

Brian M Hoffman

List of Publications by Citations

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|--------------------|--------------------------|-----------------|-----------------|
| 248 papers | 14,415 citations | 66 h-index | 109 g-index |
| 261 ext. papers | 16,429 ext. citations | 11.3 avg, IF | 6.48 L-index |

| # | Paper | IF | Citations |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 248 | Mechanism of nitrogen fixation by nitrogenase: the next stage. <i>Chemical Reviews</i> , 2014 , 114, 4041-62 | 68.1 | 1073 |
| 247 | Beyond fossil fuel-driven nitrogen transformations. <i>Science</i> , 2018 , 360, | 33.3 | 772 |
| 246 | Mechanism of Mo-dependent nitrogenase. <i>Annual Review of Biochemistry</i> , 2009 , 78, 701-22 | 29.1 | 457 |
| 245 | Hydroxylation of camphor by reduced oxy-cytochrome P450cam: mechanistic implications of EPR and ENDOR studies of catalytic intermediates in native and mutant enzymes. <i>Journal of the American Chemical Society</i> , 2001 , 123, 1403-15 | 16.4 | 406 |
| 244 | Climbing nitrogenase: toward a mechanism of enzymatic nitrogen fixation. <i>Accounts of Chemical Research</i> , 2009 , 42, 609-19 | 24.3 | 287 |
| 243 | Nitrogenase: a draft mechanism. <i>Accounts of Chemical Research</i> , 2013 , 46, 587-95 | 24.3 | 282 |
| 242 | Reconsideration of X, the Diiron Intermediate Formed during Cofactor Assembly in E. coli Ribonucleotide Reductase. <i>Journal of the American Chemical Society</i> , 1996 , 118, 7551-7557 | 16.4 | 234 |
| 241 | Ligand spin densities in blue copper proteins by q-band proton and nitrogen-14 ENDOR spectroscopy. <i>Journal of the American Chemical Society</i> , 1991 , 113, 1533-1538 | 16.4 | 182 |
| 240 | Substrate interactions with the nitrogenase active site. <i>Accounts of Chemical Research</i> , 2005 , 38, 208-14 | 24.3 | 177 |
| 239 | Trapping H- bound to the nitrogenase FeMo-cofactor active site during H ₂ evolution: characterization by ENDOR spectroscopy. <i>Journal of the American Chemical Society</i> , 2005 , 127, 6231-41 | 16.4 | 170 |
| 238 | 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. <i>Journal of the American Chemical Society</i> , 1995 , 117, 9033-9041 | 16.4 | 166 |
| 237 | Electron-nuclear double resonance spectroscopic evidence that S-adenosylmethionine binds in contact with the catalytically active [4Fe-4S](+) cluster of pyruvate formate-lyase activating enzyme. <i>Journal of the American Chemical Society</i> , 2002 , 124, 3143-51 | 16.4 | 159 |
| 236 | An anchoring role for FeS clusters: chelation of the amino acid moiety of S-adenosylmethionine to the unique iron site of the [4Fe-4S] cluster of pyruvate formate-lyase activating enzyme. <i>Journal of the American Chemical Society</i> , 2002 , 124, 11270-1 | 16.4 | 156 |
| 235 | Catalytic mechanism of heme oxygenase through EPR and ENDOR of cryoreduced oxy-heme oxygenase and its Asp 140 mutants. <i>Journal of the American Chemical Society</i> , 2002 , 124, 1798-808 | 16.4 | 146 |
| 234 | Particulate methane monooxygenase contains only mononuclear copper centers. <i>Science</i> , 2019 , 364, 566-570 | 33.3 | 136 |
| 233 | Characterization of an Fe ²⁺ N-NH ₂ Intermediate Relevant to Catalytic N ₂ Reduction to NH ₃ . <i>Journal of the American Chemical Society</i> , 2015 , 137, 7803-7809 | 16.4 | 134 |
| 232 | Hydroperoxy-Heme Oxygenase Generated by Cryoreduction Catalyzes the Formation of Ene-so-Hydroxyheme as Detected by EPR and ENDOR. <i>Journal of the American Chemical Society</i> , 1999 , 121, 10656-10657 | 16.4 | 132 |

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| 231 | Internal dynamics of a supramolecular nanofibre. <i>Nature Materials</i> , 2014 , 13, 812-6 | 27 | 131 |
| 230 | EPR and ENDOR of Catalytic Intermediates in Cryoreduced Native and Mutant Oxy-Cytochromes P450cam: Mutation-Induced Changes in the Proton Delivery System. <i>Journal of the American Chemical Society</i> , 1999 , 121, 10654-10655 | 16.4 | 127 |
| 229 | Q-Band Pulsed Electron Spin-Echo Spectrometer and Its Application to ENDOR and ESEEM. <i>Journal of Magnetic Resonance Series A</i> , 1996 , 119, 38-44 | | 127 |
| 228 | Purified particulate methane monooxygenase from <i>Methylococcus capsulatus</i> (Bath) is a dimer with both mononuclear copper and a copper-containing cluster. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 3820-5 | 11.5 | 123 |
| 227 | Metal-Ion Valencies of the FeMo Cofactor in CO-Inhibited and Resting State Nitrogenase by ⁵⁷ Fe Q-Band ENDOR. <i>Journal of the American Chemical Society</i> , 1997 , 119, 11395-11400 | 16.4 | 118 |
| 226 | Electron nuclear double resonance (ENDOR) of metalloenzymes. <i>Accounts of Chemical Research</i> , 1991 , 24, 164-170 | 24.3 | 117 |
| 225 | ¹⁴ N, ¹ H, and metal ENDOR of single crystal Ag(II)(TPP) and Cu(II)(TPP). <i>Molecular Physics</i> , 1980 , 39, 1073-1109 | 11.09 | 114 |
| 224 | Intermediates trapped during nitrogenase reduction of N triple bond N, CH ₃ -N=NH, and H ₂ N-NH ₂ . <i>Journal of the American Chemical Society</i> , 2005 , 127, 14960-1 | 16.4 | 112 |
| 223 | CO Binding to the FeMo Cofactor of CO-Inhibited Nitrogenase: ¹³ CO and ¹ H Q-Band ENDOR Investigation. <i>Journal of the American Chemical Society</i> , 1997 , 119, 10121-10126 | 16.4 | 111 |
| 222 | The Core Structure of X Generated in the Assembly of the Diiron Cluster of Ribonucleotide Reductase: ¹⁷ O ₂ and ¹ H ₂ O ENDOR. <i>Journal of the American Chemical Society</i> , 1998 , 120, 12910-12919 | 16.4 | 111 |
| 221 | Identification of the Protonated Oxygenic Ligands of Ribonucleotide Reductase Intermediate X by Q-Band ¹ H CW and Pulsed ENDOR. <i>Journal of the American Chemical Society</i> , 1997 , 119, 9816-9824 | 16.4 | 107 |
| 220 | An organometallic intermediate during alkyne reduction by nitrogenase. <i>Journal of the American Chemical Society</i> , 2004 , 126, 9563-9 | 16.4 | 105 |
| 219 | The metal centers of particulate methane monooxygenase from <i>Methylosinus trichosporium</i> OB3b. <i>Biochemistry</i> , 2008 , 47, 6793-801 | 3.2 | 104 |
| 218 | The dioxygen adduct of meso-tetraphenylporphyrinmanganese(II), a synthetic oxygen carrier. <i>Journal of the American Chemical Society</i> , 1976 , 98, 5473-82 | 16.4 | 104 |
| 217 | Crystal structure and characterization of particulate methane monooxygenase from <i>Methylocystis</i> species strain M. <i>Biochemistry</i> , 2011 , 50, 10231-40 | 3.2 | 101 |
| 216 | Reductive Elimination of H ₂ Activates Nitrogenase to Reduce the N≡N Triple Bond: Characterization of the E ₄ (4H) Janus Intermediate in Wild-Type Enzyme. <i>Journal of the American Chemical Society</i> , 2016 , 138, 10674-83 | 16.4 | 100 |
| 215 | Coordination and mechanism of reversible cleavage of S-adenosylmethionine by the [4Fe-4S] center in lysine 2,3-aminomutase. <i>Journal of the American Chemical Society</i> , 2003 , 125, 11788-9 | 16.4 | 100 |
| 214 | Electron transfer within nitrogenase: evidence for a deficit-spending mechanism. <i>Biochemistry</i> , 2011 , 50, 9255-63 | 3.2 | 97 |

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| 213 | 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. <i>Journal of the American Chemical Society</i> , 2005 , 127, 1403-13 | 16.4 | 97 |
| 212 | Spectroscopic approaches to elucidating novel iron-sulfur chemistry in the "radical-Sam" protein superfamily. <i>Inorganic Chemistry</i> , 2005 , 44, 727-41 | 5.1 | 95 |
| 211 | Probing in vivo Mn ²⁺ speciation and oxidative stress resistance in yeast cells with electron-nuclear double resonance spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 15335-9 | 11.5 | 93 |
| 210 | 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> , 1991 , 30, 431-5 | 3.2 | 93 |
| 209 | ENDOR of the resting state of nitrogenase molybdenum-iron proteins from <i>Azotobacter vinelandii</i> , <i>Klebsiella pneumoniae</i> , and <i>Clostridium pasteurianum</i> . Proton, iron-57, molybdenum-95, and sulfur-33 studies. <i>Journal of the American Chemical Society</i> , 1986 , 108, 3487-3498 | 16.4 | 92 |
| 208 | Metalloenzyme Active-Site Structure and Function through Multifrequency CW and Pulsed ENDOR. <i>Biological Magnetic Resonance</i> , 1993 , 151-218 | 0.5 | 92 |
| 207 | Connecting nitrogenase intermediates with the kinetic scheme for N ₂ reduction by a relaxation protocol and identification of the N ₂ binding state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 1451-5 | 11.5 | 91 |
| 206 | Reduction of Substrates by Nitrogenases. <i>Chemical Reviews</i> , 2020 , 120, 5082-5106 | 68.1 | 90 |
| 205 | Trapping a hydrazine reduction intermediate on the nitrogenase active site. <i>Biochemistry</i> , 2005 , 44, 8030-2 | 3.2 | 89 |
| 204 | Radical SAM catalysis via an organometallic intermediate with an Fe-[5'-C]-deoxyadenosyl bond. <i>Science</i> , 2016 , 352, 822-5 | 33.3 | 86 |
| 203 | Diazene (HN=NH) is a substrate for nitrogenase: insights into the pathway of N ₂ reduction. <i>Biochemistry</i> , 2007 , 46, 6784-94 | 3.2 | 84 |
| 202 | Identification of a key catalytic intermediate demonstrates that nitrogenase is activated by the reversible exchange of N ₂ for H ₂ . <i>Journal of the American Chemical Society</i> , 2015 , 137, 3610-5 | 16.4 | 83 |
| 201 | Investigation of CO bound to inhibited forms of nitrogenase MoFe protein by ¹³ C ENDOR. <i>Journal of the American Chemical Society</i> , 1995 , 117, 8686-8687 | 16.4 | 83 |
| 200 | Localization of a substrate binding site on the FeMo-cofactor in nitrogenase: trapping propargyl alcohol with an alpha-70-substituted MoFe protein. <i>Biochemistry</i> , 2003 , 42, 9102-9 | 3.2 | 82 |
| 199 | Investigation of the Dinuclear Fe Center of Methane Monooxygenase by Advanced Paramagnetic Resonance Techniques: On the Geometry of DMSO Binding. <i>Journal of the American Chemical Society</i> , 1996 , 118, 121-134 | 16.4 | 80 |
| 198 | On reversible H ₂ loss upon N ₂ binding to FeMo-cofactor of nitrogenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 16327-32 | 11.5 | 78 |
| 197 | Testing if the interstitial atom, X, of the nitrogenase molybdenum-iron cofactor is N or C: ENDOR, ESEEM, and DFT studies of the S = 3/2 resting state in multiple environments. <i>Inorganic Chemistry</i> , 2007 , 46, 11437-49 | 5.1 | 77 |
| 196 | Identification of the CO-Binding Cluster in Nitrogenase MoFe Protein by ENDOR of ⁵⁷ Fe Isotopomers. <i>Journal of the American Chemical Society</i> , 1996 , 118, 8707-8709 | 16.4 | 77 |

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| 195 | Evidence for oxygen binding at the active site of particulate methane monooxygenase. <i>Journal of the American Chemical Society</i> , 2012 , 134, 7640-3 | 16.4 | 76 |
| 194 | ENDOR/HYSCORE studies of the common intermediate trapped during nitrogenase reduction of N ₂ H ₂ , CH ₃ N ₂ H, and N ₂ H ₄ support an alternating reaction pathway for N ₂ reduction. <i>Journal of the American Chemical Society</i> , 2011 , 133, 11655-64 | 16.4 | 75 |
| 193 | Electron transfer precedes ATP hydrolysis during nitrogenase catalysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 16414-9 | 11.5 | 74 |
| 192 | A methyldiazenide (HN=N-CH ₃)-derived species bound to the nitrogenase active-site FeMo cofactor: Implications for mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 17113-8 | 11.5 | 74 |
| 191 | 17O, 1H, and 2H electron nuclear double resonance characterization of solvent, substrate, and inhibitor binding to the [4Fe-4S] ⁺ cluster of aconitase. <i>Biochemistry</i> , 1990 , 29, 10526-32 | 3.2 | 74 |
| 190 | ENDOR of metalloenzymes. <i>Accounts of Chemical Research</i> , 2003 , 36, 522-9 | 24.3 | 73 |
| 189 | Is Mo involved in hydride binding by the four-electron reduced (E ₄) intermediate of the nitrogenase MoFe protein?. <i>Journal of the American Chemical Society</i> , 2010 , 132, 2526-7 | 16.4 | 72 |
| 188 | Rapid freeze-quench ENDOR study of chloroperoxidase compound I: the site of the radical. <i>Journal of the American Chemical Society</i> , 2006 , 128, 5598-9 | 16.4 | 71 |
| 187 | Iron-57 hyperfine coupling tensors of the FeMo cluster in <i>Azotobacter vinelandii</i> MoFe protein: determination by polycrystalline ENDOR spectroscopy. <i>Journal of the American Chemical Society</i> , 1988 , 110, 1935-1943 | 16.4 | 71 |
| 186 | Critical computational analysis illuminates the reductive-elimination mechanism that activates nitrogenase for N ₂ reduction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E10521-E10530 | 11.5 | 69 |
| 185 | Ultrafast Excited State Relaxation of a Metalloporphyrin Revealed by Femtosecond X-ray Absorption Spectroscopy. <i>Journal of the American Chemical Society</i> , 2016 , 138, 8752-64 | 16.4 | 67 |
| 184 | Mechanistic enzymology of oxygen activation by the cytochromes P450. <i>Drug Metabolism Reviews</i> , 2002 , 34, 691-708 | 7 | 67 |
| 183 | 57Fe ENDOR spectroscopy and 'electron inventory' analysis of the nitrogenase E ₄ intermediate suggest the metal-ion core of FeMo-cofactor cycles through only one redox couple. <i>Journal of the American Chemical Society</i> , 2011 , 133, 17329-40 | 16.4 | 66 |
| 182 | Kinetic isotope effects on the rate-limiting step of heme oxygenase catalysis indicate concerted proton transfer/heme hydroxylation. <i>Journal of the American Chemical Society</i> , 2003 , 125, 16208-9 | 16.4 | 66 |
| 181 | Chiral porphyrazine near-IR optical imaging agent exhibiting preferential tumor accumulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 1284-8 | 11.5 | 64 |
| 180 | Electron-nuclear double resonance spectroscopy (and electron spin-echo envelope modulation spectroscopy) in bioinorganic chemistry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 3575-8 | 11.5 | 64 |
| 179 | Energy Transduction in Nitrogenase. <i>Accounts of Chemical Research</i> , 2018 , 51, 2179-2186 | 24.3 | 62 |
| 178 | gemini-Porphyrazines: The Synthesis and Characterization of Metal-Capped cis- and trans-Porphyrazine Tetrathiolates. <i>Journal of the American Chemical Society</i> , 1996 , 118, 10487-10493 | 16.4 | 62 |

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| 177 | Detection of two histidyl ligands to CuA of cytochrome oxidase by 35-GHz ENDOR. ^{14}N and $^{63,65}\text{Cu}$ ENDOR studies of the CuA site in bovine heart cytochrome aa3 and cytochromes caa3 and ba3 from <i>Thermus thermophilus</i> . <i>Journal of the American Chemical Society</i> , 1993 , 115, 10888-10894 | 16.4 | 62 |
| 176 | Letter: Synthetic oxygen carrier. A dioxygen adduct of a manganese porphyrin. <i>Journal of the American Chemical Society</i> , 1975 , 97, 5278-80 | 16.4 | 62 |
| 175 | Mo-, V-, and Fe-Nitrogenases Use a Universal Eight-Electron Reductive-Elimination Mechanism To Achieve N Reduction. <i>Biochemistry</i> , 2019 , 58, 3293-3301 | 3.2 | 59 |
| 174 | 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. <i>Journal of the American Chemical Society</i> , 1998 , 120, 2190-2191 | 16.4 | 59 |
| 173 | Across the tree of life, radiation resistance is governed by antioxidant Mn, gauged by paramagnetic resonance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E9253-E9260 | 11.5 | 58 |
| 172 | EPR and ENDOR characterization of the reactive intermediates in the generation of NO by cryoreduced oxy-nitric oxide synthase from <i>Geobacillus stearothermophilus</i> . <i>Journal of the American Chemical Society</i> , 2009 , 131, 14493-507 | 16.4 | 58 |
| 171 | Electron inventory, kinetic assignment ($E(n)$), structure, and bonding of nitrogenase turnover intermediates with C_2H_2 and CO. <i>Journal of the American Chemical Society</i> , 2005 , 127, 15880-90 | 16.4 | 58 |
| 170 | Distinct reaction pathways followed upon reduction of oxy-heme oxygenase and oxy-myoglobin as characterized by Mössbauer spectroscopy. <i>Journal of the American Chemical Society</i> , 2007 , 129, 1402-12 | 16.4 | 57 |
| 169 | Evidence for N coordination to Fe in the $[\text{2Fe-2S}]$ center in yeast mitochondrial complex III. Comparison with similar findings for analogous bacterial $[\text{2Fe-2S}]$ proteins. <i>FEBS Letters</i> , 1987 , 214, 117-21 | 3.8 | 57 |
| 168 | Triplet Exciton EPR and Crystal Structure of $[\text{TMPD}^+]\text{2}[\text{Ni}(\text{mnt})\text{2}]\text{2}$. <i>Journal of Chemical Physics</i> , 1972 , 56, 3490-3502 | 3.9 | 56 |
| 167 | Paradigm Shift for Radical S-Adenosyl-L-methionine Reactions: The Organometallic Intermediate Π Is Central to Catalysis. <i>Journal of the American Chemical Society</i> , 2018 , 140, 8634-8638 | 16.4 | 55 |
| 166 | Responses of Mn^{2+} speciation in <i>Deinococcus radiodurans</i> and <i>Escherichia coli</i> to Radiation by advanced paramagnetic resonance methods. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 5945-50 | 11.5 | 55 |
| 165 | A superoxo-ferrous state in a reduced oxy-ferrous hemoprotein and model compounds. <i>Journal of the American Chemical Society</i> , 2003 , 125, 16340-6 | 16.4 | 55 |
| 164 | An EPR study of the dinuclear iron site in the soluble methane monooxygenase from <i>Methylococcus capsulatus</i> (Bath) reduced by one electron at 77 K: the effects of component interactions and the binding of small molecules to the diiron(III) center. <i>Biochemistry</i> , 1999 , 38, 4188-97 | 3.2 | 55 |
| 163 | Molybdenum-95 and proton ENDOR spectroscopy of the nitrogenase molybdenum-iron protein. <i>Journal of the American Chemical Society</i> , 1982 , 104, 860-862 | 16.4 | 55 |
| 162 | Uncoupling nitrogenase: catalytic reduction of hydrazine to ammonia by a MoFe protein in the absence of Fe protein-ATP. <i>Journal of the American Chemical Society</i> , 2010 , 132, 13197-9 | 16.4 | 54 |
| 161 | EPR and ENDOR studies of cryoreduced compounds II of peroxidases and myoglobin. Proton-coupled electron transfer and protonation status of ferryl hemes. <i>Biochemistry</i> , 2008 , 47, 5147-55 | 3.2 | 54 |
| 160 | Trapping an intermediate of dinitrogen (N_2) reduction on nitrogenase. <i>Biochemistry</i> , 2009 , 48, 9094-102 | 3.2 | 53 |

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| 159 | High-frequency and field EPR investigation of (8,12-diethyl-2,3,7,13,17,18-hexamethylcorrolato)manganese(III). <i>Journal of the American Chemical Society</i> , 2001 , 123, 7890-7 | 16.4 | 53 |
| 158 | Conformational gating of electron transfer from the nitrogenase Fe protein to MoFe protein. <i>Journal of the American Chemical Society</i> , 2010 , 132, 6894-5 | 16.4 | 52 |
| 157 | Unification of reaction pathway and kinetic scheme for N ₂ reduction catalyzed by nitrogenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 5583-7 | 11.5 | 52 |
| 156 | Mechanism of Radical Initiation in the Radical S-Adenosyl-L-methionine Superfamily. <i>Accounts of Chemical Research</i> , 2018 , 51, 2611-2619 | 24.3 | 52 |
| 155 | Functional solitare- and trans-hybrids, the synthesis, characterization, electrochemistry and reactivity of porphyrazine/phthalocyanine hybrids bearing nitro and amino functionality. <i>Journal of Porphyrins and Phthalocyanines</i> , 2003 , 07, 700-712 | 1.8 | 51 |
| 154 | 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 |
| 153 | Why Nature Uses Radical SAM Enzymes so Widely: Electron Nuclear Double Resonance Studies of Lysine 2,3-Aminomutase Show the 5'-dAdo [•] Free Radical" Is Never Free. <i>Journal of the American Chemical Society</i> , 2015 , 137, 7111-21 | 16.4 | 50 |
| 152 | Experimental and theoretical EPR study of Jahn-Teller-active [HIPTN(3)N]MoL complexes (L = N(2), CO, NH(3)). <i>Journal of the American Chemical Society</i> , 2010 , 132, 8645-56 | 16.4 | 50 |
| 151 | Structure of the nucleotide radical formed during reaction of CDP/TTP with the E441Q-alpha2beta2 of E. coli ribonucleotide reductase. <i>Journal of the American Chemical Society</i> , 2009 , 131, 200-11 | 16.4 | 50 |
| 150 | Porphyrazines: Designer Macrocycles by Peripheral Substituent Change. <i>Australian Journal of Chemistry</i> , 2008 , 61, 235 | 1.2 | 50 |
| 149 | Differential influence of dynamic processes on forward and reverse electron transfer across a protein-protein interface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 3564-9 | 11.5 | 50 |
| 148 | Making hyperfine selection in Mims ENDOR independent of deadtime. <i>Chemical Physics Letters</i> , 1997 , 269, 208-214 | 2.5 | 49 |
| 147 | Reversible Photoinduced Reductive Elimination of H ₂ from the Nitrogenase Dihydride State, the E(4)(4H) Janus Intermediate. <i>Journal of the American Chemical Society</i> , 2016 , 138, 1320-7 | 16.4 | 48 |
| 146 | Mechanism of N Reduction Catalyzed by Fe-Nitrogenase Involves Reductive Elimination of H. <i>Biochemistry</i> , 2018 , 57, 701-710 | 3.2 | 47 |
| 145 | Active intermediates in heme monooxygenase reactions as revealed by cryoreduction/annealing, EPR/ENDOR studies. <i>Archives of Biochemistry and Biophysics</i> , 2011 , 507, 36-43 | 4.1 | 47 |
| 144 | Studies on seco-porphyrazines: a case study on serendipity. <i>Dalton Transactions</i> , 2003 , 2093 | 4.3 | 47 |
| 143 | Cytochrome c peroxidase-cytochrome c complex: locating the second binding domain on cytochrome c peroxidase with site-directed mutagenesis. <i>Biochemistry</i> , 2000 , 39, 10132-9 | 3.2 | 46 |
| 142 | Calculation of z-coordinates and orientational restraints using a metal binding tag. <i>Biochemistry</i> , 2000 , 39, 15217-24 | 3.2 | 46 |

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| 141 | The dioxygen adducts of several manganese(II) porphyrins. Electron paramagnetic resonance studies. <i>Journal of the American Chemical Society</i> , 1978 , 100, 7253-7259 | 16.4 | 46 |
| 140 | Synthesis and characterization of new porphyrazine-Gd(III) conjugates as multimodal MR contrast agents. <i>Bioconjugate Chemistry</i> , 2010 , 21, 2267-75 | 6.3 | 45 |
| 139 | Probing the ternary complexes of indoleamine and tryptophan 2,3-dioxygenases by cryoreduction EPR and ENDOR spectroscopy. <i>Journal of the American Chemical Society</i> , 2010 , 132, 5494-500 | 16.4 | 44 |
| 138 | The Elusive 5'-Deoxyadenosyl Radical: Captured and Characterized by Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Spectroscopies. <i>Journal of the American Chemical Society</i> , 2019 , 141, 12139-12146 | 16.4 | 42 |
| 137 | EPR, ENDOR, and electronic structure studies of the Jahn-Teller distortion in an Fe(V) nitride. <i>Journal of the American Chemical Society</i> , 2014 , 136, 12323-36 | 16.4 | 42 |
| 136 | Identification of the valence and coordination environment of the particulate methane monooxygenase copper centers by advanced EPR characterization. <i>Journal of the American Chemical Society</i> , 2014 , 136, 11767-75 | 16.4 | 42 |
| 135 | Characterization of the microsomal cytochrome P450 2B4 O ₂ activation intermediates by cryoreduction and electron paramagnetic resonance. <i>Biochemistry</i> , 2008 , 47, 9661-6 | 3.2 | 42 |
| 134 | Characterization of an Intermediate in the Reduction of Acetylene by the Nitrogenase $\text{Gln}195$ MoFe Protein by Q-band EPR and ¹³ C, ¹ H ENDOR. <i>Journal of the American Chemical Society</i> , 2000 , 122, 5582-5587 | 16.4 | 42 |
| 133 | Detection of a new signal in the ESR spectrum of vanadium nitrogenase from <i>Azotobacter vinelandii</i> . <i>Journal of the American Chemical Society</i> , 1989 , 111, 8519-8520 | 16.4 | 39 |
| 132 | Mechanism of Nitrogenase H Formation by Metal-Hydride Protonation Probed by Mediated Electrocatalysis and H/D Isotope Effects. <i>Journal of the American Chemical Society</i> , 2017 , 139, 13518-13524 | 16.4 | 38 |
| 131 | Modeling the signatures of hydrides in metalloenzymes: ENDOR analysis of a Di-iron Fe(ENH)(EH)Fe core. <i>Journal of the American Chemical Society</i> , 2012 , 134, 12637-47 | 16.4 | 37 |
| 130 | Interaction of acetylene and cyanide with the resting state of nitrogenase alpha-96-substituted MoFe proteins. <i>Biochemistry</i> , 2001 , 40, 13816-25 | 3.2 | 37 |
| 129 | Protein structure and mechanism studied by electron nuclear double resonance spectroscopy. <i>Methods in Enzymology</i> , 1995 , 246, 554-89 | 1.7 | 37 |
| 128 | Jahn-Teller effects in metalloporphyrins and other four-fold symmetric systems. <i>Molecular Physics</i> , 1978 , 35, 901-925 | 1.7 | 37 |
| 127 | Compound I is the reactive intermediate in the first monooxygenation step during conversion of cholesterol to pregnenolone by cytochrome P450 _{sc} : EPR/ENDOR/cryoreduction/annealing studies. <i>Journal of the American Chemical Society</i> , 2012 , 134, 17149-56 | 16.4 | 36 |
| 126 | Comparison of wild-type and nifV mutant molybdenum-iron proteins of nitrogenase from <i>Klebsiella pneumoniae</i> by ENDOR spectroscopy. <i>Journal of the American Chemical Society</i> , 1990 , 112, 651-657 | 16.4 | 36 |
| 125 | Paramagnetic intermediates of (E)-4-hydroxy-3-methylbut-2-enyl diphosphate synthase (GcpE/IspG) under steady-state and pre-steady-state conditions. <i>Journal of the American Chemical Society</i> , 2010 , 132, 14509-20 | 16.4 | 35 |
| 124 | Enantiomerically Pure Winged Spirane Porphyrazinooctols. <i>Angewandte Chemie International Edition in English</i> , 1997 , 36, 760-761 | | 35 |

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