Gerard Charles Dismukes

List of Publications by Year
in descending order

139	11,938	26630 56	26613 107
papers	citations	h-index	g-index

150	150	150	10124
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthetic Water-Oxidation Catalysts for Artificial Photosynthetic Water Oxidationâ€. Chemical Reviews, 1997, 97, 1-24.	47.7	734
2	Aquatic phototrophs: efficient alternatives to land-based crops for biofuels. Current Opinion in Biotechnology, 2008, 19, 235-240.	6.6	620
3	Photochemical Water Oxidation by Crystalline Polymorphs of Manganese Oxides: Structural Requirements for Catalysis. Journal of the American Chemical Society, 2013, 135, 3494-3501.	13.7	561
4	Development of Bioinspired Mn₄O₄âˆ’Cubane Water Oxidation Catalysts: Lessons from Photosynthesis. Accounts of Chemical Research, 2009, 42, 1935-1943.	15.6	510
5	Manganese Enzymes with Binuclear Active Sites. Chemical Reviews, 1996, 96, 2909-2926.	47.7	502
6	Solar Driven Water Oxidation by a Bioinspired Manganese Molecular Catalyst. Journal of the American Chemical Society, 2010, 132, 2892-2894.	13.7	414
7	A Co₄O₄ â€œCubaneâ€• Water Oxidation Catalyst Inspired by Photosynthesis. Journal of the American Chemical Society, 2011, 133, 11446-11449.	13.7	331
8	Photosystem II: The Reaction Center of Oxygenic Photosynthesis. Annual Review of Biochemistry, 2013, 82, 577-606.	11.1	330
9	Increased Lipid Accumulation in the Chlamydomonas reinhardtii <i>sta7-10</i> Starchless Isoamylase Mutant and Increased Carbohydrate Synthesis in Complemented Strains. Eukaryotic Cell, 2010, 9, 1251-1261.	3.4	317
10	Photosynthesis: a blueprint for solar energy capture and biohydrogen production technologies. Photochemical and Photobiological Sciences, 2005, 4, 957.	2.9	284
11	Sustained Water Oxidation Photocatalysis by a Bioinspired Manganese Cluster. Angewandte Chemie - International Edition, 2008, 47, 7335-7338.	13.8	269
12	Water Oxidation by Î»-MnO₂: Catalysis by the Cubical Mn₄O₄ Subcluster Obtained by Delithiation of Spinel LiMn₂O₄. Journal of the American Chemical Society, 2010, 132, 11467-11469.	13.7	267
13	Binuclear manganese(III) complexes of potential biological significance. Journal of the American Chemical Society, 1987, 109, 1435-1444.	13.7	258
14	Mixed valence interactions in di-.mu.-oxo bridged manganese complexes. Electron paramagnetic resonance and magnetic susceptibility studies. Journal of the American Chemical Society, 1978, 100, 7248-7252.	13.7	206
15	THE METAL CENTERS OF THE PHOTOSYNTHETIC OXYGENâ€EVOLVING COMPLEX *. Photochemistry and Photobiology, 1986, 43, 99-115.	2.5	199
16	Orbital Configuration of the Valence Electrons, Ligand Field Symmetry, and Manganese Oxidation States of the Photosynthetic Water Oxidizing Complex:Â Analysis of the S2State Multiline EPR Signalsâ€. Inorganic Chemistry, 1996, 35, 3307-3319.	4.0	198
17	Climbing the Volcano of Electrocatalytic Activity while Avoiding Catalyst Corrosion: Ni₃P, a Hydrogen Evolution Electrocatalyst Stable in Both Acid and Alkali. ACS Catalysis, 2018, 8, 4408-4419.	11.2	178
18	Selective CO₂reduction to C₃and C₄oxyhydrocarbons on nickel phosphides at overpotentials as low as 10 mV. Energy and Environmental Science, 2018, 11, 2550-2559.	30.8	165

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19	Photoassembly of the water-oxidizing complex in photosystem II. Coordination Chemistry Reviews, 2008, 252, 347-360.	18.8	163
20	A calcium-specific site influences the structure and activity of the manganese cluster responsible for photosynthetic water oxidation. Biochemistry, 1989, 28, 9459-9464.	2.5	162
21	Coordination Geometry and Oxidation State Requirements of Corner-Sharing MnO₆ Octahedra for Water Oxidation Catalysis: An Investigation of Manganite (Î³-MnOOH). ACS Catalysis, 2016, 6, 2089-2099.	11.2	156
22	Structural Requirements in Lithium Cobalt Oxides for the Catalytic Oxidation of Water. Angewandte Chemie - International Edition, 2012, 51, 1616-1619.	13.8	150
23	Redirecting Reductant Flux into Hydrogen Production via Metabolic Engineering of Fermentative Carbon Metabolism in a Cyanobacterium. Applied and Environmental Microbiology, 2010, 76, 5032-5038.	3.1	142
24	Synthesis and Characterization of Mn4O4L6Complexes with Cubane-like Core Structure:Â A New Class of Models of the Active Site of the Photosynthetic Water Oxidase. Journal of the American Chemical Society, 1997, 119, 6670-6671.	13.7	140
25	Selenium-Containing Formate Dehydrogenase H fromEscherichia coli:Â A Molybdopterin Enzyme That Catalyzes Formate Oxidation without Oxygen Transfer. Biochemistry, 1998, 37, 3518-3528.	2.5	136
26	Molecular water-oxidation catalysts for photoelectrochemical cells. Dalton Transactions, 2009, , 9374.	3.3	124
27	Spectroscopic evidence from site-directed mutants of Synechocystis PCC6803 in favor of a close interaction between histidine 189 and redox-active tyrosine 160, both of polypeptide D2 of the photosystem II reaction center. Biochemistry, 1993, 32, 13742-13748.	2.5	122
28	Altered carbohydrate metabolism in glycogen synthase mutants of Synechococcus sp. strain PCC 7002: Cell factories for soluble sugars. Metabolic Engineering, 2013, 16, 56-67.	7.0	116
29	How fast can Photosystem II split water? Kinetic performance at high and low frequencies. Photosynthesis Research, 2005, 84, 355-365.	2.9	113
30	Optimization of Metabolic Capacity and Flux through Environmental Cues To Maximize Hydrogen Production by the Cyanobacterium â€œ <i>Arthrospira</i> (<i>Spirulina</i>) <i>maxima</i> â€ Applied and Environmental Microbiology, 2008, 74, 6102-6113.	3.1	113
31	Lightâ€dependent oxygen consumption in nitrogenâ€fixing cyanobacteria plays a key role in nitrogenase protection¹. Journal of Phycology, 2007, 43, 845-852.	2.3	103
32	Investigation of the Differences in the Local Protein Environments Surrounding Tyrosine Radicals YZâ€¢ and YDâ€¢ in Photosystem II Using Wild-Type and the D2-Tyr160Phe Mutant of Synechocystis 6803. Biochemistry, 1996, 35, 1475-1484.	2.5	100
33	Protonation and Dehydration Reactions of the Mn4O4L6Cubane and Synthesis and Crystal Structure of the Oxidized Cubane [Mn4O4L6]+: A Model for the Photosynthetic Water Oxidizing Complex. Inorganic Chemistry, 1999, 38, 1036-1037.	4.0	96
34	Quantitative Kinetic Model for Photoassembly of the Photosynthetic Water Oxidase from Its Inorganic Constituents:Â Requirements for Manganese and Calcium in the Kinetically Resolved Stepsâ€,â€¡. Biochemistry, 1997, 36, 8914-8922.	2.5	90
35	Selective Photoproduction of O2 from the Mn4O4 Cubane Core: A Structural and Functional Model for the Photosynthetic Water-Oxidizing Complex. Angewandte Chemie - International Edition, 2001, 40, 2925-2928.	13.8	88
36	Boosting Autofermentation Rates and Product Yields with Sodium Stress Cycling: Application to Production of Renewable Fuels by Cyanobacteria. Applied and Environmental Microbiology, 2010, 76, 6455-6462.	3.1	86

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37	Assembly of the Tetra-Mn Site of Photosynthetic Water Oxidation by Photoactivation:Â Mn Stoichiometry and Detection of a New Intermediateâ€. Biochemistry, 1996, 35, 4102-4109.	2.5	83
38	Sustained Water Oxidation by [Mn₄O₄]⁷⁺ Core Complexes Inspired by Oxygenic Photosynthesis. Inorganic Chemistry, 2009, 48, 7269-7279.	4.0	83
39	Structural basis for differing electrocatalytic water oxidation by the cubic, layered and spinel forms of lithium cobalt oxides. Energy and Environmental Science, 2016, 9, 184-192.	30.8	81
40	Direct Detection of Oxygen Ligation to the Mn₄Ca Cluster of Photosystem II by Xâ€ray Emission Spectroscopy. Angewandte Chemie - International Edition, 2010, 49, 800-803.	13.8	78
41	Regulatory branch points affecting protein and lipid biosynthesis in the diatom Phaeodactylum tricornutum. Biomass and Bioenergy, 2013, 59, 306-315.	5.7	78
42	An LCâ€"MS-Based Chemical and Analytical Method for Targeted Metabolite Quantification in the Model Cyanobacterium Synechococcus sp. PCC 7002. Analytical Chemistry, 2011, 83, 3808-3816.	6.5	77
43	Molecular mechanism of photosynthetic oxygen evolution. A theoretical approach. Journal of the American Chemical Society, 1992, 114, 4374-4382.	13.7	76
44	Bicarbonate Accelerates Assembly of the Inorganic Core of the Water-Oxidizing Complex in Manganese-Depleted Photosystem II:â€‰ A Proposed Biogeochemical Role for Atmospheric Carbon Dioxide in Oxygenic Photosynthesis. Biochemistry, 2000, 39, 6060-6065.	2.5	74
45	Tuning the Electrocatalytic Water Oxidation Properties of AB₂O₄ Spinel Nanocrystals: A (Li, Mg, Zn) and B (Mn, Co) Site Variants of LiMn₂O₄. ACS Catalysis, 2015, 5, 3403-3410.	11.2	74
46	What Are the Oxidation States of Manganese Required To Catalyze Photosynthetic Water Oxidation?. Biophysical Journal, 2012, 103, 313-322.	0.5	72
47	Protein Coordination to Manganese Determines the High Catalytic Rate of Dimanganese Catalases. Comparison to Functional Catalase Mimics. Biochemistry, 1994, 33, 15433-15436.	2.5	70
48	Phenotypic diversity of hydrogen production in chlorophycean algae reflects distinct anaerobic metabolisms. Journal of Biotechnology, 2009, 142, 21-30.	3.8	70
49	What Determines Catalyst Functionality in Molecular Water Oxidation? Dependence on Ligands and Metal Nuclearity in Cobalt Clusters. Inorganic Chemistry, 2014, 53, 2113-2121.	4.0	70
50	High-Resolution Kinetic Studies of the Reassembly of the Tetra-Manganese Cluster of Photosynthetic Water Oxidation:Â Proton Equilibrium, Cations, and Electrostaticsâ€. Biochemistry, 1996, 35, 14608-14617.	2.5	67
51	Mn2+/Mn3+ and Mn3+/Mn4+ mixed valence binuclear manganese complexes of biological interest. Journal of the American Chemical Society, 1987, 109, 7202-7203.	13.7	66
52	Water Oxidation by the [Co4O4(OAc)4(py)4]+ Cubium is Initiated by OHâ€" Addition. Journal of the American Chemical Society, 2015, 137, 15460-15468.	13.7	64
53	Models for the photosynthetic water oxidizing enzyme. 1. A binuclear manganese(III)-Î²-cyclodextrin complex. Journal of the American Chemical Society, 1983, 105, 124-125.	13.7	63
54	Conversion of Core Oxos to Water Molecules by 4e-/4H+Reductive Dehydration of the Mn4O26+Core in the Manganeseâˆ'Oxo Cubane Complex Mn4O4(Ph2PO2)6:Â A Partial Model for Photosynthetic Water Binding and Activation. Inorganic Chemistry, 2000, 39, 1021-1027.	4.0	63

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55	l-Arginine Binding to Liver Arginase Requires Proton Transfer to Gateway Residue His141 and Coordination of the Guanidinium Group to the Dimanganese(II,II) Centerâ€. Biochemistry, 1998, 37, 8539-8550.	2.5	62
56	Tuning the Photoinduced O2-Evolving Reactivity of Mn4O47+, Mn4O46+, and Mn4O3(OH)6+ Manganeseâˆ'Oxo Cubane Complexes. Inorganic Chemistry, 2006, 45, 189-195.	4.0	60
57	Consequences of structural and biophysical studies for the molecular mechanism of photosynthetic oxygen evolution: functional roles for calcium and bicarbonate. Physical Chemistry Chemical Physics, 2004, 6, 4793.	2.8	56
58	Oxidation potentials and electron donation to photosystem II of manganese complexes containing bicarbonate and carboxylate ligands. Physical Chemistry Chemical Physics, 2004, 6, 4905.	2.8	54
59	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 Clusterâ€. Biochemistry, 1997, 36, 11342-11350.	2.5	53
60	Renewable hydrogen production by cyanobacteria: Nickel requirements for optimal hydrogenase activity. International Journal of Hydrogen Energy, 2008, 33, 2014-2022.	7.1	53
61	Trapping an Elusive Intermediate in Manganeseâ˜'Oxo Cubane Chemistry. Inorganic Chemistry, 2004, 43, 5795-5797.	4.0	52
62	Transition from Hydrogen Atom to Hydride Abstraction by Mn4O4(O2PPh2)6versus [Mn4O4(O2PPh2)6]+:Â Oâˆ'H Bond Dissociation Energies and the Formation of Mn4O3(OH)(O2PPh2)6. Inorganic Chemistry, 2003, 42, 2849-2858.	4.0	51
63	Spectroscopic Evidence for Ca2+Involvement in the Assembly of the Mn4Ca Cluster in the Photosynthetic Water-Oxidizing Complexâ€. Biochemistry, 2006, 45, 12876-12889.	2.5	50
64	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.	3.2	50
65	Metabolic and photosynthetic consequences of blocking starch biosynthesis in the green alga <i><scp>C</scp>hlamydomonas reinhardtii sta6</i> mutant. Plant Journal, 2015, 81, 947-960.	5.7	49
66	Quantitative Assessment of Intrinsic Carbonic Anhydrase Activity and the Capacity for Bicarbonate Oxidation in Photosystem II. Biochemistry, 2006, 45, 2094-2102.	2.5	48
67	Electrochemical investigation of Mn4O4-cubane water-oxidizing clusters. Physical Chemistry Chemical Physics, 2009, 11, 6441.	2.8	48
68	Kinetics of proton-coupled electron-transfer reactions to the manganese-oxo "cubane" complexes containing the Mn4OFormula and Mn4OFormula core types. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 3707-3712.	7.1	46
69	Natural osmolytes are much less effective substrates than glycogen for catabolic energy production in the marine cyanobacterium Synechococcus sp. strain PCC 7002. Journal of Biotechnology, 2013, 166, 65-75.	3.8	46
70	Carbonate Complexation of Mn2+in the Aqueous Phase:Â Redox Behavior and Ligand Binding Modes by Electrochemistry and EPR Spectroscopy. Journal of Physical Chemistry B, 2006, 110, 5099-5111.	2.6	44
71	Reprogramming the glycolytic pathway for increased hydrogen production in cyanobacteria: metabolic engineering of NAD+-dependent GAPDH. Energy and Environmental Science, 2013, 6, 3722.	30.8	44
72	Remarkable Affinity and Selectivity for Cs+ and Uranyl (UO22+) Binding to the Manganese Site of the Apo-Water Oxidation Complex of Photosystem II. Biochemistry, 1999, 38, 7200-7209.	2.5	43

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73	Metabolic Pathways for Photobiological Hydrogen Production by Nitrogenase- and Hydrogenase-containing Unicellular Cyanobacteria Cyanothece. Journal of Biological Chemistry, 2012, 287, 2777-2786.	3.4	40
74	Photosystem II-cyclic electron flow powers exceptional photoprotection and record growth in the microalga Chlorella ohadii. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 873-883.	1.0	40
75	Photosynthetic Oxygen Evolution Is Not Reversed at High Oxygen Pressures: Mechanistic Consequences for the Water-Oxidizing Complex. Biochemistry, 2009, 48, 1381-1389.	2.5	39
76	Synechococcussp. Strain PCC 7002nifJMutant Lacking Pyruvate:Ferredoxin Oxidoreductase. Applied and Environmental Microbiology, 2011, 77, 2435-2444.	3.1	38
77	Engineered Photosystem II Reaction Centers Optimize Photochemistry versus Photoprotection at Different Solar Intensities. Journal of the American Chemical Society, 2014, 136, 4048-4055.	13.7	36
78	Mutagenesis of CP43-arginine-357 to serine reveals new evidence for (bi)carbonate functioning in the water oxidizing complex of Photosystem II. Photochemical and Photobiological Sciences, 2005, 4, 991.	2.9	35
79	Natural Variants of Photosystem II Subunit D1 Tune Photochemical Fitness to Solar Intensity *. Journal of Biological Chemistry, 2013, 288, 5451-5462.	3.4	35
80	Flux balance analysis of photoautotrophic metabolism: Uncovering new biological details of subsystems involved in cyanobacterial photosynthesis. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 276-287.	1.0	35
81	Surface Hydrides on Fe₂P Electrocatalyst Reduce CO₂ at Low Overpotential: Steering Selectivity to Ethylene Glycol. Journal of the American Chemical Society, 2021, 143, 21275-21285.	13.7	34
82	The Conformation of the Isoprenyl Chain Relative to the Semiquinone Head in the Primary Electron Acceptor (QA) of Higher Plant PSII (Plastosemiquinone) Differs from that in Bacterial Reaction Centers (Ubisemiquinone or Menasemiquinone) by ca. 90Â°â€,â€¡. Biochemistry, 1996, 35, 8955-8963.	2.5	33
83	Dynamics of Lipid Biosynthesis and Redistribution in the Marine Diatom Phaeodactylum tricornutum Under Nitrate Deprivation. Bioenergy Research, 2012, 5, 876-885.	3.9	31
84	A Tandem Waterâ€Splitting Device Based on a Bioâ€inspired Manganese Catalyst. ChemSusChem, 2010, 3, 1146-1150.	6.8	30
85	Enhancing biological hydrogen production from cyanobacteria by removal of excreted products. Journal of Biotechnology, 2012, 162, 97-104.	3.8	29
86	Surface and Structural Investigation of a MnO_{<i>x</i>} Birnessiteâ€Type Water Oxidation Catalyst Formed under Photocatalytic Conditions. Chemistry - A European Journal, 2015, 21, 14218-14228.	3.3	29
87	Rerouting of Metabolism into Desired Cellular Products by Nutrient Stress: Fluxes Reveal the Selected Pathways in Cyanobacterial Photosynthesis. ACS Synthetic Biology, 2018, 7, 1465-1476.	3.8	27
88	CO2 electro-reduction on Cu3P: Role of Cu(I) oxidation state and surface facet structure in C1-formate production and H2 selectivity. Electrochimica Acta, 2021, 391, 138889.	5.2	27
89	Evolutionary Origins of the Photosynthetic Water Oxidation Cluster: Bicarbonate Permits Mn²⁺ Photoâ€oxidation by Anoxygenic Bacterial Reaction Centers. ChemBioChem, 2013, 14, 1725-1731.	2.6	25
90	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.	1.0	25

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91	Creating stable interfaces between reactive materials: titanium nitride protects photoabsorberâ€“catalyst interface in water-splitting photocathodes. Journal of Materials Chemistry A, 2019, 7, 2400-2411.	10.3	25
92	Identification and quantification of waterâ€soluble metabolites by cryoprobeâ€assisted nuclear magnetic resonance spectroscopy applied to microbial fermentation. Magnetic Resonance in Chemistry, 2009, 47, S138-46.	1.9	24
93	X-ray Emission Spectroscopy of Mn Coordination Complexes Toward Interpreting the Electronic Structure of the Oxygen-Evolving Complex of Photosystem II. Journal of Physical Chemistry C, 2016, 120, 3326-3333.	3.1	24
94	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.	3.1	22
95	Towards Hydrogen Energy: Progress on Catalysts for Water Splitting. Australian Journal of Chemistry, 2012, 65, 577.	0.9	22
96	Resolving Ambiguous Protonation and Oxidation States in the Oxygen Evolving Complex of Photosystem II. Journal of Physical Chemistry B, 2018, 122, 8654-8664.	2.6	22
97	In vivo bicarbonate requirement for water oxidation by Photosystem II in the hypercarbonate-requiring cyanobacterium Arthrospira maxima. Journal of Inorganic Biochemistry, 2007, 101, 1865-1874.	3.5	21
98	Homogeneous Catalysts with a Mechanical (â€œMachineâ€likeâ€) Action. Chemistry - A European Journal, 2009, 15, 4746-4759.	3.3	20
99	Substitution of copper(2+) in the reaction center diquinone electron acceptor complex of Rhodobacter sphaeroides: determination of the metal-ligand coordination. Biochemistry, 1987, 26, 5049-5055.	2.5	19
100	The Oxygen quantum yield in diverse algae and cyanobacteria is controlled by partitioning of flux between linear and cyclic electron flow within photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1380-1391.	1.0	19
101	Inhibition of electron transport in photosystem II by hydroxylamine: further evidence for two binding sites. Biochemistry, 1988, 27, 6297-6306.	2.5	18
102	ESEEM Spectroscopy Reveals Carbonate and an Nâ€Donor Proteinâ€Ligand Binding to Mn²⁺ in the Photoassembly Reaction of the Mn₄Ca Cluster in Photosystemâ€…II. Angewandte Chemie - International Edition, 2007, 46, 8028-8031.	13.8	18
103	Calcium controls the assembly of the photosynthetic water-oxidizing complex: a cadmium(II) inorganic mutant of the Mn ₄ Ca core. Philosophical Transactions of the Royal Society B: Biological Sciences, 2008, 363, 1253-1261.	4.0	18
104	Bicarbonate Coordinates to Mn3+ during Photo-Assembly of the Catalytic Mn4Ca Core of Photosynthetic Water Oxidation: EPR Characterization. Applied Magnetic Resonance, 2010, 37, 137-150.	1.2	16
105	The strontium inorganic mutant of the water oxidizing center (CaMn4O5) of PSII improves WOC efficiency but slows electron flux through the terminal acceptors. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1550-1560.	1.0	16
106	Inhibition of the catalase reaction of Photosystem II by anions. Photosynthesis Research, 1993, 38, 433-440.	2.9	15
107	Metabolic switching of central carbon metabolism in response to nitrate: Application to autofermentative hydrogen production in cyanobacteria. Journal of Biotechnology, 2014, 182-183, 83-91.	3.8	15
108	â€˜Birth defectsâ€™ of photosystem II make it highly susceptible to photodamage during chloroplast biogenesis. Physiologia Plantarum, 2019, 166, 165-180.	5.2	15

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109	Symbiosis extended: exchange of photosynthetic O2 and fungal-respired CO2 mutually power metabolism of lichen symbionts. Photosynthesis Research, 2020, 143, 287-299.	2.9	14
110	Inactivation of nitrate reductase alters metabolic branching of carbohydrate fermentation in the cyanobacterium Synechococcus sp. strain PCC 7002. Biotechnology and Bioengineering, 2016, 113, 979-988.	3.3	13
111	Self-Assembled Monolayer of Organic Iodine on a Au Surface for Attachment of Redox-Active Metal Clusters. Langmuir, 2007, 23, 8257-8263.	3.5	12
112	Mechanism of H₂ Production by the [FeFe]_H Subcluster of Di-Iron Hydrogenases: Implications for Abiotic Catalysts. Journal of Physical Chemistry B, 2008, 112, 13381-13390.	2.6	12
113	The Catalytic Cycle of Water Oxidation in Crystallized Photosystem II Complexes: Performance and Requirements for Formation of Intermediates. ACS Catalysis, 2019, 9, 1396-1407.	11.2	12
114	Rewiring of Cyanobacterial Metabolism for Hydrogen Production: Synthetic Biology Approaches and Challenges. Advances in Experimental Medicine and Biology, 2018, 1080, 171-213.	1.6	12
115	Prospecting for biohydrogen fuel. Industrial Biotechnology, 2006, 2, 133-137.	0.8	10
116	Reconciling Structural and Spectroscopic Fingerprints of the Oxygen-Evolving Complex of Photosystem II: A Computational Study of the S₂ State. Journal of Physical Chemistry B, 2018, 122, 11868-11882.	2.6	10
117	Crossing the Thauer limit: rewiring cyanobacterial metabolism to maximize fermentative H₂production. Energy and Environmental Science, 2019, 12, 1035-1045.	30.8	10
118	Highly efficient and durable IIIâ€“V semiconductor-catalyst photocathodes <i>via</i> a transparent protection layer. Sustainable Energy and Fuels, 2020, 4, 1437-1442.	4.9	9
119	Identification of an Oxygenic Reaction Center psbADC Operon in the Cyanobacterium Gloeobacter violaceus PCC 7421. Molecular Biology and Evolution, 2012, 29, 35-38.	8.9	7
120	Why Did Nature Choose Manganese over Cobalt to Make Oxygen Photosynthetically on the Earth?. Journal of Physical Chemistry B, 2022, 126, 3257-3268.	2.6	7
121	A new mechanism-based inhibitor of photosynthetic water oxidation: acetone hydrazone. 2. Kinetic probes. Biochemistry, 1990, 29, 7767-7773.	2.5	6
122	Entropy and enthalpy contributions to the kinetics of proton coupled electron transfer to the Mn₄O₄(O₂PPh₂)₆ cubane. Physical Chemistry Chemical Physics, 2014, 16, 11843-11847.	2.8	6
123	Realtime kinetics of the light driven steps of photosynthetic water oxidation in living organisms by â€œstroboscopicâ€• fluorometry. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148212.	1.0	6
124	EPR EVIDENCE FOR THE INVOLVEMENT OF A DISCRETE MANGANESE CLUSTER IN O2 EVOLUTION1,1Supported by a Searle Scholars Award and grants by the USDA CRGO and the SERI division of the DOE, grant no. DE-FG02â€“80CS84003 A003.22This article is dedicated to the memory of Professor Allen Scattergood.. , 1983, , 145-158.		6
125	THE ORGANIZATION AND FUNCTION OF MANGANESE IN THE WATER-OXIDIZING COMPLEX OF PHOTOSYNTHESIS11Supported by the Department of Energy Soleras Program Grant No. 84CH10199 and the National Science Foundation Grant No. CHE82-17920.. , 1986, , 275-309.		6
126	A Comparison of the Manganese Center Responsible for Photosynthetic Water Oxidation in O₂â€Evolving Core Particles and Photosystem II Enriched Membranes: EPR of the S₂ State. Israel Journal of Chemistry, 1988, 28, 103-108.	2.3	5

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127	Bridging the gap between Kok-type and kinetic models of photosynthetic electron transport within Photosystem II. Photosynthesis Research, 2022, 151, 83-102.	2.9	5
128	Natural isoforms of the Photosystem II D1 subunit differ in photoassembly efficiency of the water-oxidizing complex. Photosynthesis Research, 2016, 128, 141-150.	2.9	4
129	A new mechanism-based inhibitor of photosynthetic water oxidation: acetone hydrazone. 1. Equilibrium reactions. Biochemistry, 1990, 29, 7759-7767.	2.5	3
130	Warwick Hillier: a tribute. Photosynthesis Research, 2014, 122, 1-11.	2.9	3
131	Desiccation tolerant lichens facilitate in vivo H/D isotope effect measurements in oxygenic photosynthesis. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1039-1044.	1.0	3
132	Distance-Dependent Enhanced ENDOR Phase (DEEP) Spectroscopy and Its Application to Determination of Solvation Structure around Paramagnetic Ions in Disordered Solids:â€‰ The Three Ordered Hydration Shells of Aquated Transition Ions. Journal of Physical Chemistry B, 1998, 102, 8306-8313.	2.6	2
133	Photocatalytic oxygen evolution from non-potable water by a bioinspired molecular water oxidation catalyst. Journal of Molecular Catalysis A, 2011, , .	4.8	2
134	Water and vapor transport in algalâ€fungal lichen: Modeling constrained by laboratory experiments, an application for Flavoparmelia caperata. Plant, Cell and Environment, 2020, 43, 945-964.	5.7	2
135	Synthetic Catalysts for Non-biological Water Oxidation: Comparison to the photosynthetic water oxidation complex. , 1999, , 330-363.		1
136	Evidence for a robust photosystem II in the photosynthetic amoeba <i>Paulinella</i>. New Phytologist, 2022, 234, 934-945.	7.3	1
137	Creating Functional Oxynitrideâ€"Silicon Interfaces and SrNbO₂N Thin Films for Photoelectrochemical Applications. Journal of Physical Chemistry C, 2022, 126, 5970-5979.	3.1	1
138	A New Class of Potential Mechanism-Based Suicide Inhibitors of Photosynthetic Activity. , 1989, , 247-250.		0
139	Using Electrocatalysts To Find New Uses For Captured CO2. , 2018, , .		0