

Alain Boussac

List of Publications by Citations

Source: <https://exaly.com/author-pdf/4043405/alain-boussac-publications-by-citations.pdf>

Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

95
papers

5,068
citations

41
h-index

70
g-index

102
ext. papers

5,475
ext. citations

6.7
avg, IF

5.4
L-index

#	Paper	IF	Citations
95	Photosynthesis. Electronic structure of the oxygen-evolving complex in photosystem II prior to O-O bond formation. <i>Science</i> , 2014 , 345, 804-8	33.3	363
94	EPR signals from modified charge accumulation states of the oxygen evolving enzyme in Ca ²⁺ -deficient photosystem II. <i>Biochemistry</i> , 1989 , 28, 8984-9	3.2	265
93	Histidine oxidation in the oxygen-evolving photosystem-II enzyme. <i>Nature</i> , 1990 , 347, 303-306	50.4	234
92	Detection of the water-binding sites of the oxygen-evolving complex of Photosystem II using W-band 17O electron-electron double resonance-detected NMR spectroscopy. <i>Journal of the American Chemical Society</i> , 2012 , 134, 16619-34	16.4	223
91	Effect of Ca ²⁺ /Sr ²⁺ substitution on the electronic structure of the oxygen-evolving complex of photosystem II: a combined multifrequency EPR, 55Mn-ENDOR, and DFT study of the S ₂ state. <i>Journal of the American Chemical Society</i> , 2011 , 133, 3635-48	16.4	190
90	Structural changes in the Mn ₄ Ca cluster and the mechanism of photosynthetic water splitting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 1879-84	11.5	164
89	Conversion of the spin state of the manganese complex in photosystem II induced by near-infrared light. <i>Biochemistry</i> , 1996 , 35, 6984-9	3.2	150
88	Photosystem II and photosynthetic oxidation of water: an overview. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2002 , 357, 1369-81; discussion 1419-20	5.8	134
87	Ammonia binding to the oxygen-evolving complex of photosystem II identifies the solvent-exchangeable oxygen bridge (E _{bxo}) of the manganese tetramer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 15561-6	11.5	130
86	Photochemistry beyond the red limit in chlorophyll f-containing photosystems. <i>Science</i> , 2018 , 360, 1210-1213	32.3	129
85	Biosynthetic Ca ²⁺ /Sr ²⁺ exchange in the photosystem II oxygen-evolving enzyme of <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Chemistry</i> , 2004 , 279, 22809-19	5.4	126
84	Molecular changes following oxidoreduction of cytochrome b559 characterized by Fourier transform infrared difference spectroscopy and electron paramagnetic resonance: photooxidation in photosystem II and electrochemistry of isolated cytochrome b559 and iron protoporphyrin IX-bisimidazole model compounds. <i>Biochemistry</i> , 1992 , 31, 11460-71	3.2	111
83	Inhibition of tyrosine Z photooxidation after formation of the S ₃ state in Ca(2+)-depleted and Cl(-)-depleted photosystem II. <i>Biochemistry</i> , 1992 , 31, 1224-34	3.2	108
82	X-ray crystallography identifies two chloride binding sites in the oxygen evolving centre of Photosystem II. <i>Energy and Environmental Science</i> , 2008 , 1, 161	35.4	107
81	High-spin states (S ≥ 5/2) of the photosystem II manganese complex. <i>Biochemistry</i> , 1998 , 37, 4001-7	3.2	98
80	A New Manganese Dinuclear Complex with Phenolate Ligands and a Single Unsupported Oxo Bridge. Storage of Two Positive Charges within Less than 500 mV. Relevance to Photosynthesis. <i>Inorganic Chemistry</i> , 1999 , 38, 1222-1232	5.1	89
79	The origin of 4000°C thermoluminescence bands in Photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1994 , 1184, 85-92	4.6	85

78	Electron transfer pathways from the S ₂ -states to the S ₃ -states either after a Ca ²⁺ /Sr ²⁺ or a Cl ⁻ /I ⁻ exchange in Photosystem II from <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2015 , 1847, 576-86	4.6	79
77	The electronic structures of the S(2) states of the oxygen-evolving complexes of photosystem II in plants and cyanobacteria in the presence and absence of methanol. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011 , 1807, 829-40	4.6	75
76	Interaction of ammonia with the water splitting enzyme of photosystem II. <i>Biochemistry</i> , 1990 , 29, 24-32.	3.2	75
75	Effect of the 33-kDa protein on the S-state transitions in photosynthetic oxygen evolution. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1987 , 890, 151-159	4.6	75
74	Ca ²⁺ binding to the oxygen evolving enzyme varies with the redox state of the Mn cluster. <i>FEBS Letters</i> , 1988 , 236, 432-436	3.8	74
73	Complete EPR spectrum of the S ₃ -state of the oxygen-evolving photosystem II. <i>Journal of the American Chemical Society</i> , 2009 , 131, 5050-1	16.4	73
72	Redox properties of the photosystem II cytochromes b ₅₅₉ and c ₅₅₀ in the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2003 , 8, 206-16	3.7	69
71	Substrate-water exchange in photosystem II is arrested before dioxygen formation. <i>Nature Communications</i> , 2014 , 5, 4305	17.4	67
70	Structure, ligands and substrate coordination of the oxygen-evolving complex of photosystem II in the S ₂ state: a combined EPR and DFT study. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 11877-92	3.6	66
69	Site-directed mutagenesis of <i>Thermosynechococcus elongatus</i> photosystem II: the O ₂ -evolving enzyme lacking the redox-active tyrosine D. <i>Biochemistry</i> , 2004 , 43, 13549-63	3.2	65
68	SQUID Magnetization Study of the Infrared-Induced Spin Transition in the S ₂ State of Photosystem II: Spin Value Associated with the g = 4.1 EPR Signal. <i>Journal of the American Chemical Society</i> , 1998 , 120, 7924-7928	16.4	63
67	Probing the coupling between proton and electron transfer in photosystem II core complexes containing a 3-fluorotyrosine. <i>Journal of the American Chemical Society</i> , 2009 , 131, 4425-33	16.4	61
66	EPR study of the oxygen evolving complex in His-tagged photosystem II from the cyanobacterium <i>Synechococcus elongatus</i> . <i>Biochemistry</i> , 2000 , 39, 13788-99	3.2	61
65	Low-temperature electron transfer in photosystem II: a tyrosyl radical and semiquinone charge pair. <i>Biochemistry</i> , 2004 , 43, 13787-95	3.2	59
64	Ca ²⁺ determines the entropy changes associated with the formation of transition states during water oxidation by Photosystem II. <i>Energy and Environmental Science</i> , 2011 , 4, 2520	35.4	58
63	Influence of histidine-198 of the D1 subunit on the properties of the primary electron donor, P680, of photosystem II in <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008 , 1777, 331-42	4.6	57
62	Biosynthetic exchange of bromide for chloride and strontium for calcium in the photosystem II oxygen-evolving enzymes. <i>Journal of Biological Chemistry</i> , 2008 , 283, 13330-40	5.4	57
61	Effect of near-infrared light on the S ₂ -state of the manganese complex of photosystem II from <i>Synechococcus elongatus</i> . <i>Biochemistry</i> , 1998 , 37, 8995-9000	3.2	57

60	The low spin - high spin equilibrium in the S-state of the water oxidizing enzyme. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018 , 1859, 342-356	4.6	54
59	Towards a spin coupling model for the Mn ₄ cluster in Photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2005 , 1708, 120-32	4.6	52
58	Structural perturbation of the carboxylate ligands to the manganese cluster upon Ca ²⁺ /Sr ²⁺ exchange in the S-state cycle of photosynthetic oxygen evolution as studied by flash-induced FTIR difference spectroscopy. <i>Biochemistry</i> , 2006 , 45, 13454-64	3.2	46
57	Comparative study of the g=4.1 EPR signals in the S(2) state of photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2000 , 1457, 145-56	4.6	45
56	Multifrequency High-Field EPR Study of the Interaction between the Tyrosyl Z Radical and the Manganese Cluster in Plant Photosystem II. <i>Journal of Physical Chemistry B</i> , 1999 , 103, 10945-10954	3.4	43
55	Quantitative assessment of intrinsic carbonic anhydrase activity and the capacity for bicarbonate oxidation in photosystem II. <i>Biochemistry</i> , 2006 , 45, 2094-102	3.2	41
54	Electron paramagnetic resonance study of the S = $\frac{1}{2}$ ground state of a radiolysis-generated manganese(III)–manganese(IV) form of [Mn ₄ O ₆ (bipy) ₆] ⁴⁺ (bipy = 2,2'-bipyridine). Comparison with the photosynthetic Oxygen Evolving Complex. <i>Journal of the Chemical Society Dalton Transactions</i> , 1997 , 4069-4074		38
53	Energetics in photosystem II from <i>Thermosynechococcus elongatus</i> with a D1 protein encoded by either the psbA1 or psbA3 gene. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010 , 1797, 1491-9	4.6	37
52	Near-infrared-induced transitions in the manganese cluster of photosystem II: action spectra for the S ₂ and S ₃ redox states. <i>Plant and Cell Physiology</i> , 2005 , 46, 837-42	4.9	37
51	Structural and EPR characterization of the soluble form of cytochrome c-550 and of the psbV2 gene product from the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Plant and Cell Physiology</i> , 2003 , 44, 697-706	4.9	34
50	Detection of an electron paramagnetic resonance signal in the S ₀ state of the manganese complex of photosystem II from <i>Synechococcus elongatus</i> . <i>Biochemistry</i> , 1999 , 38, 11942-8	3.2	34
49	Low-temperature photochemistry in photosystem II from <i>Thermosynechococcus elongatus</i> induced by visible and near-infrared light. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2008 , 363, 1203-10; discussion 1210	5.8	33
48	Probing the role of chloride in Photosystem II from <i>Thermosynechococcus elongatus</i> by exchanging chloride for iodide. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012 , 1817, 802-10	4.6	32
47	Cytochrome c550 in the cyanobacterium <i>Thermosynechococcus elongatus</i> : study of redox mutants. <i>Journal of Biological Chemistry</i> , 2004 , 279, 52869-80	5.4	32
46	Characterization of the tyrosine-Z radical and its environment in the spin-coupled S ₂ TyrZ* state of photosystem II from <i>Thermosynechococcus elongatus</i> . <i>Biochemistry</i> , 2007 , 46, 3138-50	3.2	31
45	Purification, crystallization and X-ray diffraction analyses of the T. <i>elongatus</i> PSII core dimer with strontium replacing calcium in the oxygen-evolving complex. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2007 , 1767, 404-13	4.6	29
44	Temperature dependence of the high-spin S to S transition in Photosystem II: Mechanistic consequences. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2019 , 1860, 508-518	4.6	28
43	Inhomogeneity of the EPR multiline signal from the S ₂ -state of the photosystem II oxygen-evolving enzyme. <i>Journal of Biological Inorganic Chemistry</i> , 1997 , 2, 580-585	3.7	28

42	Spectral and kinetic pH-dependence of fast and slow signal II in tris-washed chloroplasts. <i>FEBS Letters</i> , 1982 , 148, 113-116	3.8	28
41	Probing the quinone binding site of photosystem II from <i>Thermosynechococcus elongatus</i> containing either PsbA1 or PsbA3 as the D1 protein through the binding characteristics of herbicides. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011 , 1807, 119-29	4.6	27
40	Modification of the pheophytin redox potential in <i>Thermosynechococcus elongatus</i> Photosystem II with PsbA3 as D1. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2014 , 1837, 139-48	4.6	26
39	Structural coupling of a tyrosine side chain with the non-heme iron center in photosystem II as revealed by light-induced Fourier transform infrared difference spectroscopy. <i>Biochemistry</i> , 2009 , 48, 8994-9001	3.2	24
38	Influence of the PsbA1/PsbA3, Ca(2+)/Sr(2+) and Cl(-)/Br(-) exchanges on the redox potential of the primary quinone Q(A) in Photosystem II from <i>Thermosynechococcus elongatus</i> as revealed by spectroelectrochemistry. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012 , 1817, 1998-2004	4.6	23
37	The 1.6 Å resolution structure of Fe-superoxide dismutase from the thermophilic cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2003 , 8, 707-14	3.7	23
36	Evidence that D1-His332 in photosystem II from <i>Thermosynechococcus elongatus</i> interacts with the S3-state and not with the S2-state. <i>Biochemistry</i> , 2009 , 48, 7856-66	3.2	22
35	Synthesis, Structure, Electronic, Redox, and Magnetic Properties of a New Mixed-Valent Mn-Oxo Cluster: [Mn ² III,IVO ₂ (N,Nbispicen) ₂] ³⁺ (N,Nbispicen = N,N-bis(2-pyridylmethyl)-1,2-diaminoethane). <i>European Journal of Inorganic Chemistry</i> , 1998 , 1998, 721-727	2.3	22
34	Effect of (13)C-, (18)O- and (2)H-labeling on the infrared modes of UV-induced phenoxyl radicals. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1998 , 1365, 112-6	4.6	21
33	Deactivation processes in PsbA1-Photosystem II and PsbA3-Photosystem II under photoinhibitory conditions in the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012 , 1817, 1322-30	4.6	19
32	Differences in the interactions between the subunits of photosystem II dependent on D1 protein variants in the thermophilic cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Chemistry</i> , 2010 , 285, 30008-18	5.4	19
31	D1 protein variants in Photosystem II from <i>Thermosynechococcus elongatus</i> studied by low temperature optical spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010 , 1797, 11-9	4.6	19
30	Semiquinone-iron complex of photosystem II: EPR signals assigned to the low-field edge of the ground state doublet of QAFe ²⁺ and QBFe ²⁺ . <i>Biochemistry</i> , 2011 , 50, 6012-21	3.2	18
29	Environment of TyrZ in photosystem II from <i>Thermosynechococcus elongatus</i> in which PsbA2 is the D1 protein. <i>Journal of Biological Chemistry</i> , 2012 , 287, 13336-47	5.4	18
28	Exchange of chloride by bromide in the manganese photosystem-II complex studied by cw- and pulsed-EPR. <i>Chemical Physics</i> , 1995 , 194, 409-418	2.3	18
27	Charge recombination in S(n)Tyr(Z)([Q(A)-]) radical pairs in D1 protein variants of Photosystem II: long range electron transfer in the Marcus inverted region. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 3308-14	3.4	15
26	The D1-173 amino acid is a structural determinant of the critical interaction between D1-Tyr161 (TyrZ) and D1-His190 in Photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2014 , 1837, 1922-1931	4.6	14
25	Some Photosystem II properties depending on the D1 protein variants in <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2014 , 1837, 1427-34	4.6	14

24	Psb30 contributes to structurally stabilise the Photosystem II complex in the thermophilic cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010 , 1797, 1546-54	4.6	14
23	Crystal structure at 1.5Å resolution of the PsbV2 cytochrome from the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>FEBS Letters</i> , 2013 , 587, 3267-72	3.8	11
22	The Tll0287 protein is a hemoprotein associated with the PsbA2-Photosystem II complex in <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2013 , 1827, 1174-82	4.6	10
21	Probing the role of Valine 185 of the D1 protein in the Photosystem II oxygen evolution. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018 , 1859, 1259-1273	4.6	10
20	Crystal structure and redox properties of a novel cyanobacterial heme protein with a His/Cys heme axial ligation and a Per-Arnt-Sim (PAS)-like domain. <i>Journal of Biological Chemistry</i> , 2017 , 292, 9599-9612	5.4	9
19	Assembly of oxygen-evolving Photosystem II efficiently occurs with the apo-Cytb559 but the holo-Cytb559 accelerates the recovery of a functional enzyme upon photoinhibition. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2015 , 1847, 276-285	4.6	9
18	The involvement of Ca(2+) in the Ca (2+)-effect on Photosystem-II oxygen evolution. <i>Photosynthesis Research</i> , 1992 , 32, 207-9	3.7	9
17	Does the formation of the S3-state in Ca2+-depleted Photosystem II correspond to an oxidation of Tyrosine Z detectable by cw-EPR at room temperature?. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1995 , 1230, 195-201	4.6	8
16	Near-infrared in vitro measurements of photosystem I cofactors and electron-transfer partners with a recently developed spectrophotometer. <i>Photosynthesis Research</i> , 2019 , 142, 307-319	3.7	7
15	A unique ferrous iron binding mode is associated with large conformational changes for the transport protein FpvC of <i>Pseudomonas aeruginosa</i> . <i>FEBS Journal</i> , 2020 , 287, 295-309	5.7	7
14	An alternative plant-like cyanobacterial ferredoxin with unprecedented structural and functional properties. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2019 , 1860, 148084	4.6	6
13	New insights on Chl function in Photosystem II from site-directed mutants of D1/T179 in <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2019 , 1860, 297-309	4.6	6
12	Quantification of the number of spins in the S2- and S3-states of Ca2+-depleted photosystem II by pulsed-EPR spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1996 , 1277, 253-265	4.6	6
11	Isotopic labelling of photosystem II in <i>Thermosynechococcus elongatus</i> . <i>Photosynthesis Research</i> , 2008 , 98, 285-92	3.7	3
10	Photoaccumulation of two ascorbyl free radicals per photosystem I at 200 K. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2004 , 1656, 203-13	4.6	3
9	Probing the role of arginine 323 of the D1 protein in photosystem II function. <i>Physiologia Plantarum</i> , 2021 , 171, 183-199	4.6	3
8	Variants of photosystem II D1 protein in <i>Thermosynechococcus elongatus</i> . <i>Research on Chemical Intermediates</i> , 2014 , 40, 3219-3229	2.8	1
7	Properties and structure of a low-potential, penta-heme cytochrome c from a thermophilic purple sulfur photosynthetic bacterium <i>Thermochromatium tepidum</i> . <i>Photosynthesis Research</i> , 2019 , 139, 281-293	3.7	1

- 6 Protonation of the Cysteine Axial Ligand Investigated in His/Cys -Type Cytochrome by UV-Vis and Mid- and Far-IR Spectroscopy. *Journal of Physical Chemistry Letters*, **2020**, 11, 4198-4205 6.4 ○
- 5 Consequences of structural modifications in cytochrome b on the electron acceptor side of Photosystem II. *Photosynthesis Research*, **2019**, 139, 475-486 3.7 ○
- 4 Properties of Photosystem II lacking the PsbJ subunit. *Photosynthesis Research*, **2021**, 1 3.7 ○
- 3 What can we still learn from the electrochromic band-shifts in Photosystem II?. *Biochimica Et Biophysica Acta - Bioenergetics*, **2020**, 1861, 148176 4.6 ○
- 2 Probing the proton release by Photosystem II in the S to S high-spin transition.. *Biochimica Et Biophysica Acta - Bioenergetics*, **2022**, 148546 4.6 ○
- 1 Effects of Chloride/Bromide Substitution on Substrate Water Exchange Rates in Photosystem II **2008**, 369-371