Holger Dau

List of Publications by Year
in descending order

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202 papers	19,117 citations	15504 65 h-index	12272 133 g-index
210 all docs	210 docs citations	210 times ranked	14588 citing authors

#	Article	IF	Citations
1	The Mechanism of Water Oxidation: From Electrolysis via Homogeneous to Biological Catalysis. ChemCatChem, 2010, 2, 724-761.	3.7	1,493
2	Oxygen Evolution Reaction Dynamics, Faradaic Charge Efficiency, and the Active Metal Redox States of Niâ€“Fe Oxide Water Splitting Electrocatalysts. Journal of the American Chemical Society, 2016, 138, 5603-5614.	13.7	888
3	A Janus cobalt-based catalytic material for electro-splitting of water. Nature Materials, 2012, 11, 802-807.	27.5	784
4	Reversible amorphization and the catalytically active state of crystalline Co3O4 during oxygen evolution. Nature Communications, 2015, 6, 8625.	12.8	694
5	Tracking Catalyst Redox States and Reaction Dynamics in Niâ€“Fe Oxyhydroxide Oxygen Evolution Reaction Electrocatalysts: The Role of Catalyst Support and Electrolyte pH. Journal of the American Chemical Society, 2017, 139, 2070-2082.	13.7	518
6	Photosynthetic O2 Formation Tracked by Time-Resolved X-ray Experiments. Science, 2005, 310, 1019-1021.	12.6	454
7	A synthetic Mn ₄ Ca-cluster mimicking the oxygen-evolving center of photosynthesis. Science, 2015, 348, 690-693.	12.6	428
8	Unified structural motifs of the catalytically active state of Co(oxyhydr)oxides during the electrochemical oxygen evolution reaction. Nature Catalysis, 2018, 1, 711-719.	34.4	415
9	Electrosynthesis, functional, and structural characterization of a water-oxidizing manganese oxide. Energy and Environmental Science, 2012, 5, 7081.	30.8	407
10	Principles, Efficiency, and Blueprint Character of Solar-Energy Conversion in Photosynthetic Water Oxidation. Accounts of Chemical Research, 2009, 42, 1861-1870.	15.6	378
11	The manganese complex of photosystem II in its reaction cycleâ€”Basic framework and possible realization at the atomic level. Coordination Chemistry Reviews, 2008, 252, 273-295.	18.8	365
12	Structural and Oxidation State Changes of the Photosystem II Manganese Complex in Four Transitions of the Water Oxidation Cycle (S0 â†’ S1, S1 â†’ S2, S2 â†’ S3, and S3,4 â†’ S0) Characterized by X-ray Absorption Spectroscopy at 20 K and Room Temperature. Biochemistry, 2005, 44, 1894-1908.	2.5	314
13	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
14	Artificial photosynthesis as a frontier technology for energy sustainability. Energy and Environmental Science, 2013, 6, 1074.	30.8	284
15	Water oxidation by amorphous cobalt-based oxides: in situ tracking of redox transitions and mode of catalysis. Energy and Environmental Science, 2015, 8, 661-674.	30.8	279
16	Active Mixedâ€Valent MnO_{<i>x</i>} Water Oxidation Catalysts through Partial Oxidation (Corrosion) of Nanostructured MnO Particles. Angewandte Chemie - International Edition, 2013, 52, 13206-13210.	13.8	267
17	Synthetic manganeseâ€“calcium oxides mimic the water-oxidizing complex of photosynthesis functionally and structurally. Energy and Environmental Science, 2011, 4, 2400.	30.8	263
18	Cobaltâˆ’Oxo Core of a Water-Oxidizing Catalyst Film. Journal of the American Chemical Society, 2009, 131, 6936-6937.	13.7	262

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19	MOLECULAR MECHANISMS AND QUANTITATIVE MODELS OF VARIABLE PHOTOSYSTEM II FLUORESCENCE. Photochemistry and Photobiology, 1994, 60, 1-23.	2.5	258
20	Layered manganese oxides for water-oxidation: alkaline earth cations influence catalytic activity in a photosystem II-like fashion. Chemical Science, 2012, 3, 2330.	7.4	250
21	High-Performance Oxygen Redox Catalysis with Multifunctional Cobalt Oxide Nanochains: Morphology-Dependent Activity. ACS Catalysis, 2015, 5, 2017-2027.	11.2	249
22	Electrochemical water splitting by layered and 3D cross-linked manganese oxides: correlating structural motifs and catalytic activity. Energy and Environmental Science, 2013, 6, 2745.	30.8	248
23	A structurally versatile nickel phosphite acting as a robust bifunctional electrocatalyst for overall water splitting. Energy and Environmental Science, 2018, 11, 1287-1298.	30.8	205
24	Structural models of the manganese complex of photosystem II and mechanistic implications. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 88-105.	1.0	197
25	The tetra-manganese complex of photosystem II during its redox cycle â€“ X-ray absorption results and mechanistic implications. Biochimica Et Biophysica Acta - Bioenergetics, 2001, 1503, 24-39.	1.0	196
26	Recent developments in research on water oxidation by photosystem II. Current Opinion in Chemical Biology, 2012, 16, 3-10.	6.1	187
27	Direct Electrolytic Splitting of Seawater: Activity, Selectivity, Degradation, and Recovery Studied from the Molecular Catalyst Structure to the Electrolyzer Cell Level. Advanced Energy Materials, 2018, 8, 1800338.	19.5	185
28	X-ray Absorption Spectroscopy on Layered Photosystem II Membrane Particles Suggests Manganese-Centered Oxidation of the Oxygen-Evolving Complex for the S0-S1, S1-S2, and S2-S3Transitions of the Water Oxidation Cycleâ€. Biochemistry, 1998, 37, 17112-17119.	2.5	183
29	Water Oxidation by Amorphous Cobaltâ€Based Oxides: Volume Activity and Proton Transfer to Electrolyte Bases. ChemSusChem, 2014, 7, 1301-1310.	6.8	183
30	Helical cobalt borophosphates to master durable overall water-splitting. Energy and Environmental Science, 2019, 12, 988-999.	30.8	179
31	Rapid Loss of Structural Motifs in the Manganese Complex of Oxygenic Photosynthesis by X-ray Irradiation at 10â€“300 K. Journal of Biological Chemistry, 2006, 281, 4580-4588.	3.4	178
32	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
33	Uncovering the prominent role of metal ions in octahedral versus tetrahedral sites of cobaltâ€“zinc oxide catalysts for efficient oxidation of water. Journal of Materials Chemistry A, 2016, 4, 10014-10022.	10.3	171
34	On the structure of the manganese complex of photosystem II: extended-range EXAFS data and specific atomic-resolution models for four S-states. Philosophical Transactions of the Royal Society B: Biological Sciences, 2008, 363, 1237-1244.	4.0	169
35	Morphology and mechanism of highly selective Cu(II) oxide nanosheet catalysts for carbon dioxide electroreduction. Nature Communications, 2021, 12, 794.	12.8	168
36	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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37	Heterogeneous Water Oxidation: Surface Activity versus Amorphization Activation in Cobalt Phosphate Catalysts. Angewandte Chemie - International Edition, 2015, 54, 2472-2476.	13.8	152
38	Water Oxidation by Electrodeposited Cobalt Oxidesâ€"Role of Anions and Redoxâ€Inert Cations in Structure and Function of the Amorphous Catalyst. ChemSusChem, 2012, 5, 542-549.	6.8	149
39	New aspects of operando Raman spectroscopy applied to electrochemical CO2 reduction on Cu foams. Journal of Chemical Physics, 2019, 150, 041718.	3.0	149
40	Spectroscopic identification of active sites for the oxygen evolution reaction on iron-cobalt oxides. Nature Communications, 2017, 8, 2022.	12.8	147
41	An Oxocobalt(IV) Complex Stabilized by Lewis Acid Interactions with Scandium(III) Ions. Angewandte Chemie - International Edition, 2011, 50, 1711-1715.	13.8	136
42	Energetics of primary and secondary electron transfer in Photosystem II membrane particles of spinach revisited on basis of recombination-fluorescence measurements. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1708, 209-218.	1.0	128
43	Fragments of Layered Manganese Oxide Are the Real Water Oxidation Catalyst after Transformation of Molecular Precursor on Clay. Journal of the American Chemical Society, 2014, 136, 7245-7248.	13.7	127
44	Structural Consequences of Ammonia Binding to the Manganese Center of the Photosynthetic Oxygen-Evolving Complex: An X-ray Absorption Spectroscopy Study of Isotropic and Oriented Photosystem II Particles. Biochemistry, 1995, 34, 5274-5287.	2.5	126
45	Uncovering The Role of Oxygen in Ni-Fe(OxHy) Electrocatalysts using In situ Soft X-ray Absorption Spectroscopy during the Oxygen Evolution Reaction. Scientific Reports, 2019, 9, 1532.	3.3	112
46	Nickel-oxido structure of a water-oxidizing catalyst film. Chemical Communications, 2011, 47, 11912.	4.1	105
47	The structure of the manganese complex of Photosystem II in its dark-stable S1-stateâ€"EXAFS results in relation to recent crystallographic data. Physical Chemistry Chemical Physics, 2004, 6, 4781-4792.	2.8	103
48	Water oxidation catalysis â€" role of redox and structural dynamics in biological photosynthesis and inorganic manganese oxides. Energy and Environmental Science, 2016, 9, 2433-2443.	30.8	99
49	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
50	Preparation protocols for high-activity Photosystem II membrane particles of green algae and higher plants, pH dependence of oxygen evolution and comparison of the S2-state multiline signal by X-band EPR spectroscopy. Journal of Photochemistry and Photobiology B: Biology, 2000, 55, 138-144.	3.8	94
51	Chlorophyll fluorescence transients of Photosystem II membrane particles as a tool for studying photosynthetic oxygen evolution. , 2000, 65, 41-52.		92
52	Evolving Highly Active Oxidic Iron(III) Phase from Corrosion of Intermetallic Iron Silicide to Master Efficient Electrocatalytic Water Oxidation and Selective Oxygenation of 5â€Hydroxymethylfurfural. Advanced Materials, 2021, 33, e2008823.	21.0	91
53	The photosystem II-associated Cah3 in Chlamydomonas enhances the O2 evolution rate by proton removal. EMBO Journal, 2008, 27, 782-791.	7.8	86
54	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

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55	Geometric distortions in nickel (oxy)hydroxide electrocatalysts by redox inactive iron ions. Energy and Environmental Science, 2018, 11, 2476-2485.	30.8	83
56	Correlation between Structure and Magnetic Spin State of the Manganese Cluster in the Oxygen-Evolving Complex of Photosystem II in the S2 State: Determination by X-ray Absorption Spectroscopy. Biochemistry, 1994, 33, 4923-4932.	2.5	82
57	New trends in photobiology. Journal of Photochemistry and Photobiology B: Biology, 1994, 26, 3-27.	3.8	81
58	Reactivity Determinants in Electrodeposited Cu Foams for Electrochemical CO₂ Reduction. ChemSusChem, 2018, 11, 3449-3459.	6.8	80
59	Detecting structural transformation of cobalt phosphonate to active bifunctional catalysts for electrochemical water-splitting. Journal of Materials Chemistry A, 2020, 8, 2637-2643.	10.3	80
60	Extended protein/water H-bond networks in photosynthetic water oxidation. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1177-1190.	1.0	78
61	Understanding the formation of bulk- and surface-active layered (oxy)hydroxides for water oxidation starting from a cobalt selenite precursor. Energy and Environmental Science, 2020, 13, 3607-3619.	30.8	77
62	The D1-D61N Mutation in <i>Synechocystis</i> sp. PCC 6803 Allows the Observation of pH-Sensitive Intermediates in the Formation and Release of O₂ from Photosystem II. Biochemistry, 2012, 51, 1079-1091.	2.5	75
63	Structural Basis of Cyanobacterial Photosystem II Inhibition by the Herbicide Terbutryn. Journal of Biological Chemistry, 2011, 286, 15964-15972.	3.4	73
64	H/D Isotope Effects Reveal Factors Controlling Catalytic Activity in Co-Based Oxides for Water Oxidation. Journal of the American Chemical Society, 2019, 141, 2938-2948.	13.7	72
65	Electrodeposited AgCu Foam Catalysts for Enhanced Reduction of CO₂ to CO. ACS Applied Materials & Interfaces, 2019, 11, 14734-14744.	8.0	71
66	Exciton equilibration and Photosystem II exciton dynamics â€” a fluorescence study on Photosystem II membrane particles of spinach. Biochimica Et Biophysica Acta - Bioenergetics, 1996, 1273, 175-190.	1.0	70
67	Structure and Orientation of the Oxygen-Evolving Manganese Complex of Green Algae and Higher Plants Investigated by X-ray Absorption Linear Dichroism Spectroscopy on Oriented Photosystem II Membrane Particlesâ€. Biochemistry, 1998, 37, 7340-7350.	2.5	67
68	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
69	Electronic Structure of Oxidized Complexes Derived fromcis-[RuII(bpy)2(H2O)2]2+and Its Photoisomerization Mechanism. Inorganic Chemistry, 2011, 50, 11134-11142.	4.0	64
70	Nickel-iron catalysts for electrochemical water oxidation â€" redox synergism investigated by <i>in situ</i> X-ray spectroscopy with millisecond time resolution. Sustainable Energy and Fuels, 2018, 2, 1986-1994.	4.9	64
71	Shining light on integrity of a tetracobalt-polyoxometalate water oxidation catalyst by X-ray spectroscopy before and after catalysis. Chemical Communications, 2014, 50, 100-102.	4.1	62
72	Structural insights into the light-driven auto-assembly process of the water-oxidizing Mn4CaO5-cluster in photosystem II. ELife, 2017, 6, .	6.0	62

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73	Spare quinones in the QB cavity of crystallized photosystem II from Thermosynechococcus elongatus. Biochimica Et Biophysica Acta - Bioenergetics, 2007, 1767, 520-527.	1.0	61
74	Screenâ€Printed Calciumâ€“Birnessite Electrodes for Water Oxidation at Neutral pH and an â€œElectrochemical Harriman Seriesâ€ ChemSusChem, 2014, 7, 3442-3451.	6.8	61
75	Bromide Does Not Bind to the Mn4Ca Complex in Its S1State in Cl–Depleted and Br–Reconstituted Oxygen-Evolving Photosystem II:Â Evidence from X-ray Absorption Spectroscopy at the Br K-Edgeâ€. Biochemistry, 2006, 45, 13101-13107.	2.5	60
76	Valinomycin sensitivity proves that light-induced thylakoid voltages result in millisecond phase of chlorophyll fluorescence transients. Biochimica Et Biophysica Acta - Bioenergetics, 2002, 1554, 94-100.	1.0	59
77	Artificial Photosynthesis: Beyond Mimicking Nature. ChemSusChem, 2017, 10, 4228-4235.	6.8	59
78	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
79	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
80	Formation of unexpectedly active Niâ€“Fe oxygen evolution electrocatalysts by physically mixing Ni and Fe oxyhydroxides. Chemical Communications, 2019, 55, 818-821.	4.1	57
81	Stepwise Transition of the Tetra-Manganese Complex of Photosystem II to a Binuclear Mn2(Î¼-O)2 Complex in Response to a Temperature Jump: A Time-Resolved Structural Investigation Employing X-Ray Absorption Spectroscopy. Biophysical Journal, 2003, 84, 1370-1386.	0.5	56
82	Water Oxidation by Photosystem II: H₂Oâˆ’D₂O Exchange and the Influence of pH Support Formation of an Intermediate by Removal of a Proton before Dioxygen Creation. Biochemistry, 2010, 49, 10098-10106.	2.5	56
83	Operando Raman spectroscopy tracks oxidation-state changes in an amorphous Co oxide material for electrocatalysis of the oxygen evolution reaction. Journal of Chemical Physics, 2020, 152, 194202.	3.0	55
84	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
85	Bridging-type changes facilitate successive oxidation steps at about 1V in two binuclear manganese complexesâ€”implications for photosynthetic water-oxidation. Journal of Inorganic Biochemistry, 2006, 100, 1234-1243.	3.5	53
86	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
87	Combination of Highly Efficient Electrocatalytic Water Oxidation with Selective Oxygenation of Organic Substrates using Manganese Borophosphates. Advanced Materials, 2021, 33, e2004098.	21.0	52
88	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
89	Thermodynamic Limitations of Photosynthetic Water Oxidation at High Proton Concentrations. Journal of Biological Chemistry, 2011, 286, 18222-18228.	3.4	50
90	Electric field effect on the picosecond fluorescence of Photosystem II and its relation to the energetics and kinetics of primary charge separation. Biochimica Et Biophysica Acta - Bioenergetics, 1992, 1102, 91-106.	1.0	47

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91	Water and bromide in the active center of vanadate-dependent haloperoxidases. Journal of Inorganic Biochemistry, 2000, 80, 115-121.	3.5	46
92	Heterogeneous Water Oxidation: Surface Activity versus Amorphization Activation in Cobalt Phosphate Catalysts. Angewandte Chemie, 2015, 127, 2502-2506.	2.0	46
93	Photosynthetic dioxygen formation studied by time-resolved delayed fluorescence measurements â€" Method, rationale, and results on the activation energy of dioxygen formation. Biochimica Et Biophysica Acta - Bioenergetics, 2007, 1767, 565-574.	1.0	45
94	Electric field effect on chlorophyll fluorescence and its relation to Photosystem II charge separation reactions studied by a salt-jump technique. Biochimica Et Biophysica Acta - Bioenergetics, 1991, 1098, 49-60.	1.0	44
95	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
96	Functional Characterization and Quantification of the Alternative PsbA Copies in Thermosynechococcus elongatus and Their Role in Photoprotection. Journal of Biological Chemistry, 2010, 285, 29851-29856.	3.4	44
97	Does the Structure of the Water-Oxidizing Photosystem IIâˆ'Manganese Complex at Room Temperature Differ from Its Low-Temperature Structure? A Comparative X-ray Absorption Studyâ€. Biochemistry, 2000, 39, 7033-7040.	2.5	43
98	The first room-temperature X-ray absorption spectra of higher oxidation states of the tetra-manganese complex of photosystem II. FEBS Letters, 2002, 512, 116-120.	2.8	43
99	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
100	Photosynthetic Water Oxidation at High O2 Backpressure Monitored by Delayed Chlorophyll Fluorescence. Biochemistry, 2005, 44, 12775-12779.	2.5	43
101	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
102	Temperature Dependence of the Catalytic Two- versus Four-Electron Reduction of Dioxygen by a Hexanuclear Cobalt Complex. Journal of the American Chemical Society, 2017, 139, 15033-15042.	13.7	42
103	Nanostructured Intermetallic Nickel Silicide (Pre)Catalyst for Anodic Oxygen Evolution Reaction and Selective Dehydrogenation of Primary Amines. Advanced Energy Materials, 2022, 12, .	19.5	42
104	Water-Oxidation Electrocatalysis by Manganese Oxides: Syntheses, Electrode Preparations, Electrolytes and Two Fundamental Questions. Zeitschrift Fur Physikalische Chemie, 2020, 234, 925-978.	2.8	41
105	Hydrophobic Nanoreactor Softâ€Templating: A Supramolecular Approach to Yolk@Shell Materials. Advanced Functional Materials, 2015, 25, 6228-6240.	14.9	40
106	Photo-assisted water oxidation by high-nuclearity cobalt-oxo cores: tracing the catalyst fate during oxygen evolution turnover. Green Chemistry, 2017, 19, 2416-2426.	9.0	40
107	Studies on the adaptation of intact leaves to changing light intensities by a kinetic analysis of chlorophyll fluorescence and oxygen evolution as measured by the photoacoustic signal. Photosynthesis Research, 1989, 20, 59-83.	2.9	38
108	A study on the energy-dependent quenching of chlorophyll fluorescence by means of photoacoustic measurements. Photosynthesis Research, 1990, 25, 269-278.	2.9	38

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109	Water oxidation by manganese oxides formed from tetranuclear precursor complexes: the influence of phosphate on structure and activity. Physical Chemistry Chemical Physics, 2014, 16, 11965.	2.8	38
110	Specific loss of the extrinsic 18 KDa protein from Photosystem II upon heating to 47ÂÂ°C causes inactivation of oxygen evolution likely due to Ca release from the Mn-complex. Photosynthesis Research, 2005, 84, 231-237.	2.9	37
111	Title is missing!. Photosynthesis Research, 1999, 60, 217-227.	2.9	36
112	Hydrogen-Induced Structural Changes at the Nickel Site of the Regulatory [NiFe] Hydrogenase from Ralstonia eutropha Detected by X-ray Absorption Spectroscopy. Biochemistry, 2003, 42, 11004-11015.	2.5	36
113	Protonation states in a cobalt-oxide catalyst for water oxidation: fine comparison of ab initio molecular dynamics and X-ray absorption spectroscopy results. Physical Chemistry Chemical Physics, 2011, 13, 15437.	2.8	36
114	Atomistic Texture of Amorphous Manganese Oxides for Electrochemical Water Splitting Revealed by Ab Initio Calculations Combined with X-ray Spectroscopy. Journal of the American Chemical Society, 2015, 137, 10254-10267.	13.7	36
115	Bromine K-edge EXAFS studies of bromide binding to bromoperoxidase fromAscophyllum nodosum. FEBS Letters, 1999, 457, 237-240.	2.8	35
116	Nickelâ€"Vanadium Layered Double Hydroxide under Water-Oxidation Reaction: New Findings and Challenges. ACS Sustainable Chemistry and Engineering, 2019, 7, 17252-17262.	6.7	35
117	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
118	Considerations on the mechanism of photosynthetic water oxidation â€" dual role of oxo-bridges between Mn ions in (i) redox-potential maintenance and (ii) proton abstraction from substrate water. Photosynthesis Research, 2005, 84, 325-331.	2.9	33
119	[NiFe] and [FeS] Cofactors in the Membrane-Bound Hydrogenase of <i>Ralstonia eutropha</i> Investigated by X-ray Absorption Spectroscopy: Insights into O₂-Tolerant H₂ Cleavage. Biochemistry, 2011, 50, 5858-5869.	2.5	33
120	Electrosynthesis of Biomimetic Manganeseâ€"Calcium Oxides for Water Oxidation Catalysisâ€"Atomic Structure and Functionality. ChemSusChem, 2016, 9, 379-387.	6.8	33
121	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
122	Electromodified NiFe Alloys as Electrocatalysts for Water Oxidation: Mechanistic Implications of Timeâ€Resolved UV/Vis Tracking of Oxidation State Changes. ChemSusChem, 2019, 12, 1966-1976.	6.8	33
123	Self-supported Ni(OH)2/MnO2 on CFP as a flexible anode towards electrocatalytic urea conversion: The role of composition on activity, redox states and reaction dynamics. Electrochimica Acta, 2019, 318, 32-41.	5.2	33
124	Carboxylate Shifts Steer Interquinone Electron Transfer in Photosynthesis. Journal of Biological Chemistry, 2011, 286, 5368-5374.	3.4	32
125	Theory of the Linear Dichroism in the Extended X-ray Absorption Fine Structure (EXAFS) of Partially Vectorially Ordered Systems. Journal of Physical Chemistry B, 1998, 102, 8196-8200.	2.6	31
126	A soft molecular 2Feâ€"2As precursor approach to the synthesis of nanostructured FeAs for efficient electrocatalytic water oxidation. Chemical Science, 2020, 11, 11834-11842.	7.4	30

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127	Cyanamide route to calciumâ€“manganese oxide foams for water oxidation. Dalton Transactions, 2013, 42, 16920.	3.3	29
128	Revisiting Metalâ€“Organic Frameworks for Oxygen Evolution: A Case Study. Inorganic Chemistry, 2020, 59, 15335-15342.	4.0	29
129	Biogenic Manganese-Calcium Oxides on the Cell Walls of the AlgaeChara Corallina: Elemental Composition, Atomic Structure, and Water-Oxidation Catalysis. European Journal of Inorganic Chemistry, 2014, 2014, 780-790.	2.0	28
130	The role of zinc in the methylation of the coenzymeâ€ƒM thiol group in methanol:coenzymeâ€ƒM methyltransferase fromMethanosarcina barkeri. FEBS Journal, 2002, 269, 2117-2123.	0.2	27
131	Fast structural changes (200â€“900 ns) may prepare the photosynthetic manganese complex for oxidation by the adjacent tyrosine radical. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1196-1207.	1.0	27
132	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
133	Origin of the heat-induced improvement of catalytic activity and stability of MnO_x electrocatalysts for water oxidation. Journal of Materials Chemistry A, 2019, 7, 17022-17036.	10.3	25
134	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
135	Efficiency and role of loss processes in light-driven water oxidation by PSII. Physiologia Plantarum, 2007, 131, 50-63.	5.2	24
136	Effect of light-induced changes in thylakoid voltage on chlorophyll fluorescence of Aegopodium podagraria leaves. Biochimica Et Biophysica Acta - Bioenergetics, 1991, 1057, 337-345.	1.0	22
137	Evaporated manganese films as a starting point for the preparation of thin-layer MnO_x water-oxidation anodes. Sustainable Energy and Fuels, 2017, 1, 1162-1170.	4.9	22
138	Carbon fibre paper coated by a layered manganese oxide: a nano-structured electrocatalyst for water-oxidation with high activity over a very wide pH range. Journal of Materials Chemistry A, 2019, 7, 25333-25346.	10.3	22
139	From manganese oxidation to water oxidation: assembly and evolution of the water-splitting complex in photosystem II. Photosynthesis Research, 2022, 152, 107-133.	2.9	22
140	Assembly of light harvesting complexes II (LHC-II) in the absence of lutein. Biochimica Et Biophysica Acta - Bioenergetics, 1997, 1320, 188-194.	1.0	21
141	Enthalpy Changes during Photosynthetic Water Oxidation Tracked by Time-Resolved Calorimetry Using a Photothermal Beam Deflection Technique. Biophysical Journal, 2008, 94, 1890-1903.	0.5	21
142	Exploring the Limits of Self-Repair in Cobalt Oxide Films for Electrocatalytic Water Oxidation. ACS Catalysis, 2020, 10, 7990-7999.	11.2	21
143	Structure and Mechanism Leading to Formation of the Cysteine Sulfinate Product Complex of a Biomimetic Cysteine Dioxygenase Model. Chemistry - A European Journal, 2015, 21, 7470-7479.	3.3	20
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