

# Richard Sayre

## List of Publications by Year in descending order

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108  
papers

9,950  
citations

53794

45  
h-index

36028

97  
g-index

117  
all docs

117  
docs citations

117  
times ranked

11436  
citing authors

#	ARTICLE	IF	CITATIONS
1	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. <i>Science</i> , 2007, 318, 245-250.	12.6	2,354
2	Comparing Photosynthetic and Photovoltaic Efficiencies and Recognizing the Potential for Improvement. <i>Science</i> , 2011, 332, 805-809.	12.6	1,369
3	Biochemical biomarkers in algae and marine pollution: A review. <i>Ecotoxicology and Environmental Safety</i> , 2008, 71, 1-15.	6.0	446
4	Molecular Mechanisms of Proline-Mediated Tolerance to Toxic Heavy Metals in Transgenic Microalgae. <i>Plant Cell</i> , 2002, 14, 2837-2847.	6.6	440
5	Microalgae: The Potential for Carbon Capture. <i>BioScience</i> , 2010, 60, 722-727.	4.9	320
6	The BioCassava Plus Program: Biofortification of Cassava for Sub-Saharan Africa. <i>Annual Review of Plant Biology</i> , 2011, 62, 251-272.	18.7	245
7	<i>Chlamydomonas reinhardtii</i> Secretes Compounds That Mimic Bacterial Signals and Interfere with Quorum Sensing Regulation in Bacteria. <i>Plant Physiology</i> , 2004, 134, 137-146.	4.8	213
8	Optimization of photosynthetic light energy utilization by microalgae. <i>Algal Research</i> , 2012, 1, 134-142.	4.6	199
9	The topology of a membrane protein: The orientation of the 32 kd Qb-binding chloroplast thylakoid membrane protein. <i>Cell</i> , 1986, 47, 601-608.	28.9	165
10	Generation of cyanogen-free transgenic cassava. <i>Planta</i> , 2003, 217, 367-373.	3.2	153
11	The Vitamin Riboflavin and Its Derivative Lumichrome Activate the LasR Bacterial Quorum-Sensing Receptor. <i>Molecular Plant-Microbe Interactions</i> , 2008, 21, 1184-1192.	2.6	150
12	Purification, Characterization, and Localization of Linamarase in Cassava. <i>Plant Physiology</i> , 1990, 93, 176-181.	4.8	137
13	Involvement of Histidine 190 on the D1 Protein in Electron/Proton Transfer Reactions on the Donor Side of Photosystem II. <i>Biochemistry</i> , 1998, 37, 14245-14256.	2.5	136
14	Genetic modification of cassava for enhanced starch production. <i>Plant Biotechnology Journal</i> , 2006, 4, 453-465.	8.3	136
15	Extending Cassava Root Shelf Life via Reduction of Reactive Oxygen Species Production. <i>Plant Physiology</i> , 2012, 159, 1396-1407.	4.8	132
16	Engineering cyanogen synthesis and turnover in cassava ( <i>Manihot esculenta</i> ). <i>Plant Molecular Biology</i> , 2004, 56, 661-669.	3.9	119
17	Cyanogenesis in Cassava. <i>Plant Physiology</i> , 1998, 116, 1219-1225.	4.8	112
18	Comparative energetics and kinetics of autotrophic lipid and starch metabolism in chlorophytic microalgae: implications for biomass and biofuel production. <i>Biotechnology for Biofuels</i> , 2013, 6, 150.	6.2	110

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19	Initial risk assessment of genetically modified (GM) microalgae for commodity-scale biofuel cultivation. <i>Algal Research</i> , 2013, 2, 66-77.	4.6	105
20	Impact of nitrogen limitation on biomass, photosynthesis, and lipid accumulation in <i>Chlorella sorokiniana</i> . <i>Journal of Applied Phycology</i> , 2016, 28, 803-812.	2.8	100
21	Cadmium- and iron-stress-inducible gene expression in the green alga <i>Chlamydomonas reinhardtii</i> : evidence for H43 protein function in iron assimilation. <i>Planta</i> , 2002, 215, 1-13.	3.2	76
22	Luminal side histidine mutations in the D1 protein of photosystem II affect donor side electron transfer in <i>Chlamydomonas reinhardtii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1994, 1185, 257-270.	1.0	72
23	Review of the cultivation program within the National Alliance for Advanced Biofuels and Bioproducts. <i>Algal Research</i> , 2017, 22, 166-186.	4.6	72
24	Characterization of the <i>ndhC-psbG-ORF157/159</i> operon of maize plastid DNA and of the cyanobacterium <i>Synechocystis</i> sp. PCC6803. <i>Molecular Genetics and Genomics</i> , 1989, 216, 60-69.	2.4	70
25	Review of the algal biology program within the National Alliance for Advanced Biofuels and Bioproducts. <i>Algal Research</i> , 2017, 22, 187-215.	4.6	69
26	Photoproduction of hydrogen by sulfur-deprived <i>C. reinhardtii</i> mutants with impaired Photosystem II photochemical activity. <i>Photosynthesis Research</i> , 2007, 94, 79-89.	2.9	68
27	Light regulation of light-harvesting antenna size substantially enhances photosynthetic efficiency and biomass yield in green algae. <i>Plant Journal</i> , 2020, 103, 584-603.	5.7	68
28	Over-expression of hydroxynitrile lyase in transgenic cassava roots accelerates cyanogenesis and food detoxification. <i>Plant Biotechnology Journal</i> , 2004, 2, 37-43.	8.3	65
29	Charge Recombination and Thermoluminescence in Photosystem II. <i>Biophysical Journal</i> , 2005, 88, 1948-1958.	0.5	63
30	Protein PSII-G. An additional component of photosystem II identified through its plastid gene in maize.. <i>Journal of Biological Chemistry</i> , 1986, 261, 2485-2488.	3.4	63
31	Photosynthetic Enzyme Activities and Localization in <i>Mollugo verticillata</i> Populations Differing in the Levels of C <sub>3</sub> and C <sub>4</sub> Cycle Operation. <i>Plant Physiology</i> , 1979, 64, 293-299.	4.8	62
32	Photosynthetic electron transport in genetically altered photosystem II reaction centers of chloroplasts.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1991, 88, 9122-9126.	7.1	59
33	Protein PSII-G. An additional component of photosystem II identified through its plastid gene in maize. <i>Journal of Biological Chemistry</i> , 1986, 261, 2485-8.	3.4	59
34	Modification of the pheophytin midpoint potential in photosystem II: Modulation of the quantum yield of charge separation and of charge recombination pathways. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 4825.	2.8	58
35	Manganese-binding proteins of the oxygen-evolving complex. <i>Biochemistry</i> , 1989, 28, 5560-5567.	2.5	57
36	Retention during Processing and Bioaccessibility of $\beta$ -Carotene in High $\beta$ -Carotene Transgenic Cassava Root. <i>Journal of Agricultural and Food Chemistry</i> , 2012, 60, 3861-3866.	5.2	57

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37	Functional asymmetry of photosystem II D1 and D2 peripheral chlorophyll mutants of <i>Chlamydomonas reinhardtii</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 4091-4096.	7.1	54
38	Phycoremediation of Heavy Metals Using Transgenic Microalgae. <i>Advances in Experimental Medicine and Biology</i> , 2007, 616, 99-109.	1.6	53
39	Fine-tuning the photosynthetic light harvesting apparatus for improved photosynthetic efficiency and biomass yield. <i>Scientific Reports</i> , 2019, 9, 13028.	3.3	53
40	Evaluating nuclear transgene expression systems in <i>Chlamydomonas reinhardtii</i> . <i>Algal Research</i> , 2013, 2, 321-332.	4.6	52
41	Review of the harvesting and extraction program within the National Alliance for Advanced Biofuels and Bioproducts. <i>Algal Research</i> , 2018, 33, 470-485.	4.6	50
42	Provitamin A biofortification of cassava enhances shelf life but reduces dry matter content of storage roots due to altered carbon partitioning into starch. <i>Plant Biotechnology Journal</i> , 2018, 16, 1186-1200.	8.3	49
43	REGULATION OF CYANOGENESIS IN CASSAVA. <i>Acta Horticulturae</i> , 1994, , 69-78.	0.2	48
44	Spectroscopic characterization of tyrosine-Z in histidine 190 mutants of the D1 protein in photosystem II (PSII) in <i>Chlamydomonas reinhardtii</i> . Implications for the structural model of the donor side of PSII. <i>Journal of Biological Chemistry</i> , 1994, 269, 5115-21.	3.4	47
45	Ecotypic differences in the C3 and C4 photosynthetic activity in <i>Mollugo verticillata</i> , a C3?C4 intermediate. <i>Planta</i> , 1977, 134, 257-262.	3.2	46
46	Growth and Heavy Metal Binding Properties of Transgenic <i>Chlamydomonas</i> Expressing a Foreign Metallothionein Gene. <i>International Journal of Phytoremediation</i> , 1999, 1, 53-65.	3.1	46
47	High Field EPR Study of the Pheophytin Anion Radical in Wild Type and D1-E130 Mutants of Photosystem II in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Biological Chemistry</i> , 2001, 276, 22313-22316.	3.4	46
48	Binding of aqueous cadmium by the lyophilized biomass of <i>Chlamydomonas reinhardtii</i> . <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2002, 210, 1-11.	4.7	46
49	Removal of mercury from sediment by ultrasound combined with biomass (transgenic <i>Chlamydomonas</i> ) Tj ETQq1 1,0,784314 <sub>rgBT</sub> /C	8.2	45
50	A LuxP-FRET-Based Reporter for the Detection and Quantification of AI-2 Bacterial Quorum-Sensing Signal Compounds. <i>Biochemistry</i> , 2007, 46, 3990-3997.	2.5	41
51	Overexpression of Hydroxynitrile Lyase in Cassava Roots Elevates Protein and Free Amino Acids while Reducing Residual Cyanogen Levels. <i>PLoS ONE</i> , 2011, 6, e21996.	2.5	41
52	The AT thermoluminescence band from <i>Chlamydomonas reinhardtii</i> and the effects of mutagenesis of histidine residues on the donor side of the Photosystem II D1 polypeptide. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1994, 1185, 228-237.	1.0	39
53	Strategies for Optimizing Algal Biology for Enhanced Biomass Production. <i>Frontiers in Energy Research</i> , 2015, 3, .	2.3	38
54	Modification of the photosystem II acceptor side function in a D1 mutant (arginine-269-glycine) of <i>Chlamydomonas reinhardtii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1997, 1322, 60-76.	1.0	35

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55	Studies on the Reconstitution of O <sub>2</sub> -Evolution of Chloroplasts. <i>Plant Physiology</i> , 1982, 69, 1084-1095.	4.8	32
56	Construction and characterization of a Photosystem II D1 mutant (arginine-269-glycine) of <i>Chlamydomonas reinhardtii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1996, 1277, 83-92.	1.0	31
57	A light-dependent oxygen consumption induced by photosystem II of isolated chloroplasts. <i>Archives of Biochemistry and Biophysics</i> , 1979, 196, 525-533.	3.0	30
58	Microalgal Vaccines. <i>Advances in Experimental Medicine and Biology</i> , 2007, 616, 122-128.	1.6	30
59	The Iron Assimilatory Protein, FE1, from <i>Chlamydomonas reinhardtii</i> Facilitates Iron-Specific Metal Uptake in Yeast and Plants. <i>Frontiers in Plant Science</i> , 2011, 2, 67.	3.6	29
60	Cyanogen Metabolism in Cassava Roots: Impact on Protein Synthesis and Root Development. <i>Frontiers in Plant Science</i> , 2017, 8, 220.	3.6	29
61	Quantum Biological Switch Based on Superradiance Transitions. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20-26.	3.1	28
62	Molecular topology of the Photosystem II chlorophyll a binding protein, CP 43: Topology of a thylakoid membrane protein. <i>Photosynthesis Research</i> , 1994, 40, 11-19.	2.9	27
63	Iron biofortification and homeostasis in transgenic cassava roots expressing the algal iron assimilatory gene, FE1. <i>Frontiers in Plant Science</i> , 2012, 3, 171.	3.6	26
64	Characterization of chloroplast manganese by electron paramagnetic resonance spectroscopy. <i>Plant Science Letters</i> , 1979, 16, 319-326.	1.8	25
65	Substitution of a Chlorophyll into the Inactive Branch Pheophytin-Binding Site Impairs Charge Separation in Photosystem II. <i>Journal of Physical Chemistry B</i> , 2004, 108, 16904-16911.	2.6	25
66	Removing allergens and reducing toxins from food crops. <i>Current Opinion in Biotechnology</i> , 2009, 20, 191-196.	6.6	25
67	Differential expression of oxygen-evolving polypeptide genes in maize leaf cell types. <i>Plant Molecular Biology</i> , 1987, 9, 217-226.	3.9	24
68	Transgenic Approaches for Cyanogen Reduction in Cassava. <i>Journal of AOAC INTERNATIONAL</i> , 2007, 90, 1450-1455.	1.5	24
69	Site Energies of Active and Inactive Pheophytins in the Reaction Center of Photosystem II from <i>Chlamydomonas reinhardtii</i> . <i>Journal of Physical Chemistry B</i> , 2012, 116, 3890-3899.	2.6	24
70	Identification of the Optimal Light Harvesting Antenna Size for High-Light Stress Mitigation in Plants. <i>Frontiers in Plant Science</i> , 2020, 11, 505.	3.6	24
71	Photosystem II Peripheral Accessory Chlorophyll Mutants in <i>Chlamydomonas reinhardtii</i> . <i>Biochemical Characterization and Sensitivity to Photo-Inhibition</i> . <i>Plant Physiology</i> , 2001, 127, 633-644.	4.8	23
72	ACYL HOMOSERINE LACTONE LACTONASE, AiiA, INACTIVATION OF QUORUM SENSING AGONISTS PRODUCED BY <i>CHLAMYDOMONAS REINHARDTII</i> (CHLOROPHYTA) AND CHARACTERIZATION OF TRANSGENIC ALGAE. <i>Journal of Phycology</i> , 2011, 47, 1219-1227.	2.3	23

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73	Iron and protein biofortification of cassava: lessons learned. <i>Current Opinion in Biotechnology</i> , 2012, 23, 257-264.	6.6	23
74	Electron transfer reactions: generalized spin-boson approach. <i>Journal of Mathematical Chemistry</i> , 2013, 51, 890-913.	1.5	20
75	Induction of RNA interference to block Zika virus replication and transmission in the mosquito <i>Aedes aegypti</i> . <i>Insect Biochemistry and Molecular Biology</i> , 2019, 111, 103169.	2.7	19
76	Fluorescence Decay Kinetics of Wild Type and D2-H117N Mutant Photosystem II Reaction Centers Isolated from <i>Chlamydomonas reinhardtii</i> . <i>Journal of Physical Chemistry B</i> , 2000, 104, 4777-4781.	2.6	17
77	Tissue specific inhibition of transient gene expression in cassava ( <i>Manihot esculenta</i> Crantz). <i>Plant Science</i> , 1993, 93, 121-130.	3.6	16
78	Dynamics of a chlorophyll dimer in collective and local thermal environments. <i>Journal of Mathematical Chemistry</i> , 2016, 54, 866-917.	1.5	15
79	Noninvasive Evaluation of Heavy Metal Uptake and Storage in Microalgae Using a Fluorescence Resonance Energy Transfer-Based Heavy Metal Biosensor. <i>Plant Physiology</i> , 2014, 164, 1059-1067.	4.8	14
80	Engineering the Chloroplast Encoded Proteins of <i>Chlamydomonas</i> . <i>Photosynthesis Research</i> , 2004, 80, 411-419.	2.9	13
81	Superradiance Transition and Nonphotochemical Quenching in Photosynthetic Complexes. <i>Journal of Physical Chemistry C</i> , 2015, 119, 22289-22296.	3.1	11
82	Characterization of the Expression of the Photosystem II-Oxygen Evolving Complex in <i>C<sub>4</sub></i> Species of <i>Flaveria</i> . <i>Plant Physiology</i> , 1992, 98, 1154-1162.	4.8	10
83	Noise-assisted quantum electron transfer in photosynthetic complexes. <i>Journal of Mathematical Chemistry</i> , 2013, 51, 2514-2541.	1.5	10
84	Genome sequence and comparative analyses of atoxigenic <i>Aspergillus flavus</i> WRR1 1519. <i>Mycologia</i> , 2018, 110, 482-493.	1.9	10
85	Reduction of Chloroplast DNA Content in <i>Solanum nigrum</i> Suspension Cells by Treatment with Chloroplast DNA Synthesis Inhibitors. <i>Plant Physiology</i> , 1990, 94, 1477-1483.	4.8	9
86	Modulating the Redox Potential of the Stable Electron Acceptor, $Q_B$ , in Mutagenized Photosystem II Reaction Centers. <i>Biochemistry</i> , 2011, 50, 1454-1464.	2.5	9
87	Molecular Tools for Bioengineering Eukaryotic Microalgae. <i>Current Biotechnology</i> , 2016, 5, 93-108.	0.4	9
88	Photosystem II peripheral accessory chlorophyll mutants in <i>Chlamydomonas reinhardtii</i> . <i>Biochemical characterization and sensitivity to photo-inhibition</i> . <i>Plant Physiology</i> , 2001, 127, 633-44.	4.8	9
89	Photosystem II, a Structural Perspective. , 2009, , 573-602.		7
90	Mutagenesis of the Symmetry Related H117 Residue in the Photosystem II D2 Protein of <i>Chlamydomonas</i> : Implications for Energy Transfer from Accessory Chlorophylls. , 1998, , 1013-1016.		7

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91	Assessing <i>Aedes aegypti</i> candidate genes during viral infection and <i>Wolbachia</i> -mediated pathogen blocking. <i>Insect Molecular Biology</i> , 2022, 31, 356-368.	2.0	7
92	Cyanogenesis in cassava and its molecular manipulation for crop improvement. <i>Journal of Experimental Botany</i> , 2022, 73, 1853-1867.	4.8	7
93	A sensitive fluorescence reporter for monitoring quorum sensing regulated protease production in <i>Vibrio harveyi</i> . <i>Journal of Microbiological Methods</i> , 2011, 84, 189-193.	1.6	5
94	Biosensors for the Detection and Quantification of AI-2 Class Quorum-Sensing Compounds. <i>Methods in Molecular Biology</i> , 2018, 1673, 73-88.	0.9	5
95	Formation of light-harvesting complex II aggregates from LHCII-PSI-LHCI complexes in rice plants under high light. <i>Journal of Experimental Botany</i> , 2021, 72, 4938-4948.	4.8	5
96	Transgenic approaches for cyanogen reduction in cassava. <i>Journal of AOAC INTERNATIONAL</i> , 2007, 90, 1450-5.	1.5	4
97	FRET-Based Biosensors for the Detection and Quantification of AI-2 Class of Quorum Sensing Compounds. <i>Methods in Molecular Biology</i> , 2011, 692, 31-46.	0.9	3
98	Production of Entanglement Entropy by Decoherence. <i>Open Systems and Information Dynamics</i> , 2018, 25, 1850001.	1.2	3
99	Recent Advances in Algal Biomass Production. , 0, , .		3
100	On improving the performance of nonphotochemical quenching in CP29 light-harvesting antenna complex. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 1279-1283.	2.1	2
101	Functional Analysis of Photosystem II. , 1998, , 287-322.		2
102	Heavy Metal Binding Properties of Wild Type and Transgenic Algae ( <i>Chlamydomonas</i> sp.). , 1998, , 189-192.		2
103	Introduction. <i>Photosynthesis Research</i> , 2004, 82, 201-202.	2.9	1
104	Cassava ( <i>Manihot esculenta</i> Crantz). , 2006, 344, 13-24.		1
105	Possible role of interference, protein noise, and sink effects in nonphotochemical quenching in photosynthetic complexes. <i>Journal of Mathematical Biology</i> , 2017, 74, 43-76.	1.9	1
106	Biofortification of Cassava: Recent Progress and Challenges Facing the Future. , 2022, , 417-438.		1
107	Characterization of a Site-Directed Mutant (D1-Arginine 269-Glycine) of <i>Chlamydomonas reinhardtii</i> . , 1995, , 575-578.		0
108	Engineering the chloroplast encoded proteins of <i>Chlamydomonas</i> . , 2005, , 691-699.		0