Witold K Subczynski

List of Publications by Year
in descending order

94 papers	4,279 citations	76196 40 h-index	118652 62 g-index
94 all docs	94 docs citations	94 times ranked	2672 citing authors

#	Article	IF	Citations
1	Hydrophobic Barriers of Lipid Bilayer Membranes Formed by Reduction of Water Penetration by Alkyl Chain Unsaturation and Cholesterol. Biochemistry, 1994, 33, 7670-7681.	1.2	312
2	High Cholesterol/Low Cholesterol: Effects in Biological Membranes: A Review. Cell Biochemistry and Biophysics, 2017, 75, 369-385.	0.9	204
3	Dynamics of raft molecules in the cell and artificial membranes: approaches by pulse EPR spin labeling and single molecule optical microscopy. Biochimica Et Biophysica Acta - Biomembranes, 2003, 1610, 231-243.	1.4	162
4	Spin-label studies on phosphatidylcholine-cholesterol membranes: effects of alkyl chain length and unsaturation in the fluid phase. Biochimica Et Biophysica Acta - Biomembranes, 1986, 854, 307-317.	1.4	141
5	Effects of polar carotenoids on dimyristoylphosphatidylcholine membranes: a spin-label study. Biochimica Et Biophysica Acta - Biomembranes, 1992, 1105, 97-108.	1.4	138
6	Effect of alkyl chain unsaturation and cholesterol intercalation on oxygen transport in membranes: a pulse ESR spin labeling study. Biochemistry, 1991, 30, 8578-8590.	1.2	132
7	Effect of polar carotenoids on the oxygen diffusion-concentration product in lipid bilayers. An EPR spin label study. Biochimica Et Biophysica Acta - Biomembranes, 1991, 1068, 68-72.	1.4	116
8	Permeability of Nitric Oxide through Lipid Bilayer Membranes. Free Radical Research, 1996, 24, 343-349.	1.5	113
9	Oxygen permeability of the lipid bilayer membrane made of calf lens lipids. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 2635-2645.	1.4	104
10	Pulse EPR Detection of Lipid Exchange between Protein-Rich Raft and Bulk Domains in the Membrane: Methodology Development and Its Application to Studies of Influenza Viral Membrane. Biophysical Journal, 2001, 80, 738-748.	0.2	99
11	Effects of polar carotenoids on the shape of the hydrophobic barrier of phospholipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1368, 235-246.	1.4	90
12	Molecular Organization and Dynamics in Bacteriorhodopsin-Rich Reconstituted Membranes: Discrimination of Lipid Environments by the Oxygen Transport Parameter Using a Pulse ESR Spin-Labeling Technique. Biochemistry, 1994, 33, 4947-4952.	1.2	89
13	Spin-Label Oximetry. Biological Magnetic Resonance, 1989, , 399-425.	0.4	85
14	Molecular Organization and Dynamics of 1-Palmitoyl-2-oleoylphosphatidylcholine Bilayers Containing a Transmembrane Î±-Helical Peptideâ€. Biochemistry, 1998, 37, 3156-3164.	1.2	83
15	Microimmiscibility and three-dimensional dynamic structures of phosphatidylcholine-cholesterol membranes: translational diffusion of a copper complex in the membrane. Biochemistry, 1990, 29, 7936-7945.	1.2	75
16	Rotational diffusion of a steroid molecule in phosphatidylcholine-cholesterol membranes: fluid-phase microimmiscibility in unsaturated phosphatidylcholine-cholesterol membranes. Biochemistry, 1990, 29, 4059-4069.	1.2	75
17	Physical properties of lipid bilayers from EPR spin labeling and their influence on chemical reactions in a membrane environment. Free Radical Biology and Medicine, 2009, 46, 707-718.	1.3	69
18	Three-Dimensional Dynamic Structure of the Liquid-Ordered Domain in Lipid Membranes as Examined by Pulse-EPR Oxygen Probing. Biophysical Journal, 2007, 92, 1573-1584.	0.2	64

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19	Functions of Cholesterol and the Cholesterol Bilayer Domain Specific to the Fiber-Cell Plasma Membrane of the Eye Lens. Journal of Membrane Biology, 2012, 245, 51-68.	1.0	64
20	Carotenoid-membrane interactions in liposomes: effect of dipolar, monopolar, and nonpolar carotenoids.. Acta Biochimica Polonica, 2019, 53, 475-484.	0.3	64
21	Oxygen permeability of thylakoid membranes: electron paramagnetic resonance spin labeling study. Biochimica Et Biophysica Acta - Bioenergetics, 1998, 1365, 453-463.	0.5	62
22	Spin-label studies on phosphatidylcholine-polar carotenoid membranes: effects of alkyl-chain length and unsaturation. Biochimica Et Biophysica Acta - Biomembranes, 1993, 1150, 173-181.	1.4	61
23	Using spin-label electron paramagnetic resonance (EPR) to discriminate and characterize the cholesterol bilayer domain. Chemistry and Physics of Lipids, 2011, 164, 819-829.	1.5	60
24	Location of macular xanthophylls in the most vulnerable regions of photoreceptor outer-segment membranes. Archives of Biochemistry and Biophysics, 2010, 504, 61-66.	1.4	59
25	The immiscible cholesterol bilayer domain exists as an integral part of phospholipid bilayer membranes. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 1072-1080.	1.4	58
26	Why has Nature Chosen Lutein and Zeaxanthin to Protect the Retina?. Journal of Clinical & Experimental Ophthalmology, 2014, 05, 326.	0.1	58
27	Formation of Cholesterol Bilayer Domains Precedes Formation of Cholesterol Crystals in Cholesterol/Dimyristoylphosphatidylcholine Membranes: EPR and DSC Studies. Journal of Physical Chemistry B, 2013, 117, 8994-9003.	1.2	52
28	Physical properties of the lipid bilayer membrane made of calf lens lipids: EPR spin labeling studies. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 1454-1465.	1.4	50
29	Studying Lipid Organization in Biological Membranes Using Liposomes and EPR Spin Labeling. Methods in Molecular Biology, 2010, 606, 247-269.	0.4	50
30	Properties of membranes derived from the total lipids extracted from the human lens cortex and nucleus. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 1432-1440.	1.4	50
31	Membrane fluidity profiles as deduced by saturation-recovery EPR measurements of spin-lattice relaxation times of spin labels. Journal of Magnetic Resonance, 2011, 212, 418-425.	1.2	49
32	Saturation with cholesterol increases vertical order and smoothes the surface of the phosphatidylcholine bilayer: A molecular simulation study. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 520-529.	1.4	49
33	Can Xanthophyll-Membrane Interactions Explain Their Selective Presence in the Retina and Brain?. Foods, 2016, 5, 7.	1.9	49
34	Spin-Label EPR T1Values Using Saturation Recovery from 2 to 35 GHzâ€. Journal of Physical Chemistry B, 2004, 108, 9524-9529.	1.2	48
35	Accumulation of macular xanthophylls in unsaturated membrane domains. Free Radical Biology and Medicine, 2006, 40, 1820-1826.	1.3	47
36	Physical properties of the lipid bilayer membrane made of cortical and nuclear bovine lens lipids: EPR spin-labeling studies. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 2380-2388.	1.4	46

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37	Molecular Dynamics of 1-Palmitoyl-2-oleoylphosphatidylcholine Membranes Containing Transmembrane Î±-Helical Peptides with Alternating Leucine and Alanine Residues. Biochemistry, 2003, 42, 3939-3948.	1.2	45
38	Is a fluid-mosaic model of biological membranes fully relevant? Studies on lipid organization in model and biological membranes. Cellular and Molecular Biology Letters, 2003, 8, 147-59.	2.7	45
39	Saturation recovery EPR and ELDOR at W-band for spin labels. Journal of Magnetic Resonance, 2008, 193, 297-304.	1.2	44
40	Concentration by centrifugation for gas exchange EPR oximetry measurements with loopâ€"gap resonators. Journal of Magnetic Resonance, 2005, 176, 244-248.	1.2	42
41	Characterization of lipid domains in reconstituted porcine lens membranes using EPR spin-labeling approaches. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 1079-1090.	1.4	41
42	Saturation-Recovery Electron Paramagnetic Resonance Discrimination by Oxygen Transport (DOT) Method for Characterizing Membrane Domains. Methods in Molecular Biology, 2007, 398, 143-157.	0.4	40
43	Dynamic fluorescence quenching studies on lipid mobilities in phosphatidylcholine-cholesterol membranes. Biochimica Et Biophysica Acta - Biomembranes, 1987, 897, 238-248.	1.4	39
44	Properties of membranes derived from the total lipids extracted from clear and cataractous lenses of 61â€"70-year-old human donors. European Biophysics Journal, 2015, 44, 91-102.	1.2	39
45	Distribution of macular xanthophylls between domains in a model of photoreceptor outer segment membranes. Free Radical Biology and Medicine, 2006, 41, 1257-1265.	1.3	38
46	Changes in the Properties and Organization of Human Lens Lipid Membranes Occurring with Age. Current Eye Research, 2017, 42, 721-731.	0.7	38
47	A Polyalanine-Based Peptide Cannot Form a Stable Transmembrane Î±-Helix in Fully Hydrated Phospholipid Bilayersâ€. Biochemistry, 2001, 40, 12103-12111.	1.2	37
48	Phases and domains in sphingomyelinâ€"cholesterol membranes: structure and properties using EPR spin-labeling methods. European Biophysics Journal, 2012, 41, 147-159.	1.2	36
49	Using spin-label W-band EPR to study membrane fluidity profiles in samples of small volume. Journal of Magnetic Resonance, 2013, 226, 35-44.	1.2	36
50	Phase-Separation and Domain-Formation in Cholesterol-Sphingomyelin Mixture: Pulse-EPR Oxygen Probing. Biophysical Journal, 2011, 101, 837-846.	0.2	35
51	Properties of fiber cell plasma membranes isolated from the cortex and nucleus of the porcine eye lens. Experimental Eye Research, 2012, 97, 117-129.	1.2	32
52	Cholesterol Bilayer Domains in the Eye Lens Health: A Review. Cell Biochemistry and Biophysics, 2017, 75, 387-398.	0.9	29
53	Effects of very small amounts of cholesterol on gel-phase phosphatidylcholine membranes. Biochimica Et Biophysica Acta - Biomembranes, 1986, 854, 318-320.	1.4	28
54	Is the cholesterol bilayer domain a barrier to oxygen transport into the eye lens?. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 434-441.	1.4	28

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55	Lipid domains in intact fiber-cell plasma membranes isolated from cortical and nuclear regions of human eye lenses of donors from different age groups. Experimental Eye Research, 2015, 132, 78-90.	1.2	26
56	Why Is Very High Cholesterol Content Beneficial for the Eye Lens but Negative for Other Organs?. Nutrients, 2019, 11, 1083.	1.7	26
57	Organization of lipids in fiber-cell plasma membranes of the eye lens. Experimental Eye Research, 2017, 156, 79-86.	1.2	25
58	Formation of cholesterol Bilayer Domains Precedes Formation of Cholesterol Crystals in Membranes Made of the Major Phospholipids of Human Eye Lens Fiber Cell Plasma Membranes. Current Eye Research, 2020, 45, 162-172.	0.7	24
59	Why Is Zeaxanthin the Most Concentrated Xanthophyll in the Central Fovea?. Nutrients, 2020, 12, 1333.	1.7	24
60	EPR Oximetry in Biological and Model Samples. , 2005, , 229-282.		23
61	Comparative Computer Simulation Study of Cholesterol in Hydrated Unary and Binary Lipid Bilayers and in an Anhydrous Crystal. Journal of Physical Chemistry B, 2013, 117, 8758-8769.	1.2	23
62	Spin-label saturation-recovery EPR at W-band: Applications to eye lens lipid membranes. Journal of Magnetic Resonance, 2011, 212, 86-94.	1.2	22
63	Lipidâ€“protein interactions in plasma membranes of fiber cells isolated from the human eye lens. Experimental Eye Research, 2014, 120, 138-151.	1.2	22
64	The liquid-ordered phase in sphingomyelincholesterol membranes as detected by the discrimination by oxygen transport (DOT) method. Cellular and Molecular Biology Letters, 2008, 13, 430-51.	2.7	21
65	Carotenoid-membrane interactions in liposomes: effect of dipolar, monopolar, and nonpolar carotenoids. Acta Biochimica Polonica, 2006, 53, 475-84.	0.3	21
66	Spin-label W-band EPR with Seven-Loopâ€“Six-Gap Resonator: Application to Lens Membranes Derived from Eyes of a Single Donor. Applied Magnetic Resonance, 2014, 45, 1343-1358.	0.6	17
67	Depth dependence of the perturbing effect of placing a bulky group (oxazolidine ring spin labels) in the membrane on the membrane phase transition. Biochimica Et Biophysica Acta - Biomembranes, 1996, 1278, 68-72.	1.4	16
68	Assessment of the ESR spectra of copper 3-ethoxy-2-oxobutyraldehyde bis(thiosemicarbazonate) complexes CuKTSM2. Inorganic Chemistry, 1987, 26, 3945-3949.	1.9	15
69	Detection of cholesterol bilayer domains in intact biological membranes: Methodology development and its application to studies of eye lens fiber cell plasma membranes. Experimental Eye Research, 2019, 178, 72-81.	1.2	15
70	Saturation Recovery EPR Spin-Labeling Method for Quantification of Lipids in Biological Membrane Domains. Applied Magnetic Resonance, 2017, 48, 1355-1373.	0.6	14
71	Factors Differentiating the Antioxidant Activity of Macular Xanthophylls in the Human Eye Retina. Antioxidants, 2021, 10, 601.	2.2	14
72	Mechanisms enhancing the protective functions of macular xanthophylls in the retina during oxidative stress. Experimental Eye Research, 2019, 178, 238-246.	1.2	13

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73	Confocal Microscopy Confirmed that in Phosphatidylcholine Giant Unilamellar Vesicles with very High Cholesterol Content Pure Cholesterol Bilayer Domains Form. Cell Biochemistry and Biophysics, 2019, 77, 309-317.	0.9	11
74	Characterization of the Distribution of Spinâ€"Lattice Relaxation Rates of Lipid Spin Labels in Fiber Cell Plasma Membranes of Eye Lenses with a Stretched Exponential Function. Applied Magnetic Resonance, 2019, 50, 903-918.	0.6	11
75	Membranes. Advances in Experimental Medicine and Biology, 1998, , 399-408.	0.8	11
76	Hypothetical Pathway for Formation of Cholesterol Microcrystals Initiating the Atherosclerotic Process. Cell Biochemistry and Biophysics, 2020, 78, 241-247.	0.9	10
77	Amounts of phospholipids and cholesterol in lipid domains formed in intact lens membranes: Methodology development and its application to studies of porcine lens membranes. Experimental Eye Research, 2015, 140, 179-186.	1.2	9
78	Transmembrane localization of cis-isomers of zeaxanthin in the host dimyristoylphosphatidylcholine bilayer membrane. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 10-19.	1.4	8
79	Structural aspects of the antioxidant activity of lutein in a model of photoreceptor membranes. Acta Biochimica Polonica, 2012, 59, 119-24.	0.3	7
80	Effects of pH-induced variations of the charge of the transmembrane Î±-helical peptide Ac-K2(LA)12K2-amide on the organization and dynamics of the host dimyristoylphosphatidylcholine bilayer membrane. Biochimica Et Biophysica Acta - Biomembranes, 2005, 1720, 99-109.	1.4	6
81	Spin-Labeled Small Unilamellar Vesicles with the T 1-Sensitive Saturation-Recovery EPR Display as an Oxygen-Sensitive Analyte for Measurement of Cellular Respiration. Applied Magnetic Resonance, 2015, 46, 885-895.	0.6	6
82	Broadband W-band Rapid Frequency Sweep Considerations for Fourier Transform EPR. Cell Biochemistry and Biophysics, 2017, 75, 259-273.	0.9	6
83	Can macular xanthophylls replace cholesterol in formation of the liquid-ordered phase in lipid-bilayer membranes?. Acta Biochimica Polonica, 2012, 59, 109-14.	0.3	6
84	Oxygenic photosynthesis: EPR study of photosynthetic electron transport and oxygen-exchange, an overview. Cell Biochemistry and Biophysics, 2019, 77, 47-59.	0.9	5
85	Differences in the properties of porcine cortical and nuclear fiber cell plasma membranes revealed by saturation recovery EPR spin labeling measurements. Experimental Eye Research, 2021, 206, 108536.	1.2	5
86	Oxidation of Polyunsaturated Phospholipid Decreases the Cholesterol Content at which Cholesterol Bilayer Domains Start to form in Phospholipid-Cholesterol Membranes. Biophysical Journal, 2017, 112, 375a.	0.2	4
87	Factors Determining Barrier Properties to Oxygen Transport Across Model and Cell Plasma Membranes Based on EPR Spin-Label Oximetry. Applied Magnetic Resonance, 2021, 52, 1237.	0.6	4
88	Oriented Self-Association of Copper(II) Tetraphenylporphine in Liquid-Crystalline Lipid Bilayer Membranes:Â An EPR Study. Journal of the American Chemical Society, 1999, 121, 4054-4059.	6.6	3
89	Cholesterol Bilayer Domain in Phospholipid Bilayer Membranes can be Detected by Confocal Microscope. Biophysical Journal, 2015, 108, 403a-404a.	0.2	2
90	Chirality affects cholesterol-oxysterol association in water, a computational study. Computational and Structural Biotechnology Journal, 2021, 19, 4319-4335.	1.9	2

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91	Enhancement of Paramagnetic Relaxation by Photoexcited Gold Nanorods. Scientific Reports, 2016, 6, 24101.	1.6	1
92	Pure Cholesterol Bilayer Domains are Formed at Cholesterol Contents Significantly Lower than Cholesterol Solubility Thresholds in Phospholipid Membranes: EPR and DSC Studies. Biophysical Journal, 2018, 114, 450a.	0.2	1
93	Detection of Pure Cholesterol Bilayer Domains in Biological Membranes Overloaded with Cholesterol: Methodology Development and its Application to Porcine Lens Membrane Studies. Biophysical Journal, 2018, 114, 449a.	0.2	1
94	Role of cholesterol in maintaining the physical properties of the plasma membrane. , 2022, , 41-71.		0