

John D Lipscomb

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

160 papers	11,779 citations	60 h-index	105 g-index
162 ext. papers	12,562 ext. citations	8.7 avg, IF	6.37 L-index

#	Paper	IF	Citations
160	Dioxygen Activation by Enzymes Containing Binuclear Non-Heme Iron Clusters. <i>Chemical Reviews</i> , 1996 , 96, 2625-2658	68.1	1092
159	An Fe ₂ IVO ₂ diamond core structure for the key intermediate Q of methane monooxygenase. <i>Science</i> , 1997 , 275, 515-8	33.3	514
158	Versatility of biological non-heme Fe(II) centers in oxygen activation reactions. <i>Nature Chemical Biology</i> , 2008 , 4, 186-93	11.7	474
157	Haloalkene oxidation by the soluble methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b: mechanistic and environmental implications. <i>Biochemistry</i> , 1990 , 29, 6419-27	3.2	345
156	Biochemistry of the soluble methane monooxygenase. <i>Annual Review of Microbiology</i> , 1994 , 48, 371-99	17.5	336
155	Crystal structures of Fe ²⁺ dioxygenase superoxo, alkylperoxo, and bound product intermediates. <i>Science</i> , 2007 , 316, 453-7	33.3	313
154	A transient intermediate of the methane monooxygenase catalytic cycle containing an Fe ^{IV} Fe ^{IV} cluster. <i>Journal of the American Chemical Society</i> , 1993 , 115, 6450-6451	16.4	307
153	Large kinetic isotope effects in methane oxidation catalyzed by methane monooxygenase: evidence for C-H bond cleavage in a reaction cycle intermediate. <i>Biochemistry</i> , 1996 , 35, 10240-7	3.2	239
152	Crystal structure of the hydroxylase component of methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b. <i>Protein Science</i> , 1997 , 6, 556-68	6.3	231
151	Finding intermediates in the O ₂ activation pathways of non-heme iron oxygenases. <i>Accounts of Chemical Research</i> , 2007 , 40, 475-83	24.3	205
150	Structure of the key species in the enzymatic oxidation of methane to methanol. <i>Nature</i> , 2015 , 518, 431-4	50.4	198
149	The Roles of Putidaredoxin and P450cam in Methylene Hydroxylation. <i>Journal of Biological Chemistry</i> , 1972 , 247, 5777-5784	5.4	192
148	Electron paramagnetic resonance detectable states of cytochrome P-450cam. <i>Biochemistry</i> , 1980 , 19, 3590-9	3.2	184
147	Structure of protocatechuate 3,4-dioxygenase from <i>Pseudomonas aeruginosa</i> at 2.15 Å resolution. <i>Journal of Molecular Biology</i> , 1994 , 244, 586-608	6.5	175
146	Oxygen activation catalyzed by methane monooxygenase hydroxylase component: proton delivery during the O-O bond cleavage steps. <i>Biochemistry</i> , 1999 , 38, 4423-32	3.2	170
145	Moessbauer, EPR, and ENDOR studies of the hydroxylase and reductase components of methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b. <i>Journal of the American Chemical Society</i> , 1993 , 115, 3688-3701	16.4	167
144	Crystal structures of substrate and substrate analog complexes of protocatechuate 3,4-dioxygenase: endogenous Fe ³⁺ ligand displacement in response to substrate binding. <i>Biochemistry</i> , 1997 , 36, 10052-66	3.2	154

143	X-ray absorption spectroscopic studies of the Fe(II) active site of catechol 2,3-dioxygenase. Implications for the extradiol cleavage mechanism. <i>Biochemistry</i> , 1995 , 34, 6649-59	3.2	146
142	Mechanism of extradiol aromatic ring-cleaving dioxygenases. <i>Current Opinion in Structural Biology</i> , 2008 , 18, 644-9	8.1	141
141	Crystallographic comparison of manganese- and iron-dependent homoprotocatechuate 2,3-dioxygenases. <i>Journal of Bacteriology</i> , 2004 , 186, 1945-58	3.5	138
140	Integer-spin EPR studies of the fully reduced methane monooxygenase hydroxylase component. <i>Journal of the American Chemical Society</i> , 1990 , 112, 5861-5865	16.4	132
139	Superoxide anion production by the autoxidation of cytochrome P450cam. <i>Biochemical and Biophysical Research Communications</i> , 1974 , 61, 290-6	3.4	132
138	Trapping and spectroscopic characterization of an FeIII-superoxo intermediate from a nonheme mononuclear iron-containing enzyme. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 16788-93	11.5	124
137	Single turnover chemistry and regulation of O ₂ activation by the oxygenase component of naphthalene 1,2-dioxygenase. <i>Journal of Biological Chemistry</i> , 2001 , 276, 1945-53	5.4	124
136	Kinetics and activation thermodynamics of methane monooxygenase compound Q formation and reaction with substrates. <i>Biochemistry</i> , 2000 , 39, 13503-15	3.2	120
135	Oxidation-reduction potentials of the methane monooxygenase hydroxylase component from <i>Methylosinus trichosporium</i> OB3b. <i>Biochemistry</i> , 1994 , 33, 713-22	3.2	110
134	Role of the nonheme Fe(II) center in the biosynthesis of the plant hormone ethylene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999 , 96, 7905-9	11.5	107
133	A role of the putidaredoxin COOH-terminus in P-450cam (cytochrome m) hydroxylations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1974 , 71, 3906-10	11.5	107
132	Hydrogen peroxide-coupled cis-diol formation catalyzed by naphthalene 1,2-dioxygenase. <i>Journal of Biological Chemistry</i> , 2003 , 278, 829-35	5.4	101
131	Swapping metals in Fe- and Mn-dependent dioxygenases: evidence for oxygen activation without a change in metal redox state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 7347-52	11.5	100
130	Radical intermediates in monooxygenase reactions of rieske dioxygenases. <i>Journal of the American Chemical Society</i> , 2007 , 129, 3514-5	16.4	99
129	VTVH-MCD and DFT studies of thiolate bonding to [FeNO]7/[FeO ₂]8 complexes of isopenicillin N synthase: substrate determination of oxidase versus oxygenase activity in nonheme Fe enzymes. <i>Journal of the American Chemical Society</i> , 2007 , 129, 7427-38	16.4	98
128	Thiolate ligation of the active site Fe ²⁺ of isopenicillin N synthase derives from substrate rather than endogenous cysteine: spectroscopic studies of site-specific Cys→Ser mutated enzymes. <i>Biochemistry</i> , 1992 , 31, 4602-12	3.2	93
127	Substrate activation for O ₂ reactions by oxidized metal centers in biology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 18355-62	11.5	90
126	Gating effects of component B on oxygen activation by the methane monooxygenase hydroxylase component. <i>Journal of Biological Chemistry</i> , 1995 , 270, 24662-5	5.4	90

125	Spectroscopic studies of the coupled binuclear non-heme iron active site in the fully reduced hydroxylase component of methane monooxygenase: comparison to deoxy and deoxy-azide hemerythrin. <i>Journal of the American Chemical Society</i> , 1993 , 115, 12409-12422	16.4	90
124	Variable-temperature variable-field magnetic circular dichroism studies of the iron(II) active site in metapyrocatechase: implications for the molecular mechanism of extradiol dioxygenases. <i>Journal of the American Chemical Society</i> , 1991 , 113, 4053-4061	16.4	83
123	Structures of competitive inhibitor complexes of protocatechuate 3,4-dioxygenase: multiple exogenous ligand binding orientations within the active site. <i>Biochemistry</i> , 1997 , 36, 10039-51	3.2	81
122	Spectroscopic and electronic structure studies of protocatechuate 3,4-dioxygenase: nature of tyrosinate-Fe(III) bonds and their contribution to reactivity. <i>Journal of the American Chemical Society</i> , 2002 , 124, 602-14	16.4	80
121	Hydrogen peroxide dependent cis-dihydroxylation of benzoate by fully oxidized benzoate 1,2-dioxygenase. <i>Biochemistry</i> , 2007 , 46, 8004-16	3.2	79
120	Intermediate Q from soluble methane monooxygenase hydroxylates the mechanistic substrate probe norcarane: evidence for a stepwise reaction. <i>Journal of the American Chemical Society</i> , 2001 , 123, 11831-7	16.4	78
119	Benzoate 1,2-dioxygenase from <i>Pseudomonas putida</i> : single turnover kinetics and regulation of a two-component Rieske dioxygenase. <i>Biochemistry</i> , 2002 , 41, 9611-26	3.2	76
118	High-Energy-Resolution Fluorescence-Detected X-ray Absorption of the Q Intermediate of Soluble Methane Monooxygenase. <i>Journal of the American Chemical Society</i> , 2017 , 139, 18024-18033	16.4	75
117	Methane monooxygenase component B mutants alter the kinetics of steps throughout the catalytic cycle. <i>Biochemistry</i> , 2001 , 40, 2220-33	3.2	75
116	Crystal structure and resonance Raman studies of protocatechuate 3,4-dioxygenase complexed with 3,4-dihydroxyphenylacetate. <i>Biochemistry</i> , 1997 , 36, 11504-13	3.2	74
115	Spectroscopic and electronic structure study of the enzyme-substrate complex of intradiol dioxygenases: substrate activation by a high-spin ferric non-heme iron site. <i>Journal of the American Chemical Society</i> , 2007 , 129, 1944-58	16.4	74
114	An EXAFS study of the interaction of substrate with the ferric active site of protocatechuate 3,4-dioxygenase. <i>Biochemistry</i> , 1990 , 29, 10847-54	3.2	74
113	Solution structure of component B from methane monooxygenase derived through heteronuclear NMR and molecular modeling. <i>Biochemistry</i> , 1999 , 38, 5799-812	3.2	73
112	Electron paramagnetic resonance detection of intermediates in the enzymatic cycle of an extradiol dioxygenase. <i>Journal of the American Chemical Society</i> , 2008 , 130, 14465-7	16.4	71
111	Methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b. <i>Methods in Enzymology</i> , 1990 , 188, 191-202	1.7	71
110	Aromatic ring cleavage by homoprotocatechuate 2,3-dioxygenase: role of His200 in the kinetics of interconversion of reaction cycle intermediates. <i>Biochemistry</i> , 2005 , 44, 7175-88	3.2	70
109	A family of diiron monooxygenases catalyzing amino acid beta-hydroxylation in antibiotic biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 15391-6	11.5	69
108	Mechanistic studies of 1-aminocyclopropane-1-carboxylic acid oxidase: single turnover reaction. <i>Journal of Biological Inorganic Chemistry</i> , 2004 , 9, 171-82	3.7	69

107	Ligand Field Circular Dichroism and Magnetic Circular Dichroism Studies of Component B and Substrate Binding to the Hydroxylase Component of Methane Monooxygenase. <i>Journal of the American Chemical Society</i> , 1997 , 119, 387-395	16.4	68
106	Soluble Methane Monooxygenase. <i>Annual Review of Biochemistry</i> , 2019 , 88, 409-431	29.1	67
105	A hyperactive cobalt-substituted extradiol-cleaving catechol dioxygenase. <i>Journal of Biological Inorganic Chemistry</i> , 2011 , 16, 341-55	3.7	64
104	ENDOR studies of the ligation and structure of the non-heme iron site in ACC oxidase. <i>Journal of the American Chemical Society</i> , 2005 , 127, 7005-13	16.4	63
103	Homoprotocatechuate 2,3-dioxygenase from <i>Brevibacterium fuscum</i> . A dioxygenase with catalase activity. <i>Journal of Biological Chemistry</i> , 1996 , 271, 5524-35	5.4	63
102	Double-flow focused liquid injector for efficient serial femtosecond crystallography. <i>Scientific Reports</i> , 2017 , 7, 44628	4.9	62
101	Roles of the methane monooxygenase reductase component in the regulation of catalysis. <i>Biochemistry</i> , 1997 , 36, 5223-33	3.2	61
100	The axial tyrosinate Fe ³⁺ ligand in protocatechuate 3,4-dioxygenase influences substrate binding and product release: evidence for new reaction cycle intermediates. <i>Biochemistry</i> , 1998 , 37, 2131-44	3.2	60
99	Spectroscopic studies of 1-aminocyclopropane-1-carboxylic acid oxidase: molecular mechanism and CO(2) activation in the biosynthesis of ethylene. <i>Journal of the American Chemical Society</i> , 2002 , 124, 4602-9	16.4	60
98	Two-pronged survival strategy for the major cystic fibrosis pathogen, <i>Pseudomonas aeruginosa</i> , lacking the capacity to degrade nitric oxide during anaerobic respiration. <i>EMBO Journal</i> , 2007 , 26, 3662-72	13	58
97	An unusual peroxo intermediate of the arylamine oxygenase of the chloramphenicol biosynthetic pathway. <i>Journal of the American Chemical Society</i> , 2015 , 137, 1608-17	16.4	57
96	High-Resolution Extended X-ray Absorption Fine Structure Analysis Provides Evidence for a Longer Fe-Fe Distance in the Q Intermediate of Methane Monooxygenase. <i>Journal of the American Chemical Society</i> , 2018 , 140, 16807-16820	16.4	57
95	Structural and molecular characterization of iron-sensing hemerythrin-like domain within F-box and leucine-rich repeat protein 5 (FBXL5). <i>Journal of Biological Chemistry</i> , 2012 , 287, 7357-65	5.4	53
94	Intermediate in the O-O bond cleavage reaction of an extradiol dioxygenase. <i>Biochemistry</i> , 2008 , 47, 11168-70	3.2	53
93	Unmasking of deuterium kinetic isotope effects on the methane monooxygenase compound Q reaction by site-directed mutagenesis of component B. <i>Journal of the American Chemical Society</i> , 2001 , 123, 10421-2	16.4	53
92	MMO: P450 in wolf's clothing?. <i>Journal of Biological Inorganic Chemistry</i> , 1998 , 3, 331-336	3.7	51
91	Substrate binding to NO-ferro-naphthalene 1,2-dioxygenase studied by high-resolution Q-band pulsed 2H-ENDOR spectroscopy. <i>Journal of the American Chemical Society</i> , 2003 , 125, 7056-66	16.4	51
90	A Blue Copper oxidase from <i>Nitrosomonas europaea</i> . <i>BBA - Proteins and Proteomics</i> , 1985 , 827, 320-326		50

89	Single-turnover kinetics of homoprotocatechuate 2,3-dioxygenase. <i>Biochemistry</i> , 2004 , 43, 15141-53	3.2	49
88	Desaturation reactions catalyzed by soluble methane monooxygenase. <i>Journal of Biological Inorganic Chemistry</i> , 2001 , 6, 717-25	3.7	49
87	Cyanobacterial aldehyde deformylase oxygenation of aldehydes yields n-1 aldehydes and alcohols in addition to alkanes. <i>ACS Catalysis</i> , 2013 , 3, 2228-2238	13.1	48
86	Roles of the equatorial tyrosyl iron ligand of protocatechuate 3,4-dioxygenase in catalysis. <i>Biochemistry</i> , 2005 , 44, 11024-39	3.2	47
85	Conversion of extradiol aromatic ring-cleaving homoprotocatechuate 2,3-dioxygenase into an intradiol cleaving enzyme. <i>Journal of the American Chemical Society</i> , 2003 , 125, 11780-1	16.4	47
84	P-450 cam hydroxylase: substrate-effector and electron-transport reactions. <i>Chemico-Biological Interactions</i> , 1971 , 4, 75-8	5	47
83	Probing the mechanism of C-H activation: oxidation of methylcubane by soluble methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b. <i>Biochemistry</i> , 1999 , 38, 6178-86	3.2	45
82	Intermediate P* from soluble methane monooxygenase contains a diferrous cluster. <i>Biochemistry</i> , 2013 , 52, 4331-42	3.2	44
81	Regulation of methane monooxygenase catalysis based on size exclusion and quantum tunneling. <i>Biochemistry</i> , 2006 , 45, 1685-92	3.2	44
80	Key amino acid residues in the regulation of soluble methane monooxygenase catalysis by component B. <i>Biochemistry</i> , 2003 , 42, 5618-31	3.2	44
79	Equilibrating (L)Fe-OOAc and (L)Fe(O) Species in Hydrocarbon Oxidations by Bio-Inspired Nonheme Iron Catalysts Using HO and AcOH. <i>Journal of the American Chemical Society</i> , 2017 , 139, 17313-17326	16.4	43
78	Biochemical and spectroscopic studies on (S)-2-hydroxypropylphosphonic acid epoxidase: a novel mononuclear non-heme iron enzyme. <i>Biochemistry</i> , 2003 , 42, 11577-86	3.2	43
77	Oxy intermediates of homoprotocatechuate 2,3-dioxygenase: facile electron transfer between substrates. <i>Biochemistry</i> , 2011 , 50, 10262-74	3.2	42
76	Residues in <i>Methylosinus trichosporium</i> OB3b methane monooxygenase component B involved in molecular interactions with reduced- and oxidized-hydroxylase component: a role for the N-terminus. <i>Biochemistry</i> , 2001 , 40, 9539-51	3.2	41
75	Purification of a high specific activity methane monooxygenase hydroxylase component from a type II methanotroph. <i>Biochemical and Biophysical Research Communications</i> , 1988 , 154, 165-70	3.4	41
74	A two-electron-shell game: intermediates of the extradiol-cleaving catechol dioxygenases. <i>Journal of Biological Inorganic Chemistry</i> , 2014 , 19, 491-504	3.7	39
73	Spectroscopic studies of the anaerobic enzyme-substrate complex of catechol 1,2-dioxygenase. <i>Journal of the American Chemical Society</i> , 2005 , 127, 16882-91	16.4	38
72	Rate-Determining Attack on Substrate Precedes Rieske Cluster Oxidation during Cis-Dihydroxylation by Benzoate Dioxygenase. <i>Biochemistry</i> , 2015 , 54, 4652-64	3.2	37

71	Characterization of an O ₂ adduct of an active cobalt-substituted extradiol-cleaving catechol dioxygenase. <i>Journal of the American Chemical Society</i> , 2012 , 134, 796-9	16.4	36
70	Crystal structure of CmlI, the arylamine oxygenase from the chloramphenicol biosynthetic pathway. <i>Journal of Biological Inorganic Chemistry</i> , 2016 , 21, 589-603	3.7	35
69	Near-IR MCD of the nonheme ferrous active site in naphthalene 1,2-dioxygenase: correlation to crystallography and structural insight into the mechanism of Rieske dioxygenases. <i>Journal of the American Chemical Society</i> , 2008 , 130, 1601-10	16.4	34
68	Catalase (KatA) plays a role in protection against anaerobic nitric oxide in <i>Pseudomonas aeruginosa</i> . <i>PLoS ONE</i> , 2014 , 9, e91813	3.7	33
67	Unprecedented (E1,1-Peroxo)diferic Structure for the Ambiphilic Orange Peroxo Intermediate of the Nonheme N-Oxygenase CmlI. <i>Journal of the American Chemical Society</i> , 2017 , 139, 10472-10485	16.4	32
66	Substrate-mediated oxygen activation by homoprotocatechuate 2,3-dioxygenase: intermediates formed by a tyrosine 257 variant. <i>Biochemistry</i> , 2012 , 51, 8743-54	3.2	32
65	Structure of a dinuclear iron cluster-containing Ehydroxylase active in antibiotic biosynthesis. <i>Biochemistry</i> , 2013 , 52, 6662-71	3.2	32
64	Radiolytic reduction of methane monooxygenase dinuclear iron cluster at 77 K. EPR evidence for conformational change upon reduction or binding of component B to the diferic state. <i>Journal of Biological Chemistry</i> , 1997 , 272, 7022-6	5.4	31
63	Mössbauer Evidence for Antisymmetric Exchange in a Diferic Synthetic Complex and Diferic Methane Monooxygenase. <i>Journal of the American Chemical Society</i> , 1998 , 120, 8739-8746	16.4	31
62	Diiron monooxygenases in natural product biosynthesis. <i>Natural Product Reports</i> , 2018 , 35, 646-659	15.1	30
61	CD and MCD studies of the effects of component B variant binding on the biferrous active site of methane monooxygenase. <i>Biochemistry</i> , 2008 , 47, 8386-97	3.2	30
60	Effector proteins from P450(cam) and methane monooxygenase: lessons in tuning nature's powerful reagents. <i>Biochemical and Biophysical Research Communications</i> , 2003 , 312, 143-8	3.4	30
59	Crystal structures of alkylperoxo and anhydride intermediates in an intradiol ring-cleaving dioxygenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 388-93	11.5	29
58	Cloning, overexpression, and mutagenesis of the gene for homoprotocatechuate 2,3-dioxygenase from <i>Brevibacterium fuscum</i> . <i>Protein Expression and Purification</i> , 1997 , 10, 1-9	2	28
57	Resonance Raman studies of the protocatechuate 3,4-dioxygenase from <i>Brevibacterium fuscum</i> . <i>Biochemistry</i> , 1992 , 31, 10443-8	3.2	28
56	Protocatechuate 3,4-dioxygenase from <i>Brevibacterium fuscum</i> . <i>Methods in Enzymology</i> , 1990 , 188, 82-8	1.7	28
55	Mechanism for Six-Electron Aryl-N-Oxygenation by the Non-Heme Diiron Enzyme CmlI. <i>Journal of the American Chemical Society</i> , 2016 , 138, 7411-21	16.4	28
54	Accessibility to the active site of methane monooxygenase: the first demonstration of exogenous ligand binding to the diiron cluster. <i>Journal of the American Chemical Society</i> , 1992 , 114, 8711-8713	16.4	27

53	Cytochrome P450 cam: SS- dimer and -SH derivative reactivities. <i>Biochemical and Biophysical Research Communications</i> , 1978 , 83, 771-8	3.4	27
52	Cytochrome P-450cam substrate and effector interactions. <i>Annals of the New York Academy of Sciences</i> , 1973 , 212, 107-21	6.5	27
51	Structural basis for the role of tyrosine 257 of homoprotocatechuate 2,3-dioxygenase in substrate and oxygen activation. <i>Biochemistry</i> , 2012 , 51, 8755-63	3.2	26
50	Cyanide and nitric oxide binding to reduced protocatechuate 3,4-dioxygenase: insight into the basis for order-dependent ligand binding by intradiol catecholic dioxygenases. <i>Biochemistry</i> , 1997 , 36, 14044-55	3.2	26
49	Determination of the substrate binding mode to the active site iron of (S)-2-hydroxypropylphosphonic acid epoxidase using ¹⁷ O-enriched substrates and substrate analogues. <i>Biochemistry</i> , 2007 , 46, 12628-38	3.2	26
48	Determination of the quaternary structure of protocatechuate 3,4-dioxygenase from <i>Pseudomonas aeruginosa</i> . <i>Journal of Molecular Biology</i> , 1987 , 195, 225-7	6.5	26
47	Mechanistic insights into C-H activation from radical clock chemistry: oxidation of substituted methylcyclopropanes catalyzed by soluble methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b. <i>BBA - Proteins and Proteomics</i> , 2000 , 1543, 47-59		25
46	Conversion of [3 Fe S] into [4 Fe S] clusters in a <i>Desulfovibrio gigas</i> ferredoxin and isotopic labeling of iron-sulfur cluster subsites. <i>FEBS Letters</i> , 1982 , 138, 55-58	3.8	24
45	Methane monooxygenase hydroxylase and B component interactions. <i>Biochemistry</i> , 2006 , 45, 2913-26	3.2	23
44	High-Resolution XFEL Structure of the Soluble Methane Monooxygenase Hydroxylase Complex with its Regulatory Component at Ambient Temperature in Two Oxidation States. <i>Journal of the American Chemical Society</i> , 2020 , 142, 14249-14266	16.4	22
43	Role of the C-terminal region of the B component of <i>Methylosinus trichosporium</i> OB3b methane monooxygenase in the regulation of oxygen activation. <i>Biochemistry</i> , 2006 , 45, 1459-69	3.2	21
42	Spectroscopic studies of the effect of ligand donor strength on the Fe-NO bond intradiol dioxygenases. <i>Inorganic Chemistry</i> , 2003 , 42, 365-76	5.1	21
41	Structural Basis for Substrate and Oxygen Activation in Homoprotocatechuate 2,3-Dioxygenase: Roles of Conserved Active Site Histidine 200. <i>Biochemistry</i> , 2015 , 54, 5329-39	3.2	20
40	NRVS Studies of the Peroxide Shunt Intermediate in a Rieske Dioxygenase and Its Relation to the Native Fe O Reaction. <i>Journal of the American Chemical Society</i> , 2018 , 140, 5544-5559	16.4	20
39	Modulation of substrate binding to naphthalene 1,2-dioxygenase by rieske cluster reduction/oxidation. <i>Journal of the American Chemical Society</i> , 2003 , 125, 2034-5	16.4	20
38	Active-site structure of a hydroxylase in antibiotic biosynthesis. <i>Journal of the American Chemical Society</i> , 2011 , 133, 6938-41	16.4	19
37	Hydrogen peroxide sensitivity of catechol-2,3-dioxygenase: a cautionary note on use of xyle reporter fusions under aerobic conditions. <i>Applied and Environmental Microbiology</i> , 2000 , 66, 4119-23	4.8	19
36	Salicylate 5-Hydroxylase: Intermediates in Aromatic Hydroxylation by a Rieske Monooxygenase. <i>Biochemistry</i> , 2019 , 58, 5305-5319	3.2	17

35	CmlI N-Oxygenase Catalyzes the Final Three Steps in Chloramphenicol Biosynthesis without Dissociation of Intermediates. <i>Biochemistry</i> , 2017 , 56, 4940-4950	3.2	17
34	Spectroscopic Investigation of Reduced Protocatechuate 3,4-Dioxygenase: Charge-Induced Alterations in the Active Site Iron Coordination Environment. <i>Inorganic Chemistry</i> , 1999 , 38, 3676-3683	5.1	16
33	A Long-Lived Fe(III)-(Hydroperoxo) Intermediate in the Active H200C Variant of Homoprotocatechuate 2,3-Dioxygenase: Characterization by Mössbauer, Electron Paramagnetic Resonance, and Density Functional Theory Methods. <i>Inorganic Chemistry</i> , 2015 , 54, 10269-80	5.1	15
32	Heme Binding Biguanides Target Cytochrome P450-Dependent Cancer Cell Mitochondria. <i>Cell Chemical Biology</i> , 2017 , 24, 1259-1275.e6	8.2	15
31	Methane Monooxygenase: A Novel Biological Catalyst for Hydrocarbon Oxidations 1990 , 367-388		15
30	Site-directed mutagenesis and spectroscopic studies of the iron-binding site of (S)-2-hydroxypropylphosphonic acid epoxidase. <i>Archives of Biochemistry and Biophysics</i> , 2005 , 442, 82-91	4.1	13
29	Formate dehydrogenase from <i>Methylosinus trichosporium</i> OB3b. <i>Methods in Enzymology</i> , 1990 , 188, 331-4	1.7	13
28	Structural Studies of the OB3b Soluble Methane Monooxygenase Hydroxylase and Regulatory Component Complex Reveal a Transient Substrate Tunnel. <i>Biochemistry</i> , 2020 , 59, 2946-2961	3.2	13
27	A Carboxylate Shift Regulates Dioxygen Activation by the Diiron Nonheme α -Hydroxylase CmlA upon Binding of a Substrate-Loaded Nonribosomal Peptide Synthetase. <i>Biochemistry</i> , 2016 , 55, 5818-5831	3.2	13
26	Substrate radical intermediates in soluble methane monooxygenase. <i>Biochemical and Biophysical Research Communications</i> , 2005 , 338, 254-61	3.4	12
25	Basis for specificity in methane monooxygenase and related non-heme iron-containing biological oxidation catalysts. <i>Journal of Molecular Catalysis A</i> , 2006 , 251, 54-65		12
24	Preliminary crystallographic study of protocatechuate 3,4-dioxygenase from <i>Brevibacterium fuscum</i> . <i>Journal of Molecular Biology</i> , 1994 , 236, 374-6	6.5	12
23	Nuclear Resonance Vibrational Spectroscopy Definition of O Intermediates in an Extradiol Dioxygenase: Correlation to Crystallography and Reactivity. <i>Journal of the American Chemical Society</i> , 2018 , 140, 16495-16513	16.4	12
22	Use of Isotopes and Isotope Effects for Investigations of Diiron Oxygenase Mechanisms. <i>Methods in Enzymology</i> , 2017 , 596, 239-290	1.7	11
21	Small-Molecule Tunnels in Metalloenzymes Viewed as Extensions of the Active Site. <i>Accounts of Chemical Research</i> , 2021 , 54, 2185-2195	24.3	10
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15	Preliminary crystallographic analysis of methane mono-oxygenase hydroxylase from <i>Methylosinus trichosporium</i> OB3b. <i>Journal of Molecular Biology</i> , 1994 , 236, 379-81	6.5	5
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4	Probing the Reaction Mechanism of Protocatechuate 3,4-Dioxygenase with X-Ray Crystallography	1998 , 282-288	1
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2	Oxygenation by Methane Monooxygenase: Oxygen Activation and Component Interactions	1991 , 39-53	1
1	6-phenylpyrrolocytosine as a fluorescent probe to examine nucleotide flipping catalyzed by a DNA repair protein. <i>Biopolymers</i> , 2021 , 112, e23405	2.2	0