

# Stephen W Ragsdale

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/9066836/stephen-w-ragsdale-publications-by-year.pdf>

**Version:** 2024-04-19

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

175  
papers

11,300  
citations

54  
h-index

103  
g-index

191  
ext. papers

12,769  
ext. citations

10.1  
avg, IF

6.63  
L-index

#	Paper	IF	Citations
175	XFEL serial crystallography reveals the room temperature structure of methyl-coenzyme M reductase.. <i>Journal of Inorganic Biochemistry</i> , <b>2022</b> , 230, 111768	4.2	2
174	Not a 'they' but a 'we': the microbiome helps promote our well-being.. <i>Journal of Biological Chemistry</i> , <b>2021</b> , 101511	5.4	
173	Heme oxygenase-2 (HO-2) binds and buffers labile ferric heme in human embryonic kidney cells.. <i>Journal of Biological Chemistry</i> , <b>2021</b> , 101549	5.4	1
172	Nickel-Sulfonate Mode of Substrate Binding for Forward and Reverse Reactions of Methyl-S-CoM Reductase Suggest a Radical Mechanism Involving Long-Range Electron Transfer. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 5481-5496	16.4	8
171	Negative-Stain Electron Microscopy Reveals Dramatic Structural Rearrangements in Ni-Fe-S-Dependent Carbon Monoxide Dehydrogenase/Acetyl-CoA Synthase. <i>Structure</i> , <b>2021</b> , 29, 43-49.e3	5.2	4
170	Regulation of protein function and degradation by heme, heme responsive motifs, and CO. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>2021</b> , 1-32	8.7	4
169	Ferric heme as a CO/NO sensor in the nuclear receptor Rev-Erb $\beta$ by coupling gas binding to electron transfer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	7
168	Heme oxygenase-2 is post-translationally regulated by heme occupancy in the catalytic site. <i>Journal of Biological Chemistry</i> , <b>2020</b> , 295, 17227-17240	5.4	15
167	Structure determination of the HgcAB complex using metagenome sequence data: insights into microbial mercury methylation. <i>Communications Biology</i> , <b>2020</b> , 3, 320	6.7	8
166	Crystallographic Characterization of the Carbonylated A-Cluster in Carbon Monoxide Dehydrogenase/Acetyl-CoA Synthase. <i>ACS Catalysis</i> , <b>2020</b> , 10, 9741-9746	13.1	8
165	C Electron Nuclear Double Resonance Spectroscopy Shows Acetyl-CoA Synthase Binds Two Substrate CO in Multiple Binding Modes and Reveals the Importance of a CO-Binding "Alcove". <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 15362-15370	16.4	5
164	The heme-regulatory motifs of heme oxygenase-2 contribute to the transfer of heme to the catalytic site for degradation. <i>Journal of Biological Chemistry</i> , <b>2020</b> , 295, 5177-5191	5.4	8
163	Oxygen and Conformation Dependent Protein Oxidation and Aggregation by Porphyrins in Hepatocytes and Light-Exposed Cells. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , <b>2019</b> , 8, 659-682.e1	7.9	13
162	Kinetics of Enzymatic Mercury Methylation at Nanomolar Concentrations Catalyzed by HgcAB. <i>Applied and Environmental Microbiology</i> , <b>2019</b> , 85,	4.8	6
161	Dynamic and structural differences between heme oxygenase-1 and -2 are due to differences in their C-terminal regions. <i>Journal of Biological Chemistry</i> , <b>2019</b> , 294, 8259-8272	5.4	13
160	Fast and Selective Photoreduction of CO to CO Catalyzed by a Complex of Carbon Monoxide Dehydrogenase, TiO <sub>2</sub> , and Ag Nanoclusters. <i>ACS Catalysis</i> , <b>2018</b> , 8, 2789-2795	13.1	55
159	Stealth reactions driving carbon fixation. <i>Science</i> , <b>2018</b> , 359, 517-518	33.3	6

158	Binding site for coenzyme A revealed in the structure of pyruvate:ferredoxin oxidoreductase from. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 3846-3851	11.5	11
157	Redox Regulation of Heme Oxygenase-2 and the Transcription Factor, Rev-Erb, Through Heme Regulatory Motifs. <i>Antioxidants and Redox Signaling</i> , <b>2018</b> , 29, 1841-1857	8.4	16
156	An unlikely heme chaperone confirmed at last. <i>Journal of Biological Chemistry</i> , <b>2018</b> , 293, 14569-14570	5.4	3
155	Production and properties of enzymes that activate and produce carbon monoxide. <i>Methods in Enzymology</i> , <b>2018</b> , 613, 297-324	1.7	6
154	X-ray Absorption Spectroscopy Reveals an Organometallic Ni-C Bond in the CO-Treated Form of Acetyl-CoA Synthase. <i>Biochemistry</i> , <b>2017</b> , 56, 1248-1260	3.2	17
153	Properties of Intermediates in the Catalytic Cycle of Oxalate Oxidoreductase and Its Suicide Inactivation by Pyruvate. <i>Biochemistry</i> , <b>2017</b> , 56, 2824-2835	3.2	5
152	The heme-regulatory motif of nuclear receptor Rev-erb $\beta$ is a key mediator of heme and redox signaling in circadian rhythm maintenance and metabolism. <i>Journal of Biological Chemistry</i> , <b>2017</b> , 292, 11280-11299	5.4	22
151	Microbiology: Deep-sea secrets of butane metabolism. <i>Nature</i> , <b>2016</b> , 539, 367-368	50.4	
150	Protonation of the Hydroperoxo Intermediate of Cytochrome P450 2B4 Is Slower in the Presence of Cytochrome P450 Reductase Than in the Presence of Cytochrome b5. <i>Biochemistry</i> , <b>2016</b> , 55, 6558-6567	3.2	13
149	High Affinity Heme Binding to a Heme Regulatory Motif on the Nuclear Receptor Rev-erb $\beta$ Leads to Its Degradation and Indirectly Regulates Its Interaction with Nuclear Receptor Corepressor. <i>Journal of Biological Chemistry</i> , <b>2016</b> , 291, 2196-222	5.4	35
148	One-carbon chemistry of oxalate oxidoreductase captured by X-ray crystallography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 320-5	11.5	11
147	Comparison of the Mechanisms of Heme Hydroxylation by Heme Oxygenases-1 and -2: Kinetic and Cryoreduction Studies. <i>Biochemistry</i> , <b>2016</b> , 55, 62-8	3.2	7
146	Exploring Hydrogenotrophic Methanogenesis: a Genome Scale Metabolic Reconstruction of Methanococcus maripaludis. <i>Journal of Bacteriology</i> , <b>2016</b> , 198, 3379-3390	3.5	27
145	The radical mechanism of biological methane synthesis by methyl-coenzyme M reductase. <i>Science</i> , <b>2016</b> , 352, 953-8	33.3	96
144	Investigations by Protein Film Electrochemistry of Alternative Reactions of Nickel-Containing Carbon Monoxide Dehydrogenase. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 13690-7	3.4	22
143	The C-terminal heme regulatory motifs of heme oxygenase-2 are redox-regulated heme binding sites. <i>Biochemistry</i> , <b>2015</b> , 54, 2709-18	3.2	21
142	The Structure of an Oxalate Oxidoreductase Provides Insight into Microbial 2-Oxoacid Metabolism. <i>Biochemistry</i> , <b>2015</b> , 54, 4112-20	3.2	12
141	Spectroscopic studies reveal that the heme regulatory motifs of heme oxygenase-2 are dynamically disordered and exhibit redox-dependent interaction with heme. <i>Biochemistry</i> , <b>2015</b> , 54, 2693-708	3.2	14

140	The reaction mechanism of methyl-coenzyme M reductase: how an enzyme enforces strict binding order. <i>Journal of Biological Chemistry</i> , <b>2015</b> , 290, 9322-34	5.4	39
139	3 Evidence for Organometallic Intermediates in Bacterial Methane Formation Involving the Nickel Coenzyme F430 <b>2015</b> , 71-110		
138	Dramatic Conformational Flexibility of Carbon Monoxide Dehydrogenase/Acetyl-CoA Synthase Revealed by Electron Microscopy. <i>FASEB Journal</i> , <b>2015</b> , 29, 573.37	0.9	
137	Structure, function, and mechanism of the nickel metalloenzymes, CO dehydrogenase, and acetyl-CoA synthase. <i>Chemical Reviews</i> , <b>2014</b> , 114, 4149-74	68.1	341
136	Protein/protein interactions in the mammalian heme degradation pathway: heme oxygenase-2, cytochrome P450 reductase, and biliverdin reductase. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 29836-58	5.4	27
135	Selective visible-light-driven CO <sub>2</sub> reduction on a p-type dye-sensitized NiO photocathode. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 13518-21	16.4	84
134	Modulation of nuclear receptor function by cellular redox poise. <i>Journal of Inorganic Biochemistry</i> , <b>2014</b> , 133, 92-103	4.2	19
133	Investigations of the efficient electrocatalytic interconversions of carbon dioxide and carbon monoxide by nickel-containing carbon monoxide dehydrogenases. <i>Metal Ions in Life Sciences</i> , <b>2014</b> , 14, 71-97	2.6	10
132	Biochemistry of methyl-coenzyme M reductase: the nickel metalloenzyme that catalyzes the final step in synthesis and the first step in anaerobic oxidation of the greenhouse gas methane. <i>Metal Ions in Life Sciences</i> , <b>2014</b> , 14, 125-45	2.6	23
131	How light-harvesting semiconductors can alter the bias of reversible electrocatalysts in favor of H <sub>2</sub> production and CO <sub>2</sub> reduction. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 15026-32	16.4	67
130	Frontiers, opportunities, and challenges in biochemical and chemical catalysis of CO <sub>2</sub> fixation. <i>Chemical Reviews</i> , <b>2013</b> , 113, 6621-58	68.1	1415
129	A unified electrocatalytic description of the action of inhibitors of nickel carbon monoxide dehydrogenase. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 2198-206	16.4	51
128	Thiol/Disulfide Redox Switches as a Regulatory Mechanism in Heme-binding Proteins. <i>Handbook of Porphyrin Science</i> , <b>2013</b> , 31-54	0.3	
127	Investigations of two bidirectional carbon monoxide dehydrogenases from <i>Carboxydothemus hydrogenoformans</i> by protein film electrochemistry. <i>ChemBioChem</i> , <b>2013</b> , 14, 1845-51	3.8	22
126	In vivo activation of methyl-coenzyme M reductase by carbon monoxide. <i>Frontiers in Microbiology</i> , <b>2013</b> , 4, 69	5.7	17
125	Crystallographic snapshots of metalloenzyme complexes involved in biological carbon dioxide sequestration. <i>FASEB Journal</i> , <b>2013</b> , 27, 98.3	0.9	
124	Conformational changes of the carbon-fixing enzyme CODH/ACS revealed by electron microscopy. <i>FASEB Journal</i> , <b>2013</b> , 27, lb236	0.9	
123	Redox, haem and CO in enzymatic catalysis and regulation. <i>Biochemical Society Transactions</i> , <b>2012</b> , 40, 501-7	5.1	10

122	Visible light-driven CO <sub>2</sub> reduction by enzyme coupled CdS nanocrystals. <i>Chemical Communications</i> , <b>2012</b> , 48, 58-60	5.8	157
121	Transient B12-dependent methyltransferase complexes revealed by small-angle X-ray scattering. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 17945-54	16.4	13
120	Radical reactions of thiamin pyrophosphate in 2-oxoacid oxidoreductases. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , <b>2012</b> , 1824, 1291-8	4	19
119	Visualizing molecular juggling within a B12-dependent methyltransferase complex. <i>Nature</i> , <b>2012</b> , 484, 265-9	50.4	54
118	CO <sub>2</sub> photoreduction at enzyme-modified metal oxide nanoparticles. <i>Energy and Environmental Science</i> , <b>2011</b> , 4, 2393	35.4	135
117	Metal centers in the anaerobic microbial metabolism of CO and CO <sub>2</sub> . <i>Metallomics</i> , <b>2011</b> , 3, 797-815	4.5	57
116	Pseudo-4D triple resonance experiments to resolve HN overlap in the backbone assignment of unfolded proteins. <i>Journal of Biomolecular NMR</i> , <b>2011</b> , 49, 69-74	3	12
115	Structural analysis of a Ni-methyl species in methyl-coenzyme M reductase from <i>Methanothermobacter marburgensis</i> . <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 5626-8	16.4	38
114	Evidence that ferredoxin interfaces with an internal redox shuttle in Acetyl-CoA synthase during reductive activation and catalysis. <i>Biochemistry</i> , <b>2011</b> , 50, 276-86	3.2	23
113	Thiol-disulfide redox dependence of heme binding and heme ligand switching in nuclear hormone receptor rev-erb{beta}. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 4392-403	5.4	78
112	Thiol/Disulfide redox switches in the regulation of heme binding to proteins. <i>Antioxidants and Redox Signaling</i> , <b>2011</b> , 14, 1039-47	8.4	34
111	Identification and characterization of oxalate oxidoreductase, a novel thiamine pyrophosphate-dependent 2-oxoacid oxidoreductase that enables anaerobic growth on oxalate. <i>Journal of Biological Chemistry</i> , <b>2010</b> , 285, 40515-24	5.4	17
110	Identification of a thiol/disulfide redox switch in the human BK channel that controls its affinity for heme and CO. <i>Journal of Biological Chemistry</i> , <b>2010</b> , 285, 20117-27	5.4	63
109	Infrared and EPR spectroscopic characterization of a Ni(I) species formed by photolysis of a catalytically competent Ni(I)-CO intermediate in the acetyl-CoA synthase reaction. <i>Biochemistry</i> , <b>2010</b> , 49, 7516-23	3.2	33
108	Efficient and clean photoreduction of CO(2) to CO by enzyme-modified TiO(2) nanoparticles using visible light. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 2132-3	16.4	354
107	Structural insight into methyl-coenzyme M reductase chemistry using coenzyme B analogues. <i>Biochemistry</i> , <b>2010</b> , 49, 7683-93	3.2	36
106	Observation of organometallic and radical intermediates formed during the reaction of methyl-coenzyme M reductase with bromoethanesulfonate. <i>Biochemistry</i> , <b>2010</b> , 49, 6866-76	3.2	15
105	Detection of organometallic and radical intermediates in the catalytic mechanism of methyl-coenzyme M reductase using the natural substrate methyl-coenzyme M and a coenzyme B substrate analogue. <i>Biochemistry</i> , <b>2010</b> , 49, 10902-11	3.2	35

104	Metal-Carbon Bonds in Enzymes and Cofactors. <i>Coordination Chemistry Reviews</i> , <b>2010</b> , 254, 1948-1949	23.2	2
103	Spectroscopic insights into axial ligation and active-site H-bonding in substrate-bound human heme oxygenase-2. <i>Journal of Biological Inorganic Chemistry</i> , <b>2010</b> , 15, 1117-27	3.7	12
102	Expanding the biological periodic table. <i>Chemistry and Biology</i> , <b>2010</b> , 17, 793-4		1
101	3:Evidence for Organometallic Intermediates in Bacterial Methane Formation Involving the Nickel Coenzyme F430. <i>Metal Ions in Life Sciences</i> , <b>2010</b> , 71-110		6
100	Catalysis by Microsomal Cytochrome P450 2B4 Proceeds via a Stable Hydroperoxo Intermediate Identified by Freeze Quench EPR. <i>FASEB Journal</i> , <b>2010</b> , 24, 512.8	0.9	
99	Heme regulatory motifs in heme oxygenase-2 form a thiol/disulfide redox switch that responds to the cellular redox state. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 20556-61	5.4	64
98	Water-gas shift reaction catalyzed by redox enzymes on conducting graphite platelets. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 14154-5	16.4	45
97	Geometric and electronic structures of the Ni(I) and methyl-Ni(III) intermediates of methyl-coenzyme M reductase. <i>Biochemistry</i> , <b>2009</b> , 48, 3146-56	3.2	44
96	Nickel-based Enzyme Systems. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 18571-5	5.4	231
95	Crystallographic snapshots of cyanide- and water-bound C-clusters from bifunctional carbon monoxide dehydrogenase/acetyl-CoA synthase. <i>Biochemistry</i> , <b>2009</b> , 48, 7432-40	3.2	62
94	The complete genome sequence of <i>Moorella thermoacetica</i> (f. <i>Clostridium thermoaceticum</i> ). <i>Environmental Microbiology</i> , <b>2008</b> , 10, 2550-73	5.2	212
93	Catalysis of methyl group transfers involving tetrahydrofolate and B(12). <i>Vitamins and Hormones</i> , <b>2008</b> , 79, 293-324	2.5	37
92	<sup>13</sup> C NMR characterization of an exchange reaction between CO and CO <sub>2</sub> catalyzed by carbon monoxide dehydrogenase. <i>Biochemistry</i> , <b>2008</b> , 47, 6770-81	3.2	41
91	Characterization of the thioether product formed from the thiolytic cleavage of the alkyl-nickel bond in methyl-coenzyme M reductase. <i>Biochemistry</i> , <b>2008</b> , 47, 2661-7	3.2	25
90	Dual roles of an essential cysteine residue in activity of a redox-regulated bacterial transcriptional activator. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 28721-8	5.4	12
89	Pulse-chase studies of the synthesis of acetyl-CoA by carbon monoxide dehydrogenase/acetyl-CoA synthase: evidence for a random mechanism of methyl and carbonyl addition. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 8384-94	5.4	45
88	Xenon in and at the end of the tunnel of bifunctional carbon monoxide dehydrogenase/acetyl-CoA synthase. <i>Biochemistry</i> , <b>2008</b> , 47, 3474-83	3.2	93
87	Acetogenesis and the Wood-Ljungdahl pathway of CO(2) fixation. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , <b>2008</b> , 1784, 1873-98	4	695

86	Enzymology of the wood-Ljungdahl pathway of acetogenesis. <i>Annals of the New York Academy of Sciences</i> , <b>2008</b> , 1125, 129-36	6.5	211
85	Characterization of alkyl-nickel adducts generated by reaction of methyl-coenzyme m reductase with brominated acids. <i>Biochemistry</i> , <b>2007</b> , 46, 11969-78	3.2	32
84	Biochemical and spectroscopic studies of the electronic structure and reactivity of a methyl-Ni species formed on methyl-coenzyme M reductase. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 11030-2	16.4	63
83	Discovery of a Biological Organometallic Reaction Sequence Involving Vitamin B12 <b>2007</b> , 167-177		1
82	Nickel and the carbon cycle. <i>Journal of Inorganic Biochemistry</i> , <b>2007</b> , 101, 1657-66	4.2	128
81	Rapid and efficient electrocatalytic CO <sub>2</sub> /CO interconversions by Carboxydotherrmus hydrogenoformans CO dehydrogenase I on an electrode. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 10328-9	16.4	154
80	Comparison of apo- and heme-bound crystal structures of a truncated human heme oxygenase-2. <i>Journal of Biological Chemistry</i> , <b>2007</b> , 282, 37624-31	5.4	48
79	Evidence that the heme regulatory motifs in heme oxygenase-2 serve as a thiol/disulfide redox switch regulating heme binding. <i>Journal of Biological Chemistry</i> , <b>2007</b> , 282, 21056-67	5.4	68
78	Structural and kinetic evidence for an extended hydrogen-bonding network in catalysis of methyl group transfer. Role of an active site asparagine residue in activation of methyl transfer by methyltransferases. <i>Journal of Biological Chemistry</i> , <b>2007</b> , 282, 6609-6618	5.4	36
77	CprK crystal structures reveal mechanism for transcriptional control of halorespiration. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 28318-25	5.4	29
76	Spectroscopic and kinetic studies of the reaction of bromopropanesulfonate with methyl-coenzyme M reductase. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 34663-76	5.4	27
75	Transcriptional activation of dehalorespiration. Identification of redox-active cysteines regulating dimerization and DNA binding. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 26382-90	5.4	26
74	Metals and their scaffolds to promote difficult enzymatic reactions. <i>Chemical Reviews</i> , <b>2006</b> , 106, 3317-3378	16.4	153
73	Spectroscopic studies of the corrinoid/iron-sulfur protein from Moorella thermoacetica. <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 5010-20	16.4	43
72	Spectroscopic and computational studies of reduction of the metal versus the tetrapyrrole ring of coenzyme F430 from methyl-coenzyme M reductase. <i>Biochemistry</i> , <b>2006</b> , 45, 11915-33	3.2	10
71	Pulsed electron paramagnetic resonance experiments identify the paramagnetic intermediates in the pyruvate ferredoxin oxidoreductase catalytic cycle. <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 3888-9	16.4	33
70	EPR spectroscopic and computational characterization of the hydroxyethylidene-thiamine pyrophosphate radical intermediate of pyruvate:ferredoxin oxidoreductase. <i>Biochemistry</i> , <b>2006</b> , 45, 7122-31	3.2	65
69	EPR and infrared spectroscopic evidence that a kinetically competent paramagnetic intermediate is formed when acetyl-coenzyme A synthase reacts with CO. <i>Journal of the American Chemical Society</i> , <b>2005</b> , 127, 13500-1	16.4	54

68	Mechanism of 4-(beta-D-ribofuranosyl)aminobenzene 5'-phosphate synthase, a key enzyme in the methanopterin biosynthetic pathway. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 39389-95	5.4	15
67	Regulation of anaerobic dehalorespiration by the transcriptional activator CprK. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 49910-8	5.4	40
66	Life with carbon monoxide. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>2004</b> , 39, 165-95	8.7	284
65	Spectroscopic and computational characterization of the nickel-containing F430 cofactor of methyl-coenzyme M reductase. <i>Journal of Biological Inorganic Chemistry</i> , <b>2004</b> , 9, 77-89	3.7	24
64	The metalloclusters of carbon monoxide dehydrogenase/acetyl-CoA synthase: a story in pictures. <i>Journal of Biological Inorganic Chemistry</i> , <b>2004</b> , 9, 511-5	3.7	100
63	Evidence that NiNi acetyl-CoA synthase is active and that the CuNi enzyme is not. <i>Biochemistry</i> , <b>2004</b> , 43, 3944-55	3.2	74
62	Nickel oxidation states of F(430) cofactor in methyl-coenzyme M reductase. <i>Journal of the American Chemical Society</i> , <b>2004</b> , 126, 4068-9	16.4	50
61	Functional copper at the acetyl-CoA synthase active site. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 3689-94	11.5	64
60	Targeting methanopterin biosynthesis to inhibit methanogenesis. <i>Applied and Environmental Microbiology</i> , <b>2003</b> , 69, 7236-41	4.8	22
59	Pyruvate ferredoxin oxidoreductase and its radical intermediate. <i>Chemical Reviews</i> , <b>2003</b> , 103, 2333-46	68.1	172
58	Rapid ligand exchange in the MCRred1 form of methyl-coenzyme M reductase. <i>Journal of the American Chemical Society</i> , <b>2003</b> , 125, 2436-43	16.4	11
57	The many faces of vitamin B12: catalysis by cobalamin-dependent enzymes. <i>Annual Review of Biochemistry</i> , <b>2003</b> , 72, 209-47	29.1	577
56	Infrared studies of carbon monoxide binding to carbon monoxide dehydrogenase/acetyl-CoA synthase from <i>Moorella thermoacetica</i> . <i>Biochemistry</i> , <b>2003</b> , 42, 14822-30	3.2	45
55	Rapid kinetic studies of acetyl-CoA synthesis: evidence supporting the catalytic intermediacy of a paramagnetic NiFeC species in the autotrophic Wood-Ljungdahl pathway. <i>Biochemistry</i> , <b>2002</b> , 41, 1807-19	3.2	76
54	A Ni-Fe-Cu center in a bifunctional carbon monoxide dehydrogenase/acetyl-CoA synthase. <i>Science</i> , <b>2002</b> , 298, 567-72	33.3	440
53	The roles of coenzyme A in the pyruvate:ferredoxin oxidoreductase reaction mechanism: rate enhancement of electron transfer from a radical intermediate to an iron-sulfur cluster. <i>Biochemistry</i> , <b>2002</b> , 41, 9921-37	3.2	47
52	X-ray absorption and resonance Raman studies of methyl-coenzyme M reductase indicating that ligand exchange and macrocycle reduction accompany reductive activation. <i>Journal of the American Chemical Society</i> , <b>2002</b> , 124, 13242-56	16.4	37
51	Redox centers of 4-hydroxybenzoyl-CoA reductase, a member of the xanthine oxidase family of molybdenum-containing enzymes. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 47853-62	5.4	29



50	Characterization of the intramolecular electron transfer pathway from 2-hydroxyphenazine to the heterodisulfide reductase from <i>Methanosarcina thermophila</i> . <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 2432-9	5.4	24
49	Characterization of the B12- and iron-sulfur-containing reductive dehalogenase from <i>Desulfitobacterium chlororespirans</i> . <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 40991-7	5.4	65
48	Characterization of a three-component vanillate O-demethylase from <i>Moorella thermoacetica</i> . <i>Journal of Bacteriology</i> , <b>2001</b> , 183, 3276-81	3.5	67
47	Acetyl coenzyme A synthesis from unnatural methylated corrinoids: requirement for "base-off" coordination at cobalt. <i>Journal of the American Chemical Society</i> , <b>2001</b> , 123, 1786-7	16.4	23
46	Cryoreduction of methyl-coenzyme M reductase: EPR characterization of forms, MCR(ox1) and MCR (red1). <i>Journal of the American Chemical Society</i> , <b>2001</b> , 123, 5853-60	16.4	53
45	Mechanistic studies of methane biogenesis by methyl-coenzyme M reductase: evidence that coenzyme B participates in cleaving the C-S bond of methyl-coenzyme M. <i>Biochemistry</i> , <b>2001</b> , 40, 12875-82	3.2	58
44	Evidence for intersubunit communication during acetyl-CoA cleavage by the multienzyme CO dehydrogenase/acetyl-CoA synthase complex from <i>Methanosarcina thermophila</i> . Evidence that the beta subunit catalyzes C-C and C-S bond cleavage. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 4699-707	5.4	20
43	Crystal structure of a methyltetrahydrofolate- and corrinoid-dependent methyltransferase. <i>Structure</i> , <b>2000</b> , 8, 817-30	5.2	62
42	The role of pyruvate ferredoxin oxidoreductase in pyruvate synthesis during autotrophic growth by the Wood-Ljungdahl pathway. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 28494-9	5.4	126
41	Channeling of carbon monoxide during anaerobic carbon dioxide fixation. <i>Biochemistry</i> , <b>2000</b> , 39, 1274-73.2	3.2	75
40	On the Assignment of Nickel Oxidation States of the Ox1, Ox2 Forms of Methylcoenzyme M Reductase. <i>Journal of the American Chemical Society</i> , <b>2000</b> , 122, 182-183	16.4	56
39	The role of an iron-sulfur cluster in an enzymatic methylation reaction. Methylation of CO dehydrogenase/acetyl-CoA synthase by the methylated corrinoid iron-sulfur protein. <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 11513-8	5.4	49
38	ENDOR Studies of Pyruvate:Ferredoxin Oxidoreductase Reaction Intermediates. <i>Journal of the American Chemical Society</i> , <b>1999</b> , 121, 3724-3729	16.4	10
37	Binding of (6R,S)-methyltetrahydrofolate to methyltransferase from <i>Clostridium thermoaceticum</i> : role of protonation of methyltetrahydrofolate in the mechanism of methyl transfer. <i>Biochemistry</i> , <b>1999</b> , 38, 5736-45	3.2	21
36	Mechanism of transfer of the methyl group from (6S)-methyltetrahydrofolate to the corrinoid/iron-sulfur protein catalyzed by the methyltransferase from <i>Clostridium thermoaceticum</i> : a key step in the Wood-Ljungdahl pathway of acetyl-CoA synthesis. <i>Biochemistry</i> , <b>1999</b> , 38, 5728-35	3.2	31
35	Nickel/Iron/Sulfur Active Sites: Hydrogenase and Co Dehydrogenase. <i>Advances in Inorganic Chemistry</i> , <b>1999</b> , 47, 283-333	2.1	41
34	Nitrate-dependent regulation of acetate biosynthesis and nitrate respiration by <i>Clostridium thermoaceticum</i> . <i>Journal of Bacteriology</i> , <b>1999</b> , 181, 1489-95	3.5	26
33	Nickel biochemistry. <i>Current Opinion in Chemical Biology</i> , <b>1998</b> , 2, 208-15	9.7	92

32	The F420H <sub>2</sub> :heterodisulfide oxidoreductase system from Methanosarcina species. 2-Hydroxyphenazine mediates electron transfer from F420H <sub>2</sub> dehydrogenase to heterodisulfide reductase. <i>FEBS Letters</i> , <b>1998</b> , 428, 295-8	3.8	34
31	Activation of methyl-SCoM reductase to high specific activity after treatment of whole cells with sodium sulfide. <i>Biochemistry</i> , <b>1998</b> , 37, 2639-47	3.2	55
30	Role of the [4Fe-4S] cluster in reductive activation of the cobalt center of the corrinoid iron-sulfur protein from Clostridium thermoaceticum during acetate biosynthesis. <i>Biochemistry</i> , <b>1998</b> , 37, 5689-98	3.2	58
29	Electrochemical and spectroscopic properties of the iron-sulfur flavoprotein from Methanosarcina thermophila. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 26462-9	5.4	14
28	Nucleotide excision repair in the third kingdom. <i>Journal of Bacteriology</i> , <b>1998</b> , 180, 5796-8	3.5	35
27	Mechanism of carbon monoxide oxidation by the carbon monoxide dehydrogenase/acetyl-CoA synthase from Clostridium thermoaceticum: kinetic characterization of the intermediates. <i>Biochemistry</i> , <b>1997</b> , 36, 11241-51	3.2	54
26	Mechanism of the Clostridium thermoaceticum pyruvate:ferredoxin oxidoreductase: evidence for the common catalytic intermediacy of the hydroxyethylthiamine pyropyrosphate radical. <i>Biochemistry</i> , <b>1997</b> , 36, 8484-94	3.2	67
25	The eastern and western branches of the Wood/Ljungdahl pathway: how the east and west were won. <i>BioFactors</i> , <b>1997</b> , 6, 3-11	6.1	67
24	Nickel-Containing Carbon Monoxide Dehydrogenase/Acetyl-CoA Synthase(,). <i>Chemical Reviews</i> , <b>1996</b> , 96, 2515-2540	68.1	281
23	Raman and Infrared Spectroscopy of Cyanide-Inhibited CO Dehydrogenase/Acetyl-CoA Synthase from Clostridium thermoaceticum: Evidence for Bimetallic Enzymatic CO Oxidation. <i>Journal of the American Chemical Society</i> , <b>1996</b> , 118, 10429-10435	16.4	13
22	Evidence that carbon monoxide is an obligatory intermediate in anaerobic acetyl-CoA synthesis. <i>Biochemistry</i> , <b>1996</b> , 35, 12119-25	3.2	44
21	Unleashing hydrogenase activity in carbon monoxide dehydrogenase/acetyl-CoA synthase and pyruvate:ferredoxin oxidoreductase. <i>Biochemistry</i> , <b>1996</b> , 35, 15814-21	3.2	56
20	Mechanistic studies of the methyltransferase from Clostridium thermoaceticum: origin of the pH dependence of the methyl group transfer from methyltetrahydrofolate to the corrinoid/iron-sulfur protein. <i>Biochemistry</i> , <b>1995</b> , 34, 15075-83	3.2	49
19	Azide Binding to Carbon Monoxide Dehydrogenase from Clostridium thermoaceticum. <i>Journal of the American Chemical Society</i> , <b>1995</b> , 117, 2939-2940	16.4	10
18	n-Butyl isocyanide: A structural and functional analog of carbon monoxide for carbon monoxide dehydrogenase from Clostridium thermoaceticum. <i>Journal of the American Chemical Society</i> , <b>1995</b> , 117, 11604-11605	16.4	13
17	Freeze-quench resonance Raman spectroscopic evidence for an Fe-CO adduct during acetyl-CoA synthesis and Ni involvement in CO oxidation by carbon monoxide dehydrogenase from Clostridium thermoaceticum. <i>Journal of the American Chemical Society</i> , <b>1995</b> , 117, 2653-2654	16.4	27
16	Binding of carbon disulfide to the site of acetyl-CoA synthesis by the nickel-iron-sulfur protein, carbon monoxide dehydrogenase, from Clostridium thermoaceticum. <i>Biochemistry</i> , <b>1994</b> , 33, 9769-77	3.2	41
15	Anaerobic pathway for conversion of the methyl group of aromatic methyl ethers to acetic acid by Clostridium thermoaceticum. <i>Biochemistry</i> , <b>1994</b> , 33, 11217-24	3.2	40

14	Kinetic evidence that carbon monoxide dehydrogenase catalyzes the oxidation of carbon monoxide and the synthesis of acetyl-CoA at separate metal clusters. <i>Journal of the American Chemical Society</i> , <b>1993</b> , 115, 11646-11647	16.4	66
13	X-ray absorption spectroscopy of the corrinoid/iron-sulfur protein involved in acetyl coenzyme A synthesis by <i>Clostridium thermoaceticum</i> . <i>Journal of the American Chemical Society</i> , <b>1993</b> , 115, 2146-2150	16.4	33
12	Characterization of the carbon monoxide binding site of carbon monoxide dehydrogenase from <i>Clostridium thermoaceticum</i> by infrared spectroscopy. <i>Journal of the American Chemical Society</i> , <b>1992</b> , 114, 8713-8715	16.4	59
11	Enzymology of the acetyl-CoA pathway of CO <sub>2</sub> fixation. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>1991</b> , 26, 261-300	8.7	197
10	Characterization of the Ni-Fe-C complex formed by reaction of carbon monoxide with the carbon monoxide dehydrogenase from <i>Clostridium thermoaceticum</i> by Q-band ENDOR. <i>Biochemistry</i> , <b>1991</b> , 30, 431-5	3.2	93
9	Mechanism of reductive activation of cobalamin-dependent methionine synthase: an electron paramagnetic resonance spectroelectrochemical study. <i>Biochemistry</i> , <b>1990</b> , 29, 1129-35	3.2	132
8	A spectroelectrochemical cell designed for low temperature electron paramagnetic resonance titration of oxygen-sensitive proteins. <i>Analytical Biochemistry</i> , <b>1989</b> , 181, 283-7	3.1	34
7	Spectroelectrochemical studies of the corrinoid/iron-sulfur protein involved in acetyl coenzyme A synthesis by <i>Clostridium thermoaceticum</i> . <i>Biochemistry</i> , <b>1989</b> , 28, 9080-7	3.2	91
6	Antioxidant Enzymes49-134		1
5	Antioxidant Molecules and Redox Cofactors11-47		2
4	Specialized Methods227-284		
3	Pathological Processes Related to Redox183-225		
2	Redox Metabolism and Life1-9		
1	Redox Regulation of Physiological Processes135-182		