Bruce Allan Palfey

List of Publications by Year
in descending order

76 papers	2,734 citations	136950 32 h-index	197818 49 g-index
79 all docs	79 docs citations	79 times ranked	2566 citing authors

#	Article	IF	Citations
1	Flavin binding affinity and initial kinetic characterization of DnmZ, a flavinâ€dependent Nâ€oxygenase. FASEB Journal, 2022, 36, .	0.5	0
2	Kinetic Analysis of Transient Intermediates in the Mechanism of Prenyl-Flavin-Dependent Ferulic Acid Decarboxylase. Biochemistry, 2021, 60, 125-134.	2.5	6
3	An enzymatic activation of formaldehyde for nucleotide methylation. Nature Communications, 2021, 12, 4542.	12.8	6
4	Fast Kinetics Reveals Rate-Limiting Oxidation and the Role of the Aromatic Cage in the Mechanism of the Nicotine-Degrading Enzyme NicA2. Biochemistry, 2021, 60, 259-273.	2.5	8
5	Tunable Heteroaromatic Sulfones Enhance in-Cell Cysteine Profiling. Journal of the American Chemical Society, 2020, 142, 1801-1810.	13.7	69
6	Preface. Methods in Enzymology, 2019, 620, xix-xx.	1.0	0
7	Structural Basis for Selectivity in Flavin-Dependent Monooxygenase-Catalyzed Oxidative Dearomatization. ACS Catalysis, 2019, 9, 3633-3640.	11.2	28
8	Enzymatic control of dioxygen binding and functionalization of the flavin cofactor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4909-4914.	7.1	49
9	Two-Photon Excitation of Flavins and Flavoproteins with Classical and Quantum Light. Journal of the American Chemical Society, 2018, 140, 14562-14566.	13.7	53
10	Flavins as Covalent Catalysts: New Mechanisms Emerge. Trends in Biochemical Sciences, 2017, 42, 457-469.	7.5	103
11	Initial investigations of C4a-(hydro)peroxyflavin intermediate formation by dibenzothiophene monooxygenase. Biochemical and Biophysical Research Communications, 2016, 481, 189-194.	2.1	6
12	Deprotonations in the Reaction of Flavin-Dependent Thymidylate Synthase. Biochemistry, 2016, 55, 3261-3269.	2.5	16
13	Biochemical Establishment and Characterization of EncMâ€™s Flavin-N5-oxide Cofactor. Journal of the American Chemical Society, 2015, 137, 8078-8085.	13.7	80
14	Kinetic Mechanism and the Rate-limiting Step of Plasmodium vivax Serine Hydroxymethyltransferase. Journal of Biological Chemistry, 2015, 290, 8656-8665.	3.4	10
15	Study of Kinetic Mechanism of Flavinâ€Dependent Thymidylate Synthase from Thermotoga Maritima. FASEB Journal, 2015, 29, 573.23.	0.5	0
16	Detection of Intermediates in the Oxidative Half-Reaction of the FAD-Dependent Thymidylate Synthase from Thermotoga maritima: Carbon Transfer without Covalent Pyrimidine Activation. Biochemistry, 2014, 53, 5199-5207.	2.5	17
17	Flavin-mediated dual oxidation controls an enzymatic Favorskii-type rearrangement. Nature, 2013, 503, 552-556.	27.8	147
18	Actin Stimulates Reduction of the MICAL-2 Monooxygenase Domain. Biochemistry, 2013, 52, 6076-6084.	2.5	22

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19	Oxidation Mode of Pyranose 2-Oxidase Is Controlled by pH. Biochemistry, 2013, 52, 1437-1445.	2.5	21
20	Trapping of an Intermediate in the Reaction Catalyzed by Flavin-Dependent Thymidylate Synthase. Journal of the American Chemical Society, 2012, 134, 4442-4448.	13.7	31
21	Substrate Binding and Reactivity Are Not Linked: Grafting a Proton-Transfer Network into a Class 1A Dihydroorotate Dehydrogenase. Biochemistry, 2011, 50, 2714-2716.	2.5	3
22	The Cationâ^'Ï€ Interaction between Lys53 and the Flavin of Fructosamine Oxidase (FAOX-II) Is Critical for Activity. Biochemistry, 2011, 50, 7977-7986.	2.5	10
23	Oxygen Reactivity in Flavoenzymes: Context Matters. Journal of the American Chemical Society, 2011, 133, 16809-16811.	13.7	64
24	An Analysis of the Solution Structure and Signaling Mechanism of LovK, a Sensor Histidine Kinase Integrating Light and Redox Signals. Biochemistry, 2010, 49, 6761-6770.	2.5	70
25	Flavin-Dependent Enzymes. , 2010, , 37-113.		57
26	Control of catalysis in flavin-dependent monooxygenases. Archives of Biochemistry and Biophysics, 2010, 493, 26-36.	3.0	152
27	Mechanism of Dihydrouridine Synthase 2 from Yeast and the Importance of Modifications for Efficient tRNA Reduction. Journal of Biological Chemistry, 2009, 284, 10324-10333.	3.4	40
28	Quinone reductase acts as a redox switch of the 20 S yeast proteasome. EMBO Reports, 2009, 10, 65-70.	4.5	38
29	An unusual mechanism of thymidylate biosynthesis in organisms containing the thyX gene. Nature, 2009, 458, 919-923.	27.8	79
30	A single intersubunit salt bridge affects oligomerization and catalytic activity in a bacterial quinone reductase. FEBS Journal, 2009, 276, 5263-5274.	4.7	35
31	Roles in Binding and Chemistry for Conserved Active Site Residues in the Class 2 Dihydroorotate Dehydrogenase fromEscherichia coli. Biochemistry, 2009, 48, 7169-7178.	2.5	20
32	Mechanism of Flavin Reduction and Oxidation in the Redox-Sensing Quinone Reductase Lot6p fromSaccharomyces cerevisiae. Biochemistry, 2009, 48, 8636-8643.	2.5	30
33	Disruption of the Proton Relay Network in the Class 2 Dihydroorotate Dehydrogenase fromEscherichia coli. Biochemistry, 2009, 48, 9801-9809.	2.5	9
34	The dimeric dihydroorotate dehydrogenase A from Lactococcus lactis dissociates reversibly into inactive monomers. Protein Science, 2009, 11, 2575-2583.	7.6	20
35	Adenosyltransferase tailors and delivers coenzyme B12. Nature Chemical Biology, 2008, 4, 194-196.	8.0	81
36	Characterization of a Novel Bifunctional Dihydropteroate Synthase/Dihydropteroate Reductase Enzyme from Helicobacter pylori. Journal of Bacteriology, 2007, 189, 4062-4069.	2.2	12

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37	Mechanism of Flavin Reduction in the Class 1A Dihydroorotate Dehydrogenase from Lactococcus lactis. Biochemistry, 2007, 46, 4028-4036.	2.5	25
38	Interaction of Benzoate Pyrimidine Analogues with Class 1A Dihydroorotate Dehydrogenase from Lactococcus lactis,. Biochemistry, 2007, 46, 5741-5753.	2.5	15
39	Lot6p from Saccharomyces cerevisiae is a FMN-dependent reductase with a potential role in quinone detoxification. FEBS Journal, 2007, 274, 1328-1339.	4.7	45
40	Analysis of the Kinetic Isotope Effects on Initial Rates in Transient Kinetics. Biochemistry, 2006, 45, 13631-13640.	2.5	6
41	Relationship between the Time-Dependence of a Transient-State Kinetic Isotope Effect and the Location of Complexes in a Reaction Sequence. Journal of Physical Chemistry A, 2006, 110, 4465-4472.	2.5	4
42	Mechanism of Flavin Reduction in Class 2 Dihydroorotate Dehydrogenases. Biochemistry, 2006, 45, 14926-14932.	2.5	40
43	Graduate Education in Chemical Biology at the University of Michigan. ACS Chemical Biology, 2006, 1, 487-488.	3.4	1
44	A Fluoro Analogue of the Menadione Derivative 6-[2â€˜-(3â€˜-Methyl)-1â€˜,4â€˜-naphthoquinolyl]hexanoic Acid Is a Suicide Substrate of Glutathione Reductase. Crystal Structure of the Alkylated Human Enzymeâ€. Journal of the American Chemical Society, 2006, 128, 10784-10794.	13.7	84
45	Single-molecule kinetics reveals signatures of half-sites reactivity in dihydroorotate dehydrogenase A catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 5775-5780.	7.1	45
46	Conformational Dynamics of the Isoalloxazine in Substrate-Free p-Hydroxybenzoate Hydroxylase:â€‰ Single-Molecule Studies. Journal of the American Chemical Society, 2005, 127, 18171-18178.	13.7	38
47	Kinetics of Proton-Linked Flavin Conformational Changes inp-Hydroxybenzoate Hydroxylaseâ€. Biochemistry, 2005, 44, 13304-13314.	2.5	14
48	Direct Observation of the Participation of Flavin in Product Formation bythyX-Encoded Thymidylate Synthase. Journal of the American Chemical Society, 2005, 127, 832-833.	13.7	30
49	Raman spectrum of fully reduced flavin. Journal of Raman Spectroscopy, 2004, 35, 521-524.	2.5	43
50	Multiple States of the Tyr318Leu Mutant of Dihydroorotate Dehydrogenase Revealed by Single-Molecule Kinetics. Journal of the American Chemical Society, 2004, 126, 6914-6922.	13.7	40
51	Catalysis of Diaphorase Reactions byMycobacterium tuberculosisLipoamide Dehydrogenase Occurs at the EH4Levelâ€. Biochemistry, 2003, 42, 2218-2228.	2.5	37
52	Altered Balance of Half-reactions in p-Hydroxybenzoate Hydroxylase Caused by Substituting the 2â€²-Carbon of FAD with Fluorine. Journal of Biological Chemistry, 2003, 278, 22210-22216.	3.4	4
53	Role of Protein Flexibility in the Catalytic Cycle ofp-Hydroxybenzoate Hydroxylase Elucidated by the Pro293Ser Mutantâ€. Biochemistry, 2002, 41, 8438-8446.	2.5	42
54	The Lipoamide Dehydrogenase from Mycobacterium tuberculosis Permits the Direct Observation of Flavin Intermediates in Catalysis. Biochemistry, 2002, 41, 14580-14590.	2.5	19

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55	Dihydrooxonate Is a Substrate of Dihydroorotate Dehydrogenase (DHOD) Providing Evidence for Involvement of Cysteine and Serine Residues in Base Catalysis. Archives of Biochemistry and Biophysics, 2001, 391, 286-294.	3.0	25
56	Protein Dynamics Control Proton Transfers to the Substrate on the His72Asn Mutant of p-Hydroxybenzoate Hydroxylase. Biochemistry, 2001, 40, 3891-3899.	2.5	27
57	Kinetic Studies, Mechanism, and Substrate Specificity of Amadoriase I fromAspergillus sp.â€. Biochemistry, 2001, 40, 12886-12895.	2.5	27
58	Insight into the Chemistry of Flavin Reduction and Oxidation inEscherichia coliDihydroorotate Dehydrogenase Obtained by Rapid Reaction Studiesâ€. Biochemistry, 2001, 40, 4381-4390.	2.5	51
59	Specific Inhibition of a Family 1A Dihydroorotate Dehydrogenase by Benzoate Pyrimidine Analogues. Journal of Medicinal Chemistry, 2001, 44, 2861-2864.	6.4	22
60	Comparison of resonance Raman spectra of flavin-3,4-dihydroxybenzoate charge-transfer complexes in three flavoenzymes. Journal of Raman Spectroscopy, 2001, 32, 579-586.	2.5	8
61	Comparing protein-ligand interactions in solution and single crystals by Raman spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 3006-3011.	7.1	61
62	Modelling flavin and substrate substituent effects on the activation barrier and rate of oxygen transfer byp-hydroxybenzoate hydroxylase. FEBS Letters, 2000, 478, 197-201.	2.8	29
63	On the interpretation of quantitative structure-function activity relationship data for lactate oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 2480-2485.	7.1	48
64	Tandem Nitroaldolâ^'Dehydration Reactions Employing the Dianion of Phenylsulfonylnitromethane1. Journal of Organic Chemistry, 2000, 65, 7723-7730.	3.2	11
65	Substrate Recognition by â€œPasswordâ€•in p-Hydroxybenzoate Hydroxylase. Biochemistry, 1999, 38, 1153-1158.	2.5	88
66	Mechanistic Insights intop-Hydroxybenzoate Hydroxylase from Studies of the Mutant Ser212Alaâ€. Biochemistry, 1999, 38, 6292-6299.	2.5	20
67	Using Raman Spectroscopy To Monitor the Solvent-Exposed and â€œBuriedâ€•Forms of Flavin in p-Hydroxybenzoate Hydroxylase. Biochemistry, 1999, 38, 16727-16732.	2.5	52
68	On the reaction mechanism of L-lactate oxidase: Quantitative structure-activity analysis of the reaction with para-substituted L-mandelates. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 9590-9595.	7.1	47
69	Electrostatic Effects on Substrate Activation in para-Hydroxybenzoate Hydroxylase:â€‰ Studies of the Mutant Lysine 297 Methionine. Biochemistry, 1997, 36, 7548-7556.	2.5	33
70	Probing the Chemistries of the Substrate and Flavin Ring System ofp-Hydroxybenzoate Hydroxylase by Raman Difference Spectroscopyâ€. Biochemistry, 1997, 36, 12560-12566.	2.5	8
71	Evidence for Flavin Movement in the Function of p-Hydroxybenzoate Hydroxylase from Studies of the Mutant Arg220Lys. Biochemistry, 1996, 35, 9278-9285.	2.5	33
72	Catalytic function of the conserved hydroxyl group in the protein tyrosine phosphatase signature motif. Biochemistry, 1995, 34, 16389-16396.	2.5	83

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73	Oxygen Activation by Flavins and Pterins. , 1995, , 37-83.		33
74	Crystal Structures of Mutant Pseudomonas aeruginosa p-Hydroxybenzoate Hydroxylases: The Tyr201Phe, Tyr385Phe, and Asn300Asp Variants. Biochemistry, 1994, 33, 1555-1564.	2.5	40
75	Changes in the Catalytic Properties of p-Hydroxybenzoate Hydroxylase Caused by the Mutation Asn300Asp. Biochemistry, 1994, 33, 1545-1554.	2.5	52
76	A Novel Leflunomide Analog, UTL-5b (GBL-5b), Suppresses JAK3, MAP3K2, and LITAF Genes. American Journal of Biomedical Sciences, 0, , 218-227.	0.2	11