Brian M Hoffman

List of Publications by Year
in descending order

253 papers	18,044 citations	10373 72 h-index	17580 121 g-index
261 all docs	261 docs citations	261 times ranked	10837 citing authors

#	Article	IF	Citations
1	Mechanism of Nitrogen Fixation by Nitrogenase: The Next Stage. Chemical Reviews, 2014, 114, 4041-4062.	23.0	1,379
2	Beyond fossil fuelâ€“driven nitrogen transformations. Science, 2018, 360, .	6.0	1,379
3	Mechanism of Mo-Dependent Nitrogenase. Annual Review of Biochemistry, 2009, 78, 701-722.	5.0	561
4	Hydroxylation of Camphor by Reduced Oxy-Cytochrome P450cam:Â Mechanistic Implications of EPR and ENDOR Studies of Catalytic Intermediates in Native and Mutant Enzymes. Journal of the American Chemical Society, 2001, 123, 1403-1415.	6.6	442
5	Climbing Nitrogenase: Toward a Mechanism of Enzymatic Nitrogen Fixation. Accounts of Chemical Research, 2009, 42, 609-619.	7.6	336
6	Nitrogenase: A Draft Mechanism. Accounts of Chemical Research, 2013, 46, 587-595.	7.6	328
7	Reconsideration of X, the Diiron Intermediate Formed during Cofactor Assembly inE. coliRibonucleotide Reductase. Journal of the American Chemical Society, 1996, 118, 7551-7557.	6.6	253
8	Reduction of Substrates by Nitrogenases. Chemical Reviews, 2020, 120, 5082-5106.	23.0	234
9	Particulate methane monooxygenase contains only mononuclear copper centers. Science, 2019, 364, 566-570.	6.0	217
10	Ligand spin densities in blue copper proteins by q-band proton and nitrogen-14 ENDOR spectroscopy. Journal of the American Chemical Society, 1991, 113, 1533-1538.	6.6	201
11	Substrate Interactions with the Nitrogenase Active Site. Accounts of Chemical Research, 2005, 38, 208-214.	7.6	199
12	Trapping H-Bound to the Nitrogenase FeMo-Cofactor Active Site during H2Evolution:Â Characterization by ENDOR Spectroscopy. Journal of the American Chemical Society, 2005, 127, 6231-6241.	6.6	196
13	Electron-Nuclear Double Resonance Spectroscopic Evidence ThatS-Adenosylmethionine Binds in Contact with the Catalytically Active [4Feâˆ’4S]+Cluster of Pyruvate Formate-Lyase Activating Enzyme. Journal of the American Chemical Society, 2002, 124, 3143-3151.	6.6	186
14	An Anchoring Role for FeS Clusters:â€‰ Chelation of the Amino Acid Moiety of S-Adenosylmethionine to the Unique Iron Site of the [4Feâˆ’4S] Cluster of Pyruvate Formate-Lyase Activating Enzyme. Journal of the American Chemical Society, 2002, 124, 11270-11271.	6.6	185
15	Compound ES of Cytochrome c Peroxidase Contains a Trp .pi.-Cation Radical: Characterization by Continuous Wave and Pulsed Q-Band External Nuclear Double Resonance Spectroscopy. Journal of the American Chemical Society, 1995, 117, 9033-9041.	6.6	180
16	Catalytic Mechanism of Heme Oxygenase through EPR and ENDOR of Cryoreduced Oxy-Heme Oxygenase and Its Asp 140 Mutants. Journal of the American Chemical Society, 2002, 124, 1798-1808.	6.6	159
17	Characterization of an Feâ‰¡Nâ€“NH₂ Intermediate Relevant to Catalytic N₂ Reduction to NH₃. Journal of the American Chemical Society, 2015, 137, 7803-7809.	6.6	155
18	Internal dynamics of a supramolecular nanofibre. Nature Materials, 2014, 13, 812-816.	13.3	154

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19	Purified particulate methane monooxygenase from Methylococcus capsulatus (Bath) is a dimer with both mononuclear copper and a copper-containing cluster. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 3820-3825.	3.3	145
20	Hydroperoxy-Heme Oxygenase Generated by Cryoreduction Catalyzes the Formation of Î±-meso-Hydroxyheme as Detected by EPR and ENDOR. Journal of the American Chemical Society, 1999, 121, 10656-10657.	6.6	143
21	EPR and ENDOR of Catalytic Intermediates in Cryoreduced Native and Mutant Oxy-Cytochromes P450cam:Â Mutation-Induced Changes in the Proton Delivery System. Journal of the American Chemical Society, 1999, 121, 10654-10655.	6.6	139
22	Q-Band Pulsed Electron Spin-Echo Spectrometer and Its Application to ENDOR and ESEEM. Journal of Magnetic Resonance Series A, 1996, 119, 38-44.	1.6	138
23	Reductive Elimination of H₂ Activates Nitrogenase to Reduce the Nâ‰¡N Triple Bond: Characterization of the E₄(4H) Janus Intermediate in Wild-Type Enzyme. Journal of the American Chemical Society, 2016, 138, 10674-10683.	6.6	131
24	Metal-Ion Valencies of the FeMo Cofactor in CO-Inhibited and Resting State Nitrogenase by57Fe Q-Band ENDOR. Journal of the American Chemical Society, 1997, 119, 11395-11400.	6.6	130
25	The Metal Centers of Particulate Methane Monooxygenase from <i>Methylosinus trichosporium</i> OB3b. Biochemistry, 2008, 47, 6793-6801.	1.2	130
26	Crystal Structure and Characterization of Particulate Methane Monooxygenase from <i>Methylocystis</i> species Strain M. Biochemistry, 2011, 50, 10231-10240.	1.2	130
27	CO Binding to the FeMo Cofactor of CO-Inhibited Nitrogenase:Â13CO and1H Q-Band ENDOR Investigation. Journal of the American Chemical Society, 1997, 119, 10121-10126.	6.6	129
28	14N,1H, and metal ENDOR of single crystal Ag(II)(TPP) and Cu(II)(TPP). Molecular Physics, 1980, 39, 1073-1109.	0.8	128
29	Electron nuclear double resonance (ENDOR) of metalloenzymes. Accounts of Chemical Research, 1991, 24, 164-170.	7.6	124
30	The dioxygen adduct of meso-tetraphenylporphyrinmanganese(II), a synthetic oxygen carrier. Journal of the American Chemical Society, 1976, 98, 5473-5482.	6.6	123
31	Intermediates Trapped during Nitrogenase Reduction of Nâ‹®N, CH3âˆ’NNH, and H2Nâˆ’NH2. Journal of the American Chemical Society, 2005, 127, 14960-14961.	6.6	122
32	The Core Structure of X Generated in the Assembly of the Diiron Cluster of Ribonucleotide Reductase:Â17O2and H217O ENDOR. Journal of the American Chemical Society, 1998, 120, 12910-12919.	6.6	119
33	Electron Transfer within Nitrogenase: Evidence for a Deficit-Spending Mechanism. Biochemistry, 2011, 50, 9255-9263.	1.2	117
34	An Organometallic Intermediate during Alkyne Reduction by Nitrogenase. Journal of the American Chemical Society, 2004, 126, 9563-9569.	6.6	116
35	Identification of the Protonated Oxygenic Ligands of Ribonucleotide Reductase Intermediate X by Q-Band1,2H CW and Pulsed ENDOR. Journal of the American Chemical Society, 1997, 119, 9816-9824.	6.6	114
36	Connecting nitrogenase intermediates with the kinetic scheme for N2 reduction by a relaxation protocol and identification of the N2 binding state. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1451-1455.	3.3	113

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37	Probing in vivo Mn²⁺speciation and oxidative stress resistance in yeast cells with electron-nuclear double resonance spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15335-15339.	3.3	113
38	Radical SAM catalysis via an organometallic intermediate with an Feâ€“[5â€²-C]-deoxyadenosyl bond. Science, 2016, 352, 822-825.	6.0	113
39	Spectroscopic Approaches to Elucidating Novel Ironâˆ’Sulfur Chemistry in the â€œRadical-SAMâ€•Protein Superfamily. Inorganic Chemistry, 2005, 44, 727-741.	1.9	108
40	Coordination and Mechanism of Reversible Cleavage of S-Adenosylmethionine by the [4Fe-4S] Center in Lysine 2,3-Aminomutase. Journal of the American Chemical Society, 2003, 125, 11788-11789.	6.6	106
41	Diazene (HNNH) Is a Substrate for Nitrogenase:Â Insights into the Pathway of N2Reductionâ€. Biochemistry, 2007, 46, 6784-6794.	1.2	106
42	Characterization of the nickel-iron-carbon complex formed by reaction of carbon monoxide with the carbon monoxide dehydrogenase from Clostridium thermoaceticum by Q-band ENDOR. Biochemistry, 1991, 30, 431-435.	1.2	104
43	ENDOR of the resting state of nitrogenase molybdenum-iron proteins from Azotobacter vinelandii, Klebsiella pneumoniae, and Clostridium pasteurianum. Proton, iron-57, molybdenum-95, and sulfur-33 studies. Journal of the American Chemical Society, 1986, 108, 3487-3498.	6.6	103
44	Energy Transduction in Nitrogenase. Accounts of Chemical Research, 2018, 51, 2179-2186.	7.6	101
45	Critical computational analysis illuminates the reductive-elimination mechanism that activates nitrogenase for N ₂ reduction. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10521-E10530.	3.3	100
46	Identification of a Key Catalytic Intermediate Demonstrates That Nitrogenase Is Activated by the Reversible Exchange of N₂ for H₂. Journal of the American Chemical Society, 2015, 137, 3610-3615.	6.6	99
47	Mo-, V-, and Fe-Nitrogenases Use a Universal Eight-Electron Reductive-Elimination Mechanism To Achieve N₂ Reduction. Biochemistry, 2019, 58, 3293-3301.	1.2	99
48	Investigation of CO bound to inhibited forms of nitrogenase MoFe protein by 13C ENDOR. Journal of the American Chemical Society, 1995, 117, 8686-8687.	6.6	98
49	Substrate Modulation of the Properties and Reactivity of the Oxy-Ferrous and Hydroperoxo-Ferric Intermediates of Cytochrome P450cam As Shown by Cryoreduction-EPR/ENDOR Spectroscopy. Journal of the American Chemical Society, 2005, 127, 1403-1413.	6.6	98
50	On reversible H ₂ loss upon N ₂ binding to FeMo-cofactor of nitrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16327-16332.	3.3	98
51	Trapping a Hydrazine Reduction Intermediate on the Nitrogenase Active Site. Biochemistry, 2005, 44, 8030-8037.	1.2	96
52	Metalloenzyme Active-Site Structure and Function through Multifrequency CW and Pulsed ENDOR. Biological Magnetic Resonance, 1993, , 151-218.	0.4	95
53	Electron transfer precedes ATP hydrolysis during nitrogenase catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16414-16419.	3.3	94
54	Across the tree of life, radiation resistance is governed by antioxidant Mn ²⁺ , gauged by paramagnetic resonance. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9253-E9260.	3.3	94

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55	Localization of a Substrate Binding Site on the FeMo-Cofactor in Nitrogenase:Â Trapping Propargyl Alcohol with an Î±-70-Substituted MoFe Proteinâ€. Biochemistry, 2003, 42, 9102-9109.	1.2	93
56	Identification of the CO-Binding Cluster in Nitrogenase MoFe Protein by ENDOR of57Fe Isotopomers. Journal of the American Chemical Society, 1996, 118, 8707-8709.	6.6	90
57	Testing if the Interstitial Atom, X, of the Nitrogenase Molybdenumâ^'Iron Cofactor Is N or C:â€‰ ENDOR, ESEEM, and DFT Studies of the <i>S</i> = ³/₂ Resting State in Multiple Environments. Inorganic Chemistry, 2007, 46, 11437-11449.	1.9	89
58	Evidence for Oxygen Binding at the Active Site of Particulate Methane Monooxygenase. Journal of the American Chemical Society, 2012, 134, 7640-7643.	6.6	88
59	Investigation of the Dinuclear Fe Center of Methane Monooxygenase by Advanced Paramagnetic Resonance Techniques:Â On the Geometry of DMSO Binding. Journal of the American Chemical Society, 1996, 118, 121-134.	6.6	87
60	ENDOR of Metalloenzymes. Accounts of Chemical Research, 2003, 36, 522-529.	7.6	85
61	A methyldiazene (HNNCH3)-derived species bound to the nitrogenase active-site FeMo cofactor: Implications for mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17113-17118.	3.3	84
62	ENDOR/HYSCORE Studies of the Common Intermediate Trapped during Nitrogenase Reduction of N₂H₂, CH₃N₂H, and N₂H₄Support an Alternating Reaction Pathway for N₂Reduction. Journal of the American Chemical Society, 2011, 133, 11655-11664.	6.6	83
63	Rapid Freeze-Quench ENDOR Study of Chloroperoxidase Compound I:Â The Site of the Radical. Journal of the American Chemical Society, 2006, 128, 5598-5599.	6.6	82
64	Iron-57 hyperfine coupling tensors of the FeMo cluster in Azotobacter vinelandii MoFe protein: determination by polycrystalline ENDOR spectroscopy. Journal of the American Chemical Society, 1988, 110, 1935-1943.	6.6	81
65	Oxygen-17, proton, and deuterium electron nuclear double resonance characterization of solvent, substrate, and inhibitor binding to the iron-sulfur [4Fe-4S]+ cluster of aconitase. Biochemistry, 1990, 29, 10526-10532.	1.2	81
66	Mechanism of N₂ Reduction Catalyzed by Fe-Nitrogenase Involves Reductive Elimination of H₂. Biochemistry, 2018, 57, 701-710.	1.2	80
67	Is Mo Involved in Hydride Binding by the Four-Electron Reduced (E₄) Intermediate of the Nitrogenase MoFe Protein?. Journal of the American Chemical Society, 2010, 132, 2526-2527.	6.6	79
68	Synthetic oxygen carrier. Dioxygen adduct of a manganese porphyrin. Journal of the American Chemical Society, 1975, 97, 5278-5280.	6.6	78
69	Mechanism of Radical Initiation in the Radical <i>S</i>-Adenosyl-<scp>l</scp>-methionine Superfamily. Accounts of Chemical Research, 2018, 51, 2611-2619.	7.6	78
70	Ultrafast Excited State Relaxation of a Metalloporphyrin Revealed by Femtosecond X-ray Absorption Spectroscopy. Journal of the American Chemical Society, 2016, 138, 8752-8764.	6.6	77
71	Paradigm Shift for Radical <i>S</i>-Adenosyl-<scp>l</scp>-methionine Reactions: The Organometallic Intermediate Î© Is Central to Catalysis. Journal of the American Chemical Society, 2018, 140, 8634-8638.	6.6	76
72	⁵⁷Fe ENDOR Spectroscopy and â€˜Electron Inventoryâ€™ Analysis of the Nitrogenase E₄Intermediate Suggest the Metal-Ion Core of FeMo-Cofactor Cycles Through Only One Redox Couple. Journal of the American Chemical Society, 2011, 133, 17329-17340.	6.6	75

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73	Generation of a Mixed-Valent Fe(III)Fe(IV) Form of Intermediate Q in the Reaction Cycle of Soluble Methane Monooxygenase, an Analog of Intermediate X in Ribonucleotide Reductase R2 Assembly. Journal of the American Chemical Society, 1998, 120, 2190-2191.	6.6	72
74	Kinetic Isotope Effects on the Rate-Limiting Step of Heme Oxygenase Catalysis Indicate Concerted Proton Transfer/Heme Hydroxylation. Journal of the American Chemical Society, 2003, 125, 16208-16209.	6.6	72
75	Chiral porphyrazine near-IR optical imaging agent exhibiting preferential tumor accumulation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1284-1288.	3.3	71
76	gemini-Porphyrazines:Â The Synthesis and Characterization of Metal-Cappedcis- andtrans-Porphyrazine Tetrathiolates. Journal of the American Chemical Society, 1996, 118, 10487-10493.	6.6	70
77	Detection of two histidyl ligands to CuA of cytochrome oxidase by 35-GHz ENDOR. 14,15N and 63,65Cu ENDOR studies of the CuA site in bovine heart cytochrome aa3 and cytochromes caa3 and ba3 from Thermus thermophilus. Journal of the American Chemical Society, 1993, 115, 10888-10894.	6.6	69
78	Electron-nuclear double resonance spectroscopy (and electron spin-echo envelope modulation) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54 United States of America, 2003, 100, 3575-3578.	3.3	69
79	MECHANISTIC ENZYMOLOGY OF OXYGEN ACTIVATION BY THE CYTOCHROMES P450. Drug Metabolism Reviews, 2002, 34, 691-708.	1.5	68
80	The Elusive 5â€^{2}-Deoxyadenosyl Radical: Captured and Characterized by Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Spectroscopies. Journal of the American Chemical Society, 2019, 141, 12139-12146.	6.6	68
81	Trapping an Intermediate of Dinitrogen (N₂) Reduction on Nitrogenase. Biochemistry, 2009, 48, 9094-9102.	1.2	66
82	Electron Inventory, Kinetic Assignment (En), Structure, and Bonding of Nitrogenase Turnover Intermediates with C2H2and CO. Journal of the American Chemical Society, 2005, 127, 15880-15890.	6.6	65
83	Uncoupling Nitrogenase: Catalytic Reduction of Hydrazine to Ammonia by a MoFe Protein in the Absence of Fe Protein-ATP. Journal of the American Chemical Society, 2010, 132, 13197-13199.	6.6	65
84	Evidence for N coordination to Fe in the [2Fe-2S] center in yeast mitochondrial complex III Comparison with similar findings for analogous bacterial [2Fe-2S] proteins. FEBS Letters, 1987, 214, 117-121.	1.3	64
85	Responses of Mn ²⁺ speciation in <i>Deinococcus radiodurans</i> and <i>Escherichia coli</i> to Î^{3}-radiation by advanced paramagnetic resonance methods. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5945-5950.	3.3	63
86	Active intermediates in heme monooxygenase reactions as revealed by cryoreduction/annealing, EPR/ENDOR studies. Archives of Biochemistry and Biophysics, 2011, 507, 36-43.	1.4	62
87	Molybdenum-95 and proton ENDOR spectroscopy of the nitrogenase molybdenum-iron protein. Journal of the American Chemical Society, 1982, 104, 860-862.	6.6	61
88	An EPR Study of the Dinuclear Iron Site in the Soluble Methane Monooxygenase fromMethylococcus capsulatus(Bath) Reduced by One Electron at 77 K:Â The Effects of Component Interactions and the Binding of Small Molecules to the Diiron(III) Centerâ€. Biochemistry, 1999, 38, 4188-4197.	1.2	61
89	Distinct Reaction Pathways Followed upon Reduction of Oxy-Heme Oxygenase and Oxy-Myoglobin as Characterized by MÃ¶ssbauer Spectroscopy. Journal of the American Chemical Society, 2007, 129, 1402-1412.	6.6	61
90	Conformational Gating of Electron Transfer from the Nitrogenase Fe Protein to MoFe Protein. Journal of the American Chemical Society, 2010, 132, 6894-6895.	6.6	61

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91	High-Frequency and Field EPR Investigation of (8,12-Diethyl-2,3,7,13,17,18-hexamethylcorrolato)manganese(III). Journal of the American Chemical Society, 2001, 123, 7890-7897.	6.6	60
92	Porphyrazines: Designer Macrocycles by Peripheral Substituent Change. Australian Journal of Chemistry, 2008, 61, 235.	0.5	60
93	EPR and ENDOR Characterization of the Reactive Intermediates in the Generation of NO by Cryoreduced Oxy-Nitric Oxide Synthase from <i>Geobacillus stearothermophilus</i>. Journal of the American Chemical Society, 2009, 131, 14493-14507.	6.6	60
94	Reversible Photoinduced Reductive Elimination of H₂ from the Nitrogenase Dihydride State, the E₄(4H) Janus Intermediate. Journal of the American Chemical Society, 2016, 138, 1320-1327.	6.6	60
95	Triplet Exciton EPR and Crystal Structure of [TMPD+]2[Ni(mnt)2]â"2. Journal of Chemical Physics, 1972, 56, 3490-3502.	1.2	59
96	Substrate Binding to NOâ"Ferroâ"Naphthalene 1,2-Dioxygenase Studied by High-Resolution Q-Band Pulsed2H-ENDOR Spectroscopy. Journal of the American Chemical Society, 2003, 125, 7056-7066.	6.6	59
97	Unification of reaction pathway and kinetic scheme for N ₂ reduction catalyzed by nitrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5583-5587.	3.3	59
98	Why Nature Uses Radical SAM Enzymes so Widely: Electron Nuclear Double Resonance Studies of Lysine 2,3-Aminomutase Show the 5â€²-dAdoâ€¢ â€œFree Radicalâ€•Is Never Free. Journal of the American Chemical Society, 2015, 137, 7111-7121.	6.6	59
99	High-Resolution ENDOR Spectroscopy Combined with Quantum Chemical Calculations Reveals the Structure of Nitrogenase Janus Intermediate E₄(4H). Journal of the American Chemical Society, 2019, 141, 11984-11996.	6.6	58
100	A Superoxo-Ferrous State in a Reduced Oxy-Ferrous Hemoprotein and Model Compounds. Journal of the American Chemical Society, 2003, 125, 16340-16346.	6.6	57
101	EPR and ENDOR Studies of Cryoreduced Compounds II of Peroxidases and Myoglobin. Proton-Coupled Electron Transfer and Protonation Status of Ferryl Hemes. Biochemistry, 2008, 47, 5147-5155.	1.2	57
102	Structure of the Nucleotide Radical Formed during Reaction of CDP/TTP with the E441Q-Î±2Î²2 of<i>E. coli</i>Ribonucleotide Reductase. Journal of the American Chemical Society, 2009, 131, 200-211.	6.6	55
103	Experimental and Theoretical EPR Study of Jahnâ"Teller-Active [HIPTN₃N]MoL Complexes (L) Tj ETQq1 1 0.784314 rgBT	6.6	55
104	The dioxygen adducts of several manganese(II) porphyrins. Electron paramagnetic resonance studies. Journal of the American Chemical Society, 1978, 100, 7253-7259.	6.6	54
105	Making hyperfine selection in Mims ENDOR independent of deadtime. Chemical Physics Letters, 1997, 269, 208-214.	1.2	53
106	Manganese co-localizes with calcium and phosphorus in Chlamydomonas acidocalcisomes and is mobilized in manganese-deficient conditions. Journal of Biological Chemistry, 2019, 294, 17626-17641.	1.6	53
107	Cytochrome c Peroxidaseâ"Cytochrome c Complex:â€‰ Locating the Second Binding Domain on Cytochrome c Peroxidase with Site-Directed Mutagenesis. Biochemistry, 2000, 39, 10132-10139.	1.2	52
108	Functional solitare- and trans-hybrids, the synthesis, characterization, electrochemistry and reactivity of porphyrazine/phthalocyanine hybrids bearing nitro and amino functionality. Journal of Porphyrins and Phthalocyanines, 2003, 07, 700-712.	0.4	52

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109	EPR, ENDOR, and Electronic Structure Studies of the Jahnâ€"Teller Distortion in an FeVNitride. Journal of the American Chemical Society, 2014, 136, 12323-12336.	6.6	52
110	Studies on seco-porphyrazines: a case study on serendipity. Dalton Transactions, 2003, , 2093.	1.6	51
111	Differential influence of dynamic processes on forward and reverse electron transfer across a protein-protein interface. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3564-3569.	3.3	51
112	Synthesis and Characterization of New Porphyrazine-Gd(III) Conjugates as Multimodal MR Contrast Agents. Bioconjugate Chemistry, 2010, 21, 2267-2275.	1.8	51
113	Mechanism of Nitrogenase H₂ Formation by Metal-Hydride Protonation Probed by Mediated Electrocatalysis and H/D Isotope Effects. Journal of the American Chemical Society, 2017, 139, 13518-13524.	6.6	51
114	Characterization of an Intermediate in the Reduction of Acetylene by the Nitrogenase Î±-Gln195MoFe Protein by Q-band EPR and13C,1H ENDOR. Journal of the American Chemical Society, 2000, 122, 5582-5587.	6.6	50
115	Identification of the Valence and Coordination Environment of the Particulate Methane Monooxygenase Copper Centers by Advanced EPR Characterization. Journal of the American Chemical Society, 2014, 136, 11767-11775.	6.6	49
116	From micelles to bicelles: Effect of the membrane on particulate methane monooxygenase activity. Journal of Biological Chemistry, 2018, 293, 10457-10465.	1.6	49
117	Calculation of z-Coordinates and Orientational Restraints Using a Metal Binding Tag. Biochemistry, 2000, 39, 15217-15224.	1.2	48
118	Organometallic and radical intermediates reveal mechanism of diphthamide biosynthesis. Science, 2018, 359, 1247-1250.	6.0	48
119	Characterization of the Microsomal Cytochrome P450 2B4 O2 Activation Intermediates by Cryoreduction and Electron Paramagnetic Resonance. Biochemistry, 2008, 47, 9661-9666.	1.2	47
120	CO₂ Reduction Catalyzed by Nitrogenase: Pathways to Formate, Carbon Monoxide, and Methane. Inorganic Chemistry, 2016, 55, 8321-8330.	1.9	47
121	¹³C ENDOR Spectroscopy of Lipoxygenaseâ€"Substrate Complexes Reveals the Structural Basis for Câ€"H Activation by Tunneling. Journal of the American Chemical Society, 2017, 139, 1984-1997.	6.6	47
122	Probing the Ternary Complexes of Indoleamine and Tryptophan 2,3-Dioxygenases by Cryoreduction EPR and ENDOR Spectroscopy. Journal of the American Chemical Society, 2010, 132, 5494-5500.	6.6	46
123	Characterization of a long overlooked copper protein from methane- and ammonia-oxidizing bacteria. Nature Communications, 2018, 9, 4276.	5.8	46
124	Interaction of Acetylene and Cyanide with the Resting State of Nitrogenase Î±-96-Substituted MoFe Proteins. Biochemistry, 2001, 40, 13816-13825.	1.2	45
125	Detection of a new signal in the ESR spectrum of vanadium nitrogenase from Azotobacter vinelandii. Journal of the American Chemical Society, 1989, 111, 8519-8520.	6.6	44
126	Kinetic Understanding of N₂ Reduction versus H₂ Evolution at the E₄(4H) Janus State in the Three Nitrogenases. Biochemistry, 2018, 57, 5706-5714.	1.2	44

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127	General theory of polycrystalline ENDOR patterns. g and hyperfine tensors of arbitrary symmetry and relative orientation. Journal of Magnetic Resonance, 1984, 59, 110-123.	0.5	43
128	Compound I Is the Reactive Intermediate in the First Monooxygenation Step during Conversion of Cholesterol to Pregnenolone by Cytochrome P450scc: EPR/ENDOR/Cryoreduction/Annealing Studies. Journal of the American Chemical Society, 2012, 134, 17149-17156.	6.6	43
129	Control of electron transfer in nitrogenase. Current Opinion in Chemical Biology, 2018, 47, 54-59.	2.8	43
130	Negative cooperativity in the nitrogenase Fe protein electron delivery cycle. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5783-E5791.	3.3	42
131	Photoinduced Reductive Elimination of H₂ from the Nitrogenase Dihydride (Janus) State Involves a FeMo-cofactor-H₂ Intermediate. Inorganic Chemistry, 2017, 56, 2233-2240.	1.9	42
132	[23] Protein structure and mechanism studied by electron nuclear double resonance spectroscopy. Methods in Enzymology, 1995, 246, 554-589.	0.4	41
133	Enantiomerically Pureâ€œWingedâ€•Spirane Porphyrazinoctaols. Angewandte Chemie International Edition in English, 1997, 36, 760-761.	4.4	40
134	Nitrogenase Reduction of Carbon Disulfide:Â Freeze-Quench EPR and ENDOR Evidence for Three Sequential Intermediates with Cluster-Bound Carbon Moietiesâ€. Biochemistry, 2000, 39, 1114-1119.	1.2	40
135	Peripherally Functionalized Porphyrazines: Novel Metallomacrocycles with Broad, Untapped Potential. Progress in Inorganic Chemistry, 2002, , 473-590.	3.0	40
136	A Confirmation of the Quench-Cryoannealing Relaxation Protocol for Identifying Reduction States of Freeze-Trapped Nitrogenase Intermediates. Inorganic Chemistry, 2014, 53, 3688-3693.	1.9	40
137	Structural and spectroscopic characterization of an Fe(VI) bis(imido) complex. Science, 2020, 370, 356-359.	6.0	40
138	Jahn-Teller effects in metalloporphyrins and other four-fold symmetric systems. Molecular Physics, 1978, 35, 901-925.	0.8	39
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