Judith P Klinman

List of Publications by Year
in descending order

261 papers	17,409 citations	11651 70 h-index	16650 123 g-index
289 all docs	289 docs citations	289 times ranked	10759 citing authors

#	Article	IF	Citations
1	Ribosomally synthesized and post-translationally modified peptide natural products: overview and recommendations for a universal nomenclature. Natural Product Reports, 2013, 30, 108-160.	10.3	1,692
2	Mechanisms Whereby Mononuclear Copper Proteins Functionalize Organic Substrates. Chemical Reviews, 1996, 96, 2541-2562.	47.7	831
3	Enzyme dynamics and hydrogen tunnelling in a thermophilic alcohol dehydrogenase. Nature, 1999, 399, 496-499.	27.8	568
4	Temperature-Dependent Isotope Effects in Soybean Lipoxygenase-1:Â Correlating Hydrogen Tunneling with Protein Dynamics. Journal of the American Chemical Society, 2002, 124, 3865-3874.	13.7	466
5	Recommendations for performing, interpreting and reporting hydrogen deuterium exchange mass spectrometry (HDX-MS) experiments. Nature Methods, 2019, 16, 595-602.	19.0	452
6	Enzyme Catalysis:â€‰ Beyond Classical Paradigms. Accounts of Chemical Research, 1998, 31, 397-404.	15.6	360
7	The Copper-Enzyme Family of Dopamine Î²-Monooxygenase and Peptidylglycine Î±-Hydroxylating Monooxygenase: Resolving the Chemical Pathway for Substrate Hydroxylation. Journal of Biological Chemistry, 2006, 281, 3013-3016.	3.4	336
8	Quinoenzymes in Biology. Annual Review of Biochemistry, 1994, 63, 299-344.	11.1	328
9	Tunneling and Dynamics in Enzymatic Hydride Transfer. Chemical Reviews, 2006, 106, 3095-3118.	47.7	299
10	Hydrogen Tunneling Links Protein Dynamics to Enzyme Catalysis. Annual Review of Biochemistry, 2013, 82, 471-496.	11.1	273
11	A 21st century revisionist's view at a turning point in enzymology. Nature Chemical Biology, 2009, 5, 543-550.	8.0	269
12	Environmentally coupled hydrogen tunneling. FEBS Journal, 2002, 269, 3113-3121.	0.2	261
13	Dopamine Beta-Hydroxylase of Adrenal Chromaffin Granules: Structure and Function. Annual Review of Biochemistry, 1988, 57, 551-590.	11.1	241
14	Catalytic Mechanism of the Topa Quinone Containing Copper Amine Oxidasesâ€. Biochemistry, 2002, 41, 9269-9278.	2.5	229
15	Hydrogen tunneling in biology. Chemistry and Biology, 1999, 6, R191-R198.	6.0	210
16	Copper amine oxidase from Hansenula polymorpha: the crystal structure determined at 2.4 Ã¥ resolution reveals the active conformation. Structure, 1998, 6, 293-307.	3.3	191
17	Experimental Evidence for Extensive Tunneling of Hydrogen in the Lipoxygenase Reaction:Â Implications for Enzyme Catalysis. Journal of the American Chemical Society, 1996, 118, 10319-10320.	13.7	180
18	Nature of Hydrogen Transfer in Soybean Lipoxygenase 1:Â Separation of Primary and Secondary Isotope Effectsâ€. Biochemistry, 1999, 38, 12218-12228.	2.5	180

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19	Nature of Rate-Limiting Steps in the Soybean Lipoxygenase-1 Reaction. Biochemistry, 1995, 34, 14077-14092.	2.5	172
20	Catalysis of electron transfer during activation of O2 by the flavoprotein glucose oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 62-67.	7.1	169
21	Evidence That Dioxygen and Substrate Activation Are Tightly Coupled in Dopamine Î²-Monooxygenase. Journal of Biological Chemistry, 2003, 278, 49691-49698.	3.4	162
22	Intrigues and Intricacies of the Biosynthetic Pathways for the Enzymatic Quinocofactors: PQQ, TTQ, CTQ, TPQ, and LTQ. Chemical Reviews, 2014, 114, 4343-4365.	47.7	160
23	Extremely Large Isotope Effects in the Soybean Lipoxygenase-Linoleic Acid Reaction. Journal of the American Chemical Society, 1994, 116, 793-794.	13.7	156
24	Unmasking of hydrogen tunneling in the horse liver alcohol dehydrogenase reaction by site-directed mutagenesis. Biochemistry, 1993, 32, 5503-5507.	2.5	153
25	Enzyme structure and dynamics affect hydrogen tunneling: The impact of a remote side chain (I553) in soybean lipoxygenase-1. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1146-1151.	7.1	151
26	How Large Should the QM Region Be in QM/MM Calculations? The Case of Catechol <i>O</i>-Methyltransferase. Journal of Physical Chemistry B, 2016, 120, 11381-11394.	2.6	150
27	Synthesis and spectroscopic characterization of model compounds for the active site cofactor in copper amine oxidases. Journal of the American Chemical Society, 1993, 115, 7117-7127.	13.7	145
28	Probing the Mechanism of Proton Coupled Electron Transfer to Dioxygen:Â the Oxidative Half-Reaction of Bovine Serum Amine Oxidaseâ€. Biochemistry, 1998, 37, 12513-12525.	2.5	141
29	Lipoxygenase Reaction Mechanism:Â Demonstration That Hydrogen Abstraction from Substrate Precedes Dioxygen Binding during Catalytic Turnoverâ€. Biochemistry, 1996, 35, 12882-12892.	2.5	139
30	How Do Enzymes Activate Oxygen without Inactivating Themselves?. Accounts of Chemical Research, 2007, 40, 325-333.	15.6	136
31	Thermal-activated protein mobility and its correlation with catalysis in thermophilic alcohol dehydrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9556-9561.	7.1	134
32	Evidence that both protium and deuterium undergo significant tunneling in the reaction catalyzed by bovine serum amine oxidase. Biochemistry, 1989, 28, 6597-6605.	2.5	131
33	Oxygen-18 kinetic isotope effects in the dopamine .beta.-monooxygenase reaction: Evidence for a new chemical mechanism in non-heme, metallomonooxygenase. Biochemistry, 1994, 33, 226-234.	2.5	123
34	Hydrogen Tunneling in Peptidylglycine Î±-Hydroxylating Monooxygenase. Journal of the American Chemical Society, 2002, 124, 8194-8195.	13.7	122
35	Model Studies of Topaquinone-Dependent Amine Oxidases. 2. Characterization of Reaction Intermediates and Mechanism. Journal of the American Chemical Society, 1995, 117, 8707-8718.	13.7	119
36	An integrated model for enzyme catalysis emerges from studies of hydrogen tunneling. Chemical Physics Letters, 2009, 471, 179-193.	2.6	114

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37	Copper Amine Oxidase: Heterologous Expression, Purification, and Characterization of An Active Enzyme in Saccharomyces cerevisiae. Biochemistry, 1994, 33, 7647-7653.	2.5	113
38	Kinetic Studies of Oxygen Reactivity in Soybean Lipoxygenase-1. Biochemistry, 2003, 42, 11466-11475.	2.5	112
39	The Mechanism of Enzyme-catalyzed Reduced Nicotinamide Adenine Dinucleotide-dependent Reductions. Journal of Biological Chemistry, 1972, 247, 7977-7987.	3.4	109
40	Update 1 of: Tunneling and Dynamics in Enzymatic Hydride Transfer. Chemical Reviews, 2010, 110, PR41-PR67.	47.7	108
41	Model Studies of Topaquinone-Dependent Amine Oxidases. 1. Oxidation of Benzylamine by Topaquinone Analogs. Journal of the American Chemical Society, 1995, 117, 8698-8706.	13.7	107
42	Steric Control of Oxygenation Regiochemistry in Soybean Lipoxygenase-1. Journal of the American Chemical Society, 2001, 123, 2931-2932.	13.7	103
43	Distribution and Properties of the Genes Encoding the Biosynthesis of the Bacterial Cofactor, Pyrroloquinoline Quinone. Biochemistry, 2012, 51, 2265-2275.	2.5	103
44	Effects of Protein Glycosylation on Catalysis:Â Changes in Hydrogen Tunneling and Enthalpy of Activation in the Glucose Oxidase Reactionâ€. Biochemistry, 1997, 36, 2603-2611.	2.5	102
45	Oxygen Isotope Effects on Electron Transfer to O2Probed Using Chemically Modified Flavins Bound to Glucose Oxidase. Journal of the American Chemical Society, 2004, 126, 15120-15131.	13.7	101
46	Isotope effects and structure-reactivity correlations in the yeast alcohol dehydrogenase reaction. A study of the enzyme-catalyzed oxidation of aromatic alcohols. Biochemistry, 1976, 15, 2018-2026.	2.5	99
47	Demonstration That the Radical S-Adenosylmethionine (SAM) Enzyme PqqE Catalyzes de Novo Carbon-Carbon Cross-linking within a Peptide Substrate PqqA in the Presence of the Peptide Chaperone PqqD. Journal of Biological Chemistry, 2016, 291, 8877-8884.	3.4	98
48	Understanding Biological Hydrogen Transfer Through the Lens of Temperature Dependent Kinetic Isotope Effects. Accounts of Chemical Research, 2018, 51, 1966-1974.	15.6	88
49	Mechanism of modulation of dopamine .beta.-monooxygenase by pH and fumarate as deduced from initial rate and primary deuterium isotope effect studies. Biochemistry, 1983, 22, 3096-3106.	2.5	86
50	New Quinocofactors in Eukaryotes. Journal of Biological Chemistry, 1996, 271, 27189-27192.	3.4	86
51	Protein Flexibility Correlates with Degree of Hydrogen Tunneling in Thermophilic and Mesophilic Alcohol Dehydrogenases. Journal of the American Chemical Society, 2000, 122, 10738-10739.	13.7	86
52	Hydrogen tunneling in the flavoenzyme monoamine oxidase B. Biochemistry, 1994, 33, 14871-14878.	2.5	85
53	Nature of Oxygen Activation in Glucose Oxidase fromAspergillus niger:Â The Importance of Electrostatic Stabilization in Superoxide Formationâ€. Biochemistry, 1999, 38, 8572-8581.	2.5	85
54	The nature of O ₂ activation by the ethylene-forming enzyme 1-aminocyclopropane-1-carboxylic acid oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1814-1819.	7.1	85

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55	Kinetic Mechanism and Intrinsic Isotope Effects for the Peptidylglycine Î±-Amidating Enzyme Reactionâ€. Biochemistry, 1998, 37, 8244-8252.	2.5	84
56	Evidence Against Reduction of Cu2+to Cu+during Dioxygen Activation in a Copper Amine Oxidase from Yeast. Journal of the American Chemical Society, 2000, 122, 9897-9904.	13.7	84
57	Pyrroloquinoline Quinone Biogenesis: Demonstration That PqqE from <i>Klebsiella pneumoniae</i> Is a Radical <i>S</i>-Adenosyl-<scp>l</scp>-methionine Enzyme. Biochemistry, 2009, 48, 10151-10161.	2.5	84
58	Extremely Elevated Room-Temperature Kinetic Isotope Effects Quantify the Critical Role of Barrier Width in Enzymatic Câ€“H Activation. Journal of the American Chemical Society, 2014, 136, 8157-8160.	13.7	83
59	Dynamically Achieved Active Site Precision in Enzyme Catalysis. Accounts of Chemical Research, 2015, 48, 449-456.	15.6	82
60	Liver Alcohol Dehydrogenas. Critical Reviews in Biochemistry, 1986, 21, 349-389.	7.5	79
61	[14] Hydrogen tunneling in enzyme catalysis. Methods in Enzymology, 1995, 249, 373-397.	1.0	79
62	Modeling temperature dependent kinetic isotope effects for hydrogen transfer in a series of soybean lipoxygenase mutants: The effect of anharmonicity upon transfer distance. Chemical Physics, 2005, 319, 283-296.	1.9	79
63	The multi-functional topa-quinone copper amine oxidases. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2003, 1647, 131-137.	2.3	78
64	Enzymatic Methyl Transfer: Role of an Active Site Residue in Generating Active Site Compaction That Correlates with Catalytic Efficiency. Journal of the American Chemical Society, 2011, 133, 17134-17137.	13.7	78
65	Exploring Molecular Oxygen Pathways in Hansenula polymorpha Copper-containing Amine Oxidase. Journal of Biological Chemistry, 2007, 282, 17767-17776.	3.4	76
66	Oxygen-18 Kinetic Isotope Effect Studies of the Tyrosine Hydroxylase Reaction:Â Evidence of Rate Limiting Oxygen Activation. Journal of the American Chemical Society, 1998, 120, 4057-4062.	13.7	75
67	Life as aerobes: are there simple rules for activation of dioxygen by enzymes?. Journal of Biological Inorganic Chemistry, 2001, 6, 1-13.	2.6	75
68	Mechanism of post-translational quinone formation in copper amine oxidases and its relationship to the catalytic turnover. Archives of Biochemistry and Biophysics, 2005, 433, 255-265.	3.0	75
69	Investigation of Spectroscopic Intermediates during Copper-Binding and TPQ Formation in Wild-Type and Active-Site Mutants of a Copper-Containing Amine Oxidase from Yeast. Biochemistry, 2000, 39, 3690-3698.	2.5	74
70	Quinone biogenesis: Structure and mechanism of PqqC, the final catalyst in the production of pyrroloquinoline quinone. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7913-7918.	7.1	74
71	Linking protein structure and dynamics to catalysis: the role of hydrogen tunnelling. Philosophical Transactions of the Royal Society B: Biological Sciences, 2006, 361, 1323-1331.	4.0	74
72	Kinetic Analysis of Oxygen Utilization during Cofactor Biogenesis in a Copper-Containing Amine Oxidase from Yeast. Biochemistry, 2000, 39, 3699-3707.	2.5	73

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73	PqqD Is a Novel Peptide Chaperone That Forms a Ternary Complex with the Radical S-Adenosylmethionine Protein PqqE in the Pyrroloquinoline Quinone Biosynthetic Pathway. Journal of Biological Chemistry, 2015, 290, 12908-12918.	3.4	72
74	Computational Study of Tunneling and Coupled Motion in Alcohol Dehydrogenase-Catalyzed Reactions:Â Implication for Measured Hydrogen and Carbon Isotope Effects. Journal of the American Chemical Society, 1999, 121, 1997-2006.	13.7	71
75	The Role of Copper in Topa Quinone Biogenesis and Catalysis, as Probed by Azide Inhibition of a Copper Amine Oxidase from Yeastâ€. Biochemistry, 2001, 40, 2954-2963.	2.5	71
76	Correlation of copper valency with product formation in single turnovers of dopamine .beta.-monooxygenase. Biochemistry, 1989, 28, 4664-4670.	2.5	69
77	Crystal Structure and Amide H/D Exchange of Binary Complexes of Alcohol Dehydrogenase fromBacillus stearothermophilus:Â Insight into Thermostability and Cofactor Bindingâ€,â€¡. Biochemistry, 2004, 43, 5266-5277.	2.5	69
78	Magnitude of intrinsic isotope effects in the dopamine .beta.-monooxygenase reaction. Biochemistry, 1983, 22, 3091-3096.	2.5	67
79	Oxygen and Hydrogen Isotope Effects in an Active Site Tyrosine to Phenylalanine Mutant of Peptidylglycine Î±-Hydroxylating Monooxygenase:Â Mechanistic Implicationsâ€. Biochemistry, 2003, 42, 1813-1819.	2.5	67
80	Transition-state structure in the yeast alcohol dehydrogenase reaction: the magnitude of solvent and .alpha.-secondary hydrogen isotope effects. Biochemistry, 1980, 19, 2005-2016.	2.5	66
81	Mediation of donorâ€"acceptor distance in an enzymatic methyl transfer reaction. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7954-7959.	7.1	65
82	Calculation of substrate dissociation constants from steady-state isotope effects in enzyme-catalyzed reactions. Journal of the American Chemical Society, 1985, 107, 1058-1060.	13.7	64
83	Discrimination between 16O and 18O in oxygen binding to the reversible oxygen carriers hemoglobin, myoglobin, hemerythrin, and hemocyanin: a new probe for oxygen binding and reductive activation by proteins. Journal of the American Chemical Society, 1993, 115, 8891-8897.	13.7	64
84	Evidence for Increased Local Flexibility in Psychrophilic Alcohol Dehydrogenase Relative to Its Thermophilic Homologue. Biochemistry, 2004, 43, 14676-14683.	2.5	62
85	The role of tunneling in enzyme catalysis of Câ€"H activation. Biochimica Et Biophysica Acta - Bioenergetics, 2006, 1757, 981-987.	1.0	62
86	Mechanistic Comparison of the Cobalt-Substituted and Wild-Type Copper Amine Oxidase from Hansenula polymorpha. Biochemistry, 2002, 41, 10577-10584.	2.5	61
87	Galactose Oxidase as a Model for Reactivity at a Copper Superoxide Center. Journal of the American Chemical Society, 2009, 131, 4657-4663.	13.7	61
88	Impaired protein conformational landscapes as revealed in anomalous Arrhenius prefactors. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10520-10525.	7.1	60
89	Synthesis and Characterization of Model Compounds of the Lysine Tyrosyl Quinone Cofactor of Lysyl Oxidase. Journal of the American Chemical Society, 2003, 125, 6113-6125.	13.7	59
90	Investigation of the Pathway for Inter-Copper Electron Transfer in Peptidylglycine Î±-Amidating Monooxygenase. Journal of the American Chemical Society, 2004, 126, 13168-13169.	13.7	58

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91	Importance of Protein Dynamics during Enzymatic Câ€“H Bond Cleavage Catalysis. Biochemistry, 2013, 52, 2068-2077.	2.5	56
92	Origins of Enzyme Catalysis: Experimental Findings for Câ€“H Activation, New Models, and Their Relevance to Prevailing Theoretical Constructs. Journal of the American Chemical Society, 2017, 139, 18409-18427.	13.7	56
93	Evolutionary Aspects of Enzyme Dynamics. Journal of Biological Chemistry, 2014, 289, 30205-30212.	3.4	55
94	Hydrogenâ€“Deuterium Exchange of Lipoxygenase Uncovers a Relationship between Distal, Solvent Exposed Protein Motions and the Thermal Activation Barrier for Catalytic Proton-Coupled Electron Tunneling. ACS Central Science, 2017, 3, 570-579.	11.3	55
95	Mutation of a Strictly Conserved, Active-Site Residue Alters Substrate Specificity and Cofactor Biogenesis in a Copper Amine Oxidaseâ€. Biochemistry, 1999, 38, 3683-3693.	2.5	52
96	¹⁸O Kinetic Isotope Effects in Non-Heme Iron Enzymes: Probing the Nature of Fe/O₂ Intermediates. Journal of the American Chemical Society, 2008, 130, 8122-8123.	13.7	51
97	The Structure of a Biosynthetic Intermediate of Pyrroloquinoline Quinone (PQQ) and Elucidation of the Final Step of PQQ Biosynthesis. Journal of the American Chemical Society, 2004, 126, 5342-5343.	13.7	50
98	Crystal Structure at 2.5 Ã… Resolution of Zinc-Substituted Copper Amine Oxidase of Hansenula polymorpha Expressed in Escherichia coli,. Biochemistry, 2000, 39, 9709-9717.	2.5	49
99	Binding of Dioxygen to Non-Metal Sites in Proteins:â€‰ Exploration of the Importance of Binding Site Size versus Hydrophobicity in the Copper Amine Oxidase from Hansenula polymorpha. Biochemistry, 2002, 41, 13637-13643.	2.5	49
100	Enhanced Rigidification within a Double Mutant of Soybean Lipoxygenase Provides Experimental Support for Vibronically Nonadiabatic Proton-Coupled Electron Transfer Models. ACS Catalysis, 2017, 7, 3569-3574.	11.2	49
101	Rapid freeze and chemical-quench studies of dopamine .beta.-monooxygenase: comparison of pre-steady-state and steady-state parameters. Biochemistry, 1989, 28, 4656-4664.	2.5	47
102	Characterization of the Native Lysine Tyrosylquinone Cofactor in Lysyl Oxidase by Raman Spectroscopy. Journal of Biological Chemistry, 1997, 272, 28841-28844.	3.4	47
103	Comparison of Rates and Kinetic Isotope Effects Using PEG-Modified Variants and Glycoforms of Glucose Oxidase:â€‰ The Relationship of Modification of the Protein Envelope to Câ^'H Activation and Tunneling. Biochemistry, 2002, 41, 8747-8758.	2.5	47
104	Impact of Protein Flexibility on Hydride-Transfer Parameters in Thermophilic and Psychrophilic Alcohol Dehydrogenases. Journal of the American Chemical Society, 2004, 126, 9500-9501.	13.7	47
105	¹³C ENDOR Spectroscopy of Lipoxygenaseâ€“Substrate Complexes Reveals the Structural Basis for Câ€“H Activation by Tunneling. Journal of the American Chemical Society, 2017, 139, 1984-1997.	13.7	47
106	Probes of Hydrogen Tunneling with Horse Liver Alcohol Dehydrogenase at Subzero Temperatures. Biochemistry, 2001, 40, 2303-2311.	2.5	46
107	The zinc content of yeast alcohol dehydrogenase. Biochemical and Biophysical Research Communications, 1976, 70, 878-884.	2.1	44
108	Structure and Hydride Transfer Mechanism of a Moderate Thermophilic Dihydrofolate Reductase from Bacillus stearothermophilus and Comparison to Its Mesophilic and Hyperthermophilic Homologues,. Biochemistry, 2005, 44, 11428-11439.	2.5	44

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109	A new model for the origin of kinetic hydrogen isotope effects. Journal of Physical Organic Chemistry, 2010, 23, 606-612.	1.9	44
110	Stereochemistry and kinetic isotope effects in the bovine plasma amine oxidase catalyzed oxidation of dopamine. Biochemistry, 1979, 18, 1969-1979.	2.5	43
111	Interaction of PqqE and PqqD in the pyrroloquinoline quinone (PQQ) biosynthetic pathway links PqqD to the radical SAM superfamily. Chemical Communications, 2010, 46, 7031.	4.1	43
112	Relationship between Conserved Consensus Site Residues and the Productive Conformation for the TPQ Cofactor in a Copper-Containing Amine Oxidase from Yeast. Biochemistry, 1998, 37, 16591-16600.	2.5	41
113	The Catalytic Function of Bovine Lysyl Oxidase in the Absence of Copper. Journal of Biological Chemistry, 2001, 276, 30575-30578.	3.4	40
114	Implication for Functions of the Ectopic Adipocyte Copper Amine Oxidase (AOC3) from Purified Enzyme and Cell-Based Kinetic Studies. PLoS ONE, 2012, 7, e29270.	2.5	40
115	Trihydroxyphenylalanine quinone (TPQ) from copper amine oxidases and lysyl tyrosylquinone (LTQ) from lysyl oxidase. Advances in Protein Chemistry, 2001, 58, 141-174.	4.4	39
116	Nuclear Magnetic Resonance Structure and Binding Studies of PqqD, a Chaperone Required in the Biosynthesis of the Bacterial Dehydrogenase Cofactor Pyrroloquinoline Quinone. Biochemistry, 2017, 56, 2735-2746.	2.5	39
117	Steady-State Kinetics of Substrate Binding and Iron Release in Tomato ACC Oxidaseâ€. Biochemistry, 2001, 40, 9717-9724.	2.5	38
118	Oxygen Kinetic Isotope Effects in Soluble Methane Monooxygenase. Journal of Biological Chemistry, 2001, 276, 4549-4553.	3.4	38
119	The Catalytic Role of the Copper Ligand H172 of Peptidylglycine Î±-Hydroxylating Monooxygenase:Â A Kinetic Study of the H172A Mutantâ€. Biochemistry, 2006, 45, 15419-15429.	2.5	38
120	Identification of a Long-range Protein Network That Modulates Active Site Dynamics in Extremophilic Alcohol Dehydrogenases. Journal of Biological Chemistry, 2013, 288, 14087-14097.	3.4	38
121	Temperature dependence of protein motions in a thermophilic dihydrofolate reductase and its relationship to catalytic efficiency. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10074-10079.	7.1	37
122	Kinetic and Structural Analysis of Substrate Specificity in Two Copper Amine Oxidases from <i>Hansenula polymorpha</i>. Biochemistry, 2010, 49, 2540-2550.	2.5	36
123	Investigating Inner-Sphere Reorganization via Secondary Kinetic Isotope Effects in the Câˆ’H Cleavage Reaction Catalyzed by Soybean Lipoxygenase: Tunneling in the Substrate Backbone as Well as the Transferred Hydrogen. Journal of the American Chemical Society, 2011, 133, 430-439.	13.7	35
124	Active Site Hydrophobic Residues Impact Hydrogen Tunneling Differently in a Thermophilic Alcohol Dehydrogenase at Optimal versus Nonoptimal Temperatures. Biochemistry, 2012, 51, 4147-4156.	2.5	33
125	Oxygen-18 Kinetic Isotope Effects of Nonheme Iron Enzymes HEPD and MPnS Support Iron(III) Superoxide as the Hydrogen Abstraction Species. Journal of the American Chemical Society, 2015, 137, 10448-10451.	13.7	33
126	Control of the Position of Oxygen Delivery in Soybean Lipoxygenase-1 by Amino Acid Side Chains within a Gas Migration Channel. Journal of Biological Chemistry, 2016, 291, 9052-9059.	3.4	33

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127	Experimental Evidence for Hydrogen Tunneling when the Isotopic Arrhenius Prefactor (AH/AD) is Unity. Journal of the American Chemical Society, 2008, 130, 17632-17633.	13.7	32
128	Multistep, Eight-Electron Oxidation Catalyzed by the Cofactorless Oxidase, PqqC: Identification of Chemical Intermediates and Their Dependence on Molecular Oxygen. Biochemistry, 2013, 52, 4667-4675.	2.5	31
129	X-ray and EPR Characterization of the Auxiliary Feâ€"S Clusters in the Radical SAM Enzyme PqqE. Biochemistry, 2018, 57, 1306-1315.	2.5	31
130	Mechanism of the aconitate isomerase reaction. Biochemistry, 1971, 10, 2259-2266.	2.5	30
131	Effect of Metal on 2,4,5-Trihydroxyphenylalanine (Topa) Quinone Biogenesis in the Hansenula polymorpha Copper Amine Oxidase. Journal of Biological Chemistry, 1997, 272, 19277-19281.	3.4	30
132	Pathway for the StereocontrolledZandEProduction of Î±,Î±-Difluorine-Substituted Phenyl Butenoates. Journal of Organic Chemistry, 2006, 71, 8618-8621.	3.2	30
133	Partial Conversion of Hansenula polymorpha Amine Oxidase into a â€œPlantâ€•Amine Oxidase:â€‰ Implications for Copper Chemistry and Mechanism. Biochemistry, 2007, 46, 10817-10827.	2.5	29
134	Hydroxylase Activity of Met471Cys Tyramine Î²-Monooxygenase. Journal of the American Chemical Society, 2008, 130, 11939-11944.	13.7	29
135	Modular behavior of tauD provides insight into the origin of specificity in Î±-ketoglutarate-dependent nonheme iron oxygenases. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 19791-19795.	7.1	29
136	Mechanism of the Insect Enzyme, Tyramine Î²-Monooxygenase, Reveals Differences from the Mammalian Enzyme, Dopamine Î²-Monooxygenase. Journal of Biological Chemistry, 2008, 283, 3042-3049.	3.4	28
137	Convergent Mechanistic Features between the Structurally Diverse <i>N</i>- and <i>O</i>-Methyltransferases: Glycine <i>N</i>-Methyltransferase and Catechol <i>O</i>-Methyltransferase. Journal of the American Chemical Society, 2016, 138, 9158-9165.	13.7	28
138	Discovery of Hydroxylase Activity for PqqB Provides a Missing Link in the Pyrroloquinoline Quinone Biosynthetic Pathway. Journal of the American Chemical Society, 2019, 141, 4398-4405.	13.7	28
139	Stereochemistry of the interconversions of citrate and acetate catalyzed by citrate synthase, adenosine triphosphate citrate lyase, and citrate lyase. Biochemistry, 1971, 10, 2267-2272.	2.5	27
140	Exponential relationships among multiple hydrogen isotope effects as probes of hydrogen tunneling. Bioorganic Chemistry, 1992, 20, 1-7.	4.1	27
141	Detecting and Characterizing the Kinetic Activation of Thermal Networks in Proteins: Thermal Transfer from a Distal, Solvent-Exposed Loop to the Active Site in Soybean Lipoxygenase. Journal of Physical Chemistry B, 2019, 123, 8662-8674.	2.6	27
142	Comparative Study of17O and18O Isotope Effects As a Probe for Dioxygen Activation:Â Application to the Soybean Lipoxygenase Reaction#. Journal of the American Chemical Society, 1997, 119, 11357-11361.	13.7	26
143	2,4,5-Trihydroxyphenylalanine Quinone Biogenesis in the Copper Amine Oxidase fromHansenula polymorphawith the Alternate Metal Nickelâ€. Biochemistry, 2005, 44, 14308-14317.	2.5	26
144	Mechanism of O2Activation by Cytochrome P450cam Studied by Isotope Effects and Transient State Kineticsâ€. Biochemistry, 2006, 45, 15793-15806.	2.5	26

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145	Kinetic Isotope Effects in Enzymology. Advances in Enzymology and Related Areas of Molecular Biology, 2006, 46, 415-494.	1.3	26
146	An Active-Site Phenylalanine Directs Substrate Binding and Câ˘H Cleavage in the Î±-Ketoglutarate-Dependent Dioxygenase TauD. Journal of the American Chemical Society, 2010, 132, 5114-5120.	13.7	25
147	Picosecond-Resolved Fluorescent Probes at Functionally Distinct Tryptophans within a Thermophilic Alcohol Dehydrogenase: Relationship of Temperature-Dependent Changes in Fluorescence to Catalysis. Journal of Physical Chemistry B, 2014, 118, 6049-6061.	2.6	25
148	Activity-Related Microsecond Dynamics Revealed by Temperature-Jump FÃ¶rster Resonance Energy Transfer Measurements on Thermophilic Alcohol Dehydrogenase. Journal of the American Chemical Society, 2018, 140, 900-903.	13.7	25
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