Gilles Peltier

List of Publications by Year
in descending order

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112 papers	10,728 citations	20817 60 h-index	32842 100 g-index
119 all docs	119 docs citations	119 times ranked	8272 citing authors

#	Article	IF	Citations
1	Oil accumulation in the model green alga Chlamydomonas reinhardtii: characterization, variability between common laboratory strains and relationship with starch reserves. BMC Biotechnology, 2011, 11, 7.	3.3	625
2	Chlororespiration and cyclic electron flow around PSI during photosynthesis and plant stress response. Plant, Cell and Environment, 2007, 30, 1041-1051.	5.7	362
3	CHLORORESPIRATION. Annual Review of Plant Biology, 2002, 53, 523-550.	18.7	359
4	An algal photoenzyme converts fatty acids to hydrocarbons. Science, 2017, 357, 903-907.	12.6	317
5	A nucleus-encoded factor, CRR2, is essential for the expression of chloroplastndhBinArabidopsis. Plant Journal, 2003, 36, 541-549.	5.7	293
6	An economic, sustainability, and energetic model of biodiesel production from microalgae. Bioresource Technology, 2012, 111, 191-200.	9.6	283
7	â€œSolvent-freeâ€•ultrasound-assisted extraction of lipids from fresh microalgae cells: A green, clean and scalable process. Bioresource Technology, 2012, 114, 457-465.	9.6	271
8	PredAlgo: A New Subcellular Localization Prediction Tool Dedicated to Green Algae. Molecular Biology and Evolution, 2012, 29, 3625-3639.	8.9	270
9	Sustained Photoevolution of Molecular Hydrogen in a Mutant of Synechocystis sp. Strain PCC 6803 Deficient in the Type I NADPH-Dehydrogenase Complex. Journal of Bacteriology, 2004, 186, 1737-1746.	2.2	230
10	NDH-1 and NDH-2 Plastoquinone Reductases in Oxygenic Photosynthesis. Annual Review of Plant Biology, 2016, 67, 55-80.	18.7	224
11	Targeted Inactivation of the Plastid ndhB Gene in Tobacco Results in an Enhanced Sensitivity of Photosynthesis to Moderate Stomatal Closure. Plant Physiology, 2000, 123, 1337-1350.	4.8	219
12	Proteomic profiling of oil bodies isolated from the unicellular green microalga Chlamydomonas reinhardtii: With focus on proteins involved in lipid metabolism. Proteomics, 2011, 11, 4266-4273.	2.2	201
13	Generation of fertile transplastomic soybean. Plant Molecular Biology, 2004, 55, 479-489.	3.9	188
14	Hydrogen production by Chlamydomonas reinhardtii: an elaborate interplay of electron sources and sinks. Planta, 2007, 227, 397-407.	3.2	187
15	A type II NAD(P)H dehydrogenase mediates light-independent plastoquinone reduction in the chloroplast of Chlamydomonas. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20546-20551.	7.1	187
16	New Subunits NDH-M, -N, and -O, Encoded by Nuclear Genes, Are Essential for Plastid Ndh Complex Functioning in Higher Plants. Plant Cell, 2005, 17, 219-232.	6.6	181
17	Potential for hydrogen production with inducible chloroplast gene expression in Chlamydomonas. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 17548-17553.	7.1	181
18	Control of Hydrogen Photoproduction by the Proton Gradient Generated by Cyclic Electron Flow in Chlamydomonas reinhardtii. Plant Cell, 2011, 23, 2619-2630.	6.6	176

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19	Autotrophic and Mixotrophic Hydrogen Photoproduction in Sulfur-Deprived Chlamydomonas Cells. Applied and Environmental Microbiology, 2005, 71, 6199-6205.	3.1	170
20	Hydrogen Production in Chlamydomonas: Photosystem II-Dependent and -Independent Pathways Differ in Their Requirement for Starch Metabolism Â. Plant Physiology, 2009, 151, 631-640.	4.8	154
21	Auxiliary electron transport pathways in chloroplasts of microalgae. Photosynthesis Research, 2010, 106, 19-31.	2.9	152
22	Electron Flow between Photosystem II and Oxygen in Chloroplasts of Photosystem I-deficient Algae Is Mediated by a Quinol Oxidase Involved in Chlororespiration. Journal of Biological Chemistry, 2000, 275, 17256-17262.	3.4	149
23	Chlororespiration: an adaptation to nitrogen deficiency in Chlamydomonas reinhardtii.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 4791-4795.	7.1	148
24	Involvement of a Plastid Terminal Oxidase in Plastoquinone Oxidation as Evidenced by Expression of the Arabidopsis thaliana Enzyme in Tobacco. Journal of Biological Chemistry, 2002, 277, 31623-31630.	3.4	147
25	Enhanced Toxic Metal Accumulation in Engineered Bacterial Cells Expressing Arabidopsis thaliana Phytochelatin Synthase. Applied and Environmental Microbiology, 2003, 69, 490-494.	3.1	144
26	Characterization of Nda2, a Plastoquinone-reducing Type II NAD(P)H Dehydrogenase in Chlamydomonas Chloroplasts. Journal of Biological Chemistry, 2009, 284, 4148-4157.	3.4	134
27	Flavodiiron Proteins Promote Fast and Transient O₂ Photoreduction in Chlamydomonas. Plant Physiology, 2017, 174, 1825-1836.	4.8	133
28	Inhibitor studies on non-photochemical plastoquinone reduction and H2 photoproduction in Chlamydomonas reinhardtii. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1708, 322-332.	1.0	128
29	Over-expression of a pepper plastid lipid-associated protein in tobacco leads to changes in plastid ultrastructure and plant development upon stress. Plant Journal, 2000, 21, 483-494.	5.7	124
30	Lipidomic and transcriptomic analyses of Chlamydomonas reinhardtii under heat stress unveil a direct route for the conversion of membrane lipids into storage lipids. Plant, Cell and Environment, 2016, 39, 834-847.	5.7	124
31	Increased Sensitivity of Photosynthesis to Antimycin A Induced by Inactivation of the Chloroplast ndhB Gene. Evidence for a Participation of the NADH-Dehydrogenase Complex to Cyclic Electron Flow around Photosystem I. Plant Physiology, 2001, 125, 1919-1929.	4.8	122
32	Effect of PGR5 Impairment on Photosynthesis and Growth in Arabidopsis thaliana. Plant and Cell Physiology, 2008, 49, 1688-1698.	3.1	122
33	Generation and Analysis of Soybean Plastid Transformants Expressing BacillusÂthuringiensis Cry1Ab Protoxin. Plant Molecular Biology, 2005, 58, 659-668.	3.9	121
34	Microalgal lipid droplets: composition, diversity, biogenesis and functions. Plant Cell Reports, 2015, 34, 545-555.	5.6	118
35	O₂ Uptake in the Light in Chlamydomonas. Plant Physiology, 1985, 79, 225-230.	4.8	117
36	Combined Increases in Mitochondrial Cooperation and Oxygen Photoreduction Compensate for Deficiency in Cyclic Electron Flow in Chlamydomonas reinhardtii Â Â. Plant Cell, 2014, 26, 3036-3050.	6.6	111

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37	Evidence for an association ofndhB,ndhJ gene products and ferredoxin-NADP-reductase as components of a chloroplastic NAD(P)H dehydrogenase complex. FEBS Letters, 1996, 378, 277-280.	2.8	110
38	Investigation of fatty acids accumulation in Nannochloropsis oculata for biodiesel application. Bioresource Technology, 2012, 124, 421-432.	9.6	110
39	Nfu2: a scaffold protein required for [4Fe-4S] and ferredoxin iron-sulphur cluster assembly in Arabidopsis chloroplasts. Plant Journal, 2004, 40, 101-111.	5.7	107
40	Hunting the main player enabling Chlamydomonas reinhardtii growth under fluctuating light. Plant Journal, 2018, 94, 822-835.	5.7	104
41	The cyclic electron pathways around photosystem I in Chlamydomonas reinhardtii as determined in vivo by photoacoustic measurements of energy storage. Planta, 1994, 193, 251.	3.2	103
42	Microalgae Synthesize Hydrocarbons from Long-Chain Fatty Acids via a Light-Dependent Pathway. Plant Physiology, 2016, 171, 2393-2405.	4.8	102
43	A novel thioredoxin-like protein located in the chloroplast is induced by water deficit in Solanum tuberosum L. plants. Plant Journal, 2002, 13, 97-107.	5.7	99
44	Chlamydomonas reinhardtii PsbS Protein Is Functional and Accumulates Rapidly and Transiently under High Light. Plant Physiology, 2016, 171, 2717-2730.	4.8	99
45	Inhibition of a respiratory activity by short saturating flashes in Chlamydomonas: Evidence for a chlororespiration. Biochimica Et Biophysica Acta - Bioenergetics, 1987, 893, 83-90.	1.0	95
46	Reduction of the plastoquinone pool by exogenous NADH and NADPH in higher plant chloroplasts. Biochimica Et Biophysica Acta - Bioenergetics, 1998, 1363, 59-69.	1.0	95
47	Mechanism and dynamics of fatty acid photodecarboxylase. Science, 2021, 372, .	12.6	93
48	Flocculent activity of a recombinant protein from Moringa oleifera Lam. seeds. Applied Microbiology and Biotechnology, 2002, 60, 114-119.	3.6	92
49	In Vivo Interactions between Photosynthesis, Mitorespiration, and Chlororespiration in Chlamydomonas reinhardtii. Plant Physiology, 2002, 129, 1921-1928.	4.8	90
50	Comparison of various microalgae liquid biofuel production pathways based on energetic, economic and environmental criteria. Bioresource Technology, 2013, 136, 205-212.	9.6	88
51	Effect of water deficit on photosynthetic oxygen exchange measured using 18O2 and mass spectrometry in Solanum tuberosum L. leaf discs. Planta, 1995, 195, 570.	3.2	85
52	Molecular characterization of CDSP 34, a chloroplastic protein induced by water deficit inSolanum tuberosumL. plants, and regulation ofCDSP 34expression by ABA and high illumination. Plant Journal, 1998, 16, 257-262.	5.7	85
53	Specific function of a plastid sigma factor for ndhF gene transcription. Nucleic Acids Research, 2005, 33, 5991-5999.	14.5	83
54	The Green Microalga Chlamydomonas reinhardtii Has a Single Â-3 Fatty Acid Desaturase That Localizes to the Chloroplast and Impacts Both Plastidic and Extraplastidic Membrane Lipids. Plant Physiology, 2013, 163, 914-928.	4.8	83

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55	Involvement of CDSP 32, a drought-induced thioredoxin, in the response to oxidative stress in potato plants. FEBS Letters, 2000, 467, 245-248.	2.8	81
56	Chlamydomonas carries out fatty acid Î²â€oxidation in ancestral peroxisomes using a bona fide acylâ€CoA oxidase. Plant Journal, 2017, 90, 358-371.	5.7	80
57	A security network in PSI photoprotection: regulation of photosynthetic control, NPQ and O2 photoreduction by cyclic electron flow. Frontiers in Plant Science, 2015, 6, 875.	3.6	71
58	Deletion of Proton Gradient Regulation 5 (PGR5) and PGR5-Like 1 (PGRL1) proteins promote sustainable light-driven hydrogen production in Chlamydomonas reinhardtii due to increased PSII activity under sulfur deprivation. Frontiers in Plant Science, 2015, 6, 892.	3.6	67
59	Flexibility in photosynthetic electron transport: a newly identified chloroplast oxidase involved in chlororespiration. Philosophical Transactions of the Royal Society B: Biological Sciences, 2000, 355, 1447-1454.	4.0	66
60	Photosystem I Is Indispensable for Photoautotrophic Growth, CO2 Fixation, and H2 Photoproduction inChlamydomonas reinhardtii. Journal of Biological Chemistry, 1999, 274, 10466-10473.	3.4	62
61	Alternative photosynthesis pathways drive the algal CO2-concentrating mechanism. Nature, 2022, 605, 366-371.	27.8	62
62	Chloroplast targeting ofÂphytochelatin synthase inÂArabidopsis: effects onÂheavy metal tolerance andÂaccumulation. Biochimie, 2006, 88, 1743-1750.	2.6	61
63	Development and validation of a screening procedure of microalgae for biodiesel production: Application to the genus of marine microalgae Nannochloropsis. Bioresource Technology, 2015, 177, 224-232.	9.6	57
64	Heterocyst-specific flavodiiron protein Flv3B enables oxic diazotrophic growth of the filamentous cyanobacterium Anabaena sp. PCC 7120. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11205-11210.	7.1	55
65	Distinguishing the roles of thylakoid respiratory terminal oxidases in the cyanobacterium Synechocystis sp. PCC 6803. Plant Physiology, 2016, 171, pp.00479.2016.	4.8	55
66	Saturating Light Induces Sustained Accumulation of Oil in Plastidal Lipid Droplets in Chlamydomonas reinhardtii. Plant Physiology, 2016, 171, 2406-2417.	4.8	54
67	A stromal region of cytochrome b ₆ f subunit IV is involved in the activation of the Stt7 kinase in Chlamydomonas. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12063-12068.	7.1	54
68	Interorganelle Communication: Peroxisomal MALATE DEHYDROGENASE2 Connects Lipid Catabolism to Photosynthesis through Redox Coupling in Chlamydomonas. Plant Cell, 2018, 30, 1824-1847.	6.6	51
69	Hyper-accumulation of starch and oil in a Chlamydomonas mutant affected in a plant-specific DYRK kinase. Biotechnology for Biofuels, 2016, 9, 55.	6.2	50
70	Development of a forward genetic screen to isolate oil mutants in the green microalga Chlamydomonas reinhardtii. Biotechnology for Biofuels, 2013, 6, 178.	6.2	49
71	Plastidial Expression of Type II NAD(P)H Dehydrogenase Increases the Reducing State of Plastoquinones and Hydrogen Photoproduction Rate by the Indirect Pathway in Chlamydomonas reinhardtii Â Â Â. Plant Physiology, 2014, 165, 1344-1352.	4.8	47
72	Flavodiiron-Mediated O₂ Photoreduction Links H₂ Production with CO₂ Fixation during the Anaerobic Induction of Photosynthesis. Plant Physiology, 2018, 177, 1639-1649.	4.8	47

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73	Algal photosynthesis converts nitric oxide into nitrous oxide. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2704-2709.	7.1	41
74	Elevated Expression of PGR5 and NDH-H in Bundle Sheath Chloroplasts in C4Flaveria Species. Plant and Cell Physiology, 2010, 51, 664-668.	3.1	39
75	Relationships between PSII-independent hydrogen bioproduction and starch metabolism as evidenced from isolation of starch catabolism mutants in the green alga Chlamydomonas reinhardtii. International Journal of Hydrogen Energy, 2010, 35, 10731-10740.	7.1	37
76	Light-Dependent Oxygen Uptake, Glycolate, and Ammonia Release in l-Methionine Sulfoximine-Treated Chlamydomonas. Plant Physiology, 1985, 77, 281-284.	4.8	35
77	Continuous photoproduction of hydrocarbon drop-in fuel by microbial cell factories. Scientific Reports, 2019, 9, 13713.	3.3	33
78	Cytochrome b 6 f function and localization, phosphorylation state of thylakoid membrane proteins and consequences on cyclic electron flow. Photosynthesis Research, 2016, 129, 307-320.	2.9	32
79	Using coagulationâ€“flocculation to harvest Chlamydomonas reinhardtii: Coagulant and flocculant efficiencies, and reuse of the liquid phase as growth medium. Algal Research, 2015, 9, 283-290.	4.6	31
80	Third-generation biofuels: current and future research on microalgal lipid biotechnology. OCL - Oilseeds and Fats, Crops and Lipids, 2013, 20, D606.	1.4	29
81	A Forward Genetic Approach in Chlamydomonas reinhardtii as a Strategy for Exploring Starch Catabolism. PLoS ONE, 2013, 8, e74763.	2.5	28
82	Role of an ancient light-harvesting protein of PSI in light absorption and photoprotection. Nature Communications, 2021, 12, 679.	12.8	28
83	Branched-Chain Amino Acid Catabolism Impacts Triacylglycerol Homeostasis in Chlamydomonas reinhardtii. Plant Physiology, 2019, 179, 1502-1514.	4.8	26
84	Limited photosynthetic electron flow but no CO2fixation inChlamydomonasmutants lacking photosystem I. FEBS Letters, 1997, 416, 65-68.	2.8	24
85	PGRL1 and LHCSR3 Compensate for Each Other in Controlling Photosynthesis and Avoiding Photosystem I Photoinhibition during High Light Acclimation of Chlamydomonas Cells. Molecular Plant, 2017, 10, 216-218.	8.3	23
86	Subcellular Energetics and Carbon Storage in Chlamydomonas. Cells, 2019, 8, 1154.	4.1	23
87	Fatty acid photodecarboxylase is an ancient photoenzyme that forms hydrocarbons in the thylakoids of algae. Plant Physiology, 2021, 186, 1455-1472.	4.8	23
88	Physiological functions of malate shuttles in plants and algae. Trends in Plant Science, 2022, 27, 488-501.	8.8	21
89	Oxygen-exchange studies in Chlamydomonas mutants deficient in photosynthetic electron transport: Evidence for a Photosystem II-dependent oxygen uptake in vivo. Biochimica Et Biophysica Acta - Bioenergetics, 1988, 936, 319-324.	1.0	20
90	Inhibition of chlororespiration by myxothiazol and antimycin A in Chlamydomonas reinhardtii. Photosynthesis Research, 1991, 28, 141-148.	2.9	20

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91	Increased zinc content in transplastomic tobacco plants expressing a polyhistidine-tagged Rubisco large subunit. Plant Biotechnology Journal, 2004, 2, 389-399.	8.3	18
92	Hydrogen independent expression of hupSL genes in Thiocapsa roseopersicina BBS. FEBS Journal, 2005, 272, 4807-4816.	4.7	18
93	The Kok effect and the light-inhibition of chlororespiration inChlamydomonas reinhardtii. FEBS Letters, 1988, 228, 259-262.	2.8	17
94	Improved oxygen tolerance of the Synechocystis sp. PCC 6803 bidirectional hydrogenase by site-directed mutagenesis of putative residues of the gas diffusion channel. International Journal of Hydrogen Energy, 2014, 39, 16872-16884.	7.1	16
95	Atrazine and diuron resistant plants from photoautotrophic protoplast-derived cultures of Nicotiana plumbaginifolia. Plant Cell Reports, 1990, 9, 241-4.	5.6	15
96	Agrobacterium tumefaciens type II NADH dehydrogenase.. FEBS Journal, 2006, 273, 3625-3637.	4.7	15
97	Modification of substrate specificity in single point mutants of Agrobacterium tumefaciens type II NADH dehydrogenase. FEBS Letters, 2007, 581, 4017-4022.	2.8	15
98	Non-Photochemical Reduction of Intersystem Electron Carriers in Chloroplasts of Higher Plants and Algae. , 1998, , 1877-1882.		15
99	The gene encoding the NdhH subunit of type 1 NAD(P)H dehydrogenase is essential to survival of Synechocystis PCC6803. FEBS Letters, 2000, 487, 272-276.	2.8	14
100	[76] Mass spectrometric measurement of photosynthetic and respiratory oxygen exchange. Methods in Enzymology, 1988, 167, 686-691.	1.0	13
101	Stimulation of the chlororespiratory electron flow by Photosystem II activity in Chlamydomonas reinhardtii. Biochimica Et Biophysica Acta - Bioenergetics, 1992, 1101, 57-63.	1.0	13
102	Membrane Inlet Mass Spectrometry: A Powerful Tool for Algal Research. Frontiers in Plant Science, 2020, 11, 1302.	3.6	13
103	Establishment and characterization of photoautotrophic protoplast-derived cultures ofNicotiana plumbaginifolia. Plant Cell Reports, 1989, 8, 234-237.	5.6	9
104	Transport of antimony salts byArabidopsis thalianaprotoplasts over-expressing the human multidrug resistance-associated protein 1 (MRP1/ABCC1). FEBS Letters, 2006, 580, 6891-6897.	2.8	9
105	Metal binding and antioxidant properties of chimeric tri- and tetra-domained metallothioneins. Biochimie, 2008, 90, 705-716.	2.6	9
106	Evidence for 18O labeling of photorespiratory CO2 in photoautotrophic cell cultures of higher plants illuminated in the presence of 18O2. Planta, 1993, 190, 407.	3.2	7
107	Oxygen photoreduction and variable fluorescence during a dark-to-light transition in Chlorella pyrenoidosa. Biochimica Et Biophysica Acta - Bioenergetics, 1987, 894, 543-551.	1.0	6
108	Structure-Function Analysis of Chloroplast Proteins via Random Mutagenesis Using Error-Prone PCR. Plant Physiology, 2018, 177, 465-475.	4.8	6

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109	Carbonic anhydrase activity in leaves as measured in vivo by 18O exchange between carbon dioxide and water. Planta, 1995, 196, 732.	3.2	5
110	Membrane Inlet Mass Spectrometry at the Crossroads of Photosynthesis, Biofuel, and Climate Research. Plant Physiology, 2020, 183, 451-454.	4.8	4
111	Chlororespiration in Unicellular Green Algae. , 1995, , 1865-1868.		1
112	Developments In Plastid Transformation. Developments in Plant Genetics and Breeding, 2000, , 59-66.	0.6	0