

Wolfgang Lubitz

List of Publications by Year in descending order

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394
papers

26,685
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139
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405
all docs

405
docs citations

405
times ranked

11831
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Hydrogenases. Chemical Reviews, 2014, 114, 4081-4148. | 23.0 | 1,653 |
| 2 | Hydrogen: An Overview. Chemical Reviews, 2007, 107, 3900-3903. | 23.0 | 628 |
| 3 | Biomimetic assembly and activation of [FeFe]-hydrogenases. Nature, 2013, 499, 66-69. | 13.7 | 597 |
| 4 | [NiFe] and [FeFe] Hydrogenases Studied by Advanced Magnetic Resonance Techniques. Chemical Reviews, 2007, 107, 4331-4365. | 23.0 | 458 |
| 5 | Biological Water Oxidation. Accounts of Chemical Research, 2013, 46, 1588-1596. | 7.6 | 453 |
| 6 | Electronic structure of the oxygen-evolving complex in photosystem II prior to O-O bond formation. Science, 2014, 345, 804-808. | 6.0 | 432 |
| 7 | Solar water-splitting into H ₂ and O ₂ : design principles of photosystem II and hydrogenases. Energy and Environmental Science, 2008, 1, 15. | 15.6 | 388 |
| 8 | ¹⁴ N HYSCORE investigation of the H-cluster of [FeFe] hydrogenase: evidence for a nitrogen in the dithiol bridge. Physical Chemistry Chemical Physics, 2009, 11, 6592. | 1.3 | 354 |
| 9 | Two Interconvertible Structures that Explain the Spectroscopic Properties of the Oxygen-Evolving Complex of Photosystem II in the S ₂ State. Angewandte Chemie - International Edition, 2012, 51, 9935-9940. | 7.2 | 342 |
| 10 | Spontaneous activation of [FeFe]-hydrogenases by an inorganic [2Fe] active site mimic. Nature Chemical Biology, 2013, 9, 607-609. | 3.9 | 316 |
| 11 | Metal oxidation states in biological water splitting. Chemical Science, 2015, 6, 1676-1695. | 3.7 | 275 |
| 12 | Theoretical Evaluation of Structural Models of the S ₂ State in the Oxygen Evolving Complex of Photosystem II: Protonation States and Magnetic Interactions. Journal of the American Chemical Society, 2011, 133, 19743-19757. | 6.6 | 271 |
| 13 | Hydrogens detected by subatomic resolution protein crystallography in a [NiFe] hydrogenase. Nature, 2015, 520, 571-574. | 13.7 | 267 |
| 14 | Energy and environment policy case for a global project on artificial photosynthesis. Energy and Environmental Science, 2013, 6, 695. | 15.6 | 264 |
| 15 | Direct Detection of a Hydrogen Ligand in the [NiFe] Center of the Regulatory H ₂ -Sensing Hydrogenase from <i>Ralstonia eutropha</i> in Its Reduced State by HYSCORE and ENDOR Spectroscopy. Journal of the American Chemical Society, 2003, 125, 13075-13083. | 6.6 | 259 |
| 16 | Detection of the Water-Binding Sites of the Oxygen-Evolving Complex of Photosystem II Using W-Band ¹⁷ O Electron Double Resonance-Detected NMR Spectroscopy. Journal of the American Chemical Society, 2012, 134, 16619-16634. | 6.6 | 248 |
| 17 | Electronic Structure of the Mn ₄ O ₄ Ca Cluster in the S ₀ and S ₂ States of the Oxygen-Evolving Complex of Photosystem II Based on Pulse ⁵⁵ Mn-ENDOR and EPR Spectroscopy. Journal of the American Chemical Society, 2007, 129, 13421-13435. | 6.6 | 230 |
| 18 | P700: the primary electron donor of photosystem I. Biochimica Et Biophysica Acta - Bioenergetics, 2001, 1507, 61-79. | 0.5 | 225 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | 3-mm High-field EPR on semiquinone radical anions Q _• - related to photosynthesis and on the primary donor P _• + and acceptor QA _• - in reaction centers of Rhodobacter sphaeroides R-26. The Journal of Physical Chemistry, 1993, 97, 7639-7647. | 2.9 | 220 |
| 20 | [NiFe] hydrogenases: A common active site for hydrogen metabolism under diverse conditions. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 986-1002. | 0.5 | 219 |
| 21 | Effect of Ca ²⁺ /Sr ²⁺ Substitution on the Electronic Structure of the Oxygen-Evolving Complex of Photosystem II: A Combined Multifrequency EPR, ⁵⁵ Mn-ENDOR, and DFT Study of the S ₂ State. Journal of the American Chemical Society, 2011, 133, 3635-3648. | 6.6 | 211 |
| 22 | A redox hydrogel protects hydrogenase from high-potential deactivation and oxygen damage. Nature Chemistry, 2014, 6, 822-827. | 6.6 | 209 |
| 23 | Single Crystal EPR Studies of the Reduced Active Site of [NiFe] Hydrogenase from Desulfovibrio vulgaris Miyazaki F. Journal of the American Chemical Society, 2003, 125, 83-93. | 6.6 | 196 |
| 24 | Calculating the Electron Paramagnetic Resonance Parameters of Exchange Coupled Transition Metal Complexes Using Broken Symmetry Density Functional Theory: Application to a MnIII/MnIV Model Compound. Journal of the American Chemical Society, 2004, 126, 2613-2622. | 6.6 | 194 |
| 25 | Identification and Characterization of the "Super-Reduced" State of the H-Cluster in [FeFe] Hydrogenase: A New Building Block for the Catalytic Cycle?. Angewandte Chemie - International Edition, 2012, 51, 11458-11462. | 7.2 | 184 |
| 26 | Ultrafast Transient Absorption Studies on Photosystem I Reaction Centers from Chlamydomonas reinhardtii. 1. A New Interpretation of the Energy Trapping and Early Electron Transfer Steps in Photosystem I. Biophysical Journal, 2003, 85, 3899-3922. | 0.2 | 180 |
| 27 | [NiFe] hydrogenases: structural and spectroscopic studies of the reaction mechanism. Dalton Transactions, 2009, , 7577. | 1.6 | 179 |
| 28 | ⁵⁵ Mn Pulse ENDOR at 34 GHz of the S ₀ and S ₂ States of the Oxygen-Evolving Complex in Photosystem II. Journal of the American Chemical Society, 2005, 127, 2392-2393. | 6.6 | 174 |
| 29 | Structural adaptations of photosynthetic complex I enable ferredoxin-dependent electron transfer. Science, 2019, 363, 257-260. | 6.0 | 162 |
| 30 | Radicals, Radical Pairs and Triplet States in Photosynthesis. Accounts of Chemical Research, 2002, 35, 313-320. | 7.6 | 161 |
| 31 | The electronic structure of the primary donor cation radical in Rhodobacter sphaeroides R-26: ENDOR and TRIPLE resonance studies in single crystals of reaction centers. Biochimica Et Biophysica Acta - Bioenergetics, 1993, 1183, 139-160. | 0.5 | 159 |
| 32 | A five-coordinate Mn(IV) intermediate in biological water oxidation: spectroscopic signature and a pivot mechanism for water binding. Chemical Science, 2016, 7, 72-84. | 3.7 | 158 |
| 33 | The Electronic Structure of the H-Cluster in the [FeFe]-Hydrogenase from Desulfovibrio desulfuricans: A Q-band ⁵⁷ Fe-ENDOR and HYSCORE Study. Journal of the American Chemical Society, 2007, 129, 11447-11458. | 6.6 | 157 |
| 34 | Direct Observation of an Iron-Bound Terminal Hydride in [FeFe]-Hydrogenase by Nuclear Resonance Vibrational Spectroscopy. Journal of the American Chemical Society, 2017, 139, 4306-4309. | 6.6 | 155 |
| 35 | Characterization of a unique [FeS] cluster in the electron transfer chain of the oxygen tolerant [NiFe] hydrogenase from Aquifex aeolicus. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6097-6102. | 3.3 | 154 |
| 36 | Water oxidation in photosystem II. Photosynthesis Research, 2019, 142, 105-125. | 1.6 | 149 |

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|----|---|-----|-----------|
| 37 | Ammonia binding to the oxygen-evolving complex of photosystem II identifies the solvent-exchangeable oxygen bridge (1/4-oxo) of the manganese tetramer. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15561-15566. | 3.3 | 148 |
| 38 | Ultrafast Transient Absorption Studies on Photosystem I Reaction Centers from Chlamydomonas reinhardtii. 2: Mutations near the P700 Reaction Center Chlorophylls Provide New Insight into the Nature of the Primary Electron Donor. Biophysical Journal, 2006, 90, 552-565. | 0.2 | 146 |
| 39 | Membrane-Bound Hydrogenase I from the Hyperthermophilic Bacterium <i>Aquifex aeolicus</i> : Enzyme Activation, Redox Intermediates and Oxygen Tolerance. Journal of the American Chemical Society, 2010, 132, 6991-7004. | 6.6 | 145 |
| 40 | The primary and secondary acceptors in bacterial photosynthesis III. Characterization of the quinone radicals Q A ^{•-} and Q B ^{•-} by EPR and ENDOR. Applied Magnetic Resonance, 1999, 17, 1-48. | 0.6 | 142 |
| 41 | Proton Coupled Electronic Rearrangement within the H-Cluster as an Essential Step in the Catalytic Cycle of [FeFe] Hydrogenases. Journal of the American Chemical Society, 2017, 139, 1440-1443. | 6.6 | 142 |
| 42 | Spectroelectrochemical Characterization of the Active Site of the [FeFe] Hydrogenase HydA1 from <i>Chlamydomonas reinhardtii</i> . Biochemistry, 2009, 48, 7780-7786. | 1.2 | 133 |
| 43 | A Model of the [FeFe] Hydrogenase Active Site with a Biologically Relevant Azadithiolate Bridge: A Spectroscopic and Theoretical Investigation. Angewandte Chemie - International Edition, 2011, 50, 1439-1443. | 7.2 | 130 |
| 44 | Importance of the Protein Framework for Catalytic Activity of [FeFe]-Hydrogenases. Journal of Biological Chemistry, 2012, 287, 1489-1499. | 1.6 | 129 |
| 45 | A New Quantum Chemical Approach to the Magnetic Properties of Oligonuclear Transition-Metal Complexes: Application to a Model for the Tetranuclear Manganese Cluster of Photosystem II. Chemistry - A European Journal, 2009, 15, 5108-5123. | 1.7 | 123 |
| 46 | Current Understanding of the Mechanism of Water Oxidation in Photosystem II and Its Relation to XFEL Data. Annual Review of Biochemistry, 2020, 89, 795-820. | 5.0 | 123 |
| 47 | The Crystal Structure of the [NiFe] Hydrogenase from the Photosynthetic Bacterium <i>Allochrocatium vinosum</i> : Characterization of the Oxidized Enzyme (Ni-A State). Journal of Molecular Biology, 2010, 402, 428-444. | 2.0 | 122 |
| 48 | A Systematic Density Functional Study of the Zero-Field Splitting in Mn(II) Coordination Compounds. Inorganic Chemistry, 2008, 47, 134-142. | 1.9 | 121 |
| 49 | Structure of the oxygen-evolving complex of photosystem II: information on the S2 state through quantum chemical calculation of its magnetic properties. Physical Chemistry Chemical Physics, 2009, 11, 6788. | 1.3 | 121 |
| 50 | New Redox States Observed in [FeFe] Hydrogenases Reveal Redox Coupling Within the H-Cluster. Journal of the American Chemical Society, 2014, 136, 11339-11346. | 6.6 | 121 |
| 51 | Electronic Structure of Antiferromagnetically Coupled Dinuclear Manganese (MnIII/MnIV) Complexes Studied by Magnetic Resonance Techniques. Journal of the American Chemical Society, 1998, 120, 13104-13120. | 6.6 | 120 |
| 52 | Time-Resolved X-, K-, and W-Band EPR of the Radical Pair State of Photosystem I in Comparison with in Bacterial Reaction Centers. Journal of Physical Chemistry B, 1997, 101, 1437-1443. | 1.2 | 118 |
| 53 | Hydrogen Bond Geometries from Electron Paramagnetic Resonance and Electron-Nuclear Double Resonance Parameters: Density Functional Study of Quinone Radical Anion-Solvent Interactions. Journal of the American Chemical Society, 2004, 126, 3280-3290. | 6.6 | 118 |
| 54 | ENDOR Studies of the Primary Donor Cation Radical in Mutant Reaction Centers of <i>Rhodospira rubra</i> with Altered Hydrogen-Bond Interactions. Biochemistry, 1995, 34, 8130-8143. | 1.2 | 114 |

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|----|---|-----|-----------|
| 55 | Hybrid [FeFe]-Hydrogenases with Modified Active Sites Show Remarkable Residual Enzymatic Activity. <i>Biochemistry</i> , 2015, 54, 1474-1483. | 1.2 | 113 |
| 56 | Electronic structure of Q-A in reaction centers from <i>Rhodobacter sphaeroides</i> . I. Electron paramagnetic resonance in single crystals. <i>Biophysical Journal</i> , 1995, 69, 311-322. | 0.2 | 112 |
| 57 | Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of <i>Rhodobacter sphaeroides</i> R-26. <i>Chemical Physics</i> , 1995, 194, 361-370. | 0.9 | 110 |
| 58 | EPR Study of the Molecular and Electronic Structure of the Semiquinone Biradical QA-QB in Photosynthetic Reaction Centers from <i>Rhodobacter sphaeroides</i> . <i>Journal of the American Chemical Society</i> , 2000, 122, 7327-7341. | 6.6 | 110 |
| 59 | An orientation-selected ENDOR and HYSORE study of the Ni-C active state of <i>Desulfovibrio vulgaris</i> Miyazaki F hydrogenase. <i>Journal of Biological Inorganic Chemistry</i> , 2005, 10, 51-62. | 1.1 | 110 |
| 60 | Determination of the g tensor of the primary donor cation radical in single crystals of <i>Rhodobacter sphaeroides</i> R-26 reaction centers by 3-mm high-field EPR. <i>The Journal of Physical Chemistry</i> , 1993, 97, 2015-2020. | 2.9 | 109 |
| 61 | Relativistic DFT Calculations of the Paramagnetic Intermediates of [NiFe] Hydrogenase. Implications for the Enzymatic Mechanism. <i>Journal of the American Chemical Society</i> , 2001, 123, 5839-5840. | 6.6 | 109 |
| 62 | Orientation and Electronic Structure of the Primary Donor Radical Cation in Photosystem I: A Single Crystals EPR and ENDOR Study. <i>Journal of Physical Chemistry B</i> , 2001, 105, 1225-1239. | 1.2 | 106 |
| 63 | Isolation and first EPR characterization of the [FeFe]-hydrogenases from green algae. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008, 1777, 410-416. | 0.5 | 104 |
| 64 | Intermediates in the Catalytic Cycle of [NiFe] Hydrogenase: Functional Spectroscopy of the Active Site. <i>ChemPhysChem</i> , 2010, 11, 1127-1140. | 1.0 | 104 |
| 65 | A single-crystal ENDOR and density functional theory study of the oxidized states of the [NiFe] hydrogenase from <i>Desulfovibrio vulgaris</i> Miyazaki F. <i>Journal of Biological Inorganic Chemistry</i> , 2006, 11, 41-51. | 1.1 | 103 |
| 66 | Electronic Structure of Neutral Tryptophan Radicals in Ribonucleotide Reductase Studied by EPR and ENDOR Spectroscopy. <i>Journal of the American Chemical Society</i> , 1996, 118, 8111-8120. | 6.6 | 101 |
| 67 | A Functional [NiFe]-Hydrogenase Model Compound That Undergoes Biologically Relevant Reversible Thiolate Protonation. <i>Journal of the American Chemical Society</i> , 2012, 134, 20745-20755. | 6.6 | 101 |
| 68 | In Situ EPR Study of the Redox Properties of CuO-CeO ₂ Catalysts for Preferential CO Oxidation (PROX). <i>ACS Catalysis</i> , 2016, 6, 3520-3530. | 5.5 | 97 |
| 69 | Recent developments in biological water oxidation. <i>Current Opinion in Chemical Biology</i> , 2016, 31, 113-119. | 2.8 | 97 |
| 70 | Hydride bridge in [NiFe]-hydrogenase observed by nuclear resonance vibrational spectroscopy. <i>Nature Communications</i> , 2015, 6, 7890. | 5.8 | 96 |
| 71 | Influence of the Axial Ligands on the Spectral Properties of P700 of Photosystem I: A Study of Site-Directed Mutants. <i>Biochemistry</i> , 2000, 39, 13012-13025. | 1.2 | 95 |
| 72 | A Metal-Metal Bond in the Light-Induced State of [NiFe] Hydrogenases with Relevance to Hydrogen Evolution. <i>Journal of the American Chemical Society</i> , 2013, 135, 3915-3925. | 6.6 | 95 |

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|----|--|------|-----------|
| 73 | The [FeFe]-hydrogenase maturase HydF from <i>Clostridium acetobutylicum</i> contains a CO and CN ⁺ ligated iron cofactor. FEBS Letters, 2010, 584, 638-642. | 1.3 | 94 |
| 74 | A Tyrosyl-Dimanganese Coupled Spin System is the Native Metalloradical Cofactor of the R2F Subunit of the Ribonucleotide Reductase of <i>Corynebacterium ammoniagenes</i> . Journal of the American Chemical Society, 2010, 132, 11197-11213. | 6.6 | 93 |
| 75 | ENDOR Spectroscopy – A Promising Technique for Investigating the Structure of Organic Radicals. Angewandte Chemie International Edition in English, 1984, 23, 173-194. | 4.4 | 92 |
| 76 | Structure and function of [NiFe] hydrogenases. Journal of Biochemistry, 2016, 160, 251-258. | 0.9 | 92 |
| 77 | Comparative Study of Reaction Centers from Photosynthetic Purple Bacteria: Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Spectroscopy. Biochemistry, 1994, 33, 12077-12084. | 1.2 | 90 |
| 78 | Orientation-Resolving Pulsed Electron Dipolar High-Field EPR Spectroscopy on Disordered Solids: I. Structure of Spin-Correlated Radical Pairs in Bacterial Photosynthetic Reaction Centers. Journal of Physical Chemistry B, 2007, 111, 6245-6262. | 1.2 | 90 |
| 79 | Hydrogen Bonding to P700: Site-Directed Mutagenesis of Threonine A739 of Photosystem I in <i>Chlamydomonas reinhardtii</i> . Biochemistry, 2002, 41, 8557-8569. | 1.2 | 88 |
| 80 | Relativistic DFT calculation of the reaction cycle intermediates of [NiFe] hydrogenase: a contribution to understanding the enzymatic mechanism. Journal of Inorganic Biochemistry, 2004, 98, 862-877. | 1.5 | 87 |
| 81 | A Redox Hydrogel Protects the O ₂ -Sensitive [FeFe]-Hydrogenase from <i>Chlamydomonas reinhardtii</i> from Oxidative Damage. Angewandte Chemie - International Edition, 2015, 54, 12329-12333. | 7.2 | 87 |
| 82 | Spin State as a Marker for the Structural Evolution of Nature's Water-Splitting Catalyst. Inorganic Chemistry, 2016, 55, 488-501. | 1.9 | 87 |
| 83 | Fluid solution and solid-state electron nuclear double resonance studies of flavin model compounds and flavoenzymes. Journal of the American Chemical Society, 1984, 106, 737-746. | 6.6 | 86 |
| 84 | Effects of Hydrogen Bonding to a Bacteriochlorophyll-Bacteriopheophytin Dimer in Reaction Centers from <i>Rhodospira rubra</i> . Biochemistry, 1996, 35, 6612-6619. | 1.2 | 84 |
| 85 | Radicals in solution studied by endor and triple resonance spectroscopy. Physics Reports, 1982, 87, 171-208. | 10.3 | 83 |
| 86 | Pulsed EPR Structure Analysis of Photosystem I Single Crystals: Localization of the Phylloquinone Acceptor. Biochemistry, 1997, 36, 12001-12004. | 1.2 | 82 |
| 87 | Quantum chemical calculations of [NiFe] hydrogenase. Current Opinion in Chemical Biology, 2002, 6, 243-249. | 2.8 | 81 |
| 88 | The electronic structures of the S2 states of the oxygen-evolving complexes of photosystem II in plants and cyanobacteria in the presence and absence of methanol. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 829-840. | 0.5 | 81 |
| 89 | Structural and Spectroscopic Features of Mixed Valent Fe ^{II} Fe ^I Complexes and Factors Related to the Rotated Configuration of Diiron Hydrogenase. Journal of the American Chemical Society, 2012, 134, 13089-13102. | 6.6 | 81 |
| 90 | Mechanism of Protection of Catalysts Supported in Redox Hydrogel Films. Journal of the American Chemical Society, 2015, 137, 5494-5505. | 6.6 | 81 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 91 | Photosystem II single crystals studied by EPR spectroscopy at 94 GHz: The tyrosine radical Y ₂ Formula. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 6623-6628. | 3.3 | 79 |
| 92 | Reaction Coordinate Leading to H ₂ Production in [FeFe]-Hydrogenase Identified by Nuclear Resonance Vibrational Spectroscopy and Density Functional Theory. Journal of the American Chemical Society, 2017, 139, 16894-16902. | 6.6 | 78 |
| 93 | Structure, ligands and substrate coordination of the oxygen-evolving complex of photosystem II in the S ₂ state: a combined EPR and DFT study. Physical Chemistry Chemical Physics, 2014, 16, 11877. | 1.3 | 77 |
| 94 | Enhancing hydrogen production of microalgae by redirecting electrons from photosystem I to hydrogenase. Energy and Environmental Science, 2014, 7, 3296-3301. | 15.6 | 77 |
| 95 | Inhibition of the [NiFe] hydrogenase from Desulfovibrio vulgaris Miyazaki F by carbon monoxide: An FTIR and EPR spectroscopic study. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 304-313. | 0.5 | 76 |
| 96 | Relationship between the oxidation potential and electron spin density of the primary electron donor in reaction centers from Rhodobacter sphaeroides. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 13582-13587. | 3.3 | 75 |
| 97 | A Structural Model for the Charge Separated State in Photosystem I from the Orientation of the Magnetic Interaction Tensors. Journal of Physical Chemistry B, 2000, 104, 9728-9739. | 1.2 | 75 |
| 98 | ENDOR and ESEEM of the ¹⁵ N labelled radical cations of chlorophyll a and the primary donor P700 in photosystem I. Chemical Physics, 1995, 194, 419-432. | 0.9 | 74 |
| 99 | Light-Induced Excited Spin State Trapping in an Exchange-Coupled Nitroxide-Copper(II)-Nitroxide Cluster. Angewandte Chemie - International Edition, 2008, 47, 6897-6899. | 7.2 | 74 |
| 100 | EPR and ENDOR characterization of semiquinone anion radicals related to photosynthesis. Magnetic Resonance in Chemistry, 1995, 33, S81-S93. | 1.1 | 72 |
| 101 | DFT calculations of the electronic structure of the paramagnetic states Ni-A, Ni-B and Ni-C of [NiFe] hydrogenase. Physical Chemistry Chemical Physics, 2001, 3, 2668-2675. | 1.3 | 72 |
| 102 | A gas breathing hydrogen/air biofuel cell comprising a redox polymer/hydrogenase-based bioanode. Nature Communications, 2018, 9, 4715. | 5.8 | 71 |
| 103 | Molecular orbital investigation of dimer formations of bacteriochlorophyll a. Model configurations for the primary donor of photosynthesis. Chemical Physics, 1986, 107, 185-196. | 0.9 | 69 |
| 104 | Spectroscopic Investigations of [FeFe] Hydrogenase Maturated with [⁵⁷ Fe ₂ (adt)(CN) ₂ (CO) ₄] ²⁺ . Journal of the American Chemical Society, 2015, 137, 8998-9005. | 6.6 | 69 |
| 105 | Atomic-Scale Explanation of O ₂ Activation at the Au-TiO ₂ Interface. Journal of the American Chemical Society, 2018, 140, 18082-18092. | 6.6 | 69 |
| 106 | A solution ENDOR sensitivity study of various nuclei in organic radicals. The Journal of Physical Chemistry, 1981, 85, 1202-1219. | 2.9 | 68 |
| 107 | Modeling of Interactions in Bacterial Reaction Centers from Rhodobacter sphaeroides R-26: II. Geometry of the Hydrogen Bonds to the Primary Quinone $\langle \text{mmi:math altimg= 's11.gif' display= 'inline' overflow= 'scroll' } \rangle$ $\langle \text{xmlns:xocs= 'http://www.elsevier.com/xml/xocs/dtd' } \rangle$ $\langle \text{xmlns:xs= 'http://www.w3.org/2001/XMLSchema' } \rangle$ $\langle \text{xmlns:xsi= 'http://www.w3.org/2001/XMLSchema-instance' } \rangle$ $\langle \text{xmlns= 'http://www.elsevier.com/xml/ja/dtd' } \rangle$ $\langle \text{xmlns:ja= 'http://www.elsevier.com/xml/ja/dtd' } \rangle$ $\langle \text{xmlns:mml= 'http://www.w3.org/1998/Math/MathML' } \rangle$ | 0.2 | 68 |
| 108 | The first tyrosyl radical intermediate formed in the S ₂ -S ₃ transition of photosystem II. Physical Chemistry Chemical Physics, 2014, 16, 11901. | 1.3 | 68 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 109 | Charge Recombination Fluorescence in Photosystem I Reaction Centers from <i>Chlamydomonas reinhardtii</i> . <i>Journal of Physical Chemistry B</i> , 2005, 109, 5903-5911. | 1.2 | 66 |
| 110 | A tunable general purpose Q-band resonator for CW and pulse EPR/ENDOR experiments with large sample access and optical excitation. <i>Journal of Magnetic Resonance</i> , 2012, 214, 237-243. | 1.2 | 66 |
| 111 | Species-specific Differences of the Spectroscopic Properties of P700. <i>Journal of Biological Chemistry</i> , 2003, 278, 46760-46771. | 1.6 | 65 |
| 112 | In vivo liquid solution ENDOR and TRIPLE resonance of bacterial photosynthetic reaction centers of <i>Rhodospseudomonas sphaeroides</i> R-26. <i>Journal of the American Chemical Society</i> , 1981, 103, 4635-4637. | 6.6 | 64 |
| 113 | Transient EPR spectroscopy of the charge separated state $P^+Q^{\dot{-}}$ in photosynthetic reaction centers. Comparison of Zn-substituted <i>Rhodobacter sphaeroides</i> R-26 and Photosystem I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1993, 1142, 23-35. | 0.5 | 64 |
| 114 | Differences in the binding of the primary quinone receptor in Photosystem I and reaction centres of <i>Rhodobacter sphaeroides</i> -R26 studied with transient EPR spectroscopy. <i>Chemical Physics</i> , 1995, 194, 349-359. | 0.9 | 64 |
| 115 | g- and A-Tensor Calculations in the Zero-Order Approximation for Relativistic Effects of Ni Complexes and Ni(CO) ₃ H as Model Complexes for the Active Center of [NiFe]-Hydrogenase. <i>Journal of Physical Chemistry A</i> , 2001, 105, 416-425. | 1.1 | 64 |
| 116 | Probing hydrogen bonding to quinone anion radicals by 1H and 2H ENDOR spectroscopy at 35 GHz. <i>Chemical Physics</i> , 2003, 294, 401-413. | 0.9 | 64 |
| 117 | Spectroscopic Characterization of the Bridging Amine in the Active Site of [FeFe] Hydrogenase Using Isotopologues of the H-Cluster. <i>Journal of the American Chemical Society</i> , 2015, 137, 12744-12747. | 6.6 | 64 |
| 118 | ESR, ENDOR and TRIPLE resonance studies of the primary donor radical cation P960 ⁺ in the photosynthetic bacterium <i>Rhodospseudomonas viridis</i> . <i>Chemical Physics Letters</i> , 1988, 148, 377-385. | 1.2 | 63 |
| 119 | The First State in the Catalytic Cycle of the Water-Oxidizing Enzyme: Identification of a Water-Derived $\frac{1}{4}$ -Hydroxo Bridge. <i>Journal of the American Chemical Society</i> , 2017, 139, 14412-14424. | 6.6 | 63 |
| 120 | Spectroscopic and Computational Evidence that [FeFe] Hydrogenases Operate Exclusively with CO-Bridged Intermediates. <i>Journal of the American Chemical Society</i> , 2020, 142, 222-232. | 6.6 | 63 |
| 121 | 2D ESEEM of the ¹⁵ N-Labeled Radical Cations of Bacteriochlorophyll a and of the Primary Donor in Reaction Centers of <i>Rhodobacter sphaeroides</i> . <i>The Journal of Physical Chemistry</i> , 1995, 99, 436-448. | 2.9 | 62 |
| 122 | Single crystal EPR studies of the oxidized active site of [NiFe] hydrogenase from <i>Desulfovibrio vulgaris</i> Miyazaki F. <i>Journal of Biological Inorganic Chemistry</i> , 2000, 5, 36-44. | 1.1 | 62 |
| 123 | Structure of the Tyrosyl Biradical in Mouse R2 Ribonucleotide Reductase from High-Field PELDOR. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 1224-1227. | 7.2 | 62 |
| 124 | Artificial Photosynthesis for Solar Fuels – an Evolving Research Field within AMPEA, a Joint Programme of the European Energy Research Alliance. <i>Green</i> , 2013, 3, . | 0.4 | 62 |
| 125 | Pigment-Protein Interactions in Bacterial Reaction Centers and Their Influence on Oxidation Potential and Spin Density Distribution of the Primary Donor. <i>Journal of Physical Chemistry B</i> , 2002, 106, 3226-3236. | 1.2 | 61 |
| 126 | Manganese catalase spectroscopic parameters from broken-symmetry density functional theory of the superoxidized Mn(III)/Mn(IV) state. <i>Journal of Biological Inorganic Chemistry</i> , 2005, 10, 231-238. | 1.1 | 61 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 127 | Spectroelectrochemical Study of the [NiFe] Hydrogenase from <i>Desulfovibrio vulgaris</i> Miyazaki F in Solution and Immobilized on Biocompatible Gold Surfaces. <i>Journal of Physical Chemistry B</i> , 2009, 113, 15344-15351. | 1.2 | 61 |
| 128 | Direct Comparison of the Performance of a Bio-inspired Synthetic Nickel Catalyst and a [NiFe]-Hydrogenase, Both Covalently Attached to Electrodes. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 12303-12307. | 7.2 | 61 |
| 129 | Time-resolved EPR of the radical pair P865+•QA• in bacterial reaction centers. Observations of transient nutations, quantum beats and envelope modulation effects. <i>Chemical Physics Letters</i> , 1994, 226, 349-358. | 1.2 | 60 |
| 130 | Pulsed EPR measurement of the distance between P680 +• and QA• in photosystem II. <i>FEBS Letters</i> , 1997, 414, 454-456. | 1.3 | 60 |
| 131 | Multifrequency EPR Investigation of Dimanganese Catalase and Related Mn(III)Mn(IV) Complexes. <i>Journal of Physical Chemistry B</i> , 2003, 107, 1242-1250. | 1.2 | 60 |
| 132 | De novo design of a non-natural fold for an iron-sulfur protein: Alpha-helical coiled-coil with a four-iron four-sulfur cluster binding site in its central core. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010, 1797, 406-413. | 0.5 | 60 |
| 133 | Observation of the Fe-C≡N and Fe-C≡O Vibrations in the Active Site of [NiFe] Hydrogenase by Nuclear Resonance Vibrational Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 724-728. | 7.2 | 60 |
| 134 | Artificial photosynthesis: understanding water splitting in nature. <i>Interface Focus</i> , 2015, 5, 20150009. | 1.5 | 60 |
| 135 | Transient EPR spectroscopy of perdeuterated Zn-substituted reaction centres of <i>Rhodobacter sphaeroides</i> R-26. <i>Chemical Physics Letters</i> , 1993, 212, 561-568. | 1.2 | 59 |
| 136 | W-band ELDOR-detected NMR (EDNMR) spectroscopy as a versatile technique for the characterisation of transition metal-ligand interactions. <i>Molecular Physics</i> , 2013, 111, 2788-2808. | 0.8 | 59 |
| 137 | Molecular orbital study of the primary electron donor P700 of photosystem I based on a recent X-ray single crystal structure analysis. <i>Chemical Physics</i> , 2003, 294, 483-499. | 0.9 | 58 |
| 138 | Redox active iron nitrosyl units in proton reduction electrocatalysis. <i>Nature Communications</i> , 2014, 5, 3684. | 5.8 | 58 |
| 139 | Electron Spin-Lattice Relaxation of the S0 State of the Oxygen-Evolving Complex in Photosystem II and of Dinuclear Manganese Model Complexes. <i>Biochemistry</i> , 2005, 44, 9368-9374. | 1.2 | 57 |
| 140 | Electronic structure of the unique [4Fe-3S] cluster in O ₂ -tolerant hydrogenases characterized by ⁵⁷ Fe Mössbauer and EPR spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 483-488. | 3.3 | 57 |
| 141 | Electronic Structure of a Transient Histidine Radical in Liquid Aqueous Solution: EPR Continuous-Flow Studies and Density Functional Calculations. <i>Journal of Physical Chemistry A</i> , 1999, 103, 1283-1290. | 1.1 | 56 |
| 142 | The Basic Properties of the Electronic Structure of the Oxygen-evolving Complex of Photosystem II Are Not Perturbed by Ca ²⁺ Removal. <i>Journal of Biological Chemistry</i> , 2012, 287, 24721-24733. | 1.6 | 56 |
| 143 | Theoretical Spectroscopy of the Ni ^{II} Intermediate States in the Catalytic Cycle and the Activation of [NiFe] Hydrogenases. <i>ChemBioChem</i> , 2013, 14, 1898-1905. | 1.3 | 56 |
| 144 | Models of the Ni-L and Ni-S _a States of the [NiFe]-Hydrogenase Active Site. <i>Inorganic Chemistry</i> , 2016, 55, 419-431. | 1.9 | 56 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 145 | Intercluster Redox Coupling Influences Protonation at the H-cluster in [FeFe] Hydrogenases. Journal of the American Chemical Society, 2017, 139, 15122-15134. | 6.6 | 56 |
| 146 | EPR and ENDOR studies of the water oxidizing complex of Photosystem II. Photosynthesis Research, 1996, 48, 227-237. | 1.6 | 55 |
| 147 | Pulsed ENDOR at 95 GHz on the Primary Acceptor Ubisemiquinone in Photosynthetic Bacterial Reaction Centers and Related Model Systems. Journal of Physical Chemistry B, 1998, 102, 4648-4657. | 1.2 | 55 |
| 148 | The electronic structure of the catalytic intermediate Ni-C in [NiFe] and [NiFeSe] hydrogenases Electronic Supplementary Information available. See http://www.rsc.org/suppdata/cp/b1/b105723p/ . Physical Chemistry Chemical Physics, 2001, 3, 5115-5120. | 1.3 | 55 |
| 149 | Rapid and Reversible Reactions of [NiFe]-Hydrogenases with Sulfide. Journal of the American Chemical Society, 2006, 128, 7448-7449. | 6.6 | 55 |
| 150 | Electronic Structure of a Weakly Antiferromagnetically Coupled Mn ^{II} /Mn ^{III} Model Relevant to Manganese Proteins: A Combined EPR, Mn-ENDOR, and DFT Study. Inorganic Chemistry, 2011, 50, 8238-8251. | 1.9 | 55 |
| 151 | Structural studies of the primary donor cation radical P870+ in reaction centers of Rhodospirillum rubrum by electron-nuclear double resonance in solution. Proceedings of the National Academy of Sciences of the United States of America, 1984, 81, 1401-1405. | 3.3 | 54 |
| 152 | Orientation-Selected 95 GHz High-Field ENDOR Spectroscopy of Randomly Oriented Plastoquinone Anion Radicals. Journal of Magnetic Resonance Series A, 1995, 116, 59-66. | 1.6 | 54 |
| 153 | Five-coordinate Mn ^{IV} intermediate in the activation of nature's water splitting cofactor. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16841-16846. | 3.3 | 54 |
| 154 | Transient EPR and Absorption Studies of Carotenoid Triplet Formation in Purple Bacterial Antenna Complexes. Journal of Physical Chemistry B, 2001, 105, 5525-5535. | 1.2 | 53 |
| 155 | Spectroscopic characterization of the key catalytic intermediate Ni ⁺ C in the O ₂ -tolerant [NiFe] hydrogenase I from Aquifex aeolicus: evidence of a weakly bound hydride. Chemical Communications, 2012, 48, 823-825. | 2.2 | 53 |
| 156 | Unique Spectroscopic Properties of the H-Cluster in a Putative Sensory [FeFe] Hydrogenase. Journal of the American Chemical Society, 2018, 140, 1057-1068. | 6.6 | 53 |
| 157 | A fully protected hydrogenase/polymer-based bioanode for high-performance hydrogen/glucose biofuel cells. Nature Communications, 2018, 9, 3675. | 5.8 | 53 |
| 158 | Preventing the coffee-ring effect and aggregate sedimentation by <i>in situ</i> gelation of monodisperse materials. Chemical Science, 2018, 9, 7596-7605. | 3.7 | 53 |
| 159 | ¹⁵ N electron nuclear double resonance of the primary donor cation radical P ₈₆₅ in reaction centers of Rhodospseudomonas sphaeroides: additional evidence for the dimer model. Proceedings of the National Academy of Sciences of the United States of America, 1984, 81, 7792-7796. | 3.3 | 52 |
| 160 | Pulsed EPR experiments on radical pairs in photosynthesis: Comparison of the donor-acceptor distances in photosystem I and bacterial reaction centers. Zeitschrift Fur Elektrochemie Und Elektrochemie, 1996, 100, 2041-2044. | 0.9 | 51 |
| 161 | Electronic and Vibronic Coupling of the Special Pair of Bacteriochlorophylls in Photosynthetic Reaction Centers from Wild-Type and Mutant Strains of Rhodobacter Sphaeroides. Journal of Physical Chemistry B, 2002, 106, 11859-11869. | 1.2 | 49 |
| 162 | Direct observation of structurally encoded metal discrimination and ether bond formation in a heterodinuclear metalloprotein. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17189-17194. | 3.3 | 49 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 163 | The catalytic cycle of [FeFe] hydrogenase: A tale of two sites. <i>Coordination Chemistry Reviews</i> , 2021, 449, 214191. | 9.5 | 49 |
| 164 | Single crystal EPR study of the Ni center of NiFe hydrogenase. <i>Chemical Physics Letters</i> , 1996, 256, 518-524. | 1.2 | 48 |
| 165 | High-field EPR, ENDOR and ELDOR on bacterial photosynthetic reaction centers. <i>Applied Magnetic Resonance</i> , 2007, 31, 59-98. | 0.6 | 48 |
| 166 | SEIRA Spectroscopy of the Electrochemical Activation of an Immobilized [NiFe] Hydrogenase under Turnover and Non-Turnover Conditions. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 2632-2634. | 7.2 | 48 |
| 167 | Chalcogenide substitution in the [2Fe] cluster of [FeFe]-hydrogenases conserves high enzymatic activity. <i>Dalton Transactions</i> , 2017, 46, 16947-16958. | 1.6 | 48 |
| 168 | Engineering an [FeFe]-Hydrogenase: Do Accessory Clusters Influence O ₂ Resistance and Catalytic Bias?. <i>Journal of the American Chemical Society</i> , 2018, 140, 5516-5526. | 6.6 | 48 |
| 169 | Observation of deuterium quadrupole splittings of aromatic free radicals in liquid crystals by ENDOR and TRIPLE resonance. <i>Journal of Chemical Physics</i> , 1977, 66, 2074-2078. | 1.2 | 47 |
| 170 | Evaluation of 2D-ESEEM data of 15N-labeled radical cations of the primary donor P700 in photosystem I and chlorophyll a. <i>Chemical Physics Letters</i> , 1996, 251, 193-203. | 1.2 | 47 |
| 171 | Electronic Structure of the Cysteine Thiyl Radical: A DFT and Correlated ab Initio Study. <i>Journal of the American Chemical Society</i> , 2004, 126, 2237-2246. | 6.6 | 47 |
| 172 | Structural and dynamical characteristics of trehalose and sucrose matrices at different hydration levels as probed by FTIR and high-field EPR. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 9831-9848. | 1.3 | 47 |
| 173 | Sulfide Protects [FeFe] Hydrogenases From O ₂ . <i>Journal of the American Chemical Society</i> , 2018, 140, 9346-9350. | 6.6 | 47 |
| 174 | Computational study of the electronic structure and magnetic properties of the Ni ^{II} -C state in [NiFe] hydrogenases including the second coordination sphere. <i>Journal of Biological Inorganic Chemistry</i> , 2012, 17, 1269-1281. | 1.1 | 46 |
| 175 | Protein Immobilization Capabilities of Sucrose and Trehalose Glasses: The Effect of Protein/Sugar Concentration Unraveled by High-Field EPR. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 4871-4877. | 2.1 | 46 |
| 176 | High-field ELDOR-detected NMR study of a nitroxide radical in disordered solids: Towards characterization of heterogeneity of microenvironments in spin-labeled systems. <i>Journal of Magnetic Resonance</i> , 2014, 242, 203-213. | 1.2 | 45 |
| 177 | Alkali and H ENDOR on aromatic ion pairs in solution. An INDO approach. <i>The Journal of Physical Chemistry</i> , 1979, 83, 3402-3413. | 2.9 | 44 |
| 178 | Probing the surrounding of a cobalt(II) porphyrin and its superoxo complex by EPR techniques. <i>Applied Magnetic Resonance</i> , 2001, 20, 35-70. | 0.6 | 44 |
| 179 | EPR experiments to elucidate the structure of the ready and unready states of the [NiFe] hydrogenase of <i>Desulfovibrio vulgaris</i> Miyazaki F. <i>Biochemical Society Transactions</i> , 2005, 33, 7-11. | 1.6 | 44 |
| 180 | The Iron-Oxygen Reconstitution Reaction in Protein R2-Tyr-177 Mutants of Mouse Ribonucleotide Reductase. <i>Journal of Biological Chemistry</i> , 1999, 274, 17696-17704. | 1.6 | 43 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 181 | Hyperfine structure of the photoexcited triplet state 3P680 in plant PS II reaction centres as determined by pulse ENDOR spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2003, 1605, 35-46. | 0.5 | 43 |
| 182 | Protein thiol radicals in disordered systems: A comparative EPR study at low temperature. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 2442-2453. | 1.3 | 43 |
| 183 | Spin distribution of the H-cluster in the Hox ⁺ CO state of the [FeFe]-hydrogenase from <i>Desulfovibrio desulfuricans</i> : HYSCORE and ENDOR study of ¹⁴ N and ¹³ C nuclear interactions. <i>Journal of Biological Inorganic Chemistry</i> , 2009, 14, 301-313. | 1.1 | 43 |
| 184 | Electronic Structure of the Quinone Radical Anion A ₁ ⁻ of Photosystem I Investigated by Advanced Pulse EPR and ENDOR Techniques. <i>Journal of Physical Chemistry B</i> , 2009, 113, 10367-10379. | 1.2 | 42 |
| 185 | Interplay between CN ⁻ Ligands and the Secondary Coordination Sphere of the H-Cluster in [FeFe]-Hydrogenases. <i>Journal of the American Chemical Society</i> , 2017, 139, 18222-18230. | 6.6 | 42 |
| 186 | The Quinone Acceptor A1 in Photosystem I: Binding Site, and Comparison to QA in Purple Bacteria Reaction Centers. <i>Journal of Physical Chemistry B</i> , 1998, 102, 8278-8287. | 1.2 | 41 |
| 187 | Protein-cofactor interactions in bacterial reaction centers from <i>Rhodobacter sphaeroides</i> R-26: Effect of hydrogen bonding on the electronic and geometric structure of the primary quinone. A density functional theory study. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 5659-5670. | 1.3 | 41 |
| 188 | EPR, ENDOR, and TRIPLE resonance studies of modified bacteriochlorophyll cation radicals. <i>The Journal of Physical Chemistry</i> , 1994, 98, 354-363. | 2.9 | 40 |
| 189 | An Improved TM110 ENDOR Cavity for the Investigation of Transition Metal Complexes. <i>Journal of Magnetic Resonance Series A</i> , 1994, 109, 172-176. | 1.6 | 40 |
| 190 | Incorporation of a high potential quinone reveals that electron transfer in Photosystem I becomes highly asymmetric at low temperature. <i>Photochemical and Photobiological Sciences</i> , 2012, 11, 946-956. | 1.6 | 40 |
| 191 | Semisynthetic Hydrogenases Propel Biological Energy Research into a New Era. <i>Joule</i> , 2017, 1, 61-76. | 11.7 | 40 |
| 192 | ESR, NMR, and ENDOR studies of partially deuterated phenyl substituted anthracenes. π - σ Delocalization. <i>Journal of the American Chemical Society</i> , 1977, 99, 4278-4286. | 6.6 | 39 |
| 193 | Pulse EPR and ENDOR studies of light-induced radicals and triplet states in photosystem II of oxygenic photosynthesis. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 5539-5545. | 1.3 | 39 |
| 194 | Multifrequency EPR analysis of the dimanganese cluster of the putative sulfate thiohydrolase SoxB of <i>Paracoccus pantotrophus</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2005, 10, 636-642. | 1.1 | 39 |
| 195 | Electron-nuclear double resonance. <i>Photosynthesis Research</i> , 2009, 102, 391-401. | 1.6 | 39 |
| 196 | Zinc-Bacteriochlorophyllide Dimers in de Novo Designed Four-Helix Bundle Proteins. A Model System for Natural Light Energy Harvesting and Dissipation. <i>Journal of the American Chemical Society</i> , 2011, 133, 9526-9535. | 6.6 | 39 |
| 197 | Artificially matured [FeFe] hydrogenase from <i>Chlamydomonas reinhardtii</i> : a HYSCORE and ENDOR study of a non-natural H-cluster. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 5421-5430. | 1.3 | 39 |
| 198 | Artificial Maturation of the Highly Active Heterodimeric [FeFe] Hydrogenase from <i>Desulfovibrio desulfuricans</i> ATCC 7757. <i>Israel Journal of Chemistry</i> , 2016, 56, 852-863. | 1.0 | 39 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 199 | Title is missing!. Photosynthesis Research, 1998, 55, 189-197. | 1.6 | 38 |
| 200 | Structural and functional characterization of the hydrogenase-maturation HydF protein. Nature Chemical Biology, 2017, 13, 779-784. | 3.9 | 38 |
| 201 | Investigating the Kinetic Competency of Cr^{IV} HydA1 [FeFe] Hydrogenase Intermediate States via Time-Resolved Infrared Spectroscopy. Journal of the American Chemical Society, 2019, 141, 16064-16070. | 6.6 | 38 |
| 202 | The H ₂ sensor of <i>Ralstonia eutropha</i> : biochemical and spectroscopic analysis of mutant proteins modified at a conserved glutamine residue close to the [NiFe] active site. Journal of Biological Inorganic Chemistry, 2002, 7, 897-908. | 1.1 | 37 |
| 203 | Pulse EPR, 55Mn-ENDOR and ELDOR-detected NMR of the S ₂ -state of the oxygen evolving complex in Photosystem II. Photosynthesis Research, 2005, 84, 347-353. | 1.6 | 37 |
| 204 | Temperature-Dependent Exchange Interaction in Molecular Magnets $\text{Cu}(\text{hfac})_2 \cdot \text{L}^{\text{R}}$ Studied by EPR: Methodology and Interpretations. Inorganic Chemistry, 2011, 50, 10204-10212. | 1.9 | 37 |
| 205 | Electronic Structural Flexibility of Heterobimetallic Mn/Fe Cofactors: R ₂ lox and R ₂ c Proteins. Journal of the American Chemical Society, 2014, 136, 13399-13409. | 6.6 | 37 |
| 206 | ENDOR and pulsed EPR studies of photosynthetic reaction centers: Protein-cofactor interactions. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1996, 100, 2036-2040. | 0.9 | 36 |
| 207 | Quadrupole parameters of nitrogen nuclei in the cation radical P700.+ determined by ESEEM of single crystals of photosystem I. Chemical Physics Letters, 1996, 257, 197-206. | 1.2 | 36 |
| 208 | Characterization of radical intermediates in laccase-mediator systems. A multifrequency EPR, ENDOR and DFT/PCM investigation. Physical Chemistry Chemical Physics, 2008, 10, 7284. | 1.3 | 36 |
| 209 | A [RuRu] Analogue of an [FeFe]-Hydrogenase Traps the Key Hydride Intermediate of the Catalytic Cycle. Angewandte Chemie - International Edition, 2018, 57, 5429-5432. | 7.2 | 36 |
| 210 | Protein thyl radicals directly observed by EPR spectroscopy. Archives of Biochemistry and Biophysics, 2002, 403, 141-144. | 1.4 | 35 |
| 211 | The S ₁ YZ? metalloradical intermediate in photosystem II: an X- and W-band EPR study. Physical Chemistry Chemical Physics, 2004, 6, 4859. | 1.3 | 35 |
| 212 | Probing intermediates in the activation cycle of [NiFe] hydrogenase by infrared spectroscopy: the Ni-S ₁ R state and its light sensitivity. Journal of Biological Inorganic Chemistry, 2009, 14, 1227-1241. | 1.1 | 35 |
| 213 | FTIR study on the light sensitivity of the [NiFe] hydrogenase from <i>Desulfovibrio vulgaris</i> Miyazaki F: Ni ^{II} -C to Ni ^{II} -L photoconversion, kinetics of proton rebinding and H/D isotope effect. Physical Chemistry Chemical Physics, 2009, 11, 8680. | 1.3 | 35 |
| 214 | High-Field Dipolar Electron Paramagnetic Resonance (EPR) Spectroscopy of Nitroxide Biradicals for Determining Three-Dimensional Structures of Biomacromolecules in Disordered Solids. Journal of Physical Chemistry B, 2011, 115, 11950-11963. | 1.2 | 35 |
| 215 | Cofactor composition and function of a H ₂ -sensing regulatory hydrogenase as revealed by Mössbauer and EPR spectroscopy. Chemical Science, 2015, 6, 4495-4507. | 3.7 | 35 |
| 216 | ELDOR-detected NMR: A general and robust method for electron-nuclear hyperfine spectroscopy?. Journal of Magnetic Resonance, 2017, 280, 63-78. | 1.2 | 35 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 217 | Dual properties of a hydrogen oxidation Ni-catalyst entrapped within a polymer promote self-defense against oxygen. <i>Nature Communications</i> , 2018, 9, 864. | 5.8 | 35 |
| 218 | Phylloquinone and Related Radical Anions Studied by Pulse Electron Nuclear Double Resonance Spectroscopy at 34 GHz and Density Functional Theory. <i>Journal of Physical Chemistry B</i> , 2006, 110, 11549-11560. | 1.2 | 34 |
| 219 | Crucial Role of Paramagnetic Ligands for Magnetostructural Anomalies in "Breathing Crystals". <i>Inorganic Chemistry</i> , 2012, 51, 9385-9394. | 1.9 | 34 |
| 220 | The Radical Pair State in Photosystem I Single Crystals: Orientation Dependence of the Transient Spin-Polarized EPR Spectra. <i>Journal of Physical Chemistry B</i> , 1998, 102, 8266-8277. | 1.2 | 33 |
| 221 | Wavelength dependence of the photo-induced conversion of the Ni ^C to the Ni ^L redox state in the [NiFe] hydrogenase of <i>Desulfovibrio vulgaris</i> Miyazaki F. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 5507-5513. | 1.3 | 33 |
| 222 | Electron ⁶¹ Electron Double Resonance-Detected NMR to Measure Metal Hyperfine Interactions: Ni in the Ni ^B State of the [NiFe] Hydrogenase of <i>Desulfovibrio vulgaris</i> Miyazaki F. <i>Journal of the American Chemical Society</i> , 2008, 130, 2402-2403. | 6.6 | 33 |
| 223 | Endor and triple resonance in solutions of the chlorophyll a and bis(chlorophyll)cyclophane radical cations. <i>Chemical Physics Letters</i> , 1986, 132, 467-473. | 1.2 | 32 |
| 224 | Protein-Cofactor Interactions in Bacterial Reaction Centers from <i>Rhodobacter sphaeroides</i> R-26: I. Identification of the ENDOR Lines Associated with the Hydrogen Bonds to the Primary Quinone | 0.2 | 32 |
| 225 | Characterization of a cyanobacterial-like uptake [NiFe]Hydrogenase. EPR and FTIR spectroscopic studies of the enzyme from <i>Acidithiobacillus ferrooxidans</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2007, 12, 212-233. | 1.1 | 32 |
| 226 | Key Hydride Vibrational Modes in [NiFe] Hydrogenase Model Compounds Studied by Resonance Raman Spectroscopy and Density Functional Calculations. <i>Inorganic Chemistry</i> , 2012, 51, 11787-11797. | 1.9 | 32 |
| 227 | Direct Detection of the Terminal Hydride Intermediate in [FeFe] Hydrogenase by NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2018, 140, 3863-3866. | 6.6 | 32 |
| 228 | The radical SAM protein HemW is a heme chaperone. <i>Journal of Biological Chemistry</i> , 2018, 293, 2558-2572. | 1.6 | 32 |
| 229 | His-Ligation to the [4Fe ^{4S}] Subcluster Tunes the Catalytic Bias of [FeFe] Hydrogenase. <i>Journal of the American Chemical Society</i> , 2019, 141, 472-481. | 6.6 | 32 |
| 230 | Transient and pulsed EPR spectroscopy on the radical pair state P 865 +. Q A to study light-induced changes in bacterial reaction centers. <i>Applied Magnetic Resonance</i> , 1997, 13, 517-529. | 0.6 | 31 |
| 231 | Spin-Density Distribution of the Carotenoid Triplet State in the Peridinin-Chlorophyll-Protein Antenna. A Q-Band Pulse Electron-Nuclear Double Resonance and Density Functional Theory Study. <i>Journal of the American Chemical Society</i> , 2007, 129, 15442-15443. | 6.6 | 31 |
| 232 | Trehalose matrix effects on charge-recombination kinetics in Photosystem I of oxygenic photosynthesis at different dehydration levels. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 1440-1454. | 0.5 | 31 |
| 233 | Influence of hydrogen bonds on the electronic-g-tensor and ¹³ C-hyperfine tensors of ¹³ C-labeled ubiquinones - EPR and ENDOR study. <i>Applied Magnetic Resonance</i> , 1998, 14, 255-274. | 0.6 | 30 |
| 234 | Orientation-selected ENDOR of the active center in <i>Chromatium vinosum</i> [NiFe] hydrogenase in the oxidized "ready" state. <i>Journal of Biological Inorganic Chemistry</i> , 1999, 4, 379-389. | 1.1 | 30 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 235 | Electron Paramagnetic Resonance Studies of Zinc-Substituted Reaction Centers from <i>Rhodospseudomonas viridis</i> . <i>Biochemistry</i> , 1999, 38, 11773-11787. | 1.2 | 30 |
| 236 | Determination of the distance between Yoxâ€¦ Z and Qâ€¦ A in photosystem II by pulsed EPR spectroscopy on light-induced radical pairs. <i>FEBS Letters</i> , 1999, 442, 79-82. | 1.3 | 30 |
| 237 | Characterization of de novo synthesized four-helix bundle proteins with metalloporphyrin cofactors. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 4082-4090. | 1.3 | 30 |
| 238 | High-frequency EPR studies on cofactor radicals in photosystem I. <i>Applied Magnetic Resonance</i> , 2001, 21, 363-379. | 0.6 | 30 |
| 239 | Molecular Dynamics of QA-â€¦ and QB-â€¦ in Photosynthetic Bacterial Reaction Centers Studied by Pulsed High-Field EPR at 95 GHz. <i>Journal of Physical Chemistry B</i> , 2002, 106, 9454-9462. | 1.2 | 30 |
| 240 | Empirical and computational design of iron-sulfur cluster proteins. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1256-1262. | 0.5 | 30 |
| 241 | 3 mm EPR investigation of the primary donor cation radical in single crystals of <i>Rhodobacter sphaeroides</i> R-26 reaction centers. <i>Chemical Physics Letters</i> , 1991, 185, 381-386. | 1.2 | 29 |
| 242 | Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Investigation of the Diradical Bis(\pm -iminopyridinato)zinc Complex. <i>Inorganic Chemistry</i> , 2009, 48, 2626-2632. | 1.9 | 29 |
| 243 | [Fe4S4]- and [Fe3S4]-cluster formation in synthetic peptides. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011, 1807, 1414-1422. | 0.5 | 29 |
| 244 | Orientation and Function of a Membrane-Bound Enzyme Monitored by Electrochemical Surface-Enhanced Infrared Absorption Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 2794-2798. | 2.1 | 29 |
| 245 | In search of metal hydrides: an X-ray absorption and emission study of [NiFe] hydrogenase model complexes. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 10688-10699. | 1.3 | 29 |
| 246 | Endor studies of [6]helicene anion radical. <i>Tetrahedron</i> , 1979, 35, 905-907. | 1.0 | 28 |
| 247 | Structure of a Transient Neutral Histidine Radical in Solution: EPR Continuous-Flow Studies in a Ti3+/EDTA Fenton System and Density Functional Calculations. <i>Journal of Physical Chemistry A</i> , 2000, 104, 9144-9152. | 1.1 | 28 |
| 248 | Hydrogen Bonding Affects the [NiFe] Active Site of <i>Desulfovibrio vulgaris</i> Miyazaki F Hydrogenase: A Hyperfine Sublevel Correlation Spectroscopy and Density Functional Theory Study. <i>Journal of Physical Chemistry B</i> , 2006, 110, 8142-8150. | 1.2 | 28 |
| 249 | EPR/ENDOR, MÃ¶ssbauer, and Quantum-Chemical Investigations of Diiron Complexes Mimicking the Active Oxidized State of [FeFe]Hydrogenase. <i>Inorganic Chemistry</i> , 2012, 51, 8617-8628. | 1.9 | 28 |
| 250 | Structural Insight into the Complex of Ferredoxin and [FeFe] Hydrogenase from <i>Chlamydomonas reinhardtii</i> . <i>ChemBioChem</i> , 2015, 16, 1663-1669. | 1.3 | 28 |
| 251 | Spectroscopic and biochemical insight into an electron-bifurcating [FeFe] hydrogenase. <i>Journal of Biological Inorganic Chemistry</i> , 2020, 25, 135-149. | 1.1 | 28 |
| 252 | Suppressing hydrogen peroxide generation to achieve oxygen-insensitivity of a [NiFe] hydrogenase in redox active films. <i>Nature Communications</i> , 2020, 11, 920. | 5.8 | 28 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 253 | Photosystem II single crystals studied by transient EPR: the light-induced triplet state. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2003, 1605, 47-54. | 0.5 | 27 |
| 254 | Probing Mode and Site of Substrate Water Binding to the Oxygen-Evolving Complex in the S ₂ State of Photosystem II by ¹⁷ O-HYSCORE Spectroscopy. <i>Journal of the American Chemical Society</i> , 2008, 130, 786-787. | 6.6 | 27 |
| 255 | Dynamic mixing processes in spin triads of "breathing crystals" Cu(hfac) ₂ LR: a multifrequency EPR study at 34, 122 and 244 GHz. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 6654. | 1.3 | 27 |
| 256 | Orientation Resolving Dipolar High-Field EPR Spectroscopy on Disordered Solids: II. Structure of Spin-Correlated Radical Pairs in Photosystem I. <i>Journal of Physical Chemistry B</i> , 2013, 117, 11184-11199. | 1.2 | 27 |
| 257 | In Situ EPR Characterization of a Cobalt Oxide Water Oxidation Catalyst at Neutral pH. <i>Catalysts</i> , 2019, 9, 926. | 1.6 | 27 |
| 258 | Chemical assembly of multiple metal cofactors: The heterologously expressed multidomain [FeFe]-hydrogenase from <i>Megasphaera elsdenii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 1734-1740. | 0.5 | 26 |
| 259 | Light and Temperature Control of the Spin State of Bis(<i>p</i> -methoxyphenyl)carbene: A Magnetically Bistable Carbene. <i>Journal of the American Chemical Society</i> , 2016, 138, 1622-1629. | 6.6 | 26 |
| 260 | A novel versatile microbiosensor for local hydrogen detection by means of scanning photoelectrochemical microscopy. <i>Biosensors and Bioelectronics</i> , 2017, 94, 433-437. | 5.3 | 26 |
| 261 | The bacteriopheophytin anion radical. A solution EPR and triple resonance study. <i>Chemical Physics Letters</i> , 1981, 84, 33-38. | 1.2 | 25 |
| 262 | Multiple magnetic resonance studies on organic molecules in their ground and excited states. <i>The Journal of Physical Chemistry</i> , 1982, 86, 4491-4507. | 2.9 | 25 |
| 263 | Generation and Electron Paramagnetic Resonance Spin Trapping Detection of Thiyl Radicals in Model Proteins and in the R1 Subunit of <i>Escherichia coli</i> Ribonucleotide Reductase. <i>Archives of Biochemistry and Biophysics</i> , 2002, 397, 57-68. | 1.4 | 25 |
| 264 | Carbon-13 ENDOR studies of organic doublet and triplet state molecules. <i>Journal of the American Chemical Society</i> , 1978, 100, 2292-2299. | 6.6 | 24 |
| 265 | ENDOR studies of substituted chlorophyll cation radicals. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 1998, 54, 1141-1156. | 2.0 | 24 |
| 266 | Comparison of the membrane-bound [NiFe] hydrogenases from <i>R. eutropha</i> H16 and <i>D. vulgaris</i> Miyazaki F in the oxidized ready state by pulsed EPR. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 2139. | 1.3 | 24 |
| 267 | EPR Spectroscopy and the Electronic Structure of the Oxygen-Evolving Complex of Photosystem II. <i>Applied Magnetic Resonance</i> , 2013, 44, 691-720. | 0.6 | 24 |
| 268 | Pressure and Temperature Effects on the Activity and Structure of the Catalytic Domain of Human MT1-MMP. <i>Biophysical Journal</i> , 2015, 109, 2371-2381. | 0.2 | 24 |
| 269 | Divergent assembly mechanisms of the manganese/iron cofactors in R2lox and R2c proteins. <i>Journal of Inorganic Biochemistry</i> , 2016, 162, 164-177. | 1.5 | 24 |
| 270 | Fluorine and proton ENDOR of aromatic radicals in solution. <i>Chemical Physics</i> , 1975, 8, 371-383. | 0.9 | 23 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 271 | 14N and 1H electron nuclear multiple resonance experiments on bacteriochlorophyll a anion radicals in solution. <i>Chemical Physics Letters</i> , 1981, 81, 235-241. | 1.2 | 23 |
| 272 | Electron paramagnetic resonance and electron nuclear double resonance spectroscopy of a heme protein maquette. <i>Chemical Physics Letters</i> , 2000, 323, 329-339. | 1.2 | 23 |
| 273 | Chlorophylla Radical Ions: A Density Functional Study. <i>Journal of Physical Chemistry B</i> , 2002, 106, 5281-5288. | 1.2 | 23 |
| 274 | The primary donor cation P+ in photosynthetic reaction centers of site-directed mutants of <i>Rhodobacter sphaeroides</i> : g-tensor shifts revealed by high-field EPR at 360 GHz/12.8 T. <i>Chemical Physics</i> , 2003, 294, 371-384. | 0.9 | 23 |
| 275 | Detection of Heme Oxygenase Activity in a Library of Four-helix Bundle Proteins: Towards the de Novo Synthesis of Functional Heme Proteins. <i>Journal of Molecular Biology</i> , 2007, 371, 739-753. | 2.0 | 23 |
| 276 | Electron Nuclear and Electron-Electron Double Resonance Spectroscopies Show that the Primary Quinone Acceptor Q _A in Reaction Centers from Photosynthetic Bacteria <i>Rhodobacter sphaeroides</i> Remains in the Same Orientation Upon Light-Induced Reduction. <i>Journal of Physical Chemistry B</i> , 2010, 114, 16894-16901. | 1.2 | 23 |
| 277 | Unraveling the Electronic Properties of the Photoinduced States of the H-Cluster in the [FeFe] Hydrogenase from <i>D. desulfuricans</i> . <i>European Journal of Inorganic Chemistry</i> , 2011, 2011, 1056-1066. | 1.0 | 23 |
| 278 | A strenuous experimental journey searching for spectroscopic evidence of a bridging nickel-iron-hydride in [NiFe] hydrogenase. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 1334-1344. | 1.0 | 23 |
| 279 | Design and Characterization of Phosphine Iron Hydrides: Toward Hydrogen-Producing Catalysts. <i>Inorganic Chemistry</i> , 2015, 54, 6928-6937. | 1.9 | 23 |
| 280 | Importance of Hydrogen Bonding in Fine Tuning the [2Fe-2S] Cluster Redox Potential of HydC from <i>Thermotoga maritima</i> . <i>Biochemistry</i> , 2016, 55, 4344-4355. | 1.2 | 23 |
| 281 | Heterodimeric Versus Homodimeric Structure of the Primary Electron Donor in <i>Rhodobacter sphaeroides</i> Reaction Centers Genetically Modified at Position M202. <i>Photochemistry and Photobiology</i> , 2000, 71, 582. | 1.3 | 23 |
| 282 | A CW and pulse EPR spectrometer operating at 122 and 244 GHz using a quasi-optical bridge and a cryogen-free 12 T superconducting magnet. <i>Applied Magnetic Resonance</i> , 2007, 31, 611-626. | 0.6 | 22 |
| 283 | High-field EPR on membrane proteins – Crossing the gap to NMR. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2013, 75, 1-49. | 3.9 | 22 |
| 284 | Nitrite Dismutase Reaction Mechanism: Kinetic and Spectroscopic Investigation of the Interaction between Nitrophorin and Nitrite. <i>Journal of the American Chemical Society</i> , 2015, 137, 4141-4150. | 6.6 | 22 |
| 285 | Asymmetry in the Ligand Coordination Sphere of the [FeFe] Hydrogenase Active Site Is Reflected in the Magnetic Spin Interactions of the Aza-propanedithiolate Ligand. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 6794-6799. | 2.1 | 22 |
| 286 | The bacteriochlorophylla cation radical revisited. An ENDOR and TRIPLE resonance study. <i>Applied Magnetic Resonance</i> , 1997, 13, 531-551. | 0.6 | 21 |
| 287 | Homologous expression of the <i>nrdF</i> gene of <i>Corynebacterium ammoniagenes</i> strain ATCC 6872 generates a manganese metallofactor (R2F) and a stable tyrosyl radical (Y [•]) involved in ribonucleotide reduction. <i>FEBS Journal</i> , 2010, 277, 4849-4862. | 2.2 | 21 |
| 288 | Magnetic Properties of [FeFe]-Hydrogenases: A Theoretical Investigation Based on Extended QM and QM/MM Models of the H-Cluster and Its Surroundings. <i>European Journal of Inorganic Chemistry</i> , 2011, 2011, 1043-1049. | 1.0 | 21 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 289 | Structural differences between the active sites of the Ni-A and Ni-B states of the [NiFe] hydrogenase: an approach by quantum chemistry and single crystal ENDOR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 16204-16212. | 1.3 | 21 |
| 290 | Biomolecular EPR Meets NMR at High Magnetic Fields. <i>Magnetochemistry</i> , 2018, 4, 50. | 1.0 | 21 |
| 291 | Extending electron paramagnetic resonance to nanoliter volume protein single crystals using a self-resonant microhelix. <i>Science Advances</i> , 2019, 5, eaay1394. | 4.7 | 21 |
| 292 | Redox-Polymer-Based High-Current-Density Gas-Diffusion H ₂ -Oxidation Bioanode Using [FeFe] Hydrogenase from <i>Desulfovibrio desulfuricans</i> in a Membrane-free Biofuel Cell. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 16506-16510. | 7.2 | 21 |
| 293 | Nitrogen-14 and hydrogen-1 ENDOR and TRIPLE resonance experiments of flavin and thiaflavin radical cations in liquid solution. <i>Journal of the American Chemical Society</i> , 1981, 103, 5567-5568. | 6.6 | 20 |
| 294 | Characterization of a de novo Designed Heme Protein by EPR and ENDOR Spectroscopy. <i>Chemistry - A European Journal</i> , 1999, 5, 2327-2334. | 1.7 | 20 |
| 295 | An EPR/ENDOR study of the asymmetric hydrogen bond between the quinone electron acceptor and the protein backbone in Photosystem I. <i>Journal of Molecular Structure</i> , 2004, 700, 233-241. | 1.8 | 20 |
| 296 | Modelling Low-Potential [Fe ₄ S ₄] Clusters in Proteins. <i>Chemistry and Biodiversity</i> , 2008, 5, 1571-1587. | 1.0 | 20 |
| 297 | Spin Density Distribution of the Excited Triplet State of Bacteriochlorophylls. Pulsed ENDOR and DFT Studies. <i>Journal of Physical Chemistry B</i> , 2009, 113, 6917-6927. | 1.2 | 20 |
| 298 | MÃ¼bius-HÃ¼ckel topology switching in an expanded porphyrin cation radical as studied by EPR and ENDOR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 6644-6652. | 1.3 | 20 |
| 299 | Influence of the [4Fe-4S] cluster coordinating cysteines on active site maturation and catalytic properties of <i>C. reinhardtii</i> [FeFe]-hydrogenase. <i>Chemical Science</i> , 2017, 8, 8127-8137. | 3.7 | 20 |
| 300 | Electrochemical Investigations on the Inactivation of the [FeFe] Hydrogenase from <i>Desulfovibrio desulfuricans</i> by O ₂ or Light under Hydrogen-Producing Conditions. <i>ChemPlusChem</i> , 2017, 82, 540-545. | 1.3 | 20 |
| 301 | EPR Characterisation of Bis(dimethylglyoximate)-Cobalt(II) Complexes and Their Oxygen Adducts Synthesised in an X-Zeolite Matrix. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1987, 42, 970-986. | 0.7 | 19 |
| 302 | Title is missing!. <i>Photosynthesis Research</i> , 1998, 55, 199-205. | 1.6 | 19 |
| 303 | Pulse ENDOR studies on the radical pair P 700 + \dot{A} 1 \dot{A} and the photoaccumulated quinone acceptor A 1 \dot{A} of photosystem I. <i>Applied Magnetic Resonance</i> , 2004, 26, 5-21. | 0.6 | 19 |
| 304 | PELDOR study on the tyrosyl radicals in the R2 protein of mouse ribonucleotide reductase. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 58-62. | 1.3 | 19 |
| 305 | Effects of noncovalently bound quinones on the ground and triplet states of zinc chlorins in solution and bound to de novo synthesized peptides. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 5444-5453. | 1.3 | 19 |
| 306 | Electronic Structure of a Binuclear Nickel Complex of Relevance to [NiFe] Hydrogenase. <i>Inorganic Chemistry</i> , 2008, 47, 11688-11697. | 1.9 | 19 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 307 | Advanced Electron Paramagnetic Resonance and Density Functional Theory Study of a {2Fe3S} Cluster Mimicking the Active Site of [FeFe] Hydrogenase. <i>Journal of the American Chemical Society</i> , 2010, 132, 17578-17587. | 6.6 | 19 |
| 308 | A Heme-based Redox Sensor in the Methanogenic Archaeon <i>Methanosarcina acetivorans</i> . <i>Journal of Biological Chemistry</i> , 2013, 288, 18458-18472. | 1.6 | 19 |
| 309 | The auxiliary [4Fe-4S] cluster of the Radical SAM heme synthase from <i>Methanosarcina barkeri</i> is involved in electron transfer. <i>Chemical Science</i> , 2016, 7, 4633-4643. | 3.7 | 19 |
| 310 | Proton, deuteron, and carbon-13 ENDOR studies of labeled bis(biphenylenyl)propenyl type radicals in isotropic solutions and in liquid crystals. <i>Journal of the American Chemical Society</i> , 1980, 102, 817-825. | 6.6 | 18 |
| 311 | Low-Temperature Pulsed EPR Study at 34 GHz of the Triplet States of the Primary Electron Donor P ₈₆₅ and the Carotenoid in Native and Mutant Bacterial Reaction Centers of <i>Rhodobacter sphaeroides</i> . <i>Biochemistry</i> , 2007, 46, 14782-14794. | 1.2 | 18 |
| 312 | Spectroscopic and Electrochemical Characterization of the [NiFeSe] Hydrogenase from <i>Desulfovibrio vulgaris</i> Miyazaki F: Reversible Redox Behavior and Interactions between Electron Transfer Centers. <i>ChemBioChem</i> , 2013, 14, 1714-1719. | 1.3 | 18 |
| 313 | Rational redesign of the ferredoxin-NADP ⁺ -oxido-reductase/ferredoxin-interaction for photosynthesis-dependent H ₂ -production. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 253-262. | 0.5 | 18 |
| 314 | Cryo-EM photosystem I structure reveals adaptation mechanisms to extreme high light in <i>Chlorella ohadii</i> . <i>Nature Plants</i> , 2021, 7, 1314-1322. | 4.7 | 18 |
| 315 | Proton and nitrogen electron nuclear double and triple resonance of the chlorophyll a anion in liquid solution. <i>Chemical Physics Letters</i> , 1982, 85, 3-8. | 1.2 | 17 |
| 316 | 25Mg ENDOR and TRIPLE resonance in liquid solution of the bacteriochlorophyll a cation and anion radicals. <i>Chemical Physics Letters</i> , 1984, 111, 583-588. | 1.2 | 17 |
| 317 | EPR and 55Mn cw-ENDOR study of an antiferromagnetically coupled dinuclear manganese (Mn ^{III} Mn ^{IV}) complex. <i>Chemical Physics Letters</i> , 1996, 261, 272-276. | 1.2 | 17 |
| 318 | Photochemical processes in photosynthesis studied by advanced electron paramagnetic resonance techniques. <i>Pure and Applied Chemistry</i> , 2003, 75, 1021-1030. | 0.9 | 17 |
| 319 | Incorporation of 2,3-Disubstituted-1,4-Naphthoquinones into the A1 Binding Site of Photosystem I Studied by EPR and ENDOR Spectroscopy. <i>Applied Magnetic Resonance</i> , 2010, 37, 65-83. | 0.6 | 17 |
| 320 | Ein Redoxhydrogel schütz die O ₂ -empfindliche [FeFe]-Hydrogenase aus <i>Chlamydomonas reinhardtii</i> vor oxidativer Zerstörung. <i>Angewandte Chemie</i> , 2015, 127, 12506-12510. | 1.6 | 17 |
| 321 | Iron-Sulfur Cluster-dependent Catalysis of Chlorophyllide a Oxidoreductase from <i>Roseobacter denitrificans</i> . <i>Journal of Biological Chemistry</i> , 2015, 290, 1141-1154. | 1.6 | 17 |
| 322 | Bioinspired Artificial [FeFe]-Hydrogenase with a Synthetic H-Cluster. <i>ACS Catalysis</i> , 2019, 9, 4495-4501. | 5.5 | 17 |
| 323 | EPR in photosynthesis. <i>Electron Paramagnetic Resonance</i> , 0, , 174-242. | 0.2 | 17 |
| 324 | The radical cation of bacteriochlorophyll b. A liquid-phase endor and triple resonance study. <i>Chemical Physics Letters</i> , 1986, 126, 290-296. | 1.2 | 16 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 325 | EPR and endor studies of cobaloxime(II). <i>Chemical Physics Letters</i> , 1987, 133, 102-108. | 1.2 | 16 |
| 326 | Bacteriochlorophyll a radical cation and anionâ€™ calculation of isotropic hyperfine coupling constants by density functional methods. <i>Physical Chemistry Chemical Physics</i> , 2000, 2, 4772-4778. | 1.3 | 16 |
| 327 | Photosynthesis: from natural to artificial. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 11810. | 1.3 | 16 |
| 328 | Modeling the Active Site of [NiFe] Hydrogenases and the [NiFeu] Subsite of the C-Cluster of Carbon Monoxide Dehydrogenases: Low-Spin Iron(II) Versus High-Spin Iron(II). <i>Inorganic Chemistry</i> , 2014, 53, 6329-6337. | 1.9 | 16 |
| 329 | Pulse Double-Resonance EPR Techniques for the Study of Metallobiomolecules. <i>Methods in Enzymology</i> , 2015, 563, 211-249. | 0.4 | 16 |
| 330 | Following [FeFe] Hydrogenase Active Site Intermediates by Time-Resolved Mid-IR Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3290-3293. | 2.1 | 16 |
| 331 | Local water sensing: water exchange in bacterial photosynthetic reaction centers embedded in a trehalose glass studied using multiresonance EPR. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 28388-28400. | 1.3 | 16 |
| 332 | Solvent water interactions within the active site of the membrane type I matrix metalloproteinase. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 30316-30331. | 1.3 | 16 |
| 333 | The pheophytin a anion radical. ¹⁴ N and ¹ H endor and triple resonance in liquid solution. <i>Chemical Physics Letters</i> , 1982, 90, 375-381. | 1.2 | 15 |
| 334 | Photo-Induced Electron Spin Polarization in Chemical and Biological Reactions: Probing Structure and Dynamics of Transient Intermediates by Multifrequency EPR Spectroscopy. <i>Applied Magnetic Resonance</i> , 2011, 41, 113-143. | 0.6 | 15 |
| 335 | Effect of Cyanide Ligands on the Electronic Structure of [FeFe] Hydrogenase Active Site Model Complexes with an Azadithiolate Cofactor. <i>Chemistry - A European Journal</i> , 2013, 19, 14566-14572. | 1.7 | 15 |
| 336 | Spectroscopic Evidence of Reversible Disassembly of the [FeFe] Hydrogenase Active Site. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3834-3839. | 2.1 | 15 |
| 337 | Photoredoxâ€™Switchable Resorcin[4]arene Cavitands: Radical Control of Molecular Gripping Machinery via Hydrogen Bonding. <i>Chemistry - A European Journal</i> , 2018, 24, 1431-1440. | 1.7 | 15 |
| 338 | Carnitine metabolism in the human gut: characterization of the two-component carnitine monooxygenase CntAB from <i>Acinetobacter baumannii</i> . <i>Journal of Biological Chemistry</i> , 2020, 295, 13065-13078. | 1.6 | 15 |
| 339 | Soft Dynamic Confinement of Membrane Proteins by Dehydrated Trehalose Matrices: High-Field EPR and Fast-Laser Studies. <i>Applied Magnetic Resonance</i> , 2020, 51, 773-850. | 0.6 | 15 |
| 340 | Molecular Orbital Studies on the Primary Donor P960 in Reaction Centers of <i>Rps. viridis</i> . , 1988, , 379-388. | | 15 |
| 341 | B-Branch Electron Transfer in the Photosynthetic Reaction Center of a <i>Rhodobacter sphaeroides</i> Quadruple Mutant. Q- and W-Band Electron Paramagnetic Resonance Studies of Triplet and Radical-Pair Cofactor States. <i>Journal of Physical Chemistry B</i> , 2010, 114, 14364-14372. | 1.2 | 14 |
| 342 | The structurally unique photosynthetic <i>Chlorella variabilis</i> NC64A hydrogenase does not interact with plant-type ferredoxins. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2017, 1858, 771-778. | 0.5 | 14 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 343 | Nitroxide Spin Labelsâ€™Magnetic Parameters and Hydrogen-Bond Formation: A High-Field EPR and EDNMR Study. <i>Applied Magnetic Resonance</i> , 2019, 50, 1-16. | 0.6 | 14 |
| 344 | ¹³ C- and Proton-ENDOR Studies of ¹³ C-labelled Organic Radicals. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1978, 33, 514-522. | 0.7 | 14 |
| 345 | A New Tyrosyl Radical on Phe208 as Ligand to the Diiron Center in <i>Escherichia coli</i> Ribonucleotide Reductase, Mutant R2-Y122H. <i>Journal of Biological Chemistry</i> , 2005, 280, 11233-11246. | 1.6 | 13 |
| 346 | EPR, ENDOR, and Special TRIPLE measurements of Pâ€™+ in wild type and modified reaction centers from <i>Rb.Âsphaeroides</i> . <i>Photosynthesis Research</i> , 2009, 99, 1-10. | 1.6 | 13 |
| 347 | Intersubunit distances in full-length, dimeric, bacterial phytochrome Agp1, as measured by pulsed electron-electron double resonance (PELDOR) between different spin label positions, remain unchanged upon photoconversion. <i>Journal of Biological Chemistry</i> , 2017, 292, 7598-7606. | 1.6 | 13 |
| 348 | Spectroscopic investigations of a semi-synthetic [FeFe] hydrogenase with propane di-selenol as bridging ligand in the binuclear subsite: comparison to the wild type and propane di-thiol variants. <i>Journal of Biological Inorganic Chemistry</i> , 2018, 23, 481-491. | 1.1 | 13 |
| 349 | ¹⁵ N Endor Experiments on the Primary Donor Cation Radical D+ in Bacterial Reaction Center Single Crystals of <i>RB. Shaeroides R-26.</i> , 1992, , 89-97. | | 13 |
| 350 | Esr and endor studies of partially deuterated and chlorinated phenalenyls. <i>Tetrahedron</i> , 1978, 34, 419-424. | 1.0 | 12 |
| 351 | Covalent Attachment of the Waterâ€™insoluble Ni(P Cy 2 N Phe 2) 2 Electrocatalyst to Electrodes Showing Reversible Catalysis in Aqueous Solution. <i>Electroanalysis</i> , 2016, 28, 2452-2458. | 1.5 | 12 |
| 352 | Paramagnetic Molecular Grippers: The Elements of Six-State Redox Switches. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2470-2477. | 2.1 | 12 |
| 353 | MÃ¶biusâ€™HÃ¼ckel Topology Switching in Expanded Porphyrins: EPR, ENDOR, and DFT Studies of Doublet and Triplet Open-Shell Systems. <i>Applied Magnetic Resonance</i> , 2016, 47, 757-780. | 0.6 | 12 |
| 354 | Structured near-infrared Magnetic Circular Dichroism spectra of the Mn4CaO5 cluster of PSII in <i>T. vulcanus</i> are dominated by Mn(IV) d-d â€™spin-flipâ€™™ transitions. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 88-98. | 0.5 | 12 |
| 355 | Thermally Activated Delayed Fluorescence in a Y₃N@C₈₀ Endohedral Fullerene: Timeâ€™Resolved Luminescence and EPR Studies. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 277-281. | 7.2 | 12 |
| 356 | Investigation of <i>Rhodobacter Sphaeroides</i> Reaction Center Mutants with Changed Ligands to the Primary Donor. , 1998, , 767-770. | | 12 |
| 357 | ¹³ C- and ¹ H-ENDOR Studies of a Phenoxy Type Radical. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1978, 33, 1072-1076. | 0.7 | 11 |
| 358 | Crystallization and preliminary X-ray crystallographic analysis of the catalytic domain of membrane type 1 matrix metalloproteinase. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2014, 70, 232-235. | 0.4 | 10 |
| 359 | Elucidation of the heme active site electronic structure affecting the unprecedented nitrite dismutase activity of the ferriheme b proteins, the nitrophorins. <i>Chemical Science</i> , 2016, 7, 5332-5340. | 3.7 | 10 |
| 360 | Polymer-Bound DuBois-Type Molecular H₂ Oxidation Ni Catalysts Are Protected by Redox Polymer Matrices. <i>ACS Applied Energy Materials</i> , 2019, 2, 2921-2929. | 2.5 | 10 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 361 | In Vivo Biogenesis of a De Novo Designed Iron-Sulfur Protein. ACS Synthetic Biology, 2020, 9, 3400-3407. | 1.9 | 10 |
| 362 | EPR Studies of the Primary Electron Donor P700 in Photosystem. , 2006, , 245-269. | | 10 |
| 363 | Magnetic Resonance and Molecular Orbital Studies of the Primary Donor States in Bacterial Reaction Centers. Jerusalem Symposia on Quantum Chemistry and Biochemistry, 1990, , 423-434. | 0.2 | 10 |
| 364 | Study of heme Fe(III) ligated by OH-in cytochrome b-559 and its low temperature photochemistry in intact chloroplasts. FEBS Letters, 1995, 377, 325-329. | 1.3 | 9 |
| 365 | A New Stable High-Valent Diiron Center in R2 Mutant Y122H of E. coli Ribonucleotide Reductase Studied by High-Field EPR and ⁵⁷ Fe-ENDOR. Journal of the American Chemical Society, 2000, 122, 9856-9857. | 6.6 | 9 |
| 366 | Pulse Q-Band EPR and ENDOR Spectroscopies of the Photochemically Generated Monoprotonated Benzoquinone Radical in Frozen Alcoholic Solution. Journal of Physical Chemistry B, 2012, 116, 8890-8900. | 1.2 | 9 |
| 367 | A caged substrate peptide for matrix metalloproteinases. Photochemical and Photobiological Sciences, 2015, 14, 300-307. | 1.6 | 9 |
| 368 | ¹ H NMR Spectroscopy of [FeFe] Hydrogenase: Insight into the Electronic Structure of the Active Site. Journal of the American Chemical Society, 2018, 140, 131-134. | 6.6 | 9 |
| 369 | Viologen-modified electrodes for protection of hydrogenases from high potential inactivation while performing H ₂ oxidation at low overpotential. Dalton Transactions, 2018, 47, 10685-10691. | 1.6 | 9 |
| 370 | Spin-dependent recombination of the charge-transfer state in photovoltaic polymer/fullerene blends. Molecular Physics, 2019, 117, 2654-2663. | 0.8 | 9 |
| 371 | Primary donor triplet states of Photosystem I and II studied by Q-band pulse ENDOR spectroscopy. Photosynthesis Research, 2022, , 1. | 1.6 | 9 |
| 372 | The Magic of Disaccharide Glass Matrices for Protein Function as Decoded by High-Field EPR and FTIR Spectroscopy. Applied Magnetic Resonance, 2015, 46, 435-464. | 0.6 | 8 |
| 373 | The Laser-Induced Potential Jump: A Method for Rapid Electron Injection into Oxidoreductase Enzymes. Journal of Physical Chemistry B, 2020, 124, 8750-8760. | 1.2 | 8 |
| 374 | Spin Polarization Reveals the Coordination Geometry of the [FeFe] Hydrogenase Active Site in Its CO-Inhibited State. Journal of Physical Chemistry Letters, 2020, 11, 4597-4602. | 2.1 | 7 |
| 375 | Metallofullerene photoswitches driven by photoinduced fullerene-to-metal electron transfer. Chemical Science, 2021, 12, 7818-7838. | 3.7 | 7 |
| 376 | Radical Products in Single Electron Transfer Reactions of Lithium Triethylhydridoborate as Detected by ESR and Multinuclear (¹ H, ¹⁰ B, ¹¹ B, ¹⁴ N) ENDOR Spectroscopy. Angewandte Chemie International Edition in English, 1983, 22, 1209-1220. | 4.4 | 6 |
| 377 | Comparative ENDOR study at 34 GHz of the triplet state of the primary donor in bacterial reaction centers of Rb. sphaeroides and Bl. viridis. Photosynthesis Research, 2014, 120, 99-111. | 1.6 | 6 |
| 378 | A [RuRu] Analogue of an [FeFe] Hydrogenase Traps the Key Hydride Intermediate of the Catalytic Cycle. Angewandte Chemie, 2018, 130, 5527-5530. | 1.6 | 6 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 379 | An improved coupling design for high-frequency TE ₀₁₁ electron paramagnetic resonance cavities. Review of Scientific Instruments, 2013, 84, 014704. | 0.6 | 5 |
| 380 | Protein Crystallography Using Free-Electron Lasers: Water Oxidation in Photosynthesis. Angewandte Chemie - International Edition, 2014, 53, 13007-13008. | 7.2 | 5 |
| 381 | Synthesis and Characterization of Nickel Compounds with Tetradentate Thiolate-Thioether Ligands as Precursors for [NiFe]-Hydrogenase Models. European Journal of Inorganic Chemistry, 2014, 2014, 148-155. | 1.0 | 5 |
| 382 | Vibrational Perturbation of the [FeFe] Hydrogenase H-Cluster Revealed by ¹³ C ² -H-ADT Labeling. Journal of the American Chemical Society, 2021, 143, 8237-8243. | 6.6 | 4 |
| 383 | Hydrogen-Bonded Complexes of Neutral Nitroxide Radicals with 2-Propanol Studied by Multifrequency EPR/ENDOR. Applied Magnetic Resonance, 0, , 1. | 0.6 | 4 |
| 384 | Molecular Concepts of Water Splitting: Nature's Approach. Green, 2013, 3, . | 0.4 | 2 |
| 385 | Thermally Activated Delayed Fluorescence in a Y ₃ N@C ₈₀ Endohedral Fullerene: Time-Resolved Luminescence and EPR Studies. Angewandte Chemie, 2018, 130, 283-287. | 1.6 | 2 |
| 386 | Bioenergetics Theory and Components Hydrogenases Structure and Function. , 2021, , 66-73. | | 2 |
| 387 | Eine Redoxpolymer-basierte Gasdiffusions-Oxidationsbioanode mit hoher Stromdichte unter Verwendung von [FeFe]-Hydrogenase aus Desulfovibrio desulfuricans integriert in einer membranfreien Biobrennstoffzelle. Angewandte Chemie, 2020, 132, 16649. | 1.6 | 2 |
| 388 | Time-Resolved Infrared Spectroscopy Reveals the pH-Independence of the First Electron Transfer Step in the [FeFe] Hydrogenase Catalytic Cycle. Journal of Physical Chemistry Letters, 0, , 5986-5990. | 2.1 | 2 |
| 389 | Probing the Electronic Structure of Bacteriochlorophyll Radical Ions-A Theoretical Study of the Effect of Substituents on Hyperfine Parameters. Photochemistry and Photobiology, 2017, 93, 755-761. | 1.3 | 1 |
| 390 | Remembering George Feher (1924-2017). Photosynthesis Research, 2018, 137, 361-375. | 1.6 | 1 |
| 391 | Enhancing the catalytic current response of H ₂ oxidation gas diffusion bioelectrodes using an optimized viologen-based redox polymer and [NiFe] hydrogenase. Electrochemical Science Advances, 0, , e2100100. | 1.2 | 1 |
| 392 | Jim Hyde and the ENDOR Connection: A Personal Account. Applied Magnetic Resonance, 2017, 48, 1149-1183. | 0.6 | 0 |
| 393 | Special Issue of Applied Magnetic Resonance Celebrating the 85th Birthdays of Klaus Möbius and Kev M. Salikhov. Applied Magnetic Resonance, 2022, 53, 457. | 0.6 | 0 |
| 394 | CIDEP-Enhanced ENDOR of short-lived radicals. Recollections of first joint experiments with Renad Sagdeev. Russian Chemical Bulletin, 2021, 70, 2445-2456. | 0.4 | 0 |