John D Lipscomb

List of Publications by Year
in descending order

159 papers	13,520 citations	17440 63 h-index	23533 111 g-index
162 all docs	162 docs citations	162 times ranked	6127 citing authors

#	Article	IF	Citations
1	Dioxygen Activation by Enzymes Containing Binuclear Non-Heme Iron Clusters. Chemical Reviews, 1996, 96, 2625-2658.	47.7	1,211
2	An Fe2IVO2 Diamond Core Structure for the Key Intermediate Q of Methane Monooxygenase. Science, 1997, 275, 515-518.	12.6	583
3	Versatility of biological non-heme Fe(II) centers in oxygen activation reactions. Nature Chemical Biology, 2008, 4, 186-193.	8.0	551
4	Haloalkene oxidation by the soluble methane monooxygenase from Methylosinus trichosporium OB3b: mechanistic and environmental implications. Biochemistry, 1990, 29, 6419-6427.	2.5	420
5	Biochemistry of the Soluble Methane Monooxygenase. Annual Review of Microbiology, 1994, 48, 371-399.	7.3	393
6	Crystal Structures of Fe2+ Dioxygenase Superoxo, Alkylperoxo, and Bound Product Intermediates. Science, 2007, 316, 453-457.	12.6	357
7	A transient intermediate of the methane monooxygenase catalytic cycle containing an FeIVFeIV cluster. Journal of the American Chemical Society, 1993, 115, 6450-6451.	13.7	337
8	Crystal structure of the hydroxylase component of methane monooxygenase from<i>Methylosinus trichosporium</i>OB3b. Protein Science, 1997, 6, 556-568.	7.6	265
9	Large Kinetic Isotope Effects in Methane Oxidation Catalyzed by Methane Monooxygenase:Â Evidence for Câ^'H Bond Cleavage in a Reaction Cycle Intermediateâ€. Biochemistry, 1996, 35, 10240-10247.	2.5	261
10	Structure of the key species in the enzymatic oxidation of methane to methanol. Nature, 2015, 518, 431-434.	27.8	241
11	Finding Intermediates in the O2 Activation Pathways of Non-Heme Iron Oxygenases. Accounts of Chemical Research, 2007, 40, 475-483.	15.6	229
12	The Roles of Putidaredoxin and P450cam in Methylene Hydroxylation. Journal of Biological Chemistry, 1972, 247, 5777-5784.	3.4	214
13	Electron paramagnetic resonance detectable states of cytochrome P-450cam. Biochemistry, 1980, 19, 3590-3599.	2.5	196
14	Structure of Protocatechuate 3,4-Dioxygenase from Pseudomonas aeruginosa at 2.15 Ã… Resolution. Journal of Molecular Biology, 1994, 244, 586-608.	4.2	195
15	Oxygen Activation Catalyzed by Methane Monooxygenase Hydroxylase Component:Â Proton Delivery during the Oâ^'O Bond Cleavage Stepsâ€. Biochemistry, 1999, 38, 4423-4432.	2.5	186
16	Moessbauer, EPR, and ENDOR studies of the hydroxylase and reductase components of methane monooxygenase from Methylosinus trichosporium OB3b. Journal of the American Chemical Society, 1993, 115, 3688-3701.	13.7	185
17	Crystal Structures of Substrate and Substrate Analog Complexes of Protocatechuate 3,4-Dioxygenase:Â Endogenous Fe3+Ligand Displacement in Response to Substrate Bindingâ€,â€¡. Biochemistry, 1997, 36, 10052-10066.	2.5	174
18	Mechanism of extradiol aromatic ring-cleaving dioxygenases. Current Opinion in Structural Biology, 2008, 18, 644-649.	5.7	171

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19	X-ray absorption spectroscopic studies of the Fe(II) active site of catechol 2,3-dioxygenase. Implications for the extradiol cleavage mechanism. Biochemistry, 1995, 34, 6649-6659.	2.5	162
20	Crystallographic Comparison of Manganese- and Iron-Dependent Homoprotocatechuate 2,3-Dioxygenases. Journal of Bacteriology, 2004, 186, 1945-1958.	2.2	152
21	Superoxide anion production by the autoxidation of cytochrome P450cam. Biochemical and Biophysical Research Communications, 1974, 61, 290-296.	2.1	146
22	Integer-spin EPR studies of the fully reduced methane monooxygenase hydroxylase component. Journal of the American Chemical Society, 1990, 112, 5861-5865.	13.7	145
23	Single Turnover Chemistry and Regulation of O2Activation by the Oxygenase Component of Naphthalene 1,2-Dioxygenase. Journal of Biological Chemistry, 2001, 276, 1945-1953.	3.4	143
24	Trapping and spectroscopic characterization of an Fe ^{III} -superoxo intermediate from a nonheme mononuclear iron-containing enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16788-16793.	7.1	141
25	Kinetics and Activation Thermodynamics of Methane Monooxygenase Compound Q Formation and Reaction with Substrates. Biochemistry, 2000, 39, 13503-13515.	2.5	133
26	Soluble Methane Monooxygenase. Annual Review of Biochemistry, 2019, 88, 409-431.	11.1	124
27	Oxidation-reduction potentials of the methane monooxygenase hydroxylase component from Methylosinus trichosporium OB3b. Biochemistry, 1994, 33, 713-722.	2.5	119
28	Hydrogen Peroxide-coupled cis-Diol Formation Catalyzed by Naphthalene 1,2-Dioxygenase. Journal of Biological Chemistry, 2003, 278, 829-835.	3.4	117
29	A Role of the Putidaredoxin COOH-terminus in P-450cam (Cytochrome m) Hydroxylations. Proceedings of the National Academy of Sciences of the United States of America, 1974, 71, 3906-3910.	7.1	114
30	Role of the nonheme Fe(II) center in the biosynthesis of the plant hormone ethylene. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 7905-7909.	7.1	111
31	Swapping metals in Fe- and Mn-dependent dioxygenases: Evidence for oxygen activation without a change in metal redox state. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 7347-7352.	7.1	109
32	VTVH-MCD and DFT Studies of Thiolate Bonding to {FeNO}7/{FeO2}8Complexes of IsopenicillinNSynthase:Â Substrate Determination of Oxidase versus Oxygenase Activity in Nonheme Fe Enzymes. Journal of the American Chemical Society, 2007, 129, 7427-7438.	13.7	105
33	Radical Intermediates in Monooxygenase Reactions of Rieske Dioxygenases. Journal of the American Chemical Society, 2007, 129, 3514-3515.	13.7	105
34	Thiolate ligation of the active site iron(II) of isopenicillin N synthase derives from substrate rather than endogenous cysteine: spectroscopic studies of site-specific Cys .fwdarw. Ser mutated enzymes. Biochemistry, 1992, 31, 4602-4612.	2.5	104
35	Gating Effects of Component B on Oxygen Activation by the Methane Monooxygenase Hydroxylase Component. Journal of Biological Chemistry, 1995, 270, 24662-24665.	3.4	104
36	Substrate activation for O2 reactions by oxidized metal centers in biology. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18355-18362.	7.1	100

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37	High-Energy-Resolution Fluorescence-Detected X-ray Absorption of the Q Intermediate of Soluble Methane Monooxygenase. Journal of the American Chemical Society, 2017, 139, 18024-18033.	13.7	98
38	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. Journal of the American Chemical Society, 1993, 115, 12409-12422.	13.7	96
39	Structures of Competitive Inhibitor Complexes of Protocatechuate 3,4-Dioxygenase:Â Multiple Exogenous Ligand Binding Orientations within the Active Siteâ€,â€¡. Biochemistry, 1997, 36, 10039-10051.	2.5	92
40	Variable-temperature variable-field magnetic circular dichroism studies of the iron(II) active site in metapyrocatechase: implications for the molecular mechanism of extradiol dioxygenases. Journal of the American Chemical Society, 1991, 113, 4053-4061.	13.7	90
41	Benzoate 1,2-Dioxygenase fromPseudomonas putida:Â Single Turnover Kinetics and Regulation of a Two-Component Rieske Dioxygenaseâ€. Biochemistry, 2002, 41, 9611-9626.	2.5	90
42	Double-flow focused liquid injector for efficient serial femtosecond crystallography. Scientific Reports, 2017, 7, 44628.	3.3	90
43	[31] Methane monooxygenase from Methylosinus trichosporium OB3b. Methods in Enzymology, 1990, 188, 191-202.	1.0	89
44	Spectroscopic and Electronic Structure Studies of Protocatechuate 3,4-Dioxygenase:â€‰ Nature of Tyrosinateâ^'Fe(III) Bonds and Their Contribution to Reactivity. Journal of the American Chemical Society, 2002, 124, 602-614.	13.7	88
45	Hydrogen Peroxide Dependent cis-Dihydroxylation of Benzoate by Fully Oxidized Benzoate 1,2-Dioxygenase. Biochemistry, 2007, 46, 8004-8016.	2.5	88
46	Crystal Structure and Resonance Raman Studies of Protocatechuate 3,4- Dioxygenase Complexed with 3,4-Dihydroxyphenylacetateâ€,â€¡. Biochemistry, 1997, 36, 11504-11513.	2.5	86
47	Intermediate Q from Soluble Methane Monooxygenase Hydroxylates the Mechanistic Substrate Probe Norcarane:Â Evidence for a Stepwise Reaction. Journal of the American Chemical Society, 2001, 123, 11831-11837.	13.7	85
48	An EXAFS study of the interaction of substrate with the ferric active site of protocatechuate 3,4-dioxygenase. Biochemistry, 1990, 29, 10847-10854.	2.5	84
49	Methane Monooxygenase Component B Mutants Alter the Kinetics of Steps Throughout the Catalytic Cycle. Biochemistry, 2001, 40, 2220-2233.	2.5	83
50	High-Resolution Extended X-ray Absorption Fine Structure Analysis Provides Evidence for a Longer FeÂ·Â·Â·Fe Distance in the Q Intermediate of Methane Monooxygenase. Journal of the American Chemical Society, 2018, 140, 16807-16820.	13.7	82
51	Spectroscopic and Electronic Structure Study of the Enzymeâ^'Substrate Complex of Intradiol Dioxygenases:Â Substrate Activation by a High-Spin Ferric Non-heme Iron Site. Journal of the American Chemical Society, 2007, 129, 1944-1958.	13.7	81
52	Solution Structure of Component B from Methane Monooxygenase Derived through Heteronuclear NMR and Molecular Modelingâ€,â€¡. Biochemistry, 1999, 38, 5799-5812.	2.5	79
53	A family of diiron monooxygenases catalyzing amino acid beta-hydroxylation in antibiotic biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15391-15396.	7.1	79
54	Electron Paramagnetic Resonance Detection of Intermediates in the Enzymatic Cycle of an Extradiol Dioxygenase. Journal of the American Chemical Society, 2008, 130, 14465-14467.	13.7	77

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55	Ligand Field Circular Dichroism and Magnetic Circular Dichroism Studies of Component B and Substrate Binding to the Hydroxylase Component of Methane Monooxygenase. Journal of the American Chemical Society, 1997, 119, 387-395.	13.7	75
56	Aromatic Ring Cleavage by Homoprotocatechuate 2,3-Dioxygenase:Â Role of His200 in the Kinetics of Interconversion of Reaction Cycle Intermediatesâ€. Biochemistry, 2005, 44, 7175-7188.	2.5	73
57	Mechanistic studies of 1-aminocyclopropane-1-carboxylic acid oxidase: single turnover reaction. Journal of Biological Inorganic Chemistry, 2004, 9, 171-182.	2.6	72
58	An Unusual Peroxo Intermediate of the Arylamine Oxygenase of the Chloramphenicol Biosynthetic Pathway. Journal of the American Chemical Society, 2015, 137, 1608-1617.	13.7	71
59	Roles of the Methane Monooxygenase Reductase Component in the Regulation of Catalysis. Biochemistry, 1997, 36, 5223-5233.	2.5	70
60	ENDOR Studies of the Ligation and Structure of the Non-Heme Iron Site in ACC Oxidase. Journal of the American Chemical Society, 2005, 127, 7005-7013.	13.7	70
61	Homoprotocatechuate 2,3-Dioxygenase from Brevibacterium fuscum. Journal of Biological Chemistry, 1996, 271, 5524-5535.	3.4	69
62	A â€˜blueâ€™ copper oxidase from Nitrosomonas europaea. BBA - Proteins and Proteomics, 1985, 827, 320-326.	2.1	67
63	The Axial Tyrosinate Fe3+Ligand in Protocatechuate 3,4-Dioxygenase Influences Substrate Binding and Product Release:Â Evidence for New Reaction Cycle Intermediatesâ€,â€¡. Biochemistry, 1998, 37, 2131-2144.	2.5	67
64	A hyperactive cobalt-substituted extradiol-cleaving catechol dioxygenase. Journal of Biological Inorganic Chemistry, 2011, 16, 341-355.	2.6	65
65	Spectroscopic Studies of 1-Aminocyclopropane-1-carboxylic Acid Oxidase:â€‰ Molecular Mechanism and CO2 Activation in the Biosynthesis of Ethylene. Journal of the American Chemical Society, 2002, 124, 4602-4609.	13.7	64
66	Two-pronged survival strategy for the major cystic fibrosis pathogen, Pseudomonas aeruginosa, lacking the capacity to degrade nitric oxide during anaerobic respiration. EMBO Journal, 2007, 26, 3662-3672.	7.8	63
67	Unmasking of Deuterium Kinetic Isotope Effects on the Methane Monooxygenase Compound Q Reaction by Site-Directed Mutagenesis of Component B. Journal of the American Chemical Society, 2001, 123, 10421-10422.	13.7	59
68	Substrate Binding to NOâˆ'Ferroâˆ'Naphthalene 1,2-Dioxygenase Studied by High-Resolution Q-Band Pulsed2H-ENDOR Spectroscopy. Journal of the American Chemical Society, 2003, 125, 7056-7066.	13.7	59
69	Structural and Molecular Characterization of Iron-sensing Hemerythrin-like Domain within F-box and Leucine-rich Repeat Protein 5 (FBXL5). Journal of Biological Chemistry, 2012, 287, 7357-7365.	3.4	59
70	Intermediate in the Oâˆ'O Bond Cleavage Reaction of an Extradiol Dioxygenase[,]. Biochemistry, 2008, 47, 11168-11170.	2.5	58
71	Cyanobacterial Aldehyde Deformylase Oxygenation of Aldehydes Yields <i>n</i> â€“ 1 Aldehydes and Alcohols in Addition to Alkanes. ACS Catalysis, 2013, 3, 2228-2238.	11.2	58
72	MMO: P450 in wolf's clothing?. Journal of Biological Inorganic Chemistry, 1998, 3, 331-336.	2.6	57

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73	Single-Turnover Kinetics of Homoprotocatechuate 2,3-Dioxygenaseâ€. Biochemistry, 2004, 43, 15141-15153.	2.5	54
74	Desaturation reactions catalyzed by soluble methane monooxygenase. Journal of Biological Inorganic Chemistry, 2001, 6, 717-725.	2.6	53
75	Probing the Mechanism of Câˆ’H Activation:Â Oxidation of Methylcubane by Soluble Methane Monooxygenase fromMethylosinus trichosporiumOB3bâ€. Biochemistry, 1999, 38, 6178-6186.	2.5	51
76	Unprecedented (Î¼-1,1-Peroxo)diferric Structure for the Ambiphilic Orange Peroxo Intermediate of the Nonheme <i>N</i>-Oxygenase CmlI. Journal of the American Chemical Society, 2017, 139, 10472-10485.	13.7	51
77	P-450cam hydroxylase: substrate-effector and electron-transport reactions. Chemico-Biological Interactions, 1971, 4, 75-78.	4.0	50
78	Roles of the Equatorial Tyrosyl Iron Ligand of Protocatechuate 3,4-Dioxygenase in Catalysisâ€,â€¡. Biochemistry, 2005, 44, 11024-11039.	2.5	50
79	Residues inMethylosinus trichosporiumOB3b Methane Monooxygenase Component B Involved in Molecular Interactions with Reduced- and Oxidized-Hydroxylase Component:Â A Role for the N-Terminusâ€. Biochemistry, 2001, 40, 9539-9551.	2.5	49
80	Key Amino Acid Residues in the Regulation of Soluble Methane Monooxygenase Catalysis by Component Bâ€. Biochemistry, 2003, 42, 5618-5631.	2.5	49
81	Intermediate P* from Soluble Methane Monooxygenase Contains a Diferrous Cluster. Biochemistry, 2013, 52, 4331-4342.	2.5	49
82	Conversion of Extradiol Aromatic Ring-Cleaving Homoprotocatechuate 2,3-Dioxygenase into an Intradiol Cleaving Enzyme. Journal of the American Chemical Society, 2003, 125, 11780-11781.	13.7	48
83	Oxy Intermediates of Homoprotocatechuate 2,3-Dioxygenase: Facile Electron Transfer between Substrates. Biochemistry, 2011, 50, 10262-10274.	2.5	48
84	Equilibrating (L)Fe^{III}â€“OOAc and (L)Fe^V(O) Species in Hydrocarbon Oxidations by Bio-Inspired Nonheme Iron Catalysts Using H₂O₂ and AcOH. Journal of the American Chemical Society, 2017, 139, 17313-17326.	13.7	48
85	Purification of a high specific activity methane monooxygenase hydroxylase component from a type II methanotroph. Biochemical and Biophysical Research Communications, 1988, 154, 165-170.	2.1	47
86	Regulation of Methane Monooxygenase Catalysis Based on Size Exclusion and Quantum Tunnelingâ€. Biochemistry, 2006, 45, 1685-1692.	2.5	46
87	Biochemical and Spectroscopic Studies on (S)-2-Hydroxypropylphosphonic Acid Epoxidase:Â A Novel Mononuclear Non-heme Iron Enzymeâ€. Biochemistry, 2003, 42, 11577-11586.	2.5	45
88	Rate-Determining Attack on Substrate Precedes Rieske Cluster Oxidation during Cis-Dihydroxylation by Benzoate Dioxygenase. Biochemistry, 2015, 54, 4652-4664.	2.5	45
89	Diiron monooxygenases in natural product biosynthesis. Natural Product Reports, 2018, 35, 646-659.	10.3	44
90	Characterization of an O₂ Adduct of an Active Cobalt-Substituted Extradiol-Cleaving Catechol Dioxygenase. Journal of the American Chemical Society, 2012, 134, 796-799.	13.7	42

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91	Crystal structure of CmlI, the arylamine oxygenase from the chloramphenicol biosynthetic pathway. Journal of Biological Inorganic Chemistry, 2016, 21, 589-603.	2.6	42
92	A two-electron-shell game: intermediates of the extradiol-cleaving catechol dioxygenases. Journal of Biological Inorganic Chemistry, 2014, 19, 491-504.	2.6	41
93	High-Resolution XFEL Structure of the Soluble Methane Monooxygenase Hydroxylase Complex with its Regulatory Component at Ambient Temperature in Two Oxidation States. Journal of the American Chemical Society, 2020, 142, 14249-14266.	13.7	41
94	Catalase (KatA) Plays a Role in Protection against Anaerobic Nitric Oxide in Pseudomonas aeruginosa. PLoS ONE, 2014, 9, e91813.	2.5	40
95	[14] Protocatechuate 3,4-dioxygenase from Brevibacterium fuscum. Methods in Enzymology, 1990, 188, 82-88.	1.0	39
96	Spectroscopic Studies of the Anaerobic Enzymeâ˘'Substrate Complex of Catechol 1,2-Dioxygenase. Journal of the American Chemical Society, 2005, 127, 16882-16891.	13.7	39
97	Near-IR MCD of the Nonheme Ferrous Active Site in Naphthalene 1,2-Dioxygenase:â€‰ Correlation to Crystallography and Structural Insight into the Mechanism of Rieske Dioxygenases. Journal of the American Chemical Society, 2008, 130, 1601-1610.	13.7	39
98	Structure of a Dinuclear Iron Cluster-Containing Î²-Hydroxylase Active in Antibiotic Biosynthesis. Biochemistry, 2013, 52, 6662-6671.	2.5	38
99	Crystal structures of alkylperoxo and anhydride intermediates in an intradiol ring-cleaving dioxygenase. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 388-393.	7.1	37
100	Mechanism for Six-Electron Aryl-N-Oxygenation by the Non-Heme Diiron Enzyme CmlI. Journal of the American Chemical Society, 2016, 138, 7411-7421.	13.7	37
101	Radiolytic Reduction of Methane Monooxygenase Dinuclear Iron Cluster at 77 K. Journal of Biological Chemistry, 1997, 272, 7022-7026.	3.4	36
102	MÃ¶ssbauer Evidence for Antisymmetric Exchange in a Diferric Synthetic Complex and Diferric Methane Monooxygenase. Journal of the American Chemical Society, 1998, 120, 8739-8746.	13.7	36
103	Substrate-Mediated Oxygen Activation by Homoprotocatechuate 2,3-Dioxygenase: Intermediates Formed by a Tyrosine 257 Variant. Biochemistry, 2012, 51, 8743-8754.	2.5	35
104	Heme Binding Biguanides Target Cytochrome P450-Dependent Cancer Cell Mitochondria. Cell Chemical Biology, 2017, 24, 1259-1275.e6.	5.2	35
105	CYTOCHROME P-450***amSUBSTRATE AND EFFECTOR INTERACTIONS. Annals of the New York Academy of Sciences, 1973, 212, 107-121.	3.8	32
106	Resonance Raman studies of the protocatechuate 3,4-dioxygenase from Brevibacterium fuscum. Biochemistry, 1992, 31, 10443-10448.	2.5	32
107	Structural Basis for the Role of Tyrosine 257 of Homoprotocatechuate 2,3-Dioxygenase in Substrate and Oxygen Activation. Biochemistry, 2012, 51, 8755-8763.	2.5	32
108	Effector proteins from P450cam and methane monooxygenase: lessons in tuning natureâ€™s powerful reagents. Biochemical and Biophysical Research Communications, 2003, 312, 143-148.	2.1	31

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109	CD and MCD Studies of the Effects of Component B Variant Binding on the Biferrous Active Site of Methane Monooxygenase. Biochemistry, 2008, 47, 8386-8397.	2.5	31
110	NRVS Studies of the Peroxide Shunt Intermediate in a Rieske Dioxygenase and Its Relation to the Native Fe^{II} O₂ Reaction. Journal of the American Chemical Society, 2018, 140, 5544-5559.	13.7	31
111	Cytochrome P450cam: SS- dimer and -SH derivative reactivities. Biochemical and Biophysical Research Communications, 1978, 83, 771-778.	2.1	30
112	Determination of the quaternary structure of protocatechuate 3,4-dioxygenase from Pseudomonas aeruginosa. Journal of Molecular Biology, 1987, 195, 225-227.	4.2	30
113	Accessibility to the active site of methane monooxygenase: the first demonstration of exogenous ligand binding to the diiron cluster. Journal of the American Chemical Society, 1992, 114, 8711-8713.	13.7	30
114	Cloning, Overexpression, and Mutagenesis of the Gene for Homoprotocatechuate 2,3-Dioxygenase fromBrevibacterium fuscum. Protein Expression and Purification, 1997, 10, 1-9.	1.3	30
115	Cyanide and Nitric Oxide Binding to Reduced Protocatechuate 3,4-Dioxygenase:Â Insight into the Basis for Order-Dependent Ligand Binding by Intradiol Catecholic Dioxygenasesâ€. Biochemistry, 1997, 36, 14044-14055.	2.5	29
116	Mechanistic insights into Câ€"H activation from radical clock chemistry: oxidation of substituted methylcyclopropanes catalyzed by soluble methane monooxygenase from Methylosinus trichosporium OB3b. BBA - Proteins and Proteomics, 2000, 1543, 47-59.	2.1	29
117	Modulation of Substrate Binding to Naphthalene 1,2-Dioxygenase by Rieske Cluster Reduction/Oxidation. Journal of the American Chemical Society, 2003, 125, 2034-2035.	13.7	29
118	Conversion of [3 Fe-3 S] into [4 Fe-4 S] clusters in a Desulfovibrio gigas ferredoxin and isotopic labeling of iron-sulfur cluster subsites. FEBS Letters, 1982, 138, 55-58.	2.8	28
119	Determination of the Substrate Binding Mode to the Active Site Iron of (S)-2-Hydroxypropylphosphonic Acid Epoxidase Using 17O-Enriched Substrates and Substrate Analogues. Biochemistry, 2007, 46, 12628-12638.	2.5	28
120	Small-Molecule Tunnels in Metalloenzymes Viewed as Extensions of the Active Site. Accounts of Chemical Research, 2021, 54, 2185-2195.	15.6	28
121	Structural Basis for Substrate and Oxygen Activation in Homoprotocatechuate 2,3-Dioxygenase: Roles of Conserved Active Site Histidine 200. Biochemistry, 2015, 54, 5329-5339.	2.5	26
122	Methane Monooxygenase Hydroxylase and B Component Interactionsâ€. Biochemistry, 2006, 45, 2913-2926.	2.5	25
123	Role of the C-Terminal Region of the B Component ofMethylosinus trichosporiumOB3b Methane Monooxygenase in the Regulation of Oxygen Activationâ€. Biochemistry, 2006, 45, 1459-1469.	2.5	24
124	Salicylate 5-Hydroxylase: Intermediates in Aromatic Hydroxylation by a Rieske Monooxygenase. Biochemistry, 2019, 58, 5305-5319.	2.5	24
125	Nuclear Resonance Vibrational Spectroscopic Definition of the Fe(IV)₂ Intermediate Q in Methane Monooxygenase and Its Reactivity. Journal of the American Chemical Society, 2021, 143, 16007-16029.	13.7	24
126	[49] Formate dehydrogenase from Methylosinus trichosporium OB3b. Methods in Enzymology, 1990, 188, 331-334.	1.0	23

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127	Spectroscopic Studies of the Effect of Ligand Donor Strength on the Feâ^'NO Bond in Intradiol Dioxygenases. Inorganic Chemistry, 2003, 42, 365-376.	4.0	23
128	Hydrogen Peroxide Sensitivity of Catechol-2,3-Dioxygenase: a Cautionary Note on Use of xylE Reporter Fusions under Aerobic Conditions. Applied and Environmental Microbiology, 2000, 66, 4119-4123.	3.1	22
129	Active-Site Structure of a Î²-Hydroxylase in Antibiotic Biosynthesis. Journal of the American Chemical Society, 2011, 133, 6938-6941.	13.7	21
130	A Carboxylate Shift Regulates Dioxygen Activation by the Diiron Nonheme Î²-Hydroxylase CmlA upon Binding of a Substrate-Loaded Nonribosomal Peptide Synthetase. Biochemistry, 2016, 55, 5818-5831.	2.5	21
131	CmlI <i>N</i>-Oxygenase Catalyzes the Final Three Steps in Chloramphenicol Biosynthesis without Dissociation of Intermediates. Biochemistry, 2017, 56, 4940-4950.	2.5	21
132	Structural Studies of the <i>Methylosinus trichosporium</i> OB3b Soluble Methane Monooxygenase Hydroxylase and Regulatory Component Complex Reveal a Transient Substrate Tunnel. Biochemistry, 2020, 59, 2946-2961.	2.5	19
133	Preliminary Crystallographic Study of Protocatechuate 3,4-Dioxygenase from Brevibacterium fuscum. Journal of Molecular Biology, 1994, 236, 374-376.	4.2	18
134	Spectroscopic Investigation of Reduced Protocatechuate 3,4-Dioxygenase:â€‰ Charge-Induced Alterations in the Active Site Iron Coordination Environment. Inorganic Chemistry, 1999, 38, 3676-3683.	4.0	18
135	A Long-Lived Fe^{III}-(Hydroperoxo) Intermediate in the Active H200C Variant of Homoprotocatechuate 2,3-Dioxygenase: Characterization by MÃ¶ssbauer, Electron Paramagnetic Resonance, and Density Functional Theory Methods. Inorganic Chemistry, 2015, 54, 10269-10280.	4.0	17
136	Methane Monooxygenase: A Novel Biological Catalyst for Hydrocarbon Oxidations. , 1990, , 367-388.		16
137	Basis for specificity in methane monooxygenase and related non-heme iron-containing biological oxidation catalysts. Journal of Molecular Catalysis A, 2006, 251, 54-65.	4.8	15
138	Nuclear Resonance Vibrational Spectroscopy Definition of O₂ Intermediates in an Extradiol Dioxygenase: Correlation to Crystallography and Reactivity. Journal of the American Chemical Society, 2018, 140, 16495-16513.	13.7	14
139	Site-directed mutagenesis and spectroscopic studies of the iron-binding site of (S)-2-hydroxypropylphosphonic acid epoxidase. Archives of Biochemistry and Biophysics, 2005, 442, 82-91.	3.0	13
140	Use of Isotopes and Isotope Effects for Investigations of Diiron Oxygenase Mechanisms. Methods in Enzymology, 2017, 596, 239-290.	1.0	13
141	Substrate radical intermediates in soluble methane monooxygenase. Biochemical and Biophysical Research Communications, 2005, 338, 254-261.	2.1	12
142	[17] Gentisate 1,2-dioxygenase from Pseudomonas acidovorans. Methods in Enzymology, 1990, 188, 101-107.	1.0	11
143	Unusual spin interactions in the 24 heme hydroxylamine oxidoreductase and diheme cytochrome c 554 from nitrosomonas. Inorganica Chimica Acta, 1983, 79, 181-182.	2.4	9
144	Rational Optimization of Mechanism-Based Inhibitors through Determination of the Microscopic Rate Constants of Inactivation. Journal of the American Chemical Society, 2017, 139, 7132-7135.	13.7	8

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145	Soluble Methane Monooxygenase Component Interactions Monitored by ¹⁹F NMR. Biochemistry, 2021, 60, 1995-2010.	2.5	8
146	Preliminary Crystallographic Analysis of Methane Mono-oxygenase Hydroxylase from Methylosinus trichosporium OB3b. Journal of Molecular Biology, 1994, 236, 379-381.	4.2	7
147	NO binding to Mn-substituted homoprotocatechuate 2,3-dioxygenase: relationship to O2 reactivity. Journal of Biological Inorganic Chemistry, 2013, 18, 717-728.	2.6	7
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