Robert S Phillips

List of Publications by Year
in descending order

212 papers	6,660 citations	66315 42 h-index	95218 68 g-index
222 all docs	222 docs citations	222 times ranked	5575 citing authors

#	Article	IF	Citations
1	Symbiotic Bacterial Metabolites Regulate Gastrointestinal Barrier Function via the Xenobiotic Sensor PXR and Toll-like Receptor 4. Immunity, 2014, 41, 296-310.	6.6	708
2	Indole can act as an extracellular signal to regulate biofilm formation of Escherichia coli and other indole-producing bacteria. Canadian Journal of Microbiology, 2003, 49, 443-449.	0.8	227
3	Temperature modulation of the stereochemistry of enzymatic catalysis: Prospects for exploitation. Trends in Biotechnology, 1996, 14, 13-16.	4.9	206
4	Three-dimensional structure of tyrosine phenol-lyase. Biochemistry, 1993, 32, 4195-4206.	1.2	143
5	A redox-active FKBP-type immunophilin functions in accumulation of the photosystem II supercomplex in Arabidopsis thaliana. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12631-12636.	3.3	123
6	The entropic force generated by intrinsically disordered segments tunes protein function. Nature, 2018, 563, 584-588.	13.7	113
7	Recent advances in alcohol dehydrogenase-catalyzed asymmetric production of hydrophobic alcohols. Catalysis Science and Technology, 2011, 1, 1311.	2.1	111
8	Asymmetric Reduction and Oxidation of Aromatic Ketones and Alcohols Using W110A Secondary Alcohol Dehydrogenase fromThermoanaerobacterethanolicus. Journal of Organic Chemistry, 2007, 72, 30-34.	1.7	96
9	Temperature effects on stereochemistry of enzymatic reactions. Enzyme and Microbial Technology, 1992, 14, 417-419.	1.6	95
10	Controlling Substrate Specificity and Stereospecificity of Alcohol Dehydrogenases. ACS Catalysis, 2015, 5, 2100-2114.	5.5	91
11	Kinetics and Mechanism of Superoxide Reduction by Two-Iron Superoxide Reductase from Desulfovibrio vulgaris. Biochemistry, 2002, 41, 4348-4357.	1.2	90
12	Synthetic applications of tryptophan synthase. Tetrahedron: Asymmetry, 2004, 15, 2787-2792.	1.8	86
13	Effects of substrate structure and temperature on the stereospecificity of secondary alcohol dehydrogenase from Thermoanaerobacter ethanolicus. Journal of the American Chemical Society, 1990, 112, 3629-3632.	6.6	84
14	Interactions of tryptophan synthase, tryptophanase, and pyridoxal phosphate with oxindolyl-L-alanine and 2,3-dihydro-L-tryptophan: support for an indolenine intermediate in tryptophan metabolism. Biochemistry, 1984, 23, 6228-6234.	1.2	80
15	Temperature-dependent enantiospecificity of secondary alcohol dehydrogenase from Thermoanaerobacter ethanolicus. Journal of the American Chemical Society, 1989, 111, 1935-1936.	6.6	80
16	S-Aryl-L-cysteine S,S-dioxides: design, synthesis, and evaluation of a new class of inhibitors of kynureninase. Journal of the American Chemical Society, 1993, 115, 1264-1270.	6.6	77
17	The Crystal Structure ofCitrobacter freundiiTyrosine Phenol-lyase Complexed with 3-(4â€˜-Hydroxyphenyl)propionic Acid, Together with Site-Directed Mutagenesis and Kinetic Analysis, Demonstrates That Arginine 381 Is Required for Substrate Specificityâ€,â€¡. Biochemistry, 1997, 36, 6502-6510.	1.2	74
18	A Single Point Mutation Reverses the Enantiopreference of <i>Thermoanaerobacter ethanolicus</i> Secondary Alcohol Dehydrogenase. ChemCatChem, 2009, 1, 89-93.	1.8	72

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19	Mutation of Cysteine-295 to Alanine in Secondary Alcohol Dehydrogenase from Thermoanaerobacter ethanolicus Affects the Enantioselectivity and Substrate Specificity of Ketone Reductions. Bioorganic and Medicinal Chemistry, 2001, 9, 1659-1666.	1.4	65
20	Site-Directed Mutagenesis of Tyrosine-71 to Phenylalanine in Citrobacter freundii Tyrosine Phenol-Lyase: Evidence for Dual Roles of Tyrosine-71 as a General Acid Catalyst in the Reaction Mechanism and in Cofactor Binding. Biochemistry, 1995, 34, 12276-12283.	1.2	63
21	Asymmetric reduction of ethynyl ketones and ethynylketoesters by secondary alcohol dehydrogenase from Thermoanaerobacter ethanolicusâ€Šâ€. Journal of the Chemical Society, Perkin Transactions 1, 2000, , 2821-2825.	1.3	63
22	Xerogel-Encapsulated W110A Secondary Alcohol Dehydrogenase fromThermoanaerobacter ethanolicus Performs Asymmetric Reduction of Hydrophobic Ketones in Organic Solvents. Angewandte Chemie - International Edition, 2007, 46, 3091-3094.	7.2	62
23	Spectroscopic investigation of ligand interaction with hepatic phenylalanine hydroxylase: evidence for a conformational change associated with activation. Biochemistry, 1984, 23, 3836-3842.	1.2	61
24	A resonance Raman study of substrate and inhibitor binding to protocatechuate-3,4-dioxygenase. Biochemical and Biophysical Research Communications, 1978, 85, 844-850.	1.0	59
25	Chemistry and diversity of pyridoxal-5â€²-phosphate dependent enzymes. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 1167-1174.	1.1	59
26	Mechanistic deductions from multiple kinetic and solvent deuterium isotope effects and pH studies of pyridoxal phosphate dependent carbon-carbon lyases: Escherichia coli tryptophan indole-lyase. Biochemistry, 1988, 27, 7339-7344.	1.2	57
27	A Thermoanaerobacter ethanolicus secondary alcohol dehydrogenase mutant derivative highly active and stereoselective on phenylacetone and benzylacetone. Protein Engineering, Design and Selection, 2007, 20, 47-55.	1.0	56
28	Mechanistic deductions from kinetic isotope effects and pH studies of pyridoxal phosphate dependent carbon-carbon lyases: Erwinia herbicola and Citrobacter freundii tyrosine phenol-lyase. Biochemistry, 1988, 27, 7333-7338.	1.2	54
29	Reactions of O-acyl-l-serines with tryptophanase, tyrosine phenol-lyase, and tryptophan synthase. Archives of Biochemistry and Biophysics, 1987, 256, 302-310.	1.4	53
30	Isolation of an Escherichia coli strain mutant unable to form biofilm on polystyrene and to adhere to human pneumocyte cells: involvement of tryptophanase. Canadian Journal of Microbiology, 2002, 48, 132-137.	0.8	53
31	Investigation of the role of 3-hydroxyanthranilic acid in the degradation of lignin by white-rot fungus Pycnoporus cinnabarinus. Enzyme and Microbial Technology, 2001, 28, 301-307.	1.6	51
32	Kinetics of the Superoxide Reductase Catalytic Cycle. Journal of Biological Chemistry, 2003, 278, 39662-39668.	1.6	51
33	Reaction of indole and analogs with amino acid complexes of Escherichia coli tryptophan indole-lyase: detection of a new reaction intermediate by rapid-scanning stopped-flow spectrophotometry. Biochemistry, 1991, 30, 5927-5934.	1.2	50
34	Activity and selectivity of W110A secondary alcohol dehydrogenase from Thermoanaerobacter ethanolicus in organic solvents and ionic liquids: mono- and biphasic media. Organic and Biomolecular Chemistry, 2008, 6, 887.	1.5	50
35	Stereochemistry and mechanism of aldol reactions catalyzed by kynureninase. Journal of the American Chemical Society, 1991, 113, 7385-7388.	6.6	49
36	Proton Transfer and Carbonâˆ’Carbon Bond Cleavage in the Elimination of Indole Catalyzed byEscherichia coliTryptophan Indole-Lyase. Journal of the American Chemical Society, 2000, 122, 1008-1014.	6.6	49

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37	Mechanism of tryptophan indole-lyase: insights from pre-steady-state kinetics and substrate and solvent isotope effects. Journal of the American Chemical Society, 1989, 111, 727-730.	6.6	48
38	Mutation of Serine-39 to Threonine in Thermostable Secondary Alcohol Dehydrogenase fromThermoanaerobacter ethanolicusChanges Enantiospecificity. Journal of the American Chemical Society, 1998, 120, 5137-5141.	6.6	47
39	Site-Directed Mutagenesis of His343Ala in Citrobacter freundii Tyrosine Phenol-Lyase. Effects on the Kinetic Mechanism and Rate-Determining Step. FEBS Journal, 1995, 229, 540-549.	0.2	45
40	The Role of the Catalytic Base in the Protein Tyrosine Kinase Csk. Journal of Biological Chemistry, 1995, 270, 22105-22108.	1.6	44
41	Synthesis of l-tyrosine from phenol and catalysed by tyrosine phenol-lyase. Enzyme and Microbial Technology, 1989, 11, 80-83.	1.6	43
42	Kynurenine 3-Monooxygenase from <i>Pseudomonas fluorescens</i>: Substrate-like Inhibitors both Stimulate Flavin Reduction and Stabilize the Flavinâ^'Peroxo Intermediate yet Result in the Production of Hydrogen Peroxide. Biochemistry, 2008, 47, 12420-12433.	1.2	43
43	Crystallographic Snapshots of Tyrosine Phenol-lyase Show That Substrate Strain Plays a Role in Câ€"C Bond Cleavage. Journal of the American Chemical Society, 2011, 133, 16468-16476.	6.6	43
44	Dopamine-B-hydroxylase: Suicide inhibition by the novel olefinic substrate, 1-phenyl-1-aminomethylethene. Biochemical and Biophysical Research Communications, 1983, 110, 161-168.	1.0	41
45	Detection and identification of transient intermediates in the reactions of tryptophan synthase with oxindolyl-L-alanine and 2,3-dihydro-L-tryptophan. Evidence for a tetrahedral (gem-diamine)intermediate. Biochemistry, 1988, 27, 8661-8669.	1.2	41
46	Crystal Structure ofHomo sapiensKynureninaseâ€,â€¡. Biochemistry, 2007, 46, 2735-2744.	1.2	41
47	Structure and mechanism of kynureninase. Archives of Biochemistry and Biophysics, 2014, 544, 69-74.	1.4	41
48	Binding of phenol and analogs to alanine complexes of tyrosine phenol-lyase from Citrobacter freundii: Implications for the mechanisms of .alpha.,.beta.-elimination and alanine racemization. Biochemistry, 1993, 32, 11591-11599.	1.2	39
49	Effects of pH on enantiospecificity of alcohol dehydrogenases from Thermoanaerobacter ethanolicus and horse liver. Enzyme and Microbial Technology, 1996, 19, 487-492.	1.6	39
50	Structure and mechanism of tryptophan indole-lyase and tyrosine phenol-lyase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2003, 1647, 167-172.	1.1	39
51	Isomerization of (3S)-2,3-dihydro-5-fluoro-L-tryptophan and of 5-fluoro-L-tryptophan catalyzed by tryptophan synthase: studies using fluorine-19 nuclear magnetic resonance and difference spectroscopy. Biochemistry, 1986, 25, 4240-4249.	1.2	38
52	Histidine Ligand Protonation and Redox Potential in the Rieske Dioxygenases:â€‰ Role of a Conserved Aspartate in Anthranilate 1,2-Dioxygenase. Biochemistry, 2003, 42, 13625-13636.	1.2	38
53	Crystal Structure of the<i>Homo sapiens</i>Kynureninase-3-Hydroxyhippuric Acid Inhibitor Complex: Insights into the Molecular Basis Of Kynureninase Substrate Specificity. Journal of Medicinal Chemistry, 2009, 52, 389-396.	2.9	38
54	Oxygenation of fluorinated tyrosines by mushroom tyrosinase releases fluoride ion. Archives of Biochemistry and Biophysics, 1990, 276, 65-69.	1.4	37

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55	The Stereospecificity of Secondary Alcohol Dehydrogenase from Thermoanaerobacter ethanolicus Is Partially Determined by Active Site Water. Journal of the American Chemical Society, 2001, 123, 345-346.	6.6	37
56	Mutation of Thermoanaerobacter ethanolicus secondary alcohol dehydrogenase at Trp-110 affects stereoselectivity of aromatic ketone reduction. Organic and Biomolecular Chemistry, 2014, 12, 5905-5910.	1.5	37
57	Lipase-catalyzed stereoselective esterification of dl-menthol in organic solvents using acid anhydrides as acylating agents. Enzyme and Microbial Technology, 1996, 18, 536-539.	1.6	35
58	Biophysical and mutagenic analysis of Thermoanaerobacter ethanolicus secondary-alcohol dehydrogenase activity and specificity. Biochemical Journal, 1997, 326, 717-724.	1.7	33
59	A Leucine Residue â€œGatesâ€•Solvent but Not O2Access to the Binding Pocket of Phascolopsis gouldiiHemerythrin. Journal of Biological Chemistry, 2000, 275, 17043-17050.	1.6	33
60	High-Efficiency Incorporation in Vivo of Tyrosine Analogues with Altered Hydroxyl Acidity in Place of the Catalytic Tyrosine-14 of Î”5-3-Ketosteroid Isomerase ofComamonas(Pseudomonas)testosteroni:Â Effects of the Modifications on Isomerase Kineticsâ€. Biochemistry, 1998, 37, 9738-9742.	1.2	32
61	Tyrosine phenol-lyase and tryptophan indole-lyase encapsulated in wet nanoporous silica gels: Selective stabilization of tertiary conformations. Protein Science, 2004, 13, 913-924.	3.1	32
62	Mass Defect Labeling of Cysteine for Improving Peptide Assignment in Shotgun Proteomic Analyses. Analytical Chemistry, 2006, 78, 3417-3423.	3.2	32
63	Modulation of Enzyme Activity in the Kynurenine Pathway by Kynurenine Monooxygenase Inhibition. Frontiers in Molecular Biosciences, 2019, 6, 3.	1.6	32
64	Mechanism of binding of substrate analogs to tryptophan indole-lyase: studies using rapid-scanning and single-wavelength stopped-flow spectrophotometry. Biochemistry, 1990, 29, 8608-8614.	1.2	31
65	Cellobiose oxidase from Phanerochaete chrysosporium Stopped-flow spectrophotometric analysis of pH-dependent reduction. FEBS Letters, 1992, 306, 165-168.	1.3	31
66	Asymmetric reduction of aliphatic and cyclic ketones with secondary alcohol dehydrogenase from Thermoanaerobacter ethanolicus: effects of substrate. Catalysis Today, 1994, 22, 607-620.	2.2	31
67	Racemization of enantiopure secondary alcohols by Thermoanaerobacter ethanolicus secondary alcohol dehydrogenase. Organic and Biomolecular Chemistry, 2013, 11, 2911.	1.5	31
68	Lipase PS-catalyzed transesterification of citronellyl butyrate and geranyl caproate: Effect of reaction parameters. JAOCS, Journal of the American Oil Chemists' Society, 1997, 74, 255-260.	0.8	29
69	The Catalytic Mechanism of Kynureninase fromPseudomonasfluorescens:Â Evidence for Transient Quinonoid and Ketimine Intermediates from Rapid-Scanning Stopped-Flow Spectrophotometry. Biochemistry, 1998, 37, 8783-8789.	1.2	29
70	The Photophysical Properties of 6-Azaindole. Journal of Physical Chemistry B, 2003, 107, 637-645.	1.2	29
71	Enzymatic sulphur oxygenation reactions. Enzyme and Microbial Technology, 1981, 3, 9-18.	1.6	28
72	Ligand effects on the limited proteolysis of phenylalanine hydroxylase: Evidence for multiple conformational states. Biochemical and Biophysical Research Communications, 1983, 110, 919-925.	1.0	28

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73	Intramolecular general acid and general base catalyses in the hydrolysis of 2-halotryptophans and their analogs. Journal of the American Chemical Society, 1986, 108, 2023-2030.	6.6	28
74	The O2Binding Pocket of Myohemerythrin:Â Role of a Conserved Leucineâ€. Biochemistry, 2000, 39, 8526-8536.	1.2	28
75	The Second Enzyme in Pyrrolnitrin Biosynthetic Pathway Is Related to the Heme-Dependent Dioxygenase Superfamily. Biochemistry, 2007, 46, 12393-12404.	1.2	28
76	Interaction of protocatechuate-3,4-dioxygenase with fluoro-substituted hydroxybenzoic acids and related compounds. Biochemistry, 1978, 17, 1853-1860.	1.2	27
77	Enzymatic syntheses of 6-(4H-Selenolo[3,2-b]pyrrolyl)-L-alanine, 4-(6H-selenolo[2,3-b]pyrrolyl)-L-alanine, and 6-(4H-furo[3,2-b]pyrrolyl)-L-alanine. Bioorganic and Medicinal Chemistry Letters, 1999, 9, 637-640.	1.0	27
78	Three-Dimensional Structure of Kynureninase fromPseudomonas fluorescensâ€‚â€¡. Biochemistry, 2004, 43, 1193-1203.	1.2	27
79	Protein expression in Escherichia coli S17-1 biofilms: impact of indole. Antonie Van Leeuwenhoek, 2006, 91, 71-85.	0.7	27
80	Enzymatic synthesis of chloro-L-tryptophans. Bioorganic and Medicinal Chemistry Letters, 1992, 2, 1563-1564.	1.0	26
81	Crystals of Tryptophan Indole-Lyase and Tyrosine Phenol-Lyase Form Stable Quinonoid Complexes. Journal of Biological Chemistry, 2002, 277, 21592-21597.	1.6	26
82	Benzoate Decreases the Binding of cis , cis -Muconate to the BenM Regulator despite the Synergistic Effect of Both Compounds on Transcriptional Activation. Journal of Bacteriology, 2004, 186, 1200-1204.	1.0	26
83	19F-NMR Reveals Metal and Operator-induced Allostery in MerR. Journal of Molecular Biology, 2007, 371, 79-92.	2.0	26
84	Structure, mechanism, and substrate specificity of kynureninase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 1481-1488.	1.1	26
85	Salmonella Utilizes D-Glucosaminate via a Mannose Family Phosphotransferase System Permease and Associated Enzymes. Journal of Bacteriology, 2013, 195, 4057-4066.	1.0	26
86	Cyclonerodiol from a novel source, Trichoderma koningii: Plant growth regulatory activity.. Agricultural and Biological Chemistry, 1991, 55, 243-244.	0.3	25
87	Terpene ester synthesis by lipase-catalyzed transesterification. Biotechnology Letters, 1995, 17, 67-70.	1.1	25
88	The Catalytic Mechanism of Kynureninase fromPseudomonas fluorescens:Â Insights from the Effects of pH and Isotopic Substitution on Steady-State and Pre-Steady-State Kineticsâ€. Biochemistry, 1998, 37, 1376-1382.	1.2	25
89	Threonine-124 and phenylalanine-448 in Citrobacter freundii tyrosine phenol-lyase are necessary for activity with l-tyrosine. Biochemical Journal, 2002, 363, 745-752.	1.7	25
90	Formation in Vitro of Hybrid Dimers of H463F and Y74F MutantEscherichia coliTryptophan Indole-lyase Rescues Activity withl-Tryptophanâ€. Biochemistry, 2002, 41, 4012-4019.	1.2	25

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91	Detection of Open and Closed Conformations of Tryptophan Synthase by 15N-Heteronuclear Single-Quantum Coherence Nuclear Magnetic Resonance of Bound 1-15N-L-Tryptophan. Journal of Biological Chemistry, 2003, 278, 44083-44090.	1.6	24
92	Hydrostatic Pressure Affects the Conformational Equilibrium ofSalmonella typhimuriumTryptophan Synthaseâ€. Biochemistry, 2005, 44, 7921-7928.	1.2	24
93	Excited state tautomerization of azaindole. Organic and Biomolecular Chemistry, 2005, 3, 3701.	1.5	24
94	The Kynurenine Pathway and Kynurenine 3-Monooxygenase Inhibitors. Molecules, 2022, 27, 273.	1.7	24
95	Enzymatic synthesis of aza-l-tryptophans: The preparation of 5- and 6-Aza-l-tryptophan. Bioorganic and Medicinal Chemistry Letters, 1992, 2, 1053-1056.	1.0	23
96	Effects of Î±-Deuteration and of Aza and Thia Analogs ofl-Tryptophan on Formation of Intermediates in the Reaction ofEscherichia coliTryptophan Indole-lyaseâ€. Biochemistry, 1996, 35, 16165-16173.	1.2	23
97	Cloning, Sequence, and Expression of Kynureninase fromPseudomonas fluorescens. Archives of Biochemistry and Biophysics, 1997, 344, 301-308.	1.4	23
98	Thermoanaerobacter ethanolicus secondary alcohol dehydrogenase mutants with improved racemization activity. Journal of Molecular Catalysis B: Enzymatic, 2015, 115, 155-159.	1.8	23
99	Bioactivation of Cathaedulis alkaloids: Enzymatic ketonization of norpseudoephedrine. Biochemical and Biophysical Research Communications, 1982, 104, 38-44.	1.0	22
100	Influence of Steric Bulk and Electrostatics on the Hydroxylation Regiospecificity of Tryptophan Hydroxylase:Â Characterization of Methyltryptophans and Azatryptophans as Substratesâ€. Biochemistry, 1999, 38, 16283-16289.	1.2	22
101	Threonine-124 and phenylalanine-448 in Citrobacter freundii tyrosine phenol-lyase are necessary for activity with l-tyrosine. Biochemical Journal, 2002, 363, 745.	1.7	22
102	A Mannose Family Phosphotransferase System Permease and Associated Enzymes Are Required for Utilization of Fructoselysine and Glucoselysine in Salmonella enterica Serovar Typhimurium. Journal of Bacteriology, 2015, 197, 2831-2839.	1.0	22
103	Editorial: Aromatic Amino Acid Metabolism. Frontiers in Molecular Biosciences, 2019, 6, 22.	1.6	22
104	Enzymatic synthesis of Thia-L-tryptophans. Bioorganic and Medicinal Chemistry Letters, 1995, 5, 1133-1134.	1.0	21
105	Pseudomonas sp. lipase-catalyzed synthesis of geranyl esters by transesterification. JAOCS, Journal of the American Oil Chemists' Society, 1995, 72, 1407-1408.	0.8	21
106	The Role of Glutamic Acid-69 in the Activation ofCitrobacter freundiiTyrosine Phenol-Lyase by Monovalent Cationsâ€. Biochemistry, 2000, 39, 8546-8555.	1.2	20
107	Hysteresis and Negative Cooperativity in Human UDP-Glucose Dehydrogenase. Biochemistry, 2013, 52, 1456-1465.	1.2	20
108	Ground-State Destabilization by Phe-448 and Phe-449 Contributes to Tyrosine Phenol-Lyase Catalysis. ACS Catalysis, 2016, 6, 6770-6779.	5.5	20

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109	Role of Aspartate-133 and Histidine-458 in the Mechanism of Tryptophan Indole-Lyase fromProteus vulgarisâ€. Biochemistry, 2003, 42, 11161-11169.	1.2	19
110	Pressure and Temperature Jump Relaxation Kinetics of the Conformational Change in Salmonella typhimurium Tryptophan Synthase l-Serine Complex: Large Activation Compressibility and Heat Capacity Changes Demonstrate the Contribution of Solvation. Journal of the American Chemical Society, 2008, 130, 13580-13588.	6.6	19
111	The Crystal Structure of the Pseudomonas dacunhae Aspartate-Î²-Decarboxylase Dodecamer Reveals an Unknown Oligomeric Assembly for a Pyridoxal-5â€²-Phosphate-Dependent Enzyme. Journal of Molecular Biology, 2009, 388, 98-108.	2.0	19
112	Structural and stereochemical studies of esterification of aromatic amino acids by Î±-chymotrypsin in alcohol solvents. Enzyme and Microbial Technology, 1990, 12, 731-735.	1.6	18
113	Temperature and DMSO increase the enantioselectivity of hydrolysis of methyl alkyl dimethylmalonates catalyzed by pig liver esterase. Bioorganic and Medicinal Chemistry Letters, 1991, 1, 373-376.	1.0	18
114	Synthesis of 5-cyano-l-tryptophan. Tetrahedron Letters, 1992, 33, 29-32.	0.7	18
115	Asymmetric reduction of ketoesters with alcohol dehydrogenase from thermoanaerobacter ethanolicus. Bioorganic and Medicinal Chemistry Letters, 1992, 2, 619-622.	1.0	18
116	Cold inactivation and dissociation into dimers of Escherichia coli tryptophanase and its W330F mutant form. BBA - Proteins and Proteomics, 1998, 1384, 365-372.	2.1	18
117	I86A/C295A mutant secondary alcohol dehydrogenase from Thermoanaerobacter ethanolicus has broadened substrate specificity for aryl ketones. Archives of Biochemistry and Biophysics, 2016, 606, 151-156.	1.4	18
118	Synthesis of 2-bromo-L-tryptophan and 2-chloro-L-tryptophan. Tetrahedron Letters, 1983, 24, 5555-5558.	0.7	17
119	Aminoacrylate Intermediates in the Reaction ofCitrobacter freundiiTyrosine Phenol-Lyaseâ€. Biochemistry, 2006, 45, 9575-9583.	1.2	17
120	Effect of coenzyme analogues on enantioselectivity of alcohol dehydrogenase. Journal of the Chemical Society Perkin Transactions 1, 1992, , 1083.	0.9	16
121	Improved Syntheses of [3,2-b]- and [2,3-b]-fused Selenolo- and Thienopyrroles, and of Furo[3,2-b]pyrrole. Heterocyclic Communications, 1999, 5, .	0.6	16
122	How does active site water affect enzymatic stereorecognition?. Journal of Molecular Catalysis B: Enzymatic, 2002, 19-20, 103-107.	1.8	16
123	Differential effects of bromination on substrates and inhibitors of kynureninase from Pseudomonas fluorescens. Organic and Biomolecular Chemistry, 2003, 1, 288-295.	1.5	16
124	Substituent Effects on the Reaction of Î²-Benzoylalanines with<i>Pseudomonas fluorescens</i>Kynureninase. Biochemistry, 2010, 49, 7913-7919.	1.2	16
125	New cases that expand the genotypic and phenotypic spectrum of Congenital NAD Deficiency Disorder. Human Mutation, 2021, 42, 862-876.	1.1	16
126	The mechanism of Escherichia coli tryptophan indole-lyase: substituent effects on steady-state and pre-steady-state kinetic parameters for aryl-substituted tryptophan derivatives. Bioorganic and Medicinal Chemistry, 1995, 3, 195-205.	1.4	15

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127	Photoinactivation and photoaffinity labeling of tryptophan synthase .alpha.2.beta.2 complex by the product analog 6-azido-L-tryptophan. Biochemistry, 1985, 24, 4694-4703.	1.2	14
128	Synthesis and resolution of 7-fluorotryptophans. Bioorganic and Medicinal Chemistry Letters, 1991, 1, 477-480.	1.0	14
129	Quantitative effects of allosteric ligands and mutations on conformational equilibria in Salmonella typhimurium tryptophan synthase. Archives of Biochemistry and Biophysics, 2008, 470, 8-19.	1.4	14
130	Conformational changes and loose packing promote E. coli Tryptophanase cold lability. BMC Structural Biology, 2009, 9, 65.	2.3	14
131	A Rare Variant at the<i>KYNU</i>Gene Is Associated With Kynureninase Activity and Essential Hypertension in the Han Chinese Population. Circulation: Cardiovascular Genetics, 2011, 4, 687-694.	5.1	14
132	Protocatechuate 3,4-dioxygenase: implications of ionization effects on binding and dissociation of halohydroxybenzoates and on catalytic turnover. Biochemistry, 1979, 18, 5933-5939.	1.2	13
133	The environments ofTrp-248 and Trp-330 in tryptophan indole-lyase fromEscherichia coli. FEBS Letters, 1990, 268, 213-216.	1.3	13
134	An enzymatic synthesis of 2-azido-L-tyrosine. Bioorganic and Medicinal Chemistry Letters, 1992, 2, 41-44.	1.0	13
135	Fluorine substituent effects for tryptophan in13C nuclear magnetic resonance. Magnetic Resonance in Chemistry, 1992, 30, 1035-1040.	1.1	13
136	Effects of Tyrosine Ring Fluorination on Rates and Equilibria of Formation of Intermediates in the Reactions of Carbon-Carbon Lyases. FEBS Journal, 1997, 244, 658-663.	0.2	13
137	Methionine Î³-lyase: Mechanistic deductions from the kinetic pH-effects. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2009, 1794, 1414-1420.	1.1	13
138	Secondary Alcohol Dehydrogenases from <i>Thermoanaerobacter pseudoethanolicus</i> and <i>Thermoanaerobacter brockii</i> as Robust Catalysts. ChemBioChem, 2021, 22, 1884-1893.	1.3	13
139	Reaction ofPseudomonas fluorescensKynureninase with Î²-Benzoyl-l-alanine:Â Detection of a New Reaction Intermediate and a Change in Rate-Determining Stepâ€. Biochemistry, 2004, 43, 3230-3237.	1.2	12
140	The reaction of indole with the aminoacrylate intermediate of Salmonella typhimurium tryptophan synthase: observation of a primary kinetic isotope effect with 3-[2H]indole. Archives of Biochemistry and Biophysics, 2004, 432, 233-243.	1.4	12
141	Asymmetric Kinetics of Protein Structural Changes. Accounts of Chemical Research, 2009, 42, 778-787.	7.6	12
142	Oxygen reactivity with pyridoxal 5â€²-phosphate enzymes: biochemical implications and functional relevance. Amino Acids, 2020, 52, 1089-1105.	1.2	12
143	Ionization state of pyridoxal 5â€²-phosphate in d-serine dehydratase, dialkylglycine decarboxylase and tyrosine phenol-lyase and the influence of monovalent cations as inferred by 31P NMR spectroscopy. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 230-238.	1.1	11
144	Pressure-enhanced activity and stability of Î±-l-rhamnosidase and Î²-d-glucosidase activities expressed by naringinase. Journal of Molecular Catalysis B: Enzymatic, 2010, 65, 102-109.	1.8	11

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145	Insights into the Mechanism of<i>Pseudomonas dacunhae</i>Aspartate Î²-Decarboxylase from Rapid-Scanning Stopped-Flow Kinetics. Biochemistry, 2010, 49, 5066-5073.	1.2	11
146	Crystal Structure of <scp>d</scp>-Ornithine/<scp>d</scp>-Lysine Decarboxylase, a Stereoinverting Decarboxylase: Implications for Substrate Specificity and Stereospecificity of Fold III Decarboxylases. Biochemistry, 2019, 58, 1038-1042.	1.2	11
147	Enzymatic synthesis of aza-l-tyrosines. Bioorganic and Medicinal Chemistry Letters, 2001, 11, 2099-2100.	1.0	10
148	The role of acidic dissociation of substrate's phenol group in the mechanism of tyrosine phenol-lyase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2003, 1647, 260-265.	1.1	10
149	Inhibition of Escherichia coli tryptophan indole-lyase by tryptophan homologues. Archives of Biochemistry and Biophysics, 2014, 560, 20-26.	1.4	10
150	Effects of Hydrostatic Pressure on Stereospecificity of Secondary Alcohol Dehydrogenase from Thermoanaerobacter Ethanolicus Support the Role of Solvation in Enantiospecificity. ACS Catalysis, 2014, 4, 692-694.	5.5	10
151	Interactions of Escherichia coli tryptophanase with quasisubstrates and monovalent cations studied by the circular dichroism and fluorescence methods. BBA - Proteins and Proteomics, 1996, 1294, 147-152.	2.1	9
152	Preparation and photophysical properties of a caged kynurenine. Bioorganic and Medicinal Chemistry Letters, 2012, 22, 2734-2737.	1.0	9
153	The role of substrate strain in the mechanism of the carbonâ€"carbon lyases. Bioorganic Chemistry, 2014, 57, 198-205.	2.0	9
154	Synthesis of 2â€nitroâ€Lâ€tryptophan. Journal of Heterocyclic Chemistry, 1988, 25, 191-192.	1.4	8
155	Mechanism of catalysis by tyrosine phenol lyase from Erwinia herbicola. Multiple kinetic isotope effects for the reactions with adequate substrates. Journal of the Chemical Society Perkin Transactions II, 1996, , 2001.	0.9	8
156	Stereoselective acylation of Dl -menthol in organic solvents by an immobilized lipase from Pseudomonas cepacia with vinyl propionate. JAOCS, Journal of the American Oil Chemists' Society, 1997, 74, 435-439.	0.8	8
157	Inhibition of Tyrosine Phenol-lyase fromCitrobacter freundiiby 2-Azatyrosine and 3-Azatyrosineâ€. Biochemistry, 2001, 40, 14862-14868.	1.2	8
158	Tailoring the substrate specificity of secondary alcohol dehydrogenase. Canadian Journal of Chemistry, 2002, 80, 680-685.	0.6	8
159	The mechanism of alpha-proton isotope exchange in amino acids catalysed by tyrosine phenol-lyase. What is the role of quinonoid intermediates?. FEBS Journal, 2004, 271, 4565-4571.	0.2	8
160	Tryptophanase from Proteus vulgaris: The conformational rearrangement in the active site, induced by the mutation of Tyrosine 72 to Phenylalanine, and its mechanistic consequences. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 750-757.	1.1	8
161	The phosphate of pyridoxalâ€5â€²â€phosphate is an acid/base catalyst in the mechanism of <i>PseudomonasÂ fluorescens</i> kynureninase. FEBS Journal, 2014, 281, 1100-1109.	2.2	8
162	Substrate and inhibitor specificity of kynurenine monooxygenase from Cytophaga hutchinsonii. Bioorganic and Medicinal Chemistry Letters, 2017, 27, 1705-1708.	1.0	8

#	ARTICLE	IF	CITATIONS
163	Structural Basis of the Stereochemistry of Inhibition of Tryptophan Synthase by Tryptophan and Derivatives. Biochemistry, 2021, 60, 231-244.	1.2	8
164	6-Nitro-l-tryptophan: A novel spectroscopic probe of trp aporepressor and human serum albumin. Archives of Biochemistry and Biophysics, 1988, 262, 337-344.	1.4	7
165	The design and synthesis of a selective inhibitor of fucosyltransferase VI. Organic and Biomolecular Chemistry, 2004, 2, 1376.	1.5	7
166	Role of Lysine-256 in Citrobacter freundii Tyrosine Phenol-lyase in Monovalent Cation Activation. Biochemistry, 2004, 43, 14412-14419.	1.2	7
167	Benzimidazole analogs of <scp>l</scp>â€tryptophan are substrates and inhibitors of tryptophan indole lyase from <i><scp>E</scp>scherichiaÂcoli</i>. FEBS Journal, 2013, 280, 1807-1817.	2.2	7
168	Inhibition of tyrosine phenol-lyase by tyrosine homologues. Amino Acids, 2016, 48, 2243-2251.	1.2	7
169	The crystal structure of Proteus vulgaris tryptophan indole-lyase complexed with oxindolyl-L-alanine: implications for the reaction mechanism. Acta Crystallographica Section D: Structural Biology, 2018, 74, 748-759.	1.1	7
170	On the Nature of the Spontaneous Activation of Hepatic Phenylalanine Hydroxylase. Transactions of the New York Academy of Sciences, 1983, 41, 87-95.	0.2	6
171	Cyclonerodiol from a Novel Source,Trichoderma koningii: Plant Growth Regulatory Activity. Agricultural and Biological Chemistry, 1991, 55, 243-244.	0.3	6
172	Stereospecificity of Pseudomonas fluorescens kynureninase for diastereomers of Î²-methylkynurenine. Bioorganic and Medicinal Chemistry, 1999, 7, 1497-1503.	1.4	6
173	Cold-induced enzyme inactivation: how does cooling lead to pyridoxal phosphateâ€"aldimine bond cleavage in tryptophanase?. BBA - Proteins and Proteomics, 2002, 1594, 335-340.	2.1	6
174	Regioselective nitration of NÎ±,N1-bis(trifluoroacetyl)-l-tryptophan methyl ester: Efficient synthesis of 2-nitro and 6-nitro-N-trifluoroacetyl-l-tryptophan methyl ester. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 5750-5752.	1.0	6
175	Properties of tryptophan indole-lyase from a piezophilic bacterium, Photobacterium profundum SS9. Archives of Biochemistry and Biophysics, 2011, 506, 35-41.	1.4	6
176	Crystal Structures of Wild-Type and F448A Mutant Citrobacter freundii Tyrosine Phenol-Lyase Complexed with a Substrate and Inhibitors: Implications for the Reaction Mechanism. Biochemistry, 2018, 57, 6166-6179.	1.2	6
177	Pressure and Temperature Effects on the Formation of Aminoacrylate Intermediates of Tyrosine Phenol-lyase Demonstrate Reaction Dynamics. ACS Catalysis, 2020, 10, 1692-1703.	5.5	6
178	Indole protects tryptophan indole-lyase, but not tryptophan synthase, from inactivation by trifluoroalanine. Archives of Biochemistry and Biophysics, 1992, 296, 489-496.	1.4	5
179	Site-Directed Mutagenesis of His343Ala in Citrobacter freundii Tyrosine Phenol-Lyase. Effects on the Kinetic Mechanism and Rate-Determining Step. FEBS Journal, 1995, 229, 540-549.	0.2	5
180	LIPASE-CATALYZED ACYLATION OF MENTHOL WITH VINYL ACETATE IN ORGANIC MEDIA. Journal of Food Lipids, 1996, 3, 189-198.	0.9	5

#	ARTICLE	IF	CITATIONS
181	Cleavage of Escherichia coli tryptophan indole-lyase by trypsin at Lys406 affects the transmission of conformational changes associated with monovalent cation activation. FEBS Journal, 1998, 255, 508-515.	0.2	5
182	Differential Effects of Temperature and Hydrostatic Pressure on the Formation of Quinonoid Intermediates froml-Trp andl-Met by H463F MutantEscherichia coliTryptophan Indole-lyaseâ€. Biochemistry, 2005, 44, 14289-14297.	1.2	5
183	A Matrix-Assisted Laser Desorption/Ionization Compatible Reagent for Tagging Tryptophan Residues. European Journal of Mass Spectrometry, 2006, 12, 213-221.	0.5	5
184	Effects of Pressure and Osmolytes on the Allosteric Equilibria of <i>Salmonella typhimurium</i> Tryptophan Synthase. Biochemistry, 2012, 51, 9354-9363.	1.2	5
185	Evidence of Preorganization in Quinonoid Intermediate Formation from <scp>l</scp>-Trp in H463F Mutant <i>Escherichia coli</i> Tryptophan Indole-lyase from Effects of Pressure and pH. Biochemistry, 2012, 51, 6527-6533.	1.2	5
186	A straightforward kinetic evidence for coexistence of â€œinduced fitâ€• and â€œselected fitâ€• in the reaction mechanism of a mutant tryptophan indole lyase Y72F from Proteus vulgaris. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2014, 1844, 1860-1867.	1.1	5
187	STM2360 encodes a d-ornithine/d-lysine decarboxylase in Salmonella enterica serovar typhimurium. Archives of Biochemistry and Biophysics, 2017, 634, 83-87.	1.4	5
188	Phosphorylation of pyridoxal 5â€²-phosphate enzymes: an intriguing and neglected topic. Amino Acids, 2018, 50, 205-215.	1.2	5
189	Serine 51 residue of Citrobacter freundii tyrosine phenol-lyase assists in C-Î±-proton abstraction and transfer in the reaction with substrate. Biochimie, 2018, 147, 63-69.	1.3	5
190	Properties and mechanism of d -glucosaminate-6-phosphate ammonia-lyase: An aminotransferase family enzyme with d -amino acid specificity. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2018, 1866, 799-805.	1.1	5
191	The crystal structure of the S154Y mutant carbonyl reductase from Leifsonia xyli explains enhanced activity for 3,5-bis(trifluoromethyl)acetophenone reduction. Archives of Biochemistry and Biophysics, 2022, 720, 109158.	1.4	5
192	Chlorine substituent effects for indole and tryptophan in ¹³C NMR. Journal of Heterocyclic Chemistry, 1994, 31, 711-716.	1.4	4
193	Pyridoxal phosphate binding to wild type, W330F, and C298S mutants ofEscherichia coliapotryptophanase: unraveling the cold inactivation. FEBS Letters, 1998, 433, 279-282.	1.3	4
194	Substituents effects on activity of kynureninase from Homo sapiens and Pseudomonas fluorescens. Bioorganic and Medicinal Chemistry, 2013, 21, 4670-4677.	1.4	4
195	Editorial: PLP-Dependent Enzymes: Extraordinary Versatile Catalysts and Ideal Biotechnological Tools for the Production of Unnatural Amino Acids and Related Compounds. Frontiers in Bioengineering and Biotechnology, 2020, 8, 52.	2.0	4
196	Stoppedâ€flow studies of the reaction of <scp>d</scp>â€tartronate semialdehydeâ€2â€phosphate with human neuronal enolase and yeast enolase 1. FEBS Letters, 2010, 584, 979-983.	1.3	3
197	Preparation of 3-bromo-l-tyrosine and 3,5-dibromo-l-tyrosine. Amino Acids, 2013, 44, 529-532.	1.2	3
198	Mutagenesis of Met-151 and Thr-153 to alanine in Thermoanaerobacter ethanolicus secondary alcohol dehydrogenase changes substrate specificity for acetophenones. Enzyme and Microbial Technology, 2017, 105, 59-63.	1.6	3

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199	Structure and Mechanism of d-Glucosaminate-6-phosphate Ammonia-lyase: A Novel Octameric Assembly for a Pyridoxal 5â€²-Phosphate-Dependent Enzyme, and Unprecedented Stereochemical Inversion in the Elimination Reaction of a d-Amino Acid. Biochemistry, 2021, 60, 1609-1618.	1.2	3
200	Methyl substituent effects for methyltryptophans in ¹³C nmr. Journal of Heterocyclic Chemistry, 1992, 29, 1181-1187.	1.4	2
201	Tryptophanase in aqueous methanol: the solvent effects and a probable mechanism of the hydrophobic control of substrate specificity. Enzyme and Microbial Technology, 2003, 32, 843-850.	1.6	2
202	Effects of hydrostatic pressure on the conformational equilibrium of tryptophan synthase from <i>Salmonella typhimurium</i>. Annals of the New York Academy of Sciences, 2010, 1189, 95-103.	1.8	2
203	High pressure: a tool to improve the enzymatic production of glycosides. High Pressure Research, 2011, 31, 475-487.	0.4	1
204	Enzymatic synthesis and biochemical reactions of fluorinated analogues of L-tyrosine and L-dopa. , 1990, , 166-172.		1
205	M379A Mutant Tyrosine Phenolâ€lyase from Citrobacter freundii Has Altered Conformational Dynamics. ChemBioChem, 2022, , .	1.3	1
206	Synthetic Applications of Tryptophan Synthase. ChemInform, 2005, 36, no.	0.1	0
207	The roles of Ser-36, Asp-132 and Asp-201 in the reaction of Pseudomonas fluorescens Kynureninase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2019, 1867, 722-731.	1.1	0
208	Editorial: Enzymes Regulating the Homeostasis of Agonists and Antagonists of the N-Methyl D-Aspartate Receptors. Frontiers in Molecular Biosciences, 2019, 6, 37.	1.6	0
209	Crystal structure of the Homo sapiens kynureninaseâ€2â€aminoâ€3â€hydroxyhippuric acid inhibitor complex. FASEB Journal, 2006, 20, A895.	0.2	0
210	DEFINING SUBSTRATE SPECIFICITY IN TRYPTOPHAN SYNTHASE BETAâ€SUBUNIT HOMOLOGS. FASEB Journal, 2007, 21, A1018.	0.2	0
211	Studies of the Mechanism of Tyrosine Phenol-lyase: Kinetics and Site-Directed Mutagenesis. , 1994, , 193-197.		0
212	Crystallographic snapshots of ternary complexes of thermophilic secondary alcohol dehydrogenase from <scp> <i>Thermoanaerobacter pseudoethanolicus</i> </scp> reveal the dynamics of ligand exchange and the proton relay network. Proteins: Structure, Function and Bioinformatics, 2022, , .	1.5	0