Richard Sayre

List of Publications by Citations

108 papers	8,195 citations	40 h-index	90 g-index
117 ext. papers	9,094 ext. citations	6.2 avg, IF	5.59 L-index

#	Paper	IF	Citations
108	The Chlamydomonas genome reveals the evolution of key animal and plant functions. *Science*, **2007**, 318, 245-50	33.3	1969
107	Comparing photosynthetic and photovoltaic efficiencies and recognizing the potential for improvement. *Science*, **2011**, 332, 805-9	33.3	1143
106	Biochemical biomarkers in algae and marine pollution: a review. *Ecotoxicology and Environmental Safety*, **2008**, 71, 1-15	7	368
105	Molecular mechanisms of proline-mediated tolerance to toxic heavy metals in transgenic microalgae. *Plant Cell*, **2002**, 14, 2837-47	11.6	367
104	Microalgae: The Potential for Carbon Capture. *BioScience*, **2010**, 60, 722-727	5.7	261
103	The BioCassava plus program: biofortification of cassava for sub-Saharan Africa. *Annual Review of Plant Biology*, **2011**, 62, 251-72	30.7	190
102	Chlamydomonas reinhardtii secretes compounds that mimic bacterial signals and interfere with quorum sensing regulation in bacteria. *Plant Physiology*, **2004**, 134, 137-46	6.6	182
101	The topology of a membrane protein: the orientation of the 32 kd Qb-binding chloroplast thylakoid membrane protein. *Cell*, **1986**, 47, 601-8	56.2	155
100	Optimization of photosynthetic light energy utilization by microalgae. *Algal Research*, **2012**, 1, 134-142	5	149
99	Involvement of histidine 190 on the D1 protein in electron/proton transfer reactions on the donor side of photosystem II. *Biochemistry*, **1998**, 37, 14245-56	3.2	131
98	Generation of cyanogen-free transgenic cassava. *Planta*, **2003**, 217, 367-73	4.7	118
97	Genetic modification of cassava for enhanced starch production. *Plant Biotechnology Journal*, **2006**, 4, 453-65	11.6	114
96	Purification, characterization, and localization of linamarase in cassava. *Plant Physiology*, **1990**, 93, 176-81	6.6	112
95	The vitamin riboflavin and its derivative lumichrome activate the LasR bacterial quorum-sensing receptor. *Molecular Plant-Microbe Interactions*, **2008**, 21, 1184-92	3.6	111
94	Engineering cyanogen synthesis and turnover in cassava (Manihot esculenta). *Plant Molecular Biology*, **2004**, 56, 661-9	4.6	93
93	Initial risk assessment of genetically modified (GM) microalgae for commodity-scale biofuel cultivation. *Algal Research*, **2013**, 2, 66-77	5	92
92	Extending cassava root shelf life via reduction of reactive oxygen species production. *Plant Physiology*, **2012**, 159, 1396-407	6.6	87

91	Cyanogenesis in cassava. The role of hydroxynitrile lyase in root cyanide production. *Plant Physiology*, **1998**, 116, 1219-25	6.6	87
90	Comparative energetics and kinetics of autotrophic lipid and starch metabolism in chlorophytic microalgae: implications for biomass and biofuel production. *Biotechnology for Biofuels*, **2013**, 6, 150	7.8	86
89	Impact of nitrogen limitation on biomass, photosynthesis, and lipid accumulation in Chlorella sorokiniana. *Journal of Applied Phycology*, **2016**, 28, 803-812	3.2	76
88	Lumenal side histidine mutations in the D1 protein of Photosystem II affect donor side electron transfer in Chlamydomonas reinhardtii. *Biochimica Et Biophysica Acta - Bioenergetics*, **1994**, 1185, 257-70	4.6	64
87	Photoproduction of hydrogen by sulfur-deprived C. reinhardtii mutants with impaired photosystem II photochemical activity. *Photosynthesis Research*, **2007**, 94, 79-89	3.7	63
86	Cadmium- and iron-stress-inducible gene expression in the green alga Chlamydomonas reinhardtii: evidence for H43 protein function in iron assimilation. *Planta*, **2002**, 215, 1-13	4.7	62
85	Characterization of the ndhC-psbG-ORF157/159 operon of maize plastid DNA and of the cyanobacterium Synechocystis sp. PCC6803. *Molecular Genetics and Genomics*, **1989**, 216, 60-9		62
84	Review of the cultivation program within the National Alliance for Advanced Biofuels and Bioproducts. *Algal Research*, **2017**, 22, 166-186	5	58
83	Charge recombination and thermoluminescence in photosystem II. *Biophysical Journal*, **2005**, 88, 1948-58	2.9	57
82	Photosynthetic electron transport in genetically altered photosystem II reaction centers of chloroplasts. *Proceedings of the National Academy of Sciences of the United States of America*, **1991**, 88, 9122-6	11.5	57
81	Protein PSII-G. An additional component of photosystem II identified through its plastid gene in maize. *Journal of Biological Chemistry*, **1986**, 261, 2485-8	5.4	57
80	Photosynthetic Enzyme Activities and Localization in Mollugo verticillata Populations Differing in the Levels of C(3) and C(4) Cycle Operation. *Plant Physiology*, **1979**, 64, 293-9	6.6	55
79	Modification of the pheophytin midpoint potential in photosystem II: Modulation of the quantum yield of charge separation and of charge recombination pathways. *Physical Chemistry Chemical Physics*, **2004**, 6, 4825	3.6	54
78	Over-expression of hydroxynitrile lyase in transgenic cassava roots accelerates cyanogenesis and food detoxification. *Plant Biotechnology Journal*, **2004**, 2, 37-43	11.6	52
77	Manganese-binding proteins of the oxygen-evolving complex. *Biochemistry*, **1989**, 28, 5560-7	3.2	52
76	Functional asymmetry of photosystem II D1 and D2 peripheral chlorophyll mutants of Chlamydomonas reinhardtii. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 4091-6	11.5	51
75	Review of the algal biology program within the National Alliance for Advanced Biofuels and Bioproducts. *Algal Research*, **2017**, 22, 187-215	5	50
74	Retention during processing and bioaccessibility of β-carotene in high β-carotene transgenic cassava root. *Journal of Agricultural and Food Chemistry*, **2012**, 60, 3861-6	5.7	49

73	Protein PSII-G. An additional component of photosystem II identified through its plastid gene in maize.. *Journal of Biological Chemistry*, **1986**, 261, 2485-2488	5.4	48
72	Spectroscopic characterization of tyrosine-Z in histidine 190 mutants of the D1 protein in photosystem II (PSII) in Chlamydomonas reinhardtii. Implications for the structural model of the donor side of PSII. *Journal of Biological Chemistry*, **1994**, 269, 5115-21	5.4	47
71	Ecotypic differences in the C3 and C 4 photosynthetic activity in Mollugo verticillata, a C3-C 4 intermediate. *Planta*, **1977**, 134, 257-62	4.7	44
70	REGULATION OF CYANOGENESIS IN CASSAVA. *Acta Horticulturae*, **1994**, 69-78	0.3	40
69	Evaluating nuclear transgene expression systems in Chlamydomonas reinhardtii. *Algal Research*, **2013**, 2, 321-332	5	39
68	Binding of aqueous cadmium by the lyophilized biomass of Chlamydomonas reinhardtii. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2002**, 210, 1-11	5.1	39
67	High field EPR study of the pheophytin anion radical in wild type and D1-E130 mutants of photosystem II in Chlamydomonas reinhardtii. *Journal of Biological Chemistry*, **2001**, 276, 22313-6	5.4	39
66	Removal of mercury from sediment by ultrasound combined with biomass (transgenic Chlamydomonas reinhardtii). *Chemosphere*, **2011**, 83, 1249-54	8.4	38
65	Review of the harvesting and extraction program within the National Alliance for Advanced Biofuels and Bioproducts. *Algal Research*, **2018**, 33, 470-485	5	38
64	Phycoremediation of heavy metals using transgenic microalgae. *Advances in Experimental Medicine and Biology*, **2007**, 616, 99-109	3.6	36
63	Growth and Heavy Metal Binding Properties of Transgenic Chlamydomonas Expressing a Foreign Metallothionein Gene. *International Journal of Phytoremediation*, **1999**, 1, 53-65	3.9	36
62	A LuxP-FRET-based reporter for the detection and quantification of AI-2 bacterial quorum-sensing signal compounds. *Biochemistry*, **2007**, 46, 3990-7	3.2	35
61	The AT thermoluminescence band from Chlamydomonas reinhardtii and the effects of mutagenesis of histidine residues on the donor side of the Photosystem II D1 polypeptide. *Biochimica Et Biophysica Acta - Bioenergetics*, **1994**, 1185, 228-237	4.6	35
60	Modification of the photosystem II acceptor side function in a D1 mutant (arginine-269-glycine) of Chlamydomonas reinhardti. *Biochimica Et Biophysica Acta - Bioenergetics*, **1997**, 1322, 60-76	4.6	33
59	Overexpression of hydroxynitrile lyase in cassava roots elevates protein and free amino acids while reducing residual cyanogen levels. *PLoS ONE*, **2011**, 6, e21996	3.7	32
58	Provitamin A biofortification of cassava enhances shelf life but reduces dry matter content of storage roots due to altered carbon partitioning into starch. *Plant Biotechnology Journal*, **2018**, 16, 1186-1200	11.6	30
57	Studies on the reconstitution of o(2)-evolution of chloroplasts. *Plant Physiology*, **1982**, 69, 1084-95	6.6	30
56	Strategies for Optimizing Algal Biology for Enhanced Biomass Production. *Frontiers in Energy Research*, **2015**, 3,	3.8	28

55	Construction and characterization of a photosystem II D1 mutant (arginine-269-glycine) of Chlamydomonas reinhardtii. *Biochimica Et Biophysica Acta - Bioenergetics*, **1996**, 1277, 83-92	4.6	28
54	A light-dependent oxygen consumption induced by photosystem II of isolated chloroplasts. *Archives of Biochemistry and Biophysics*, **1979**, 196, 525-33	4.1	27
53	Fine-tuning the photosynthetic light harvesting apparatus for improved photosynthetic efficiency and biomass yield. *Scientific Reports*, **2019**, 9, 13028	4.9	26
52	The Iron Assimilatory Protein, FEA1, from Chlamydomonas reinhardtii Facilitates Iron-Specific Metal Uptake in Yeast and Plants. *Frontiers in Plant Science*, **2011**, 2, 67	6.2	26
51	Characterization of chloroplast manganese by electron paramagnetic resonance spectroscopy. *Plant Science Letters*, **1979**, 16, 319-326		25
50	Removing allergens and reducing toxins from food crops. *Current Opinion in Biotechnology*, **2009**, 20, 191-6	11.4	24
49	Iron Biofortification and Homeostasis in Transgenic Cassava Roots Expressing the Algal Iron Assimilatory Gene, FEA1. *Frontiers in Plant Science*, **2012**, 3, 171	6.2	24
48	Microalgal vaccines. *Advances in Experimental Medicine and Biology*, **2007**, 616, 122-8	3.6	24
47	Molecular topology of the Photosystem II chlorophyll a binding protein, CP 43: Topology of a thylakoid membrane protein. *Photosynthesis Research*, **1994**, 40, 11-9	3.7	24
46	Light regulation of light-harvesting antenna size substantially enhances photosynthetic efficiency and biomass yield in green algae. *Plant Journal*, **2020**, 103, 584-603	6.9	23
45	Quantum Biological Switch Based on Superradiance Transitions. *Journal of Physical Chemistry C*, **2014**, 118, 20-26	3.8	23
44	Substitution of a Chlorophyll into the Inactive Branch Pheophytin-Binding Site Impairs Charge Separation in Photosystem II. *Journal of Physical Chemistry B*, **2004**, 108, 16904-16911	3.4	22
43	Photosystem II Peripheral Accessory Chlorophyll Mutants inChlamydomonas reinhardtii. Biochemical Characterization and Sensitivity to Photo-Inhibition,. *Plant Physiology*, **2001**, 127, 633-644	6.6	21
42	Site energies of active and inactive pheophytins in the reaction center of Photosystem II from Chlamydomonas reinhardtii. *Journal of Physical Chemistry B*, **2012**, 116, 3890-9	3.4	20
41	Differential expression of oxygen-evolving polypeptide genes in maize leaf cell types. *Plant Molecular Biology*, **1987**, 9, 217-26	4.6	20
40	Iron and protein biofortification of cassava: lessons learned. *Current Opinion in Biotechnology*, **2012**, 23, 257-64	11.4	19
39	Transgenic Approaches for Cyanogen Reduction in Cassava. *Journal of AOAC INTERNATIONAL*, **2007** , 90, 1450-1455	1.7	19
38	Electron transfer reactions: generalized spin-boson approach. *Journal of Mathematical Chemistry*, **2013**, 51, 890-913	2.1	18

37	N-ACYL HOMOSERINE LACTONe LACTONASE, AiiA, INACTIVATION OF QUORUM-SENSING AGONISTS PRODUCED BY CHLAMYDOMONAS REINHARDTII (CHLOROPHYTA) AND CHARACTERIZATION OF aiiA TRANSGENIC ALGAE(1). *Journal of Phycology*, **2011**, 47, 1219-27	3	18
36	Fluorescence Decay Kinetics of Wild Type and D2-H117N Mutant Photosystem II Reaction Centers Isolated from Chlamydomonas reinhardtii. *Journal of Physical Chemistry B*, **2000**, 104, 4777-4781	3.4	17
35	Cyanogen Metabolism in Cassava Roots: Impact on Protein Synthesis and Root Development. *Frontiers in Plant Science*, **2017**, 8, 220	6.2	16
34	Tissue specific inhibition of transient gene expression in cassava (Manihot esculenta Crantz). *Plant Science*, **1993**, 93, 121-130	5.3	15
33	Noninvasive evaluation of heavy metal uptake and storage in micoralgae using a fluorescence resonance energy transfer-based heavy metal biosensor. *Plant Physiology*, **2014**, 164, 1059-67	6.6	14
32	Dynamics of a chlorophyll dimer in collective and local thermal environments. *Journal of Mathematical Chemistry*, **2016**, 54, 866-917	2.1	12
31	Engineering the chloroplast encoded proteins of chlamydomonas. *Photosynthesis Research*, **2004**, 80, 411-9	3.7	10
30	Superradiance Transition and Nonphotochemical Quenching in Photosynthetic Complexes. *Journal of Physical Chemistry C*, **2015**, 119, 22289-22296	3.8	9
29	Noise-assisted quantum electron transfer in photosynthetic complexes. *Journal of Mathematical Chemistry*, **2013**, 51, 2514-2541	2.1	9
28	Characterization of the Expression of the Photosystem II-Oxygen Evolving Complex in C(4) Species of Flaveria. *Plant Physiology*, **1992**, 98, 1154-62	6.6	9
27	Reduction of Chloroplast DNA Content in Solanum nigrum Suspension Cells by Treatment with Chloroplast DNA Synthesis Inhibitors. *Plant Physiology*, **1990**, 94, 1477-83	6.6	9
26	Site-Specific Mutagenesis at Histidine 118 of the Photosystem II D1 Protein of Chlamydomonas Reinhardtii **1995**, 471-474		9
25	Modulating the redox potential of the stable electron acceptor, Q(B), in mutagenized photosystem II reaction centers. *Biochemistry*, **2011**, 50, 1454-64	3.2	8
24	Photosystem II peripheral accessory chlorophyll mutants in Chlamydomonas reinhardtii. Biochemical characterization and sensitivity to photo-inhibition. *Plant Physiology*, **2001**, 127, 633-44	6.6	8
23	Molecular Tools for Bioengineering Eukaryotic Microalgae. *Current Biotechnology*, **2016**, 5, 93-108	0.6	8
22	Induction of RNA interference to block Zika virus replication and transmission in the mosquito Aedes aegypti. *Insect Biochemistry and Molecular Biology*, **2019**, 111, 103169	4.5	7
21	Genome sequence and comparative analyses of atoxigenic Aspergillus flavus WRRL 1519. *Mycologia* , **2018**, 110, 482-493	2.4	7
20	Mutagenesis of the Symmetry Related H117 Residue in the Photosystem II D2 Protein of Chlamydomonas: Implications for Energy Transfer from Accessory Chlorophylls **1998**, 1013-1016		7

19	Photosystem II, a Structural Perspective **2009**, 573-602		6
18	Identification of the Optimal Light Harvesting Antenna Size for High-Light Stress Mitigation in Plants. *Frontiers in Plant Science*, **2020**, 11, 505	6.2	5
17	A sensitive fluorescence reporter for monitoring quorum sensing regulated protease production in Vibrio harveyi. *Journal of Microbiological Methods*, **2011**, 84, 189-93	2.8	4
16	Biosensors for the Detection and Quantification of AI-2 Class Quorum-Sensing Compounds. *Methods in Molecular Biology*, **2018**, 1673, 73-88	1.4	4
15	Formation of light-harvesting complex II aggregates from LHCII-PSI-LHCI complexes in rice plants under high light. *Journal of Experimental Botany*, **2021**, 72, 4938-4948	7	3
14	Recent Advances in Algal Biomass Production		3
13	Transgenic approaches for cyanogen reduction in cassava. *Journal of AOAC INTERNATIONAL*, **2007**, 90, 1450-5	1.7	3
12	Production of Entanglement Entropy by Decoherence. *Open Systems and Information Dynamics*, **2018**, 25, 1850001	0.4	2
11	On improving the performance of nonphotochemical quenching in CP29 light-harvesting antenna complex. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2016**, 380, 1279-1283	2.3	2
10	Functional Analysis of Photosystem II **1998**, 287-322		2
9	Possible role of interference, protein noise, and sink effects in nonphotochemical quenching in photosynthetic complexes. *Journal of Mathematical Biology*, **2017**, 74, 43-76	2	1
8	FRET-based biosensors for the detection and quantification of AI-2 class of quorum sensing compounds. *Methods in Molecular Biology*, **2011**, 692, 31-46	1.4	1
7	Introduction. *Photosynthesis Research*, **2004**, 82, 201-2	3.7	1
6	Heavy Metal Binding Properties of Wild Type and Transgenic Algae (Chlamydomonas sp.) **1998**, 189-192		1
5	Cassava **2008**, 177-198		0
4	Cassava (Manihot esculenta Crantz). *Methods in Molecular Biology*, **2006**, 344, 13-24	1.4	
3	Engineering the chloroplast encoded proteins of Chlamydomonas **2005**, 691-699		
2	Characterization of a Site-Directed Mutant (D1-Arginine 269-Glycine) of Chlamydomonas reinhardtii **1995**, 575-578		

1 Biofortification of Cassava: Recent Progress and Challenges Facing the Future **2022**, 417-438