

Leonid A Sazanov

List of Publications by Year in descending order

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70
papers

8,328
citations

76326

40
h-index

114465

63
g-index

81
all docs

81
docs citations

81
times ranked

6579
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure of the Hydrophilic Domain of Respiratory Complex I from <i>Thermus thermophilus</i> . <i>Science</i> , 2006, 311, 1430-1436.	12.6	747
2	Crystal structure of the entire respiratory complex I. <i>Nature</i> , 2013, 494, 443-448.	27.8	717
3	The architecture of respiratory complex I. <i>Nature</i> , 2010, 465, 441-445.	27.8	574
4	Identification of a functional respiratory complex in chloroplasts through analysis of tobacco mutants containing disrupted plastid <i>ndh</i> genes. <i>EMBO Journal</i> , 1998, 17, 868-876.	7.8	446
5	Atomic structure of the entire mammalian mitochondrial complex I. <i>Nature</i> , 2016, 538, 406-410.	27.8	427
6	The architecture of respiratory supercomplexes. <i>Nature</i> , 2016, 537, 644-648.	27.8	408
7	A giant molecular proton pump: structure and mechanism of respiratory complex I. <i>Nature Reviews Molecular Cell Biology</i> , 2015, 16, 375-388.	37.0	391
8	Structure of the membrane domain of respiratory complex I. <i>Nature</i> , 2011, 476, 414-420.	27.8	348
9	Clarifying the supercomplex: the higher-order organization of the mitochondrial electron transport chain. <i>Nature Structural and Molecular Biology</i> , 2017, 24, 800-808.	8.2	262
10	The assembly, regulation and function of the mitochondrial respiratory chain. <i>Nature Reviews Molecular Cell Biology</i> , 2022, 23, 141-161.	37.0	256
11	Structural Basis for the Mechanism of Respiratory Complex I. <i>Journal of Biological Chemistry</i> , 2009, 284, 29773-29783.	3.4	222
12	The plastid <i>ndh</i> genes code for an NADH-specific dehydrogenase: Isolation of a complex I analogue from pea thylakoid membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 1319-1324.	7.1	200
13	Respiratory Complex I: Mechanistic and Structural Insights Provided by the Crystal Structure of the Hydrophilic Domain. <i>Biochemistry</i> , 2007, 46, 2275-2288.	2.5	197
14	Proton-translocating transhydrogenase and NAD- and NADP-linked isocitrate dehydrogenases operate in a substrate cycle which contributes to fine regulation of the tricarboxylic acid cycle activity in mitochondria. <i>FEBS Letters</i> , 1994, 344, 109-116.	2.8	193
15	Organization of Iron-Sulfur Clusters in Respiratory Complex I. <i>Science</i> , 2005, 309, 771-774.	12.6	184
16	Resolution of the Membrane Domain of Bovine Complex I into Subcomplexes: Implications for the Structural Organization of the Enzyme. <i>Biochemistry</i> , 2000, 39, 7229-7235.	2.5	172
17	The coupling mechanism of mammalian respiratory complex I. <i>Science</i> , 2020, 370, .	12.6	157
18	Structures of Respiratory Supercomplex I+III ₂ Reveal Functional and Conformational Crosstalk. <i>Molecular Cell</i> , 2019, 75, 1131-1146.e6.	9.7	148

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19	The chloroplast Ndh complex mediates the dark reduction of the plastoquinone pool in response to heat stress in tobacco leaves. <i>FEBS Letters</i> , 1998, 429, 115-118.	2.8	122
20	Cryo-EM structure of the entire mammalian F-type ATP synthase. <i>Nature Structural and Molecular Biology</i> , 2020, 27, 1077-1085.	8.2	122
21	Mammalian Mitochondrial Complex I Structure and Disease-Causing Mutations. <i>Trends in Cell Biology</i> , 2018, 28, 835-867.	7.9	113
22	The coupling mechanism of respiratory complex I – A structural and evolutionary perspective. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1785-1795.	1.0	106
23	Structure of the bacterial type <i>scp</i> II NADH dehydrogenase: a monotopic membrane protein with an essential role in energy generation. <i>Molecular Microbiology</i> , 2014, 91, 950-964.	2.5	103
24	Respiratory complex I: “steam engine” of the cell?. <i>Current Opinion in Structural Biology</i> , 2011, 21, 532-540.	5.7	89
25	Evolution of Respiratory Complex I. <i>Journal of Biological Chemistry</i> , 2011, 286, 5023-5033.	3.4	87
26	Substrate-induced Conformational Change in Bacterial Complex I. <i>Journal of Biological Chemistry</i> , 2004, 279, 23830-23836.	3.4	86
27	Projection Structure of the Membrane Domain of Escherichia coli Respiratory Complex I at 8Å Resolution. <i>Journal of Molecular Biology</i> , 2007, 366, 140-154.	4.2	84
28	A Role for Native Lipids in the Stabilization and Two-dimensional Crystallization of the Escherichia coli NADH-Ubiquinone Oxidoreductase (Complex I). <i>Journal of Biological Chemistry</i> , 2003, 278, 19483-19491.	3.4	80
29	Naphthylphthalamic acid associates with and inhibits PIN auxin transporters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	79
30	Cryo-electron crystallography of two sub-complexes of bovine complex I reveals the relationship between the membrane and peripheral arms 1 Edited by W. Baumeister. <i>Journal of Molecular Biology</i> , 2000, 302, 455-464.	4.2	71
31	Review and meta-analysis of natural selection in mitochondrial complex I in metazoans. <i>Journal of Zoological Systematics and Evolutionary Research</i> , 2015, 53, 1-17.	1.4	70
32	Structure of bacterial respiratory complex I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 892-901.	1.0	69
33	Key role of quinone in the mechanism of respiratory complex I. <i>Nature Communications</i> , 2020, 11, 4135.	12.8	67
34	Identification of a Novel Subunit of Respiratory Complex I from <i>Thermus thermophilus</i> . <i>Biochemistry</i> , 2006, 45, 4413-4420.	2.5	64
35	The Location of NuoL and NuoM Subunits in the Membrane Domain of the Escherichia coli Complex I. <i>Journal of Biological Chemistry</i> , 2003, 278, 43114-43120.	3.4	62
36	Structure and mechanism of mitochondrial proton-translocating transhydrogenase. <i>Nature</i> , 2019, 573, 291-295.	27.8	55

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37	The mechanism of coupling between electron transfer and proton translocation in respiratory complex I. <i>Journal of Bioenergetics and Biomembranes</i> , 2014, 46, 247-253.	2.3	53
38	Mitochondrial mutations and metabolic adaptation in pancreatic cancer. <i>Cancer & Metabolism</i> , 2017, 5, 2.	5.0	51
39	Single particle analysis confirms distal location of subunits NuoL and NuoM in <i>Escherichia coli</i> complex I. <i>Journal of Structural Biology</i> , 2007, 159, 238-242.	2.8	49
40	Structure and assembly of the mammalian mitochondrial supercomplex CIII2CIV. <i>Nature</i> , 2021, 598, 364-367.	27.8	48
41	Structure and conformational plasticity of the intact <i>Thermus thermophilus</i> V/A-type ATPase. <i>Science</i> , 2019, 365, .	12.6	47
42	Detection and characterization of a complex I-like NADH-specific dehydrogenase from pea thylakoids. <i>Biochemical Society Transactions</i> , 1996, 24, 739-743.	3.4	45
43	Three-dimensional structure of respiratory complex I from <i>Escherichia coli</i> in ice in the presence of nucleotides. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008, 1777, 711-718.	1.0	40
44	Reversible FMN dissociation from <i>Escherichia coli</i> respiratory complex I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 1777-1785.	1.0	40
45	Structure of respiratory complex I – An emerging blueprint for the mechanism. <i>Current Opinion in Structural Biology</i> , 2022, 74, 102350.	5.7	36
46	Chemical and NADH-Induced, ROS-Dependent, Cross-Linking between Subunits of Complex I from <i>Escherichia coli</i> and <i>Thermus thermophilus</i> . <i>Biochemistry</i> , 2008, 47, 10262-10270.	2.5	35
47	Structure of <i>Escherichia coli</i> OmpF porin from lipidic mesophase. <i>Journal of Structural Biology</i> , 2012, 178, 311-318.	2.8	34
48	Cryo-EM grid optimization for membrane proteins. <i>IScience</i> , 2021, 24, 102139.	4.1	32
49	Gaining mass: the structure of respiratory complex I from bacterial towards mitochondrial versions. <i>Current Opinion in Structural Biology</i> , 2015, 33, 135-145.	5.7	30
50	Estimation of the H ⁺ /H ⁺ ratio of the reaction catalysed by the nicotinamide nucleotide transhydrogenase in chromatophores from over-expressing strains of <i>Rhodospirillum rubrum</i> and in liposomes inlaid with the purified bovine enzyme. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1996, 1273, 4-12.	1.0	29
51	Structure and mechanism of the Mrp complex, an ancient cation/proton antiporter. <i>ELife</i> , 2020, 9, .	6.0	28
52	Purification of Ovine Respiratory Complex I Results in a Highly Active and Stable Preparation. <i>Journal of Biological Chemistry</i> , 2016, 291, 24657-24675.	3.4	26
53	NDUFS4 deletion triggers loss of NDUFA12 in <i>Ndufs4</i> mice and Leigh syndrome patients: A stabilizing role for NDUFAF2. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148213.	1.0	25
54	A long road towards the structure of respiratory complex I, a giant molecular proton pump. <i>Biochemical Society Transactions</i> , 2013, 41, 1265-1271.	3.4	22

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55	Charge Transfer and Chemo-Mechanical Coupling in Respiratory Complex I. Journal of the American Chemical Society, 2020, 142, 9220-9230.	13.7	22
56	Proton-translocating transhydrogenase in bacteria. Biochemical Society Transactions, 1993, 21, 1010-1013.	3.4	14
57	Inhibition of the respiratory burst in mouse macrophages by ultra-low doses of an opioid peptide is consistent with a possible adaptation mechanism. FEBS Letters, 1994, 355, 114-116.	2.8	13
58	Respiratory burst inhibition in human neutrophils by ultra-low doses of [D-Ala ²]methionine enkephalinamide. FEBS Letters, 1991, 291, 84-86.	2.8	11
59	Most mitochondrial dGTP is tightly bound to respiratory complex I through the NDUF10 subunit. Communications Biology, 2022, 5, .	4.4	9
60	Activation and inhibition of mitochondrial transhydrogenase by metal ions. Biochimica Et Biophysica Acta - Bioenergetics, 1993, 1144, 225-228.	1.0	6
61	Possible functions of the NADP-linked isocitrate dehydrogenase and H ⁺ -transhydrogenase in heart mitochondria. Biochemical Society Transactions, 1993, 21, 260S-260S.	3.4	2
62	Structure and mechanism of respiratory complex I, a giant molecular proton pump. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s3-s3.	0.1	1
63	Characterisation and crystallisation of intact complex I from Thermus thermophilus. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 11.	1.0	0
64	Structure of Complex I., 2012, , 3-21.		0
65	A novel chaperone-like subunit of complex I from Thermus thermophilus. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S51.	1.0	0
66	Proton translocation by Thermus thermophilus complex I. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S55.	1.0	0
67	Interaction of complex I from Thermus thermophilus with quinone and quinone-like inhibitors. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S58-S59.	1.0	0
68	Purification and characterization of mitochondrial complex I from Neurospora crassa for structural studies. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, e44.	1.0	0
69	Structure and mechanism of respiratory complex I, a giant molecular proton pump. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s59-s59.	0.3	0
70	Structure and mechanism of respiratory complex I. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C8-C8.	0.1	0