Alexey Yu Semenov

List of Publications by Year
in descending order

107 papers	2,608 citations	186265 28 h-index	223800 46 g-index
109 all docs	109 docs citations	109 times ranked	1140 citing authors

#	Article	IF	Citations
1	Direct measurement of electric current generation by cytochrome oxidase, H+-ATPase and bacteriorhodopsin.. Nature, 1974, 249, 321-324.	27.8	228
2	Electrogenic steps in the redox reactions catalyzed by photosynthetic reaction-centre complex from Rhodopseudomonas viridis. FEBS Journal, 1988, 171, 253-264.	0.2	170
3	Primary electron transfer processes in photosynthetic reaction centers from oxygenic organisms. Photosynthesis Research, 2015, 125, 51-63.	2.9	110
4	Near-IR absorbance changes and electrogenic reactions in the microsecond-to-second time domain in Photosystem I. Biophysical Journal, 1997, 72, 301-315.	0.5	100
5	Semi-continuum electrostatic calculations of redox potentials in photosystem I. Photosynthesis Research, 2008, 97, 55-74.	2.9	96
6	Femtosecond primary charge separation in Synechocystis sp. PCC 6803 photosystem I. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 1410-1420.	1.0	95
7	Recruitment of a Foreign Quinone into the A1 Site of Photosystem I. Journal of Biological Chemistry, 2000, 275, 23429-23438.	3.4	89
8	Generation of electric current by chromatophores of Rhodospirillum rubrum and reconstitution of electrogenic function in subchromatophore pigment-protein complexes. Biochimica Et Biophysica Acta - Bioenergetics, 1976, 440, 637-660.	1.0	71
9	Lipid-impregnated filters as a tool for studying the electric current-generating proteins. Analytical Biochemistry, 1979, 96, 250-262.	2.4	68
10	Spectral, redox and kinetic characteristics of high-potential cytochrome c hemes in Rhodopseudomonas viridis reaction center. FEBS Letters, 1986, 205, 41-46.	2.8	67
11	O₂ reduction by photosystem I involves phylloquinone under steadyâ€state illumination. FEBS Letters, 2014, 588, 4364-4368.	2.8	58
12	Flash-induced electrogenic events in the photosynthetic reaction center and bc1 complexes of Rhodobacter sphaeroides chromatophores. Biochimica Et Biophysica Acta - Bioenergetics, 1989, 973, 189-197.	1.0	51
13	P680 (PD1PD2) and ChlD1 as alternative electron donors in photosystem II core complexes and isolated reaction centers. Journal of Photochemistry and Photobiology B: Biology, 2011, 104, 44-50.	3.8	51
14	Electrogenic reduction of the secondary quinone acceptor in chromatophores of Rhodospirillum rubrum. FEBS Letters, 1986, 202, 224-228.	2.8	45
15	Primary light-energy conversion in tetrameric chlorophyll structure of photosystem II and bacterial reaction centers: II. Femto- and picosecond charge separation in PSII D1/D2/Cyt b559 complex. Photosynthesis Research, 2008, 98, 95-103.	2.9	41
16	Incorporation of a high potential quinone reveals that electron transfer in Photosystem I becomes highly asymmetric at low temperature. Photochemical and Photobiological Sciences, 2012, 11, 946-956.	2.9	40
17	Fast Stages of Photoelectric Processes in Biological Membranes. FEBS Journal, 1981, 117, 483-489.	0.2	39
18	Mechanism of adiabatic primary electron transfer in photosystem I: Femtosecond spectroscopy upon excitation of reaction center in the far-red edge of the QY band. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 895-905.	1.0	37

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19	EPR study of electron transport in the cyanobacterium Synechocystis sp. PCC 6803: Oxygen-dependent interrelations between photosynthetic and respiratory electron transport chains. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1708, 238-249.	1.0	36
20	Electrogenesis associated with proton transfer in the reaction center protein of the purple bacterium Rhodobacter sphaeroides. FEBS Letters, 1990, 259, 324-326.	2.8	35
21	Critical evaluation of electron transfer kinetics in P700â€"FA/FB, P700â€"FX, and P700â€"A1 Photosystem I core complexes in liquid and in trehalose glass. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1288-1301.	1.0	34
22	EPR study of light-induced regulation of photosynthetic electron transport in Synechocystis sp. strain PCC 6803. FEBS Letters, 2003, 544, 15-20.	2.8	32
23	Evidence that histidine forms a coordination bond to the A0A and A0B chlorophylls and a second H-bond to the A1A and A1B phylloquinones in M688HPsaA and M668HPsaB variants of Synechocystis sp. PCC 6803. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1362-1375.	1.0	32
24	Trehalose matrix effects on charge-recombination kinetics in Photosystem I of oxygenic photosynthesis at different dehydration levels. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1440-1454.	1.0	31
25	Alteration of the Axial Met Ligand to Electron Acceptor A0 in Photosystem I: Effect on the Generation of P 700 Â·+ A 1 Â·â[^] Radical Pairs as Studied by W-band Transient EPR. Applied Magnetic Resonance, 2010, 37, 85-102.	1.2	30
26	Electrogenicity at the donor/acceptor sides of cyanobacterial photosystem I. Journal of Bioenergetics and Biomembranes, 1996, 28, 517-522.	2.3	29
27	Kinetic modeling of electron transfer reactions in photosystem I complexes of various structures with substituted quinone acceptors. Photosynthesis Research, 2017, 133, 185-199.	2.9	29
28	Electrogenic reactions and dielectric properties of photosystem II. Photosynthesis Research, 2008, 98, 121-130.	2.9	28
29	Interaction of ascorbate with photosystem I. Photosynthesis Research, 2014, 122, 215-231.	2.9	27
30	Evidence that chlorophyll f functions solely as an antenna pigment in far-red-light photosystem I from Fischerella thermalis PCC 7521. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148184.	1.0	26
31	Reduction and protonation of the secondary quinone acceptor of Rhodobacter sphaeroides photosynthetic reaction center: kinetic model based on a comparison of wild-type chromatophores with mutants carrying Argâ†'Ile substitution at sites 207 and 217 in the L-subunit. Biochimica Et Biophysica Acta - Bioenergetics, 2000, 1459, 10-34.	1.0	24
32	Photoelectric studies of the transmembrane charge transfer reactions in photosystem I pigment-protein complexes. FEBS Letters, 2003, 553, 223-228.	2.8	23
33	Voltage changes involving photosystem II quinoneâ€"iron complex turnover. European Biophysics Journal, 2006, 35, 647-654.	2.2	23
34	Correlation of electron transfer rate in photosynthetic reaction centers with intraprotein dielectric properties. Biochimica Et Biophysica Acta - Bioenergetics, 2007, 1767, 441-448.	1.0	23
35	Electrogenic reduction of the primary electron donor P700+in photosystem I by redox dyes. FEBS Letters, 1997, 414, 193-196.	2.8	22
36	Partial reversion of the electrogenic reaction in the ubiquinol. FEBS Letters, 1990, 277, 127-130.	2.8	21

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37	Phylloquinone is the principal Mehler reaction site within photosystem I in high light. Plant Physiology, 2021, 186, 1848-1858.	4.8	21
38	Structure of the Intermolecular Complex between Plastocyanin and Cytochrome f from Spinach*. Journal of Biological Chemistry, 2005, 280, 18833-18841.	3.4	20
39	Effect of trehalose on oxygen evolution and electron transfer in photosystem 2 complexes. Biochemistry (Moscow), 2015, 80, 61-66.	1.5	20
40	Effect of artificial redox mediators on the photoinduced oxygen reduction by photosystem I complexes. Photosynthesis Research, 2018, 137, 421-429.	2.9	19
41	Primary charge separation within the structurally symmetric tetrameric Chl2APAPBChl2B chlorophyll exciplex in photosystem I. Journal of Photochemistry and Photobiology B: Biology, 2021, 217, 112154.	3.8	19
42	Phase II of carotenoid bandshift is mainly due to the electrogenic protonation of the secondary quinone acceptor. FEBS Letters, 1988, 233, 315-318.	2.8	18
43	Effect of redox mediators on the flash-induced membrane potential generation in Mn-depleted photosystem II core particles. European Biophysics Journal, 2008, 37, 1045-1050.	2.2	18
44	Electron transfer through the acceptor side of photosystem I: Interaction with exogenous acceptors and molecular oxygen. Biochemistry (Moscow), 2017, 82, 1249-1268.	1.5	18
45	Electrogenic Reactions Associated with Electron Transfer in Photosystem I. , 2006, , 319-338.		18
46	Effect of pH and surface potential on the rate of electric potential generation due to proton uptake by secondary quinone acceptor of reaction centers in Rhodobacter sphaeroides chromatophores. Biochimica Et Biophysica Acta - Bioenergetics, 1993, 1144, 285-294.	1.0	17
47	The effect of cytochrome c, hexammineruthenium and ubiquinone-10 on the kinetics of photoelectric responses of Rhodospirillum rubrum reaction centres. Biochimica Et Biophysica Acta - Bioenergetics, 1986, 848, 137-146.	1.0	16
48	Electrogenic reduction of the primary electron donor P700 by plastocyanin in photosystem I complexes. FEBS Letters, 2001, 500, 172-176.	2.8	16
49	Effect of D2O and cryosolvents on the redox properties of bacteriochlorophyll dimer and electron transfer processes in Rhodobacter sphaeroides reaction centers. Bioelectrochemistry, 2001, 53, 233-241.	4.6	16
50	Molecular dynamics study of the primary charge separation reactions in Photosystem I: Effect of the replacement of the axial ligands to the electron acceptor A0. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1472-1483.	1.0	16
51	Electronâ€“Phonon Coupling in Cyanobacterial Photosystem I. Journal of Physical Chemistry B, 2018, 122, 7943-7955.	2.6	16
52	Title is missing!. Photosynthesis Research, 1998, 55, 309-316.	2.9	15
53	Soft Dynamic Confinement of Membrane Proteins by Dehydrated Trehalose Matrices: High-Field EPR and Fast-Laser Studies. Applied Magnetic Resonance, 2020, 51, 773-850.	1.2	15
54	Transfer of ubiquinol from the reaction center to the bc 1 complex in Rhodobacter sphaeroides chromatophores under oxidizing conditions. FEBS Letters, 1989, 245, 43-46.	2.8	14

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55	Reconstitution of Biological Molecular Generators of Electric Current. FEBS Journal, 1980, 113, 213-217.	0.2	14
56	Multiple pathways of charge recombination revealed by the temperature dependence of electron transfer kinetics in cyanobacterial photosystem I. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 601-610.	1.0	14
57	Electrogenic reactions on the donor side of Mn-depleted photosystem II core particles in the presence of MnCl2 and synthetic trinuclear Mn-complexes. Photochemical and Photobiological Sciences, 2009, 8, 162-166.	2.9	13
58	Photosysem II: where does the light-induced voltage come from?. Frontiers in Bioscience - Landmark, 2010, 15, 1007.	3.0	13
59	Generation of ion-radical chlorophyll states in the light-harvesting antenna and the reaction center of cyanobacterial photosystem I. Photosynthesis Research, 2020, 146, 55-73.	2.9	13
60	Photoelectric effects in bacterial chromatophores. Comparison of spectral and direct electrometric methods. Biochimica Et Biophysica Acta - Bioenergetics, 1984, 767, 257-262.	1.0	12
61	Electrogenic reduction of Rhodospirillum rubrum reaction centre bacteriochlorophyll P870+ by redox dyes. FEBS Letters, 1985, 189, 45-49.	2.8	12
62	Flash-induced electrogenic reactions in the SA(L223) reaction center mutant in Rhodobacter sphaeroides chromatophores. FEBS Letters, 1994, 341, 10-14.	2.8	12
63	Electrometrical study of electron transfer from the terminal FA /FB iron-sulfur clusters to external acceptors in photosystem I. FEBS Letters, 1999, 462, 421-424.	2.8	12
64	Electrogenicity at the secondary quinone acceptor site of cyanobacterial photosystem II. FEBS Letters, 1994, 350, 96-98.	2.8	11
65	Transmembrane charge transfer in photosynthetic reaction centers: Some similarities and distinctions. Journal of Photochemistry and Photobiology B: Biology, 2011, 104, 326-332.	3.8	11
66	Photochemical properties of photosystem 1 immobilized in a mesoporous semiconductor matrix. High Energy Chemistry, 2012, 46, 200-205.	0.9	11
67	Fast phases of the generation of the transmembrane electric potential in chromatophores of the photosynthetic bacterium Ectothiorhodospira shaposhnikovii. Biochimica Et Biophysica Acta - Bioenergetics, 1985, 808, 201-208.	1.0	10
68	Electron Transfer from HiPIP to the Photooxidized Tetraheme Cytochrome Subunit of Allochromatium vinosum Reaction Center:â€‰ New Insights from Site-Directed Mutagenesis and Computational Studies. Biochemistry, 2004, 43, 437-445.	2.5	10
69	Elastic Vibrations in the Photosynthetic Bacterial Reaction Center Coupled to the Primary Charge Separation: Implications from Molecular Dynamics Simulations and Stochastic Langevin Approach. Journal of Physical Chemistry B, 2015, 119, 13656-13667.	2.6	9
70	Effect of Dehydrated Trehalose Matrix on the Kinetics of Forward Electron Transfer Reactions in Photosystem I. Zeitschrift Fur Physikalische Chemie, 2017, 231, 325-345.	2.8	9
71	Control of electron transfer by protein dynamics in photosynthetic reaction centers. Critical Reviews in Biochemistry and Molecular Biology, 2020, 55, 425-468.	5.2	9
72	Long-lived coherent oscillations of the femtosecond transients in cyanobacterial photosystem I. Physical Chemistry Chemical Physics, 2006, 8, 5671.	2.8	8

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73	Interaction of various types of photosystem I complexes with exogenous electron acceptors. Photosynthesis Research, 2017, 133, 175-184.	2.9	8
74	Excitation of photosystem I by 760 nm femtosecond laser pulses: transient absorption spectra and intermediates. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 174001.	1.5	8
75	The Decrease of the ESEEM Frequency of $${ext{P}}_{700}^{ + } {ext{A}}_{1}^{ - }$$ P 700 + A 1. Applied Magnetic Resonance, 2018, 49, 1011-1025.	1.2	8
76	Functioning of quinone acceptors in the reaction center of the green photosynthetic bacteriumChloroflexus aurantiacus. FEBS Letters, 1991, 289, 179-182.	2.8	6
77	Electrogenic steps during electron transfer via the cytochromebc1complex ofRhodobacter sphaeroideschromatophores. FEBS Letters, 1993, 321, 1-5.	2.8	6
78	Electrogenic proton transfer in Rhodobacter sphaeroides reaction centers: effect of coenzyme Q10 substitution by decylubiquinone in the QB binding site. FEBS Letters, 2001, 499, 116-120.	2.8	6
79	Manganese-depleted/reconstituted photosystem II core complexes in solution and liposomes. Journal of Photochemistry and Photobiology B: Biology, 2011, 104, 372-376.	3.8	6
80	Primary steps of electron and energy transfer in photosystem I: Effect of excitation pulse wavelength. Biochemistry (Moscow), 2012, 77, 1011-1020.	1.5	6
81	Mechanism of primary and secondary ion-radical pair formation in photosystem I complexes. Biochemistry (Moscow), 2014, 79, 221-226.	1.5	6
82	Photovoltage generation by photosystem II core complexes immobilized onto a Millipore filter on an indium tin oxide electrode. Journal of Bioenergetics and Biomembranes, 2020, 52, 495-504.	2.3	6
83	Trehalose matrix effects on electron transfer in Mn-depleted protein-pigment complexes of Photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148413.	1.0	6
84	The antimycin-sensitive electrogenesis in Rhodopseudomonas sphaeroides chromatophores. FEBS Letters, 1987, 213, 128-132.	2.8	5
85	Dielectric and photoelectric properties of photosynthetic reaction centers. Biochemistry (Moscow), 2005, 70, 257-263.	1.5	5
86	Photosynthetic electron transport in the cyanobacteriumSynechocystis sp. PCC 6803: High-Field W-band and X-band EPR study of electron flow through photosystem I. Applied Magnetic Resonance, 2007, 31, 221-236.	1.2	5
87	Symmetry breaking in photosystem I: ultrafast optical studies of variants near the accessory chlorophylls in the A- and B-branches of electron transfer cofactors. Photochemical and Photobiological Sciences, 2021, 20, 1209-1227.	2.9	5
88	Problems of Red Blood Cell Aggregation and Deformation Assessed by Laser Tweezers, Diffuse Light Scattering and Laser Diffractometry. Photonics, 2022, 9, 238.	2.0	5
89	Impact of Ironâ€"Sulfur Clusters on the Spinâ€"Lattice Relaxation Rate and ESEEM Frequency of the Oxidized Primary Donor P700+Â· and Reduced Phylloquinone Acceptor A1â˜'Â· in Radical Pairs in Photosystem I Embedded in Trehalose Glassy Matrix. Applied Magnetic Resonance, 2020, 51, 909-924.	1.2	4
90	Proton Transfer in Bacterial Reaction Centers and Bacteriorhodopsin in the Presence of Dipyridamole. Progress in Reaction Kinetics and Mechanism, 2001, 26, 287-299.	2.1	4

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91	Voltage generation by photosystem I complexes immobilized onto a millipore filter under continuous illumination. International Journal of Hydrogen Energy, 2022, 47, 11528-11538.	7.1	4
92	Electrogenic Protonation of the Secondary Quinone Acceptor QB in Spinach Photosystem II Complexes Incorporated into Lipid Vesicles. Biochemistry (Moscow), 2005, 70, 1348-1353.	1.5	3
93	Primary radical ion pairs in photosystem II core complexes. Biochemistry (Moscow), 2014, 79, 197-204.	1.5	3
94	Temporary Stabilization of Electron on Quinone Acceptor Side of Reaction Centers from the Bacterium Rhodobacter sphaeroides Wild Type and Mutant SA(L223) Depending on Duration of Light Activation. Biochemistry (Moscow), 2004, 69, 890-896.	1.5	2
95	Electron transfer between exogenous electron donors and reaction center of photosystem 2. Biochemistry (Moscow), 2010, 75, 579-584.	1.5	2
96	Vectorial charge transfer reactions on the donor side of manganese-depleted and reconstituted photosystem 2 core complexes. Biochemistry (Moscow), 2013, 78, 395-402.	1.5	2
97	Electrogenic reactions in Mn-depleted photosystem II core particles in the presence of synthetic binuclear Mn complexes. Biochemical and Biophysical Research Communications, 2018, 503, 222-227.	2.1	2
98	Tribute: a salute to Alexander Yurievich Borisov (1930â€“2019), an outstanding biophysicist. Photosynthesis Research, 2020, 146, 25-27.	2.9	2
99	The Mechanisms of Electrogenic Reactions in Bacterial Photosynthetic Reaction Centers: Studies in Collaboration with Alexander Konstantinov. Biochemistry (Moscow), 2021, 86, 1-7.	1.5	2
100	Electrogenic events in chromatophores fromRhodobacter sphaeroides lacking high-potential cytochrome b of thebc1-complex. Biochimica Et Biophysica Acta - Bioenergetics, 1992, 1101, 166-167.	1.0	1
101	Electron transfer in photosystem I containing native and modified quinone acceptors. Biochemistry (Moscow), 2015, 80, 654-661.	1.5	1
102	Conserved residue PsaB-Trp673 is essential for high-efficiency electron transfer between the phylloquinones and the iron-sulfur clusters in Photosystem I. Photosynthesis Research, 2021, 148, 161-180.	2.9	1
103	Generation of Photoelectric Responses by Photosystem II Core Complexes in the Presence of Externally Added Cytochrome c. Biochemistry (Moscow), 2021, 86, 1369-1376.	1.5	1
104	Transmembrane electric potential difference in the protein-pigment complex of photosystem 2. Biochemistry (Moscow), 2012, 77, 947-955.	1.5	0
105	Cyclic electron transfer around Photosystem I mediated by 2,3â€dichloroâ€1,4â€naphtoquinone and ascorbate. FEBS Letters, 2018, 592, 2220-2226.	2.8	0
106	Effect of Trehalose on the Functional Properties of Photosystem II. Advances in Photosynthesis and Respiration, 2021, , 447-464.	1.0	0
107	Vectorial Charge Transfer Reactions in the Protein-Pigment Complex of Photosystem II. , 2017, , 97-109.		0