John P Richard

List of Publications by Year
in descending order

232 papers	9,404 citations	31902 53 h-index	56606 83 g-index
247 all docs	247 docs citations	247 times ranked	5179 citing authors

#	Article	IF	Citations
1	The role of remote flavin adenine dinucleotide pieces in the oxidative decarboxylation catalyzed by salicylate hydroxylase. Bioorganic Chemistry, 2022, 119, 105561.	2.0	3
2	Glycerol-3-Phosphate Dehydrogenase: The K120 and K204 Side Chains Define an Oxyanion Hole at the Enzyme Active Site. Biochemistry, 2022, 61, 856-867.	1.2	3
3	Enabling Role of Ligand-Driven Conformational Changes in Enzyme Evolution. Biochemistry, 2022, 61, 1533-1542.	1.2	21
4	Phosphodianion Activation of Enzymes for Catalysis of Central Metabolic Reactions. Journal of the American Chemical Society, 2021, 143, 2694-2698.	6.6	12
5	Linear Free Energy Relationships for Enzymatic Reactions: Fresh Insight from a Venerable Probe. Accounts of Chemical Research, 2021, 54, 2532-2542.	7.6	6
6	Adenylate Kinase-Catalyzed Reaction of AMP in Pieces: Enzyme Activation for Phosphoryl Transfer to Phosphite Dianion. Biochemistry, 2021, 60, 2672-2676.	1.2	6
7	Origin of Free Energy Barriers of Decarboxylation and the Reverse Process of CO₂ Capture in Dimethylformamide and in Water. Journal of the American Chemical Society, 2021, 143, 137-141.	6.6	16
8	Proteinâ€"Ribofuranosyl Interactions Activate Orotidine 5â€²-Monophosphate Decarboxylase for Catalysis. Biochemistry, 2021, 60, 3362-3373.	1.2	5
9	Modeling the Role of a Flexible Loop and Active Site Side Chains in Hydride Transfer Catalyzed by Glycerol-3-phosphate Dehydrogenase. ACS Catalysis, 2020, 10, 11253-11267.	5.5	14
10	Hydride Transfer Catalyzed by Glycerol Phosphate Dehydrogenase: Recruitment of an Acidic Amino Acid Side Chain to Rescue a Damaged Enzyme. Biochemistry, 2020, 59, 4856-4863.	1.2	6
11	The Organization of Active Site Side Chains of Glycerol-3-phosphate Dehydrogenase Promotes Efficient Enzyme Catalysis and Rescue of Variant Enzymes. Biochemistry, 2020, 59, 1582-1591.	1.2	9
12	Orotidine 5â€²-Monophosphate Decarboxylase: The Operation of Active Site Chains Within and Across Protein Subunits. Biochemistry, 2020, 59, 2032-2040.	1.2	6
13	Role of the Carboxylate in Enzyme-Catalyzed Decarboxylation of Orotidine 5â€²-Monophosphate: Transition State Stabilization Dominates Over Ground State Destabilization. Journal of the American Chemical Society, 2019, 141, 13468-13478.	6.6	9
14	Uncovering the Role of Key Active-Site Side Chains in Catalysis: An Extended BrÃ¸nsted Relationship for Substrate Deprotonation Catalyzed by Wild-Type and Variants of Triosephosphate Isomerase. Journal of the American Chemical Society, 2019, 141, 16139-16150.	6.6	15
15	Protein Flexibility and Stiffness Enable Efficient Enzymatic Catalysis. Journal of the American Chemical Society, 2019, 141, 3320-3331.	6.6	91
16	Human Glycerol 3-Phosphate Dehydrogenase: X-ray Crystal Structures That Guide the Interpretation of Mutagenesis Studies. Biochemistry, 2019, 58, 1061-1073.	1.2	15
17	The role of ligand-gated conformational changes in enzyme catalysis. Biochemical Society Transactions, 2019, 47, 1449-1460.	1.6	12
18	Role of Ligand-Driven Conformational Changes in Enzyme Catalysis: Modeling the Reactivity of the Catalytic Cage of Triosephosphate Isomerase. Journal of the American Chemical Society, 2018, 140, 3854-3857.	6.6	27

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19	Enzyme Architecture: The Role of a Flexible Loop in Activation of Glycerol-3-phosphate Dehydrogenase for Catalysis of Hydride Transfer. Biochemistry, 2018, 57, 3227-3236.	1.2	21
20	Orotidine 5â€²-Monophosphate Decarboxylase: Probing the Limits of the <i>Possible</i> for Enzyme Catalysis. Accounts of Chemical Research, 2018, 51, 960-969.	7.6	31
21	Enzyme Architecture: Breaking Down the Catalytic Cage that Activates Orotidine 5â€²-Monophosphate Decarboxylase for Catalysis. Journal of the American Chemical Society, 2018, 140, 17580-17590.	6.6	11
22	Primary Deuterium Kinetic Isotope Effects: A Probe for the Origin of the Rate Acceleration for Hydride Transfer Catalyzed by Glycerol-3-Phosphate Dehydrogenase. Biochemistry, 2018, 57, 4338-4348.	1.2	11
23	Enzyme Architecture: Amino Acid Side-Chains That Function To Optimize the Basicity of the Active Site Glutamate of Triosephosphate Isomerase. Journal of the American Chemical Society, 2018, 140, 8277-8286.	6.6	25
24	Substituent Effects on Carbon Acidity in Aqueous Solution and at Enzyme Active Sites. Synlett, 2017, 28, 1407-1421.	1.0	6
25	Enzyme Architecture: Erection of Active Orotidine 5â€²-Monophosphate Decarboxylase by Substrate-Induced Conformational Changes. Journal of the American Chemical Society, 2017, 139, 16048-16051.	6.6	14
26	A reevaluation of the origin of the rate acceleration for enzyme-catalyzed hydride transfer. Organic and Biomolecular Chemistry, 2017, 15, 8856-8866.	1.5	4
27	Enzyme Architecture: Modeling the Operation of a Hydrophobic Clamp in Catalysis by Triosephosphate Isomerase. Journal of the American Chemical Society, 2017, 139, 10514-10525.	6.6	38
28	Primary Deuterium Kinetic Isotope Effects From Product Yields: Rationale, Implementation, and Interpretation. Methods in Enzymology, 2017, 596, 163-177.	0.4	3
29	Enzyme Architecture: Self-Assembly of Enzyme and Substrate Pieces of Glycerol-3-Phosphate Dehydrogenase into a Robust Catalyst of Hydride Transfer. Journal of the American Chemical Society, 2016, 138, 15251-15259.	6.6	19
30	Structureâ€"Reactivity Effects on Intrinsic Primary Kinetic Isotope Effects for Hydride Transfer Catalyzed by Glycerol-3-phosphate Dehydrogenase. Journal of the American Chemical Society, 2016, 138, 14526-14529.	6.6	10
31	Structureâ€"Function Studies of Hydrophobic Residues That Clamp a Basic Glutamate Side Chain during Catalysis by Triosephosphate Isomerase. Biochemistry, 2016, 55, 3036-3047.	1.2	21
32	Formation and mechanism for reactions of ringâ€substituted phenonium ions in aqueous solution. Journal of Physical Organic Chemistry, 2016, 29, 557-564.	0.9	14
33	Enzyme Architecture: A Startling Role for Asn270 in Glycerol 3-Phosphate Dehydrogenase-Catalyzed Hydride Transfer. Biochemistry, 2016, 55, 1429-1432.	1.2	12
34	The Activating Oxydianion Binding Domain for Enzyme-Catalyzed Proton Transfer, Hydride Transfer, and Decarboxylation: Specificity and Enzyme Architecture. Journal of the American Chemical Society, 2015, 137, 1372-1382.	6.6	45
35	Swainâ€"Scott relationships for nucleophile addition to ring-substituted phenonium ions. Canadian Journal of Chemistry, 2015, 93, 428-434.	0.6	2
36	Rate and Equilibrium Constants for an Enzyme Conformational Change during Catalysis by Orotidine 5â€²-Monophosphate Decarboxylase. Biochemistry, 2015, 54, 4555-4564.	1.2	18

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37	Enzyme Architecture: Optimization of Transition State Stabilization from a Cationâ€"Phosphodianion Pair. Journal of the American Chemical Society, 2015, 137, 5312-5315.	6.6	29
38	Role of Loop-Clamping Side Chains in Catalysis by Triosephosphate Isomerase. Journal of the American Chemical Society, 2015, 137, 15185-15197.	6.6	38
39	Enzyme and coenzyme reaction mechanisms: Editorial overview. Bioorganic Chemistry, 2014, 57, 169-170.	2.0	3
40	Reflections on the catalytic power of a TIM-barrel. Bioorganic Chemistry, 2014, 57, 206-212.	2.0	35
41	Mechanistic imperatives for deprotonation of carbon catalyzed by triosephosphate isomerase: enzyme activation by phosphite dianion,. Journal of Physical Organic Chemistry, 2014, 27, 269-276.	0.9	10
42	Enzyme architecture: on the importance of being in a protein cage. Current Opinion in Chemical Biology, 2014, 21, 1-10.	2.8	91
43	Enzyme Architecture: The Effect of Replacement and Deletion Mutations of Loop 6 on Catalysis by Triosephosphate Isomerase. Biochemistry, 2014, 53, 3486-3501.	1.2	23
44	Enzyme Architecture: Remarkably Similar Transition States for Triosephosphate Isomerase-Catalyzed Reactions of the Whole Substrate and the Substrate in Pieces. Journal of the American Chemical Society, 2014, 136, 4145-4148.	6.6	33
45	Enzyme Architecture: Deconstruction of the Enzyme-Activating Phosphodianion Interactions of Orotidine 5â€²-Monophosphate Decarboxylase. Journal of the American Chemical Society, 2014, 136, 10156-10165.	6.6	31
46	Role of a Guanidinium Cationâ€"Phosphodianion Pair in Stabilizing the Vinyl Carbanion Intermediate of Orotidine 5â€²-Phosphate Decarboxylase-Catalyzed Reactions. Biochemistry, 2013, 52, 7500-7511.	1.2	22
47	Specificity in Transition State Binding: The Pauling Model Revisited. Biochemistry, 2013, 52, 2021-2035.	1.2	96
48	Enzymatic Rate Enhancements: A Review and Perspective. Biochemistry, 2013, 52, 2009-2011.	1.2	27
49	Magnitude and Origin of the Enhanced Basicity of the Catalytic Glutamate of Triosephosphate Isomerase. Journal of the American Chemical Society, 2013, 135, 5978-5981.	6.6	41
50	Structural Mutations That Probe the Interactions between the Catalytic and Dianion Activation Sites of Triosephosphate Isomerase. Biochemistry, 2013, 52, 5928-5940.	1.2	29
51	Enzyme Architecture: The Activating Oxydianion Binding Domain for Orotidine 5â€²-Monophophate Decarboxylase. Journal of the American Chemical Society, 2013, 135, 18343-18346.	6.6	15
52	Catalysis by Orotidine 5â€²-Monophosphate Decarboxylase: Effect of 5-Fluoro and 4â€²-Substituents on the Decarboxylation of Two-Part Substrates. Biochemistry, 2013, 52, 537-546.	1.2	24
53	Substituent effects on the formation and nucleophile selectivity of ringâ€substituted phenonium ions in aqueous solution. Journal of Physical Organic Chemistry, 2013, 26, 970-976.	0.9	8
54	Conformational Changes in Orotidine 5â€²-Monophosphate Decarboxylase: A Structure-Based Explanation for How the 5â€²-Phosphate Group Activates the Enzyme. Biochemistry, 2012, 51, 8665-8678.	1.2	13

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55	Isopentenyl Diphosphate Isomerase Catalyzed Reactions in D2O: Product Release Limits the Rate of This Sluggish Enzyme-Catalyzed Reaction. Journal of the American Chemical Society, 2012, 134, 6568-6570.	6.6	17
56	Mechanism for Activation of Triosephosphate Isomerase by Phosphite Dianion: The Role of a Hydrophobic Clamp. Journal of the American Chemical Society, 2012, 134, 10286-10298.	6.6	35
57	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. Journal of the American Chemical Society, 2012, 134, 14580-14594.	6.6	37
58	A Paradigm for Enzyme-Catalyzed Proton Transfer at Carbon: Triosephosphate Isomerase. Biochemistry, 2012, 51, 2652-2661.	1.2	69
59	Orotidine 5â€²-Monophosphate Decarboxylase: Transition State Stabilization from Remote Proteinâ€"Phosphodianion Interactions. Biochemistry, 2012, 51, 4630-4632.	1.2	39
60	Wildtype and Engineered Monomeric Triosephosphate Isomerase fromTrypanosoma brucei: Partitioning of Reaction Intermediates in D2O and Activation by Phosphite Dianion. Biochemistry, 2011, 50, 5767-5779.	1.2	25
61	Binding Energy and Catalysis by <scp>d</scp>-Xylose Isomerase: Kinetic, Product, and X-ray Crystallographic Analysis of Enzyme-Catalyzed Isomerization of (<i>R</i>)-Glyceraldehyde. Biochemistry, 2011, 50, 10170-10181.	1.2	15
62	Substituent Effects on Electrophilic Catalysis by the Carbonyl Group: Anatomy of the Rate Acceleration for PLP-Catalyzed Deprotonation of Glycine. Journal of the American Chemical Society, 2011, 133, 3173-3183.	6.6	40
63	Formation and Stability of the 4-Methoxyphenonium Ion in Aqueous Solution. Journal of Organic Chemistry, 2011, 76, 9568-9571.	1.7	8
64	OMP Decarboxylase: Phosphodianion Binding Energy Is Used To Stabilize a Vinyl Carbanion Intermediate. Journal of the American Chemical Society, 2011, 133, 6545-6548.	6.6	41
65	The generation and reactions of quinone methides. Advances in Physical Organic Chemistry, 2011, 45, 39-91.	0.5	114
66	Mechanism for Activation of Triosephosphate Isomerase by Phosphite Dianion: The Role of a Ligand-Driven Conformational Change. Journal of the American Chemical Society, 2011, 133, 16428-16431.	6.6	39
67	The PLP cofactor: Lessons from studies on model reactions. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 1419-1425.	1.1	14
68	William Platt Jencks. 15 August 1927 â€" 3 January 2007. Biographical Memoirs of Fellows of the Royal Society, 2011, 57, 179-188.	0.1	0
69	Enzymatic catalysis of proton transfer and decarboxylation reactions. Pure and Applied Chemistry, 2011, 83, 1555-1565.	0.9	6
70	Biographical Essay: A. Jerry Kresge. Advances in Physical Organic Chemistry, 2010, 44, xiii-xxiii.	0.5	0
71	A role for flexible loops in enzyme catalysis. Current Opinion in Structural Biology, 2010, 20, 702-710.	2.6	149
72	Dynamics for reactions of ion pairs in aqueous solution: reactivity of tosylate anion ion paired with the highly destabilized 1â€(4â€methylphenyl)â€2,2,2â€trifluoroethyl carbocation. Journal of Physical Organic Chemistry, 2010, 23, 730-734.	0.9	9

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73	Role of Lys-12 in Catalysis by Triosephosphate Isomerase: A Two-Part Substrate Approach. Biochemistry, 2010, 49, 5377-5389.	1.2	57
74	Product Deuterium Isotope Effects for Orotidine 5â€²-Monophosphate Decarboxylase: Effect of Changing Substrate and Enzyme Structure on the Partitioning of the Vinyl Carbanion Reaction Intermediate. Journal of the American Chemical Society, 2010, 132, 7018-7024.	6.6	24
75	Bovine Serum Albumin-Catalyzed Deprotonation of [1-¹³C]Glycolaldehyde: Protein Reactivity toward Deprotonation of the Î±-Hydroxy Î±-Carbonyl Carbon. Biochemistry, 2010, 49, 7704-7708.	1.2	10
76	Rescue of K12G Triosephosphate Isomerase by Ammonium Cations: The Reaction of an Enzyme in Pieces. Journal of the American Chemical Society, 2010, 132, 13525-13532.	6.6	36
77	Activation of R235A Mutant Orotidine 5â€²-Monophosphate Decarboxylase by the Guanidinium Cation: Effective Molarity of the Cationic Side Chain of Arg-235. Biochemistry, 2010, 49, 824-826.	1.2	41
78	Conformational Changes in Orotidine 5â€²-Monophosphate Decarboxylase: â€œRemoteâ€• Residues That Stabilize the Active Conformation. Biochemistry, 2010, 49, 3514-3516.	1.2	17
79	Hydron Transfer Catalyzed by Triosephosphate Isomerase. Products of the Direct and Phosphite-Activated Isomerization of [1-¹³C]-Glycolaldehyde in D₂O. Biochemistry, 2009, 48, 5769-5778.	1.2	54
80	Pyridoxal 5â€²-phosphate: electrophilic catalyst extraordinaire. Current Opinion in Chemical Biology, 2009, 13, 475-483.	2.8	61
81	Punching Holes in an Enzyme. Chemistry and Biology, 2009, 16, 915-917.	6.2	0
82	Structureâˆ'Reactivity Effects on Primary Deuterium Isotope Effects on Protonation of Ring-Substituted Î±-Methoxystyrenes. Journal of the American Chemical Society, 2009, 131, 13952-13962.	6.6	17
83	Mechanism of the Orotidine 5â€²-Monophosphate Decarboxylase-Catalyzed Reaction: Effect of Solvent Viscosity on Kinetic Constants. Biochemistry, 2009, 48, 5510-5517.	1.2	34
84	An Examination of the Relationship between Active Site Loop Size and Thermodynamic Activation Parameters for Orotidine 5â€²-Monophosphate Decarboxylase from Mesophilic and Thermophilic Organisms. Biochemistry, 2009, 48, 8006-8013.	1.2	32
85	Theoretical Analysis of Kinetic Isotope Effects on Proton Transfer Reactions between Substituted Î±-Methoxystyrenes and Substituted Acetic Acids. Journal of the American Chemical Society, 2009, 131, 13963-13971.	6.6	30
86	Mechanism of the Orotidine 5â€²-Monophosphate Decarboxylase-Catalyzed Reaction: Evidence for Substrate Destabilization[,]. Biochemistry, 2009, 48, 5518-5531.	1.2	58
87	Substituent Effects on the Thermodynamic Stability of Imines Formed from Glycine and Aromatic Aldehydes: Implications for the Catalytic Activity of Pyridoxal-5â€²-phosphate. Journal of the American Chemical Society, 2009, 131, 15815-15824.	6.6	58
88	Structureâ€reactivity relationships for <i>Î²</i>â€galactosidase (<i>Escherichia coli, lac Z</i>): a second derivative effect on <i>Î²</i>_{nuc} for addition of alkyl alcohols to an oxocarbenium ion reaction intermediate. Journal of Physical Organic Chemistry, 2008, 21, 531-537.	0.9	5
89	Alanine-dependent reactions of 5â€²-deoxypyridoxal in water. Bioorganic Chemistry, 2008, 36, 295-298.	2.0	5
90	Slow proton transfer from the hydrogen-labelled carboxylic acid side chain (Glu-165) of triosephosphate isomerase to imidazole buffer in D2O. Organic and Biomolecular Chemistry, 2008, 6, 391-396.	1.5	12

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91	Phosphate Binding Energy and Catalysis by Small and Large Molecules. Accounts of Chemical Research, 2008, 41, 539-548.	7.6	105
92	Formation and Stability of a Vinyl Carbanion at the Active Site of Orotidine 5â€˜-Monophosphate Decarboxylase:â€‰ p<i>K</i>_a of the C-6 Proton of Enzyme-Bound UMP. Journal of the American Chemical Society, 2008, 130, 1574-1575.	6.6	79
93	Altered Transition State for the Reaction of an RNA Model Catalyzed by a Dinuclear Zinc(II) Catalyst. Journal of the American Chemical Society, 2008, 130, 17858-17866.	6.6	59
94	A Substrate in Pieces: Allosteric Activation of Glycerol 3-Phosphate Dehydrogenase (NAD⁺) by Phosphite Dianion. Biochemistry, 2008, 47, 4575-4582.	1.2	65
95	Glycine Enolates:Â The Effect of Formation of Iminium Ions to Simple Ketones on Î±-Amino Carbon Acidity and a Comparison with Pyridoxal Iminium Ions. Journal of the American Chemical Society, 2008, 130, 2041-2050.	6.6	46
96	Dissecting the Total Transition State Stabilization Provided by Amino Acid Side Chains at Orotidine 5â€²-Monophosphate Decarboxylase: A Two-Part Substrate Approach. Biochemistry, 2008, 47, 7785-7787.	1.2	39
97	Restoring a Metabolic Pathway. ACS Chemical Biology, 2008, 3, 605-607.	1.6	8
98	Formation and Stability of Mononuclear and Dinuclear Eu(III) Complexes and Their Catalytic Reactivity Toward Cleavage of an RNA Analog. Inorganic Chemistry, 2007, 46, 7169-7177.	1.9	44
99	Rational Design of Transition-State Analogues as Potent Enzyme Inhibitors with Therapeutic Applications. ACS Chemical Biology, 2007, 2, 711-714.	1.6	10
100	A minimalist approach to understanding the efficiency of mononuclear Zn(ii) complexes as catalysts of cleavage of an RNA analog. Dalton Transactions, 2007, , 3804.	1.6	35
101	Direct excitation luminescence spectroscopy of Eu(iii) complexes of 1,4,7-tris(carbamoylmethyl)-1,4,7,10- tetraazacyclododecane derivatives and kinetic studies of their catalytic cleavage of an RNA analog. Dalton Transactions, 2007, , 5171.	1.6	27
102	Covalent Catalysis by Pyridoxal:â€‰ Evaluation of the Effect of the Cofactor on the Carbon Acidity of Glycine. Journal of the American Chemical Society, 2007, 129, 3013-3021.	6.6	51
103	Enhancement of a Lewis Acidâˆ’Base Interaction via Solvation:Â Ammonia Molecules and the Benzene Radical Cation. Journal of Physical Chemistry A, 2007, 111, 6068-6076.	1.1	11
104	Product Deuterium Isotope Effect for Orotidine 5â€˜-Monophosphate Decarboxylase:Â Evidence for the Existence of a Short-Lived Carbanion Intermediate. Journal of the American Chemical Society, 2007, 129, 12946-12947.	6.6	44
105	Enzymatic Catalysis of Proton Transfer at Carbon:â€‰ Activation of Triosephosphate Isomerase by Phosphite Dianion. Biochemistry, 2007, 46, 5841-5854.	1.2	96
106	A Marcus Treatment of Rate Constants for Protonation of Ring-Substituted Î±-Methoxystyrenes:Â Intrinsic Reaction Barriers and the Shape of the Reaction Coordinate. Journal of the American Chemical Society, 2007, 129, 6952-6961.	6.6	37
107	A Simple Method To Determine Kinetic Deuterium Isotope Effects Provides Evidence that Proton Transfer to Carbon Proceeds over and Not through the Reaction Barrier. Journal of the American Chemical Society, 2007, 129, 10330-10331.	6.6	17
108	A transition state analog for phosphate diester cleavage catalyzed by a small enzyme-like metal ion complex. Bioorganic Chemistry, 2007, 35, 366-374.	2.0	25

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109	The ACS division of Biological Chemistry. IUBMB Life, 2007, 59, 224-225.	1.5	0
110	When Does an Intermediate Become a Transition State? Degenerate Isomerization without Competing Racemization during Solvolysis of (S)-1-(3-Nitrophenyl)ethyl Tosylate. Journal of the American Chemical Society, 2006, 128, 17139-17145.	6.6	14
111	Claisen-Type Addition of Glycine to a Pyridoxal Iminium Ion in Water. Journal of Organic Chemistry, 2006, 71, 7094-7096.	1.7	10
112	Substrate Specificity of an Active Dinuclear Zn(II) Catalyst for Cleavage of RNA Analogues and a Dinucleoside. Journal of the American Chemical Society, 2006, 128, 1615-1621.	6.6	76
113	Reactions of Ion-Pair Intermediates of Solvolysis. ChemInform, 2005, 36, no.	0.1	0
114	Reactions of ion-pair intermediates of solvolysis. Chemical Record, 2005, 5, 94-106.	2.9	15
115	Crossing the Borderline between SN1 and SN2 Nucleophilic Substitution at Aliphatic Carbon. , 2005, , 41-68.		3
116	Ketonization of the remarkably strongly acidic elongated enol generated by flash photolytic decarboxylation of p-benzoylphenylacetic acid in aqueous solution. Chemical Communications, 2005, , 4231.	2.2	5
117	Activation of Orotidine 5â€˜-Monophosphate Decarboxylase by Phosphite Dianion:Â The Whole Substrate is the Sum of Two Parts. Journal of the American Chemical Society, 2005, 127, 15708-15709.	6.6	92
118	Formation and stability of organic zwitterions Â— The carbon acid pKas of the trimethylsulfonium and tetramethylphosphonium cations in water. Canadian Journal of Chemistry, 2005, 83, 1536-1542.	0.6	9
119	Carbon acidity of the Î±-pyridinium carbon of a pyridoxamine analog. Organic and Biomolecular Chemistry, 2005, 3, 2145.	1.5	16
120	Hydron Transfer Catalyzed by Triosephosphate Isomerase. Products of Isomerization of Dihydroxyacetone Phosphate in D2Oâ€. Biochemistry, 2005, 44, 2622-2631.	1.2	44
121	Ground-State, Transition-State, and Metal-Cation Effects of the 2-Hydroxyl Group on Î²-d-Galactopyranosyl Transfer Catalyzed by Î²-Galactosidase (Escherichia coli, lac Z). Biochemistry, 2005, 44, 11872-11881.	1.2	8
122	Solvent Deuterium Isotope Effects on Phosphodiester Cleavage Catalyzed by an Extraordinarily Active Zn(II) Complex. Journal of the American Chemical Society, 2005, 127, 1064-1065.	6.6	80
123	Hydron Transfer Catalyzed by Triosephosphate Isomerase. Products of Isomerization of (R)-Glyceraldehyde 3-Phosphate in D2Oâ€. Biochemistry, 2005, 44, 2610-2621.	1.2	55
124	A Comparison of the Electrophilic Reactivities of Zn2+and Acetic Acid as Catalysts of Enolization:Â Imperatives for Enzymatic Catalysis of Proton Transfer at Carbon. Journal of the American Chemical Society, 2004, 126, 5164-5173.	6.6	15
125	Editorial: Biological applications of physical organic chemistry. Journal of Physical Organic Chemistry, 2004, 17, 459-460.	0.9	0
126	On the importance of being zwitterionic: enzymatic catalysis of decarboxylation and deprotonation of cationic carbon. Bioorganic Chemistry, 2004, 32, 354-366.	2.0	77

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127	Dynamics for the reactions of ion pair intermediates of solvolysis. Advances in Physical Organic Chemistry, 2004, 39, 1-26.	0.5	24
128	Scrambling of Oxygen-18 during the â€œBorderlineâ€• Solvolysis of 1-(3-Nitrophenyl)ethyl Tosylate. Organic Letters, 2004, 6, 3633-3636.	2.4	12
129	Claisen-Type Addition of Glycine to Pyridoxal in Water. Journal of the American Chemical Society, 2004, 126, 10538-10539.	6.6	19
130	Formation and Stability of N-Heterocyclic Carbenes in Water:Â The Carbon Acid pKaof Imidazolium Cations in Aqueous Solution. Journal of the American Chemical Society, 2004, 126, 4366-4374.	6.6	476
131	Structureâ^'Activity Studies on the Cleavage of an RNA Analogue by a Potent Dinuclear Metal Ion Catalyst:Â Effect of Changing the Metal Ion. Inorganic Chemistry, 2004, 43, 1743-1750.	1.9	68
132	Kinetic Studies of RNA Cleavage by Lanthanide(III) Macrocyclic Complexes. Bulletin of the Korean Chemical Society, 2004, 25, 403-406.	1.0	3
133	Mechanisms Complex biological processes and their central chemical events. Current Opinion in Chemical Biology, 2003, 7, 525-527.	2.8	1
134	Dynamics of reaction of ion pairs in aqueous solution: racemization of the chiral ion pair intermediate of solvolysis of (S)-1-(4-methylphenyl)ethylpentafluorobenzoate. Journal of Physical Organic Chemistry, 2003, 16, 484-490.	0.9	13
135	The Mandelamide Ketoâ^'Enol System in Aqueous Solution. Generation of the Enol by Hydration of Phenylcarbamoylcarbene. Journal of the American Chemical Society, 2003, 125, 187-194.	6.6	14
136	Cooperativity between Metal Ions in the Cleavage of Phosphate Diesters and RNA by Dinuclear Zn(II) Catalysts. Inorganic Chemistry, 2003, 42, 7737-7746.	1.9	143
137	Kinetic and Thermodynamic Barriers to Carbon and Oxygen Alkylation of Phenol and Phenoxide Ion by the 1-(4-Methoxyphenyl)ethyl Carbocation. Journal of the American Chemical Society, 2003, 125, 15455-15465.	6.6	19
138	Substituent Effects on Carbocation Stability:Â The pKRforp-Quinone Methide. Journal of the American Chemical Society, 2003, 125, 8814-8819.	6.6	49
139	Physical and Kinetic Analysis of the Cooperative Role of Metal Ions in Catalysis of Phosphodiester Cleavage by a Dinuclear Zn(II) Complex. Journal of the American Chemical Society, 2003, 125, 1988-1993.	6.6	224
140	Formation and Stability of the Enolates of N-Protonated Proline Methyl Ester and Proline Zwitterion in Aqueous Solution:â€‰ A Nonenzymatic Model for the First Step in the Racemization of Proline Catalyzed by Proline Racemase. Biochemistry, 2003, 42, 8354-8361.	1.2	37
141	Substrate specificity for catalysis of phosphodiester cleavage by a dinuclear Zn(ii) complex. Chemical Communications, 2003, , 2832.	2.2	43
142	Hydrogen Bonding and Catalysis of Solvolysis of 4-Methoxybenzyl Fluoride. Journal of the American Chemical Society, 2002, 124, 9798-9805.	6.6	23
143	Formation and Stability of Peptide Enolates in Aqueous Solution. Journal of the American Chemical Society, 2002, 124, 8251-8259.	6.6	53
144	1â€ƒâ€ƒIntroduction. Annual Reports on the Progress of Chemistry Section B, 2002, 98, 1-2.	0.8	0

#	Article	IF	Citations
145	Formation and Stability of Enolates of Acetamide and Acetate Anion:Â An Eigen Plot for Proton Transfer at Î±-Carbonyl Carbon. Journal of the American Chemical Society, 2002, 124, 2957-2968.	6.6	108
146	What Is the Stabilizing Interaction with Nucleophilic Solvents in the Transition State for Solvolysis of Tertiary Derivatives:â€‰ Nucleophilic Solvent Participation or Nucleophilic Solvation?. Organic Letters, 2001, 3, 2225-2228.	2.4	56
147	Mechanistic Imperatives for Aldoseâ˜'Ketose Isomerization in Water:Â Specific, General Base- and Metal Ion-Catalyzed Isomerization of Glyceraldehyde with Proton and Hydride Transfer. Journal of the American Chemical Society, 2001, 123, 794-802.	6.6	94
148	Formation and Stability of Carbocations and Carbanions in Water and Intrinsic Barriers to Their Reactions. Accounts of Chemical Research, 2001, 34, 981-988.	7.6	146
149	Deprotonation of the Î±-(N,N-dimethylcarbamoyl)-Î±-methyl-4-methoxybenzyl carbocation by alkanecarboxylate and halide ionsâ€. Perkin Transactions II RSC, 2001, , 1167-1173.	1.1	1
150	Dynamics for Reaction of an Ion Pair in Aqueous Solution:â€‰ Reactivity of Carboxylate Anions in Bimolecular Carbocationâ˜'Nucleophile Addition and Unimolecular Ion Pair Collapse. Organic Letters, 2001, 3, 1237-1240.	2.4	13
151	Contribution of Phosphate Intrinsic Binding Energy to the Enzymatic Rate Acceleration for Triosephosphate Isomerase. Journal of the American Chemical Society, 2001, 123, 11325-11326.	6.6	73
152	Glycine Enolates:Â The Large Effect of Iminium Ion Formation on Î±-Amino Carbon Acidity. Journal of the American Chemical Society, 2001, 123, 7949-7950.	6.6	57
153	Ketoâ˜'Enol/Enolate Equilibria in theN-Acetylamino-p-methylacetophenone System. Effect of a Î²-Nitrogen Substituent. Journal of the American Chemical Society, 2001, 123, 8979-8984.	6.6	14
154	Proton transfer at carbon. Current Opinion in Chemical Biology, 2001, 5, 626-633.	2.8	103
155	Effect of an E461G Mutation of Î²-Galactosidase (Escherichia coli, lac Z) on pL Rate Profiles and Solvent Deuterium Isotope Effects. Bioorganic Chemistry, 2001, 29, 146-155.	2.0	1
156	Solvent Deuterium Isotope Effect on the Binding of Î²-d-Galactopyranosyl Derivatives to Î²-Galactosidase (Escherichia coli, lac Z). Bioorganic Chemistry, 2000, 28, 49-56.	2.0	8
157	How does structure determine organic reactivity? Partitioning of carbocations between addition of nucleophiles and deprotonation. Advances in Physical Organic Chemistry, 2000, 35, 67-115.	0.5	9
158	Structureâ˜'Reactivity Relationships and Intrinsic Reaction Barriers for Nucleophile Additions to a Quinone Methide:Â A Strongly Resonance-Stabilized Carbocation. Journal of the American Chemical Society, 2000, 122, 1664-1674.	6.6	68
159	1â€ƒIntroduction. Annual Reports on the Progress of Chemistry Section B, 2000, 96, 1-2.	0.8	1
160	Structureâ˜'Reactivity Relationships for Addition of Sulfur Nucleophiles to Electrophilic Carbon:â€‰ Resonance, Polarization, and Steric/Electrostatic Effects. Journal of the American Chemical Society, 2000, 122, 11073-11083.	6.6	27
161	Dynamics for Reaction of an Ion Pair in Aqueous Solution:Â The Rate Constant for Ion Pair Reorganization. Journal of the American Chemical Society, 2000, 122, 3963-3964.	6.6	31
162	Formation and Stability of Organic Zwitterions in Aqueous Solution:Â Enolates of the Amino Acid Glycine and Its Derivatives. Journal of the American Chemical Society, 2000, 122, 9373-9385.	6.6	114

#	Article	IF	Citations
163	How does organic structure determine organic reactivity? The effect of ortho-dimethyl groups on the nucleophilic substitution and alkene-forming elimination reactions of ring-substituted cumyl derivatives. Canadian Journal of Chemistry, 1999, 77, 922-933.	0.6	4
164	Experimental and Computational Determination of the Effect of the Cyano Group on Carbon Acidity in Water. Journal of the American Chemical Society, 1999, 121, 715-726.	6.6	110
165	Intrinsic Barriers for the Reactions of an Oxocarbenium Ion in Water. Journal of the American Chemical Society, 1999, 121, 8403-8404.	6.6	40
166	Mechanistic Imperatives for Catalysis of Aldol Addition Reactions:Â Partitioning of the Enolate Intermediate between Reaction with BrÃ¸nsted Acids and the Carbonyl Group. Journal of the American Chemical Society, 1999, 121, 4763-4770.	6.6	23
167	Imperatives for enzymatic catalysis of isomerization of sugars and sugar phosphates. Journal of Physical Organic Chemistry, 1998, 11, 512-518.	0.9	3
168	Kinetic mechanism for dimerization of an Î±-thioamide substituted benzyl carbocation in aqueous solution. Journal of Physical Organic Chemistry, 1998, 11, 701-706.	0.9	6
169	Solvent Effects on Carbocationâ˘'Nucleophile Combination Reactions:Â A Comparison of Ï€-Nucleophilicity in Aqueous and Organic Solvents. Journal of the American Chemical Society, 1998, 120, 10372-10378.	6.6	12
170	The Enhancement of Enzymatic Rate Accelerations by BrÃ¸nsted Acidâ˘'Base Catalysisâ€. Biochemistry, 1998, 37, 4305-4309.	1.2	75
171	Intrinsic barriers to the formation and reaction of carbocations. Pure and Applied Chemistry, 1998, 70, 2007-2014.	0.9	31
172	Biological Enolates:Â Generation and Stability of the Enolate of N-Protonated Glycine Methyl Ester in Water. Journal of the American Chemical Society, 1997, 119, 8375-8376.	6.6	57
173	Mechanistic Imperatives for the Reaction Catalyzed by Isopentenyl Pyrophosphate Isomerase: Free Energy Profile for Stepwise Isomerization in Water through a Tertiary Carbocation Intermediate. Bioorganic Chemistry, 1997, 25, 239-245.	2.0	10
174	How Does Organic Structure Determine Organic Reactivity? Nucleophilic Substitution and Alkene-Forming Elimination Reactions of Î±-Carbonyl and Î±-Thiocarbonyl Substituted Benzyl Derivatives. Journal of the American Chemical Society, 1996, 118, 12603-12613.	6.6	22
175	Relative Reactivities of a Strongly Nucleophilic Alkene and Azide Ion in Aqueous Methanol. Journal of Organic Chemistry, 1996, 61, 9033-9034.	1.7	8
176	Determination of the pKaof Ethyl Acetate:Â BrÃ¸nsted Correlation for Deprotonation of a Simple Oxygen Ester in Aqueous Solution. Journal of the American Chemical Society, 1996, 118, 3129-3141.	6.6	179
177	Structureâ˘'Reactivity Relationships for Î²-Galactosidase (Escherichia coli,lac Z). 3. Evidence that Glu-461 Participates in BrÃ¸nsted Acidâ˘'Base Catalysis of Î²-d-Galactopyranosyl Group Transferâ€. Biochemistry, 1996, 35, 12377-12386.	1.2	49
178	Mechanistic Imperatives for Enzymatic Catalysis of Aldoseâ˘'Ketose Isomerization:Â Isomerization of Glyceraldehyde in Weakly Alkaline Aqueous Solution Occurs with Intramolecular Transfer of a Hydride Ion. Journal of the American Chemical Society, 1996, 118, 7432-7433.	6.6	21
179	Mechanism for Nucleophilic Substitution and Elimination Reactions at Tertiary Carbon in Largely Aqueous Solutions:â€‰ Lifetime of a Simple Tertiary Carbocation. Journal of the American Chemical Society, 1996, 118, 11434-11445.	6.6	75
180	Structureâ˘'Reactivity Relationships for Î²-Galactosidase (Escherichia coli,lac Z). 4. Mechanism for Reaction of Nucleophiles with the Galactosyl-Enzyme Intermediates of E461G and E461Q Î²-Galactosidasesâ€. Biochemistry, 1996, 35, 12387-12401.	1.2	53

#	Article	IF	Citations
181	A consideration of the barrier for carbocation-nucleophile combination reactions. Tetrahedron, 1995, 51, 1535-1573.	1.0	122
182	Spontaneous Cleavage of gem-Diazides: A Comparison of the Effects of .alpha.-Azido and Other Electron-Donating Groups on the Kinetic and Thermodynamic Stability of Benzyl and Alkyl Carbocations in Aqueous Solution. Journal of the American Chemical Society, 1995, 117, 5198-5205.	6.6	44
183	Nucleofugality of the benzotriazole group in solvolysis. Journal of Organic Chemistry, 1995, 60, 5989-5991.	1.7	10
184	Absolute and Relative Electrophilicities of a Carbonyl Group and Tertiary Ammonium Ions toward a Simple Enolate Ion. Journal of the American Chemical Society, 1995, 117, 4718-4719.	6.6	22
185	Structure-reactivity relationships for .beta.-galactosidase (Escherichia coli, lac Z). 1. Broensted parameters for cleavage of alkyl .beta.-D-galactopyranosides. Biochemistry, 1995, 34, 11703-11712.	1.2	37
186	Structure-reactivity relationships for .beta.-galactosidase (Escherichia coli, lac Z). 2. Reactions of the galactosyl-enzyme intermediate with alcohols and azide ion. Biochemistry, 1995, 34, 11713-11724.	1.2	45
187	Demonstration of the Chemical Competence of an Iminodiazonium Ion to Serve as the Reactive Intermediate of a Schmidt Reaction. Journal of the American Chemical Society, 1994, 116, 10833-10834.	6.6	31
188	A Comparison of Substituent Effects on the Stability of .alpha.,.alpha.-Dimethylbenzyl Carbocations in Aqueous Solution and in the Gas Phase: How Significant is Nucleophilic Solvation?. Journal of the American Chemical Society, 1994, 116, 6706-6712.	6.6	31
189	Effect of electron-withdrawing .alpha.-substituents on nucleophile selectivity toward 4-methoxybenzyl carbocations: selectivities that are independent of carbocation stability. Journal of Organic Chemistry, 1994, 59, 25-29.	1.7	22
190	Direct observation of Î²-fluoro-substituted 4-methoxyphenethyl cations by laser flash photolysis. Journal of the Chemical Society Perkin Transactions II, 1993, , 1717-1722.	0.9	38
191	How delocalised are resonance-stabilised 1-[4-(N-methyl-N-alkylamino)phenyl]-2,2,2-trifluoroethyl carbocations?. Journal of the Chemical Society Perkin Transactions II, 1993, , 171.	0.9	3
192	Kinetic and thermodynamic stabilities of .alpha.-oxygen- and .alpha.-sulfur-stabilized carbocations in solution. Journal of the American Chemical Society, 1993, 115, 8465-8466.	6.6	34
193	On the importance of carbocation intermediates in bimolecular nucleophilic substitution reactions in aqueous solution. Journal of the American Chemical Society, 1993, 115, 1739-1744.	6.6	13
194	Effects of electronic geminal interactions on the solvolytic reactivity of methoxymethyl derivatives. Journal of the American Chemical Society, 1993, 115, 2523-2524.	6.6	26
195	The effects of .alpha.-substituents on the kinetic and thermodynamic stability of 4-methoxybenzyl carbocations: carbocation lifetimes that are independent of their thermodynamic stability. Journal of Organic Chemistry, 1993, 58, 6057-6066.	1.7	45
196	Mechanism for the formation of methylglyoxal from triosephosphates. Biochemical Society Transactions, 1993, 21, 549-553.	1.6	233
197	Generation and stability of a simple thiol ester enolate in aqueous solution. Journal of the American Chemical Society, 1992, 114, 10297-10302.	6.6	102
198	On the importance of reactions of carbocation ion pairs in water: common ion inhibition of solvolysis of 1-(4-methoxyphenyl)-2,2,2-trifluoroethyl bromide and trapping of an ion-pair intermediate by solvent. Journal of Organic Chemistry, 1992, 57, 625-629.	1.7	17

#	Article	IF	Citations
199	Reactions of ring-substituted 1-phenyl-2,2,2-trifluoroethyl carbocations with nucleophilic reagents: a bridge between carbocations which follow the reactivity-selectivity principle and the N+ scale. Journal of the American Chemical Society, 1992, 114, 5626-5634.	6.6	34
200	Experiments and calculations for determination of the stabilities of benzyl, benzhydryl, and fluorenyl carbocations: antiaromaticity revisited. Journal of the American Chemical Society, 1992, 114, 8032-8041.	6.6	86
201	Carbocation lifetimes that are independent of carbocation stability: the reaction of Î±-substituted 4-methoxybenzyl carbocations. Journal of the Chemical Society Chemical Communications, 1991, , 200-202.	2.0	10
202	Mechanisms for the uncatalyzed and hydrogen ion catalyzed reactions of a simple quinone methide with solvent and halide ions. Journal of the American Chemical Society, 1991, 113, 4588-4595.	6.6	25
203	How do reaction mechanisms change? Appearance of concerted pericyclic elimination for the reaction of cumyl derivatives. Journal of the American Chemical Society, 1991, 113, 8960-8961.	6.6	15
204	Kinetic parameters for the elimination reaction catalyzed by triosephosphate isomerase and an estimation of the reaction's physiological significance. Biochemistry, 1991, 30, 4581-4585.	1.2	211
205	Kinetic and thermodynamic stability of .alpha.-azidobenzyl carbocations: putative intermediates in the Schmidt reaction. Journal of the American Chemical Society, 1991, 113, 1867-1869.	6.6	22
206	Absence of nucleophilic assistance by solvent and azide ion to the reaction of cumyl derivatives: mechanism of nucleophilic substitution at tertiary carbon. Journal of the American Chemical Society, 1991, 113, 5871-5873.	6.6	40
207	Generation and determination of the lifetime of an Î±-carbonyl substituted carbocation. Tetrahedron Letters, 1991, 32, 4255-4258.	0.7	16
208	Effect of .beta.-fluorine substituents on the rate and equilibrium constants for the reactions of .alpha.-substituted 4-methoxybenzyl carbocations and on the reactivity of a simple quinone methide. Journal of the American Chemical Society, 1990, 112, 9513-9519.	6.6	76
209	Concurrent stepwise and concerted substitution reactions of 4-methoxybenzyl derivatives and the lifetime of the 4-methoxybenzyl carbocation. Journal of the American Chemical Society, 1990, 112, 9507-9512.	6.6	66
210	Reduction of the 1-(4-thiomethylphenyl)-2,2,2-trifluoroethyl carbocation by sodium sulfite. Tetrahedron Letters, 1989, 30, 23-26.	0.7	9
211	Aromatic substitution reactions of amines with ring-substituted 1-phenyl-2,2,2-trifluoroethyl carbocations. Journal of the American Chemical Society, 1989, 111, 6735-6744.	6.6	17
212	The extraordinarily long lifetimes and other properties of highly destabilized ring-substituted 1-phenyl-2,2,2-trifluoroethyl carbocations. Journal of the American Chemical Society, 1989, 111, 1455-1465.	6.6	55
213	Desolvation-limited reactions of amines with the 1-(4-methylthiophenyl)-2,2,2-trifluoroethyl carbocation. Journal of the Chemical Society Chemical Communications, 1987, , 1768.	2.0	23
214	Surprisingly small effect of an .alpha.-triflurometyl-for-.alpha.-methyl substitution on 1-(4-methoxyphenyl)ethyl cation reactivity. Journal of the American Chemical Society, 1986, 108, 6819-6820.	6.6	26
215	Reaction of triose phosphate isomerase with L-glyceraldehyde 3-phosphate and triose 1,2-enediol 3-phosphate. Biochemistry, 1985, 24, 949-953.	1.2	23
216	Equilibrium constants for the interconversion of substituted 1-phenylethyl alcohols and ethers. A measurement of intramolecular electrostatic interactions. Journal of the American Chemical Society, 1985, 107, 1340-1346.	6.6	14

#	ARTICLE	IF	CITATIONS
217	Stereochemical course of thiophosphoryl group transfer catalyzed by mitochondrial phosphoenolpyruvate carboxykinase. Biochemistry, 1984, 23, 1779-1783.	1.2	31
218	General base catalysis of the addition of hydroxylic reagents to unstable carbocations and its disappearance. Journal of the American Chemical Society, 1984, 106, 1396-1401.	6.6	55
219	Concerted bimolecular substitution reactions of 1-phenylethyl derivatives. Journal of the American Chemical Society, 1984, 106, 1383-1396.	6.6	124
220	Reactions of substituted 1-phenylethyl carbocations with alcohols and other nucleophilic reagents. Journal of the American Chemical Society, 1984, 106, 1373-1383.	6.6	136
221	Formation and stability of ring-substituted 1-phenylethyl carbocations. Journal of the American Chemical Society, 1984, 106, 1361-1372.	6.6	135
222	Acid-base catalysis of the elimination and isomerization reactions of triose phosphates. Journal of the American Chemical Society, 1984, 106, 4926-4936.	6.6	224
223	Stereochemical course of phosphoanhydride synthesis. Journal of the American Chemical Society, 1983, 105, 6605-6609.	6.6	16
224	[14] Stereochemistry of selected phosphotransferases and nucleotidyltransferases. Methods in Enzymology, 1982, 87, 213-235.	0.4	33
225	A simple relationship between carbocation lifetime and reactivity-selectivity relationships for the solvolysis of ring-substituted 1-phenylethyl derivatives. Journal of the American Chemical Society, 1982, 104, 4689-4691.	6.6	98
226	Concerted SN2 displacement reactions of 1-phenylethyl chlorides. Journal of the American Chemical Society, 1982, 104, 4691-4692.	6.6	44
227	The stereochemical course of thiophosphoryl group transfer catalyzed by adenosine kinase. Biochemical and Biophysical Research Communications, 1980, 94, 1052-1056.	1.0	25
228	Stereochemical course of a phosphokinase using a chiral [18O]phosphorothioate. Comparison with the transfer of a chiral [16O,17O,18O] phosphoryl group. Biochemistry, 1980, 19, 325-329.	1.2	40
229	Stereochemical courses of nucleotidyltransferase and phosphotransferase action. Uridine diphosphate glucose pyrophosphorylase, galactose-1-phosphate uridylyltransferase, adenylate kinase, and nucleoside diphosphate kinase. Biochemistry, 1979, 18, 5548-5556.	1.2	84
230	Synthesis of nucleoside [18O]pyrophosphorothioates with chiral [18O]phosphorothioate groups of known configuration. Stereochemical orientations of enzymic phosphorylations of chiral [18O]phosphorothioates. Journal of the American Chemical Society, 1978, 100, 7756-7757.	6.6	50
231	Stereochemical course of thiophosphoryl group transfer catalyzed by adenylate kinase. Journal of the American Chemical Society, 1978, 100, 7757-7758.	6.6	69
232	Proton Transfer to and from Carbon in Model Reactions. , 0, , 949-973.		0