Michael Haumann

List of Publications by Year
in descending order

89 papers	4,366 citations	101543 36 h-index	114465 63 g-index
92 all docs	92 docs citations	92 times ranked	3701 citing authors

#	Article	IF	Citations
1	Lewis acid protection turns cyanide containing [FeFe]-hydrogenase mimics into proton reduction catalysts. Dalton Transactions, 2022, 51, 4634-4643.	3.3	4
2	Exploring the Biosynthetic Potential of TsrM, a B₁₂â€dependent Radical SAM Methyltransferase Catalyzing Nonâ€radical Reactions. Chemistry - A European Journal, 2022, 28, .	3.3	7
3	Tryptophan regulates<i>Drosophila</i>zinc stores. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117807119.	7.1	19
4	Water Oxidation by Pentapyridyl Base Metal Complexes? A Case Study. Inorganic Chemistry, 2022, 61, 9104-9118.	4.0	5
5	Trapping an Oxidized and Protonated Intermediate of the [FeFe]-Hydrogenase Cofactor under Mildly Reducing Conditions. Inorganic Chemistry, 2022, 61, 10036-10042.	4.0	5
6	A Pseudotetrahedral Terminal Oxoiron(IV) Complex: Mechanistic Promiscuity in Câˆ'H Bond Oxidation Reactions. Angewandte Chemie - International Edition, 2021, 60, 6752-6756.	13.8	16
7	A bioinspired oxoiron(<scp>iv</scp>) motif supported on a N₂S₂ macrocyclic ligand. Chemical Communications, 2021, 57, 2947-2950.	4.1	11
8	A Pseudotetrahedral Terminal Oxoiron(IV) Complex: Mechanistic Promiscuity in Câˆ'H Bond Oxidation Reactions. Angewandte Chemie, 2021, 133, 6826-6830.	2.0	3
9	Operando tracking of oxidation-state changes by coupling electrochemistry with time-resolved X-ray absorption spectroscopy demonstrated for water oxidation by a cobalt-based catalyst film. Analytical and Bioanalytical Chemistry, 2021, 413, 5395-5408.	3.7	16
10	Bimetallic Mn, Fe, Co, and Ni Sites in a Four-Helix Bundle Protein: Metal Binding, Structure, and Peroxide Activation. Inorganic Chemistry, 2021, 60, 17498-17508.	4.0	2
11	Anion Binding and Oxidative Modification at the Molybdenum Cofactor of Formate Dehydrogenase from <i>Rhodobacter capsulatus</i> Studied by X-ray Absorption Spectroscopy. Inorganic Chemistry, 2020, 59, 214-225.	4.0	20
12	[FeFe]-hydrogenase maturation: H-cluster assembly intermediates tracked by electron paramagnetic resonance, infrared, and X-ray absorption spectroscopy. Journal of Biological Inorganic Chemistry, 2020, 25, 777-788.	2.6	10
13	Light-driven formation of manganese oxide by todayâ€™s photosystem II supports evolutionarily ancient manganese-oxidizing photosynthesis. Nature Communications, 2020, 11, 6110.	12.8	34
14	Temperature Dependence of Structural Dynamics at the Catalytic Cofactor of [FeFe]-hydrogenase. Inorganic Chemistry, 2020, 59, 16474-16488.	4.0	16
15	Stoichiometric Formation of an Oxoiron(IV) Complex by a Soluble Methane Monooxygenase Type Activation of O₂ at an Iron(II)-Cyclam Center. Journal of the American Chemical Society, 2020, 142, 5924-5928.	13.7	27
16	Fate of oxygen species from O2 activation at dimetal cofactors in an oxidase enzyme revealed by 57Fe nuclear resonance X-ray scattering and quantum chemistry. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 148060.	1.0	1
17	Geometry of the Catalytic Active Site in [FeFe]-Hydrogenase Is Determined by Hydrogen Bonding and Proton Transfer. ACS Catalysis, 2019, 9, 9140-9149.	11.2	30
18	Identification of YdhV as the First Molybdoenzyme Binding a Bis-Mo-MPT Cofactor in <i>Escherichia coli</i>. Biochemistry, 2019, 58, 2228-2242.	2.5	7

#	ARTICLE	IF	CITATIONS
19	Differential Protonation at the Catalytic Six-Iron Cofactor of [FeFe]-Hydrogenases Revealed by ⁵⁷Fe Nuclear Resonance X-ray Scattering and Quantum Mechanics/Molecular Mechanics Analyses. Inorganic Chemistry, 2019, 58, 4000-4013.	4.0	19
20	Light-driven hydrogen evolution catalyzed by a cobaloxime catalyst incorporated in a MIL-101(Cr) metalâ€“organic framework. Sustainable Energy and Fuels, 2018, 2, 1148-1152.	4.9	36
21	Protonation/reduction dynamics at the [4Feâ€“4S] cluster of the hydrogen-forming cofactor in [FeFe]-hydrogenases. Physical Chemistry Chemical Physics, 2018, 20, 3128-3140.	2.8	76
22	Hydrogen and oxygen trapping at the H-cluster of [FeFe]-hydrogenase revealed by site-selective spectroscopy and QM/MM calculations. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 28-41.	1.0	39
23	From an Fe₂P₃ complex to FeP nanoparticles as efficient electrocatalysts for water-splitting. Chemical Science, 2018, 9, 8590-8597.	7.4	103
24	KÎ± X-ray Emission Spectroscopy on the Photosynthetic Oxygen-Evolving Complex Supports Manganese Oxidation and Water Binding in the S₃ State. Inorganic Chemistry, 2018, 57, 10424-10430.	4.0	33
25	Spectroscopical Investigations on the Redox Chemistry of [FeFe]-Hydrogenases in the Presence of Carbon Monoxide. Molecules, 2018, 23, 1669.	3.8	9
26	The Molecular Proceedings of Biological Hydrogen Turnover. Accounts of Chemical Research, 2018, 51, 1755-1763.	15.6	62
27	O₂-Tolerant H₂ Activation by an Isolated Large Subunit of a [NiFe] Hydrogenase. Biochemistry, 2018, 57, 5339-5349.	2.5	16
28	Behavior of Ruâ€“bda Waterâ€Oxidation Catalysts in Low Oxidation States. Chemistry - A European Journal, 2018, 24, 12838-12847.	3.3	27
29	Protonation and Sulfido versus Oxo Ligation Changes at the Molybdenum Cofactor in Xanthine Dehydrogenase (XDH) Variants Studied by X-ray Absorption Spectroscopy. Inorganic Chemistry, 2017, 56, 2165-2176.	4.0	7
30	Spontaneous Siâ€“C bond cleavage in (Triphos^{Si})-nickel complexes. Dalton Transactions, 2017, 46, 907-917.	3.3	16
31	Protonâ€Coupled Reduction of the Catalytic [4Feâ€4S] Cluster in [FeFe]â€Hydrogenases. Angewandte Chemie - International Edition, 2017, 56, 16503-16506.	13.8	56
32	Bridging Hydride at Reduced H-Cluster Species in [FeFe]-Hydrogenases Revealed by Infrared Spectroscopy, Isotope Editing, and Quantum Chemistry. Journal of the American Chemical Society, 2017, 139, 12157-12160.	13.7	53
33	Electronic and molecular structure relations in diiron compounds mimicking the [FeFe]-hydrogenase active site studied by X-ray spectroscopy and quantum chemistry. Dalton Transactions, 2017, 46, 12544-12557.	3.3	8
34	Effective intermediate-spin iron in O ₂ -transporting heme proteins. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8556-8561.	7.1	45
35	Protonengekoppelte Reduktion des katalytischen [4Feâ€4S]â€Zentrums in [FeFe]â€Hydrogenasen. Angewandte Chemie, 2017, 129, 16728-16732.	2.0	7
36	Ligand binding at the A-cluster in full-length or truncated acetyl-CoA synthase studied by X-ray absorption spectroscopy. PLoS ONE, 2017, 12, e0171039.	2.5	3

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37	Axial Ligation and Redox Changes at the Cobalt Ion in Cobalamin Bound to Corrinoid Iron-Sulfur Protein (CoFeSP) or in Solution Characterized by XAS and DFT. PLoS ONE, 2016, 11, e0158681.	2.5	20
38	Sequential and Coupled Proton and Electron Transfer Events in the S₂ â†’ S₃ Transition of Photosynthetic Water Oxidation Revealed by Time-Resolved X-ray Absorption Spectroscopy. Biochemistry, 2016, 55, 6996-7004.	2.5	54
39	The Molybdenum Active Site of Formate Dehydrogenase Is Capable of Catalyzing Câ€“H Bond Cleavage and Oxygen Atom Transfer Reactions. Biochemistry, 2016, 55, 2381-2389.	2.5	51
40	Protonation State of MnFe and FeFe Cofactors in a Ligand-Binding Oxidase Revealed by X-ray Absorption, Emission, and Vibrational Spectroscopy and QM/MM Calculations. Inorganic Chemistry, 2016, 55, 9869-9885.	4.0	15
41	Room-Temperature Energy-Sampling KÎ² X-ray Emission Spectroscopy of the Mn₄Ca Complex of Photosynthesis Reveals Three Manganese-Centered Oxidation Steps and Suggests a Coordination Change Prior to O₂ Formation. Biochemistry, 2016, 55, 4197-4211.	2.5	66
42	The <i>Escherichia coli</i> Periplasmic Aldehyde Oxidoreductase Is an Exceptional Member of the Xanthine Oxidase Family of Molybdoenzymes. ACS Chemical Biology, 2016, 11, 2923-2935.	3.4	26
43	Stepwise isotope editing of [FeFe]-hydrogenases exposes cofactor dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8454-8459.	7.1	60
44	Lyophilization protects [FeFe]-hydrogenases against O2-induced H-cluster degradation. Scientific Reports, 2015, 5, 13978.	3.3	26
45	Biomimetic [2Feâ€2S] Clusters with Extensively Delocalized Mixedâ€Valence Iron Centers. Angewandte Chemie - International Edition, 2015, 54, 12506-12510.	13.8	35
46	Behavior of the Ru-bda Water Oxidation Catalyst Covalently Anchored on Glassy Carbon Electrodes. ACS Catalysis, 2015, 5, 3422-3429.	11.2	78
47	Sulfido and Cysteine Ligation Changes at the Molybdenum Cofactor during Substrate Conversion by Formate Dehydrogenase (FDH) from <i>Rhodobacter capsulatus</i>. Inorganic Chemistry, 2015, 54, 3260-3271.	4.0	57
48	Abrupt versus Gradual Spin-Crossover in Fe^{II}(phen)₂(NCS)₂ and Fe^{III}(dedtc)₃ Compared by X-ray Absorption and Emission Spectroscopy and Quantum-Chemical Calculations. Inorganic Chemistry, 2015, 54, 11606-11624.	4.0	24
49	Seven Steps of Alternating Electron and Proton Transfer in Photosystem II Water Oxidation Traced by Time-Resolved Photothermal Beam Deflection at Improved Sensitivity. Journal of Physical Chemistry B, 2015, 119, 2677-2689.	2.6	85
50	Structural differences of oxidized ironâ€“sulfur and nickelâ€“iron cofactors in O 2 -tolerant and O 2 -sensitive hydrogenases studied by X-ray absorption spectroscopy. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 162-170.	1.0	14
51	Hydride Binding to the Active Site of [FeFe]-Hydrogenase. Inorganic Chemistry, 2014, 53, 12164-12177.	4.0	58
52	Electronic and molecular structures of the active-site H-cluster in [FeFe]-hydrogenase determined by site-selective X-ray spectroscopy and quantum chemical calculations. Chemical Science, 2014, 5, 1187-1203.	7.4	60
53	Effect of Exchange of the Cysteine Molybdenum Ligand with Selenocysteine on the Structure and Function of the Active Site in Human Sulfite Oxidase. Biochemistry, 2013, 52, 8295-8303.	2.5	21
54	Bridging-hydride influence on the electronic structure of an [FeFe] hydrogenase active-site model complex revealed by XAES-DFT. Dalton Transactions, 2013, 42, 7539.	3.3	28

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55	Rapid X-ray Photoreduction of Dimetal-Oxygen Cofactors in Ribonucleotide Reductase. Journal of Biological Chemistry, 2013, 288, 9648-9661.	3.4	30
56	Identification of a Bis-molybdopterin Intermediate in Molybdenum Cofactor Biosynthesis in Escherichia coli. Journal of Biological Chemistry, 2013, 288, 29736-29745.	3.4	43
57	Site-Selective X-ray Spectroscopy on an Asymmetric Model Complex of the [FeFe] Hydrogenase Active Site. Inorganic Chemistry, 2012, 51, 4546-4559.	4.0	28
58	Electronic Structure of an [FeFe] Hydrogenase Model Complex in Solution Revealed by X-ray Absorption Spectroscopy Using Narrow-Band Emission Detection. Journal of the American Chemical Society, 2012, 134, 14142-14157.	13.7	36
59	Alternating electron and proton transfer steps in photosynthetic water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16035-16040.	7.1	172
60	Experimental and quantum chemical characterization of the water oxidation cycle catalysed by [RuII(damp)(bpy)(H2O)]2+. Chemical Science, 2012, 3, 2576.	7.4	96
61	Recent developments in research on water oxidation by photosystem II. Current Opinion in Chemical Biology, 2012, 16, 3-10.	6.1	187
62	Structure of the Molybdenum Site in YedY, a Sulfite Oxidase Homologue from <i>Escherichia coli</i>. Inorganic Chemistry, 2011, 50, 741-748.	4.0	42
63	O2 Reactions at the Six-iron Active Site (H-cluster) in [FeFe]-Hydrogenase. Journal of Biological Chemistry, 2011, 286, 40614-40623.	3.4	80
64	Synthetic manganeseâ€“calcium oxides mimic the water-oxidizing complex of photosynthesis functionally and structurally. Energy and Environmental Science, 2011, 4, 2400.	30.8	263
65	A Crystallographic and Mo K-Edge XAS Study of Molybdenum Oxo Bis-, Mono-, and Non-Dithiolene Complexes - First-Sphere Coordination Geometry and Noninnocence of Ligands. European Journal of Inorganic Chemistry, 2011, 2011, 4387-4399.	2.0	20
66	Carboxylate Shifts Steer Interquinone Electron Transfer in Photosynthesis. Journal of Biological Chemistry, 2011, 286, 5368-5374.	3.4	32
67	Proteinâ€“Protein Complex Formation Affects the Niâ€“Fe and Feâ€“S Centers in the H₂â€Sensing Regulatory Hydrogenase from <i>Ralstonia eutropha</i> H16. ChemPhysChem, 2010, 11, 1297-1306.	2.1	11
68	The Structure of the Active Site H-Cluster of [FeFe] Hydrogenase from the Green Alga Chlamydomonas reinhardtii Studied by X-ray Absorption Spectroscopy. Biochemistry, 2009, 48, 5042-5049.	2.5	68
69	How oxygen attacks [FeFe] hydrogenases from photosynthetic organisms. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17331-17336.	7.1	302
70	Photosynthetic water oxidation at elevated dioxygen partial pressure monitored by time-resolved X-ray absorption measurements. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 17384-17389.	7.1	53
71	Facilitated Hydride Binding in an Feâˆ’Fe Hydrogenase Activeâˆ’Site Biomimic Revealed by X-ray Absorption Spectroscopy and DFT Calculations. Inorganic Chemistry, 2007, 46, 11094-11105.	4.0	43
72	Eight steps preceding Oâ€“O bond formation in oxygenic photosynthesisâ€”A basic reaction cycle of the Photosystem II manganese complex. Biochimica Et Biophysica Acta - Bioenergetics, 2007, 1767, 472-483.	1.0	166

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73	Time-resolved X-ray spectroscopy leads to an extension of the classical S-state cycle model of photosynthetic oxygen evolution. Photosynthesis Research, 2007, 92, 327-343.	2.9	58
74	Intermediates in Assembly by Photoactivation after Thermally Accelerated Disassembly of the Manganese Complex of Photosynthetic Water Oxidation. Biochemistry, 2006, 45, 14523-14532.	2.5	44
75	The Manganese Complex of Oxygenic Photosynthesis Conversion of FiveCoordinated MnIII to SixCoordinated MnIV in the S2S3 Transition is Implied by XANES Simulations. Physica Scripta, 2005, , 844.	2.5	43
76	Simulation of XANES Spectra for ProteinBound Metal Centers Analysis of Linear Dichroism Data. Physica Scripta, 2005, , 859.	2.5	5
77	Specific loss of the extrinsic 18 KDa protein from Photosystem II upon heating to 47Â°C causes inactivation of oxygen evolution likely due to Ca release from the Mn-complex. Photosynthesis Research, 2005, 84, 231-237.	2.9	37
78	A novel BioXAS technique with sub-millisecond time resolution to track oxidation state and structural changes at biological metal centers. Journal of Synchrotron Radiation, 2005, 12, 35-44.	2.4	24
79	Reduction of Unusual Iron-Sulfur Clusters in the H2-sensing Regulatory Ni-Fe Hydrogenase from Ralstonia eutropha H16. Journal of Biological Chemistry, 2005, 280, 19488-19495.	3.4	42
80	The structure of the Ni-Fe site in the isolated HoxC subunit of the hydrogen-sensing hydrogenase fromRalstonia eutropha. FEBS Letters, 2005, 579, 4287-4291.	2.8	26
81	X-ray absorption spectroscopy to analyze nuclear geometry and electronic structure of biological metal centers?potential and questions examined with special focus on the tetra-nuclear manganese complex of oxygenic photosynthesis. Analytical and Bioanalytical Chemistry, 2003, 376, 562-583.	3.7	306
82	Electrostatics and proton transfer in photosynthetic water oxidation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2002, 357, 1407-1418.	4.0	121
83	Tyrosine-Z in Oxygen-Evolving Photosystem II:â€‰ A Hydrogen-Bonded Tyrosinate. Biochemistry, 1999, 38, 1258-1267.	2.5	75
84	Cofactor X of photosynthetic water oxidation: electron transfer, proton release, and electrogenic behaviour in chloride-depleted Photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 1997, 1321, 47-60.	1.0	9
85	Title is missing!. Photosynthesis Research, 1997, 51, 193-208.	2.9	103
86	Extent and rate of proton release by photosynthetic water oxidation in thylakoids: Electrostatic relaxation versus chemical production. Biochemistry, 1994, 33, 864-872.	2.5	146
87	Photosynthetic water oxidation under flashing light. Oxygen release, proton release and absorption transients in the near ultraviolet â€" A comparison between thylakoids and a reaction-centre core preparation. Biochimica Et Biophysica Acta - Bioenergetics, 1993, 1183, 210-214.	1.0	23
88	5 Metal centers in hydrogenase enzymes studied by X-ray spectroscopy. , 0, , .		4
89	Modelling the coordination environment in Î±â€ketoglutarate dependent oxygenases â€" a comparative study on the effect of Nâ€•vs. Oâ€ligation. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 0, , .	1.2	0