Pavel PospÃ-Å¡il

List of Publications by Year
in descending order

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84 papers	3,803 citations	109137 35 h-index	143772 57 g-index
90 all docs	90 docs citations	90 times ranked	3743 citing authors

#	Article	IF	Citations
1	Reactive oxygen species in photosystem II: relevance for oxidative signaling. Photosynthesis Research, 2022, 152, 245-260.	1.6	4
2	Bioactive Compounds and Their Impact on Protein Modification in Human Cells. International Journal of Molecular Sciences, 2022, 23, 7424.	1.8	3
3	Tocopherol controls D1 amino acid oxidation by oxygen radicals in Photosystem II. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	26
4	Free Radical-Mediated Protein Radical Formation in Differentiating Monocytes. International Journal of Molecular Sciences, 2021, 22, 9963.	1.8	9
5	Towards spruce-type photosystem II: consequences of the loss of light-harvesting proteins LHCB3 and LHCB6 in Arabidopsis. Plant Physiology, 2021, 187, 2691-2715.	2.3	10
6	The Anti-Senescence Activity of Cytokinin Arabinosides in Wheat and Arabidopsis Is Negatively Correlated with Ethylene Production. International Journal of Molecular Sciences, 2020, 21, 8109.	1.8	9
7	Reactive Oxygen Species Imaging in U937 Cells. Frontiers in Physiology, 2020, 11, 552569.	1.3	23
8	Formation of Î±-tocopherol hydroperoxide and Î±-tocopheroxyl radical: relevance for photooxidative stress in Arabidopsis. Scientific Reports, 2020, 10, 19646.	1.6	11
9	Spectral Distribution of Ultra-Weak Photon Emission as a Response to Wounding in Plants: An In Vivo Study. Biology, 2020, 9, 139.	1.3	12
10	Interplay between antioxidants in response to photooxidative stress in Arabidopsis. Free Radical Biology and Medicine, 2020, 160, 894-907.	1.3	19
11	Characterization of Protein Radicals in Arabidopsis. Frontiers in Physiology, 2019, 10, 958.	1.3	7
12	Mechanism of the Formation of Electronically Excited Species by Oxidative Metabolic Processes: Role of Reactive Oxygen Species. Biomolecules, 2019, 9, 258.	1.8	69
13	Editorial: Reactive Oxygen Species (ROS) Detection Methods in Biological System. Frontiers in Physiology, 2019, 10, 1316.	1.3	14
14	Exogenous application of cytokinin during dark senescence eliminates the acceleration of photosystem II impairment caused by chlorophyll b deficiency in barley. Plant Physiology and Biochemistry, 2019, 136, 43-51.	2.8	20
15	Real-time imaging of photosynthetic oxygen evolution from spinach using LSI-based biosensor. Scientific Reports, 2019, 9, 12234.	1.6	10
16	Organic radical imaging in plants: Focus on protein radicals. Free Radical Biology and Medicine, 2019, 130, 568-575.	1.3	13
17	Reactive Oxygen Species as a Response to Wounding: In Vivo Imaging in Arabidopsis thaliana. Frontiers in Plant Science, 2019, 10, 1660.	1.7	32
18	The plastoquinone pool outside the thylakoid membrane serves in plant photoprotection as a reservoir of singlet oxygen scavengers. Plant, Cell and Environment, 2018, 41, 2277-2287.	2.8	30

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19	Plant-Derived Antioxidants in Disease Prevention 2018. Oxidative Medicine and Cellular Longevity, 2018, 2018, 1-2.	1.9	20
20	Data on detection of singlet oxygen, hydroxyl radical and organic radical in Arabidopsis thaliana. Data in Brief, 2018, 21, 2246-2252.	0.5	14
21	Singlet oxygen imaging using fluorescent probe Singlet Oxygen Sensor Green in photosynthetic organisms. Scientific Reports, 2018, 8, 13685.	1.6	70
22	Triplet Excited Carbonyls and Singlet Oxygen Formation During Oxidative Radical Reaction in Skin. Frontiers in Physiology, 2018, 9, 1109.	1.3	20
23	The interplay between cytokinins and light during senescence in detached <i>Arabidopsis</i> leaves. Plant, Cell and Environment, 2018, 41, 1870-1885.	2.8	23
24	Chemical quenching of singlet oxygen by plastoquinols and their oxidation products in Arabidopsis. Plant Journal, 2018, 95, 848-861.	2.8	22
25	Amino acid oxidation of the D1 and D2 proteins by oxygen radicals during photoinhibition of Photosystem II. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2988-2993.	3.3	109
26	Lipoxygenase in singlet oxygen generation as a response to wounding: in vivo imaging in Arabidopsis thaliana. Scientific Reports, 2017, 7, 9831.	1.6	49
27	Damage to photosystem II by lipid peroxidation products. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 457-466.	1.1	55
28	Formation of singlet oxygen by decomposition of protein hydroperoxide in photosystem II. PLoS ONE, 2017, 12, e0181732.	1.1	16
29	Real-time monitoring of superoxide anion radical generation in response to wounding: electrochemical study. PeerJ, 2017, 5, e3050.	0.9	8
30	Plant-Derived Antioxidants in Disease Prevention. Oxidative Medicine and Cellular Longevity, 2016, 2016, 1-2.	1.9	28
31	Bcl-2â–³21 and Ac-DEVD-CHO Inhibit Death of Wheat Microspores. Frontiers in Plant Science, 2016, 7, 1931.	1.7	11
32	Production of Reactive Oxygen Species by Photosystem II as a Response to Light and Temperature Stress. Frontiers in Plant Science, 2016, 7, 1950.	1.7	322
33	Singlet oxygen production in Chlamydomonas reinhardtii under heat stress. Scientific Reports, 2016, 6, 20094.	1.6	41
34	Microâ€“mesoporous iron oxides with record efficiency for the decomposition of hydrogen peroxide: morphology driven catalysis for the degradation of organic contaminants. Journal of Materials Chemistry A, 2016, 4, 596-604.	5.2	42
35	Oxidative Damage of U937 Human Leukemic Cells Caused by Hydroxyl Radical Results in Singlet Oxygen Formation. PLoS ONE, 2015, 10, e0116958.	1.1	24
36	Detection of hydrogen peroxide in Photosystem II (PSII) using catalytic amperometric biosensor. Frontiers in Plant Science, 2015, 6, 862.	1.7	29

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37	The formation of electronically excited species in the human multiple myeloma cell suspension. Scientific Reports, 2015, 5, 8882.	1.6	20
38	Evidence for the Involvement of Loosely Bound Plastosemiquinones in Superoxide Anion Radical Production in Photosystem II. PLoS ONE, 2014, 9, e115466.	1.1	25
39	Singlet oxygen scavenging activity of tocopherol and plastochromanol in <i><scp>A</scp>rabidopsis thaliana</i>: relevance to photooxidative stress. Plant, Cell and Environment, 2014, 37, 392-401.	2.8	54
40	New perspective in cell communication: Potential role of ultra-weak photon emission. Journal of Photochemistry and Photobiology B: Biology, 2014, 139, 47-53.	1.7	30
41	Ultra-weak photon emission from biological samples: Definition, mechanisms, properties, detection and applications. Journal of Photochemistry and Photobiology B: Biology, 2014, 139, 2-10.	1.7	163
42	The Role of Metals in Production and Scavenging of Reactive Oxygen Species in Photosystem II. Plant and Cell Physiology, 2014, 55, 1224-1232.	1.5	38
43	Ultra-weak photon emission from living systems â€“ from mechanism to application. Journal of Photochemistry and Photobiology B: Biology, 2014, 139, 1.	1.7	7
44	Formation of singlet oxygen and protection against its oxidative damage in Photosystem II under abiotic stress. Journal of Photochemistry and Photobiology B: Biology, 2014, 137, 39-48.	1.7	61
45	Role of reactive oxygen species in ultra-weak photon emission in biological systems. Journal of Photochemistry and Photobiology B: Biology, 2014, 139, 11-23.	1.7	120
46	Formation of superoxide anion and carbon-centered radicals by photosystem II under high light and heat stressâ€”EPR spin-trapping study. Journal of Bioenergetics and Biomembranes, 2013, 45, 551-559.	1.0	10
47	Ultra-weak photon emission as a non-invasive tool for the measurement of oxidative stress induced by UVA radiation in Arabidopsis thaliana. Journal of Photochemistry and Photobiology B: Biology, 2013, 123, 59-64.	1.7	17
48	Towards the two-dimensional imaging of spontaneous ultra-weak photon emission from microbial, plant and animal cells. Scientific Reports, 2013, 3, 1211.	1.6	47
49	Ultraweak photon emission induced by visible light and ultraviolet A radiation via photoactivated skin chromophores: <italic>in vivo</italic> charge coupled device imaging. Journal of Biomedical Optics, 2012, 17, 085004.	1.4	35
50	Production of hydrogen peroxide and hydroxyl radical in potato tuber during the necrotrophic phase of hemibiotrophic pathogen Phytophthora infestans infection. Journal of Photochemistry and Photobiology B: Biology, 2012, 117, 202-206.	1.7	29
51	Evidence on the Formation of Singlet Oxygen in the Donor Side Photoinhibition of Photosystem II: EPR Spin-Trapping Study. PLoS ONE, 2012, 7, e45883.	1.1	33
52	Quality Control of Photosystem II: Lipid Peroxidation Accelerates Photoinhibition under Excessive Illumination. PLoS ONE, 2012, 7, e52100.	1.1	41
53	Role of chloride ion in hydroxyl radical production in photosystem II under heat stress: Electron paramagnetic resonance spin-trapping study. Journal of Bioenergetics and Biomembranes, 2012, 44, 365-372.	1.0	19
54	Small CABâ€•like proteins prevent formation of singlet oxygen in the damaged photosystem II complex of the cyanobacterium <i>Synechocystis sp.</i> PCC 6803. Plant, Cell and Environment, 2012, 35, 806-818.	2.8	45

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55	Molecular mechanisms of production and scavenging of reactive oxygen species by photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 218-231.	0.5	246
56	Twoâ€dimensional imaging of spontaneous ultraâ€weak photon emission from the human skin: role of reactive oxygen species. Journal of Biophotonics, 2011, 4, 840-849.	1.1	39
57	Enzymatic function of cytochrome b559 in photosystem II. Journal of Photochemistry and Photobiology B: Biology, 2011, 104, 341-347.	1.7	52
58	Spontaneous ultraweak photon emission imaging of oxidative metabolic processes in human skin: effect of molecular oxygen and antioxidant defense system. Journal of Biomedical Optics, 2011, 16, 096005.	1.4	53
59	Linoleic Acid-Induced Ultra-Weak Photon Emission from Chlamydomonas reinhardtii as a Tool for Monitoring of Lipid Peroxidation in the Cell Membranes. PLoS ONE, 2011, 6, e22345.	1.1	55
60	Water-splitting manganese complex controls light-induced redox changes of cytochrome b 559 in Photosystem II. Journal of Bioenergetics and Biomembranes, 2010, 42, 337-344.	1.0	9
61	Differential mechanism of light-induced and oxygen-dependent restoration of the high-potential form of cytochrome b559 in Tris-treated Photosystem II membranes. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 451-456.	0.5	10
62	Singlet oxygen scavenging activity of plastoquinol in photosystem II of higher plants: Electron paramagnetic resonance spin-trapping study. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 1807-1811.	0.5	37
63	Effect of exogenous hydrogen peroxide on biophoton emission from radish root cells. Plant Physiology and Biochemistry, 2010, 48, 117-123.	2.8	37
64	Ultra-weak photon emission as a non-invasive tool for monitoring of oxidative processes in the epidermal cells of human skin: comparative study on the dorsal and the palm side of the hand. Skin Research and Technology, 2010, 16, 365-70.	0.8	26
65	Quality Control of Photosystem II. Journal of Biological Chemistry, 2009, 284, 25343-25352.	1.6	79
66	Superoxide oxidase and reductase activity of cytochrome b559 in photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 985-994.	0.5	35
67	Production of reactive oxygen species by photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 1151-1160.	0.5	288
68	Quality Control of Photosystem II. Journal of Biological Chemistry, 2008, 283, 28380-28391.	1.6	90
69	Dark production of reactive oxygen species in photosystem II membrane particles at elevated temperature: EPR spin-trapping study. Biochimica Et Biophysica Acta - Bioenergetics, 2007, 1767, 854-859.	0.5	42
70	Reaction pathways involved in the production of hydroxyl radicals in thylakoid membrane: EPR spin-trapping study. Photochemical and Photobiological Sciences, 2006, 5, 472-476.	1.6	18
71	Evidence that cytochrome b559 is involved in superoxide production in photosystem II: effect of synthetic short-chain plastoquinones in a cytochrome b559 tobacco mutant. Biochemical Journal, 2006, 397, 321-327.	1.7	54
72	The effect of metal chelators on the production of hydroxyl radicals in thylakoids. Photosynthesis Research, 2006, 88, 323-329.	1.6	12

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73	Hydroxyl Radical Generation by Photosystem IIâ€. Biochemistry, 2004, 43, 6783-6792.	1.2	117
74	Stepwise Transition of the Tetra-Manganese Complex of Photosystem II to a Binuclear Mn2(Î¼-O)2 Complex in Response to a Temperature Jump: A Time-Resolved Structural Investigation Employing X-Ray Absorption Spectroscopy. Biophysical Journal, 2003, 84, 1370-1386.	0.2	56
75	Valinomycin sensitivity proves that light-induced thylakoid voltages result in millisecond phase of chlorophyll fluorescence transients. Biochimica Et Biophysica Acta - Bioenergetics, 2002, 1554, 94-100.	0.5	59
76	First steps towards time-resolved BioXAS atÂroom temperature: state transitions of theÂmanganese complex of oxygenic photosynthesis. Journal of Synchrotron Radiation, 2002, 9, 304-308.	1.0	8
77	Does the Structure of the Water-Oxidizing Photosystem IIâˆ'Manganese Complex at Room Temperature Differ from Its Low-Temperature Structure? A Comparative X-ray Absorption Studyâ€. Biochemistry, 2000, 39, 7033-7040.	1.2	43
78	Chlorophyll fluorescence transients of Photosystem II membrane particles as a tool for studying photosynthetic oxygen evolution. , 2000, 65, 41-52.		92
79	Molecular mechanism of high-temperature-induced inhibition of acceptor side of Photosystem II. Photosynthesis Research, 1999, 62, 55-66.	1.6	74
80	Decrease of Fluorescence Intensity After the K Step in Chlorophyll a Fluorescence Induction is Suppressed by Electron Acceptors and Donors to Photosystem 2. Photosynthetica, 1999, 37, 255-265.	0.9	38
81	Theoretical Simulation of Temperature Induced Increase of Quantum Yield of Minimum Chlorophyll Fluorescence Î¦F(0). Journal of Theoretical Biology, 1998, 193, 125-130.	0.8	11
82	Low and high temperature dependence of minimum F0 and maximum FM chlorophyll fluorescence in vivo. Biochimica Et Biophysica Acta - Bioenergetics, 1998, 1363, 95-99.	0.5	63
83	Mechanisms of non-photochemical chlorophyll fluorescence quenching in higher plants. Photosynthetica, 1997, 34, 343-355.	0.9	32
84	High temperature chlorophyll fluorescence rise within 61â€“67 Â°C. Spectroscopic study with intermittent light grown barley leaves. Journal of Photochemistry and Photobiology B: Biology, 1997, 39, 243-248.	1.7	6