

# John H Golbeck

## List of Publications by Citations

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#	Paper	IF	Citations
189	Shewanella oneidensis MR-1 nanowires are outer membrane and periplasmic extensions of the extracellular electron transport components. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 12883-8	11.5	412
188	Photosystem I <b>1991</b> , 83-177		210
187	PsaD is required for the stable binding of PsaC to the photosystem I core protein of <i>Synechococcus</i> sp. PCC 6301. <i>Biochemistry</i> , <b>1991</b> , 30, 7863-72	3.2	171
186	Spinach Thylakoid Polyphenol Oxidase : ISOLATION, ACTIVATION, AND PROPERTIES OF THE NATIVE CHLOROPLAST ENZYME. <i>Plant Physiology</i> , <b>1981</b> , 67, 977-84	6.6	146
185	Solar hydrogen-producing bionanodevice outperforms natural photosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 20988-91	11.5	138
184	Purification and properties of the intact P-700 and Fx-containing Photosystem I core protein. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1989</b> , 973, 324-32	4.6	126
183	Wiring photosystem I for direct solar hydrogen production. <i>Biochemistry</i> , <b>2010</b> , 49, 404-14	3.2	121
182	Photosystem I/molecular wire/metal nanoparticle bioconjugates for the photocatalytic production of H <sub>2</sub> . <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 6308-9	16.4	121
181	Recruitment of a foreign quinone into the A(1) site of photosystem I. I. Genetic and physiological characterization of phyloquinone biosynthetic pathway mutants in <i>Synechocystis</i> sp. pcc 6803. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 8523-30	5.4	111
180	Site-directed conversion of a cysteine to aspartate leads to the assembly of a [3Fe-4S] cluster in PsaC of photosystem I. The photoreduction of FA is independent of FB. <i>Biochemistry</i> , <b>1992</b> , 31, 5093-9	3.2	111
179	Protein-cofactor interactions in bioenergetic complexes: the role of the A1A and A1B phyloquinones in Photosystem I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2009</b> , 1787, 1057-88	4.6	110
178	Wiring an [FeFe]-hydrogenase with photosystem I for light-induced hydrogen production. <i>Biochemistry</i> , <b>2010</b> , 49, 10264-6	3.2	109
177	Iron-sulfur clusters in type I reaction centers. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2001</b> , 1507, 139-60	4.6	104
176	Assembly of photosystem I. I. Inactivation of the rubA gene encoding a membrane-associated rubredoxin in the cyanobacterium <i>Synechococcus</i> sp. PCC 7002 causes a loss of photosystem I activity. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 20343-54	5.4	103
175	Evidence for asymmetric electron transfer in cyanobacterial photosystem I: analysis of a methionine-to-leucine mutation of the ligand to the primary electron acceptor A0. <i>Biochemistry</i> , <b>2004</b> , 43, 4741-54	3.2	93
174	Electron transfer in cyanobacterial photosystem I: II. Determination of forward electron transfer rates of site-directed mutants in a putative electron transfer pathway from A0 through A1 to FX. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 27876-87	5.4	87
173	Electron transfer from the acceptor A1 to the iron-sulfur centers in photosystem I as studied by transient EPR spectroscopy. <i>Biochemistry</i> , <b>1994</b> , 33, 11789-97	3.2	86

172	Structure of a symmetric photosynthetic reaction center-photosystem. <i>Science</i> , <b>2017</b> , 357, 1021-1025	33.3	81
171	Asymmetric electron transfer in cyanobacterial Photosystem I: charge separation and secondary electron transfer dynamics of mutations near the primary electron acceptor A0. <i>Biophysical Journal</i> , <b>2005</b> , 88, 1238-49	2.9	81
170	The sufR gene (sll0088 in <i>Synechocystis</i> sp. strain PCC 6803) functions as a repressor of the sufBCDS operon in iron-sulfur cluster biogenesis in cyanobacteria. <i>Journal of Bacteriology</i> , <b>2004</b> , 186, 956-67	3.5	81
169	Assembly of photosystem I. II. Rubredoxin is required for the in vivo assembly of F(X) in <i>Synechococcus</i> sp. PCC 7002 as shown by optical and EPR spectroscopy. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 20355-66	5.4	80
168	Recruitment of a foreign quinone into the A1 site of photosystem I. Altered kinetics of electron transfer in phylloquinone biosynthetic pathway mutants studied by time-resolved optical, EPR, and electrometric techniques. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 23429-38	5.4	78
167	Isolation of the intact photosystem I reaction center core containing P700 and iron-sulfur center FX. <i>FEBS Letters</i> , <b>1988</b> , 228, 268-272	3.8	78
166	Regulatory roles for IscA and SufA in iron homeostasis and redox stress responses in the cyanobacterium <i>Synechococcus</i> sp. strain PCC 7002. <i>Journal of Bacteriology</i> , <b>2006</b> , 188, 3182-91	3.5	77
165	Recruitment of a foreign quinone into the A(1) site of photosystem I. II. Structural and functional characterization of phylloquinone biosynthetic pathway mutants by electron paramagnetic resonance and electron-nuclear double resonance spectroscopy. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 8531-9	5.4	76
164	Reconstitution of electron transport in photosystem I with PsaC and PsaD proteins expressed in <i>Escherichia coli</i> . <i>FEBS Letters</i> , <b>1990</b> , 276, 175-80	3.8	71
163	Electron transfer in cyanobacterial photosystem I: I. Physiological and spectroscopic characterization of site-directed mutants in a putative electron transfer pathway from A0 through A1 to FX. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 27864-75	5.4	70
162	Isolation and characterization of a subchloroplast particle enriched in iron-sulfur protein and P700. <i>Archives of Biochemistry and Biophysics</i> , <b>1977</b> , 178, 140-50	4.1	69
161	Deletion of the PsaF Polypeptide Modifies the Environment of the Redox-Active Phylloquinone (A1). Evidence for Unidirectionality of Electron Transfer in Photosystem I. <i>Journal of Physical Chemistry B</i> , <b>1998</b> , 102, 8288-8299	3.4	65
160	Heliobacterial photosynthesis. <i>Photosynthesis Research</i> , <b>2007</b> , 92, 35-53	3.7	64
159	Absence of PsaC subunit allows assembly of photosystem I core but prevents the binding of PsaD and PsaE in <i>Synechocystis</i> sp. PCC6803. <i>Plant Molecular Biology</i> , <b>1995</b> , 29, 331-42	4.6	64
158	SufR coordinates two [4Fe-4S] <sup>2+</sup> , 1+ clusters and functions as a transcriptional repressor of the sufBCDS operon and an autoregulator of sufR in cyanobacteria. <i>Journal of Biological Chemistry</i> , <b>2007</b> , 282, 31909-19	5.4	62
157	Biochemical and biophysical characterization of photosystem I from phytoene desaturase and zeta-carotene desaturase deletion mutants of <i>Synechocystis</i> Sp. PCC 6803: evidence for PsaA- and PsaB-side electron transport in cyanobacteria. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 20030-41	5.4	61
156	Polypeptide composition of the Photosystem I complex and the Photosystem I core protein from <i>Synechococcus</i> sp. PCC 6301. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1991</b> , 1059, 215-25	4.6	61
155	A comparative analysis of the spin state distribution of in vitro and in vivo mutants of PsaC. A biochemical argument for the sequence of electron transfer in Photosystem I as FX -IFA -IFB -I ferredoxin/flavodoxin. <i>Photosynthesis Research</i> , <b>1999</b> , 61, 107-144	3.7	60

154	PsaC subunit of photosystem I is oriented with iron-sulfur cluster F(B) as the immediate electron donor to ferredoxin and flavodoxin. <i>Biophysical Journal</i> , <b>1998</b> , 74, 2029-35	2.9	57
153	Assembly of protein subunits within the stromal ridge of photosystem I. Structural changes between unbound and sequentially PS I-bound polypeptides and correlated changes of the magnetic properties of the terminal iron sulfur clusters. <i>Journal of Molecular Biology</i> , <b>2003</b> , 327, 671-97	6.5	56
152	Recruitment of a foreign quinone into the A1 site of photosystem I. In vivo replacement of plastoquinone-9 by media-supplemented naphthoquinones in phyloquinone biosynthetic pathway mutants of <i>Synechocystis</i> sp. PCC 6803. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 39512-21	5.4	55
151	Insertional inactivation of the menG gene, encoding 2-phytyl-1,4-naphthoquinone methyltransferase of <i>Synechocystis</i> sp. PCC 6803, results in the incorporation of 2-phytyl-1,4-naphthoquinone into the A(1) site and alteration of the equilibrium constant between F(A) and F(B) iron-sulfur clusters. <i>Biophysical Journal</i> , <b>2002</b> , 83, 2885-97	3.2	55
150	Reconstitution of iron-sulfur center FB results in complete restoration of NADP (+) photoreduction in Hg-treated Photosystem I complexes from <i>Synechococcus</i> sp. PCC 6301. <i>Photosynthesis Research</i> , <b>1995</b> , 46, 249-55	3.7	55
149	Photosystem I is indispensable for photoautotrophic growth, CO <sub>2</sub> fixation, and H <sub>2</sub> photoproduction in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 10466-73	5.4	53
148	Mechanism of Linolenic Acid-induced Inhibition of Photosynthetic Electron Transport. <i>Plant Physiology</i> , <b>1980</b> , 65, 707-13	6.6	49
147	Modeling of the P700+ charge recombination kinetics with phyloquinone and plastoquinone-9 in the A1 site of photosystem I. <i>Biophysical Journal</i> , <b>2002</b> , 83, 2885-97	2.9	48
146	Mutational analysis of photosystem I polypeptides. Role of PsaD and the lysyl 106 residue in the reductase activity of the photosystem I. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 11772-80	5.4	48
145	Reconstitution of the photosystem I complex from the P700 and Fx-containing reaction center core protein and the FA/FB polypeptide. <i>FEBS Letters</i> , <b>1988</b> , 240, 9-14	3.8	48
144	Asymmetric Hydrogen-Bonding of the Quinone Cofactor in Photosystem I Probed by <sup>13</sup> C-Labeled Naphthoquinones. <i>Journal of Physical Chemistry B</i> , <b>2004</b> , 108, 9439-9448	3.4	46
143	Charge recombination between P700+ and A1- occurs directly to the ground state of P700 in a photosystem I core devoid of FX, FB, and FA. <i>Biochemistry</i> , <b>1993</b> , 32, 849-57	3.2	46
142	Spectral and kinetic characterization of electron acceptor A1 in a Photosystem I core devoid of iron-sulfur centers F X, F B and F A. <i>Photosynthesis Research</i> , <b>1995</b> , 45, 183-93	3.7	45
141	Evidence for a mixed-ligand [4Fe-4S] cluster in the C14D mutant of PsaC. Altered reduction potentials and EPR spectral properties of the FA and FB clusters on rebinding to the P700-FX core. <i>Biochemistry</i> , <b>1995</b> , 34, 7861-8	3.2	45
140	Reconstitution of barley photosystem I with modified PSI-C allows identification of domains interacting with PSI-D and PSI-A/B. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 8996-9001	5.4	45
139	Site-directed conversion of cysteine-565 to serine in PsaB of photosystem I results in the assembly of [3Fe-4S] and [4Fe-4S] clusters in Fx. A mixed-ligand [4Fe-4S] cluster is capable of electron transfer to FA and FB. <i>Biochemistry</i> , <b>1993</b> , 32, 4411-9	3.2	45
138	The binding of cofactors to photosystem I analyzed by spectroscopic and mutagenic methods. <i>Annual Review of Biophysics and Biomolecular Structure</i> , <b>2003</b> , 32, 237-56		44
137	A kinetic assessment of the sequence of electron transfer from F(X) to F(A) and further to F(B) in photosystem I: the value of the equilibrium constant between F(X) and F(A). <i>Biophysical Journal</i> , <b>2000</b> , 78, 363-72	2.9	43

136	Spectral hole burning of the primary electron donor state of Photosystem I. <i>Photosynthesis Research</i> , <b>1989</b> , 22, 233-46	3.7	42
135	Vipp1 is essential for the biogenesis of Photosystem I but not thylakoid membranes in <i>Synechococcus</i> sp. PCC 7002. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 15904-14	5.4	41
134	Identification of FX in the heliobacterial reaction center as a [4Fe-4S] cluster with an S = 3/2 ground spin state. <i>Biochemistry</i> , <b>2006</b> , 45, 6756-64	3.2	41
133	Modified ligands to FA and FB in photosystem I. I. Structural constraints for the formation of iron-sulfur clusters in free and rebound PsaC. <i>Journal of Biological Chemistry</i> , <b>1995</b> , 270, 28108-17	5.4	40
132	Characterization of the [3Fe-4S] and [4Fe-4S] clusters in unbound PsaC mutants C14D and C51D. Midpoint potentials of the single [4Fe-4S] clusters are identical to FA and FB in bound PsaC of photosystem I. <i>Biochemistry</i> , <b>1993</b> , 32, 8251-8	3.2	39
131	A Mössbauer analysis of the low-potential iron-sulfur center in photosystem I: spectroscopic evidence that FX is a [4Fe-4S] cluster. <i>Biochemistry</i> , <b>1989</b> , 28, 8980-3	3.2	38
130	Reconstitution of the iron-sulfur clusters in the isolated FA/FB protein: EPR spectral characterization of same-species and cross-species Photosystem I complexes. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1991</b> , 1056, 139-148	4.6	38
129	Menaquinone-7 in the reaction center complex of the green sulfur bacterium <i>Chlorobium vibrioforme</i> functions as the electron acceptor A1. <i>Biochemistry</i> , <b>1998</b> , 37, 3237-42	3.2	37
128	The structure of photosystem I. <i>Current Opinion in Structural Biology</i> , <b>1993</b> , 3, 508-514	8.1	37
127	EXAFS structural study of FX, the low-potential Fe-S center in photosystem I. <i>Biochemistry</i> , <b>1989</b> , 28, 8056-9	3.2	37
126	PoreDesigner for tuning solute selectivity in a robust and highly permeable outer membrane pore. <i>Nature Communications</i> , <b>2018</b> , 9, 3661	17.4	36
125	Ultrastructural analysis and identification of envelope proteins of "Candidatus <i>Chloracidobacterium thermophilum</i> " chlorosomes. <i>Journal of Bacteriology</i> , <b>2011</b> , 193, 6701-11	3.5	35
124	Isolation and characterization of homodimeric type-I reaction center complex from <i>Candidatus Chloracidobacterium thermophilum</i> , an aerobic chlorophototroph. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 5720-32	5.4	34
123	Incorporation of a high potential quinone reveals that electron transfer in Photosystem I becomes highly asymmetric at low temperature. <i>Photochemical and Photobiological Sciences</i> , <b>2012</b> , 11, 946-56	4.2	34
122	Purification of the photosynthetic reaction center from <i>Heliobacterium modesticaldum</i> . <i>Photosynthesis Research</i> , <b>2012</b> , 111, 291-302	3.7	34
121	Biogenesis of iron-sulfur clusters in photosystem I: holo-NfuA from the cyanobacterium <i>Synechococcus</i> sp. PCC 7002 rapidly and efficiently transfers [4Fe-4S] clusters to apo-PsaC in vitro. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 28426-35	5.4	33
120	Chemical rescue of a site-modified ligand to a [4Fe-4S] cluster in PsaC, a bacterial-like dicluster ferredoxin bound to Photosystem I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2007</b> , 1767, 712-24	4.6	33
119	Modified ligands to FA and FB in photosystem I. II. Characterization of a mixed ligand [4Fe-4S] cluster in the C51D mutant of PsaC upon rebinding to P700-Fx cores. <i>Journal of Biological Chemistry</i> , <b>1995</b> , 270, 28118-25	5.4	33

118	Characterization of chlorophyll f synthase heterologously produced in <i>Synechococcus</i> sp. PCC 7002. <i>Photosynthesis Research</i> , <b>2019</b> , 140, 77-92	3.7	32
117	Regulation of Gene Expression in <i>Shewanella oneidensis</i> MR-1 during Electron Acceptor Limitation and Bacterial Nanowire Formation. <i>Applied and Environmental Microbiology</i> , <b>2016</b> , 82, 5428-43	4.8	32
116	Electron transfer may occur in the chlorosome envelope: the CsmI and CsmJ proteins of chlorosomes are 2Fe-2S ferredoxins. <i>Biochemistry</i> , <b>2001</b> , 40, 464-73	3.2	32
115	Iron-sulfur centers in the photosynthetic reaction center complex from <i>Chlorobium vibrioforme</i> . Differences from and similarities to the iron-sulfur centers in Photosystem I. <i>Photosynthesis Research</i> , <b>1994</b> , 41, 105-14	3.7	32
114	Two-dimensional protein crystals for solar energy conversion. <i>Advanced Materials</i> , <b>2014</b> , 26, 7064-9	24	31
113	Recruitment of a foreign quinone into the A1 site of photosystem I. Characterization of a menB rubA double deletion mutant in <i>Synechococcus</i> sp. PCC 7002 devoid of FX, FA, and FB and containing plastoquinone or exchanged 9,10-anthraquinone. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 12271-81	5.4	30
112	Determination of acid-labile sulfide in subchloroplast particles containing Triton X-100. <i>Analytical Biochemistry</i> , <b>1976</b> , 73, 539-42	3.1	30
111	Solution structure of the unbound, oxidized Photosystem I subunit PsaC, containing [4Fe-4S] clusters F(A) and F(B): a conformational change occurs upon binding to photosystem I. <i>Journal of Biological Inorganic Chemistry</i> , <b>2002</b> , 7, 461-72	3.7	29
110	Alteration of the Axial Met Ligand to Electron Acceptor A0 in Photosystem I: Effect on the Generation of P <sup>+</sup> 700 A <sup>+</sup> Radical Pairs as Studied by W-band Transient EPR. <i>Applied Magnetic Resonance</i> , <b>2010</b> , 37, 85-102	0.8	28
109	Identification and characterization of PshB, the dicluster ferredoxin that harbors the terminal electron acceptors F(A) and F(B) in <i>Heliobacterium modesticaldum</i> . <i>Biochemistry</i> , <b>2007</b> , 46, 2530-6	3.2	28
108	Resolution and reconstitution of a bound Fe-S protein from the photosynthetic reaction center of <i>Heliobacterium modesticaldum</i> . <i>Biochemistry</i> , <b>2005</b> , 44, 9950-60	3.2	28
107	The menD and menE homologs code for 2-succinyl-6-hydroxyl-2,4-cyclohexadiene-1-carboxylate synthase and O-succinylbenzoic acid-CoA synthase in the phylloquinone biosynthetic pathway of <i>Synechocystis</i> sp. PCC 6803. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2003</b> , 1557, 67-76	4.6	28
106	Evidence that histidine forms a coordination bond to the A(0A) and A(0B) chlorophylls and a second H-bond to the A(1A) and A(1B) phylloquinones in M688H(PsaA) and M668H(PsaB) variants of <i>Synechocystis</i> sp. PCC 6803. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2014</b> , 1837, 1362-75	4.6	27
105	Role of the hydrogen bond from Leu722 to the A1A phylloquinone in photosystem I. <i>Biochemistry</i> , <b>2009</b> , 48, 3315-24	3.2	27
104	Electron Transfer Quenching and Photoinduced EPR of Hypericin and the Ciliate Photoreceptor Stentorin. <i>Journal of Physical Chemistry A</i> , <b>1997</b> , 101, 366-372	2.8	27
103	Energy transfer from chlorophyll f to the trapping center in naturally occurring and engineered Photosystem I complexes. <i>Photosynthesis Research</i> , <b>2019</b> , 141, 151-163	3.7	26
102	Modified ligands to FA and FB in photosystem I. Proposed chemical rescue of a [4Fe-4S] cluster with an external thiolate in alanine, glycine, and serine mutants of PsaC. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 31135-44	5.4	26
101	Ultrafast Energy Transfer Involving the Red Chlorophylls of Cyanobacterial Photosystem I Probed through Two-Dimensional Electronic Spectroscopy. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 11631-11638	16.4	25



100	Contributions of the protein environment to the midpoint potentials of the A1 phylloquinones and the Fx iron-sulfur cluster in photosystem I. <i>Biochemistry</i> , <b>2007</b> , 46, 10804-16	3.2	25
99	Critical evaluation of electron transfer kinetics in P-F/F, P-F, and P-A Photosystem I core complexes in liquid and in trehalose glass. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2018</b> , 1859, 1288-1301	4.6	25
98	The structure of Photosystem I acclimated to far-red light illuminates an ecologically important acclimation process in photosynthesis. <i>Science Advances</i> , <b>2020</b> , 6, eaay6415	14.3	24
97	Unifying principles in homodimeric type I photosynthetic reaction centers: properties of PscB and the FA, FB and FX iron-sulfur clusters in green sulfur bacteria. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2008</b> , 1777, 1535-44	4.6	24
96	Electrostatic influence of PsaC protein binding to the PsaA/PsaB heterodimer in photosystem I. <i>Biophysical Journal</i> , <b>2006</b> , 90, 1081-9	2.9	24
95	Temporal and spectral characterization of the photosynthetic reaction center from <i>Heliobacterium modesticaldum</i> . <i>Photosynthesis Research</i> , <b>2013</b> , 116, 1-9	3.7	23
94	Alteration of the H-bond to the A(1A) phylloquinone in Photosystem I: influence on the kinetics and energetics of electron transfer. <i>Journal of Physical Chemistry B</i> , <b>2011</b> , 115, 1751-9	3.4	23
93	Understanding of the binding interface between PsaC and the PsaA/PsaB heterodimer in photosystem I. <i>Biochemistry</i> , <b>2009</b> , 48, 5405-16	3.2	23
92	Strains of <i>Synechocystis</i> sp. PCC 6803 with altered PsaC. I. Mutations incorporated in the cysteine ligands of the two [4Fe-4S] clusters FA and FB of photosystem I. <i>Journal of Biological Chemistry</i> , <b>1997</b> , 272, 8032-9	5.4	23
91	Removal of PsaF alters forward electron transfer in photosystem I: evidence for fast reoxidation of QK-A in subunit deletion mutants of <i>Synechococcus</i> sp. PCC 7002. <i>Biochemistry</i> , <b>2004</b> , 43, 1264-75	3.2	23
90	Thermodynamics of the Electron Acceptors in <i>Heliobacterium modesticaldum</i> : An Exemplar of an Early Homodimeric Type I Photosynthetic Reaction Center. <i>Biochemistry</i> , <b>2016</b> , 55, 2358-70	3.2	23
89	Characterization of a photosystem I core containing P700 and intermediate electron acceptor A1. <i>Biochemistry</i> , <b>1990</b> , 29, 6545-50	3.2	22
88	Biomimetic wiring and stabilization of photosynthetic membrane proteins with block copolymer interfaces. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 15457-15463	13	21
87	The bound iron-sulfur clusters of type-I homodimeric reaction centers. <i>Photosynthesis Research</i> , <b>2010</b> , 104, 333-46	3.7	21
86	Strains of <i>Synechocystis</i> sp. PCC 6803 with altered PsaC. II. EPR and optical spectroscopic properties of FA and FB in aspartate, serine, and alanine replacements of cysteines 14 and 51. <i>Journal of Biological Chemistry</i> , <b>1997</b> , 272, 8040-9	5.4	21
85	The bound electron acceptors in green sulfur bacteria: resolution of the g-tensor for the F(X) iron-sulfur cluster in <i>Chlorobium tepidum</i> . <i>Biophysical Journal</i> , <b>2000</b> , 78, 3160-9	2.9	21
84	BciD Is a Radical S-Adenosyl-l-methionine (SAM) Enzyme That Completes Bacteriochlorophyllide e Biosynthesis by Oxidizing a Methyl Group into a Formyl Group at C-7. <i>Journal of Biological Chemistry</i> , <b>2017</b> , 292, 1361-1373	5.4	20
83	Light-mediated hydrogen generation in Photosystem I: attachment of a naphthoquinone-molecular wire-Pt nanoparticle to the A1A and A1B sites. <i>Biochemistry</i> , <b>2014</b> , 53, 2295-306	3.2	20

82	Paramagnetic <sup>1</sup> H NMR spectroscopy of the reduced, unbound photosystem I subunit PsaC: sequence-specific assignment of contact-shifted resonances and identification of mixed- and equal-valence Fe-Fe pairs in [4Fe-4S] centers FA- and FB-. <i>Journal of Biological Inorganic Chemistry</i> , <b>2000</b> , 5, 381-92	3.7	20
81	Suppressor mutations in the study of photosystem I biogenesis: sll0088 is a previously unidentified gene involved in reaction center accumulation in <i>Synechocystis</i> sp. strain PCC 6803. <i>Journal of Bacteriology</i> , <b>2003</b> , 185, 3878-87	3.5	19
80	3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Activity in <i>Ochromonas malhamensis</i> : A System to Study the Relationship between Enzyme Activity and Rate of Steroid Biosynthesis. <i>Plant Physiology</i> , <b>1986</b> , 82, 523-7	6.6	19
79	ChlR protein of <i>Synechococcus</i> sp. PCC 7002 is a transcription activator that uses an oxygen-sensitive [4Fe-4S] cluster to control genes involved in pigment biosynthesis. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 16624-39	5.4	18
78	Spectral resolution of the primary electron acceptor A0 in Photosystem I. <i>Journal of Physical Chemistry B</i> , <b>2012</b> , 116, 3380-6	3.4	18
77	The FX iron-sulfur cluster serves as the terminal bound electron acceptor in heliobacterial reaction centers. <i>Photosynthesis Research</i> , <b>2012</b> , 111, 285-90	3.7	18
76	Effect of hydrogen bond strength on the redox properties of phylloquinones: a two-dimensional hyperfine sublevel correlation spectroscopy study of photosystem I. <i>Biochemistry</i> , <b>2011</b> , 50, 3495-501	3.2	18
75	Identification and characterization of PshBII, a second FA/FB-containing polypeptide in the photosynthetic reaction center of <i>Heliobacterium modesticaldum</i> . <i>Photosynthesis Research</i> , <b>2010</b> , 104, 293-303	3.7	18
74	Location of the iron-sulfur clusters FA and FB in photosystem I: an electron paramagnetic resonance study of spin relaxation enhancement of P700+. <i>Biochemistry</i> , <b>1999</b> , 38, 13210-5	3.2	18
73	Hydroxylation of biphenyl by <i>Aspergillus parasiticus</i> : Approaches to yield improvement in fermenter cultures. <i>Biotechnology and Bioengineering</i> , <b>1985</b> , 27, 1395-402	4.9	18
72	The structure and function of quinones in biological solar energy transduction: a cyclic voltammetry, EPR, and hyperfine sub-level correlation (HYSCORE) spectroscopy study of model naphthoquinones. <i>Journal of Physical Chemistry B</i> , <b>2013</b> , 117, 7210-20	3.4	17
71	Redox titration of two [4Fe-4S] clusters in the photosynthetic reaction center from the anaerobic green sulfur bacterium <i>Chlorobium vibrioforme</i> . <i>FEBS Journal</i> , <b>1997</b> , 244, 454-61		17
70	A relationship between amide hydrogen bond strength and quinone reduction potential: implications for photosystem I and bacterial reaction center quinone function. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2007</b> , 17, 4891-4	2.9	17
69	The Presence of the IsiA-PSI Supercomplex Leads to Enhanced Photosystem I Electron Throughput in Iron-Starved Cells of <i>Synechococcus</i> sp. PCC 7002. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 13549-59	4	16
68	Structure and properties in solution of PsaD, an extrinsic polypeptide of photosystem I. <i>FEBS Journal</i> , <b>1998</b> , 255, 309-16		16
67	Electrogenicity accompanies photoreduction of the iron-sulfur clusters F(A) and F(B) in photosystem I. <i>FEBS Letters</i> , <b>1998</b> , 431, 219-23	3.8	16
66	Breaking biological symmetry in membrane proteins: the asymmetrical orientation of PsaC on the pseudo-C2 symmetric Photosystem I core. <i>Cellular and Molecular Life Sciences</i> , <b>2009</b> , 66, 1257-70	10.3	15
65	Light-induced charge separation across the photosynthetic membrane: a proposed structure for the photosystem I reaction center. <i>Journal of Membrane Science</i> , <b>1987</b> , 33, 151-168	9.6	15



64	Engineered biosynthesis of bacteriochlorophyll g in <i>Rhodobacter sphaeroides</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2018</b> , 1859, 501-509	4.6	14
63	N photo-CIDNP MAS NMR analysis of reaction centers of <i>Chloracidobacterium thermophilum</i> . <i>Photosynthesis Research</i> , <b>2018</b> , 137, 295-305	3.7	14
62	Molecular dynamics study of the primary charge separation reactions in Photosystem I: effect of the replacement of the axial ligands to the electron acceptor A <sup>+</sup> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2014</b> , 1837, 1472-83	4.6	14
61	Incorporation of 2,3-Disubstituted-1,4-Naphthoquinones into the A1 Binding Site of Photosystem I Studied by EPR and ENDOR Spectroscopy. <i>Applied Magnetic Resonance</i> , <b>2010</b> , 37, 65-83	0.8	14
60	The Effect of Bacteriochlorophyll g Oxidation on Energy and Electron Transfer in Reaction Centers from <i>Heliobacterium modesticaldum</i> . <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 13714-25	3.4	13
59	Evidence that chlorophyll f functions solely as an antenna pigment in far-red-light photosystem I from <i>Fischerella thermalis</i> PCC 7521. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2020</b> , 1861, 148184	4.6	12
58	Electron-Phonon Coupling in Cyanobacterial Photosystem I. <i>Journal of Physical Chemistry B</i> , <b>2018</b> , 122, 7943-7955	3.4	12
57	The Evolution of Type I Reaction Centers: The Response to Oxygenic Photosynthesis. <i>Advances in Photosynthesis and Respiration</i> , <b>2012</b> , 285-316	1.7	12
56	Electrometrical study of electron transfer from the terminal FA/FB iron-sulfur clusters to external acceptors in photosystem I. <i>FEBS Letters</i> , <b>1999</b> , 462, 421-4	3.8	12
55	The hydroxylation of biphenyl by <i>Aspergillus toxicarius</i> : Conditions for a bench scale fermentation process. <i>Biotechnology and Bioengineering</i> , <b>1984</b> , 26, 434-41	4.9	12
54	Improving extraction and post-purification concentration of membrane proteins. <i>Analyst, The</i> , <b>2018</b> , 143, 1378-1386	5	12
53	The cysteine-proximal aspartates in the Fx-binding niche of photosystem I. Effect of alanine and lysine replacements on photoautotrophic growth, electron transfer rates, single-turnover flash efficiency, and EPR spectral properties. <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 9993-10001	5.4	11
52	Zn <sup>2+</sup> -Inducible Expression Platform for <i>Synechococcus</i> sp. Strain PCC 7002 Based on the smtA Promoter/Operator and smtB Repressor. <i>Applied and Environmental Microbiology</i> , <b>2017</b> , 83,	4.8	10
51	The eight-amino acid internal loop of PSI-C mediates association of low molecular mass iron-sulfur proteins with the P700-FX core in photosystem I. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 18778-83	5.4	10
50	[12] Subchloroplast particle enriched in P700 and iron-sulfur protein. <i>Methods in Enzymology</i> , <b>1980</b> , 69, 129-141	1.7	10
49	Two-dimensional Zn HYSCORE spectroscopy reveals that a Zn-bacteriochlorophyll a <sup>+</sup> dimer is the primary donor (P) in the type-1 reaction centers of <i>Chloracidobacterium thermophilum</i> . <i>Physical Chemistry Chemical Physics</i> , <b>2020</b> , 22, 6457-6467	3.6	9
48	Species-dependent alteration of electron transfer in the early stages of charge stabilization in Photosystem I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2015</b> , 1847, 429-440	4.6	9
47	Thermodynamics of charge separation of photosystem I in the menA and menB null mutants of <i>Synechocystis</i> sp. PCC 6803 determined by pulsed photoacoustics. <i>Biochemistry</i> , <b>2009</b> , 48, 1829-37	3.2	9

46	Reaction centers of the thermophilic microaerophile, <i>Chloracidobacterium thermophilum</i> (Acidobacteria) I: biochemical and biophysical characterization. <i>Photosynthesis Research</i> , <b>2019</b> , 142, 87-103	3.7	8
45	Mutations in algal and cyanobacterial Photosystem I that independently affect the yield of initial charge separation in the two electron transfer cofactor branches. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2018</b> , 1859, 42-55	4.6	8
44	Multiple pathways of charge recombination revealed by the temperature dependence of electron transfer kinetics in cyanobacterial photosystem I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2019</b> , 1860, 601-610	4.6	8
43	Effect of Dehydrated Trehalose Matrix on the Kinetics of Forward Electron Transfer Reactions in Photosystem I. <i>Zeitschrift Fur Physikalische Chemie</i> , <b>2017</b> , 231, 325-345	3.1	8
42	The assembly of a multisubunit photosynthetic membrane protein complex: a site-specific spin labeling EPR spectroscopic study of the PsaC subunit in photosystem I. <i>Biochemistry</i> , <b>2010</b> , 49, 2398-408	3.2	8
41	Quantitation of labile sulfide content and P700 photochemistry in spinach photosystem I particles. <i>Biochemical and Biophysical Research Communications</i> , <b>1976</b> , 71, 452-8	3.4	8
40	Primary charge separation within the structurally symmetric tetrameric ChlPPChl chlorophyll exciplex in photosystem I. <i>Journal of Photochemistry and Photobiology B: Biology</i> , <b>2021</b> , 217, 112154	6.7	8
39	Assembly of the Bound Iron-Sulfur Clusters in Photosystem I		8
38	Quantum yield measurements of light-induced H <sub>2</sub> generation in a photosystem I-[FeFe]-H <sub>2</sub> ase nanoconstruct. <i>Photosynthesis Research</i> , <b>2016</b> , 127, 5-11	3.7	7
37	Alteration of the Axial Met Ligand to Electron Acceptor A0 in Photosystem I: An Investigation of Electron Transfer at Different Temperatures by Multifrequency Time-Resolved and CW EPR. <i>Applied Magnetic Resonance</i> , <b>2010</b> , 37, 103-121	0.8	7
36	Removal of the PsaF polypeptide biases electron transfer in favor of the PsaB branch of cofactors in Triton X-100 photosystem I complexes from <i>Synechococcus</i> sp. PCC 7002. <i>Photochemistry and Photobiology</i> , <b>2008</b> , 84, 1371-80	3.6	7
35	Concentrating membrane proteins using ultrafiltration without concentrating detergents. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 2122-30	4.9	7
34	Toward a mechanistic and physiological understanding of a ferredoxin:disulfide reductase from the domains Archaea and Bacteria. <i>Journal of Biological Chemistry</i> , <b>2018</b> , 293, 9198-9209	5.4	6
33	Photoinduced transient absorbance spectra of P840/P840(+) and the FMO protein in reaction centers of <i>Chlorobium vibrioforme</i> . <i>Biophysical Journal</i> , <b>2001</b> , 81, 382-93	2.9	6
32	Site of salicylaldehyde interaction with photosystem II. <i>Photosynthesis Research</i> , <b>1985</b> , 6, 371-80	3.7	6
31	Structure of a monomeric photosystem II core complex from a cyanobacterium acclimated to far-red light reveals the functions of chlorophylls d and f. <i>Journal of Biological Chemistry</i> , <b>2021</b> , 101424	5.4	6
30	Structure and function of an unusual flavodoxin from the domain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 25917-25922	11.5	6
29	Bacterial Nanowires of <i>Shewanella Oneidensis</i> MR-1 are Outer Membrane and Periplasmic Extensions of the Extracellular Electron Transport Components. <i>Biophysical Journal</i> , <b>2015</b> , 108, 368a	2.9	5

28	Triplet Charge Recombination in Heliobacterial Reaction Centers Does Not Produce a Spin-Polarized EPR Spectrum. <i>Zeitschrift Fur Physikalische Chemie</i> , <b>2017</b> , 231, 593-607	3.1	5
27	Wiring photosystem I for electron transfer to a tethered redox dye. <i>Energy and Environmental Science</i> , <b>2011</b> , 4, 2428	35.4	5
26	Generating dihydrogen by tethering an [FeFe]hydrogenase via a molecular wire to the A/A sites of photosystem I. <i>Photosynthesis Research</i> , <b>2020</b> , 143, 155-163	3.7	5
25	Electron transfer from the A1A and A1B sites to a tethered Pt nanoparticle requires the FeS clusters for suppression of the recombination channel. <i>Journal of Photochemistry and Photobiology B: Biology</i> , <b>2015</b> , 152, 325-34	6.7	4
24	Light-Driven Chloride Transport Kinetics of Halorhodopsin. <i>Biophysical Journal</i> , <b>2018</b> , 115, 353-360	2.9	4
23	The field-dependence of the solid-state photo-CIDNP effect in two states of heliobacterial reaction centers. <i>Photosynthesis Research</i> , <b>2013</b> , 117, 461-9	3.7	4
22	Action of salicylaldehyde on electron transport reactions, fluorescence yield, and light-induced field changes in spinach chloroplasts. A new mode of inhibition in photosystem II. <i>Archives of Biochemistry and Biophysics</i> , <b>1980</b> , 202, 458-66	4.1	4
21	A dimeric chlorophyll electron acceptor differentiates type I from type II photosynthetic reaction centers. <i>IScience</i> , <b>2021</b> , 24, 102719	6.1	4
20	Two-dimensional HYSCORE spectroscopy reveals a histidine imidazole as the axial ligand to Chl in the M688H genetic variant of Photosystem I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2021</b> , 1862, 148424	4.6	4
19	Shedding Light on Primary Donors in Photosynthetic Reaction Centers. <i>Frontiers in Microbiology</i> , <b>2021</b> , 12, 735666	5.7	4
18	[7] Comparison of in Vitro and in Vivo mutants of PsaC in photosystem I: Protocols for mutagenesis and techniques for analysis. <i>Methods in Enzymology</i> , <b>1998</b> , 297, 95-123	1.7	3
17	Control of electron transfer by protein dynamics in photosynthetic reaction centers. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>2020</b> , 55, 425-468	8.7	3
16	Designing a modified clostridial 2[4Fe-4S] ferredoxin as a redox coupler to directly link photosystem I with a Pt nanoparticle. <i>Photosynthesis Research</i> , <b>2020</b> , 143, 165-181	3.7	3
15	Presence of a [3Fe-4S] cluster in a PsaC variant as a functional component of the photosystem I electron transfer chain in <i>Synechococcus</i> sp. PCC 7002. <i>Photosynthesis Research</i> , <b>2018</b> , 136, 31-48	3.7	2
14	Metals in bioenergetics and biomimetics systems. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2013</b> , 1827, 869-70	4.6	2
13	Chapter 17:Wired Reaction Centers. <i>RSC Energy and Environment Series</i> , <b>2011</b> , 464-505	0.6	2
12	Molecular Interactions of the Stromal Subunit PsaC with the PsaA/PsaB Heterodimer <b>2006</b> , 79-98		2
11	Expression, purification and characterization of an active C491G variant of ferredoxin sulfite reductase from <i>Synechococcus elongatus</i> PCC 7942. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2018</b> , 1859, 1096-1107	4.6	1

10	Photosystem I: FX, FA, and FB Iron-Sulfur Clusters <b>2004</b> , 348-356		1
9	Differential sensitivity to oxygen among the bacteriochlorophylls g in the type-I reaction centers of <i>Heliobacterium modesticaldum</i> . <i>Photochemical and Photobiological Sciences</i> , <b>2021</b> , 20, 747-759	4.2	1
8	Transient EPR Studies of In Vivo Uptake of Substituted Anthraquinones by Photosystem I in Phylloquinone Biosynthetic Pathway Mutants of <i>Synechocystis</i> sp. PCC 6803 <b>2008</b> , 227-230		1
7	Acclimation of the photosynthetic apparatus to low light in a thermophilic <i>Synechococcus</i> sp. strain.. <i>Photosynthesis Research</i> , <b>2022</b> , 1	3.7	1
6	Elucidating the design principles of photosynthetic electron-transfer proteins by site-directed spin labeling EPR spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2016</b> , 1857, 548-556	4.6	0
5	Liposome-based measurement of light-driven chloride transport kinetics of halorhodopsin. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , <b>2021</b> , 1863, 183637	3.8	0
4	Symmetry breaking in photosystem I: ultrafast optical studies of variants near the accessory chlorophylls in the A- and B-branches of electron transfer cofactors. <i>Photochemical and Photobiological Sciences</i> , <b>2021</b> , 20, 1209-1227	4.2	0
3	Chemical Rescue of Site-Modified Ligands to the Iron-Sulfur Clusters of PsaC In Photosystem I <b>1998</b> , 659-662		
2	Conserved residue PsaB-Trp673 is essential for high-efficiency electron transfer between the phylloquinones and the iron-sulfur clusters in Photosystem I. <i>Photosynthesis Research</i> , <b>2021</b> , 148, 161-180	3.7	0
1	EPR of Type I photosynthetic reaction centers.. <i>Methods in Enzymology</i> , <b>2022</b> , 666, 413-450	1.7	