Douglas A Campbell

List of Publications by Year
in descending order

125	5,973	66234	82410
papers	citations	42 h-index	72 g-index

129	129	129	4585
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Chlorophyll Fluorescence Analysis of Cyanobacterial Photosynthesis and Acclimation. Microbiology and Molecular Biology Reviews, 1998, 62, 667-683.	2.9	677
2	Seasonal changes in photosystem II organisation and pigment composition in Pinus sylvestris. Planta, 1995, 197, 176.	1.6	300
3	Cell size tradeâ€offs govern light exploitation strategies in marine phytoplankton. Environmental Microbiology, 2010, 12, 95-104.	1.8	215
4	Intermittent low temperatures constrain spring recovery of photosynthesis in boreal Scots pine forests. Global Change Biology, 2004, 10, 995-1008.	4.2	197
5	The cyanobacterium Synechococcus resists UV-B by exchanging photosystem II reaction-center D1 proteins. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 364-369.	3.3	176
6	Photophysiological responses of marine diatoms to elevated CO2 and decreased pH: a review. Functional Plant Biology, 2014, 41, 449.	1.1	169
7	Parameterization of photosystem II photoinactivation and repair. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 258-265.	0.5	148
8	Ocean acidification enhances the growth rate of larger diatoms. Limnology and Oceanography, 2014, 59, 1027-1034.	1.6	135
9	Predicting Light Acclimation in Cyanobacteria from Nonphotochemical Quenching of Photosystem II Fluorescence, Which Reflects State Transitions in These Organisms. Plant Physiology, 1996, 111, 1293-1298.	2.3	130
10	Developmental Regulation of Enzymes of Indole Alkaloid Biosynthesis in Catharanthus roseus. Plant Physiology, 1988, 86, 447-450.	2.3	128
11	Light Variability Illuminates Niche-Partitioning among Marine Picocyanobacteria. PLoS ONE, 2007, 2, e1341.	1.1	108
12	Effect of the Nitrogen Source on Phycobiliprotein Synthesis and Cell Reserves in A Chromatically Adapting Filamentous Cyanobacterium. Microbiology (United Kingdom), 1996, 142, 611-622.	0.7	101
13	Flux capacities and acclimation costs in Trichodesmium from the Gulf of Mexico. Marine Biology, 2008, 154, 413-422.	0.7	96
14	Distinctive Photosystem II Photoinactivation and Protein Dynamics in Marine Diatoms Â. Plant Physiology, 2011, 156, 2184-2195.	2.3	92
15	Photosystem II Photoinactivation, Repair, and Protection in Marine Centric Diatoms Â. Plant Physiology, 2012, 160, 464-476.	2.3	86
16	Rising CO2 Interacts with Growth Light and Growth Rate to Alter Photosystem II Photoinactivation of the Coastal Diatom Thalassiosira pseudonana. PLoS ONE, 2013, 8, e55562.	1.1	85
17	Contrasting photoacclimation costs in ecotypes of the marine eukaryotic picoplankter Ostreococcus. Limnology and Oceanography, 2008, 53, 255-265.	1.6	83
18	ELEVATED CARBON DIOXIDE DIFFERENTIALLY ALTERS THE PHOTOPHYSIOLOGY OF THALASSIOSIRA PSEUDONANA (BACILLARIOPHYCEAE) AND EMILIANIA HUXLEYI (HAPTOPHYTA)¹. Journal of Phycology, 2012, 48, 635-646.	1.0	83

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19	Algal photophysiology drives darkening and melt of the Greenland Ice Sheet. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 5694-5705.	3.3	81
20	Increased rate of D1 repair in coral symbionts during bleaching is insufficient to counter accelerated photoâ€inactivation. Limnology and Oceanography, 2011, 56, 139-146.	1.6	78
21	Effects of Light, Food Availability and Temperature Stress on the Function of Photosystem II and Photosystem I of Coral Symbionts. PLoS ONE, 2012, 7, e30167.	1.1	76
22	Cyanobacterial psbA families in Anabaena and Synechocystis encode trace, constitutive and UVB-induced D1 isoforms. Biochimica Et Biophysica Acta - Bioenergetics, 2006, 1757, 47-56.	0.5	75
23	Photophysiological and Photosynthetic Complex Changes during Iron Starvation in Synechocystis sp. PCC 6803 and Synechococcus elongatus PCC 7942. PLoS ONE, 2013, 8, e59861.	1.1	72
24	Complementary chromatic adaptation alters photosynthetic strategies in the cyanobacterium Calothrix. Microbiology (United Kingdom), 1996, 142, 1255-1263.	0.7	68
25	Physiological basis for high resistance to photoinhibition under nitrogen depletion in Emiliania huxleyi. Limnology and Oceanography, 2010, 55, 2150-2160.	1.6	68
26	EFFECTS OF UV-B RADIATION ON THE D1 PROTEIN REPAIR CYCLE OF NATURAL PHYTOPLANKTON COMMUNITIES FROM THREE LATITUDES (CANADA, BRAZIL, AND ARGENTINA)1. Journal of Phycology, 2005, 41, 273-286.	1.0	67
27	Photosystem II and Pigment Dynamics among Ecotypes of the Green Alga Ostreococcus. Plant Physiology, 2009, 151, 379-390.	2.3	64
28	Photosynthetic capacity in relation to nitrogen content and its partitioning in lichens with different photobionts. Plant, Cell and Environment, 1998, 21, 361-372.	2.8	62
29	UVB Effects on the Photosystem II-D1 Protein of Phytoplankton and Natural Phytoplankton Communities. Photochemistry and Photobiology, 2006, 82, 936.	1.3	62
30	Predicting CO2 gain and photosynthetic light acclimation from fluorescence yield and quenching in cyano-lichens. Planta, 1997, 201, 138-145.	1.6	59
31	The nitrogen costs of photosynthesis in a diatom under current and future p<scp>CO</scp>₂. New Phytologist, 2015, 205, 533-543.	3.5	59
32	Membrane lipid composition of the unusual cyanobacterium Gloeobacter violaceus sp. PCC 7421, which lacks sulfoquinovosyl diacylglycerol. Archives of Microbiology, 1996, 166, 132-135.	1.0	55
33	Seasonal changes in temperature and light drive acclimation of photosynthetic physiology and macromolecular content in Lobaria pulmonaria. Planta, 2001, 214, 57-66.	1.6	55
34	Excitation energy partitioning and quenching during cold acclimation in Scots pine. Tree Physiology, 2006, 26, 325-336.	1.4	54
35	Light History Influences the Response of the Marine CyanobacteriumSynechococcussp. WH7803 to Oxidative Stress Â Â. Plant Physiology, 2011, 156, 1934-1954.	2.3	54
36	Carbon Status Constrains Light Acclimation in the Cyanobacterium Synechococcus elongatus. Plant Physiology, 2004, 136, 3301-3312.	2.3	52

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37	The cyanobacterium Synechococcus modulates Photosystem II function in response to excitation stress through D1 exchange. Photosynthesis Research, 1995, 46, 151-158.	1.6	51
38	Roadmaps and Detours: Active Chlorophyll-a Assessments of Primary Productivity Across Marine and Freshwater Systems. Environmental Science & Technology, 2018, 52, 12039-12054.	4.6	49
39	Regulation of nitrogen metabolism in the marine diazotroph Trichodesmium IMS101 under varying temperatures and atmospheric CO₂ concentrations. Environmental Microbiology, 2010, 12, 1899-1912.	1.8	47
40	Nitrogen starvation induces distinct photosynthetic responses and recovery dynamics in diatoms and prasinophytes. PLoS ONE, 2018, 13, e0195705.	1.1	47
41	Two forms of the Photosystem II D1 protein alter energy dissipation and state transitions in the cyanobacterium Synechococcus sp. PCC 7942. Photosynthesis Research, 1996, 47, 131-144.	1.6	46
42	Global warming interacts with ocean acidification to alter PSII function and protection in the diatom Thalassiosira weissflogii. Environmental and Experimental Botany, 2018, 147, 95-103.	2.0	46
43	Function and evolution of the psbA gene family in marine Synechococcus: Synechococcus sp. WH7803 as a case study. ISME Journal, 2008, 2, 937-953.	4.4	45
44	Ocean Acidification Alters the Photosynthetic Responses of a Coccolithophorid to Fluctuating Ultraviolet and Visible Radiation. Plant Physiology, 2013, 162, 2084-2094.	2.3	45
45	Rapid photoprotection in seaâ€ice diatoms from the East Antarctic pack ice. Limnology and Oceanography, 2010, 55, 1400-1407.	1.6	43
46	Dynamic responses of photosystem II and phycobilisomes to changing light in the cyanobacterium Synechococcus sp. PCC 7942. Planta, 1995, 197, 553.	1.6	42
47	Photosystem II protein clearance and FtsH function in the diatom Thalassiosira pseudonana. Photosynthesis Research, 2013, 115, 43-54.	1.6	42
48	Photosystem II repair in marine diatoms with contrasting photophysiologies. Photosynthesis Research, 2016, 127, 189-199.	1.6	42
49	Arctic Micromonas uses protein pools and non-photochemical quenching to cope with temperature restrictions on Photosystem II protein turnover. Photosynthesis Research, 2017, 131, 203-220.	1.6	42
50	Interaction of nitrogen status and UVB sensitivity in a temperate phytoplankton assemblage. Journal of Experimental Marine Biology and Ecology, 2008, 359, 67-76.	0.7	40
51	Photoinactivation of Photosystem II in Prochlorococcus and Synechococcus. PLoS ONE, 2017, 12, e0168991.	1.1	36
52	Are phytoplankton population density maxima predictable through analysis of host and viral genomic DNA content?. Journal of the Marine Biological Association of the United Kingdom, 2006, 86, 491-498.	0.4	34
53	Resource dynamics during infection of Micromonas pusilla by virus MpVâ€Sp1. Environmental Microbiology, 2007, 9, 2720-2727.	1.8	34
54	The psbA gene family responds differentially to light and UVB stress in Gloeobacter violaceus PCC 7421, a deeply divergent cyanobacterium. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 130-139.	0.5	34

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55	The RUBISCO to Photosystem II Ratio Limits the Maximum Photosynthetic Rate in Picocyanobacteria. Life, 2015, 5, 403-417.	1.1	34
56	Changes in macromolecular allocation in nondividing algal symbionts allow for photosynthetic acclimation in the lichen Lobaria pulmonaria. New Phytologist, 2003, 159, 709-718.	3.5	32
57	Decoupling light harvesting, electron transport and carbon fixation during prolonged darkness supports rapid recovery upon re-illumination in the Arctic diatom Chaetoceros neogracilis. Polar Biology, 2019, 42, 1787-1799.	0.5	31
58	Inactivation of the petE Gene for Plastocyanin Lowers Photosynthetic Capacity and Exacerbates Chilling-Induced Photoinhibition in the Cyanobacterium Synechococcus. Plant Physiology, 1996, 112, 1551-1561.	2.3	30
59	Seasonal changes in chlorophyll fluorescence quenching and the induction and capacity of the photoprotective xanthophyll cycle in Lobaria pulmonaria. Canadian Journal of Botany, 2002, 80, 255-261.	1.2	30
60	Increased reliance upon photosystem II repair following acclimation to high-light by coral-dinoflagellate symbioses. Photosynthesis Research, 2013, 118, 219-229.	1.6	30
61	Electron Transport Regulates Cellular Differentiation in the Filamentous Cyanobacterium Calothrix. Plant Cell, 1993, 5, 451.	3.1	29
62	A Hard Day's Night: Diatoms Continue Recycling Photosystem II in the Dark. Frontiers in Marine Science, 2016, 3, .	1.2	28
63	Analysing photosynthetic complexes in uncharacterized species or mixed microalgal communities using global antibodies. Physiologia Plantarum, 2003, 119, 322-327.	2.6	27
64	Single-Turnover Variable Chlorophyll Fluorescence as a Tool for Assessing Phytoplankton Photosynthesis and Primary Productivity: Opportunities, Caveats and Recommendations. Frontiers in Marine Science, 2021, 8, .	1.2	27
65	Quantitating active photosystem II reaction center content from fluorescence induction transients. Limnology and Oceanography: Methods, 2017, 15, 54-69.	1.0	26
66	INORGANIC CARBON REPLETION DISRUPTS PHOTOSYNTHETIC ACCLIMATION TO LOW TEMPERATURE IN THE CYANOBACTERIUM SYNECHOCOCCUS ELONGATUS1. Journal of Phycology, 2005, 41, 322-334.	1.0	24
67	Oxygen-dependent electron flow influences photosystem II function andpsbAgene expression in the cyanobacteriumSynechococcussp. PCC 7942. Physiologia Plantarum, 1999, 105, 746-755.	2.6	23
68	Ultraviolet-B effects on photosystem II efficiency of natural phytoplankton communities from Antarctica. Polar Biology, 2005, 28, 607-618.	0.5	23
69	Sensitivity of Cyanobacterial Antenna, Reaction Center and CO2 Assimilation Transcripts and Proteins to Moderate UVB: Light Acclimation Potentiates Resistance to UVBâ€Â¶. Photochemistry and Photobiology, 2003, 77, 405.	1.3	22
70	Connectivity among Photosystem II centers in phytoplankters: Patterns and responses. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 459-474.	0.5	22
71	Contrasting nonphotochemical quenching patterns under high light and darkness aligns with light niche occupancy in Arctic diatoms. Limnology and Oceanography, 2021, 66, S231.	1.6	22
72	Diatom growth responses to photoperiod and light are predictable from diel reductant generation. Journal of Phycology, 2017, 53, 95-107.	1.0	21

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73	Photoinhibition in optically thick samples: Effects of light attenuation on chlorophyll fluorescence-based parameters. Journal of Theoretical Biology, 2021, 513, 110580.	0.8	21
74	Time-dependent upregulation of electron transport with concomitant induction of regulated excitation dissipation in Haslea diatoms. Photosynthesis Research, 2018, 137, 377-388.	1.6	20
75	Large centric diatoms allocate more cellular nitrogen to photosynthesis to counter slower RUBISCO turnover rates. Frontiers in Marine Science, 2014, 1, .	1.2	19
76	INORGANIC CARBON REPLETION CONSTRAINS STEADY-STATE LIGHT ACCLIMATION IN THE CYANOBACTERIUM SYNECHOCOCCUS ELONGATUS1. Journal of Phycology, 2006, 42, 610-621.	1.0	18
77	Photoinhibition of Photosystem II in Phytoplankton: Processes and Patterns. Advances in Photosynthesis and Respiration, 2020, , 329-365.	1.0	18
78	Divergence of photosynthetic strategies amongst marine diatoms. PLoS ONE, 2020, 15, e0244252.	1.1	18
79	Interactive effects of nitrogen and light on growth rates and RUBISCO content of small and large centric diatoms. Photosynthesis Research, 2017, 131, 93-103.	1.6	17
80	Modification of the pIIprotein in response to carbon and nitrogen availability in filamentous heterocystous cyanobacteria. FEMS Microbiology Letters, 1996, 144, 185-190.	0.7	16
81	Prochlorothrix hollandica PCC 9006: genomic properties of an axenic representative of the chlorophyll a/b-containing oxyphotobacteria. Research in Microbiology, 1997, 148, 345-354.	1.0	16
82	Photosynthetic electron transport transients in Chlorella vulgaris under fluctuating light. Algal Research, 2019, 44, 101713.	2.4	16
83	Response of the seaâ€ice diatom Fragilariopsis cylindrus to simulated polar night darkness and return to light. Limnology and Oceanography, 2020, 65, 1041-1060.	1.6	16
84	Chlorosis during nitrogen starvation is altered by carbon dioxide and temperature status and is mediated by the ClpP1 protease in Synechococcus elongatus. Archives of Microbiology, 2005, 183, 66-69.	1.0	15
85	Large reallocations of carbon, nitrogen, and photosynthetic reductant among phycobilisomes, photosystems, and Rubisco during light acclimation in Synechococcus elongatus strain PCC7942 are constrained in cells under low environmental inorganic carbon. Archives of Microbiology, 2005, 183, 190-202.	1.0	15
86	Faster recovery of a diatom from UV damage under ocean acidification. Journal of Photochemistry and Photobiology B: Biology, 2014, 140, 249-254.	1.7	15
87	Functional responses of smaller and larger diatoms to gradual CO2 rise. Science of the Total Environment, 2019, 680, 79-90.	3.9	15
88	D1 exchange and the Photosystem II repair cycle in the cyanobacterium Synechococcus. Plant Science, 1996, 115, 183-190.	1.7	14
89	Environmental change provokes rapid macromolecular reallocations within the photosynthetic system in a static population of photobionts in the lichen Lobaria pulmonaria. Lichenologist, 2004, 36, 425-433.	0.5	14
90	Influence of Cell Size and DNA Content on Growth Rate and Photosystem II Function in Cryptic Species of Ditylum brightwellii. PLoS ONE, 2012, 7, e52916.	1.1	14

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91	Phytoplankton ΪfPSII and Excitation Dissipation; Implications for Estimates of Primary Productivity. Frontiers in Marine Science, 2018, 5, .	1.2	14
92	High antioxidant capability interacts with respiration to mediate two Alexandrium species growth exploitation of photoperiods and light intensities. Harmful Algae, 2019, 82, 26-34.	2.2	14
93	CYANOBACTERIAL ACCLIMATION TO RAPIDLY FLUCTUATING LIGHT IS CONSTRAINED BY INORGANIC CARBON STATUS1. Journal of Phycology, 2005, 41, 801-811.	1.0	13
94	Physiological characterization and light response of the CO2-concentrating mechanism in the filamentous cyanobacterium Leptolyngbya sp. CPCC 696. Photosynthesis Research, 2011, 109, 85-101.	1.6	13
95	Changes in the Rubisco to photosystem ratio dominates photoacclimation across phytoplankton taxa. Photosynthesis Research, 2015, 124, 275-291.	1.6	13
96	Differential Detergent Stability of the Major Light-Harvesting Complex II in Thylakoids Isolated from Monocotyledonous and Dicotyledonous Plants. Plant Physiology, 1992, 99, 830-836.	2.3	12
97	Shifts in growth light optima among diatom species support their succession during the spring bloom in the Arctic. Journal of Ecology, 2022, 110, 1356-1375.	1.9	12
98	Photophysiology of Bolidomonas pacifica. Journal of Plankton Research, 2013, 35, 260-269.	0.8	11
99	Thermal bleaching induced changes in photosystem II function not reflected by changes in photosystem II protein content of Stylophora pistillata. Coral Reefs, 2014, 33, 131-139.	0.9	11
100	Developmental progression of photosystem II electron transport and CO2 uptake in Spartina alterniflora, a facultative halophyte, in a northern salt marsh. Canadian Journal of Botany, 2004, 82, 365-375.	1.2	10
101	Dynamics of Fluxes Through Photosynthetic Complexes in Response to Changing Light and Inorganic Carbon Acclimation in Synechococcus elongatus. Photosynthesis Research, 2005, 85, 341-357.	1.6	10
102	Electron transport kinetics in the diazotrophic cyanobacterium Trichodesmium spp. grown across a range of light levels. Photosynthesis Research, 2015, 124, 45-56.	1.6	10
103	Short-term elevated CO2 exposure stimulated photochemical performance of a coastal marine diatom. Marine Environmental Research, 2017, 125, 42-48.	1.1	10
104	Sinking towards destiny: High throughput measurement of phytoplankton sinking rates through time-resolved fluorescence plate spectroscopy. PLoS ONE, 2017, 12, e0185166.	1.1	10
105	Membrane lipid composition and restoration of photosynthesis during low temperature acclimation in Synechococcus sp. strain PCC 7942. Physiologia Plantarum, 1998, 104, 405-412.	2.6	9
106	Strain specific differences in rates of Photosystem II repair in picocyanobacteria correlate to differences in FtsH protein levels and isoform expression patterns. PLoS ONE, 2018, 13, e0209115.	1.1	9
107	Photosynthetic Light Reactions in Diatoms. II. The Dynamic Regulation of the Various Light Reactions. , 2022, , 423-464.		9
108	Elemental Stoichiometry and Photophysiology Regulation of Synechococcus sp. PCC7002 Under Increasing Severity of Chronic Iron Limitation. Plant and Cell Physiology, 2018, 59, 1803-1816.	1.5	8

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109	Light is required for low-CO2-mediated induction of transcripts encoding components of the CO2-concentrating mechanism in the cyanobacterium Synechococcus elongatus: analysis by quantitative reverse transcription - polymerase chain reaction. Canadian Journal of Botany, 2005, 83, 711-720.	1.2	7
110	Under high light stress two Indo-Pacific coral species display differential photodamage and photorepair dynamics. Marine Biology, 2016, 163, 1.	0.7	7
111	Ocean acidification interacts with variable light to decrease growth but increase particulate organic nitrogen production in a diatom. Marine Environmental Research, 2020, 160, 104965.	1.1	7
112	Ocean acidification interacts with growth light to suppress CO2 acquisition efficiency and enhance mitochondrial respiration in a coastal diatom. Marine Pollution Bulletin, 2021, 163, 112008.	2.3	7
113	Macromolecular dynamics of the photosynthetic system over a seasonal developmental progression in Spartina alterniflora. Canadian Journal of Botany, 2007, 85, 476-483.	1.2	5
114	Temperature profoundly affects coupling of photosynthetic electron transport and CO2 uptake in Lobaria pulmonaria: a case for measurement at field-ambient temperatures. Lichenologist, 2001, 33, 453-455.	0.5	4
115	Calculation and Interpretation of Substrate Assimilation Rates in Microbial Cells Based on Isotopic Composition Data Obtained by nanoSIMS. Frontiers in Microbiology, 2021, 12, 621634.	1.5	4
116	Diffusional Interactions among Marine Phytoplankton and Bacterioplankton: Modelling H2O2 as a Case Study. Microorganisms, 2022, 10, 821.	1.6	4
117	Developmental Change in CO₂ Compensation Concentrations in Spartina alterniflora Results from Sigmoidal Photosynthetic CO₂ Responses. Photosynthetica, 2003, 41, 365-372.	0.9	3
118	OUP accepted manuscript. , 2021, 9, coab062.		3
119	Fred Chow: the contributions of a quiet giant of photoinhibition and photoprotection. Functional Plant Biology, 2021, , .	1.1	3
120	Modification of the pII protein in response to carbon and nitrogen availability in filamentous heterocystous cyanobacteria. , 0, .		3
121	Title is missing!. Hydrobiologia, 2000, 438, 91-97.	1.0	2
122	Sensitivity of Cyanobacterial Antenna, Reaction Center and CO2 Assimilation Transcripts and Proteins to Moderate UVB: Light Acclimation Potentiates Resistance to UVB â€Â¶. Photochemistry and Photobiology, 2007, 77, 405-412.	1.3	0
123	Photophysiology of Bolidomonas pacifica. Journal of Plankton Research, 2014, 36, 596-596.	0.8	0
124	Photoinhibition: Fundamentals and Implications for Primary Productivity. Encyclopedia of the UN Sustainable Development Goals, 2021, , 1-13.	0.0	0
125	Photoinhibition: Fundamentals and Implications for Primary Productivity. Encyclopedia of the UN Sustainable Development Goals, 2022, , 809-822.	0.0	0