

Markus Schwarzländer

List of Publications by Year in descending order

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73
papers

5,491
citations

66343

42
h-index

88630

70
g-index

93
all docs

93
docs citations

93
times ranked

5749
citing authors

#	ARTICLE	IF	CITATIONS
1	NAD meets ABA: connecting cellular metabolism and hormone signaling. Trends in Plant Science, 2022, 27, 16-28.	8.8	12
2	Mass Spectrometry-Based Quantitative Cysteine Proteome Profiling of Isolated Using Differential iodoTMT Labeling. Methods in Molecular Biology, 2022, 2363, 215-234.	0.9	1
3	Acetylation of conserved lysines fine-tunes mitochondrial malate dehydrogenase activity in land plants. Plant Journal, 2022, 109, 92-111.	5.7	16
4	Structure and Function of Redox-Sensitive Superfolder Green Fluorescent Protein Variant. Antioxidants and Redox Signaling, 2022, 37, 1-18.	5.4	5
5	Reductive stress triggers ANAC017-mediated retrograde signaling to safeguard the endoplasmic reticulum by boosting mitochondrial respiratory capacity. Plant Cell, 2022, 34, 1375-1395.	6.6	25
6	Live Monitoring of ROS-Induced Cytosolic Redox Changes with roGFP2-Based Sensors in Plants. Methods in Molecular Biology, 2022, , 65-85.	0.9	7
7	Endoplasmic reticulum oxidoreductin provides resilience against reductive stress and hypoxic conditions by mediating luminal redox dynamics. Plant Cell, 2022, 34, 4007-4027.	6.6	22
8	Sensors and controllers for and from plants. Plant Physiology, 2021, 187, 473-476.	4.8	4
9	Chloroplast-derived photo-oxidative stress causes changes in H ₂ O ₂ and GSH in other subcellular compartments. Plant Physiology, 2021, 186, 125-141.	4.8	65
10	Live monitoring of plant redox and energy physiology with genetically encoded biosensors. Plant Physiology, 2021, 186, 93-109.	4.8	33
11	The function of glutaredoxin GRXS15 is required for lipoyl-dependent dehydrogenases in mitochondria. Plant Physiology, 2021, 186, 1507-1525.	4.8	12
12	Establishment of a GC/MS-based ¹³ C-positional isotopomer approach suitable for investigating metabolic fluxes in plant primary metabolism. Plant Journal, 2021, 108, 1213-1233.	5.7	18
13	The versatility of plant organic acid metabolism in leaves is underpinned by mitochondrial malate-citrate exchange. Plant Cell, 2021, 33, 3700-3720.	6.6	37
14	NAD redox monitoring with the genetically encoded fluorescent biosensor Peredox-mCherry. Trends in Plant Science, 2021, 26, 1087-1088.	8.8	2
15	Shining a light on NAD- and NADP-based metabolism in plants. Trends in Plant Science, 2021, 26, 1072-1086.	8.8	19
16	Shifting paradigms and novel players in Cys-based redox regulation and ROS signaling in plants - and where to go next. Biological Chemistry, 2021, 402, 399-423.	2.5	41
17	Single organelle function and organization as estimated from Arabidopsis mitochondrial proteomics. Plant Journal, 2020, 101, 420-441.	5.7	152
18	Redox-mediated kick-start of mitochondrial energy metabolism drives resource-efficient seed germination. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 741-751.	7.1	96

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19	Matrix Redox Physiology Governs the Regulation of Plant Mitochondrial Metabolism through Posttranslational Protein Modifications. <i>Plant Cell</i> , 2020, 32, 573-594.	6.6	70
20	Changes in intracellular NAD status affect stomatal development in an abscisic acid-dependent manner. <i>Plant Journal</i> , 2020, 104, 1149-1168.	5.7	21
21	In Vivo NADH/NAD ⁺ Biosensing Reveals the Dynamics of Cytosolic Redox Metabolism in Plants. <i>Plant Cell</i> , 2020, 32, 3324-3345.	6.6	40
22	Chloroplasts require glutathione reductase to balance reactive oxygen species and maintain efficient photosynthesis. <i>Plant Journal</i> , 2020, 103, 1140-1154.	5.7	47
23	The Proteomic Landscape of Cysteine Oxidation That Underpins Retinoic Acid-Induced Neuronal Differentiation. <i>Journal of Proteome Research</i> , 2020, 19, 1923-1940.	3.7	12
24	Multiparametric real-time sensing of cytosolic physiology links hypoxia responses to mitochondrial electron transport. <i>New Phytologist</i> , 2019, 224, 1668-1684.	7.3	69
25	<i>Arabidopsis</i> glutathione reductase 2 is indispensable in plastids, while mitochondrial glutathione is safeguarded by additional reduction and transport systems. <i>New Phytologist</i> , 2019, 224, 1569-1584.	7.3	57
26	Low-glutathione mutants are impaired in growth but do not show an increased sensitivity to moderate water deficit. <i>PLoS ONE</i> , 2019, 14, e0220589.	2.5	14
27	Keeping Mitochondrial Alternative Oxidase Reduced and Active In Vivo Does Not Require Thioredoxin o1. <i>Plant and Cell Physiology</i> , 2019, 60, 2357-2359.	3.1	4
28	Metabolite-mediated TOR signaling regulates the circadian clock in <i>Arabidopsis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 25395-25397.	7.1	44
29	The fluorescent protein sensor roGFP2-Orp1 monitors <i>in vivo</i> H ₂ O ₂ and thiol redox integration and elucidates intracellular H ₂ O ₂ dynamics during elicitor-induced oxidative burst in <i>Arabidopsis</i> . <i>New Phytologist</i> , 2019, 221, 1649-1664.	7.3	132
30	Hydrogen Sulfide Increases Production of NADPH Oxidase-Dependent Hydrogen Peroxide and Phospholipase D-Derived Phosphatidic Acid in Guard Cell Signaling. <i>Plant Physiology</i> , 2018, 176, 2532-2542.	4.8	115
31	Mitochondrial Energy Signaling and Its Role in the Low-Oxygen Stress Response of Plants. <i>Plant Physiology</i> , 2018, 176, 1156-1170.	4.8	79
32	ATP compartmentation in plastids and cytosol of <i>Arabidopsis thaliana</i> revealed by fluorescent protein sensing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E10778-E10787.	7.1	72
33	Cellular Ca ²⁺ Signals Generate Defined pH Signatures in Plants. <i>Plant Cell</i> , 2018, 30, 2704-2719.	6.6	141
34	Online in vivo monitoring of cytosolic NAD redox dynamics in <i>Ustilago maydis</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 1015-1024.	1.0	13
35	Glutathione peroxidase-like enzymes cover five distinct cell compartments and membrane surfaces in <i>Arabidopsis thaliana</i> . <i>Plant, Cell and Environment</i> , 2017, 40, 1281-1295.	5.7	69
36	Loss of GET pathway orthologs in <i>Arabidopsis thaliana</i> causes root hair growth defects and affects SNARE abundance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E1544-E1553.	7.1	56

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37	Physiological Characterization of a Plant Mitochondrial Calcium Uniporter in Vitro and in Vivo. <i>Plant Physiology</i> , 2017, 173, 1355-1370.	4.8	54
38	The mitochondrial complexome of <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2017, 89, 1079-1092.	5.7	192
39	Redox regulation of mitochondrial proteins and proteomes by cysteine thiol switches. <i>Mitochondrion</i> , 2017, 33, 72-83.	3.4	69
40	ATP sensing in living plant cells reveals tissue gradients and stress dynamics of energy physiology. <i>ELife</i> , 2017, 6, .	6.0	125
41	Promoters from the itaconate cluster of <i>Ustilago maydis</i> are induced by nitrogen depletion. <i>Fungal Biology and Biotechnology</i> , 2017, 4, 11.	5.1	23
42	Plant mitochondrial membranes: adding structure and new functions to respiratory physiology. <i>Current Opinion in Plant Biology</i> , 2017, 40, 147-157.	7.1	14
43	The Roles of Mitochondrial Reactive Oxygen Species in Cellular Signaling and Stress Response in Plants. <i>Plant Physiology</i> , 2016, 171, 1551-1559.	4.8	354
44	D-Lactate dehydrogenase links methylglyoxal degradation and electron transport through cytochrome C. <i>Plant Physiology</i> , 2016, 172, pp.01174.2016.	4.8	42
45	Mitochondrial Flashes: Dump Superoxide and Dance with Protons Now. <i>Antioxidants and Redox Signaling</i> , 2016, 25, 550-551.	5.4	11
46	Mitochondrial redox and pH signaling occurs in axonal and synaptic organelle clusters. <i>Scientific Reports</i> , 2016, 6, 23251.	3.3	22
47	Chloroplast-Specific in Vivo Ca^{2+} Imaging Using Yellow Cameleon Fluorescent Protein Sensors Reveals Organelle-Autonomous Ca^{2+} Signatures in the Stroma. <i>Plant Physiology</i> , 2016, 171, 2317-2330.	4.8	71
48	Regulation of mitochondrial calcium in plants versus animals. <i>Journal of Experimental Botany</i> , 2016, 67, 3809-3829.	4.8	55
49	Immobilized Subpopulations of Leaf Epidermal Mitochondria Mediate PENETRATION2-Dependent Pathogen Entry Control in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2016, 28, 130-145.	6.6	120
50	Dissecting Redox Biology Using Fluorescent Protein Sensors. <i>Antioxidants and Redox Signaling</i> , 2016, 24, 680-712.	5.4	247
51	Thiol switches in mitochondria: operation and physiological relevance. <i>Biological Chemistry</i> , 2015, 396, 465-482.	2.5	53
52	The stability and nuclear localization of the transcription factor <i>RAP2.12</i> are dynamically regulated by oxygen concentration. <i>Plant, Cell and Environment</i> , 2015, 38, 1094-1103.	5.7	95
53	The EF-Hand Ca^{2+} Binding Protein MICU Choreographs Mitochondrial Ca^{2+} Dynamics in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2015, 27, 3190-3212.	6.6	103
54	The mitochondrial monothiol glutaredoxin S15 is essential for iron-sulfur protein maturation in <i>Arabidopsis thaliana</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13735-13740.	7.1	84

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55	Analysis of Plant Mitochondrial Function Using Fluorescent Protein Sensors. <i>Methods in Molecular Biology</i> , 2015, 1305, 241-252.	0.9	23
56	Multiparametric optical analysis of mitochondrial redox signals during neuronal physiology and pathology in vivo. <i>Nature Medicine</i> , 2014, 20, 555-560.	30.7	143
57	The "mitoflash"™ probe cpYFP does not respond to superoxide. <i>Nature</i> , 2014, 514, E12-E14.	27.8	109
58	A Conserved Mitochondrial ATP-binding Cassette Transporter Exports Glutathione Polysulfide for Cytosolic Metal Cofactor Assembly. <i>Journal of Biological Chemistry</i> , 2014, 289, 23264-23274.	3.4	141
59	The life of plant mitochondrial complex I. <i>Mitochondrion</i> , 2014, 19, 295-313.	3.4	103
60	FRIENDLY Regulates Mitochondrial Distribution, Fusion, and Quality Control in Arabidopsis. <i>Plant Physiology</i> , 2014, 166, 808-828.	4.8	93
61	Mitochondrial Energy and Redox Signaling in Plants. <i>Antioxidants and Redox Signaling</i> , 2013, 18, 2122-2144.	5.4	154
62	The impact of impaired mitochondrial function on retrograde signalling: a meta-analysis of transcriptomic responses. <i>Journal of Experimental Botany</i> , 2012, 63, 1735-1750.	4.8	112
63	Mitochondrial Cysteine Synthase Complex Regulates O-Acetylserine Biosynthesis in Plants. <i>Journal of Biological Chemistry</i> , 2012, 287, 27941-27947.	3.4	64
64	Pulsing of Membrane Potential in Individual Mitochondria: A Stress-Induced Mechanism to Regulate Respiratory Bioenergetics in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2012, 24, 1188-1201.	6.6	107
65	Mitochondrial "flashes"™: a radical concept rephined. <i>Trends in Cell Biology</i> , 2012, 22, 503-508.	7.9	74
66	The circularly permuted yellow fluorescent protein cpYFP that has been used as a superoxide probe is highly responsive to pH but not superoxide in mitochondria: implications for the existence of superoxide "flashes"™. <i>Biochemical Journal</i> , 2011, 437, 381-387.	3.7	110
67	A Genome-Scale Metabolic Model Accurately Predicts Fluxes in Central Carbon Metabolism under Stress Conditions. <i>Plant Physiology</i> , 2010, 154, 311-323.	4.8	124
68	The Metabolic Response of Arabidopsis Roots to Oxidative Stress is Distinct from that of Heterotrophic Cells in Culture and Highlights a Complex Relationship between the Levels of Transcripts, Metabolites, and Flux. <i>Molecular Plant</i> , 2009, 2, 390-406.	8.3	155
69	Monitoring the in vivo redox state of plant mitochondria: Effect of respiratory inhibitors, abiotic stress and assessment of recovery from oxidative challenge. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2009, 1787, 468-475.	1.0	137
70	The NADPH-dependent thioredoxin system constitutes a functional backup for cytosolic glutathione reductase in <i>Arabidopsis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 9109-9114.	7.1	259
71	Decrease in Manganese Superoxide Dismutase Leads to Reduced Root Growth and Affects Tricarboxylic Acid Cycle Flux and Mitochondrial Redox Homeostasis. <i>Plant Physiology</i> , 2008, 147, 101-114.	4.8	162
72	Mitochondrial mRNA Polymorphisms in Different Arabidopsis Accessions. <i>Plant Physiology</i> , 2008, 148, 1106-1116.	4.8	33

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73	MITOCHONDRIAL REGULATION AND SIGNALLING IN THE PHOTOSYNTHETIC CELL. , 0, , 185-225.		1