Ronald Kluger

List of Publications by Year
in descending order

187 papers	4,177 citations	126708 33 h-index	168136 53 g-index
205 all docs	205 docs citations	205 times ranked	2467 citing authors

#	Article	IF	Citations
1	Thiamin diphosphate: a mechanistic update on enzymic and nonenzymic catalysis of decarboxylation. Chemical Reviews, 1987, 87, 863-876.	23.0	250
2	Thiamin Diphosphate Catalysis: Enzymic and Nonenzymic Covalent Intermediates. Chemical Reviews, 2008, 108, 1797-1833.	23.0	233
3	Mechanism and Catalysis of Nucleophilic Substitution in Phosphate Esters. Advances in Physical Organic Chemistry, 1989, 25, 99-265.	0.5	161
4	Electrostatic stabilization can explain the unexpected acidity of carbon acids in enzyme-catalyzed reactions. Journal of the American Chemical Society, 1993, 115, 11569-11572.	6.6	150
5	Active site generated analogs of reactive intermediates in enzymic reactions. Potent inhibition of pyruvate dehydrogenase by a phosphonate analog of pyruvate. Journal of the American Chemical Society, 1977, 99, 4504-4506.	6.6	96
6	Chemical cross-linking and proteinâ€“protein interactionsâ€"a review with illustrative protocols. Bioorganic Chemistry, 2004, 32, 451-472.	2.0	92
7	Allosteric transition intermediates modelled by crosslinked haemoglobins. Nature, 1995, 375, 84-87.	13.7	90
8	pH-Product and pH-rate profiles for the hydrolysis of methyl ethylene phosphate. Rate-limiting pseudorotation. Journal of the American Chemical Society, 1969, 91, 6066-6072.	6.6	77
9	Sub-Ã¥ngstrÃ¶m-resolution crystallography reveals physical distortions that enhance reactivity of a covalent enzymatic intermediate. Nature Chemistry, 2013, 5, 762-767.	6.6	70
10	Thiamin-catalyzed decarboxylation of pyruvate. Synthesis and reactivity analysis of the central, elusive intermediate, .alpha.-lactylthiamin. Journal of the American Chemical Society, 1981, 103, 884-888.	6.6	59
11	Phosphonate analogues of pyruvate. Probes of substrate binding to pyruvate oxidase and other thiamin pyrophosphate-dependent decarboxylases. Biochimica Et Biophysica Acta - Biomembranes, 1980, 613, 10-17.	1.4	56
12	Decarboxylation via Addition of Water to a Carboxyl Group: Acid Catalysis of Pyrrole-2-Carboxylic Acid. Journal of the American Chemical Society, 2009, 131, 11674-11675.	6.6	52
13	On the origins of enhanced reactivity of five-membered cyclic phosphate esters. The relative contributions of enthalpic and entropic factors. Journal of the American Chemical Society, 1990, 112, 6669-6671.	6.6	51
14	A Versatile Conformational Switch Regulates Reactivity in Human Branched-Chain Î±-Ketoacid Dehydrogenase. Structure, 2006, 14, 287-298.	1.6	46
15	Red cell substitutes from hemoglobinâ€"Do we start all over again?. Current Opinion in Chemical Biology, 2010, 14, 538-543.	2.8	46
16	Crystal structure of transketolase in complex with thiamine thiazolone diphosphate, an analogue of the reaction intermediate, at 2.3 Å… resolution. FEBS Letters, 1993, 326, 145-148.	1.3	45
17	Hydrolytic Decarboxylation of Carboxylic Acids and the Formation of Protonated Carbonic Acid. Journal of the American Chemical Society, 2010, 132, 2430-2436.	6.6	44
18	A reaction proceeding through intramolecular phosphorylation of a urea. A chemical mechanism for enzymic carboxylation of biotin involving cleavage of adenosine 5'-triphosphate. Journal of the American Chemical Society, 1976, 98, 3741-3742.	6.6	42

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19	Three-point crosslinking: potential red cell substitutes from the reaction of trimesoyl tris(methyl) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.2	41
20	Decarboxylation, CO₂ and the Reversion Problem. Accounts of Chemical Research, 2015, 48, 2843-2849.	7.6	41
21	Interaction of pyruvate-thiamin diphosphate adducts with pyruvate decarboxylase. Catalysis through "closed" transition states. Journal of the American Chemical Society, 1981, 103, 1214-1216.	6.6	39
22	Dicarboxylic acid bis(methyl phosphates): anionic biomimetic crosslinking reagents. Journal of Organic Chemistry, 1990, 55, 2864-2868.	1.7	38
23	Trimesoyltris(3,5-dibromosalicylate): specificity of reactions of a trifunctional acylating agent with hemoglobin. Journal of the American Chemical Society, 1992, 114, 9275-9279.	6.6	37
24	Activation of Acyl Phosphate Monoesters by Lanthanide Ions:â€‰ Enhanced Reactivity of Benzoyl Methyl Phosphate. Journal of the American Chemical Society, 2002, 124, 3303-3308.	6.6	37
25	Hemoglobin Dendrimers:â€‰ Functional Protein Clusters. Journal of the American Chemical Society, 2003, 125, 6070-6071.	6.6	37
26	Hemoglobinâˆ'Superoxide DismutaseChemical Linkages That Create a Dual-Function Protein. Journal of the American Chemical Society, 2005, 127, 8036-8043.	6.6	37
27	Functional Cross-Linked Hemoglobin Bis-tetramers: Geometry and Cooperativity. Biochemistry, 2008, 47, 12551-12561.	1.2	37
28	Release of Nitric Oxide fromS-Nitrosohemoglobin. Electron Transfer as a Response to Deoxygenation. Journal of the American Chemical Society, 2001, 123, 4615-4616.	6.6	36
29	Enhancing Nitrite Reductase Activity of Modified Hemoglobin: Bis-tetramers and Their PEGylated Derivatives. Biochemistry, 2009, 48, 11912-11919.	1.2	36
30	Mechanism of urea participation in phosphonate ester hydrolysis. Mechanistic and stereochemical criteria for enzymic formation and reaction of phosphorylated biotin. Journal of the American Chemical Society, 1979, 101, 5995-6000.	6.6	35
31	Synthesis and crystal structure of an analog of 2-(.alpha.-lactyl)thiamin, racemic methyl 2-hydroxy-2-(2-thiamin)ethylphosphonate chloride trihydrate. A conformation for a least-motion, maximum-overlap mechanism for thiamin catalysis. Journal of the American Chemical Society, 1982, 104, 3089-3095.	6.6	35
32	Biomimetic Monoacylation of Diols in Water. Lanthanide-Promoted Reactions of Methyl Benzoyl Phosphate. Journal of the American Chemical Society, 2004, 126, 10721-10726.	6.6	35
33	Modification of human hemoglobin with methyl acyl phosphates derived from dicarboxylic acids. Systematic relationships between cross-linked structure and oxygen-binding properties. Biochemistry, 1993, 32, 215-223.	1.2	34
34	Diverting Thiamin from Catalysis to Destruction. Mechanism of Fragmentation of N(1')-Methyl-2-(1-hydroxybenzyl)thiamin. Journal of the American Chemical Society, 1995, 117, 11383-11389.	6.6	34
35	Methyl acetyl phosphate. A small anionic acetylating agent. Journal of Organic Chemistry, 1980, 45, 2723-2724.	1.7	33
36	Site-specific modification of hemoglobin by methyl acetyl phosphate. Archives of Biochemistry and Biophysics, 1986, 244, 795-800.	1.4	33

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37	Ionic intermediates in enzyme-catalyzed carbon-carbon bond formation: patterns, prototypes, probes, and proposals. Chemical Reviews, 1990, 90, 1151-1169.	23.0	33
38	Systematically Cross-Linked Human Hemoglobin:Â Functional Effects of 10 Ã… Spans between Beta Subunits at Lysine-82. Journal of the American Chemical Society, 1996, 118, 8782-8786.	6.6	33
39	Destruction of Vitamin B1 by Benzaldehyde. Reactivity of Intermediates in the Fragmentation ofN1â€˜-Benzyl-2-(1-hydroxybenzyl)thiamin. Journal of the American Chemical Society, 2000, 122, 6145-6150.	6.6	32
40	Internal Return of Carbon Dioxide in Decarboxylation: Catalysis of Separation and ¹²C/¹³C Kinetic Isotope Effects. Journal of the American Chemical Society, 2009, 131, 11638-11639.	6.6	32
41	Magnesium ion enhances lanthanum-promoted monobenzoylation of a monosaccharide in water. Organic and Biomolecular Chemistry, 2010, 8, 2006.	1.5	32
42	Carboxylic acid participation in amide hydrolysis. External general base catalysis and general acid catalysis in reactions of norbornenylanilic acids. Journal of the American Chemical Society, 1978, 100, 2191-2197.	6.6	31
43	Lessons from thiamin-watching. Pure and Applied Chemistry, 1997, 69, 1957-1968.	0.9	30
44	Reactivity of Intermediates in Benzoylformate Decarboxylase:Â Avoiding the Path to Destruction. Journal of the American Chemical Society, 2002, 124, 14858-14859.	6.6	30
45	Carboxylic acid participation in amide hydrolysis. Evidence that separation of a nonbonded complex can be rate determining. Journal of the American Chemical Society, 1982, 104, 2891-2897.	6.6	29
46	Exocyclic cleavage in the alkaline hydrolysis of methyl ethylene phosphate. Evidence against the significance of stereoelectronic acceleration in reactions of cyclic phosphates. Journal of the American Chemical Society, 1985, 107, 6006-6011.	6.6	29
47	Thiamin diphosphate catalysis. Mechanistic divergence as a probe of substrate activation of pyruvate decarboxylase. Journal of the American Chemical Society, 1988, 110, 6230-6234.	6.6	29
48	Carboxylic acid participation in amide hydrolysis. Reactivity of intermediates in the internally catalyzed hydrolysis of N-substituted 2,3-dimethylmaleamic acids. Journal of the American Chemical Society, 1979, 101, 6976-6980.	6.6	28
49	Accelerating Unimolecular Decarboxylation by Preassociated Acid Catalysis in Thiamin-Derived Intermediates:Â Implicating BrÃ¸nsted Acids as Carbanion Traps in Enzymes. Journal of the American Chemical Society, 2006, 128, 15856-15864.	6.6	28
50	Biomimetic Aminoacylation of Ribonucleotides and RNA with Aminoacyl Phosphate Esters and Lanthanum Salts. Journal of the American Chemical Society, 2007, 129, 15848-15854.	6.6	27
51	Hemoglobin bis-tetramers via cooperative azideâ€"alkyne coupling. Chemical Communications, 2009, , 7315.	2.2	27
52	Mechanisms of carbonyl participation in phosphate ester hydrolysis and their relationship to mechanisms for the carboxylation of biotin. Journal of the American Chemical Society, 1991, 113, 996-1001.	6.6	26
53	Making Thiamin Work Faster:Â Acid-Promoted Separation of Carbon Dioxide. Journal of the American Chemical Society, 2005, 127, 12242-12243.	6.6	25
54	Connecting Proteins by Design. Cross-Linked Bis-Hemoglobin. Journal of the American Chemical Society, 1999, 121, 6780-6785.	6.6	24

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55	Inhibition of acetoacetate decarboxylase by ketophosphonates. Structural and dynamic probes of the active site. Biochemistry, 1974, 13, 910-914.	1.2	23
56	Substrate analog studies of the specificity and catalytic mechanism of D-3-hydroxybutyrate dehydrogenase. Journal of the American Chemical Society, 1978, 100, 7388-7392.	6.6	23
57	Circumventive catalysis: contrasting reaction patterns of tertiary and primary amines with cyclic anhydrides and the avoidance of intermediates. Journal of the American Chemical Society, 1989, 111, 3325-3328.	6.6	23
58	Molecular reception catalysis of the decarboxylation of N-carboxyimidazolidinone. A model for activation by distortion of N-carboxybiotin. Journal of the American Chemical Society, 1993, 115, 2089-2090.	6.6	22
59	A Doubly Cross-linked Human Hemoglobin. Journal of Biological Chemistry, 1996, 271, 675-680.	1.6	22
60	Biomimetically Activated Amino Acids. Catalysis in the Hydrolysis of Alanyl Ethyl Phosphate. Journal of the American Chemical Society, 1997, 119, 12089-12094.	6.6	22
61	Proton-exchange reactions of acetone and butanone. Resolution of steps in catalysis by acetoacetate decarboxylase. Journal of the American Chemical Society, 1975, 97, 1568-1572.	6.6	21
62	Fragmentation of the Conjugate Base of 2-(1-Hydroxybenzyl)thiamin:Â Does Benzoylformate Decarboxylase Prevent Orbital Overlap To Avoid It?. Journal of the American Chemical Society, 2004, 126, 68-69.	6.6	21
63	Catalysis by Enzyme Conformational Change. Topics in Current Chemistry, 0, , 113-136.	4.0	21
64	pKa-Dependent Formation of Amides in Water from an Acyl Phosphate Monoester and Amines. Journal of Organic Chemistry, 2008, 73, 4753-4754.	1.7	21
65	pH-Rate profile for the hydrolysis of some esters of a bicyclic phosphinic acid. Evidence for rate-limiting pseudorotation. Journal of the American Chemical Society, 1969, 91, 4143-4150.	6.6	20
66	Factors controlling association of magnesium ion and acyl phosphates. Journal of the American Chemical Society, 1975, 97, 4298-4303.	6.6	20
67	Exocyclic cleavage in the alkaline hydrolysis of methyl ethylene phosphate: pseudorotation of a pentavalent intermediate or reaction via a hexavalent intermediate?. Journal of Organic Chemistry, 1986, 51, 207-212.	1.7	20
68	Enzymic carboxyl transfer from N-carboxybiotin. A molecular orbital evaluation of conformational effects in promoting reactivity. Journal of the American Chemical Society, 1986, 108, 2699-2704.	6.6	19
69	Reaction of the anionic acetylation agent methyl acetyl phosphate with <scp>D</scp>-3-hydroxybutyrate dehydrogenase. Biochemistry and Cell Biology, 1986, 64, 434-440.	0.9	19
70	Endocyclic cleavage in the alkaline hydrolysis of the cyclic phosphonate methyl propylphostonate: dianionic intermediates and barriers to pseudorotation. Journal of the American Chemical Society, 1991, 113, 5714-5719.	6.6	19
71	Hydrolysis of methylacetoin ethyl phosphate. Competing pathways for carbonyl hydrate participation in a model for biotin carboxylation. Journal of the American Chemical Society, 1993, 115, 867-871.	6.6	19
72	Changing a protein into a generalized acylating reagent. Reaction of nucleophiles with 3,5-dibromosalicyl trimesyl-((Lys-.beta.-82)-(Lys-.beta.-82))-hemoglobin. Journal of Organic Chemistry, 1994, 59, 733-736.	1.7	19

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73	1996 Bader Award Lecture Aminoacyl ethyl phosphates. Biomimetically activated amino acids. Canadian Journal of Chemistry, 1996, 74, 2395-2400.	0.6	19
74	Methyl acetyl phosphate: A novel acetylating agent Its site-specific modification of human hemoglobin A. Journal of Chromatography A, 1986, 359, 193-201.	1.8	18
75	Heats of reaction of cyclic and acyclic phosphate and phosphonate esters. Strain discrepancy and steric retardation. Journal of the American Chemical Society, 1992, 114, 3067-3071.	6.6	18
76	Protonated Carbonic Acid and Reactive Intermediates in the Acidic Decarboxylation of Indolecarboxylic Acids. Journal of Organic Chemistry, 2012, 77, 6505-6509.	1.7	18
77	Mechanism of metal ion promoted hydrogen exchange reactions. Magnesium(II) and acetonyl phosphonate. Journal of the American Chemical Society, 1973, 95, 1071-1074.	6.6	17
78	Kinetics and mechanism of the reaction of dimethyl acetylphosphonate with water. Expulsion of a phosphonate ester from a carbonyl hydrate. Canadian Journal of Chemistry, 1978, 56, 1792-1795.	0.6	17
79	Carboxylic acid participation in amide hydrolysis. Competition between acid-catalyzed dehydration and anhydride formation. Journal of the American Chemical Society, 1989, 111, 5921-5925.	6.6	17
80	Mechanism of Site-Directed Protein Cross-Linking. Protein-Directed Selectivity in Reactions of Hemoglobin with Aryl Trimesates. Journal of Organic Chemistry, 2000, 65, 214-219.	1.7	17
81	Chelation-controlled regioselectivity in the lanthanum-promoted monobenzoylation of monosaccharides in water. Carbohydrate Research, 2007, 342, 1998-2002.	1.1	17
82	Efficient CuAAC click formation of functional hemoglobin bis-tetramers. Chemical Communications, 2010, 46, 7557.	2.2	17
83	Base-Catalyzed Decarboxylation of Mandelylthiamin: Direct Formation of Bicarbonate as an Alternative to Formation of CO₂. Journal of the American Chemical Society, 2012, 134, 20621-20623.	6.6	17
84	Effects of leaving group basicity on the hydrolysis of aryl-substituted maleanilinic acids. Journal of the American Chemical Society, 1975, 97, 5536-5540.	6.6	16
85	Rates of formation and decomposition of tetrahedral intermediates in the hydrolysis of dimethyl aroylphosphonates. Substituent effects on a model for carboxylate ester hydrolysis. Journal of the American Chemical Society, 1978, 100, 7382-7388.	6.6	16
86	Substituent Effects in Carbonâˆ’Nitrogen Cleavage of Thiamin Derivatives. Fragmentation Pathways and Enzymic Avoidance of Cofactor Destruction. Journal of the American Chemical Society, 2002, 124, 1669-1673.	6.6	16
87	Effect of coenzyme modification on the structural and catalytic properties of wild-type transketolase and of the variant E418A from Saccharomycesâ€ƒcerevisiae. FEBS Journal, 2005, 272, 1326-1342.	2.2	16
88	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
89	Amino group reactions of the sulfhydryl reagent methyl methanesulfonothioate. Inactivation of D-3-hydroxybutyrate dehydrogenase and reaction with amines in water. Canadian Journal of Biochemistry, 1980, 58, 629-632.	1.4	15
90	Aminolysis of maleic anhydride. Kinetics and thermodynamics of amide formation. Journal of the American Chemical Society, 1984, 106, 5667-5670.	6.6	15

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91	Cross-Linked Bis-hemoglobins:â€‰ Connections and Oxygen Binding. Journal of the American Chemical Society, 2003, 125, 10885-10892.	6.6	15
92	Conjoined Hemoglobins. Loss of Cooperativity and Proteinâˆ'Protein Interactions. Biochemistry, 2005, 44, 14989-14999.	1.2	15
93	Some substituted 7-ethoxy-7-phosphabicycloheptene and-heptane 7-oxides. Journal of the American Chemical Society, 1967, 89, 3919-3920.	6.6	14
94	Chiral intermediates in thiamin catalysis. Stereochemical course of the decarboxylation step in the conversion of pyruvate to acetaldehyde. Journal of the American Chemical Society, 1987, 109, 6368-6371.	6.6	14
95	Phosphoenol acetylphosphonates: Substrate analogues as inhibitors of phosphoenolpyruvate enzymes. Bioorganic Chemistry, 1992, 20, 135-147.	2.0	14
96	1994 Syntex Award Lecture: Anionic Electrophiles, Protein Modification, and Artificial Blood. Canadian Journal of Chemistry, 1994, 72, 2193-2197.	0.6	14
97	Efficient generation of dendritic arrays of cross-linked hemoglobin: symmetry and redundancy. Organic and Biomolecular Chemistry, 2008, 6, 151-156.	1.5	14
98	Proteinâ€"protein coupling and its application to functional red cell substitutes. Chemical Communications, 2010, 46, 1194.	2.2	14
99	Pressureâ€monitored headspace analysis combined with compoundâ€specific isotope analysis to measure isotope fractionation in gasâ€producing reactions. Rapid Communications in Mass Spectrometry, 2013, 27, 1778-1784.	0.7	14
100	A Convenient Preparation of Chloroform-d1. Journal of Organic Chemistry, 1964, 29, 2045-2046.	1.7	13
101	Phosphoenol pyruvamides. Amide-phosphate interactions in analogs of phosphoenol pyruvate. Journal of the American Chemical Society, 1984, 106, 4017-4020.	6.6	13
102	Solvent-Accelerated Decarboxylation ofN-Carboxy-2-imidazolidinone. Implications for Stability of Intermediates in Biotin-Dependent Carboxylations. Journal of the American Chemical Society, 1996, 118, 12495-12498.	6.6	13
103	Binding of acellular, native and cross-linked human hemoglobins to haptoglobin: enhanced distribution and clearance in the rat. American Journal of Physiology - Renal Physiology, 2005, 288, G1301-G1309.	1.6	13
104	Catalyzing separation of carbon dioxide in thiamin diphosphateâ€promoted decarboxylation. FEBS Journal, 2008, 275, 6089-6100.	2.2	13
105	Click Chemistry for Biotechnology and Materials Science. Journal of the American Chemical Society, 2010, 132, 6611-6612.	6.6	13
106	Thermal decomposition of a .beta.-ketophosphonic acid. Journal of Organic Chemistry, 1973, 38, 2721-2722.	1.7	12
107	Chirality of intermediates in thiamin catalysis: structure of (+)-2-(1-hydroxyethyl)-3,4-dimethyl-5-(2-hydroxyethyl)thiazolium iodide, the absolute stereochemistry of the enantiomers of 2-(1-hydroxyethyl)thiamin, and enzymic reaction of the diphosphates. Journal of the American Chemical Society, 1987, 109, 618-620.	6.6	12
108	A Site-Specific Tetrafunctional Reagent for Protein Modification:Â Cross-Linked Hemoglobin with Two Sites for Further Reaction. Journal of the American Chemical Society, 1996, 118, 10380-10383.	6.6	12

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109	Hemodynamic responses to a hemoglobin bisâ€tetramer and its polyethylene glycol conjugate. Transfusion, 2012, 52, 974-982.	0.8	12
110	Increasing Efficiency in Proteinâ€“Protein Coupling: Subunit-Directed Acetylation and Phase-Directed CuAAC (â€œClick Couplingâ€) in the Formation of Hemoglobin Bis-Tetramers. Biochemistry, 2014, 53, 6793-6799.	1.2	12
111	How Acid-Catalyzed Decarboxylation of 2,4-Dimethoxybenzoic Acid Avoids Formation of Protonated CO₂. Journal of the American Chemical Society, 2016, 138, 7568-7573.	6.6	12
112	Ground-state destabilization by electrostatic repulsion is not a driving force in orotidine-5â€²-monophosphate decarboxylase catalysis. Nature Catalysis, 2022, 5, 332-341.	16.1	12
113	.beta.-Deuterium secondary isotope effects in heterolytic decarboxylation reactions. Manifestations of negative hyperconjugation. Journal of Organic Chemistry, 1986, 51, 3964-3968.	1.7	11
114	Reviving Artificial Blood: Meeting the Challenge of Dealing with NO Scavenging by Hemoglobin. ChemBioChem, 2010, 11, 1816-1824.	1.3	11
115	Biomimetic protecting-group-free 2â€², 3â€²-selective aminoacylation of nucleosides and nucleotides. Organic and Biomolecular Chemistry, 2011, 9, 676-678.	1.5	11
116	Avoiding CO2 in Catalysis of Decarboxylation. Advances in Physical Organic Chemistry, 2013, 47, 85-128.	0.5	11
117	Amide-phosphate interactions: acid catalysis in amide-assisted hydrolysis of phosphonate esters. Journal of the American Chemical Society, 1976, 98, 4913-4917.	6.6	10
118	Chiral intermediates in thiamin catalysis: Resolution and pyrophosphorylation of hydroxyethylthiamin. Bioorganic Chemistry, 1985, 13, 227-234.	2.0	10
119	Lanthanum-catalyzed aqueous acylation of monosaccharides by benzoyl methyl phosphate. Canadian Journal of Chemistry, 2006, 84, 620-624.	0.6	10
120	Investigating the Mechanism of Heteroaromatic Decarboxylation Using Solvent Kinetic Isotope Effects and Eyring Transition-State Theory. Journal of Chemical Education, 2011, 88, 1004-1006.	1.1	10
121	Variation of steric effects in metal ion-catalyzed proton transfer. A probe of transition-state structure. Journal of the American Chemical Society, 1984, 106, 1113-1117.	6.6	9
122	Decomposition of 2-(1-Hydroxybenzyl)thiamin. Ruling Out Stepwise Cationic Fragmentation. Organic Letters, 2000, 2, 2035-2036.	2.4	9
123	Decarboxylation without CO₂: Why Bicarbonate Forms Directly as Trichloroacetate Is Converted to Chloroform. Journal of Organic Chemistry, 2014, 79, 10972-10980.	1.7	9
124	REACTIVE INTERMEDIATES IN THIAMIN CATALYSIS. Annals of the New York Academy of Sciences, 1982, 378, 63-77.	1.8	8
125	Thiamin diphosphate-rhodium(III) and 2-(1-hydroxyethyl)thiamin diphosphate-rhodium(III). Models for metal ion activation of enzyme-bound thiamin diphosphate. Journal of Organic Chemistry, 1992, 57, 6410-6413.	1.7	8
126	Efficient Chemical Introduction of a Disulfide Cross-Link and Conjugation Site into Human Hemoglobin at Î²-Lysine-82 Utilizing a Bifunctional Aminoacyl Phosphate. Bioconjugate Chemistry, 1997, 8, 921-926.	1.8	8

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127	Fast fragmentation and slow protonation: a buffer-dependent isotope effect in reactions ofN-methyl hydroxy(benzylthiamine) analyzed by the Keeffeâ€“Jencks equations. Journal of Physical Organic Chemistry, 2004, 17, 507-510.	0.9	8
128	Protein-enhanced decarboxylation of the covalent intermediate in benzoylformate decarboxylaseâ€"Desolvation or acid catalysis?. Bioorganic Chemistry, 2006, 34, 337-344.	2.0	8
129	Biomimetic peptide bond formation in water with aminoacyl phosphate esters. Organic and Biomolecular Chemistry, 2011, 9, 5645.	1.5	8
130	Inhibition of bacterial <scp>D</scp>-3-hydroxybutyrate dehydrogenase by substrates and substrate analogues. Canadian Journal of Biochemistry, 1981, 59, 810-815.	1.4	7
131	Acyl pyrophosphates: activated analogs of pyrophosphate monoesters permitting new designs for inactivation of targeted enzymes. Journal of the American Chemical Society, 1991, 113, 5124-5125.	6.6	7
132	An ether-linked tetrafunctional acylating reagent and its cross-linking reactions with hemoglobin. Canadian Journal of Chemistry, 1999, 77, 271-279.	0.6	7
133	Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands. Bioconjugate Chemistry, 1999, 10, 1058-1067.	1.8	7
134	Carbon Kinetic Isotope Effects Reveal Variations in Reactivity of Intermediates in the Formation of Protonated Carbonic Acid. Journal of Organic Chemistry, 2013, 78, 12176-12181.	1.7	7
135	Catalyzing decarboxylation by taming carbon dioxide. Pure and Applied Chemistry, 2015, 87, 353-360.	0.9	7
136	Charge Dispersion and Its Effects on the Reactivity of Thiamin-Derived Breslow Intermediates. Biochemistry, 2018, 57, 3867-3872.	1.2	7
137	HBOCs from Chemical Modification of Hb. , 2013, , 159-183.		7
138	Phosphorylation of amides. Evidence for participation in catalysis. Journal of the American Chemical Society, 1973, 95, 2362-2364.	6.6	6
139	Rate-determining processes in the hydrolysis of maleanilinic acids in acidic solutions. Journal of the American Chemical Society, 1976, 98, 4154-4158.	6.6	6
140	Mechanisms for the enzyme-catalyzed ATP-dependent carboxylation of biotin involving phosphorylated tetrahedral intermediates. Bioorganic Chemistry, 1989, 17, 287-293.	2.0	6
141	7 Mechanisms of Enzymic Carbonâ€“Carbon Bond Formation and Cleavage. The Enzymes, 1992, 20, 271-315.	0.7	6
142	Monooxygenase-like activity of methemoglobin with sodium sulfite as an efficient reductant. Journal of the American Chemical Society, 1993, 115, 4365-4366.	6.6	6
143	S-Nitrosylation of Cross-Linked Hemoglobins at Î²-Cysteine-93:Â Stabilized Hemoglobins as Nitric Oxide Sources. Journal of the American Chemical Society, 2000, 122, 10734-10735.	6.6	6
144	Rates of release of nitric oxide from HbSNO and internal electron transfer. Bioorganic Chemistry, 2003, 31, 3-10.	2.0	6

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145	The role of pre-association in BrÃ¸nsted acid-catalyzed decarboxylation and related processes. Advances in Physical Organic Chemistry, 2010, , 357-375.	0.5	6
146	Strain-promoted azideâ€“alkyne cycloaddition for proteinâ€“protein coupling in the formation of a bis-hemoglobin as a copper-free oxygen carrier. Organic and Biomolecular Chemistry, 2016, 14, 10011-10017.	1.5	6
147	The Need for an Alternative to Radicals as the Cause of Fragmentation of a Thiaminâ€Derived Breslow Intermediate. Angewandte Chemie - International Edition, 2017, 56, 6321-6323.	7.2	6
148	Secondary .beta.-deuterium isotope effects in decarboxylation and elimination reactions of .alpha.-lactylthiamin: intrinsic isotope effects of pyruvate decarboxylase. Journal of the American Chemical Society, 1986, 108, 7828-7832.	6.6	5
149	Synthesis, structure, and hydrolysis of esters of strained and unstrained N-phosphonylureas. Canadian Journal of Chemistry, 1987, 65, 1838-1844.	0.6	5
150	Benzylpenicillin methyl phosphate. A penicillin prodrug that inactivates RTEM Î²-lactamase. Bioorganic and Medicinal Chemistry Letters, 1994, 4, 1225-1228.	1.0	5
151	Deuterium labeling as a test of intramolecular hydride mechanisms in the fragmentation of 2-(1-hydroxybenzyl)-N1â€²-methylthiamin. Canadian Journal of Chemistry, 2005, 83, 1277-1280.	0.6	5
152	Origins of Steric Effects in General-Base-Catalyzed Enolization: Solvation and Electrostatic Attraction. Journal of the American Chemical Society, 2012, 134, 1066-1070.	6.6	5
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