

Karl Fisher

List of Publications by Year in descending order

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185998

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docs citations

74
times ranked

2393
citing authors

#	ARTICLE	IF	CITATIONS
1	Reductive dehalogenase structure suggests a mechanism for B12-dependent dehalogenation. <i>Nature</i> , 2015, 517, 513-516.	13.7	260
2	New cofactor supports $\hat{1}\pm, \hat{1}^2$ -unsaturated acid decarboxylation via 1,3-dipolar cycloaddition. <i>Nature</i> , 2015, 522, 497-501.	13.7	197
3	UbiX is a flavin prenyltransferase required for bacterial ubiquinone biosynthesis. <i>Nature</i> , 2015, 522, 502-506.	13.7	168
4	Structure and Biochemical Properties of the Alkene Producing Cytochrome P450 OleTJE (CYP152L1) from the <i>Jeotgalicoccus</i> sp. 8456 Bacterium. <i>Journal of Biological Chemistry</i> , 2014, 289, 6535-6550.	1.6	153
5	The copper supply pathway to a <i>Salmoneella</i> <i>Cu,Zn</i> -superoxide dismutase (<i>SodCII</i>) involves <i>P1B</i> -type <i>ATPase</i> copper efflux and periplasmic <i>CueP</i> . <i>Molecular Microbiology</i> , 2013, 87, 466-477.	1.2	96
6	Differential Effects on N ₂ Binding and Reduction, HD Formation, and Azide Reduction with $\hat{1}\pm$ -195His- and $\hat{1}\pm$ -191Gln-Substituted MoFe Proteins of <i>Azotobacter vinelandii</i> Nitrogenase. <i>Biochemistry</i> , 2000, 39, 15570-15577.	1.2	84
7	Structure-Based Insight into the Asymmetric Bioreduction of the C=C Double Bond of $\hat{1}\pm, \hat{1}^2$ -Unsaturated Nitroalkenes by Pentaerythritol Tetranitrate Reductase. <i>Advanced Synthesis and Catalysis</i> , 2008, 350, 2789-2803.	2.1	84
8	Highly Enantioselective Reduction of $\hat{1}^2, \hat{1}^2$ -Disubstituted Aromatic Nitroalkenes Catalyzed by <i>Clostridium sporogenes</i> . <i>Journal of Organic Chemistry</i> , 2008, 73, 4295-4298.	1.7	84
9	Evidence for Electron Transfer from the Nitrogenase Iron Protein to the Molybdenum-Iron Protein without MgATP Hydrolysis: Characterization of a Tight Protein-Protein Complex. <i>Biochemistry</i> , 1996, 35, 7188-7196.	1.2	78
10	Enzymatic Carboxylation of 2-Furoic Acid Yields 2,5-Furandicarboxylic Acid (FDCA). <i>ACS Catalysis</i> , 2019, 9, 2854-2865.	5.5	74
11	How Nitrogenase Shakes Initial Information about P-Cluster and FeMo-cofactor Normal Modes from Nuclear Resonance Vibrational Spectroscopy (NRVS). <i>Journal of the American Chemical Society</i> , 2006, 128, 7608-7612.	6.6	73
12	Involvement of the P Cluster in Intramolecular Electron Transfer within the Nitrogenase MoFe Protein. <i>Journal of Biological Chemistry</i> , 1995, 270, 27007-27013.	1.6	70
13	Effects on Substrate Reduction of Substitution of Histidine-195 by Glutamine in the $\hat{1}\pm$ -Subunit of the MoFe Protein of <i>Azotobacter vinelandii</i> Nitrogenase. <i>Biochemistry</i> , 1998, 37, 17495-17505.	1.2	68
14	Regioselective <i>para</i> -Carboxylation of Catechols with a Prenylated Flavin Dependent Decarboxylase. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 13893-13897.	7.2	64
15	A microbial platform for renewable propane synthesis based on a fermentative butanol pathway. <i>Biotechnology for Biofuels</i> , 2015, 8, 61.	6.2	53
16	Electron Paramagnetic Resonance Analysis of Different <i>Azotobacter vinelandii</i> Nitrogenase MoFe-Protein Conformations Generated during Enzyme Turnover: Evidence for S=3/2 Spin States from Reduced MoFe-Protein Intermediates. <i>Biochemistry</i> , 2001, 40, 3333-3339.	1.2	52
17	<i>Azotobacter vinelandii</i> Nitrogenases Containing Altered MoFe Proteins with Substitutions in the FeMo-Cofactor Environment: Effects on the Catalyzed Reduction of Acetylene and Ethylene. <i>Biochemistry</i> , 2000, 39, 2970-2979.	1.2	50
18	Kinetics and mechanism of the reaction of cyanide with molybdenum nitrogenase from <i>Azotobacter vinelandii</i> . <i>Biochemistry</i> , 1989, 28, 8460-8466.	1.2	42

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19	Oxidative Maturation and Structural Characterization of Prenylated FMN Binding by UbiD, a Decarboxylase Involved in Bacterial Ubiquinone Biosynthesis. <i>Journal of Biological Chemistry</i> , 2017, 292, 4623-4637.	1.6	42
20	Evidence for Electron Transfer-dependent Formation of a Nitrogenase Iron Protein-Molybdenum-Iron Protein Tight Complex. <i>Journal of Biological Chemistry</i> , 1997, 272, 4157-4165.	1.6	40
21	<i>Azotobacter vinelandii</i> Nitrogenases with Substitutions in the FeMo-Cofactor Environment of the MoFe Protein: Effects of Acetylene or Ethylene on Interactions with H ₂ , HCN, and CN ⁻ . <i>Biochemistry</i> , 2000, 39, 10855-10865.	1.2	38
22	Flavocytochrome P450 BM3 mutant W1046A is a NADH-dependent fatty acid hydroxylase: Implications for the mechanism of electron transfer in the P450 BM3 dimer. <i>Archives of Biochemistry and Biophysics</i> , 2011, 507, 75-85.	1.4	38
23	The role of conserved residues in Fdc decarboxylase in prenylated flavin mononucleotide oxidative maturation, cofactor isomerization, and catalysis. <i>Journal of Biological Chemistry</i> , 2018, 293, 2272-2287.	1.6	35
24	Epoxyqueuosine Reductase Structure Suggests a Mechanism for Cobalamin-dependent tRNA Modification. <i>Journal of Biological Chemistry</i> , 2015, 290, 27572-27581.	1.6	34
25	A short, chemoenzymatic route to chiral β^2 -aryl- β^3 -amino acids using reductases from anaerobic bacteria. <i>Organic and Biomolecular Chemistry</i> , 2010, 8, 533-535.	1.5	33
26	Human P450-like oxidation of diverse proton pump inhibitor drugs by "gatekeeper" mutants of flavocytochrome P450 BM3. <i>Biochemical Journal</i> , 2014, 460, 247-259.	1.7	31
27	Variant MoFe proteins of <i>Azotobacter vinelandii</i> : effects of carbon monoxide on electron paramagnetic resonance spectra generated during enzyme turnover. <i>Journal of Biological Inorganic Chemistry</i> , 2005, 10, 394-406.	1.1	30
28	<i>Azotobacter vinelandii</i> Vanadium Nitrogenase: Formaldehyde Is a Product of Catalyzed HCN Reduction, and Excess Ammonia Arises Directly from Catalyzed Azide Reduction. <i>Biochemistry</i> , 2006, 45, 4190-4198.	1.2	29
29	Heterologous expression, purification and cofactor reconstitution of the reductive dehalogenase PceA from <i>Dehalobacter restrictus</i> . <i>Protein Expression and Purification</i> , 2012, 85, 224-229.	0.6	28
30	Enzymatic control of cycloadduct conformation ensures reversible 1,3-dipolar cycloaddition in a prFMN-dependent decarboxylase. <i>Nature Chemistry</i> , 2019, 11, 1049-1057.	6.6	28
31	The UbiX flavin prenyltransferase reaction mechanism resembles class I terpene cyclase chemistry. <i>Nature Communications</i> , 2019, 10, 2357.	5.8	28
32	Evidence for a dynamic role for homocitrate during nitrogen fixation: the effect of substitution at the β^2 -Lys426 position in MoFe-protein of <i>Azotobacter vinelandii</i> . <i>Biochemical Journal</i> , 2006, 397, 261-270.	1.7	25
33	Energy Landscapes and Catalysis in Nitric-oxide Synthase. <i>Journal of Biological Chemistry</i> , 2014, 289, 11725-11738.	1.6	25
34	Rewiring the "Push-Pull" Catalytic Machinery of a Heme Enzyme Using an Expanded Genetic Code. <i>ACS Catalysis</i> , 2020, 10, 2735-2746.	5.5	25
35	Arginine to Lysine Mutations Increase the Aggregation Stability of a Single-Chain Variable Fragment through Unfolded-State Interactions. <i>Biochemistry</i> , 2019, 58, 3413-3421.	1.2	24
36	Conformations generated during turnover of the <i>Azotobacter vinelandii</i> nitrogenase MoFe protein and their relationship to physiological function. <i>Journal of Inorganic Biochemistry</i> , 2007, 101, 1649-1656.	1.5	23

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37	Continuous two-phase flow miniaturised bioreactor for monitoring anaerobic biocatalysis by pentaerythritol tetranitrate reductase. <i>Lab on A Chip</i> , 2010, 10, 1929.	3.1	22
38	An oxidative N-demethylase reveals PAS transition from ubiquitous sensor to enzyme. <i>Nature</i> , 2016, 539, 593-597.	13.7	21
39	Electro-enzymatic viologen-mediated substrate reduction using pentaerythritol tetranitrate reductase and a parallel, segmented fluid flow system. <i>Catalysis Science and Technology</i> , 2013, 3, 1505.	2.1	20
40	Nitrogen Fixation – A General Overview. , 2002, , 1-34.		18
41	Nitrogenase proteins from <i>Gluconacetobacter diazotrophicus</i> , a sugarcane-colonizing bacterium. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2005, 1750, 154-165.	1.1	18
42	The transcriptional regulator CprK detects chlorination by combining direct and indirect readout mechanisms. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20120323.	1.8	17
43	Unexpected Roles of a Tether Harboring a Tyrosine Gatekeeper Residue in Modular Nitrite Reductase Catalysis. <i>ACS Catalysis</i> , 2019, 9, 6087-6099.	5.5	17
44	Characterization of a novel copper-haem <i>Ralstonia pickettii</i> dissimilatory nitrite reductase from <i>Ralstonia pickettii</i> . <i>Biochemical Journal</i> , 2012, 444, 219-226.	1.7	15
45	Structure and Mechanism of <i>Pseudomonas aeruginosa</i> PA0254/HudA, a prFMN-Dependent Pyrrole-2-carboxylic Acid Decarboxylase Linked to Virulence. <i>ACS Catalysis</i> , 2021, 11, 2865-2878.	5.5	15
46	Mn ²⁺ -adenosine nucleotide complexes in the presence of the nitrogenase iron-protein: detection of conformational rearrangements directly at the nucleotide binding site by EPR and 2D-ESEEM (two-dimensional electron spin-echo envelope modulation spectroscopy). <i>Biochemical Journal</i> , 2005, 391, 527-539.	1.7	14
47	UbiD domain dynamics underpins aromatic decarboxylation. <i>Nature Communications</i> , 2021, 12, 5065.	5.8	14
48	Glutamate-haem ester bond formation is disfavoured in flavocytochrome P450 BM3: characterization of glutamate substitution mutants at the haem site of P450 BM3. <i>Biochemical Journal</i> , 2010, 427, 455-466.	1.7	13
49	Ferulic Acid Decarboxylase Controls Oxidative Maturation of the Prenylated Flavin Mononucleotide Cofactor. <i>ACS Chemical Biology</i> , 2020, 15, 2466-2475.	1.6	13
50	NADPH-Driven Organohalide Reduction by a Nonrespiratory Reductive Dehalogenase. <i>Biochemistry</i> , 2018, 57, 3493-3502.	1.2	12
51	Heterologous Production and Purification of a Functional Chloroform Reductive Dehalogenase. <i>ACS Chemical Biology</i> , 2018, 13, 548-552.	1.6	12
52	Structural basis of terephthalate recognition by solute binding protein TphC. <i>Nature Communications</i> , 2021, 12, 6244.	5.8	12
53	Analysis of Heme Iron Coordination in DGCR8: The Heme-Binding Component of the Microprocessor Complex. <i>Biochemistry</i> , 2016, 55, 5073-5083.	1.2	11
54	Structural and biochemical characterization of the prenylated flavin mononucleotide-dependent indole-3-carboxylic acid decarboxylase. <i>Journal of Biological Chemistry</i> , 2022, 298, 101771.	1.6	10

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55	Another Role for CO with Nitrogenase? CO Stimulates Hydrogen Evolution Catalyzed by Variant <i>Azotobacter vinelandii</i> Mo-Nitrogenases. <i>Biochemistry</i> , 2014, 53, 6151-6160.	1.2	9
56	Multiple Inequivalent Metal-Nucleotide Coordination Environments in the Presence of the VO ₂ ⁺ -Inhibited Nitrogenase Iron Protein: pH-Dependent Structural Rearrangements at the Nucleotide Binding Site. <i>Biochemistry</i> , 2002, 41, 13253-13263.	1.2	8
57	Heterologous production, reconstitution and EPR spectroscopic analysis of prFMN dependent enzymes. <i>Methods in Enzymology</i> , 2019, 620, 489-508.	0.4	8
58	A Noncanonical Tryptophan Analogue Reveals an Active Site Hydrogen Bond Controlling Ferryl Reactivity in a Heme Peroxidase. <i>Jacs Au</i> , 2021, 1, 913-918.	3.6	8
59	Catabolic Reductive Dehalogenase Substrate Complex Structures Underpin Rational Repurposing of Substrate Scope. <i>Microorganisms</i> , 2020, 8, 1344.	1.6	7
60	Structural basis for VO ₂ ⁺ inhibition of nitrogenase activity (A): 31P and 23Na interactions with the metal at the nucleotide binding site of the nitrogenase Fe protein identified by ENDOR spectroscopy. <i>Journal of Biological Inorganic Chemistry</i> , 2008, 13, 623-635.	1.1	6
61	Structure of the cobalamin-binding protein of a putative <i>O</i> -demethylase from <i>Desulfitobacterium hafniense</i> DCB-2. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013, 69, 1609-1616.	2.5	6
62	Regioselektive <i>para</i> -Carboxylierung von Catecholen mit einer Prenylflavin-abhängigen Decarboxylase. <i>Angewandte Chemie</i> , 2017, 129, 14081-14085.	1.6	6
63	Heterologous expression of cobalamin dependent class-III enzymes. <i>Protein Expression and Purification</i> , 2021, 177, 105743.	0.6	6
64	Vanadium(v) is reduced by the <i>in situ</i> isolated nitrogenase Fe-protein at neutral pH. <i>Chemical Communications</i> , 2006, , 2807-2809.	2.2	5
65	A Conformational Sampling Model for Radical Catalysis in Pyridoxal Phosphate- and Cobalamin-dependent Enzymes. <i>Journal of Biological Chemistry</i> , 2014, 289, 34161-34174.	1.6	5
66	Structures of the methyltransferase component of <i>Desulfitobacterium hafniense</i> DCB-2 <i>O</i> -demethylase shed light on methyltetrahydrofolate formation. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015, 71, 1900-1908.	2.5	5
67	Structural basis for VO ₂ ⁺ -inhibition of nitrogenase activity: (B) pH-sensitive inner-sphere rearrangements in the 1H-environment of the metal coordination site of the nitrogenase Fe-protein identified by ENDOR spectroscopy. <i>Journal of Biological Inorganic Chemistry</i> , 2008, 13, 637-650.	1.1	3
68	The In Vitro Production of prFMN for Reconstitution of UbiD Enzymes. <i>Methods in Molecular Biology</i> , 2021, 2280, 219-227.	0.4	2
69	Heterologous production and biophysical characterization of catabolic Nitratireductor <i>pacificus</i> pht-3B reductive dehalogenase. <i>Methods in Enzymology</i> , 2022, 668, 327-347.	0.4	2
70	Glutamate 338 is an electrostatic facilitator of Co bond breakage in a dynamic/electrostatic model of catalysis by ornithine aminomutase. <i>FEBS Journal</i> , 2015, 282, 1242-1255.	2.2	1