

Wolfgang Buckel

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6357773/publications.pdf>

Version: 2024-02-01

171
papers

12,372
citations

28274

55
h-index

29157

104
g-index

318
all docs

318
docs citations

318
times ranked

9336
citing authors

#	ARTICLE	IF	CITATIONS
1	Methanogenic archaea: ecologically relevant differences in energy conservation. <i>Nature Reviews Microbiology</i> , 2008, 6, 579-591.	28.6	1,674
2	Energy conservation via electron bifurcating ferredoxin reduction and proton/Na ⁺ translocating ferredoxin oxidation. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2013, 1827, 94-113.	1.0	663
3	Anaerobic Microbial Degradation of Hydrocarbons: From Enzymatic Reactions to the Environment. <i>Journal of Molecular Microbiology and Biotechnology</i> , 2016, 26, 5-28.	1.0	615
4	A 3-Hydroxypropionate/4-Hydroxybutyrate Autotrophic Carbon Dioxide Assimilation Pathway in Archaea. <i>Science</i> , 2007, 318, 1782-1786.	12.6	534
5	Chain Elongation with Reactor Microbiomes: Open-Culture Biotechnology To Produce Biochemicals. <i>Environmental Science & Technology</i> , 2016, 50, 2796-2810.	10.0	426
6	The genome of <i>Clostridium kluyveri</i> , a strict anaerobe with unique metabolic features. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 2128-2133.	7.1	409
7	Coupled Ferredoxin and Crotonyl Coenzyme A (CoA) Reduction with NADH Catalyzed by the Butyryl-CoA Dehydrogenase/Etf Complex from <i>Clostridium kluyveri</i> . <i>Journal of Bacteriology</i> , 2008, 190, 843-850.	2.2	379
8	Energy Conservation via Electron-Transferring Flavoprotein in Anaerobic Bacteria. <i>Journal of Bacteriology</i> , 2008, 190, 784-791.	2.2	369
9	Flavin-Based Electron Bifurcation, Ferredoxin, Flavodoxin, and Anaerobic Respiration With Protons (Ech) or NAD ⁺ (Rnf) as Electron Acceptors: A Historical Review. <i>Frontiers in Microbiology</i> , 2018, 9, 401.	3.5	281
10	Flavin-Based Electron Bifurcation, A New Mechanism of Biological Energy Coupling. <i>Chemical Reviews</i> , 2018, 118, 3862-3886.	47.7	280
11	Two Pathways of Glutamate Fermentation by Anaerobic Bacteria. <i>Journal of Bacteriology</i> , 1974, 117, 1248-1260.	2.2	210
12	Radical Enzymes in Anaerobes. <i>Annual Review of Microbiology</i> , 2006, 60, 27-49.	7.3	170
13	On the mechanism of action of the antifungal agent propionate. <i>FEBS Journal</i> , 2004, 271, 3227-3241.	0.2	163
14	Glutamate and 2-methyleneglutarate mutase: from microbial curiosities to paradigms for coenzyme B12-dependent enzymes. <i>Chemical Society Reviews</i> , 1996, 25, 329.	38.1	142
15	Studies on the Mechanism of Electron Bifurcation Catalyzed by Electron Transferring Flavoprotein (Etf) and Butyryl-CoA Dehydrogenase (Bcd) of <i>Acidaminococcus fermentans</i> . <i>Journal of Biological Chemistry</i> , 2014, 289, 5145-5157.	3.4	126
16	On the Origin of Heterotrophy. <i>Trends in Microbiology</i> , 2016, 24, 12-25.	7.7	112
17	Acryloyl-CoA reductase from <i>Clostridium propionicum</i> . <i>FEBS Journal</i> , 2003, 270, 902-910.	0.2	111
18	<i>Ustilago maydis</i> produces itaconic acid via the unusual intermediate <i>trans</i> -aconitate. <i>Microbial Biotechnology</i> , 2016, 9, 116-126.	4.2	107

#	ARTICLE	IF	CITATIONS
19	The semiquinone swing in the bifurcating electron transferring flavoprotein/butyryl-CoA dehydrogenase complex from <i>Clostridium difficile</i> . <i>Nature Communications</i> , 2017, 8, 1577.	12.8	106
20	Oxidation of propionate to pyruvate in <i>Escherichia coli</i> . <i>FEBS Journal</i> , 2002, 269, 6184-6194.	0.2	105
21	Identification of the 4-Glutamyl Radical as an Intermediate in the Carbon Skeleton Rearrangement Catalyzed by Coenzyme B12-Dependent Glutamate Mutase from <i>Clostridium cochlearium</i> . <i>Biochemistry</i> , 1998, 37, 4105-4113.	2.5	102
22	Glutaconate CoA-Transferase from <i>Acidaminococcus fermentans</i> . <i>FEBS Journal</i> , 1981, 118, 315-321.	0.2	93
23	Synthesis and Configurational Assay of Asymmetric Methyl Groups. <i>FEBS Journal</i> , 1970, 14, 1-13.	0.2	92
24	Dehydration of (R)-2-hydroxyacyl-CoA to enoyl-CoA in the fermentation of \pm -amino acids by anaerobic bacteria. <i>FEMS Microbiology Reviews</i> , 2004, 28, 455-468.	8.6	92
25	An Electron-bifurcating Caffeoyl-CoA Reductase. <i>Journal of Biological Chemistry</i> , 2013, 288, 11304-11311.	3.4	86
26	Metabolism of Hydrocarbons in <i>Alkane-Utilizing Anaerobic Bacteria</i> . <i>Journal of Molecular Microbiology and Biotechnology</i> , 2016, 26, 138-151.	1.0	86
27	Sodium Ion Pumps and Hydrogen Production in Glutamate Fermenting Anaerobic Bacteria. <i>Journal of Molecular Microbiology and Biotechnology</i> , 2005, 10, 105-119.	1.0	85
28	Sodium ion-translocating decarboxylases. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2001, 1505, 15-27.	1.0	82
29	On the dehydration of (R)-lactate in the fermentation of alanine to propionate by <i>Clostridium propionicum</i> . <i>FEBS Letters</i> , 1984, 171, 79-84.	2.8	80
30	Crystal structure of 4-hydroxybutyryl-CoA dehydratase: Radical catalysis involving a [4Fe-4S] cluster and flavin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 15645-15649.	7.1	80
31	Purification, characterisation and reconstitution of glutaconyl-CoA decarboxylase, a biotin-dependent sodium pump from anaerobic bacteria. <i>FEBS Journal</i> , 1983, 136, 427-434.	0.2	78
32	Characterization of the Coenzyme-B12-Dependent Glutamate Mutase from <i>Clostridium cochlearium</i> Produced in <i>Escherichia coli</i> . <i>FEBS Journal</i> , 1994, 226, 577-585.	0.2	77
33	Characterization of (R)-2-Hydroxyisocaproate Dehydrogenase and a Family III Coenzyme A Transferase Involved in Reduction of l-Leucine to Isocaproate by <i>Clostridium difficile</i> . <i>Applied and Environmental Microbiology</i> , 2006, 72, 6062-6069.	3.1	77
34	A biotin-dependent sodium pump: glutaconyl-CoA decarboxylase from <i>Acidaminococcus fermentans</i> . <i>FEBS Letters</i> , 1982, 148, 35-38.	2.8	76
35	Coordination of a histidine residue of the protein-component S to the cobalt atom in coenzyme B12-dependent glutamate mutase from <i>Clostridium cochlearium</i> . <i>FEBS Letters</i> , 1995, 369, 252-254.	2.8	74
36	The Reversible Dehydration of (R)-2-Hydroxyglutarate to (E)-Glutaconate. <i>FEBS Journal</i> , 1980, 106, 439-447.	0.2	72

#	ARTICLE	IF	CITATIONS
37	Oneâ€Electron Redox Reactions of CoASH Esters in Anaerobic Bacteriaâ€A Mechanistic Proposal. <i>Angewandte Chemie International Edition in English</i> , 1995, 34, 1502-1506.	4.4	70
38	Evidence for a Mechanism Involving Transient Fragmentation in Carbon Skeleton Rearrangements Dependent on Coenzyme B12. <i>Angewandte Chemie International Edition in English</i> , 1995, 34, 2398-2401.	4.4	70
39	Crystal structure of the <i>Acidaminococcus fermentans</i> 2-hydroxyglutaryl-CoA dehydratase component A. <i>Journal of Molecular Biology</i> , 2001, 307, 297-308.	4.2	70
40	[42] Biotin-dependent decarboxylases as bacterial sodium pumps: Purification and reconstitution of glutaconyl-CoA decarboxylase from <i>Acidaminococcus fermentans</i> . <i>Methods in Enzymology</i> , 1986, 125, 547-558.	1.0	68
41	Stabilisation of Methylene Radicals by Cob(II)alamin in Coenzyme B12 Dependent Mutases. <i>Chemistry - A European Journal</i> , 2006, 12, 352-362.	3.3	67
42	Effect of an Oxygen-Tolerant Bifurcating Butyryl Coenzyme A Dehydrogenase/Electron-Transferring Flavoprotein Complex from <i>Clostridium difficile</i> on Butyrate Production in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 2013, 195, 3704-3713.	2.2	66
43	Dissection of the Caffeate Respiratory Chain in the Acetogen <i>Acetobacterium woodii</i> : Identification of an Rnf-Type NADH Dehydrogenase as a Potential Coupling Site. <i>Journal of Bacteriology</i> , 2007, 189, 8145-8153.	2.2	65
44	A sodium ion gradient as energy source for <i>Peptostreptococcus asaccharolyticus</i> . <i>Archives of Microbiology</i> , 1985, 142, 128-135.	2.2	64
45	An allylic ketyl radical intermediate in clostridial amino-acid fermentation. <i>Nature</i> , 2008, 452, 239-242.	27.8	63
46	Stereochemical Investigations Reveal the Mechanism of the Bacterial Activation of <i>n</i> -Alkanes without Oxygen. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 1334-1338.	13.8	63
47	The involvement of coenzyme A esters in the dehydration of (R)-phenyllactate to (E)-cinnamate by <i>Clostridium sporogenes</i> . <i>FEBS Journal</i> , 2000, 267, 3874-3884.	0.2	62
48	Fermentation of 4-aminobutyrate by <i>Clostridium aminobutyricum</i> : cloning of two genes involved in the formation and dehydration of 4-hydroxybutyryl-CoA. <i>Archives of Microbiology</i> , 2000, 174, 189-199.	2.2	61
49	2-Hydroxyisocaproyl-CoA dehydratase and its activator from <i>Clostridium difficile</i> . <i>FEBS Journal</i> , 2005, 272, 550-561.	4.7	61
50	Purification of 2-hydroxyglutaryl-CoA dehydratase from <i>Acidaminococcus fermentans</i> . An iron-sulfur protein. <i>FEBS Journal</i> , 1987, 169, 441-448.	0.2	60
51	Purification of glutaryl-CoA dehydrogenase from <i>Pseudomonas</i> sp., an enzyme involved in the anaerobic degradation of benzoate. <i>Archives of Microbiology</i> , 1993, 159, 174-181.	2.2	60
52	2-Methylisocitrate lyases from the bacterium <i>Escherichia coli</i> and the filamentous fungus <i>Aspergillus nidulans</i> . <i>FEBS Journal</i> , 2001, 268, 3577-3586.	0.2	60
53	Radical species in the catalytic pathways of enzymes from anaerobes. <i>FEMS Microbiology Reviews</i> , 1998, 22, 523-541.	8.6	59
54	Enzymatic assay for quantitative analysis of (d)-2-hydroxyglutarate. <i>Acta Neuropathologica</i> , 2012, 124, 883-891.	7.7	58

#	ARTICLE	IF	CITATIONS
55	Unusual DAhydrations in anaerobic bacteria: considering ketyls (radical anions) as reactive intermediates in enzymatic reactions. FEBS Letters, 1996, 389, 20-24.	2.8	56
56	Deprotonation of Enoxy Radicals: Theoretical Validation of a 50-year-old Mechanistic Proposal. Angewandte Chemie - International Edition, 2003, 42, 1867-1870.	13.8	56
57	Structural Basis for a Kolbe-Type Decarboxylation Catalyzed by a Glycyl Radical Enzyme. Journal of the American Chemical Society, 2011, 133, 14666-14674.	13.7	56
58	Reduction of Flavodoxin by Electron Bifurcation and Sodium Ion-dependent Reoxidation by NAD ⁺ Catalyzed by Ferredoxin-NAD ⁺ Reductase (Rnf). Journal of Biological Chemistry, 2016, 291, 11993-12002.	3.4	56
59	Adenosylcobalamin and cob(II)alamin as prosthetic groups of 2-methyleneglutarate mutase from <i>Clostridium barkeri</i> . FEBS Journal, 1992, 205, 767-773.	0.2	52
60	Cloning, sequencing and expression of the gene encoding the coenzyme B ₁₂ -dependent 2-methyleneglutarate mutase from <i>Clostridium barkeri</i> in <i>Escherichia coli</i> . FEBS Journal, 1994, 221, 101-109.	0.2	52
61	ATP-driven electron transfer in enzymatic radical reactions. Current Opinion in Chemical Biology, 2004, 8, 462-467.	6.1	52
62	Reduction of ferredoxin or oxygen by flavin-based electron bifurcation in <i>Megasphaera elsdenii</i> . FEBS Journal, 2015, 282, 3149-3160.	4.7	52
63	Purification and properties of an iron-sulfur and FAD-containing 4-hydroxybutyryl-CoA dehydratase/vinylacetyl-CoA 3-2-isomerase from <i>Clostridium aminobutyricum</i> . FEBS Journal, 1993, 215, 421-429.	0.2	51
64	Structural Basis for Reductive Radical Formation and Electron Recycling in (R)-2-Hydroxyisocaproyl-CoA Dehydratase. Journal of the American Chemical Society, 2011, 133, 4342-4347.	13.7	51
65	The biotin-dependent sodium ion pump glutaconyl-CoA decarboxylase from <i>Fusobacterium nucleatum</i> (subsp. <i>nucleatum</i>). Archives of Microbiology, 1990, 154, 362-369.	2.2	50
66	Molecular characterization of phenyllactate dehydratase and its initiator from <i>Clostridium sporogenes</i> . Molecular Microbiology, 2002, 44, 49-60.	2.5	50
67	Radical and Electron Recycling in Catalysis. Angewandte Chemie - International Edition, 2009, 48, 6779-6787.	13.8	50
68	4-Hydroxybutyryl-CoA Dehydratase from <i>Clostridium aminobutyricum</i> : Characterization of FAD and Iron-Sulfur Clusters Involved in an Overall Non-Redox Reaction. Biochemistry, 1996, 35, 11710-11718.	2.5	48
69	2-Hydroxyglutaryl-CoA dehydratase from <i>Clostridium symbiosum</i> . FEBS Journal, 1999, 265, 404-414.	0.2	47
70	Spectroscopic evidence for an all-ferrous [4Fe-4S] ₀ cluster in the superreduced activator of 2-hydroxyglutaryl-CoA dehydratase from <i>Acidaminococcus fermentans</i> . Journal of Biological Inorganic Chemistry, 2008, 13, 563-574.	2.6	47
71	Location of the Two Genes Encoding Glutaconate Coenzyme A-Transferase at the Beginning of the Hydroxyglutarate Operon in <i>Acidaminococcus fermentans</i> . FEBS Journal, 1994, 226, 41-51.	0.2	46
72	Oxygen Exchange between Acetate and the Catalytic Glutamate Residue in Glutaconate CoA-transferase from <i>Acidaminococcus fermentans</i> . Journal of Biological Chemistry, 1999, 274, 20772-20778.	3.4	45

#	ARTICLE	IF	CITATIONS
73	Engineering <i>Escherichia coli</i> with acrylate pathway genes for propionic acid synthesis and its impact on mixed-acid fermentation. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 1191-1200.	3.6	45
74	Structure and Function of Benzylsuccinate Synthase and Related Fumarate-Adding Glycyl Radical Enzymes. <i>Journal of Molecular Microbiology and Biotechnology</i> , 2016, 26, 29-44.	1.0	45
75	Adenosine Triphosphate-Induced Electron Transfer in 2-Hydroxyglutaryl-CoA Dehydratase from <i>Acidaminococcus fermentans</i> . <i>Biochemistry</i> , 2002, 41, 5873-5882.	2.5	44
76	Glutamate mutase from <i>Clostridium cochlearium</i> . Purification, cobamide content and stereospecific inhibitors. <i>FEBS Journal</i> , 1992, 205, 759-765.	0.2	43
77	Molecular Dynamics Simulations and Structure-Guided Mutagenesis Provide Insight into the Architecture of the Catalytic Core of the Ectoine Hydroxylase. <i>Journal of Molecular Biology</i> , 2014, 426, 586-600.	4.2	43
78	Succinate-ethanol fermentation in <i>Clostridium kluyveri</i> : purification and characterisation of 4-hydroxybutyryl-CoA dehydratase/vinylacetyl-CoA 3-2-isomerase. <i>Archives of Microbiology</i> , 1994, 161, 239-245.	2.2	42
79	The iron-sulfur clusters in 2-hydroxyglutaryl-CoA dehydratase from <i>Acidaminococcus fermentans</i> . <i>FEBS Journal</i> , 2000, 267, 7082-7093.	0.2	42
80	Substrate Specificity of 2-Hydroxyglutaryl-CoA Dehydratase from <i>Clostridium symbiosum</i> : Toward a Bio-Based Production of Adipic Acid. <i>Biochemistry</i> , 2011, 50, 3540-3550.	2.5	40
81	The Benzoyl-Coenzyme A Reductase and 2-Hydroxyacyl-Coenzyme A Dehydratase Radical Enzyme Family. <i>ChemBioChem</i> , 2014, 15, 2188-2194.	2.6	40
82	(R)-Lactyl-CoA dehydratase from <i>Clostridium propionicum</i> . <i>FEBS Journal</i> , 1992, 206, 547-552.	0.2	39
83	2-Hydroxyglutaryl-CoA dehydratase from <i>Fusobacterium nucleatum</i> (subsp. <i>nucleatum</i>): an iron-sulfur flavoprotein. <i>Archives of Microbiology</i> , 1992, 158, 294-301.	2.2	38
84	The sodium pump glutaconyl-CoA decarboxylase from <i>Acidaminococcus fermentans</i> . Specific cleavage by n-alkanols. <i>FEBS Journal</i> , 1986, 156, 251-257.	0.2	37
85	Production of Glutaconic Acid in a Recombinant <i>Escherichia coli</i> Strain. <i>Applied and Environmental Microbiology</i> , 2011, 77, 320-322.	3.1	37
86	Biochemical characterization of human 3-methylglutaconyl-CoA hydratase and its role in leucine metabolism. <i>FEBS Journal</i> , 2006, 273, 2012-2022.	4.7	36
87	A two [4Fe-4S]-cluster-containing ferredoxin as an alternative electron donor for 2-hydroxyglutaryl-CoA dehydratase from <i>Acidaminococcus fermentans</i> . <i>Archives of Microbiology</i> , 2003, 179, 197-204.	2.2	35
88	Analysis of the fermentation pathways of clostridia using double labelled glutamate. <i>Archives of Microbiology</i> , 1980, 127, 167-169.	2.2	33
89	Two beta-alanyl-CoA:ammonia lyases in <i>Clostridium propionicum</i> . <i>FEBS Journal</i> , 2005, 272, 813-821.	4.7	33
90	Cloning, sequencing and expression of the gene encoding the carboxytransferase subunit of the biotin-dependent Na ⁺ pump glutaconyl-CoA decarboxylase from <i>Acidaminococcus fermentans</i> in <i>Escherichia coli</i> . <i>FEBS Journal</i> , 1993, 211, 697-702.	0.2	32

#	ARTICLE	IF	CITATIONS
91	The sodium ion translocating glutacyl-CoA decarboxylase from <i>Acidaminococcus fermentans</i> : cloning and function of the genes forming a second operon. <i>Molecular Microbiology</i> , 1999, 31, 473-487.	2.5	32
92	Crystal structure of the carboxyltransferase subunit of the bacterial sodium ion pump glutacyl-coenzyme A decarboxylase. <i>EMBO Journal</i> , 2003, 22, 3493-3502.	7.8	32
93	Activation of (R)-2-hydroxyglutaryl-CoA Dehydratase from <i>Acidaminococcus fermentans</i> . <i>FEBS Journal</i> , 1995, 230, 698-704.	0.2	32
94	On the steric course of the adenosylcobalamin-dependent 2-methyleneglutarate mutase reaction in <i>Clostridium barkeri</i> . <i>FEBS Journal</i> , 1986, 156, 301-304.	0.2	31
95	Caffeate Respiration in the Acetogenic Bacterium <i>Acetobacterium woodii</i> : a Coenzyme A Loop Saves Energy for Caffeate Activation. <i>Applied and Environmental Microbiology</i> , 2013, 79, 1942-1947.	3.1	30
96	Electron-Nuclear Double Resonance Spectroscopy. Investigation of 4-Hydroxybutyryl-CoA Dehydratase from <i>Clostridium aminobutyricum</i> : Comparison with Other Flavin Radical Enzymes. <i>Biological Chemistry</i> , 1997, 378, 843-9.	2.5	29
97	Structure and dynamics of the B12-binding subunit of glutamate mutase from <i>Clostridium cochlearium</i> . <i>FEBS Journal</i> , 1999, 263, 178-188.	0.2	29
98	Energy Conservation in Fermentations of Anaerobic Bacteria. <i>Frontiers in Microbiology</i> , 2021, 12, 703525.	3.5	29
99	Studies on the dehydration of (R)-2-hydroxyglutarate in <i>Acidaminococcus fermentans</i> . A radical mechanism?. <i>Archives of Microbiology</i> , 1984, 137, 302-307.	2.2	28
100	Identification of glutamate ¹²⁵⁴ as the covalent-catalytic residue in the active site of glutacyl-CoA-transferase from <i>Acidaminococcus fermentans</i> . <i>FEBS Letters</i> , 1995, 357, 145-148.	2.8	27
101	Physiological limits to life in anoxic subseafloor sediment. <i>FEMS Microbiology Reviews</i> , 2020, 44, 219-231.	8.6	27
102	Purification of the coenzyme B12-containing 2-methyleneglutarate mutase from <i>Clostridium barkeri</i> by high-performance liquid chromatography. <i>Journal of Chromatography A</i> , 1991, 587, 93-99.	3.7	26
103	The single NqrB and NqrC subunits in the Na ⁺ -translocating NADH: Quinone oxidoreductase (Na ⁺ -NQR) from <i>Vibrio cholerae</i> each carry one covalently attached FMN. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1817-1822.	1.0	25
104	Enzyme catalyzed radical dehydrations of hydroxy acids. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2012, 1824, 1278-1290.	2.3	25
105	The stereochemistry of the formation of the methyl group in the glutamate mutase-catalysed reaction in <i>Clostridium tetanomorphum</i> . <i>FEBS Letters</i> , 1984, 171, 73-78.	2.8	24
106	Cloning, sequencing and expression in <i>Escherichia coli</i> of the gene encoding component S of the coenzyme B12-dependent glutamate mutase from <i>Clostridium cochlearium</i> . <i>FEMS Microbiology Letters</i> , 1994, 118, 15-21.	1.8	24
107	Einelektronen-Redoxreaktionen von Coenzym A ⁺ in anaeroben Bakterien – ein Vorschlag für einen neuen Mechanismus. <i>Angewandte Chemie</i> , 1995, 107, 1595-1598.	2.0	24
108	On the thermodynamic equilibrium between (R)-2-hydroxyacyl-CoA and 2-enoyl-CoA. <i>FEBS Journal</i> , 2010, 277, 1738-1746.	4.7	24

#	ARTICLE	IF	CITATIONS
109	Conversion of glutaconate CoA-transferase from <i>Acidaminococcus fermentans</i> into an acyl-CoA hydrolase by site-directed mutagenesis. <i>FEBS Letters</i> , 1997, 405, 209-212.	2.8	23
110	Structural basis for stereospecific catalysis in NAD ⁺ -dependent 2-hydroxyglutarate dehydrogenase from <i>Acidaminococcus fermentans</i> . <i>FEBS Journal</i> , 2005, 272, 269-281.	4.7	23
111	Flavins in the electron bifurcation process. <i>Archives of Biochemistry and Biophysics</i> , 2021, 701, 108796.	3.0	22
112	Cloning and sequencing of the genes of 2-hydroxyglutaryl-CoA dehydratase from <i>Acidaminococcus fermentans</i> . <i>FEBS Journal</i> , 1989, 181, 741-746.	0.2	21
113	Radical-mediated dehydration reactions in anaerobic bacteria. <i>Biological Chemistry</i> , 2005, 386, 951-959.	2.5	21
114	Searching for Intermediates in the Carbon Skeleton Rearrangement of 2-Methyleneglutarate to (R)-3-Methylitaconate Catalyzed by Coenzyme B12-Dependent 2-Methyleneglutarate Mutase from <i>Eubacterium barkeri</i> . <i>Biochemistry</i> , 2005, 44, 10541-10551.	2.5	21
115	Mossbauer Study of 4-Hydroxybutyryl-CoA Dehydratase Probing the Role of an Iron-Sulfur Cluster in an Overall Non-Redox Reaction. <i>FEBS Journal</i> , 1997, 248, 380-384.	0.2	20
116	The Complete Stereochemistry of the Enzymatic Dehydration of 4-Hydroxybutyryl Coenzyme A to Crotonyl Coenzyme A. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 3254-3257.	13.8	20
117	On the ATP-Dependent Activation of the Radical Enzyme (R)-2-Hydroxyisocaproyl-CoA Dehydratase. <i>Biochemistry</i> , 2012, 51, 6609-6622.	2.5	20
118	On the Role of two Different Cobalt(II) Species in Coenzyme B12-Dependent 2-Methyleneglutarate Mutase from <i>Clostridium barkeri</i> . <i>Biological Chemistry Hoppe-Seyler</i> , 1993, 374, 85-90.	1.4	19
119	Hinweise auf einen Fragmentierungsmechanismus bei Coenzym B ₁₂ -abhängigen Umlagerungen des Kohlenstoffgerüsts. <i>Angewandte Chemie</i> , 1995, 107, 2573-2576.	2.0	19
120	Synthesis of 13C-labeled ¹³ C-hydroxybutyrates for EPR studies with 4-hydroxybutyryl-CoA dehydratase. <i>Bioorganic Chemistry</i> , 2005, 33, 53-66.	4.1	19
121	Chemistry and Bioactivity of an Artificial Adenosylpeptide B ₁₂ Cofactor. <i>ChemBioChem</i> , 2012, 13, 2052-2055.	2.6	18
122	Structure and Function of 4-Hydroxyphenylacetate Decarboxylase and Its Cognate Activating Enzyme. <i>Journal of Molecular Microbiology and Biotechnology</i> , 2016, 26, 76-91.	1.0	18
123	Assay and purification of the adenosylcobalamin-dependent 2-methyleneglutarate mutase from <i>Clostridium barkeri</i> . <i>FEBS Journal</i> , 1989, 184, 103-107.	0.2	17
124	Dual Role of S-Adenosylmethionine (SAM) in the Methylation of sp ² -Hybridized Electrophilic Carbons. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 10492-10494.	13.8	17
125	Hydrogen Bonds Guide the Short-Lived Deoxyadenosyl Radical to the Place of Action. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 9974-9976.	13.8	17
126	Enzymatic Reactions Involving Ketyls: From a Chemical Curiosity to a General Biochemical Mechanism. <i>Biochemistry</i> , 2019, 58, 5221-5233.	2.5	17

#	ARTICLE	IF	CITATIONS
127	Rotation of the exo-Methylene Group of (R)-3-Methylitaconate Catalyzed by Coenzyme B12-Dependent 2-Methyleneglutarate Mutase from <i>Eubacterium barkeri</i> . <i>Journal of the American Chemical Society</i> , 2002, 124, 14039-14048.	13.7	16
128	Coenzyme B12-dependent enzymatic dehydration of 1,2-diols: simple reaction, complex mechanism!. <i>Journal of Porphyrins and Phthalocyanines</i> , 2004, 08, 290-300.	0.8	16
129	Experimental Study of Hydrogen Bonding Potentially Stabilizing the 5'-Deoxyadenosyl Radical from Coenzyme B ₁₂ . <i>Chemistry - A European Journal</i> , 2012, 18, 16114-16122.	3.3	16
130	Elucidation of the coenzyme binding mode of further B12-dependent enzymes using a base-off analogue of coenzyme B12. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2000, 10, 345-350.	1.8	15
131	Development of a satisfactory and general continuous assay for aminotransferases by coupling with (R)-2-hydroxyglutarate dehydrogenase. <i>Analytical Biochemistry</i> , 2012, 431, 127-131.	2.4	15
132	Structural and Functional Characterization of an Electron Transfer Flavoprotein Involved in Toluene Degradation in Strictly Anaerobic Bacteria. <i>Journal of Bacteriology</i> , 2019, 201, .	2.2	15
133	Crystal structure of 4-hydroxybutyrate CoA-transferase from <i>Clostridium aminobutyricum</i> . <i>Biological Chemistry</i> , 2009, 390, 1251-1263.	2.5	14
134	Assay of 4-hydroxybutyryl-CoA dehydratase from <i>Clostridium aminobutyricum</i> . <i>FEMS Microbiology Letters</i> , 1990, 70, 187-192.	1.8	13
135	A green 2,4-pentadienoyl-CoA reductase from <i>Clostridium aminovalericum</i> . <i>FEBS Journal</i> , 1991, 198, 263-266.	0.2	13
136	Stereochemistry of hydrogen removal from the unactivated C-3 position of 4-hydroxybutyryl-CoA catalysed by 4-hydroxybutyryl-CoA dehydratase. <i>Chemical Communications</i> , 2004, , 1210-1211.	4.1	13
137	Substrate-Induced Radical Formation in 4-Hydroxybutyryl Coenzyme A Dehydratase from <i>Clostridium aminobutyricum</i> . <i>Applied and Environmental Microbiology</i> , 2015, 81, 1071-1084.	3.1	13
138	Modulations of the reduction potentials of flavin-based electron bifurcation complexes and semiquinone stabilities are key to control directional electron flow. <i>FEBS Journal</i> , 2021, 288, 1008-1026.	4.7	13
139	ATP- and redox-induced conformational changes in the activator of the radical enzyme 2-hydroxyisocaproyl-CoA dehydratase. <i>Comptes Rendus Chimie</i> , 2007, 10, 742-747.	0.5	12
140	An Asymmetric Model for Na ⁺ -translocating Glutaconyl-CoA Decarboxylases. <i>Journal of Biological Chemistry</i> , 2009, 284, 28401-28409.	3.4	12
141	Crystal Structure and Putative Mechanism of 3-Methylitaconate- ¹³ C-isomerase from <i>Eubacterium barkeri</i> . <i>Journal of Molecular Biology</i> , 2009, 391, 609-620.	4.2	12
142	Identification and Characterization of <i>Re</i> -Citrate Synthase in <i>Syntrophus aciditrophicus</i> . <i>Journal of Bacteriology</i> , 2013, 195, 1689-1696.	2.2	12
143	Elucidating the Stereochemistry of Enzymatic Benzylsuccinate Synthesis with Chirally Labeled Toluene. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 11664-11667.	13.8	12
144	Fermentative Cyclohexane Carboxylate Formation in <i>Syntrophus aciditrophicus</i> . <i>Journal of Molecular Microbiology and Biotechnology</i> , 2016, 26, 165-179.	1.0	11

#	ARTICLE	IF	CITATIONS
145	A Complex of 2â€Hydroxyisocaproylâ€Coenzyme A Dehydratase and its Activator from <i>Clostridium difficile</i> Stabilized by Aluminium Tetrafluorideâ€Adenosine Diphosphate. ChemPhysChem, 2010, 11, 1307-1312.	2.1	10
146	Complete Genome Sequence of the Amino Acid-Fermenting <i>Clostridium propionicum</i> X2 (DSM) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.8	10
147	Spectral deconvolution of redox species in the crotonyl-CoA-dependent NADH:ferredoxin oxidoreductase from Megasphaera elsdenii. A flavin-dependent bifurcating enzyme. Archives of Biochemistry and Biophysics, 2021, 701, 108793.	3.0	10
148	Enzyme-Catalyzed Formation of Carboxybiotin as Proved by the Measurement of ¹⁵ N, ¹³ C and ¹³ C, ¹³ C Spin-Spin Coupling. Angewandte Chemie International Edition in English, 1996, 35, 2132-2133.	4.4	9
149	Mechanism-Based Inactivation of Coenzyme B12-Dependent 2-Methyleneglutarate Mutase by (Z)-Glutaconate and Buta-1,3-diene-2,3-dicarboxylate. European Journal of Inorganic Chemistry, 2006, 2006, 3622-3626.	2.0	9
150	Phenylalanine catabolism in Archaeoglobus fulgidus VC-16. Archives of Microbiology, 2013, 195, 781-797.	2.2	9
151	Rapid kinetics reveal surprising flavin chemistry in bifurcating electron transfer flavoprotein from Acidaminococcus fermentans. Journal of Biological Chemistry, 2021, 296, 100124.	3.4	9
152	Deprotonierung von Enoxy-Radikalen: theoretische BestÃtigung eines 50 Jahre alten Mechanismusvorschlags. Angewandte Chemie, 2003, 115, 1911-1915.	2.0	8
153	Formation of 3-hydroxyglutaric acid in glutaric aciduria type I: in vitro participation of medium chain acyl-CoA dehydrogenase. JIMD Reports, 2019, 47, 30-34.	1.5	8
154	Synthesis and Properties of (R)-2-Hydroxyglutaryl-1-CoA. (R)-2-Hydroxyglutaryl-5-CoA, an Erroneous Product of Glutaconate CoA-Transferase. Biological Chemistry Hoppe-Seyleyler, 1991, 372, 319-324.	1.4	7
155	3-Methylglutaconyl-CoA hydratase from Acinetobacter sp. Archives of Microbiology, 2006, 185, 297-306.	2.2	7
156	Bacterial Methanogenesis Proceeds by a Radical Mechanism. Angewandte Chemie - International Edition, 2013, 52, 8507-8509.	13.8	6
157	High resolution crystal structure of <i>Clostridium propionicum</i> Î²-alanyl-CoA:ammonia lyase, a new member of the â€hot dog foldâ€protein superfamily. Proteins: Structure, Function and Bioinformatics, 2014, 82, 2041-2053.	2.6	6
158	Two Pathways for Glutamate Biosynthesis in the Syntrophic Bacterium Syntrophus aciditrophicus. Applied and Environmental Microbiology, 2015, 81, 8434-8444.	3.1	6
159	Stereochemistry of the Methyl Group in (R)-3-Methylitaconate Derived by Rearrangement of 2-Methylideneglutarate Catalysed by a Coenzyme B12-Dependent Mutase. Helvetica Chimica Acta, 2000, 83, 2550-2561.	1.6	5
160	Response to Comment on "A 3-Hydroxypropionate/4-Hydroxybutyrate Autotrophic Carbon Dioxide Assimilation Pathway in Archaea". Science, 2008, 321, 342-342.	12.6	5
161	On the Road to Bioremediation of â€Dioxinâ€. Chemistry and Biology, 2005, 12, 723-724.	6.0	4
162	Molecular and Low-Resolution Structural Characterization of the Na ⁺ -Translocating Glutaconyl-CoA Decarboxylase From Clostridium symbiosum. Frontiers in Microbiology, 2020, 11, 480.	3.5	4

#	ARTICLE	IF	CITATIONS
163	Crystal structure of the complex between 4-hydroxybutyrate CoA-transferase from Clostridium aminobutyricum and CoA. Archives of Microbiology, 2012, 194, 157-166.	2.2	3
164	Cloning, sequencing and expression in Escherichia coli of the gene encoding component S of the coenzyme B12-dependent glutamate mutase from Clostridium cochlearium. FEMS Microbiology Letters, 1994, 118, 15-21.	1.8	3
165	Highlight: Radicals in Enzymatic Catalysis. Biological Chemistry, 2005, 386, 949-950.	2.5	2
166	Kinetic Studies of a Coenzyme B12 Dependent Reaction Catalyzed by Glutamate Mutase from Clostridium cochlearium. Advances in Enzyme Research, 2021, 09, 72-90.	1.6	1
167	Sir John Warcup Cornforth (1917-2013). Angewandte Chemie, 2014, 126, 3616-3616.	2.0	0
168	Sir John Warcup Cornforth (1917-2013). Angewandte Chemie - International Edition, 2014, 53, 3546-3546.	13.8	0
169	Stereochemischer Verlauf der enzymatischen Synthese von Benzylsuccinat mit chiral markiertem Toluol. Angewandte Chemie, 2016, 128, 11836-11839.	2.0	0
170	Poster Summaries. , 2005, , 95-107.		0
171	Glutamate mutase and 2-methyleneglutarate mutase. Methods in Enzymology, 2022, 668, 285-307.	1.0	0