Dmitry A Cherepanov

List of Publications by Year
in descending order

79	3,281	186265	155660
papers	citations	28 h-index	55 g-index

84	84	84	2671
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Function of Tyrosine Z in Water Oxidation by Photosystem II:â€‰ Electrostatical Promotor Instead of Hydrogen Abstractor. Biochemistry, 1998, 37, 1131-1142.	2.5	188
2	Penetrating cation/fatty acid anion pair as a mitochondria-targeted protonophore. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 663-668.	7.1	173
3	Protons @ interfaces: Implications for biological energy conversion. Biochimica Et Biophysica Acta - Bioenergetics, 2006, 1757, 913-930.	1.0	167
4	Transient accumulation of elastic energy in proton translocating ATP synthase. FEBS Letters, 1999, 449, 1-6.	2.8	150
5	Mitochondrial-Targeted Plastoquinone Derivatives. Effect on Senescence and Acute Age-Related Pathologies. Current Drug Targets, 2011, 12, 800-826.	2.1	147
6	Low Dielectric Permittivity of Water at the Membrane Interface: Effect on the Energy Coupling Mechanism in Biological Membranes. Biophysical Journal, 2003, 85, 1307-1316.	0.5	138
7	Viscoelastic Dynamics of Actin Filaments Coupled to Rotary F-ATPase: Angular Torque Profile of the Enzyme. Biophysical Journal, 2001, 81, 1220-1233.	0.5	134
8	The Proton-Driven Rotor of ATP Synthase: Ohmic Conductance (10 fS), and Absence of Voltage Gating. Biophysical Journal, 2004, 86, 4094-4109.	0.5	115
9	Inter-subunit rotation and elastic power transmission in F0F1-ATPase. FEBS Letters, 2001, 504, 152-160.	2.8	111
10	Prevention of cardiolipin oxidation and fatty acid cycling as two antioxidant mechanisms of cationic derivatives of plastoquinone (SkQs). Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 878-889.	1.0	104
11	Title is missing!. Photosynthesis Research, 1997, 51, 193-208.	2.9	103
12	Protons migrate along interfacial water without significant contributions from jumps between ionizable groups on the membrane surface. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14461-14466.	7.1	100
13	Semi-continuum electrostatic calculations of redox potentials in photosystem I. Photosynthesis Research, 2008, 97, 55-74.	2.9	96
14	Derivatives of Rhodamine 19 as Mild Mitochondria-targeted Cationic Uncouplers. Journal of Biological Chemistry, 2011, 286, 17831-17840.	3.4	80
15	Evolution of cytochrome bc complexes: From membrane-anchored dehydrogenases of ancient bacteria to triggers of apoptosis in vertebrates. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 1407-1427.	1.0	73
16	Photosynthetic Electron Transfer Controlled by Protein Relaxation: Analysis by Langevin Stochastic Approach. Biophysical Journal, 2001, 80, 1033-1049.	0.5	71
17	Photosystem II of Green Plants:Â Topology of Core Pigments and Redox Cofactors As Inferred from Electrochromic Difference Spectraâ€. Biochemistry, 1996, 35, 3093-3107.	2.5	69
18	The redox properties of cytochromes b imposed by the membrane electrostatic environment. Biophysical Journal, 1993, 65, 184-195.	0.5	67

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19	Survival of the fittest before the beginning of life: selection of the first oligonucleotide-like polymers by UV light. BMC Evolutionary Biology, 2003, 3, 12.	3.2	64
20	Proton Transfer Dynamics at the Membrane/Water Interface: Dependence on the Fixed and Mobile pH Buffers, on the Size and Form of Membrane Particles, and on the Interfacial Potential Barrier. Biophysical Journal, 2004, 86, 665-680.	0.5	64
21	Proton transfer from the bulk to the bound ubiquinone QB of the reaction center in chromatophores of Rhodobacter sphaeroides: Retarded conveyance by neutral water. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 13159-13164.	7.1	50
22	Chromatophore Vesicles of Rhodobacter capsulatus Contain on Average One FOF1-ATP Synthase Each. Biophysical Journal, 2002, 82, 1115-1122.	0.5	50
23	Viscoelastic Dynamics of Actin Filaments Coupled to Rotary F-ATPase: Curvature as an Indicator of the Torque. Biophysical Journal, 2001, 81, 1234-1244.	0.5	44
24	Proton transfer dynamics at membrane/water interface and mechanism of biological energy conversion. Biochemistry (Moscow), 2005, 70, 251-256.	1.5	43
25	Evolution of cation binding in the active sites of P-loop nucleoside triphosphatases in relation to the basic catalytic mechanism. ELife, 2018, 7, .	6.0	41
26	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
27	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
28	Force Oscillations and Dielectric Overscreening of Interfacial Water. Physical Review Letters, 2004, 93, 266104.	7.8	30
29	Role of hydrogen bond alternation and charge transfer states in photoactivation of the Orange Carotenoid Protein. Communications Biology, 2021, 4, 539.	4.4	30
30	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
31	Electrogenic reactions and dielectric properties of photosystem II. Photosynthesis Research, 2008, 98, 121-130.	2.9	28
32	Cytochrome cbb3 of Thioalkalivibrio is a Na+-pumping cytochrome oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7695-7700.	7.1	28
33	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
34	ATP-synthase of Rhodobacter capsulatus : coupling of proton flow through F0 to reactions in F1 under the ATP synthesis and slip conditions. FEBS Letters, 1999, 445, 409-414.	2.8	25
35	Temperature dependence of the electrogenic reaction in the QB site of the Rhodobacter sphaeroides photosynthetic reaction center: the QA â˜’ QB â†’QA QB â˜’ transition. FEBS Letters, 1997, 412, 490-494.	2.8	24
36	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

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37	Ubiquinone reduction in the photosynthetic reaction centre of Rhodobacter sphaeroides: interplay between electron transfer, proton binding and flips of the quinone ring. Biochemical Society Transactions, 2005, 33, 845-850.	3.4	23
38	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
39	F-ATPase: Forced Full Rotation of the Rotor Despite Covalent Cross-link with the Stator. Journal of Biological Chemistry, 2001, 276, 42287-42292.	3.4	22
40	PSI-SMALP, a Detergent-free Cyanobacterial Photosystem I, Reveals Faster Femtosecond Photochemistry. Biophysical Journal, 2020, 118, 337-351.	0.5	22
41	Role of charge screening and delocalization for lipophilic cation permeability of model and mitochondrial membranes. Mitochondrion, 2013, 13, 500-506.	3.4	21
42	Contraction transitions of F1-F0 ATPase during catalytic turnover. Biochimica Et Biophysica Acta - Bioenergetics, 1998, 1409, 59-71.	1.0	19
43	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
44	Coupling of proton flow to ATP synthesis in Rhodobacter capsulatus: F0F1-ATP synthase is absent from about half of chromatophores. Biochimica Et Biophysica Acta - Bioenergetics, 2001, 1506, 189-203.	1.0	18
45	Impact of Antioxidants on Cardiolipin Oxidation in Liposomes: Why Mitochondrial Cardiolipin Serves as an Apoptotic Signal?. Oxidative Medicine and Cellular Longevity, 2016, 2016, 1-19.	4.0	18
46	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
47	Interaction of tetraphenylphosphonium and dodecyltriphenylphosphonium with lipid membranes and mitochondria. Biochemistry (Moscow), 2012, 77, 1021-1028.	1.5	17
48	Ultrafast Spectroscopy of Fano-Like Resonance between Optical Phonon and Excitons in CdSe Quantum Dots: Dependence of Coherent Vibrational Wave-Packet Dynamics on Pump Fluence. Nanomaterials, 2017, 7, 371.	4.1	17
49	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
50	Electronâ€“Phonon Coupling in Cyanobacterial Photosystem I. Journal of Physical Chemistry B, 2018, 122, 7943-7955.	2.6	16
51	Title is missing!. Photosynthesis Research, 1998, 55, 309-316.	2.9	15
52	Intramembrane electric fields: A single charge, protein Î±-helix, photosynthetic reaction centre. Bioelectrochemistry, 1990, 24, 113-127.	1.0	14
53	Probing biological interfaces by tracing proton passage across them. Photochemical and Photobiological Sciences, 2006, 5, 577.	2.9	14
54	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

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55	Proton leakage across lipid bilayers: Oxygen atoms of phospholipid ester linkers align water molecules into transmembrane water wires. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 439-451.	1.0	14
56	Rotary F1-ATPase. FEBS Journal, 2004, 271, 3914-3922.	0.2	13
57	Photosysem II: where does the light-induced voltage come from?. Frontiers in Bioscience - Landmark, 2010, 15, 1007.	3.0	13
58	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
59	Flash-induced electrogenic reactions in the SA(L223) reaction center mutant in Rhodobacter sphaeroides chromatophores. FEBS Letters, 1994, 341, 10-14.	2.8	12
60	Prevention of peroxidation of cardiolipin liposomes by quinol-based antioxidants. Biochemistry (Moscow), 2014, 79, 1081-1100.	1.5	12
61	Comparative Femtosecond Spectroscopy of Primary Photoreactions of Exiguobacterium sibiricum Rhodopsin and Halobacterium salinarum Bacteriorhodopsin. Journal of Physical Chemistry B, 2021, 125, 995-1008.	2.6	11
62	G protein-coupled receptors of class A harness the energy of membrane potential to increase their sensitivity and selectivity. Biochimica Et Biophysica Acta - Biomembranes, 2019, 1861, 183051.	2.6	10
63	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
64	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
65	Interaction of various types of photosystem I complexes with exogenous electron acceptors. Photosynthesis Research, 2017, 133, 175-184.	2.9	8
66	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
67	Visible and Near Infrared Absorption Spectrum of the Excited Singlet State of Chlorophyll a. High Energy Chemistry, 2020, 54, 145-147.	0.9	8
68	Ultrafast Quenching of Excitons in the ZnxCd1â^'xS/ZnS Quantum Dots Doped with Mn2+ through Charge Transfer Intermediates Results in Manganese Luminescence. Nanomaterials, 2021, 11, 3007.	4.1	8
69	Proton transfer in Azotobacter vinelandii ferredoxin I: entatic Lys84 operates as elastic counterbalance for the proton-carrying Asp15. Biochimica Et Biophysica Acta - Bioenergetics, 2001, 1505, 179-184.	1.0	7
70	Proton transfer in the photosynthetic reaction center of Blastochloris viridis. FEBS Letters, 2008, 582, 238-242.	2.8	7
71	Electrostatics of the photosynthetic bacterial reaction center. Protonation of Glu L 212 and Asp L 213 â€" A new method of calculation. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1495-1508.	1.0	7
72	Monitoring the electric field in CdSe quantum dots under ultrafast interfacial electron transfer via coherent phonon dynamics. Nanoscale, 2018, 10, 22409-22419.	5.6	7

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73	Mechanism of primary and secondary ion-radical pair formation in photosystem I complexes. Biochemistry (Moscow), 2014, 79, 221-226.	1.5	6
74	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
75	Oxidation of cardiolipin in liposomes: A new insight into the primary steps of mitochondria-triggered apoptosis. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S100.	1.0	2
76	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
77	Intramembrane electric fields: a single charge, protein Î±-helix, photosynthetic reaction centre. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1990, 299, 113-127.	0.1	0
78	Inhibitor titration of the cytochrome bc1 complex of Rhodobacter capsulatus by myxothiazol and pyraclostrobin: Evidence for a binding change mechanism. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S95.	1.0	0
79	Proton Transfer from the Bulk to the Secondary Quinone Acceptor in Chromatophores of Rhodobacter sphaeroides. , 1998, , 869-872.		0