Christian Wilhelm

List of Publications by Year
in descending order

126 papers	5,363 citations	76326 40 h-index	91884 69 g-index
136 all docs	136 docs citations	136 times ranked	4694 citing authors

#	Article	IF	Citations
1	Heterologous Lactate Synthesis in <i>Synechocystis</i> sp. Strain PCC 6803 Causes a Growth Condition-Dependent Carbon Sink Effect. Applied and Environmental Microbiology, 2022, 88, e0006322.	3.1	3
2	Crossing and selection of Chlamydomonas reinhardtii strains for biotechnological glycolate production. Applied Microbiology and Biotechnology, 2022, 106, 3539-3554.	3.6	4
3	Isolation of fucoxanthin chlorophyll protein complexes of the centric diatom <i>Thalassiosira pseudonana</i> associated with the xanthophyll cycle enzyme diadinoxanthin deâ€epoxidase ^{â€}. IUBMB Life, 2022, , .	3.4	0
4	The potential of multispectral imaging flow cytometry for environmental monitoring. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2022, 101, 782-799.	1.5	4
5	Ru/Câ€Catalyzed Hydrogenation of Aqueous Glycolic Acid from Microalgae â€" Influence of pH and Biologically Relevant Additives. ChemistryOpen, 2022, 11, .	1.9	3
6	Influence of the compatible solute sucrose on thylakoid membrane organization and violaxanthin de-epoxidation. Planta, 2021, 254, 52.	3.2	0
7	Pre-purification of diatom pigment protein complexes provides insight into the heterogeneity of FCP complexes. BMC Plant Biology, 2020, 20, 456.	3.6	8
8	The Aureochrome Photoreceptor PtAUREO1a Is a Highly Effective Blue Light Switch in Diatoms. IScience, 2020, 23, 101730.	4.1	14
9	The fluid-mosaic membrane theory in the context of photosynthetic membranes: Is the thylakoid membrane more like a mixed crystal or like a fluid?. Journal of Plant Physiology, 2020, 252, 153246.	3.5	16
10	Photosynthesis in diatoms. , 2020, , 217-229.		2
11	Biomass Production: Biological Basics. , 2019, , 17-52.		1
12	Innovative Options for Energy Provision. , 2019, , 1413-1419.		0
13	Photocalorespirometry (Photo-CR): A Novel Method for Access to Photosynthetic Energy Conversion Efficiency. Scientific Reports, 2019, 9, 9298.	3.3	3
14	Effects of temperature and salinity on respiratory losses and the ratio of photosynthesis to respiration in representative Antarctic phytoplankton species. PLoS ONE, 2019, 14, e0224101.	2.5	10
15	Glycolate from microalgae: an efficient carbon source for biotechnological applications. Plant Biotechnology Journal, 2019, 17, 1538-1546.	8.3	27
16	Quantitative macromolecular patterns in phytoplankton communities resolved at the taxonomical level by single-cell Synchrotron FTIR-spectroscopy. BMC Plant Biology, 2019, 19, 142.	3.6	17
17	Monitoring cellular C:N ratio in phytoplankton by means of <scp>FTIR</scp>â€spectroscopy. Journal of Phycology, 2019, 55, 543-551.	2.3	7
18	Electron balancing under different sink conditions reveals positive effects on photon efficiency and metabolic activity of Synechocystis sp. PCC 6803. Biotechnology for Biofuels, 2019, 12, 43.	6.2	18

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19	15N photo-CIDNP MAS NMR on both photosystems and magnetic field-dependent 13C photo-CIDNP MAS NMR in photosystem II of the diatom Phaeodactylum tricornutum. Photosynthesis Research, 2019, 140, 151-171.	2.9	13
20	Long-Term Biogas Production from Glycolate by Diverse and Highly Dynamic Communities. Microorganisms, 2018, 6, 103.	3.6	12
21	The artificial humic substance HS1500 does not inhibit photosynthesis of the green alga Desmodesmus armatus in vivo but interacts with the photosynthetic apparatus of isolated spinach thylakoids in vitro. Photosynthesis Research, 2018, 137, 403-420.	2.9	4
22	Cell Wall Structure of Coccoid Green Algae as an Important Trade-Off Between Biotic Interference Mechanisms and Multidimensional Cell Growth. Frontiers in Microbiology, 2018, 9, 719.	3.5	39
23	A Fateful Meeting of Two Phytoplankton Speciesâ€”Chemical vs. Cell-Cell-Interactions in Co-Cultures of the Green Algae Oocystis marsonii and the Cyanobacterium Microcystis aeruginosa. Microbial Ecology, 2017, 74, 22-32.	2.8	30
24	Phytoplankton growth rate modelling: can spectroscopic cell chemotyping be superior to physiological predictors?. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20161956.	2.6	24
25	Photo-CIDNP in the Reaction Center of the Diatom <i>Cyclotella meneghiniana</i> Observed by ¹³C MAS NMR. Zeitschrift Fur Physikalische Chemie, 2017, 231, 347-367.	2.8	15
26	Influence of thylakoid membrane lipids on the structure of aggregated lightâ€harvesting complexes of the diatom <i>Thalassiosira pseudonana</i> and the green alga <i>Mantoniella squamata</i>. Physiologia Plantarum, 2017, 160, 339-358.	5.2	8
27	Direct isolation of a functional violaxanthin cycle domain from thylakoid membranes of higher plants. Planta, 2017, 245, 793-806.	3.2	19
28	Light driven reactions in model algae. Journal of Plant Physiology, 2017, 217, 1-3.	3.5	5
29	Towards an understanding of the molecular regulation of carbon allocation in diatoms: the interaction of energy and carbon allocation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160410.	4.0	36
30	An update on aureochromes: Phylogeny â€“ mechanism â€“ function. Journal of Plant Physiology, 2017, 217, 20-26.	3.5	57
31	Functional proteomics of light-harvesting complex proteins under varying light-conditions in diatoms. Journal of Plant Physiology, 2017, 217, 38-43.	3.5	9
32	An optimized protocol for the preparation of oxygen-evolving thylakoid membranes from Cyclotella meneghiniana provides a tool for the investigation of diatom plastidic electron transport. BMC Plant Biology, 2017, 17, 221.	3.6	3
33	PtAUREO1a and PtAUREO1b knockout mutants of the diatom Phaeodactylum tricornutum are blocked in photoacclimation to blue light. Journal of Plant Physiology, 2017, 217, 44-48.	3.5	39
34	Biomass Production, Biological Basics. , 2017, , 1-36.		0
35	Innovative Options for Energy Provision. , 2017, , 1-7.		0
36	Temperature affects the partitioning of absorbed light energy in freshwater phytoplankton. Freshwater Biology, 2016, 61, 1365-1378.	2.4	26

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37	Assessing in situ dominance pattern of phytoplankton classes by dominance analysis as a proxy for realized niches. Harmful Algae, 2016, 58, 74-84.	4.8	5
38	Title: Freshwater phytoplankton responses to global warming. Journal of Plant Physiology, 2016, 203, 127-134.	3.5	15
39	Photosystem II cycle activity and alternative electron transport in the diatom Phaeodactylum tricornutum under dynamic light conditions and nitrogen limitation. Photosynthesis Research, 2016, 128, 151-161.	2.9	36
40	Epidermal Pavement Cells of Arabidopsis Have Chloroplasts. Plant Physiology, 2016, 171, 723-6.	4.8	49
41	Aquatische Biomasse. , 2016, , 249-272.		0
42	Biomasseentstehung. , 2016, , 77-123.		1
43	Photosynthesis in Eukaryotic Algae with Secondary Plastids. Books in Soils, Plants, and the Environment, 2016, , 425-444.	0.1	0
44	The diadinoxanthin diatoxanthin cycle induces structural rearrangements of the isolated FCP antenna complexes of the pennate diatom Phaeodactylum tricornutum. Plant Physiology and Biochemistry, 2015, 96, 364-376.	5.8	14
45	Non-photochemical quenching and xanthophyll cycle activities in six green algal species suggest mechanistic differences in the process of excess energy dissipation. Journal of Plant Physiology, 2015, 172, 92-103.	3.5	82
46	Physiodiversity â€" New tools allow physiologist to embrace biodiversity and reconstruct the evolution of â€˜physiologiesâ€™?. Journal of Plant Physiology, 2015, 172, 1-3.	3.5	4
47	Spring Ephemerals Adapt to Extremely High Light Conditions via an Unusual Stabilization of Photosystem II. Frontiers in Plant Science, 2015, 6, 1189.	3.6	20
48	Guanchochroma wildpretii gen. et spec. nov. (Ochrophyta) Provides New Insights into the Diversification and Evolution of the Algal Class Synchromophyceae. PLoS ONE, 2015, 10, e0131821.	2.5	8
49	Surveillance of C-Allocation in Microalgal Cells. Metabolites, 2014, 4, 453-464.	2.9	19
50	Integration in microalgal bioprocess development: Design of efficient, sustainable, and economic processes. Engineering in Life Sciences, 2014, 14, 560-573.	3.6	35
51	Influence of thylakoid membrane lipids on the structure and function of the plant photosystem II core complex. Planta, 2014, 240, 781-796.	3.2	31
52	Conversion steps in bioenergy production â€" analysis of the energy flow from photon to biofuel. Biofuels, 2014, 5, 385-404.	2.4	15
53	Influence of pH, Mg2+, and lipid composition on the aggregation state of the diatom FCP in comparison to the LHCII of vascular plants. Photosynthesis Research, 2014, 119, 305-317.	2.9	21
54	Light acclimation in diatoms: From phenomenology to mechanisms. Marine Genomics, 2014, 16, 5-15.	1.1	56

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55	Unusual features of the high light acclimation of Chromera velia. Photosynthesis Research, 2014, 122, 159-169.	2.9	9
56	The Acclimation of Phaeodactylum tricornutum to Blue and Red Light Does Not Influence the Photosynthetic Light Reaction but Strongly Disturbs the Carbon Allocation Pattern. PLoS ONE, 2014, 9, e99727.	2.5	67
57	Green Algae. Advances in Photosynthesis and Respiration, 2014, , 309-333.	1.0	1
58	Subcommunity FTIR-spectroscopy to determine physiological cell states. Current Opinion in Biotechnology, 2013, 24, 88-94.	6.6	23
59	Recovery of soil unicellular eukaryotes: An efficiency and activity analysis on the single cell level. Journal of Microbiological Methods, 2013, 95, 463-469.	1.6	16
60	Attitudes toward Animals among German Children and Adolescents. Anthrozoos, 2013, 26, 325-339.	1.4	37
61	Blue light is essential for high light acclimation and photoprotection in the diatom Phaeodactylum tricornutum. Journal of Experimental Botany, 2013, 64, 483-493.	4.8	141
62	AUREOCHROME1a-Mediated Induction of the Diatom-Specific Cyclin <i>dsCYC2</i> Controls the Onset of Cell Division in Diatoms (<i>Phaeodactylum tricornutum</i>). Plant Cell, 2013, 25, 215-228.	6.6	136
63	Contrasting effects of the cyanobacterium <i><scp>M</scp>icrocystis aeruginosa</i> on the growth and physiology of two green algae, <i><scp>O</scp>ocystis marsonii</i> and <i><scp>S</scp>cenedesmus obliquus</i>, revealed by flow cytometry. Freshwater Biology, 2013, 58, 1573-1587.	2.4	38
64	Aureochrome 1a Is Involved in the Photoacclimation of the Diatom Phaeodactylum tricornutum. PLoS ONE, 2013, 8, e74451.	2.5	77
65	Lessons from Energy Balances for the Production Strategies of Biofuels. Advanced Topics in Science and Technology in China, 2013, , 737-740.	0.1	0
66	3 Balancing the conversion efficiency from photon to biomass. , 2012, , 39-54.		3
67	The investigation of violaxanthin de-epoxidation in the primitive green alga<i>Mantoniella squamata</i>(Prasinophyceae) indicates mechanistic differences in xanthophyll conversion to higher plants. Phycologia, 2012, 51, 359-370.	1.4	3
68	Simultaneous Measurement of the Silicon Content and Physiological Parameters by FTIR Spectroscopy in Diatoms with Siliceous Cell Walls. Plant and Cell Physiology, 2012, 53, 2153-2162.	3.1	20
69	Methane production from glycolate excreting algae as a new concept in the production of biofuels. Bioresource Technology, 2012, 121, 454-457.	9.6	34
70	Analysis of greenhouse gas emissions from microalgae-based biofuels. Biomass Conversion and Biorefinery, 2012, 2, 179-194.	4.6	18
71	Adolescent Learning in the Zoo: Embedding a Non-Formal Learning Environment to Teach Formal Aspects of Vertebrate Biology. Journal of Science Education and Technology, 2012, 21, 384-391.	3.9	33
72	THE IMPACT OF NONPHOTOCHEMICAL QUENCHING OF FLUORESCENCE ON THE PHOTON BALANCE IN DIATOMS UNDER DYNAMIC LIGHT CONDITIONS¹. Journal of Phycology, 2012, 48, 336-346.	2.3	31

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73	Synchroma pusillum sp. nov. and other New Algal Isolates with Chloroplast Complexes Confirm the Synchromophyceae (Ochrophyta) as a Widely Distributed Group of Amoeboid Algae. Protist, 2012, 163, 544-559.	1.5	11
74	FTIR spectra of algal species can be used as physiological fingerprints to assess their actual growth potential. Physiologia Plantarum, 2012, 146, 427-438.	5.2	60
75	Molecular dynamics of the diatom thylakoid membrane under different light conditions. Photosynthesis Research, 2012, 111, 245-257.	2.9	142
76	Different phycobilin antenna organisations affect the balance between light use and growth rate in the cyanobacterium Microcystis aeruginosa and in the cryptophyte Cryptomonas ovata. Photosynthesis Research, 2012, 111, 173-183.	2.9	14
77	Selected coccal green algae are not affected by the humic substance HuminfeedÂ® in term of growth or photosynthetic performance. Hydrobiologia, 2012, 684, 215-224.	2.0	7
78	The Biological Perspective. TATuP - Zeitschrift FÃ¼r TechnikfolgenabschÃtzung in Theorie Und Praxis, 2012, 21, 46-53.	0.1	3
79	Energy dissipation is an essential mechanism to sustain the viability of plants: The physiological limits of improved photosynthesis. Journal of Plant Physiology, 2011, 168, 79-87.	3.5	177
80	Regulation of LHCII aggregation by different thylakoid membrane lipids. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 326-335.	1.0	63
81	Photosynthetic energy conversion in the diatom Phaeodactylum tricornutum. Journal of Thermal Analysis and Calorimetry, 2011, 104, 223-231.	3.6	9
82	From photons to biomass and biofuels: evaluation of different strategies for the improvement of algal biotechnology based on comparative energy balances. Applied Microbiology and Biotechnology, 2011, 92, 909-919.	3.6	105
83	The impact of cell-specific absorption properties on the correlation of electron transport rates measured by chlorophyll fluorescence and photosynthetic oxygen production in planktonic algae. Plant Physiology and Biochemistry, 2011, 49, 801-808.	5.8	26
84	Impact of chlororespiration on non-photochemical quenching of chlorophyll fluorescence and on the regulation of the diadinoxanthin cycle in the diatom Thalassiosira pseudonana. Journal of Experimental Botany, 2011, 62, 509-519.	4.8	41
85	Functional heterogeneity of the fucoxanthins and fucoxanthin-chlorophyll proteins in diatom cells revealed by their electrochromic response and fluorescence and linear dichroism spectra. Chemical Physics, 2010, 373, 110-114.	1.9	35
86	The main thylakoid membrane lipid monogalactosyldiacylglycerol (MGDG) promotes the de-epoxidation of violaxanthin associated with the light-harvesting complex of photosystem II (LHCII). Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 414-424.	1.0	74
87	The use of FTIR spectroscopy to assess quantitative changes in the biochemical composition of microalgae. Journal of Biophotonics, 2010, 3, 557-566.	2.3	117
88	Evidence for the Existence of One Antenna-Associated, Lipid-Dissolved and Two Protein-Bound Pools of Diadinoxanthin Cycle Pigments in Diatoms. Plant Physiology, 2010, 154, 1905-1920.	4.8	145
89	Fluorescence as a Tool to Understand Changes in Photosynthetic Electron Flow Regulation. , 2010, , 75-89.		11
90	The regulation of xanthophyll cycle activity and of non-photochemical fluorescence quenching by two alternative electron flows in the diatoms Phaeodactylum tricornutum and Cyclotella meneghiniana. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 929-938.	1.0	84

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91	Ultrafast fluorescence study on the location and mechanism of non-photochemical quenching in diatoms. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 1189-1197.	1.0	136
92	An energy balance from absorbed photons to new biomass for <i>Chlamydomonas reinhardtii</i> and <i>Chlamydomonas acidophila</i> under neutral and extremely acidic growth conditions. Plant, Cell and Environment, 2009, 32, 250-258.	5.7	40
93	The lipid dependence of diadinoxanthin de-epoxidation presents new evidence for a macrodomain organization of the diatom thylakoid membrane. Journal of Plant Physiology, 2009, 166, 1839-1854.	3.5	38
94	Lipids in Algae, Lichens and Mosses. Advances in Photosynthesis and Respiration, 2009, , 117-137.	1.0	31
95	Structurally flexible macro-organization of the pigmentâ€“protein complexes of the diatom Phaeodactylum tricornutum. Photosynthesis Research, 2008, 95, 237-245.	2.9	49
96	Ancient Recruitment by Chromists of Green Algal Genes Encoding Enzymes for Carotenoid Biosynthesis. Molecular Biology and Evolution, 2008, 25, 2653-2667.	8.9	139
97	A complete energy balance from photons to new biomass reveals a light- and nutrient-dependent variability in the metabolic costs of carbon assimilation. Journal of Experimental Botany, 2007, 58, 2101-2112.	4.8	77
98	Lipid dependence of diadinoxanthin solubilization and de-epoxidation in artificial membrane systems resembling the lipid composition of the natural thylakoid membrane. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 67-75.	2.6	48
99	Investigation of the quenching efficiency of diatoxanthin in cells of Phaeodactylum tricornutum (Bacillariophyceae) with different pool sizes of xanthophyll cycle pigments. Phycologia, 2007, 46, 113-117.	1.4	64
100	Spectroscopic and Molecular Characterization of the Oligomeric Antenna of the Diatom<i>Phaeodactylum tricornutum</i>. Biochemistry, 2007, 46, 9813-9822.	2.5	114
101	The lipid composition of the unicellular green alga Chlamydomonas reinhardtii and the diatom Cyclotella meneghiniana investigated by MALDI-TOF MS and TLC. Chemistry and Physics of Lipids, 2007, 150, 143-155.	3.2	155
102	Synchroma grande spec. nov. (Synchromophyceae class. nov., Heterokontophyta): An Amoeboid Marine Alga with Unique Plastid Complexes. Protist, 2007, 158, 277-293.	1.5	28
103	Evidence for a rebinding of antheraxanthin to the light-harvesting complex during the epoxidation reaction of the violaxanthin cycle. Journal of Plant Physiology, 2006, 163, 585-590.	3.5	33
104	The importance of a highly active and Î”pH-regulated diatoxanthin epoxidase for the regulation of the PS II antenna function in diadinoxanthin cycle containing algae. Journal of Plant Physiology, 2006, 163, 1008-1021.	3.5	144
105	Influence of ascorbate and pH on the activity of the diatom xanthophyll cycle-enzyme diadinoxanthin de-epoxidase. Physiologia Plantarum, 2006, 126, 205-211.	5.2	63
106	Uphill energy transfer from long-wavelength absorbing chlorophylls to PS II in Ostreobium sp. is functional in carbon assimilation. Photosynthesis Research, 2006, 87, 323-329.	2.9	51
107	The Regulation of Carbon and Nutrient Assimilation in Diatoms is Significantly Different from Green Algae. Protist, 2006, 157, 91-124.	1.5	239
108	The application of micro-FTIR spectroscopy to analyze nutrient stress-related changes in biomass composition of phytoplankton algae. Plant Physiology and Biochemistry, 2005, 43, 717-726.	5.8	245

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109	COMBINATION OF FLOW CYTOMETRY AND SINGLE CELL ABSORPTION SPECTROSCOPY TO STUDY THE PHYTOPLANKTON STRUCTURE AND TO CALCULATE THE CHL A SPECIFIC ABSORPTION COEFFICIENTS AT THE TAXON LEVEL1. Journal of Phycology, 2005, 41, 1099-1109.	2.3	25
110	Estimation of chlorophyll content and daily primary production of the major algal groups by means of multiwavelength-excitation PAM chlorophyll fluorometry: performance and methodological limits. Photosynthesis Research, 2005, 83, 343-361.	2.9	92
111	Role of Hexagonal Structure-Forming Lipids in Diadinoxanthin and Violaxanthin Solubilization and De-Epoxidationâ€. Biochemistry, 2005, 44, 4028-4036.	2.5	91
112	Can Chlorophyll-a in-vivo fluorescence be used for quantification of carbon-based primary production in absolute terms?. Archiv FÃ¼r Hydrobiologie, 2004, 160, 515-526.	1.1	9
113	Photophysiology and primary production of phytoplankton in freshwater. Physiologia Plantarum, 2004, 120, 347-357.	5.2	27
114	Effects of UV irradiation on barley and tomato leaves: thermoluminescence as a method to screen the impact of UV radiation on crop plants. Functional Plant Biology, 2004, 31, 825.	2.1	9
115	Cytometry of Freshwater Phytoplankton. Methods in Cell Biology, 2004, 75, 375-407.	1.1	16
116	Fourier transform infrared spectroscopy as a new tool to determine rosmarinic acid in situ. Journal of Plant Physiology, 2004, 161, 151-156.	3.5	46
117	Lotharella polymorpha sp. nov. (Chlorarachniophyta) from the coast of Portugal. Phycologia, 2003, 42, 582-593.	1.4	22
118	The Application of Chlorophyll Fluorescence in the Aquatic Environment. , 2003, , 185-202.		1
119	Flow cytometric discrimination of various phycobilin-containing phytoplankton groups in a hypertrophic reservoir. Cytometry, 2002, 48, 45-57.	1.8	53
120	Unusual pH-dependence of diadinoxanthin de-epoxidase activation causes chlororespiratory induced accumulation of diatoxanthin in the diatom Phaeodactylum tricornutum. Journal of Plant Physiology, 2001, 158, 383-390.	3.5	112
121	Xanthophyll synthesis in diatoms: quantification of putative intermediates and comparison of pigment conversion kinetics with rate constants derived from a model. Planta, 2001, 212, 382-391.	3.2	133
122	Bio-optical modelling of oxygen evolution using in vivo fluorescence: Comparison of measured and calculated photosynthesis/irradiance (P-I) curves in four representative phytoplankton species. Journal of Plant Physiology, 2000, 157, 307-314.	3.5	92
123	Light adaptation of the phytoplankton diatomPhaeodactylum tricornutum under conditions of natural light climate. International Review of Hydrobiology, 1997, 82, 315-328.	0.6	8
124	Pigment-pigment interactions and secondary structure of reconstituted algal chlorophyll a/b-binding light-harvesting complexes of Chlorella fusca with different pigment compositions and pigment-protein stoichiometries. Photosynthesis Research, 1996, 49, 71-81.	2.9	11
125	Why do thylakoid membranes from higher plants form grana stacks?. Trends in Biochemical Sciences, 1993, 18, 415-419.	7.5	180
126	Fluorescence induction kinetics as a tool to detect a chlororespiratory activity in the prasinophycean alga, Mantoniella squamata. Biochimica Et Biophysica Acta - Bioenergetics, 1990, 1016, 197-202.	1.0	41