

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11582663/publications.pdf>

Version: 2024-02-01

93
papers

9,985
citations

38660

50
h-index

43802

91
g-index

100
all docs

100
docs citations

100
times ranked

8378
citing authors

#	ARTICLE	IF	CITATIONS
1	Bridging the gap between Kok-type and kinetic models of photosynthetic electron transport within Photosystem II. <i>Photosynthesis Research</i> , 2022, 151, 83-102.	1.6	5
2	Why Did Nature Choose Manganese over Cobalt to Make Oxygen Photosynthetically on the Earth?. <i>Journal of Physical Chemistry B</i> , 2022, 126, 3257-3268.	1.2	7
3	Symbiosis extended: exchange of photosynthetic O ₂ and fungal-respired CO ₂ mutually power metabolism of lichen symbionts. <i>Photosynthesis Research</i> , 2020, 143, 287-299.	1.6	14
4	Realtime kinetics of the light driven steps of photosynthetic water oxidation in living organisms by <i>in vivo</i> spectroscopic fluorometry. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148212.	0.5	6
5	"Birth defects" of photosystem II make it highly susceptible to photodamage during chloroplast biogenesis. <i>Physiologia Plantarum</i> , 2019, 166, 165-180.	2.6	15
6	Reconciling Structural and Spectroscopic Fingerprints of the Oxygen-Evolving Complex of Photosystem II: A Computational Study of the S ₂ State. <i>Journal of Physical Chemistry B</i> , 2018, 122, 11868-11882.	1.2	10
7	Resolving Ambiguous Protonation and Oxidation States in the Oxygen Evolving Complex of Photosystem II. <i>Journal of Physical Chemistry B</i> , 2018, 122, 8654-8664.	1.2	22
8	Desiccation tolerant lichens facilitate <i>in vivo</i> H/D isotope effect measurements in oxygenic photosynthesis. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 1039-1044.	0.5	3
9	Rewiring of Cyanobacterial Metabolism for Hydrogen Production: Synthetic Biology Approaches and Challenges. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1080, 171-213.	0.8	12
10	Photosystem II-cyclic electron flow powers exceptional photoprotection and record growth in the microalga <i>Chlorella ohadii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2017, 1858, 873-883.	0.5	40
11	Inactivation of nitrate reductase alters metabolic branching of carbohydrate fermentation in the cyanobacterium <i>Synechococcus</i> sp. strain PCC 7002. <i>Biotechnology and Bioengineering</i> , 2016, 113, 979-988.	1.7	13
12	The strontium inorganic mutant of the water oxidizing center (CaMn ₄ O ₅) of PSII improves WOC efficiency but slows electron flux through the terminal acceptors. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 1550-1560.	0.5	16
13	The Oxygen quantum yield in diverse algae and cyanobacteria is controlled by partitioning of flux between linear and cyclic electron flow within photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 1380-1391.	0.5	19
14	Natural isoforms of the Photosystem II D1 subunit differ in photoassembly efficiency of the water-oxidizing complex. <i>Photosynthesis Research</i> , 2016, 128, 141-150.	1.6	4
15	Coordination Geometry and Oxidation State Requirements of Corner-Sharing MnO ₆ Octahedra for Water Oxidation Catalysis: An Investigation of Manganite (Î ³ -MnOOH). <i>ACS Catalysis</i> , 2016, 6, 2089-2099.	5.5	156
16	Structural basis for differing electrocatalytic water oxidation by the cubic, layered and spinel forms of lithium cobalt oxides. <i>Energy and Environmental Science</i> , 2016, 9, 184-192.	15.6	81
17	Surface and Structural Investigation of a MnO _x Birnessite-Type Water Oxidation Catalyst Formed under Photocatalytic Conditions. <i>Chemistry - A European Journal</i> , 2015, 21, 14218-14228.	1.7	29
18	Metabolic and photosynthetic consequences of blocking starch biosynthesis in the green alga <i>Chlamydomonas reinhardtii</i> sta6 mutant. <i>Plant Journal</i> , 2015, 81, 947-960.	2.8	49

#	ARTICLE	IF	CITATIONS
19	Tuning the Electrocatalytic Water Oxidation Properties of AB_2O_4 Spinel Nanocrystals: A (Li, Mg, Zn) and B (Mn, Co) Site Variants of $LiMn_2O_4$. ACS Catalysis, 2015, 5, 3403-3410.	5.5	74
20	Water Oxidation by the $[Co_4O_4(OAc)_4(py)_4]^+$ Cubium is Initiated by OH^- Addition. Journal of the American Chemical Society, 2015, 137, 15460-15468.	6.6	64
21	What Determines Catalyst Functionality in Molecular Water Oxidation? Dependence on Ligands and Metal Nuclearity in Cobalt Clusters. Inorganic Chemistry, 2014, 53, 2113-2121.	1.9	70
22	Engineered Photosystem II Reaction Centers Optimize Photochemistry versus Photoprotection at Different Solar Intensities. Journal of the American Chemical Society, 2014, 136, 4048-4055.	6.6	36
23	Entropy and enthalpy contributions to the kinetics of proton coupled electron transfer to the $Mn_4O_4(O_2PPh)_6$ cubane. Physical Chemistry Chemical Physics, 2014, 16, 11843-11847.	1.3	6
24	Evolutionary Origins of the Photosynthetic Water Oxidation Cluster: Bicarbonate Permits Mn^{2+} Photo-oxidation by Anoxygenic Bacterial Reaction Centers. ChemBioChem, 2013, 14, 1725-1731.	1.3	25
25	Reprogramming the glycolytic pathway for increased hydrogen production in cyanobacteria: metabolic engineering of NAD^+ -dependent GAPDH. Energy and Environmental Science, 2013, 6, 3722.	15.6	44
26	Thermodynamically accurate modeling of the catalytic cycle of photosynthetic oxygen evolution: A mathematical solution to asymmetric Markov chains. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 861-868.	0.5	25
27	Photosystem II: The Reaction Center of Oxygenic Photosynthesis. Annual Review of Biochemistry, 2013, 82, 577-606.	5.0	330
28	Photochemical Water Oxidation by Crystalline Polymorphs of Manganese Oxides: Structural Requirements for Catalysis. Journal of the American Chemical Society, 2013, 135, 3494-3501.	6.6	561
29	What Are the Oxidation States of Manganese Required To Catalyze Photosynthetic Water Oxidation?. Biophysical Journal, 2012, 103, 313-322.	0.2	72
30	Dynamics of Lipid Biosynthesis and Redistribution in the Marine Diatom Phaeodactylum tricornutum Under Nitrate Deprivation. Bioenergy Research, 2012, 5, 876-885.	2.2	31
31	Towards Hydrogen Energy: Progress on Catalysts for Water Splitting. Australian Journal of Chemistry, 2012, 65, 577.	0.5	22
32	Structural Requirements in Lithium Cobalt Oxides for the Catalytic Oxidation of Water. Angewandte Chemie - International Edition, 2012, 51, 1616-1619.	7.2	150
33	A Co_4O_4 "Cubane" Water Oxidation Catalyst Inspired by Photosynthesis. Journal of the American Chemical Society, 2011, 133, 11446-11449.	6.6	331
34	Evolutionary significance of an algal gene encoding an [FeFe]-hydrogenase with F-domain homology and hydrogenase activity in Chlorella variabilis NC64A. Planta, 2011, 234, 829-843.	1.6	50
35	Contribution of a Sodium Ion Gradient to Energy Conservation during Fermentation in the Cyanobacterium Arthrospira (Spirulina) maxima CS-328. Applied and Environmental Microbiology, 2011, 77, 7185-7194.	1.4	22
36	Bicarbonate Coordinates to Mn^{3+} during Photo-Assembly of the Catalytic Mn_4Ca Core of Photosynthetic Water Oxidation: EPR Characterization. Applied Magnetic Resonance, 2010, 37, 137-150.	0.6	16

#	ARTICLE	IF	CITATIONS
37	A Tandem Water-Splitting Device Based on a Bio-Inspired Manganese Catalyst. <i>ChemSusChem</i> , 2010, 3, 1146-1150.	3.6	30
38	Redirecting Reductant Flux into Hydrogen Production via Metabolic Engineering of Fermentative Carbon Metabolism in a Cyanobacterium. <i>Applied and Environmental Microbiology</i> , 2010, 76, 5032-5038.	1.4	142
39	Water Oxidation by MnO_2 : Catalysis by the Cubical Mn_4O_4 Subcluster Obtained by Delithiation of Spinel LiMn_2O_4 . <i>Journal of the American Chemical Society</i> , 2010, 132, 11467-11469.	6.6	267
40	Increased Lipid Accumulation in the <i>Chlamydomonas reinhardtii</i> <i>sta7-10</i> Starchless Isoamylase Mutant and Increased Carbohydrate Synthesis in Complemented Strains. <i>Eukaryotic Cell</i> , 2010, 9, 1251-1261.	3.4	317
41	Solar Driven Water Oxidation by a Bioinspired Manganese Molecular Catalyst. <i>Journal of the American Chemical Society</i> , 2010, 132, 2892-2894.	6.6	414
42	Boosting Autofermentation Rates and Product Yields with Sodium Stress Cycling: Application to Production of Renewable Fuels by Cyanobacteria. <i>Applied and Environmental Microbiology</i> , 2010, 76, 6455-6462.	1.4	86
43	Identification and quantification of water-soluble metabolites by cryoprobe-assisted nuclear magnetic resonance spectroscopy applied to microbial fermentation. <i>Magnetic Resonance in Chemistry</i> , 2009, 47, S138-46.	1.1	24
44	Phenotypic diversity of hydrogen production in chlorophycean algae reflects distinct anaerobic metabolisms. <i>Journal of Biotechnology</i> , 2009, 142, 21-30.	1.9	70
45	Molecular water-oxidation catalysts for photoelectrochemical cells. <i>Dalton Transactions</i> , 2009, , 9374.	1.6	124
46	Photosynthetic Oxygen Evolution Is Not Reversed at High Oxygen Pressures: Mechanistic Consequences for the Water-Oxidizing Complex. <i>Biochemistry</i> , 2009, 48, 1381-1389.	1.2	39
47	Sustained Water Oxidation by $[\text{Mn}_4\text{O}_4]^{7+}$ Core Complexes Inspired by Oxygenic Photosynthesis. <i>Inorganic Chemistry</i> , 2009, 48, 7269-7279.	1.9	83
48	Development of Bioinspired Mn_4O_4 -Cubane Water Oxidation Catalysts: Lessons from Photosynthesis. <i>Accounts of Chemical Research</i> , 2009, 42, 1935-1943.	7.6	510
49	Electrochemical investigation of Mn_4O_4 -cubane water-oxidizing clusters. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 6441.	1.3	48
50	Photoassembly of the water-oxidizing complex in photosystem II. <i>Coordination Chemistry Reviews</i> , 2008, 252, 347-360.	9.5	163
51	Sustained Water Oxidation Photocatalysis by a Bioinspired Manganese Cluster. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 7335-7338.	7.2	269
52	Aquatic phototrophs: efficient alternatives to land-based crops for biofuels. <i>Current Opinion in Biotechnology</i> , 2008, 19, 235-240.	3.3	620
53	Optimization of Metabolic Capacity and Flux through Environmental Cues To Maximize Hydrogen Production by the Cyanobacterium <i>Arthrospira</i> (<i>Spirulina</i>) <i>maxima</i> . <i>Applied and Environmental Microbiology</i> , 2008, 74, 6102-6113.	1.4	113
54	Self-Assembled Monolayer of Organic Iodine on a Au Surface for Attachment of Redox-Active Metal Clusters. <i>Langmuir</i> , 2007, 23, 8257-8263.	1.6	12

#	ARTICLE	IF	CITATIONS
55	In vivo bicarbonate requirement for water oxidation by Photosystem II in the hypercarbonate-requiring cyanobacterium <i>Arthrospira maxima</i> . <i>Journal of Inorganic Biochemistry</i> , 2007, 101, 1865-1874.	1.5	21
56	Tuning the Photoinduced O ₂ -Evolving Reactivity of Mn ^{IV} O ₄ ⁷⁺ , Mn ^{IV} O ₄ ⁶⁺ , and Mn ^{IV} O ₃ (OH) ₆ ⁺ Manganese ^{IV} Oxo Cubane Complexes. <i>Inorganic Chemistry</i> , 2006, 45, 189-195.	1.9	60
57	Prospecting for biohydrogen fuel. <i>Industrial Biotechnology</i> , 2006, 2, 133-137.	0.5	10
58	Spectroscopic Evidence for Ca ²⁺ Involvement in the Assembly of the Mn ₄ Ca Cluster in the Photosynthetic Water-Oxidizing Complex. <i>Biochemistry</i> , 2006, 45, 12876-12889.	1.2	50
59	How fast can Photosystem II split water? Kinetic performance at high and low frequencies. <i>Photosynthesis Research</i> , 2005, 84, 355-365.	1.6	113
60	Photosynthesis: a blueprint for solar energy capture and biohydrogen production technologies. <i>Photochemical and Photobiological Sciences</i> , 2005, 4, 957.	1.6	284
61	Mutagenesis of CP43-arginine-357 to serine reveals new evidence for (bi)carbonate functioning in the water oxidizing complex of Photosystem II. <i>Photochemical and Photobiological Sciences</i> , 2005, 4, 991.	1.6	35
62	Consequences of structural and biophysical studies for the molecular mechanism of photosynthetic oxygen evolution: functional roles for calcium and bicarbonate. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 4793.	1.3	56
63	Trapping an Elusive Intermediate in Manganese ^{IV} Oxo Cubane Chemistry. <i>Inorganic Chemistry</i> , 2004, 43, 5795-5797.	1.9	52
64	Oxidation potentials and electron donation to photosystem II of manganese complexes containing bicarbonate and carboxylate ligands. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 4905.	1.3	54
65	Transition from Hydrogen Atom to Hydride Abstraction by Mn ^{IV} O ₄ (O ₂ PPh ₂) ₆ versus [Mn ^{IV} O ₄ (O ₂ PPh ₂) ₆] ⁺ : O-H Bond Dissociation Energies and the Formation of Mn ^{IV} O ₃ (OH)(O ₂ PPh ₂) ₆ . <i>Inorganic Chemistry</i> , 2003, 42, 2849-2858.	1.9	51
66	Kinetics of proton-coupled electron-transfer reactions to the manganese-oxo "cubane" complexes containing the Mn ^{IV} O ₄ and Mn ^{IV} O ₃ core types. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 3707-3712.	3.3	46
67	Selective Photoproduction of O ₂ from the Mn ^{IV} O ₄ Cubane Core: A Structural and Functional Model for the Photosynthetic Water-Oxidizing Complex. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 2925-2928.	7.2	88
68	Conversion of Core Oxos to Water Molecules by 4e ⁻ /4H ⁺ Reductive Dehydration of the Mn ^{IV} O ₂₆ Core in the Manganese ^{IV} Oxo Cubane Complex Mn ^{IV} O ₄ (Ph ₂ PO ₂) ₆ : A Partial Model for Photosynthetic Water Binding and Activation. <i>Inorganic Chemistry</i> , 2000, 39, 1021-1027.	1.9	63
69	Bicarbonate Accelerates Assembly of the Inorganic Core of the Water-Oxidizing Complex in Manganese-Depleted Photosystem II: A Proposed Biogeochemical Role for Atmospheric Carbon Dioxide in Oxygenic Photosynthesis. <i>Biochemistry</i> , 2000, 39, 6060-6065.	1.2	74
70	Protonation and Dehydration Reactions of the Mn ^{IV} O ₄ L ₆ Cubane and Synthesis and Crystal Structure of the Oxidized Cubane [Mn ^{IV} O ₄ L ₆] ⁺ : A Model for the Photosynthetic Water Oxidizing Complex. <i>Inorganic Chemistry</i> , 1999, 38, 1036-1037.	1.9	96
71	Remarkable Affinity and Selectivity for Cs ⁺ and Uranyl (UO ₂ ²⁺) Binding to the Manganese Site of the Apo-Water Oxidation Complex of Photosystem II. <i>Biochemistry</i> , 1999, 38, 7200-7209.	1.2	43
72	Synthetic Catalysts for Non-biological Water Oxidation: Comparison to the photosynthetic water oxidation complex. , 1999, , 330-363.		1

#	ARTICLE	IF	CITATIONS
73	l-Arginine Binding to Liver Arginase Requires Proton Transfer to Gateway Residue His141 and Coordination of the Guanidinium Group to the Dimanganese(II,II) Center. <i>Biochemistry</i> , 1998, 37, 8539-8550.	1.2	62
74	Calcium Induces Binding and Formation of a Spin-Coupled Dimanganese(II,II) Center in the Apo-Water Oxidation Complex of Photosystem II as Precursor to the Functional Tetra-Mn/Ca Cluster. <i>Biochemistry</i> , 1997, 36, 11342-11350.	1.2	53
75	Quantitative Kinetic Model for Photoassembly of the Photosynthetic Water Oxidase from Its Inorganic Constituents: Requirements for Manganese and Calcium in the Kinetically Resolved Steps. <i>Biochemistry</i> , 1997, 36, 8914-8922.	1.2	90
76	Synthetic Water-Oxidation Catalysts for Artificial Photosynthetic Water Oxidation. <i>Chemical Reviews</i> , 1997, 97, 1-24.	23.0	734
77	Synthesis and Characterization of Mn ₄ O ₄ L ₆ Complexes with Cubane-like Core Structure: A New Class of Models of the Active Site of the Photosynthetic Water Oxidase. <i>Journal of the American Chemical Society</i> , 1997, 119, 6670-6671.	6.6	140
78	Manganese Enzymes with Binuclear Active Sites. <i>Chemical Reviews</i> , 1996, 96, 2909-2926.	23.0	502
79	Assembly of the Tetra-Mn Site of Photosynthetic Water Oxidation by Photoactivation: Mn Stoichiometry and Detection of a New Intermediate. <i>Biochemistry</i> , 1996, 35, 4102-4109.	1.2	83
80	Orbital Configuration of the Valence Electrons, Ligand Field Symmetry, and Manganese Oxidation States of the Photosynthetic Water Oxidizing Complex: Analysis of the S ₂ State Multiline EPR Signals. <i>Inorganic Chemistry</i> , 1996, 35, 3307-3319.	1.9	198
81	Protein Coordination to Manganese Determines the High Catalytic Rate of Dimanganese Catalases. Comparison to Functional Catalase Mimics. <i>Biochemistry</i> , 1994, 33, 15433-15436.	1.2	70
82	Molecular mechanism of photosynthetic oxygen evolution. A theoretical approach. <i>Journal of the American Chemical Society</i> , 1992, 114, 4374-4382.	6.6	76
83	A new mechanism-based inhibitor of photosynthetic water oxidation: acetone hydrazone. 1. Equilibrium reactions. <i>Biochemistry</i> , 1990, 29, 7759-7767.	1.2	3
84	A new mechanism-based inhibitor of photosynthetic water oxidation: acetone hydrazone. 2. Kinetic probes. <i>Biochemistry</i> , 1990, 29, 7767-7773.	1.2	6
85	A calcium-specific site influences the structure and activity of the manganese cluster responsible for photosynthetic water oxidation. <i>Biochemistry</i> , 1989, 28, 9459-9464.	1.2	162
86	A New Class of Potential Mechanism-Based Suicide Inhibitors of Photosynthetic Activity. , 1989, , 247-250.		0
87	Binuclear manganese(III) complexes of potential biological significance. <i>Journal of the American Chemical Society</i> , 1987, 109, 1435-1444.	6.6	258
88	Mn ²⁺ /Mn ³⁺ and Mn ³⁺ /Mn ⁴⁺ mixed valence binuclear manganese complexes of biological interest. <i>Journal of the American Chemical Society</i> , 1987, 109, 7202-7203.	6.6	66
89	THE METAL CENTERS OF THE PHOTOSYNTHETIC OXYGEN-EVOLVING COMPLEX *. <i>Photochemistry and Photobiology</i> , 1986, 43, 99-115.	1.3	199
90	THE ORGANIZATION AND FUNCTION OF MANGANESE IN THE WATER-OXIDIZING COMPLEX OF PHOTOSYNTHESIS I Supported by the Department of Energy Soleras Program Grant No. 84CH10199 and the National Science Foundation Grant No. CHE82-17920.. , 1986, , 275-309.		6

#	ARTICLE	IF	CITATIONS
91	Models for the photosynthetic water oxidizing enzyme. 1. A binuclear manganese(III)- β -cyclodextrin complex. Journal of the American Chemical Society, 1983, 105, 124-125.	6.6	63
92	EPR EVIDENCE FOR THE INVOLVEMENT OF A DISCRETE MANGANESE CLUSTER IN O ₂ EVOLUTION ^{1,1} Supported by a Searle Scholars Award and grants by the USDA CRGO and the SERI division of the DOE, grant no. DE-FG02-80CS84003 A003.22This article is dedicated to the memory of Professor Allen Scattergood., 1983, , 145-158.		6
93	Mixed valence interactions in di- μ -oxo bridged manganese complexes. Electron paramagnetic resonance and magnetic susceptibility studies. Journal of the American Chemical Society, 1978, 100, 7248-7252.	6.6	206