

# Alain Boussac

## List of Publications by Year in Descending Order

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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	Probing the proton release by Photosystem II in the S to S high-spin transition.. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2022</b> , 148546	4.6	0
94	Properties of Photosystem II lacking the PsbJ subunit. <i>Photosynthesis Research</i> , <b>2021</b> , 1	3.7	0
93	Probing the role of arginine 323 of the D1 protein in photosystem II function. <i>Physiologia Plantarum</i> , <b>2021</b> , 171, 183-199	4.6	3
92	Protonation of the Cysteine Axial Ligand Investigated in His/Cys -Type Cytochrome by UV-Vis and Mid- and Far-IR Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 4198-4205	6.4	0
91	What can we still learn from the electrochromic band-shifts in Photosystem II?. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2020</b> , 1861, 148176	4.6	0
90	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> , <b>2020</b> , 287, 295-309	5.7	7
89	Near-infrared in vitro measurements of photosystem I cofactors and electron-transfer partners with a recently developed spectrophotometer. <i>Photosynthesis Research</i> , <b>2019</b> , 142, 307-319	3.7	7
88	An alternative plant-like cyanobacterial ferredoxin with unprecedented structural and functional properties. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2019</b> , 1860, 148084	4.6	6
87	Temperature dependence of the high-spin S to S transition in Photosystem II: Mechanistic consequences. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2019</b> , 1860, 508-518	4.6	28
86	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> , <b>2019</b> , 1860, 297-309	4.6	6
85	Consequences of structural modifications in cytochrome b on the electron acceptor side of Photosystem II. <i>Photosynthesis Research</i> , <b>2019</b> , 139, 475-486	3.7	0
84	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> , <b>2019</b> , 139, 281-293	3.7	1
83	The low spin - high spin equilibrium in the S-state of the water oxidizing enzyme. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2018</b> , 1859, 342-356	4.6	54
82	Photochemistry beyond the red limit in chlorophyll f-containing photosystems. <i>Science</i> , <b>2018</b> , 360, 1210-1213	32.3	129
81	Probing the role of Valine 185 of the D1 protein in the Photosystem II oxygen evolution. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2018</b> , 1859, 1259-1273	4.6	10
80	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> , <b>2017</b> , 292, 9599-9612	5.4	9
79	Electron transfer pathways from the S2-states to the S3-states either after a Ca <sup>2+</sup> /Sr <sup>2+</sup> or a Cl <sup>-</sup> /I <sup>-</sup> exchange in Photosystem II from <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2015</b> , 1847, 576-86	4.6	79

78	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> , <b>2015</b> , 1847, 276-285	4.6	9
77	Structure, ligands and substrate coordination of the oxygen-evolving complex of photosystem II in the S <sub>2</sub> state: a combined EPR and DFT study. <i>Physical Chemistry Chemical Physics</i> , <b>2014</b> , 16, 11877-92	3.6	66
76	Modification of the pheophytin redox potential in <i>Thermosynechococcus elongatus</i> Photosystem II with PsbA3 as D1. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2014</b> , 1837, 139-48	4.6	26
75	Substrate-water exchange in photosystem II is arrested before dioxygen formation. <i>Nature Communications</i> , <b>2014</b> , 5, 4305	17.4	67
74	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> , <b>2014</b> , 1837, 1922-1931	4.6	14
73	Photosynthesis. Electronic structure of the oxygen-evolving complex in photosystem II prior to O-O bond formation. <i>Science</i> , <b>2014</b> , 345, 804-8	33.3	363
72	Variants of photosystem II D1 protein in <i>Thermosynechococcus elongatus</i> . <i>Research on Chemical Intermediates</i> , <b>2014</b> , 40, 3219-3229	2.8	1
71	Some Photosystem II properties depending on the D1 protein variants in <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2014</b> , 1837, 1427-34	4.6	14
70	Ammonia binding to the oxygen-evolving complex of photosystem II identifies the solvent-exchangeable oxygen bridge (E <sub>bxo</sub> ) of the manganese tetramer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 15561-6	11.5	130
69	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> , <b>2013</b> , 1827, 1174-82	4.6	10
68	Crystal structure at 1.5 Å resolution of the PsbV2 cytochrome from the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>FEBS Letters</i> , <b>2013</b> , 587, 3267-72	3.8	11
67	Charge recombination in S(n)Tyr(Z)(IQ(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> , <b>2013</b> , 117, 3308-14	3.4	15
66	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> , <b>2012</b> , 1817, 1322-30	4.6	19
65	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> , <b>2012</b> , 1817, 802-10	4.6	32
64	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> , <b>2012</b> , 1817, 1998-2004	4.6	23
63	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> , <b>2012</b> , 134, 16619-34	16.4	223
62	Environment of TyrZ in photosystem II from <i>Thermosynechococcus elongatus</i> in which PsbA2 is the D1 protein. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 13336-47	5.4	18
61	Effect of Ca <sup>2+</sup> /Sr <sup>2+</sup> 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 <sub>2</sub> state. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 3635-48	16.4	190

60	Ca <sup>2+</sup> determines the entropy changes associated with the formation of transition states during water oxidation by Photosystem II. <i>Energy and Environmental Science</i> , <b>2011</b> , 4, 2520	35.4	58
59	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> , <b>2011</b> , 1807, 119-29	4.6	27
58	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> , <b>2011</b> , 1807, 829-40	4.6	75
57	Semiquinone-iron complex of photosystem II: EPR signals assigned to the low-field edge of the ground state doublet of QAFe <sup>2+</sup> and QBFe <sup>2+</sup> . <i>Biochemistry</i> , <b>2011</b> , 50, 6012-21	3.2	18
56	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> , <b>2010</b> , 285, 30008-18	5.4	19
55	D1 protein variants in Photosystem II from <i>Thermosynechococcus elongatus</i> studied by low temperature optical spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2010</b> , 1797, 11-9	4.6	19
54	Psb30 contributes to structurally stabilise the Photosystem II complex in the thermophilic cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2010</b> , 1797, 1546-54	4.6	14
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> , <b>2010</b> , 1797, 1491-9	4.6	37
52	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> , <b>2009</b> , 48, 8994-9001	3.2	24
51	Complete EPR spectrum of the S3-state of the oxygen-evolving photosystem II. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 5050-1	16.4	73
50	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> , <b>2009</b> , 48, 7856-66	3.2	22
49	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> , <b>2009</b> , 131, 4425-33	16.4	61
48	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> , <b>2008</b> , 1777, 331-42	4.6	57
47	X-ray crystallography identifies two chloride binding sites in the oxygen evolving centre of Photosystem II. <i>Energy and Environmental Science</i> , <b>2008</b> , 1, 161	35.4	107
46	Biosynthetic exchange of bromide for chloride and strontium for calcium in the photosystem II oxygen-evolving enzymes. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 13330-40	5.4	57
45	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> , <b>2008</b> , 363, 1203-10; discussion 1210	5.8	33
44	Structural changes in the Mn <sub>4</sub> Ca cluster and the mechanism of photosynthetic water splitting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 1879-84	11.5	164
43	Isotopic labelling of photosystem II in <i>Thermosynechococcus elongatus</i> . <i>Photosynthesis Research</i> , <b>2008</b> , 98, 285-92	3.7	3

42	Effects of Chloride/Bromide Substitution on Substrate Water Exchange Rates in Photosystem II <b>2008</b> , 369-371		
41	Characterization of the tyrosine-Z radical and its environment in the spin-coupled S2TyrZ* state of photosystem II from <i>Thermosynechococcus elongatus</i> . <i>Biochemistry</i> , <b>2007</b> , 46, 3138-50	3.2	31
40	Purification, crystallization and X-ray diffraction analyses of the <i>T. elongatus</i> PSII core dimer with strontium replacing calcium in the oxygen-evolving complex. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2007</b> , 1767, 404-13	4.6	29
39	Quantitative assessment of intrinsic carbonic anhydrase activity and the capacity for bicarbonate oxidation in photosystem II. <i>Biochemistry</i> , <b>2006</b> , 45, 2094-102	3.2	41
38	Structural perturbation of the carboxylate ligands to the manganese cluster upon Ca <sup>2+</sup> /Sr <sup>2+</sup> exchange in the S-state cycle of photosynthetic oxygen evolution as studied by flash-induced FTIR difference spectroscopy. <i>Biochemistry</i> , <b>2006</b> , 45, 13454-64	3.2	46
37	Towards a spin coupling model for the Mn <sub>4</sub> cluster in Photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2005</b> , 1708, 120-32	4.6	52
36	Near-infrared-induced transitions in the manganese cluster of photosystem II: action spectra for the S <sub>2</sub> and S <sub>3</sub> redox states. <i>Plant and Cell Physiology</i> , <b>2005</b> , 46, 837-42	4.9	37
35	Biosynthetic Ca <sup>2+</sup> /Sr <sup>2+</sup> exchange in the photosystem II oxygen-evolving enzyme of <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 22809-19	5.4	126
34	Cytochrome c550 in the cyanobacterium <i>Thermosynechococcus elongatus</i> : study of redox mutants. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 52869-80	5.4	32
33	Low-temperature electron transfer in photosystem II: a tyrosyl radical and semiquinone charge pair. <i>Biochemistry</i> , <b>2004</b> , 43, 13787-95	3.2	59
32	Site-directed mutagenesis of <i>Thermosynechococcus elongatus</i> photosystem II: the O <sub>2</sub> -evolving enzyme lacking the redox-active tyrosine D. <i>Biochemistry</i> , <b>2004</b> , 43, 13549-63	3.2	65
31	Photoaccumulation of two ascorbyl free radicals per photosystem I at 200 K. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2004</b> , 1656, 203-13	4.6	3
30	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> , <b>2003</b> , 44, 697-706	4.9	34
29	Redox properties of the photosystem II cytochromes b559 and c550 in the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Inorganic Chemistry</i> , <b>2003</b> , 8, 206-16	3.7	69
28	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> , <b>2003</b> , 8, 707-14	3.7	23
27	Photosystem II and photosynthetic oxidation of water: an overview. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2002</b> , 357, 1369-81; discussion 1419-20	5.8	134
26	Comparative study of the g=4.1 EPR signals in the S(2) state of photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2000</b> , 1457, 145-56	4.6	45
25	EPR study of the oxygen evolving complex in His-tagged photosystem II from the cyanobacterium <i>Synechococcus elongatus</i> . <i>Biochemistry</i> , <b>2000</b> , 39, 13788-99	3.2	61

24	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> , <b>1999</b> , 38, 1222-1232	5.1	89
23	Detection of an electron paramagnetic resonance signal in the S <sub>0</sub> state of the manganese complex of photosystem II from <i>Synechococcus elongatus</i> . <i>Biochemistry</i> , <b>1999</b> , 38, 11942-8	3.2	34
22	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> , <b>1999</b> , 103, 10945-10954	3.4	43
21	Synthesis, Structure, Electronic, Redox, and Magnetic Properties of a New Mixed-Valent Mn-Oxo Cluster: [Mn <sup>2</sup> III,IVO <sub>2</sub> (N,Nbispicen) <sub>2</sub> ] <sup>3+</sup> (N,Nbispicen = N,N-bis(2-pyridylmethyl)-1,2-diaminoethane). <i>European Journal of Inorganic Chemistry</i> , <b>1998</b> , 1998, 721-727	2.3	22
20	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> , <b>1998</b> , 1365, 112-6	4.6	21
19	SQUID Magnetization Study of the Infrared-Induced Spin Transition in the S <sub>2</sub> State of Photosystem II: Spin Value Associated with the g = 4.1 EPR Signal. <i>Journal of the American Chemical Society</i> , <b>1998</b> , 120, 7924-7928	16.4	63
18	Effect of near-infrared light on the S <sub>2</sub> -state of the manganese complex of photosystem II from <i>Synechococcus elongatus</i> . <i>Biochemistry</i> , <b>1998</b> , 37, 8995-9000	3.2	57
17	High-spin states (S ≥ 5/2) of the photosystem II manganese complex. <i>Biochemistry</i> , <b>1998</b> , 37, 4001-7	3.2	98
16	Electron paramagnetic resonance study of the S = 1 ground state of a radiolysis-generated manganese(III)–manganese(IV) form of [Mn <sup>IV</sup> 4O <sub>6</sub> (bipy) <sub>6</sub> ] <sup>4+</sup> (bipy = 2,2'-bipyridine). Comparison with the photosynthetic Oxygen Evolving Complex. <i>Journal of the Chemical Society Dalton Transactions</i> , <b>1997</b> , 4069-4074		38
15	Inhomogeneity of the EPR multiline signal from the S <sub>2</sub> -state of the photosystem II oxygen-evolving enzyme. <i>Journal of Biological Inorganic Chemistry</i> , <b>1997</b> , 2, 580-585	3.7	28
14	Conversion of the spin state of the manganese complex in photosystem II induced by near-infrared light. <i>Biochemistry</i> , <b>1996</b> , 35, 6984-9	3.2	150
13	Quantification of the number of spins in the S <sub>2</sub> - and S <sub>3</sub> -states of Ca <sup>2+</sup> -depleted photosystem II by pulsed-EPR spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1996</b> , 1277, 253-265	4.6	6
12	Exchange of chloride by bromide in the manganese photosystem-II complex studied by cw- and pulsed-EPR. <i>Chemical Physics</i> , <b>1995</b> , 194, 409-418	2.3	18
11	Does the formation of the S <sub>3</sub> -state in Ca <sup>2+</sup> -depleted Photosystem II correspond to an oxidation of Tyrosine Z detectable by cw-EPR at room temperature?. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1995</b> , 1230, 195-201	4.6	8
10	The origin of 4050°C thermoluminescence bands in Photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1994</b> , 1184, 85-92	4.6	85
9	Molecular changes following oxidoreduction of cytochrome b <sub>559</sub> characterized by Fourier transform infrared difference spectroscopy and electron paramagnetic resonance: photooxidation in photosystem II and electrochemistry of isolated cytochrome b <sub>559</sub> and iron protoporphyrin IX-bisimidazole model compounds. <i>Biochemistry</i> , <b>1992</b> , 31, 11460-71	3.2	111
8	Inhibition of tyrosine Z photooxidation after formation of the S <sub>3</sub> state in Ca(2+)-depleted and Cl(-)-depleted photosystem II. <i>Biochemistry</i> , <b>1992</b> , 31, 1224-34	3.2	108
7	The involvement of Ca(2+) in the Ca(2+)-effect on Photosystem-II oxygen evolution. <i>Photosynthesis Research</i> , <b>1992</b> , 32, 207-9	3.7	9

6	Histidine oxidation in the oxygen-evolving photosystem-II enzyme. <i>Nature</i> , <b>1990</b> , 347, 303-306	50.4	234
5	Interaction of ammonia with the water splitting enzyme of photosystem II. <i>Biochemistry</i> , <b>1990</b> , 29, 24-32 <sub>3,2</sub>		75
4	EPR signals from modified charge accumulation states of the oxygen evolving enzyme in Ca <sup>2+</sup> -deficient photosystem II. <i>Biochemistry</i> , <b>1989</b> , 28, 8984-9	3.2	265
3	Ca <sup>2+</sup> binding to the oxygen evolving enzyme varies with the redox state of the Mn cluster. <i>FEBS Letters</i> , <b>1988</b> , 236, 432-436	3.8	74
2	Effect of the 33-kDa protein on the S-state transitions in photosynthetic oxygen evolution. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1987</b> , 890, 151-159	4.6	75
1	Spectral and kinetic pH-dependence of fast and slow signal II in tris-washed chloroplasts. <i>FEBS Letters</i> , <b>1982</b> , 148, 113-116	3.8	28