Matthew Johnson

List of Publications by Year
in descending order

67 papers	4,422 citations	109321 35 h-index	110387 64 g-index
70 all docs	70 docs citations	70 times ranked	3308 citing authors

#	Article	IF	Citations
1	The photoprotective molecular switch in the photosystem II antenna. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 167-181.	1.0	627
2	Photoprotective Energy Dissipation Involves the Reorganization of Photosystem II Light-Harvesting Complexes in the Grana Membranes of Spinach Chloroplasts. Plant Cell, 2011, 23, 1468-1479.	6.6	305
3	Photosynthetic acclimation: Does the dynamic structure and macroâ€organisation of photosystem II in higher plant grana membranes regulate light harvesting states?. FEBS Journal, 2008, 275, 1069-1079.	4.7	208
4	Photosynthesis. Essays in Biochemistry, 2016, 60, 255-273.	4.7	177
5	Elevated Zeaxanthin Bound to Oligomeric LHCII Enhances the Resistance of Arabidopsis to Photooxidative Stress by a Lipid-protective, Antioxidant Mechanism. Journal of Biological Chemistry, 2007, 282, 22605-22618.	3.4	162
6	Lightâ€harvesting antenna composition controls the macrostructure and dynamics of thylakoid membranes in Arabidopsis. Plant Journal, 2012, 69, 289-301.	5.7	154
7	The Zeaxanthin-Independent and Zeaxanthin-Dependent qE Components of Nonphotochemical Quenching Involve Common Conformational Changes within the Photosystem II Antenna in Arabidopsis Â. Plant Physiology, 2009, 149, 1061-1075.	4.8	129
8	Higher Plant Photosystem II Light-Harvesting Antenna, Not the Reaction Center, Determines the Excited-State Lifetimeâ€"Both the Maximum and the Nonphotochemically Quenched. Biophysical Journal, 2012, 102, 2761-2771.	0.5	122
9	The Photosystem II Light-Harvesting Protein Lhcb3 Affects the Macrostructure of Photosystem II and the Rate of State Transitions in <i>Arabidopsis</i> Â Â. Plant Cell, 2009, 21, 3245-3256.	6.6	118
10	Restoration of Rapidly Reversible Photoprotective Energy Dissipation in the Absence of PsbS Protein by Enhanced Î"pH. Journal of Biological Chemistry, 2011, 286, 19973-19981.	3.4	116
11	Dynamics of higher plant photosystem cross-section associated with state transitions. Photosynthesis Research, 2009, 99, 173-183.	2.9	105
12	Arabidopsis plants lacking PsbS protein possess photoprotective energy dissipation. Plant Journal, 2010, 61, 283-289.	5.7	104
13	Induction of Efficient Energy Dissipation in the Isolated Light-harvesting Complex of Photosystem II in the Absence of Protein Aggregation. Journal of Biological Chemistry, 2008, 283, 29505-29512.	3.4	101
14	Dynamic thylakoid stacking regulates the balance between linear and cyclic photosynthetic electron transfer. Nature Plants, 2018, 4, 116-127.	9.3	98
15	Controlled Disorder in Plant Light-Harvesting Complex II Explains Its Photoprotective Role. Biophysical Journal, 2012, 102, 2669-2676.	0.5	97
16	The xanthophyll cycle pool size controls the kinetics of nonâ€photochemical quenching in <i>Arabidopsis thaliana</i>. FEBS Letters, 2008, 582, 262-266.	2.8	94
17	Visualising the mobility and distribution of chlorophyll-proteins in higher plant thylakoid membranes: effects of photoinhibition and protein phosphorylation. Plant Journal, 2010, 62, 948-59.	5.7	92
18	Photoprotective Energy Dissipation in Higher Plants Involves Alteration of the Excited State Energy of the Emitting Chlorophyll(s) in the Light Harvesting Antenna II (LHCII). Journal of Biological Chemistry, 2009, 284, 23592-23601.	3.4	84

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19	Cryo-EM structure of the spinach cytochrome b6â€‰fâ€…complex at 3.6ÂÃ… resolution. Nature, 2019, 575, 535-539.	27.8	83
20	Cytochrome b6f â€“ Orchestrator of photosynthetic electron transfer. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148380.	1.0	75
21	Nanodomains of Cytochrome<i>b</i>Â6 Â<i>f</i>and Photosystem II Complexes in Spinach Grana Thylakoid Membranes Â. Plant Cell, 2014, 26, 3051-3061.	6.6	74
22	An intact light harvesting complex I antenna system is required for complete state transitions in Arabidopsis. Nature Plants, 2015, 1, 15176.	9.3	74
23	Visualizing the dynamic structure of the plant photosynthetic membrane. Nature Plants, 2015, 1, 15161.	9.3	72
24	Xanthophylls as modulators of membrane protein function. Archives of Biochemistry and Biophysics, 2010, 504, 78-85.	3.0	70
25	Disentangling the low-energy states of the major light-harvesting complex of plants and their role in photoprotection. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1027-1038.	1.0	65
26	Photoprotection in Plants Involves a Change in Lutein 1 Binding Domain in the Major Light-harvesting Complex of Photosystem II. Journal of Biological Chemistry, 2011, 286, 27247-27254.	3.4	62
27	Rethinking the existence of a steady-state Î”Ïˆ component of the proton motive force across plant thylakoid membranes. Photosynthesis Research, 2014, 119, 233-242.	2.9	59
28	The relevance of dynamic thylakoid organisation to photosynthetic regulation. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148039.	1.0	59
29	Dynamic Thylakoid Stacking Is Regulated by LHCII Phosphorylation but Not Its interaction with PSI. Plant Physiology, 2019, 180, 2152-2166.	4.8	54
30	Visualizing the mobility and distribution of chlorophyll proteins in higher plant thylakoid membranes: effects of photoinhibition and protein phosphorylation. Plant Journal, 2010, 62, 948.	5.7	52
31	Natural light harvesting: principles and environmental trends. Energy and Environmental Science, 2011, 4, 1643.	30.8	44
32	Changes in thylakoid membrane thickness associated with the reorganization of photosystem II light harvesting complexes during photoprotective energy dissipation. Plant Signaling and Behavior, 2011, 6, 1386-1390.	2.4	44
33	Elevated Î”pH restores rapidly reversible photoprotective energy dissipation in Arabidopsis chloroplasts deficient in lutein and xanthophyll cycle activity. Planta, 2012, 235, 193-204.	3.2	43
34	Developmental acclimation of the thylakoid proteome to light intensity in <i>Arabidopsis</i>. Plant Journal, 2021, 105, 223-244.	5.7	43
35	Dynamic thylakoid stacking and state transitions work synergistically to avoid acceptor-side limitation of photosystem I. Nature Plants, 2021, 7, 87-98.	9.3	42
36	The Lhcb protein and xanthophyll composition of the light harvesting antenna controls the Î”pHâ€dependency of nonâ€photochemical quenching in <i>Arabidopsis thaliana</i>. FEBS Letters, 2008, 582, 1477-1482.	2.8	38

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37	Atomic detail visualization of photosynthetic membranes with GPU-accelerated ray tracing. Parallel Computing, 2016, 55, 17-27.	2.1	37
38	Acclimation- and mutation-induced enhancement of PsbS levels affects the kinetics of non-photochemical quenching in Arabidopsis thaliana. Planta, 2011, 233, 1253-1264.	3.2	36
39	Effect of xanthophyll composition on the chlorophyll excited state lifetime in plant leaves and isolated LHCII. Chemical Physics, 2010, 373, 23-32.	1.9	32
40	The Specificity of Controlled Protein Disorder in the Photoprotection ofÂPlants. Biophysical Journal, 2013, 105, 1018-1026.	0.5	29
41	Effect of ammonium and high light intensity on the accumulation of lipids in Nannochloropsis oceanica (CCAP 849/10) and Phaeodactylum tricornutum (CCAP 1055/1). Biotechnology for Biofuels, 2018, 11, 60.	6.2	28
42	Origin of Absorption Changes Associated with Photoprotective Energy Dissipation in the Absence of Zeaxanthin. Journal of Biological Chemistry, 2011, 286, 91-98.	3.4	25
43	Exciton annihilation as a probe of the light-harvesting antenna transition into the photoprotective mode. Chemical Physics, 2012, 404, 123-128.	1.9	24
44	Correlated fluorescence quenching and topographic mapping of Light-Harvesting Complex II within surface-assembled aggregates and lipid bilayers. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1075-1085.	1.0	24
45	Membrane organization of photosystem I complexes in the most abundant phototroph on Earth. Nature Plants, 2019, 5, 879-889.	9.3	22
46	A recombineering pipeline to clone large and complex genes in Chlamydomonas. Plant Cell, 2021, 33, 1161-1181.	6.6	19
47	Reversible Switching between Nonquenched and Quenched States in Nanoscale Linear Arrays of Plant Light-Harvesting Antenna Complexes. Langmuir, 2014, 30, 8481-8490.	3.5	18
48	A Theoretical Investigation of the Photophysical Consequences of Major Plant Light-Harvesting Complex Aggregation within the Photosynthetic Membrane. Journal of Physical Chemistry B, 2010, 114, 15244-15253.	2.6	17
49	Xanthophyll carotenoids stabilise the association of cyanobacterial chlorophyll synthase with the LHC-like protein HliD. Biochemical Journal, 2020, 477, 4021-4036.	3.7	15
50	Far-red light-regulated efficient energy transfer from phycobilisomes to photosystem I in the red microalga Galdieria sulphuraria and photosystems-related heterogeneity of phycobilisome population. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 227-235.	1.0	14
51	Proton motive force in plant photosynthesis dominated by Î”pH in both low and high light. Plant Physiology, 2021, 187, 263-275.	4.8	14
52	Membrane-dependent heterogeneity of LHCII characterized using single-molecule spectroscopy. Biophysical Journal, 2021, 120, 3091-3102.	0.5	12
53	Modeling the Role of LHCII-LHCII, PSII-LHCII, andÂPSI-LHCII Interactions in State Transitions. Biophysical Journal, 2020, 119, 287-299.	0.5	11
54	Changes in the Energy Transfer Pathways within Photosystem II Antenna Induced by Xanthophyll Cycle Activity. Journal of Physical Chemistry B, 2013, 117, 5841-5847.	2.6	10

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55	Interference lithographic nanopatterning of plant and bacterial light-harvesting complexes on gold substrates. Interface Focus, 2015, 5, 20150005.	3.0	10
56	Dissecting the cytochrome <i>c</i>2â€“reaction centre interaction in bacterial photosynthesis using single molecule force spectroscopy. Biochemical Journal, 2019, 476, 2173-2190.	3.7	10
57	A four state parametric model for the kinetics of the non-photochemical quenching in Photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 854-864.	1.0	9
58	Changes in supramolecular organization of cyanobacterial thylakoid membrane complexes in response to far-red light photoacclimation. Science Advances, 2022, 8, eabj4437.	10.3	9
59	Metabolic regulation of photosynthetic membrane structure tunes electron transfer function. Biochemical Journal, 2018, 475, 1225-1233.	3.7	8
60	Inhibition of Arabidopsis stomatal development by plastoquinone oxidation. Current Biology, 2021, 31, 5622-5632.e7.	3.9	8
61	Turning the challenge of quantum biology on its head: biological control of quantum optical systems. Faraday Discussions, 2019, 216, 57-71.	3.2	7
62	Cryo-EM structures of the <i>Synechocystis</i> sp. PCC 6803 cytochrome <i>b</i>6<i>f</i> complex with and without the regulatory PetP subunit. Biochemical Journal, 2022, 479, 1487-1503.	3.7	7
63	FRET measurement of cytochrome bc1 and reaction centre complex proximity in live Rhodobacter sphaeroides cells. Biochimica Et Biophysica Acta - Bioenergetics, 2022, 1863, 148508.	1.0	5
64	Single-molecule study of redox control involved in establishing the spinach plastocyanin-cytochrome bf electron transfer complex. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 591-599.	1.0	4
65	Comparative proteomics of thylakoids from <i>Arabidopsis</i> grown in laboratory and field conditions. Plant Direct, 2021, 5, e355.	1.9	4
66	Just the essentials: photoprotective energy dissipation pared-down. Journal of Experimental Botany, 2020, 71, 3380-3382.	4.8	3
67	Cryo-FIB Lift-out Sample Preparation Using a Novel Cryo-gripper Tool. Microscopy and Microanalysis, 2017, 23, 844-845.	0.4	2