediate of Orotidine 5â€²-Phosphate Decarboxylase-Catalyzed Reactions. <i>Biochemistry</i> , 2013, 52, 7500-7511.	1.2	22
30	Specificity in Transition State Binding: The Pauling Model Revisited. <i>Biochemistry</i> , 2013, 52, 2021-2035.	1.2	96
31	Magnitude and Origin of the Enhanced Basicity of the Catalytic Glutamate of Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2013, 135, 5978-5981.	6.6	41
32	Structural Mutations That Probe the Interactions between the Catalytic and Dianion Activation Sites of Triosephosphate Isomerase. <i>Biochemistry</i> , 2013, 52, 5928-5940.	1.2	29
33	Catalysis by Orotidine 5â€²-Monophosphate Decarboxylase: Effect of 5-Fluoro and 4â€²-Substituents on the Decarboxylation of Two-Part Substrates. <i>Biochemistry</i> , 2013, 52, 537-546.	1.2	24
34	Conformational Changes in Orotidine 5â€²-Monophosphate Decarboxylase: A Structure-Based Explanation for How the 5â€²-Phosphate Group Activates the Enzyme. <i>Biochemistry</i> , 2012, 51, 8665-8678.	1.2	13
35	Mechanism for Activation of Triosephosphate Isomerase by Phosphite Dianion: The Role of a Hydrophobic Clamp. <i>Journal of the American Chemical Society</i> , 2012, 134, 10286-10298.	6.6	35
36	Proton Transfer from C-6 of Uridine 5â€²-Monophosphate Catalyzed by Orotidine 5â€²-Monophosphate Decarboxylase: Formation and Stability of a Vinyl Carbanion Intermediate and the Effect of a 5-Fluoro Substituent. <i>Journal of the American Chemical Society</i> , 2012, 134, 14580-14594.	6.6	37

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37	Orotidine 5â€²-Monophosphate Decarboxylase: Transition State Stabilization from Remote Proteinâ€“Phosphodianion Interactions. <i>Biochemistry</i> , 2012, 51, 4630-4632.	1.2	39
38	Wildtype and Engineered Monomeric Triosephosphate Isomerase from <i>Trypanosoma brucei</i> : Partitioning of Reaction Intermediates in D2O and Activation by Phosphite Dianion. <i>Biochemistry</i> , 2011, 50, 5767-5779.	1.2	25
39	OMP Decarboxylase: Phosphodianion Binding Energy Is Used To Stabilize a Vinyl Carbanion Intermediate. <i>Journal of the American Chemical Society</i> , 2011, 133, 6545-6548.	6.6	41
40	Mechanism for Activation of Triosephosphate Isomerase by Phosphite Dianion: The Role of a Ligand-Driven Conformational Change. <i>Journal of the American Chemical Society</i> , 2011, 133, 16428-16431.	6.6	39
41	A role for flexible loops in enzyme catalysis. <i>Current Opinion in Structural Biology</i> , 2010, 20, 702-710.	2.6	149
42	Rescue of K12G Triosephosphate Isomerase by Ammonium Cations: The Reaction of an Enzyme in Pieces. <i>Journal of the American Chemical Society</i> , 2010, 132, 13525-13532.	6.6	36
43	Activation of R235A Mutant Orotidine 5â€²-Monophosphate Decarboxylase by the Guanidinium Cation: Effective Molarity of the Cationic Side Chain of Arg-235. <i>Biochemistry</i> , 2010, 49, 824-826.	1.2	41
44	Hydrogen Transfer Catalyzed by Triosephosphate Isomerase. Products of the Direct and Phosphite-Activated Isomerization of [1- ¹³ C]-Glycolaldehyde in D ₂ O. <i>Biochemistry</i> , 2009, 48, 5769-5778.	1.2	54
45	Formation and Stability of a Vinyl Carbanion at the Active Site of Orotidine 5â€²-Monophosphate Decarboxylase: p <i>K_a</i> of the C-6 Proton of Enzyme-Bound UMP. <i>Journal of the American Chemical Society</i> , 2008, 130, 1574-1575.	6.6	79
46	A Substrate in Pieces: Allosteric Activation of Glycerol 3-Phosphate Dehydrogenase (NAD ⁺) by Phosphite Dianion. <i>Biochemistry</i> , 2008, 47, 4575-4582.	1.2	65
47	Rational Design of Transition-State Analogues as Potent Enzyme Inhibitors with Therapeutic Applications. <i>ACS Chemical Biology</i> , 2007, 2, 711-714.	1.6	10
48	Enzymatic Catalysis of Proton Transfer at Carbon: Activation of Triosephosphate Isomerase by Phosphite Dianion. <i>Biochemistry</i> , 2007, 46, 5841-5854.	1.2	96
49	Crossing the Borderline between SN1 and SN2 Nucleophilic Substitution at Aliphatic Carbon. , 2005, , 41-68.		3
50	Activation of Orotidine 5â€²-Monophosphate Decarboxylase by Phosphite Dianion: The Whole Substrate is the Sum of Two Parts. <i>Journal of the American Chemical Society</i> , 2005, 127, 15708-15709.	6.6	92
51	Formation and Stability of N-Heterocyclic Carbenes in Water: The Carbon Acid p <i>K_a</i> of Imidazolium Cations in Aqueous Solution. <i>Journal of the American Chemical Society</i> , 2004, 126, 4366-4374.	6.6	476
52	What Is the Stabilizing Interaction with Nucleophilic Solvents in the Transition State for Solvolysis of Tertiary Derivatives: Nucleophilic Solvent Participation or Nucleophilic Solvation?. <i>Organic Letters</i> , 2001, 3, 2225-2228.	2.4	56
53	Contribution of Phosphate Intrinsic Binding Energy to the Enzymatic Rate Acceleration for Triosephosphate Isomerase. <i>Journal of the American Chemical Society</i> , 2001, 123, 11325-11326.	6.6	73
54	Intrinsic Barriers for the Reactions of an Oxocarbenium Ion in Water. <i>Journal of the American Chemical Society</i> , 1999, 121, 8403-8404.	6.6	40

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55	Structure-Activity Relationships for β -Galactosidase (Escherichia coli, lac Z). 3. Evidence that Glu-461 Participates in Brønsted Acid-Base Catalysis of β -D-Galactopyranosyl Group Transfer. Biochemistry, 1996, 35, 12377-12386.	1.2	49
56	Structure-Activity Relationships for β -Galactosidase (Escherichia coli, lac Z). 4. Mechanism for Reaction of Nucleophiles with the Galactosyl-Enzyme Intermediates of E461G and E461Q β -Galactosidases. Biochemistry, 1996, 35, 12387-12401.	1.2	53
57	Proton Transfer to and from Carbon in Model Reactions. , 0, , 949-973.		0