Bernard Korzeniewski

List of Publications by Year
in descending order

57 papers	1,621 citations	304743 22 h-index	302126 39 g-index
57 all docs	57 docs citations	57 times ranked	1059 citing authors

#	Article	IF	Citations
1	A model of oxidative phosphorylation in mammalian skeletal muscle. Biophysical Chemistry, 2001, 92, 17-34.	2.8	166
2	Regulation of ATP supply during muscle contraction: theoretical studies. Biochemical Journal, 1998, 330, 1189-1195.	3.7	144
3	Theoretical studies on the control of oxidative phosphorylation in muscle mitochondria: application to mitochondrial deficiencies. Biochemical Journal, 1996, 319, 143-148.	3.7	98
4	Regulation of oxidative phosphorylation through parallel activation. Biophysical Chemistry, 2007, 129, 93-110.	2.8	92
5	Cytosolic Ca2+ regulates the energization of isolated brain mitochondria by formation of pyruvate through the malateâ€“aspartate shuttle. Biochemical Journal, 2012, 443, 747-755.	3.7	68
6	Factors determining the oxygen consumption rate (V.o2) on-kinetics in skeletal muscles. Biochemical Journal, 2004, 379, 703-710.	3.7	63
7	Regulation of oxidative phosphorylation in different muscles and various experimental conditions. Biochemical Journal, 2003, 375, 799-804.	3.7	59
8	Theoretical studies on the regulation of anaerobic glycolysis and its influence on oxidative phosphorylation in skeletal muscle. Biophysical Chemistry, 2004, 110, 147-169.	2.8	52
9	Regulation of oxidative phosphorylation in intact mammalian heart in vivo. Biophysical Chemistry, 2005, 116, 145-157.	2.8	48
10	Trainingâ€induced acceleration of O₂ uptake onâ€kinetics precedes muscle mitochondrial biogenesis in humans. Experimental Physiology, 2013, 98, 883-898.	2.0	48
11	Proportional activation coefficients during stimulation of oxidative phosphorylation by lactate and pyruvate or by vasopressin. Biochimica Et Biophysica Acta - Bioenergetics, 1995, 1229, 315-322.	1.0	46
12	Training-induced adaptation of oxidative phosphorylation in skeletal muscles. Biochemical Journal, 2003, 374, 37-40.	3.7	41
13	Eachâ€step activation of oxidative phosphorylation is necessary to explain muscle metabolic kinetic responses to exercise and recovery in humans. Journal of Physiology, 2015, 593, 5255-5268.	2.9	41
14	Mechanisms responsible for the acceleration of pulmonary VÌ‡<scp>o</scp>₂on-kinetics in humans after prolonged endurance training. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2014, 307, R1101-R1114.	1.8	39
15	AMP Deamination Delays Muscle Acidification during Heavy Exercise and Hypoxia. Journal of Biological Chemistry, 2006, 281, 3057-3066.	3.4	35
16	Metabolic control over the oxygen consumption flux in intact skeletal muscle: in silico studies. American Journal of Physiology - Cell Physiology, 2006, 291, C1213-C1224.	4.6	32
17	Dextran strongly increases the Michaelis constants of oxidative phosphorylation and of mitochondrial creatine kinase in heart mitochondria. FEBS Journal, 1998, 254, 172-180.	0.2	31
18	Possible mechanisms underlying slow component of VÌ‡<scp>o</scp>₂ on-kinetics in skeletal muscle. Journal of Applied Physiology, 2015, 118, 1240-1249.	2.5	30

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19	Theoretical studies on control of oxidative phosphorylation in muscle mitochondria at different energy demands and oxygen concentrations. Acta Biotheoretica, 1996, 44, 263-269.	1.5	29
20	Preexercise metabolic alkalosis induced via bicarbonate ingestion accelerates VÌ‡o2 kinetics at the onset of a high-power-output exercise in humans. Journal of Applied Physiology, 2005, 98, 895-904.	2.5	26
21	Physiological heart activation by adrenaline involves parallel activation of ATP usage and supply. Biochemical Journal, 2008, 413, 343-347.	3.7	26
22	Some factors determining the PCr recovery overshoot in skeletal muscle. Biophysical Chemistry, 2005, 116, 129-136.	2.8	25
23	Biochemical Background of the VO2 On-Kinetics in Skeletal Muscles. Journal of Physiological Sciences, 2006, 56, 1-12.	2.1	21
24	Exceeding a â€œcriticalâ€•muscle Pi: implications for $$dot{ext{V}}ext{O}_{2}$$ and metabolite slow components, muscle fatigue and the powerâ€"duration relationship. European Journal of Applied Physiology, 2020, 120, 1609-1619.	2.5	21
25	Oxygen consumption and metabolite concentrations during transitions between different work intensities in heart. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H1466-H1474.	3.2	20
26	Regulation of oxidative phosphorylation through each-step activation (ESA): Evidences from computer modeling. Progress in Biophysics and Molecular Biology, 2017, 125, 1-23.	2.9	20
27	Factors determining training-induced changes in VÌ‡O2max, critical power, and VÌ‡O2 on-kinetics in skeletal muscle. Journal of Applied Physiology, 2021, 130, 498-507.	2.5	19
28	â€˜Idealizedâ€™ State 4 and State 3 in Mitochondria vs. Rest and Work in Skeletal Muscle. PLoS ONE, 2015, 10, e0117145.	2.5	19
29	Effect of â€˜binary mitochondrial heteroplasmyâ€™ on respiration and ATP synthesis: implications for mitochondrial diseases. Biochemical Journal, 2001, 357, 835-842.	3.7	17
30	Slow VÌ‡<scp>o</scp>₂ off-kinetics in skeletal muscle is associated with fast PCr off-kineticsâ€"and inversely. Journal of Applied Physiology, 2013, 115, 605-612.	2.5	17
31	Regulation of cytochrome oxidase: theoretical studies. Biophysical Chemistry, 1996, 59, 75-86.	2.8	16
32	Possible Factors Determining the Non-Linearity in the VO2-Power Output Relationship in Humans: Theoretical Studies. The Japanese Journal of Physiology, 2003, 53, 271-280.	0.9	16
33	Influence of rapid changes in cytosolic pH on oxidative phosphorylation in skeletal muscle: theoretical studies. Biochemical Journal, 2002, 365, 249-258.	3.7	15
34	Confrontation of the Cybernetic Definition of a Living Individual with the Real World. Acta Biotheoretica, 2005, 53, 1-28.	1.5	15
35	Pi-induced muscle fatigue leads to near-hyperbolic powerâ€"duration dependence. European Journal of Applied Physiology, 2019, 119, 2201-2213.	2.5	15
36	Regulation of oxidative phosphorylation during work transitions results from its kinetic properties. Journal of Applied Physiology, 2014, 116, 83-94.	2.5	14

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37	Regulation of oxidative phosphorylation is different in electrically- and cortically-stimulated skeletal muscle. PLoS ONE, 2018, 13, e0195620.	2.5	13
38	Parallel activation in the ATP supplyâ€“demand system lessens the impact of inborn enzyme deficiencies, inhibitors, poisons or substrate shortage on oxidative phosphorylation in vivo. Biophysical Chemistry, 2002, 96, 21-31.	2.8	11
39	Contribution of proton leak to oxygen consumption in skeletal muscle during intense exercise is very low despite large contribution at rest. PLoS ONE, 2017, 12, e0185991.	2.5	11
40	Effects of OXPHOS complex deficiencies and ESA dysfunction in working intact skeletal muscle: implications for mitochondrial myopathies. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1310-1319.	1.0	10
41	Mechanisms of Attenuation of Pulmonary Vâ€™O2 Slow Component in Humans after Prolonged Endurance Training. PLoS ONE, 2016, 11, e0154135.	2.5	10
42	Oxygen delivery by blood determines the maximal Vo2 and work rate during whole body exercise in humans: in silico studies. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H343-H353.	3.2	9
43	Effect of pyruvate, lactate and insulin on ATP supply and demand in unpaced perfused rat heart. Biochemical Journal, 2009, 423, 421-428.	3.7	9
44	Computer-aided studies on the regulation of oxidative phosphorylation during work transitions. Progress in Biophysics and Molecular Biology, 2011, 107, 274-285.	2.9	8
45	Muscle VË™O2-power output nonlinearity in constant-power, step-incremental, and ramp-incremental exercise: magnitude and underlying mechanisms. Physiological Reports, 2018, 6, e13915.	1.7	8
46	Thermodynamic regulation of cytochrome oxidase. , 1997, 174, 137-141.		7
47	Faster and stronger manifestation of mitochondrial diseases in skeletal muscle than in heart related to cytosolic inorganic phosphate (Pi) accumulation. Journal of Applied Physiology, 2016, 121, 424-437.	2.5	6
48	Mechanisms underlying extremely fast muscle VË™O₂on-kinetics in humans. Physiological Reports, 2018, 6, e13808.	1.7	6
49	Is it possible to predict any properties of oxidative phosphorylation in a theoretical way?. , 1998, 184, 345-358.		5
50	Artificial Cybernetic Living Individuals Based on SupraMolecular-Level Organization as Dispersed Individuals. Artificial Life, 2011, 17, 51-67.	1.3	5
51	Mechanisms of the effect of oxidative phosphorylation deficiencies on the skeletal muscle bioenergetic system in patients with mitochondrial myopathies. Journal of Applied Physiology, 2021, 131, 768-777.	2.5	5
52	What regulates respiration in mitochondria?. IUBMB Life, 1996, 39, 415-419.	3.4	4
53	Effect of training on skeletal muscle bioenergetic system in patients with mitochondrial myopathies: A computational study. Respiratory Physiology and Neurobiology, 2022, 296, 103799.	1.6	4
54	Computer-aided analysis of biochemical mechanisms that increase metabolite and proton stability in the heart during severe hypoxia and generate post-ischemic PCr overshoot. Journal of Physiological Sciences, 2011, 61, 349-361.	2.1	3

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55	Influence of substrate activation (hydrolysis of ATP by first steps of glycolysis and Î²-oxidation) on the effect of enzyme deficiencies, inhibitors, substrate shortage and energy demand on oxidative phosphorylation. Biophysical Chemistry, 2003, 104, 107-119.	2.8	2
56	VË™O2 On-Kineticsâ€“Critical Power Relationship: Correlation But Not Direct Causal Link. Exercise and Sport Sciences Reviews, 2022, 50, 104-104.	3.0	1
57	Effect of enzyme deficiencies on oxidative phosphorylation: from isolated mitochondria to intact tissues. Theoretical studies. Molecular Biology Reports, 2002, 29, 197-202.	2.3	0