Peter Brzezinski

List of Publications by Year
in descending order

92 papers	4,375 citations	94433 37 h-index	114465 63 g-index
98 all docs	98 docs citations	98 times ranked	2497 citing authors

#	Article	IF	Citations
1	The X-ray Crystal Structures of Wild-type and EQ(I-286) Mutant Cytochrome c Oxidases from Rhodobacter sphaeroides. Journal of Molecular Biology, 2002, 321, 329-339.	4.2	532
2	Cytochrome c oxidase: exciting progress and remaining mysteries. Journal of Bioenergetics and Biomembranes, 2008, 40, 521-531.	2.3	252
3	Glutamate 286 in Cytochromeaa3fromRhodobactersphaeroidesIs Involved in Proton Uptake during the Reaction of the Fully-Reduced Enzyme with Dioxygenâ€. Biochemistry, 1997, 36, 13824-13829.	2.5	177
4	Role of the Pathway through K(I-362) in Proton Transfer in CytochromecOxidase fromR. sphaeroidesâ€. Biochemistry, 1998, 37, 2470-2476.	2.5	139
5	Pathways of proton transfer in cytochrome c oxidase. Journal of Bioenergetics and Biomembranes, 1998, 30, 99-107.	2.3	138
6	Redox-driven proton pumping by heme-copper oxidases. Biochimica Et Biophysica Acta - Bioenergetics, 2003, 1605, 1-13.	1.0	127
7	A Mutation in Subunit I of Cytochrome Oxidase fromRhodobacter sphaeroidesResults in an Increase in Steady-State Activity but Completely Eliminates Proton Pumpingâ€. Biochemistry, 2002, 41, 13417-13423.	2.5	122
8	Internal Electron Transfer in Cytochrome c Oxidase from Rhodobacter sphaeroides. Biochemistry, 1995, 34, 2844-2849.	2.5	121
9	Redox-driven membrane-bound proton pumps. Trends in Biochemical Sciences, 2004, 29, 380-387.	7.5	102
10	Cryo-EM structure of the yeast respiratory supercomplex. Nature Structural and Molecular Biology, 2019, 26, 50-57.	8.2	100
11	Structure of a functional obligate complex III2IV2 respiratory supercomplex from Mycobacterium smegmatis. Nature Structural and Molecular Biology, 2018, 25, 1128-1136.	8.2	95
12	Internal Electron-Transfer Reactions in CytochromecOxidaseâ€. Biochemistry, 1996, 35, 5611-5615.	2.5	94
13	Structural elements involved in electron-coupled proton transfer in cytochrome c oxidase. FEBS Letters, 2004, 567, 103-110.	2.8	93
14	Design principles of proton-pumping haem-copper oxidases. Current Opinion in Structural Biology, 2006, 16, 465-472.	5.7	93
15	Aspartate-132 in Cytochrome c Oxidase from Rhodobacter sphaeroides Is Involved in a Two-Step Proton Transfer during Oxo-Ferryl Formation. Biochemistry, 1999, 38, 6826-6833.	2.5	89
16	Controlled uncoupling and recoupling of proton pumping in cytochrome c oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 317-322.	7.1	89
17	Redox-coupled proton translocation in biological systems: Proton shuttling in cytochrome c oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15543-15547.	7.1	88
18	Mitochondrial Translation Efficiency Controls Cytoplasmic Protein Homeostasis. Cell Metabolism, 2018, 27, 1309-1322.e6.	16.2	85

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19	Formation of the â€œPeroxyâ€•Intermediate in Cytochrome c Oxidase Is Associated with Internal Proton/Hydrogen Transfer. Biochemistry, 2000, 39, 14664-14669.	2.5	82
20	Scavenging of superoxide by a membrane-bound superoxide oxidase. Nature Chemical Biology, 2018, 14, 788-793.	8.0	71
21	Variable proton-pumping stoichiometry in structural variants of cytochrome c oxidase. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 710-723.	1.0	56
22	Zinc ions inhibit oxidation of cytochromecoxidase by oxygen. FEBS Letters, 2001, 494, 157-160.	2.8	53
23	The reduction of cytochrome c oxidase by carbon monoxide. FEBS Letters, 1985, 187, 111-114.	2.8	52
24	Kinetics of Electron and Proton Transfer during the Reaction of Wild Type and Helix VI Mutants of Cytochrome bo3 with Oxygen. Biochemistry, 1996, 35, 13673-13680.	2.5	52
25	Subunit III of Cytochrome c Oxidase of Rhodobacter sphaeroides Is Required To Maintain Rapid Proton Uptake through the D Pathway at Physiologic pH. Biochemistry, 2003, 42, 7400-7409.	2.5	52
26	Proton transfer in ba3 cytochrome c oxidase from Thermus thermophilus. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 650-657.	1.0	52
27	Splitting of the Oâ€"O bond at the heme-copper catalytic site of respiratory oxidases. Science Advances, 2017, 3, e1700279.	10.3	50
28	Regulatory role of the respiratory supercomplex factors in <i>Saccharomyces cerevisiae</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4476-85.	7.1	45
29	Isolation of yeast complex IV in native lipid nanodiscs. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 2984-2992.	2.6	45
30	Structure and Mechanism of Respiratory IIIâ€"IV Supercomplexes in Bioenergetic Membranes. Chemical Reviews, 2021, 121, 9644-9673.	47.7	44
31	Impaired proton pumping in cytochrome c oxidase upon structural alteration of the D pathway. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 897-903.	1.0	43
32	Charge Transfer in the K Proton Pathway Linked to Electron Transfer to the Catalytic Site in Cytochrome <i>c</i> Oxidase. Biochemistry, 2008, 47, 4929-4935.	2.5	43
33	Exploration of the cytochrome c oxidase pathway puzzle and examination of the origin of elusive mutational effects. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 413-426.	1.0	42
34	The lateral distance between a proton pump and ATP synthase determines the ATP-synthesis rate. Scientific Reports, 2017, 7, 2926.	3.3	41
35	Mimicking respiratory phosphorylation using purified enzymes. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 321-331.	1.0	40
36	Oxidation of Ubiquinol by Cytochromebo3fromEscherichia coli:Â Kinetics of Electron and Proton Transferâ€. Biochemistry, 1997, 36, 5425-5431.	2.5	39

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37	Light-induced structural changes in cytochrome c oxidase: implication for the mechanism of electron and proton gating. Biochimica Et Biophysica Acta - Bioenergetics, 1994, 1184, 207-218.	1.0	38
38	Lipid-mediated Protein-protein Interactions Modulate Respiration-driven ATP Synthesis. Scientific Reports, 2016, 6, 24113.	3.3	38
39	Kinetic advantage of forming respiratory supercomplexes. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148193.	1.0	38
40	The rate-limiting step and nonhyperbolic kinetics in the oxidation of ferrocytochrome c catalyzed by cytochrome c oxidase. FEBS Letters, 1986, 194, 1-5.	2.8	37
41	The solution configurations of inactive and activated DntR have implications for the sliding dimer mechanism of LysR transcription factors. Scientific Reports, 2016, 6, 19988.	3.3	36
42	Inhibition of proton transfer in cytochrome c oxidase by zinc ions: delayed proton uptake during oxygen reduction. Biochimica Et Biophysica Acta - Bioenergetics, 2002, 1555, 133-139.	1.0	34
43	Protonation Dynamics on Lipid Nanodiscs: Influence of the Membrane Surface Area and External Buffers. Biophysical Journal, 2016, 110, 1993-2003.	0.5	34
44	Cryo-EM structure and kinetics reveal electron transfer by 2D diffusion of cytochrome <i>c</i> in the yeast III-IV respiratory supercomplex. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	33
45	The Deuterium Isotope Effect as a Tool to Investigate Enzyme Catalysis: Protonâ€Transfer Control Mechanisms in Cytochrome <i>c</i> Oxidase. Israel Journal of Chemistry, 1999, 39, 427-437.	2.3	32
46	Extraction and liposome reconstitution of membrane proteins with their native lipids without the use of detergents. Scientific Reports, 2018, 8, 14950.	3.3	32
47	Functional interactions between membrane-bound transporters and membranes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15763-15767.	7.1	27
48	SNARE-fusion mediated insertion of membrane proteins into native and artificial membranes. Nature Communications, 2014, 5, 4303.	12.8	26
49	Internal Electron Transfer and Structural Dynamics of cd1 Nitrite Reductase Revealed by Laser CO Photodissociation. Biochemistry, 1999, 38, 7556-7564.	2.5	24
50	Mutation of a single residue in the <i>ba</i> ₃ oxidase specifically impairs protonation of the pump site. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3397-3402.	7.1	23
51	Two-electron reduction is required for rapid internal electron transfer in resting, pulsed and oxygenated cytochromecoxidase. FEBS Letters, 1987, 213, 396-400.	2.8	21
52	Solution NMR structure of yeast Rcf1, a protein involved in respiratory supercomplex formation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3048-3053.	7.1	21
53	Role of aspartate 132 at the orifice of a proton pathway in cytochrome <i>c</i> oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8912-8917.	7.1	20
54	Rapid Electron Transfer within the III-IV Supercomplex in Corynebacterium glutamicum. Scientific Reports, 2016, 6, 34098.	3.3	20

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55	A Ligand-Exchange Mechanism of Proton Pumping Involving Tyrosine-422 of Subunit I of Cytochrome Oxidase Is Ruled Outâ€. Biochemistry, 1996, 35, 824-828.	2.5	19
56	The Onset of the Deuterium Isotope Effect in Cytochrome c Oxidase. Biochemistry, 2000, 39, 5045-5050.	2.5	19
57	Proton-Coupled Structural Changes upon Binding of Carbon Monoxide to Cytochrome cd1:â€‰ A Combined Flash Photolysis and X-ray Crystallography Study,. Biochemistry, 2000, 39, 10967-10974.	2.5	19
58	Structure of mycobacterial CIII2CIV2 respiratory supercomplex bound to the tuberculosis drug candidate telacebec (Q203). ELife, 2021, 10, .	6.0	19
59	Rcf1 Modulates Cytochrome c Oxidase Activity Especially Under Energy-Demanding Conditions. Frontiers in Physiology, 2019, 10, 1555.	2.8	18
60	Structural Changes and Proton Transfer in Cytochrome c Oxidase. Scientific Reports, 2015, 5, 12047.	3.3	16
61	Control of transmembrane charge transfer in cytochrome c oxidase by the membrane potential. Nature Communications, 2018, 9, 3187.	12.8	16
62	Light-induced structural changes in cytochromecoxidase. FEBS Letters, 1993, 318, 134-138.	2.8	15
63	The electron distribution in the â€œactivatedâ€•state of cytochrome c oxidase. Scientific Reports, 2018, 8, 7502.	3.3	15
64	Rieske head domain dynamics and indazole-derivative inhibition of Candida albicans complex III. Structure, 2022, 30, 129-138.e4.	3.3	15
65	Molecular architecture of the proton diode of cytochrome <i>c</i> oxidase. Biochemical Society Transactions, 2008, 36, 1169-1174.	3.4	14
66	Modeling gating charge and voltage changes in response to charge separation in membrane proteins. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11353-11358.	7.1	13
67	Electron transfer in zinc-reconstituted nitrite reductase from Pseudomonas aeruginosa. Biochemical Journal, 1996, 319, 407-410.	3.7	12
68	Ligand Binding and the Catalytic Reaction of Cytochromecaa3from the Thermophilic BacteriumRhodothermus marinusâ€. Biochemistry, 2001, 40, 10578-10585.	2.5	12
69	Structural and functional heterogeneity of cytochrome c oxidase in S. cerevisiae. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 699-704.	1.0	12
70	Reaction of wild-type and Glu243Asp variant yeast cytochrome c oxidase with O2. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1012-1018.	1.0	11
71	Proton pumping by an inactive structural variant of cytochrome c oxidase. Journal of Inorganic Biochemistry, 2014, 140, 6-11.	3.5	11
72	Single Proteoliposomes with <i>E.Âcoli</i> Quinol Oxidase: Proton Pumping without Transmembrane Leaks. Israel Journal of Chemistry, 2017, 57, 437-445.	2.3	11

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73	Structural changes at the surface of cytochrome c oxidase alter the proton-pumping stoichiometry. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148116.	1.0	11
74	Regulation of cytochrome c oxidase activity by modulation of the catalytic site. Scientific Reports, 2018, 8, 11397.	3.3	10
75	Proton-transfer pathways in the mitochondrial S. cerevisiae cytochrome c oxidase. Scientific Reports, 2019, 9, 20207.	3.3	10
76	New Structures Reveal Interaction Dynamics in Respiratory Supercomplexes. Trends in Biochemical Sciences, 2020, 45, 3-5.	7.5	10
77	NMR Structure and Dynamics Studies of Yeast Respiratory Supercomplex Factor 2. Structure, 2021, 29, 275-283.e4.	3.3	10
78	Intermediates generated during the reaction of reduced Rhodobacter sphaeroides cytochrome c oxidase with dioxygen. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 843-847.	1.0	9
79	Reaction of S. cerevisiae mitochondria with ligands: Kinetics of CO and O2 binding to flavohemoglobin and cytochrome c oxidase. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 182-188.	1.0	8
80	Identification of a cytochrome bc1-aa3 supercomplex in Rhodobacter sphaeroides. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148433.	1.0	8
81	The proton pumping bo oxidase from Vitreoscilla. Scientific Reports, 2019, 9, 4766.	3.3	7
82	Proton transfer in uncoupled variants of cytochrome <i>c</i> oxidase. FEBS Letters, 2020, 594, 813-822.	2.8	7
83	The respiratory supercomplex from C.Âglutamicum. Structure, 2022, 30, 338-349.e3.	3.3	7
84	A flash-photolysis study of the reactions of acaa 3-ttype cytochrome oxidase with dioxygen and carbon monoxide. Journal of Bioenergetics and Biomembranes, 1996, 28, 495-501.	2.3	6
85	Examination of the Reaction of Fully Reduced Cytochrome Oxidase with Hydrogen Peroxide by Flow-Flash Spectroscopyâ€. Biochemistry, 1999, 38, 16016-16023.	2.5	6
86	Dynamics of the K^B Proton Pathway in Cytochrome <i>ba</i>₃ from <i>Thermus thermophilus</i>. Israel Journal of Chemistry, 2017, 57, 424-436.	2.3	6
87	Lipid Composition Affects the Efficiency in the Functional Reconstitution of the Cytochrome c Oxidase. International Journal of Molecular Sciences, 2020, 21, 6981.	4.1	5
88	Modulation of O₂ reduction in <i>SaccharomycesÂcerevisiae</i> mitochondria. FEBS Letters, 2017, 591, 4049-4055.	2.8	4
89	NMR Study of Rcf2 Reveals an Unusual Dimeric Topology in Detergent Micelles. ChemBioChem, 2018, 19, 444-447.	2.6	4
90	NMR structural analysis of the yeast cytochrome c oxidase subunit Cox13 and its interaction with ATP. BMC Biology, 2021, 19, 98.	3.8	2

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91	Respiration | Cytochrome Oxidases, Bacterial. , 2021, , 524-530.		0
92	Electron and proton transfer in the M. smegmatis III2IV2 supercomplex. Biochimica Et Biophysica Acta - Bioenergetics, 2022, 1863, 148585.	1.0	0