

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	Physiological functions of malate shuttles in plants and algae. Trends in Plant Science, 2022, 27, 488-501.	8.8	21
2	Alternative photosynthesis pathways drive the algal CO ₂ -concentrating mechanism. Nature, 2022, 605, 366-371.	27.8	62
3	Fatty acid photodecarboxylase is an ancient photoenzyme that forms hydrocarbons in the thylakoids of algae. Plant Physiology, 2021, 186, 1455-1472.	4.8	23
4	Mechanism and dynamics of fatty acid photodecarboxylase. Science, 2021, 372, .	12.6	93
5	Role of an ancient light-harvesting protein of PSI in light absorption and photoprotection. Nature Communications, 2021, 12, 679.	12.8	28
6	Membrane Inlet Mass Spectrometry: A Powerful Tool for Algal Research. Frontiers in Plant Science, 2020, 11, 1302.	3.6	13
7	Membrane Inlet Mass Spectrometry at the Crossroads of Photosynthesis, Biofuel, and Climate Research. Plant Physiology, 2020, 183, 451-454.	4.8	4
8	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
9	Continuous photoproduction of hydrocarbon drop-in fuel by microbial cell factories. Scientific Reports, 2019, 9, 13713.	3.3	33
10	Subcellular Energetics and Carbon Storage in Chlamydomonas. Cells, 2019, 8, 1154.	4.1	23
11	Branched-Chain Amino Acid Catabolism Impacts Triacylglycerol Homeostasis in <i>Chlamydomonas reinhardtii</i> . Plant Physiology, 2019, 179, 1502-1514.	4.8	26
12	Structure-Function Analysis of Chloroplast Proteins via Random Mutagenesis Using Error-Prone PCR. Plant Physiology, 2018, 177, 465-475.	4.8	6
13	Hunting the main player enabling <i>Chlamydomonas reinhardtii</i> growth under fluctuating light. Plant Journal, 2018, 94, 822-835.	5.7	104
14	Interorganelle Communication: Peroxisomal MALATE DEHYDROGENASE2 Connects Lipid Catabolism to Photosynthesis through Redox Coupling in Chlamydomonas. Plant Cell, 2018, 30, 1824-1847.	6.6	51
15	Flavodiiron-Mediated O ₂ Photoreduction Links H ₂ Production with CO ₂ Fixation during the Anaerobic Induction of Photosynthesis. Plant Physiology, 2018, 177, 1639-1649.	4.8	47
16	<i>Chlamydomonas</i> carries out fatty acid β -oxidation in ancestral peroxisomes using a bona fide acyl-CoA oxidase. Plant Journal, 2017, 90, 358-371.	5.7	80
17	A stromal region of cytochrome <i>b</i> ₆ subunit IV is involved in the activation of the Stt7 kinase in <i>Chlamydomonas</i> . Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12063-12068.	7.1	54
18	An algal photoenzyme converts fatty acids to hydrocarbons. Science, 2017, 357, 903-907.	12.6	317

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19	Flavodiiron Proteins Promote Fast and Transient O ₂ Photoreduction in <i>Chlamydomonas</i> . <i>Plant Physiology</i> , 2017, 174, 1825-1836.	4.8	133
20	PGRL1 and LHCSR3 Compensate for Each Other in Controlling Photosynthesis and Avoiding Photosystem I Photoinhibition during High Light Acclimation of <i>Chlamydomonas</i> Cells. <i>Molecular Plant</i> , 2017, 10, 216-218.	8.3	23
21	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.	4.8	55
22	Cytochrome b ₆ f function and localization, phosphorylation state of thylakoid membrane proteins and consequences on cyclic electron flow. <i>Photosynthesis Research</i> , 2016, 129, 307-320.	2.9	32
23	<i>Chlamydomonas reinhardtii</i> PsbS Protein Is Functional and Accumulates Rapidly and Transiently under High Light. <i>Plant Physiology</i> , 2016, 171, 2717-2730.	4.8	99
24	Saturating Light Induces Sustained Accumulation of Oil in Plastidal Lipid Droplets in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2016, 171, 2406-2417.	4.8	54
25	Microalgae Synthesize Hydrocarbons from Long-Chain Fatty Acids via a Light-Dependent Pathway. <i>Plant Physiology</i> , 2016, 171, 2393-2405.	4.8	102
26	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.	5.7	124
27	NDH-1 and NDH-2 Plastoquinone Reductases in Oxygenic Photosynthesis. <i>Annual Review of Plant Biology</i> , 2016, 67, 55-80.	18.7	224
28	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
29	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.	3.6	71
30	Deletion of Proton Gradient Regulation 5 (PGR5) and PGR5-Like 1 (PGRL1) 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.	3.6	67
31	Using coagulation-flocculation to harvest <i>Chlamydomonas reinhardtii</i> : Coagulant and flocculant efficiencies, and reuse of the liquid phase as growth medium. <i>Algal Research</i> , 2015, 9, 283-290.	4.6	31
32	Microalgal lipid droplets: composition, diversity, biogenesis and functions. <i>Plant Cell Reports</i> , 2015, 34, 545-555.	5.6	118
33	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.	9.6	57
34	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.	7.1	55
35	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.	4.8	47
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.	6.6	111

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37	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.	7.1	16
38	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
39	Comparison of various microalgae liquid biofuel production pathways based on energetic, economic and environmental criteria. <i>Bioresource Technology</i> , 2013, 136, 205-212.	9.6	88
40	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.	4.8	83
41	Third-generation biofuels: current and future research on microalgal lipid biotechnology. <i>OCL - Oilseeds and Fats, Crops and Lipids</i> , 2013, 20, D606.	1.4	29
42	A Forward Genetic Approach in <i>Chlamydomonas reinhardtii</i> as a Strategy for Exploring Starch Catabolism. <i>PLoS ONE</i> , 2013, 8, e74763.	2.5	28
43	PredAlgo: A New Subcellular Localization Prediction Tool Dedicated to Green Algae. <i>Molecular Biology and Evolution</i> , 2012, 29, 3625-3639.	8.9	270
44	Investigation of fatty acids accumulation in <i>Nannochloropsis oculata</i> for biodiesel application. <i>Bioresource Technology</i> , 2012, 124, 421-432.	9.6	110
45	An economic, sustainability, and energetic model of biodiesel production from microalgae. <i>Bioresource Technology</i> , 2012, 111, 191-200.	9.6	283
46	“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.	9.6	271
47	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.	3.3	625
48	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.	2.2	201
49	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.	6.6	176
50	Auxiliary electron transport pathways in chloroplasts of microalgae. <i>Photosynthesis Research</i> , 2010, 106, 19-31.	2.9	152
51	Relationships between PSII-independent hydrogen bioproduction and starch metabolism as evidenced from isolation of starch catabolism mutants in the green alga <i>Chlamydomonas reinhardtii</i> . <i>International Journal of Hydrogen Energy</i> , 2010, 35, 10731-10740.	7.1	37
52	Elevated Expression of PGR5 and NDH-H in Bundle Sheath Chloroplasts in <i>C4Flaveria</i> Species. <i>Plant and Cell Physiology</i> , 2010, 51, 664-668.	3.1	39
53	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.	3.4	134
54	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.	4.8	154

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55	Metal binding and antioxidant properties of chimeric tri- and tetra-domained metallothioneins. <i>Biochimie</i> , 2008, 90, 705-716.	2.6	9
56	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.	7.1	187
57	Effect of PGR5 Impairment on Photosynthesis and Growth in <i>Arabidopsis thaliana</i> . <i>Plant and Cell Physiology</i> , 2008, 49, 1688-1698.	3.1	122
58	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.	7.1	181
59	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.	2.8	15
60	Chlororespiration and cyclic electron flow around PSI during photosynthesis and plant stress response. <i>Plant, Cell and Environment</i> , 2007, 30, 1041-1051.	5.7	362
61	Hydrogen production by <i>Chlamydomonas reinhardtii</i> : an elaborate interplay of electron sources and sinks. <i>Planta</i> , 2007, 227, 397-407.	3.2	187
62	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.	2.8	9
63	Chloroplast targeting of phytochelatin synthase in <i>Arabidopsis</i> : effects on heavy metal tolerance and accumulation. <i>Biochimie</i> , 2006, 88, 1743-1750.	2.6	61
64	<i>Agrobacterium tumefaciens</i> type II NADH dehydrogenase.. <i>FEBS Journal</i> , 2006, 273, 3625-3637.	4.7	15
65	Hydrogen independent expression of hupSL genes in <i>Thiocapsa roseopersicina</i> BBS. <i>FEBS Journal</i> , 2005, 272, 4807-4816.	4.7	18
66	Generation and Analysis of Soybean Plastid Transformants Expressing <i>Bacillus thuringiensis</i> Cry1Ab Protoxin. <i>Plant Molecular Biology</i> , 2005, 58, 659-668.	3.9	121
67	Autotrophic and Mixotrophic Hydrogen Photoproduction in Sulfur-Deprived <i>Chlamydomonas</i> Cells. <i>Applied and Environmental Microbiology</i> , 2005, 71, 6199-6205.	3.1	170
68	Specific function of a plastid sigma factor for ndhF gene transcription. <i>Nucleic Acids Research</i> , 2005, 33, 5991-5999.	14.5	83
69	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.	6.6	181
70	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.	1.0	128
71	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.	2.2	230
72	Increased zinc content in transplastomic tobacco plants expressing a polyhistidine-tagged Rubisco large subunit. <i>Plant Biotechnology Journal</i> , 2004, 2, 389-399.	8.3	18

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73	Nfu2: a scaffold protein required for [4Fe-4S] and ferredoxin iron-sulphur cluster assembly in Arabidopsis chloroplasts. <i>Plant Journal</i> , 2004, 40, 101-111.	5.7	107
74	Generation of fertile transplastomic soybean. <i>Plant Molecular Biology</i> , 2004, 55, 479-489.	3.9	188
75	A nucleus-encoded factor, CRR2, is essential for the expression of chloroplastndhBinArabidopsis. <i>Plant Journal</i> , 2003, 36, 541-549.	5.7	293
76	Enhanced Toxic Metal Accumulation in Engineered Bacterial Cells Expressing Arabidopsis thaliana Phytochelatin Synthase. <i>Applied and Environmental Microbiology</i> , 2003, 69, 490-494.	3.1	144
77	Involvement of a Plastid Terminal Oxidase in Plastoquinone Oxidation as Evidenced by Expression of the Arabidopsis thaliana Enzyme in Tobacco. <i>Journal of Biological Chemistry</i> , 2002, 277, 31623-31630.	3.4	147
78	In Vivo Interactions between Photosynthesis, Mitorespiration, and Chlororespiration in Chlamydomonas reinhardtii. <i>Plant Physiology</i> , 2002, 129, 1921-1928.	4.8	90
79	CHLORORESPIRATION. <i>Annual Review of Plant Biology</i> , 2002, 53, 523-550.	18.7	359
80	Flocculent activity of a recombinant protein from Moringa oleifera Lam. seeds. <i>Applied Microbiology and Biotechnology</i> , 2002, 60, 114-119.	3.6	92
81	A novel thioredoxin-like protein located in the chloroplast is induced by water deficit in Solanum tuberosum L. plants. <i>Plant Journal</i> , 2002, 13, 97-107.	5.7	99
82	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.	4.8	122
83	Developments In Plastid Transformation. <i>Developments in Plant Genetics and Breeding</i> , 2000, , 59-66.	0.6	0
84	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.	5.7	124
85	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.	3.4	149
86	Targeted Inactivation of the Plastid ndhB Gene in Tobacco Results in an Enhanced Sensitivity of Photosynthesis to Moderate Stomatal Closure. <i>Plant Physiology</i> , 2000, 123, 1337-1350.	4.8	219
87	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.	2.8	81
88	The gene encoding the NdhH subunit of type 1 NAD(P)H dehydrogenase is essential to survival of Synechocystis PCC6803. <i>FEBS Letters</i> , 2000, 487, 272-276.	2.8	14
89	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.	4.0	66
90	Photosystem I Is Indispensable for Photoautotrophic Growth, CO ₂ Fixation, and H ₂ Photoproduction in Chlamydomonas reinhardtii. <i>Journal of Biological Chemistry</i> , 1999, 274, 10466-10473.	3.4	62

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91	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.	5.7	85
92	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.	1.0	95
93	Non-Photochemical Reduction of Intersystem Electron Carriers in Chloroplasts of Higher Plants and Algae. , 1998, , 1877-1882.		15
94	Limited photosynthetic electron flow but no CO ₂ fixation in <i>Chlamydomonas</i> mutants lacking photosystem I. <i>FEBS Letters</i> , 1997, 416, 65-68.	2.8	24
95	Evidence for an association of <i>ndhB</i> , <i>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.	2.8	110
96	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.	3.2	85
97	Carbonic anhydrase activity in leaves as measured in vivo by ¹⁸ O exchange between carbon dioxide and water. <i>Planta</i> , 1995, 196, 732.	3.2	5
98	Chlororespiration in Unicellular Green Algae. , 1995, , 1865-1868.		1
99	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.	3.2	103
100	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.	3.2	7
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.	1.0	13
102	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.	7.1	148
103	Inhibition of chlororespiration by myxothiazol and antimycin A in <i>Chlamydomonas reinhardtii</i> . <i>Photosynthesis Research</i> , 1991, 28, 141-148.	2.9	20
104	Atrazine and diuron resistant plants from photoautotrophic protoplast-derived cultures of <i>Nicotiana plumbaginifolia</i> . <i>Plant Cell Reports</i> , 1990, 9, 241-4.	5.6	15
105	Establishment and characterization of photoautotrophic protoplast-derived cultures of <i>Nicotiana plumbaginifolia</i> . <i>Plant Cell Reports</i> , 1989, 8, 234-237.	5.6	9
106	Oxygen-exchange studies in <i>Chlamydomonas</i> mutants deficient in photosynthetic electron transport: Evidence for a Photosystem II-dependent oxygen uptake in vivo. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1988, 936, 319-324.	1.0	20
107	The Kok effect and the light-inhibition of chlororespiration in <i>Chlamydomonas reinhardtii</i> . <i>FEBS Letters</i> , 1988, 228, 259-262.	2.8	17
108	[76] Mass spectrometric measurement of photosynthetic and respiratory oxygen exchange. <i>Methods in Enzymology</i> , 1988, 167, 686-691.	1.0	13

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109	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.	1.0	6
110	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.	1.0	95
111	Light-Dependent Oxygen Uptake, Glycolate, and Ammonia Release in l-Methionine Sulfoximine-Treated <i>Chlamydomonas</i> . <i>Plant Physiology</i> , 1985, 77, 281-284.	4.8	35
112	O ₂ Uptake in the Light in <i>Chlamydomonas</i> . <i>Plant Physiology</i> , 1985, 79, 225-230.	4.8	117