

Gilles Peltier

List of Publications by Year in descending order

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112
papers

10,728
citations

20797

60
h-index

32815

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 <i>Chlamydomonas reinhardtii</i> : characterization, variability between common laboratory strains and relationship with starch reserves. <i>BMC Biotechnology</i> , 2011, 11, 7.	1.7	625
2	Chlororespiration and cyclic electron flow around PSI during photosynthesis and plant stress response. <i>Plant, Cell and Environment</i> , 2007, 30, 1041-1051.	2.8	362
3	CHLORORESPIRATION. <i>Annual Review of Plant Biology</i> , 2002, 53, 523-550.	8.6	359
4	An algal photoenzyme converts fatty acids to hydrocarbons. <i>Science</i> , 2017, 357, 903-907.	6.0	317
5	A nucleus-encoded factor, CRR2, is essential for the expression of chloroplast <i>ndhB</i> in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2003, 36, 541-549.	2.8	293
6	An economic, sustainability, and energetic model of biodiesel production from microalgae. <i>Bioresource Technology</i> , 2012, 111, 191-200.	4.8	283
7	“Solvent-free” ultrasound-assisted extraction of lipids from fresh microalgae cells: A green, clean and scalable process. <i>Bioresource Technology</i> , 2012, 114, 457-465.	4.8	271
8	PredAlgo: A New Subcellular Localization Prediction Tool Dedicated to Green Algae. <i>Molecular Biology and Evolution</i> , 2012, 29, 3625-3639.	3.5	270
9	Sustained Photoevolution of Molecular Hydrogen in a Mutant of <i>Synechocystis</i> sp. Strain PCC 6803 Deficient in the Type I NADPH-Dehydrogenase Complex. <i>Journal of Bacteriology</i> , 2004, 186, 1737-1746.	1.0	230
10	NDH-1 and NDH-2 Plastoquinone Reductases in Oxygenic Photosynthesis. <i>Annual Review of Plant Biology</i> , 2016, 67, 55-80.	8.6	224
11	Targeted Inactivation of the Plastid <i>ndhB</i> Gene in Tobacco Results in an Enhanced Sensitivity of Photosynthesis to Moderate Stomatal Closure. <i>Plant Physiology</i> , 2000, 123, 1337-1350.	2.3	219
12	Proteomic profiling of oil bodies isolated from the unicellular green microalga <i>Chlamydomonas reinhardtii</i> : With focus on proteins involved in lipid metabolism. <i>Proteomics</i> , 2011, 11, 4266-4273.	1.3	201
13	Generation of fertile transplastomic soybean. <i>Plant Molecular Biology</i> , 2004, 55, 479-489.	2.0	188
14	Hydrogen production by <i>Chlamydomonas reinhardtii</i> : an elaborate interplay of electron sources and sinks. <i>Planta</i> , 2007, 227, 397-407.	1.6	187
15	A type II NAD(P)H dehydrogenase mediates light-independent plastoquinone reduction in the chloroplast of <i>Chlamydomonas</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20546-20551.	3.3	187
16	New Subunits NDH-M, -N, and -O, Encoded by Nuclear Genes, Are Essential for Plastid Ndh Complex Functioning in Higher Plants. <i>Plant Cell</i> , 2005, 17, 219-232.	3.1	181
17	Potential for hydrogen production with inducible chloroplast gene expression in <i>Chlamydomonas</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 17548-17553.	3.3	181
18	Control of Hydrogen Photoproduction by the Proton Gradient Generated by Cyclic Electron Flow in <i>Chlamydomonas reinhardtii</i> . <i>Plant Cell</i> , 2011, 23, 2619-2630.	3.1	176

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19	Autotrophic and Mixotrophic Hydrogen Photoproduction in Sulfur-Deprived <i>Chlamydomonas</i> Cells. <i>Applied and Environmental Microbiology</i> , 2005, 71, 6199-6205.	1.4	170
20	Hydrogen Production in <i>Chlamydomonas</i> : Photosystem II-Dependent and -Independent Pathways Differ in Their Requirement for Starch Metabolism. <i>Plant Physiology</i> , 2009, 151, 631-640.	2.3	154
21	Auxiliary electron transport pathways in chloroplasts of microalgae. <i>Photosynthesis Research</i> , 2010, 106, 19-31.	1.6	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. <i>Journal of Biological Chemistry</i> , 2000, 275, 17256-17262.	1.6	149
23	Chlororespiration: an adaptation to nitrogen deficiency in <i>Chlamydomonas reinhardtii</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1991, 88, 4791-4795.	3.3	148
24	Involvement of a Plastid Terminal Oxidase in Plastoquinone Oxidation as Evidenced by Expression of the <i>Arabidopsis thaliana</i> Enzyme in Tobacco. <i>Journal of Biological Chemistry</i> , 2002, 277, 31623-31630.	1.6	147
25	Enhanced Toxic Metal Accumulation in Engineered Bacterial Cells Expressing <i>Arabidopsis thaliana</i> Phytochelatin Synthase. <i>Applied and Environmental Microbiology</i> , 2003, 69, 490-494.	1.4	144
26	Characterization of Nda2, a Plastoquinone-reducing Type II NAD(P)H Dehydrogenase in <i>Chlamydomonas</i> Chloroplasts. <i>Journal of Biological Chemistry</i> , 2009, 284, 4148-4157.	1.6	134
27	Flavodiiron Proteins Promote Fast and Transient O ₂ Photoreduction in <i>Chlamydomonas</i> . <i>Plant Physiology</i> , 2017, 174, 1825-1836.	2.3	133
28	Inhibitor studies on non-photochemical plastoquinone reduction and H ₂ photoproduction in <i>Chlamydomonas reinhardtii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2005, 1708, 322-332.	0.5	128
29	Over-expression of a pepper plastid lipid-associated protein in tobacco leads to changes in plastid ultrastructure and plant development upon stress. <i>Plant Journal</i> , 2000, 21, 483-494.	2.8	124
30	Lipidomic and transcriptomic analyses of <i>Chlamydomonas reinhardtii</i> under heat stress unveil a direct route for the conversion of membrane lipids into storage lipids. <i>Plant, Cell and Environment</i> , 2016, 39, 834-847.	2.8	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. <i>Plant Physiology</i> , 2001, 125, 1919-1929.	2.3	122
32	Effect of PGR5 Impairment on Photosynthesis and Growth in <i>Arabidopsis thaliana</i> . <i>Plant and Cell Physiology</i> , 2008, 49, 1688-1698.	1.5	122
33	Generation and Analysis of Soybean Plastid Transformants Expressing <i>Bacillus thuringiensis</i> Cry1Ab Protoxin. <i>Plant Molecular Biology</i> , 2005, 58, 659-668.	2.0	121
34	Microalgal lipid droplets: composition, diversity, biogenesis and functions. <i>Plant Cell Reports</i> , 2015, 34, 545-555.	2.8	118
35	O ₂ Uptake in the Light in <i>Chlamydomonas</i> . <i>Plant Physiology</i> , 1985, 79, 225-230.	2.3	117
36	Combined Increases in Mitochondrial Cooperation and Oxygen Photoreduction Compensate for Deficiency in Cyclic Electron Flow in <i>Chlamydomonas reinhardtii</i> . <i>Plant Cell</i> , 2014, 26, 3036-3050.	3.1	111

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37	Evidence for an association of <i>ndhB, ndhJ</i> gene products and ferredoxin-NADP-reductase as components of a chloroplastic NAD(P)H dehydrogenase complex. <i>FEBS Letters</i> , 1996, 378, 277-280.	1.3	110
38	Investigation of fatty acids accumulation in <i>Nannochloropsis oculata</i> for biodiesel application. <i>Bioresource Technology</i> , 2012, 124, 421-432.	4.8	110
39	<i>Nfu2</i> : a scaffold protein required for [4Fe-4S] and ferredoxin iron-sulphur cluster assembly in <i>Arabidopsis</i> chloroplasts. <i>Plant Journal</i> , 2004, 40, 101-111.	2.8	107
40	Hunting the main player enabling <i>Chlamydomonas reinhardtii</i> growth under fluctuating light. <i>Plant Journal</i> , 2018, 94, 822-835.	2.8	104
41	The cyclic electron pathways around photosystem I in <i>Chlamydomonas reinhardtii</i> as determined in vivo by photoacoustic measurements of energy storage. <i>Planta</i> , 1994, 193, 251.	1.6	103
42	Microalgae Synthesize Hydrocarbons from Long-Chain Fatty Acids via a Light-Dependent Pathway. <i>Plant Physiology</i> , 2016, 171, 2393-2405.	2.3	102
43	A novel thioredoxin-like protein located in the chloroplast is induced by water deficit in <i>Solanum tuberosum</i> L. plants. <i>Plant Journal</i> , 2002, 13, 97-107.	2.8	99
44	<i>Chlamydomonas reinhardtii</i> PsbS Protein Is Functional and Accumulates Rapidly and Transiently under High Light. <i>Plant Physiology</i> , 2016, 171, 2717-2730.	2.3	99
45	Inhibition of a respiratory activity by short saturating flashes in <i>Chlamydomonas</i> : Evidence for a chlororespiration. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1987, 893, 83-90.	0.5	95
46	Reduction of the plastoquinone pool by exogenous NADH and NADPH in higher plant chloroplasts. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1998, 1363, 59-69.	0.5	95
47	Mechanism and dynamics of fatty acid photodecarboxylase. <i>Science</i> , 2021, 372, .	6.0	93
48	Flocculent activity of a recombinant protein from <i>Moringa oleifera</i> Lam. seeds. <i>Applied Microbiology and Biotechnology</i> , 2002, 60, 114-119.	1.7	92
49	In Vivo Interactions between Photosynthesis, Mitorespiration, and Chlororespiration in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2002, 129, 1921-1928.	2.3	90
50	Comparison of various microalgae liquid biofuel production pathways based on energetic, economic and environmental criteria. <i>Bioresource Technology</i> , 2013, 136, 205-212.	4.8	88
51	Effect of water deficit on photosynthetic oxygen exchange measured using $^{18}O_2$ and mass spectrometry in <i>Solanum tuberosum</i> L. leaf discs. <i>Planta</i> , 1995, 195, 570.	1.6	85
52	Molecular characterization of CDSP 34, a chloroplastic protein induced by water deficit in <i>Solanum tuberosum</i> L. plants, and regulation of CDSP 34 expression by ABA and high illumination. <i>Plant Journal</i> , 1998, 16, 257-262.	2.8	85
53	Specific function of a plastid sigma factor for <i>ndhF</i> gene transcription. <i>Nucleic Acids Research</i> , 2005, 33, 5991-5999.	6.5	83
54	The Green Microalga <i>Chlamydomonas reinhardtii</i> Has a Single Δ^3 Fatty Acid Desaturase That Localizes to the Chloroplast and Impacts Both Plastidic and Extrplastidic Membrane Lipids. <i>Plant Physiology</i> , 2013, 163, 914-928.	2.3	83

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55	Involvement of CDSP 32, a drought-induced thioredoxin, in the response to oxidative stress in potato plants. <i>FEBS Letters</i> , 2000, 467, 245-248.	1.3	81
56	<i>Chlamydomonas</i> carries out fatty acid β -oxidation in ancestral peroxisomes using a bona fide acyl-CoA oxidase. <i>Plant Journal</i> , 2017, 90, 358-371.	2.8	80
57	A security network in PSI photoprotection: regulation of photosynthetic control, NPQ and O ₂ photoreduction by cyclic electron flow. <i>Frontiers in Plant Science</i> , 2015, 6, 875.	1.7	71
58	Deletion of Proton Gradient Regulation 5 (PGR5) and PGR5-Like 1 (PGR1) proteins promote sustainable light-driven hydrogen production in <i>Chlamydomonas reinhardtii</i> due to increased PSII activity under sulfur deprivation. <i>Frontiers in Plant Science</i> , 2015, 6, 892.	1.7	67
59	Flexibility in photosynthetic electron transport: a newly identified chloroplast oxidase involved in chlororespiration. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2000, 355, 1447-1454.	1.8	66
60	Photosystem I Is Indispensable for Photoautotrophic Growth, CO ₂ Fixation, and H ₂ Photoproduction in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Biological Chemistry</i> , 1999, 274, 10466-10473.	1.6	62
61	Alternative photosynthesis pathways drive the algal CO ₂ -concentrating mechanism. <i>Nature</i> , 2022, 605, 366-371.	13.7	62
62	Chloroplast targeting of phytochelatin synthase in <i>Arabidopsis</i> : effects on heavy metal tolerance and accumulation. <i>Biochimie</i> , 2006, 88, 1743-1750.	1.3	61
63	Development and validation of a screening procedure of microalgae for biodiesel production: Application to the genus of marine microalgae <i>Nannochloropsis</i> . <i>Bioresource Technology</i> , 2015, 177, 224-232.	4.8	57
64	Heterocyst-specific flavodiiron protein Flv3B enables oxic diazotrophic growth of the filamentous cyanobacterium <i>Anabaena</i> sp. PCC 7120. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 11205-11210.	3.3	55
65	Distinguishing the roles of thylakoid respiratory terminal oxidases in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803. <i>Plant Physiology</i> , 2016, 171, pp.00479.2016.	2.3	55
66	Saturating Light Induces Sustained Accumulation of Oil in Plastidal Lipid Droplets in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2016, 171, 2406-2417.	2.3	54
67	A stromal region of cytochrome <i>b</i> ₆ subunit IV is involved in the activation of the Stt7 kinase in <i>Chlamydomonas</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 12063-12068.	3.3	54
68	Interorganelle Communication: Peroxisomal MALATE DEHYDROGENASE2 Connects Lipid Catabolism to Photosynthesis through Redox Coupling in <i>Chlamydomonas</i> . <i>Plant Cell</i> , 2018, 30, 1824-1847.	3.1	51
69	Hyper-accumulation of starch and oil in a <i>Chlamydomonas</i> mutant affected in a plant-specific DYRK kinase. <i>Biotechnology for Biofuels</i> , 2016, 9, 55.	6.2	50
70	Development of a forward genetic screen to isolate oil mutants in the green microalga <i>Chlamydomonas reinhardtii</i> . <i>Biotechnology for Biofuels</i> , 2013, 6, 178.	6.2	49
71	Plastidal Expression of Type II NAD(P)H Dehydrogenase Increases the Reducing State of Plastoquinones and Hydrogen Photoproduction Rate by the Indirect Pathway in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2014, 165, 1344-1352.	2.3	47
72	Flavodiiron-Mediated O ₂ Photoreduction Links H ₂ Production with CO ₂ Fixation during the Anaerobic Induction of Photosynthesis. <i>Plant Physiology</i> , 2018, 177, 1639-1649.	2.3	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.	3.3	41
74	Elevated Expression of PGR5 and NDH-H in Bundle Sheath Chloroplasts in C4Flaveria Species. Plant and Cell Physiology, 2010, 51, 664-668.	1.5	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.	3.8	37
76	Light-Dependent Oxygen Uptake, Glycolate, and Ammonia Release in L-Methionine Sulfoximine-Treated <i>Chlamydomonas</i> . Plant Physiology, 1985, 77, 281-284.	2.3	35
77	Continuous photoproduction of hydrocarbon drop-in fuel by microbial cell factories. Scientific Reports, 2019, 9, 13713.	1.6	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.	1.6	32
79	Using coagulation-flocculation to harvest <i>Chlamydomonas reinhardtii</i> : Coagulant and flocculant efficiencies, and reuse of the liquid phase as growth medium. Algal Research, 2015, 9, 283-290.	2.4	31
80	Third-generation biofuels: current and future research on microalgal lipid biotechnology. OCL - Oilseeds and Fats, Crops and Lipids, 2013, 20, D606.	0.6	29
81	A Forward Genetic Approach in <i>Chlamydomonas reinhardtii</i> as a Strategy for Exploring Starch Catabolism. PLoS ONE, 2013, 8, e74763.	1.1	28
82	Role of an ancient light-harvesting protein of PSI in light absorption and photoprotection. Nature Communications, 2021, 12, 679.	5.8	28
83	Branched-Chain Amino Acid Catabolism Impacts Triacylglycerol Homeostasis in <i>Chlamydomonas reinhardtii</i> . Plant Physiology, 2019, 179, 1502-1514.	2.3	26
84	Limited photosynthetic electron flow but no CO ₂ fixation in <i>Chlamydomonas</i> mutants lacking photosystem I. FEBS Letters, 1997, 416, 65-68.	1.3	24
85	PGRL1 and LHCSR3 Compensate for Each Other in Controlling Photosynthesis and Avoiding Photosystem I Photoinhibition during High Light Acclimation of <i>Chlamydomonas</i> Cells. Molecular Plant, 2017, 10, 216-218.	3.9	23
86	Subcellular Energetics and Carbon Storage in <i>Chlamydomonas</i> . Cells, 2019, 8, 1154.	1.8	23
87	Fatty acid photodecarboxylase is an ancient photoenzyme that forms hydrocarbons in the thylakoids of algae. Plant Physiology, 2021, 186, 1455-1472.	2.3	23
88	Physiological functions of malate shuttles in plants and algae. Trends in Plant Science, 2022, 27, 488-501.	4.3	21
89	Oxygen-exchange studies in <i>Chlamydomonas</i> 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.	0.5	20
90	Inhibition of chlororespiration by myxothiazol and antimycin A in <i>Chlamydomonas reinhardtii</i> . Photosynthesis Research, 1991, 28, 141-148.	1.6	20

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91	Increased zinc content in transplastomic tobacco plants expressing a polyhistidine-tagged Rubisco large subunit. <i>Plant Biotechnology Journal</i> , 2004, 2, 389-399.	4.1	18
92	Hydrogen independent expression of hupSL genes in <i>Thiocapsa roseopersicina</i> BBS. <i>FEBS Journal</i> , 2005, 272, 4807-4816.	2.2	18
93	The Kok effect and the light-inhibition of chlororespiration in <i>Chlamydomonas reinhardtii</i> . <i>FEBS Letters</i> , 1988, 228, 259-262.	1.3	17
94	Improved oxygen tolerance of the <i>Synechocystis</i> sp. PCC 6803 bidirectional hydrogenase by site-directed mutagenesis of putative residues of the gas diffusion channel. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 16872-16884.	3.8	16
95	Atrazine and diuron resistant plants from photoautotrophic protoplast-derived cultures of <i>Nicotiana plumbaginifolia</i> . <i>Plant Cell Reports</i> , 1990, 9, 241-4.	2.8	15
96	<i>Agrobacterium tumefaciens</i> type II NADH dehydrogenase.. <i>FEBS Journal</i> , 2006, 273, 3625-3637.	2.2	15
97	Modification of substrate specificity in single point mutants of <i>Agrobacterium tumefaciens</i> type II NADH dehydrogenase. <i>FEBS Letters</i> , 2007, 581, 4017-4022.	1.3	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 <i>Synechocystis</i> PCC6803. <i>FEBS Letters</i> , 2000, 487, 272-276.	1.3	14
100	[76] Mass spectrometric measurement of photosynthetic and respiratory oxygen exchange. <i>Methods in Enzymology</i> , 1988, 167, 686-691.	0.4	13
101	Stimulation of the chlororespiratory electron flow by Photosystem II activity in <i>Chlamydomonas reinhardtii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1992, 1101, 57-63.	0.5	13
102	Membrane Inlet Mass Spectrometry: A Powerful Tool for Algal Research. <i>Frontiers in Plant Science</i> , 2020, 11, 1302.	1.7	13
103	Establishment and characterization of photoautotrophic protoplast-derived cultures of <i>Nicotiana plumbaginifolia</i> . <i>Plant Cell Reports</i> , 1989, 8, 234-237.	2.8	9
104	Transport of antimony salts by <i>Arabidopsis thaliana</i> protoplasts over-expressing the human multidrug resistance-associated protein 1 (MRP1/ABCC1). <i>FEBS Letters</i> , 2006, 580, 6891-6897.	1.3	9
105	Metal binding and antioxidant properties of chimeric tri- and tetra-domained metallothioneins. <i>Biochimie</i> , 2008, 90, 705-716.	1.3	9
106	Evidence for ¹⁸ O labeling of photorespiratory CO ₂ in photoautotrophic cell cultures of higher plants illuminated in the presence of ¹⁸ O ₂ . <i>Planta</i> , 1993, 190, 407.	1.6	7
107	Oxygen photoreduction and variable fluorescence during a dark-to-light transition in <i>Chlorella pyrenoidosa</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1987, 894, 543-551.	0.5	6
108	Structure-Function Analysis of Chloroplast Proteins via Random Mutagenesis Using Error-Prone PCR. <i>Plant Physiology</i> , 2018, 177, 465-475.	2.3	6

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109	Carbonic anhydrase activity in leaves as measured in vivo by ^{18}O exchange between carbon dioxide and water. <i>Planta</i> , 1995, 196, 732.	1.6	5
110	Membrane Inlet Mass Spectrometry at the Crossroads of Photosynthesis, Biofuel, and Climate Research. <i>Plant Physiology</i> , 2020, 183, 451-454.	2.3	4
111	Chlororespiration in Unicellular Green Algae. , 1995, , 1865-1868.		1
112	Developments In Plastid Transformation. <i>Developments in Plant Genetics and Breeding</i> , 2000, , 59-66.	0.6	0