Andreas J Meyer

List of Publications by Year
in descending order

113 papers	8,777 citations	43973 48 h-index	46693 89 g-index
130 all docs	130 docs citations	130 times ranked	8622 citing authors

#	Article	IF	Citations
1	Real-time imaging of the intracellular glutathione redox potential. Nature Methods, 2008, 5, 553-559.	9.0	762
2	Fluorescent Protein-Based Redox Probes. Antioxidants and Redox Signaling, 2010, 13, 621-650.	2.5	462
3	Redoxâ€sensitive GFP in <i>Arabidopsis thaliana</i> is a quantitative biosensor for the redox potential of the cellular glutathione redox buffer. Plant Journal, 2007, 52, 973-986.	2.8	420
4	Proximity-based Protein Thiol Oxidation by H2O2-scavenging Peroxidases. Journal of Biological Chemistry, 2009, 284, 31532-31540.	1.6	376
5	The NADPH-dependent thioredoxin system constitutes a functional backup for cytosolic glutathione reductase in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9109-9114.	3.3	259
6	Dissecting Redox Biology Using Fluorescent Protein Sensors. Antioxidants and Redox Signaling, 2016, 24, 680-712.	2.5	247
7	Maturation of Arabidopsis Seeds Is Dependent on Glutathione Biosynthesis within the Embryo Â. Plant Physiology, 2006, 141, 446-455.	2.3	240
8	The integration of glutathione homeostasis and redox signaling. Journal of Plant Physiology, 2008, 165, 1390-1403.	1.6	238
9	Glutathione homeostasis and redox-regulation by sulfhydryl groups. Photosynthesis Research, 2005, 86, 435-457.	1.6	209
10	Plant homologs of the <i>Plasmodium falciparum</i> chloroquine-resistance transporter, <i>Pf</i> CRT, are required for glutathione homeostasis and stress responses. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 2331-2336.	3.3	164
11	Sulfite Reductase Defines a Newly Discovered Bottleneck for Assimilatory Sulfate Reduction and Is Essential for Growth and Development in <i>Arabidopsis thaliana</i> Â Â. Plant Cell, 2010, 22, 1216-1231.	3.1	163
12	Restricting glutathione biosynthesis to the cytosol is sufficient for normal plant development. Plant Journal, 2008, 53, 999-1012.	2.8	158
13	A Conserved Mitochondrial ATP-binding Cassette Transporter Exports Glutathione Polysulfide for Cytosolic Metal Cofactor Assembly. Journal of Biological Chemistry, 2014, 289, 23264-23274.	1.6	141
14	The fluorescent protein sensor ro<scp>GFP</scp>2â€Orp1 monitors <i>inÂvivo</i> H₂O₂ and thiol redox integration and elucidates intracellular H₂O₂ dynamics during elicitorâ€induced oxidative burst in Arabidopsis. New Phytologist, 2019, 221, 1649-1664.	3.5	132
15	Endoplasmic reticulum: Reduced and oxidized glutathione revisited. Journal of Cell Science, 2013, 126, 1604-17.	1.2	131
16	Expression Profiling of Tobacco Leaf Trichomes Identifies Genes for Biotic and Abiotic Stresses. Plant and Cell Physiology, 2010, 51, 1627-1637.	1.5	130
17	Sample preservation for determination of organic compounds: microwave versus freeze-drying. Journal of Experimental Botany, 1996, 47, 1469-1473.	2.4	125
18	ATP sensing in living plant cells reveals tissue gradients and stress dynamics of energy physiology. ELife, 2017, 6, .	2.8	125

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19	Benchmark Test and Guidelines for DEER/PELDOR Experiments on Nitroxide-Labeled Biomolecules. Journal of the American Chemical Society, 2021, 143, 17875-17890.	6.6	124
20	Immobilized Subpopulations of Leaf Epidermal Mitochondria Mediate PENETRATION2-Dependent Pathogen Entry Control in Arabidopsis. Plant Cell, 2016, 28, 130-145.	3.1	120
21	The EXS Domain of PHO1 Participates in the Response of Shoots to Phosphate Deficiency via a Root-to-Shoot Signal. Plant Physiology, 2016, 170, 385-400.	2.3	116
22	Hydrogen Sulfide Increases Production of NADPH Oxidase-Dependent Hydrogen Peroxide and Phospholipase D-Derived Phosphatidic Acid in Guard Cell Signaling. Plant Physiology, 2018, 176, 2532-2542.	2.3	115
23	Quantitativein vivomeasurement of glutathione inArabidopsiscells. Plant Journal, 2001, 27, 67-78.	2.8	114
24	The â€˜mitoflashâ€™ probe cpYFP does not respond to superoxide. Nature, 2014, 514, E12-E14.	13.7	109
25	Pulsing of Membrane Potential in Individual Mitochondria: A Stress-Induced Mechanism to Regulate Respiratory Bioenergetics in <i>Arabidopsis</i>. Plant Cell, 2012, 24, 1188-1201.	3.1	107
26	The EF-Hand Ca²⁺ Binding Protein MICU Choreographs Mitochondrial Ca²⁺ Dynamics in Arabidopsis. Plant Cell, 2015, 27, 3190-3212.	3.1	103
27	Î³-Glutamyl transpeptidase GGT4 initiates vacuolar degradation of glutathioneS-conjugates inArabidopsis. FEBS Letters, 2007, 581, 3131-3138.	1.3	102
28	Organelles Contribute Differentially to Reactive Oxygen Species-Related Events during Extended Darkness Â Â Â. Plant Physiology, 2011, 156, 185-201.	2.3	102
29	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.	3.3	96
30	Control of Demand-Driven Biosynthesis of Glutathione in Green Arabidopsis Suspension Culture Cells. Plant Physiology, 2002, 130, 1927-1937.	2.3	93
31	FRIENDLY Regulates Mitochondrial Distribution, Fusion, and Quality Control in Arabidopsis. Plant Physiology, 2014, 166, 808-828.	2.3	93
32	Development of roGFP2-derived redox probes for measurement of the glutathione redox potential in the cytosol of severely glutathione-deficient rml1 seedlings. Frontiers in Plant Science, 2013, 4, 506.	1.7	92
33	Glutathione Deficiency of the Arabidopsis Mutant <i>pad2-1</i> Affects Oxidative Stress-Related Events, Defense Gene Expression, and the Hypersensitive Response Â Â Â. Plant Physiology, 2011, 157, 2000-2012.	2.3	90
34	Surface wax esters contribute to drought tolerance in Arabidopsis. Plant Journal, 2019, 98, 727-744.	2.8	88
35	Glutaredoxin catalysis requires two distinct glutathione interaction sites. Nature Communications, 2017, 8, 14835.	5.8	87
36	The mitochondrial monothiol glutaredoxin S15 is essential for iron-sulfur protein maturation in <i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13735-13740.	3.3	84

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37	Mitochondrial â€˜flashesâ€™: a radical concept repHined. Trends in Cell Biology, 2012, 22, 503-508.	3.6	74
38	Functional Knockout of the Adenosine 5â€²-Phosphosulfate Reductase Gene in Physcomitrella patens Revives an Old Route of Sulfate Assimilation. Journal of Biological Chemistry, 2002, 277, 32195-32201.	1.6	73
39	Redesign of Genetically Encoded Biosensors for Monitoring Mitochondrial Redox Status in a Broad Range of Model Eukaryotes. Journal of Biomolecular Screening, 2014, 19, 379-386.	2.6	73
40	A fluorometerâ€based method for monitoring oxidation of redoxâ€sensitive GFP (roGFP) during development and extended dark stress. Physiologia Plantarum, 2010, 138, 493-502.	2.6	71
41	Robust antiâ€oxidant defences in the rice blast fungus <i>Magnaporthe oryzae</i> confer tolerance to the host oxidative burst. New Phytologist, 2014, 201, 556-573.	3.5	69
42	Glutathione peroxidaseâ€like enzymes cover five distinct cell compartments and membrane surfaces in <i>Arabidopsis thaliana</i>. Plant, Cell and Environment, 2017, 40, 1281-1295.	2.8	69
43	Multiparametric realâ€time sensing of cytosolic physiology links hypoxia responses to mitochondrial electron transport. New Phytologist, 2019, 224, 1668-1684.	3.5	69
44	Sulfur Partitioning between Glutathione and Protein Synthesis Determines Plant Growth. Plant Physiology, 2018, 177, 927-937.	2.3	66
45	Chloroplast-derived photo-oxidative stress causes changes in H2O2 and <i>E</i>GSH in other subcellular compartments. Plant Physiology, 2021, 186, 125-141.	2.3	65
46	Mitochondrial Cysteine Synthase Complex Regulates O-Acetylserine Biosynthesis in Plants. Journal of Biological Chemistry, 2012, 287, 27941-27947.	1.6	64
47	Comparison of PELDOR and RIDME for Distance Measurements between Nitroxides and Low-Spin Fe(III) Ions. Journal of Physical Chemistry B, 2015, 119, 13534-13542.	1.2	62
48	Vacuolar sequestration of glutathioneS-conjugates outcompetes a possible degradation of the glutathione moiety by phytochelatin synthase. FEBS Letters, 2006, 580, 6384-6390.	1.3	61
49	Nonâ€invasive topology analysis of membrane proteins in the secretory pathway. Plant Journal, 2009, 57, 534-541.	2.8	57
50	Arabidopsis glutathione reductase 2 is indispensable in plastids, while mitochondrial glutathione is safeguarded by additional reduction and transport systems. New Phytologist, 2019, 224, 1569-1584.	3.5	57
51	Nuclear thiol redox systems in plants. Plant Science, 2016, 243, 84-95.	1.7	52
52	The critical role of glutathione in maintenance of the mitochondrial genome. Free Radical Biology and Medicine, 2010, 49, 1956-1968.	1.3	48
53	Transit of H2O2 across the endoplasmic reticulum membrane is not sluggish. Free Radical Biology and Medicine, 2016, 94, 157-160.	1.3	48
54	Real-Time Imaging of the Intracellular Glutathione Redox Potential in the Malaria Parasite Plasmodium falciparum. PLoS Pathogens, 2013, 9, e1003782.	2.1	47

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55	Neutrophil-generated HOCl leads to non-specific thiol oxidation in phagocytized bacteria. ELife, 2018, 7, .	2.8	47
56	Molecular basis for the distinct functions of redox-active and FeS-transfering glutaredoxins. Nature Communications, 2020, 11, 3445.	5.8	47
57	Chloroplasts require glutathione reductase to balance reactive oxygen species and maintain efficient photosynthesis. Plant Journal, 2020, 103, 1140-1154.	2.8	47
58	KMS1 and KMS2, two plant endoplasmic reticulum proteins involved in the early secretory pathway. Plant Journal, 2011, 66, 613-628.	2.8	45
59	Zinc deficiency differentially affects redox homeostasis of rice genotypes contrasting in ascorbate level. Journal of Plant Physiology, 2014, 171, 1748-1756.	1.6	43
60	Organelle redox autonomy during environmental stress. Plant, Cell and Environment, 2016, 39, 1909-1919.	2.8	43
61	Arabidopsis Î³â€glutamylcyclotransferase affects glutathione content and root system architecture during sulfur starvation. New Phytologist, 2019, 221, 1387-1397.	3.5	42
62	BioelectriCity, gravity and plants. Planta, 1997, 203, S98-S106.	1.6	41
63	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.	1.2	41
64	A Genome-Wide Screen in Yeast Identifies Specific Oxidative Stress Genes Required for the Maintenance of Sub-Cellular Redox Homeostasis. PLoS ONE, 2012, 7, e44278.	1.1	40
65	In Vivo NADH/NAD⁺ Biosensing Reveals the Dynamics of Cytosolic Redox Metabolism in Plants. Plant Cell, 2020, 32, 3324-3345.	3.1	40
66	Distinct Redox Regulation in Sub-Cellular Compartments in Response to Various Stress Conditions in Saccharomyces cerevisiae. PLoS ONE, 2013, 8, e65240.	1.1	38
67	PELDOR and RIDME Measurements on a High-Spin Manganese(II) Bisnitroxide Model Complex. Journal of Physical Chemistry A, 2016, 120, 3463-3472.	1.1	38
68	Di-copper(<scp>ii</scp>) DNA G-quadruplexes as EPR distance rulers. Chemical Communications, 2018, 54, 7455-7458.	2.2	36
69	Interference between arsenicâ€induced toxicity and hypoxia. Plant, Cell and Environment, 2019, 42, 574-590.	2.8	34
70	Live monitoring of plant redox and energy physiology with genetically encoded biosensors. Plant Physiology, 2021, 186, 93-109.	2.3	33
71	Redoxâ€sensitive GFP2: use of the genetically encoded biosensor of the redox status in the filamentous fungus <i>Botrytis cinerea</i>. Molecular Plant Pathology, 2012, 13, 935-947.	2.0	32
72	Determination of glutathione redox potential and pH value in subcellular compartments of malaria parasites. Free Radical Biology and Medicine, 2017, 104, 104-117.	1.3	32

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73	Measurement of Angstrom to Nanometer Molecular Distances with ¹⁹F Nuclear Spins by EPR/ENDOR Spectroscopy. Angewandte Chemie - International Edition, 2020, 59, 373-379.	7.2	32
74	Growth, membrane potential and endogenous ion currents of willow (Salix viminalis) roots are all affected by abscisic acid and spermine. Physiologia Plantarum, 1997, 99, 529-537.	2.6	31
75	Thiol-based redox homeostasis and signaling. Frontiers in Plant Science, 2014, 5, 266.	1.7	29
76	Oxidative protein folding: stateâ€ofâ€theâ€art and current avenues of research in plants. New Phytologist, 2019, 221, 1230-1246.	3.5	29
77	(Bis(terpyridine))copper(II) Tetraphenylborate: A Complex Example for the Jahnâ€“Teller Effect. Inorganic Chemistry, 2015, 54, 8456-8464.	1.9	28
78	The oxidative protein folding machinery in plant cells. Protoplasma, 2013, 250, 799-816.	1.0	27
79	Reductive stress triggers ANAC017-mediated retrograde signaling to safeguard the endoplasmic reticulum by boosting mitochondrial respiratory capacity. Plant Cell, 2022, 34, 1375-1395.	3.1	25
80	Resolving diurnal dynamics of the chloroplastic glutathione redox state in <i>Arabidopsis</i> reveals its photosynthetically derived oxidation. Plant Cell, 2021, 33, 1828-1844.	3.1	23
81	Analysis of Plant Mitochondrial Function Using Fluorescent Protein Sensors. Methods in Molecular Biology, 2015, 1305, 241-252.	0.4	23
82	The latest HyPe(r) in plant H2O2 biosensing. Plant Physiology, 2021, 187, 480-484.	2.3	22
83	Endoplasmic reticulum oxidoreductin provides resilience against reductive stress and hypoxic conditions by mediating luminal redox dynamics. Plant Cell, 2022, 34, 4007-4027.	3.1	22
84	The Si₂H radical supported by two N-heterocyclic carbenes. Chemical Science, 2016, 7, 4973-4979.	3.7	19
85	Synthesis of Nanometer Sized Bis- and Tris-trityl Model Compounds with Different Extent of Spinâ€“Spin Coupling. Molecules, 2018, 23, 682.	1.7	19
86	Deficiency in the Phosphorylated Pathway of Serine Biosynthesis Perturbs Sulfur Assimilation. Plant Physiology, 2019, 180, 153-170.	2.3	19
87	A dual role for glutathione transferase U7 in plant growth and protection from methyl viologen-induced oxidative stress. Plant Physiology, 2021, 187, 2451-2468.	2.3	18
88	The thioredoxin-mediated recycling of Arabidopsis thaliana GRXS16 relies on a conserved C-terminal cysteine. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 426-436.	1.1	17
89	Plasticity in plastid redox networks: evolution of glutathione-dependent redox cascades and glutathionylation sites. BMC Plant Biology, 2021, 21, 322.	1.6	17
90	A perturbation in glutathione biosynthesis disrupts endoplasmic reticulum morphology and secretory membrane traffic in <i>Arabidopsis thaliana</i>. Plant Journal, 2012, 71, 881-894.	2.8	16

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91	Dynamic Redox Measurements with Redox-Sensitive GFP in Plants by Confocal Laser Scanning Microscopy. Methods in Molecular Biology, 2009, 479, 93-107.	0.4	14
92	Soluble and membrane-bound protein carrier mediate direct copper transport to the ethylene receptor family. Scientific Reports, 2019, 9, 10715.	1.6	14
93	Low-glutathione mutants are impaired in growth but do not show an increased sensitivity to moderate water deficit. PLoS ONE, 2019, 14, e0220589.	1.1	14
94	Resolution of chemical shift anisotropy in 19F ENDOR spectroscopy at 263ÂGHz/9.4ÂT. Journal of Magnetic Resonance, 2021, 333, 107091.	1.2	14
95	Free Ca2+in tissue 22+-selective electrodes. Journal of Experimental Botany, 1997, 48, 337-344.	2.4	13
96	Verdazyls as Possible Building Blocks for Multifunctional Molecular Materials: A Case Study on 1,5-Diphenyl-3-(p-iodophenyl)-verdazyl Focusing on Magnetism, Electron Transfer and the Applicability of the Sonogashira-Hagihara Reaction. Molecules, 2018, 23, 1758.	1.7	13
97	Online in vivo monitoring of cytosolic NAD redox dynamics in Ustilago maydis. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1015-1024.	0.5	13
98	The function of glutaredoxin GRXS15 is required for lipoyl-dependent dehydrogenases in mitochondria. Plant Physiology, 2021, 186, 1507-1525.	2.3	12
99	Degradation of Glutathione S-Conjugates in Physcomitrella patens is Initiated by Cleavage of Glycine. Plant and Cell Physiology, 2011, 52, 1153-1161.	1.5	10
100	Glutathione contributes to plant defence against parasitic cyst nematodes. Molecular Plant Pathology, 2022, 23, 1048-1059.	2.0	8
101	Live Monitoring of ROS-Induced Cytosolic Redox Changes with roGFP2-Based Sensors in Plants. Methods in Molecular Biology, 2022, , 65-85.	0.4	7
102	Biosynthesis, Compartmentation and Cellular Functions of Glutathione in Plant Cells. Advances in Photosynthesis and Respiration, 2008, , 161-184.	1.0	6
103	Essential trace metals in plant responses to heat stress. Journal of Experimental Botany, 2022, 73, 1775-1788.	2.4	6
104	Crystal structure of 4â€²-{[4-(2,2â€²:6â€²,2â€²â€²-terpyridyl-4â€²-yl)phenyl]ethynyl}biphenyl-4-yl (2,2,5,5-tetramethyl-1-oxyl-3-pyrrolin-3-yl)formate benzene 2.5-solvate. Acta Crystallographica Section E: Crystallographic Communications, 2015, 71, 1245-1249.	0.2	5
105	Growth, membrane potential and endogenous ion currents of willow (Salix viminalis) roots are all affected by abscisic acid and spermine. Physiologia Plantarum, 1997, 99, 529-537.	2.6	5
106	Syntheses, spectroscopy, and crystal structures of 3-(4-bromophenyl)-1,5-diphenylformazan and the 3-(4-bromophenyl)-1,5-diphenylverdazyl radical and the crystal structure of the by-product 5-anilino-3-(4-bromophenyl)-1-phenyl-1<i>H</i>-1,2,4-triazole. Acta Crystallographica Section E: Crystallographic Communications, 2018, 74, 292-297.	0.2	5
107	Imaging Thiol-Based Redox Processes in Live Cells. Advances in Photosynthesis and Respiration, 2008, , 483-501.	1.0	3
108	Quantitation of ER Structure and Function. Methods in Molecular Biology, 2018, 1691, 43-66.	0.4	2

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109	2â€Hydroxyâ€phytanoylâ€CoA lyase (AtHPCL) is involved in phytol metabolism in Arabidopsis. Plant Journal, 2022, 109, 1290-1304.	2.8	2
110	Measurement of Angstrom to Nanometer Molecular Distances with 19 F Nuclear Spins by EPR/ENDOR Spectroscopy. Angewandte Chemie, 2020, 132, 381-387.	1.6	1
111	The crystal structure of 4â€²-{4-[(2,2,5,5-tetramethyl-N-oxyl-3-pyrrolin-3-yl)ethynyl]phenyl}-2,2â€²:6â€²,2â€²â€²-terpyridine. Acta Crystallographica Section E: Crystallographic Communications, 2015, 71, 870-874.	0.2	1
112	Exotic nuclear spin behavior in dendritic macromolecules. Physical Chemistry Chemical Physics, 2021, 23, 26349-26355.	1.3	1
113	Discriminative Long-Distance Transport of Selenate and Selenite Triggers Glutathione Oxidation in Specific Subcellular Compartments of Root and Shoot Cells in Arabidopsis. Frontiers in Plant Science, 0, 13, .	1.7	1