Graham Noctor

List of Publications by Year
in descending order

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103
papers

31,338
citations

10986
71
h-index

28297
105
g-index

106
all docs

106
docs citations

106
times ranked

20456
citing authors

#	ARTICLE	IF	CITATIONS
1	ASCORBATE AND GLUTATHIONE: Keeping Active Oxygen Under Control. Annual Review of Plant Biology, 1998, 49, 249-279.	14.3	4,661
2	Redox Homeostasis and Antioxidant Signaling: A Metabolic Interface between Stress Perception and Physiological Responses. Plant Cell, 2005, 17, 1866-1875.	6.6	2,408
3	Ascorbate and Glutathione: The Heart of the Redox Hub. Plant Physiology, 2011, 155, 2-18.	4.8	1,959
4	Oxidant and antioxidant signalling in plants: a re-evaluation of the concept of oxidative stress in a physiological context. Plant, Cell and Environment, 2005, 28, 1056-1071.	5.7	1,529
5	Glutathione in plants: an integrated overview. Plant, Cell and Environment, 2012, 35, 454-484.	5.7	1,211
6	Redox Regulation in Photosynthetic Organisms: Signaling, Acclimation, and Practical Implications. Antioxidants and Redox Signaling, 2009, 11, 861-905.	5.4	1,199
7	Redox sensing and signalling associated with reactive oxygen in chloroplasts, peroxisomes and mitochondria. Physiologia Plantarum, 2003, 119, 355-364.	5.2	1,110
8	Tansley Review No. 112. New Phytologist, 2000, 146, 359-388.	7.3	851
9	Catalase function in plants: a focus on Arabidopsis mutants as stress-mimic models. Journal of Experimental Botany, 2010, 61, 4197-4220.	4.8	736
10	Interactions between biosynthesis, compartmentation and transport in the control of glutathione homeostasis and signalling. Journal of Experimental Botany, 2002, 53, 1283-1304.	4.8	726
11	ROS-related redox regulation and signaling in plants. Seminars in Cell and Developmental Biology, 2018, 80, 3-12.	5.0	581
12	Drought and Oxidative Load in the Leaves of C3 Plants: a Predominant Role for Photorespiration?. Annals of Botany, 2002, 89, 841-850.	2.9	538
13	The Roles of Reactive Oxygen Metabolism in Drought: Not So Cut and Dried Â Â. Plant Physiology, 2014, 164, 1636-1648.	4.8	519
14	Photorespiratory Metabolism: Genes, Mutants, Energetics, and Redox Signaling. Annual Review of Plant Biology, 2009, 60, 455-484.	18.7	518
15	Leaf Mitochondria Modulate Whole Cell Redox Homeostasis, Set Antioxidant Capacity, and Determine Stress Resistance through Altered Signaling and Diurnal Regulation. Plant Cell, 2003, 15, 1212-1226.	6.6	492
16	Leaf Vitamin C Contents Modulate Plant Defense Transcripts and Regulate Genes That Control Development through Hormone Signaling[W]. Plant Cell, 2003, 15, 939-951.	6.6	454
17	Mitochondrial redox biology and homeostasis in plants. Trends in Plant Science, 2007, 12, 125-134.	8.8	445
18	Metabolic signalling in defence and stress: the central roles of soluble redox couples. Plant, Cell and Environment, 2006, 29, 409-425.	5.7	418

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19	A plate reader method for the measurement of NAD, NADP, glutathione, and ascorbate in tissue extracts: Application to redox profiling during Arabidopsis rosette development. Analytical Biochemistry, 2007, 363, 58-69.	2.4	401
20	Conditional oxidative stress responses in the Arabidopsis photorespiratory mutant <i>cat2</i> demonstrate that redox state is a key modulator of daylengthâ€dependent gene expression, and define photoperiod as a crucial factor in the regulation of H₂O₂â€induced cell death. Plant Journal, 2007, 52, 640-657.	5.7	394
21	Photosynthetic control of electron transport and the regulation of gene expression. Journal of Experimental Botany, 2012, 63, 1637-1661.	4.8	375
22	Photosynthesis, photorespiration, and light signalling in defence responses. Journal of Experimental Botany, 2012, 63, 1619-1636.	4.8	330
23	Arabidopsis GLUTATHIONE REDUCTASE1 Plays a Crucial Role in Leaf Responses to Intracellular Hydrogen Peroxide and in Ensuring Appropriate Gene Expression through Both Salicylic Acid and Jasmonic Acid Signaling Pathways Â Â Â. Plant Physiology, 2010, 153, 1144-1160.	4.8	328
24	Redox Signaling in Plants. Antioxidants and Redox Signaling, 2013, 18, 2087-2090.	5.4	314
25	Stressâ€triggered redox signalling: what's in pROSpect?. Plant, Cell and Environment, 2016, 39, 951-964.	5.7	293
26	Intracellular Redox Compartmentation and ROS-Related Communication in Regulation and Signaling. Plant Physiology, 2016, 171, 1581-1592.	4.8	288
27	Functional Mitochondrial Complex I Is Required by Tobacco Leaves for Optimal Photosynthetic Performance in Photorespiratory Conditions and during Transients. Plant Physiology, 2003, 131, 264-275.	4.8	278
28	Oxidative stress and antioxidative systems: recipes for successful data collection and interpretation. Plant, Cell and Environment, 2016, 39, 1140-1160.	5.7	278
29	Markers and signals associated with nitrogen assimilation in higher plants. Journal of Experimental Botany, 2003, 54, 585-593.	4.8	266
30	Low Ascorbic Acid in the <i>vtc-1</i> Mutant of Arabidopsis Is Associated with Decreased Growth and Intracellular Redistribution of the Antioxidant System. Plant Physiology, 2001, 127, 426-435.	4.8	251
31	Plant catalases: Peroxisomal redox guardians. Archives of Biochemistry and Biophysics, 2012, 525, 181-194.	3.0	250
32	Respiration and nitrogen assimilation: targeting mitochondria-associated metabolism as a means to enhance nitrogen use efficiency. Journal of Experimental Botany, 2011, 62, 1467-1482.	4.8	236
33	Functional Analysis of Arabidopsis Mutants Points to Novel Roles for Glutathione in Coupling H₂O₂ to Activation of Salicylic Acid Accumulation and Signaling. Antioxidants and Redox Signaling, 2013, 18, 2106-2121.	5.4	234
34	NAD(P) synthesis and pyridine nucleotide cycling in plants and their potential importance in stress conditions. Journal of Experimental Botany, 2006, 57, 1603-1620.	4.8	224
35	Viewing oxidative stress through the lens of oxidative signalling rather than damage. Biochemical Journal, 2017, 474, 877-883.	3.7	214
36	Peroxide processing in photosynthesis: antioxidant coupling and redox signalling. Philosophical Transactions of the Royal Society B: Biological Sciences, 2000, 355, 1465-1475.	4.0	207

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37	Glutathione. The Arabidopsis Book, 2011, 9, 1-32.	0.5	206
38	Are leaf hydrogen peroxide concentrations commonly overestimated? The potential influence of artefactual interference by tissue phenolics and ascorbate. Plant Physiology and Biochemistry, 2002, 40, 501-507.	5.8	204
39	Peroxisomal Hydrogen Peroxide Is Coupled to Biotic Defense Responses by ISOCHORISMATE SYNTHASE1 in a Daylength-Related Manner Â Â Â. Plant Physiology, 2010, 153, 1692-1705.	4.8	202
40	The metabolomics of oxidative stress. Phytochemistry, 2015, 112, 33-53.	2.9	199
41	Recent Progress in Understanding the Role of Reactive Oxygen Species in Plant Cell Signaling. Plant Physiology, 2016, 171, 1535-1539.	4.8	199
42	Manipulation of Glutathione and Amino Acid Biosynthesis in the Chloroplast. Plant Physiology, 1998, 118, 471-482.	4.8	190
43	Mitochondria-Driven Changes in Leaf NAD Status Exert a Crucial Influence on the Control of Nitrate Assimilation and the Integration of Carbon and Nitrogen Metabolism. Plant Physiology, 2005, 139, 64-78.	4.8	185
44	AtRbohF is a crucial modulator of defenceâ€associated metabolism and a key actor in the interplay between intracellular oxidative stress and pathogenesis responses in Arabidopsis. Plant Journal, 2012, 69, 613-627.	5.7	178
45	Glutathionylation of chloroplast thioredoxin f is a redox signaling mechanism in plants. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16478-16483.	7.1	177
46	Simultaneous Measurement of Foliar Glutathione, Î³-Glutamylcysteine, and Amino Acids by High-Performance Liquid Chromatography: Comparison with Two Other Assay Methods for Glutathione. Analytical Biochemistry, 1998, 264, 98-110.	2.4	172
47	Antisense Suppression of 2-Cysteine Peroxiredoxin in Arabidopsis Specifically Enhances the Activities and Expression of Enzymes Associated with Ascorbate Metabolism But Not Glutathione Metabolism. Plant Physiology, 2000, 124, 823-832.	4.8	172
48	Increased intracellular H₂O₂ availability preferentially drives glutathione accumulation in vacuoles and chloroplasts. Plant, Cell and Environment, 2011, 34, 21-32.	5.7	139
49	Regulation of basal and oxidative stressâ€triggered jasmonic acidâ€related gene expression by glutathione. Plant, Cell and Environment, 2013, 36, 1135-1146.	5.7	137
50	The ROS Wheel: Refining ROS Transcriptional Footprints. Plant Physiology, 2016, 171, 1720-1733.	4.8	137
51	Why are literature data for H2O2 contents so variable? A discussion of potential difficulties in the quantitative assay of leaf extracts. Journal of Experimental Botany, 2008, 59, 135-146.	4.8	131
52	H2O2-Activated Up-Regulation of Glutathione in Arabidopsis Involves Induction of Genes Encoding Enzymes Involved in Cysteine Synthesis in the Chloroplast. Molecular Plant, 2009, 2, 344-356.	8.3	131
53	Modification of thiol contents in poplars (Populus tremula Ã— P. alba) overexpressing enzymes involved in glutathione synthesis. Planta, 1997, 203, 362-372.	3.2	117
54	Homeostasis of adenylate status during photosynthesis in a fluctuating environment. Journal of Experimental Botany, 2000, 51, 347-356.	4.8	117

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55	The thioredoxin-independent isoform of chloroplastic glyceraldehyde-3-phosphate dehydrogenase is selectively regulated by glutathionylation. FEBS Journal, 2007, 274, 212-226.	4.7	114
56	Intercellular Distribution of Glutathione Synthesis in Maize Leaves and Its Response to Short-Term Chilling. Plant Physiology, 2004, 134, 1662-1671.	4.8	110
57	Perturbations of Amino Acid Metabolism Associated with Glyphosate-Dependent Inhibition of Shikimic Acid Metabolism Affect Cellular Redox Homeostasis and Alter the Abundance of Proteins Involved in Photosynthesis and Photorespiration Â Â. Plant Physiology, 2011, 157, 256-268.	4.8	108
58	The ZmASR1 Protein Influences Branched-Chain Amino Acid Biosynthesis and Maintains Kernel Yield in Maize under Water-Limited Conditions Â Â. Plant Physiology, 2011, 157, 917-936.	4.8	108
59	Cytosolic NADP-dependent isocitrate dehydrogenase contributes to redox homeostasis and the regulation of pathogen responses in<i>Arabidopsis</i>leaves. Plant, Cell and Environment, 2010, 33, 1112-23.	5.7	107
60	Use of mitochondrial electron transport mutants to evaluate the effects of redox state on photosynthesis, stress tolerance and the integration of carbon/nitrogen metabolism. Journal of Experimental Botany, 2003, 55, 49-57.	4.8	102
61	<i>Myo</i>â€inositol abolishes salicylic acidâ€dependent cell death and pathogen defence responses triggered by peroxisomal hydrogen peroxide. New Phytologist, 2010, 188, 711-718.	7.3	97
62	Managing the cellular redox hub in photosynthetic organisms. Plant, Cell and Environment, 2012, 35, 199-201.	5.7	95
63	Inducible NAD overproduction in Arabidopsis alters metabolic pools and gene expression correlated with increased salicylate content and resistance to <i>Pstâ€AvrRpm1</i>. Plant Journal, 2012, 70, 650-665.	5.7	95
64	The role of glycine in determining the rate of glutathione synthesis in poplar. Possible implications for glutathione production during stress. Physiologia Plantarum, 1997, 100, 255-263.	5.2	91
65	Coâ€ordination of leaf minor amino acid contents in crop species: significance and interpretation. Journal of Experimental Botany, 2002, 53, 939-945.	4.8	91
66	Photorespiratory glycine enhances glutathione accumulation in both the chloroplastic and cytosolic compartments. Journal of Experimental Botany, 1999, 50, 1157-1167.	4.8	88
67	PLANT BIOLOGY:Leaves in the Dark See the Light. Science, 1999, 284, 599-601.	12.6	85
68	Day length is a key regulator of transcriptomic responses to both CO₂ and H₂O₂ in <i>Arabidopsis</i>. Plant, Cell and Environment, 2012, 35, 374-387.	5.7	83
69	The secondary metabolism glycosyltransferases <scp><scp>UGT73B3</scp></scp> and <scp><scp>UGT73B5</scp></scp> are components of redox status in resistance of <scp>A</scp>rabidopsis to <i><scp>P</scp></i><i>seudomonas syringae</i> pv. <i>tomato</i>. Plant, Cell and Environment, 2014, 37, 1114-1129.	5.7	80
70	pH dependent chlorophyll fluorescence quenching in spinach thylakoids from light treated or dark adapted leaves. Photosynthesis Research, 1992, 31, 11-19.	2.9	79
71	Light-dependent modulation of foliar glutathione synthesis and associated amino acid metabolism in poplar overexpressing Î³-glutamylcysteine synthetase. Planta, 1997, 202, 357-369.	3.2	76
72	Missing links in understanding redox signaling via thiol/disulfide modulation: how is glutathione oxidized in plants?. Frontiers in Plant Science, 2013, 4, 477.	3.6	75

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73	Climate Change, CO 2 , and Defense: The Metabolic, Redox, and Signaling Perspectives. Trends in Plant Science, 2017, 22, 857-870.	8.8	74
74	Cytosolic and Chloroplastic DHARs Cooperate in Oxidative Stress-Driven Activation of the Salicylic Acid Pathway. Plant Physiology, 2017, 174, 956-971.	4.8	72
75	A comparative study of amino acid measurement in leaf extracts by gas chromatography-time of flight-mass spectrometry and high performance liquid chromatography with fluorescence detection. Metabolomics, 2007, 3, 161-174.	3.0	71
76	High CO2 primes plant biotic stress defences through redox-linked pathways. Plant Physiology, 2016, 172, pp.01129.2016.	4.8	69
77	The protein phosphatase subunit PP 2Aâ€Bâ€²Î³ is required to suppress day lengthâ€dependent pathogenesis responses triggered by intracellular oxidative stress. New Phytologist, 2014, 202, 145-160.	7.3	66
78	Regulating the Redox Gatekeeper: Vacuolar Sequestration Puts Glutathione Disulfide in Its Place Â. Plant Physiology, 2013, 163, 665-671.	4.8	60
79	Mitochondrial respiratory pathways modulate nitrate sensing and nitrogenâ€dependent regulation of plant architecture in <i>Nicotiana sylvestris</i>. Plant Journal, 2008, 54, 976-992.	5.7	58
80	Redox Homeostasis and Signaling in a Higher-CO₂World. Annual Review of Plant Biology, 2020, 71, 157-182.	18.7	58
81	The differential spatial distribution of secondary metabolites in Arabidopsis leaves reacting hypersensitively to Pseudomonas syringae pv. tomato is dependent on the oxidative burst. Journal of Experimental Botany, 2010, 61, 3355-3370.	4.8	56
82	Chemical PARP Inhibition Enhances Growth of Arabidopsis and Reduces Anthocyanin Accumulation and the Activation of Stress Protective Mechanisms. PLoS ONE, 2012, 7, e37287.	2.5	47
83	SHORT-ROOT Deficiency Alleviates the Cell Death Phenotype of the <i>Arabidopsis catalase2</i> Mutant under Photorespiration-Promoting Conditions. Plant Cell, 2016, 28, 1844-1859.	6.6	42
84	Analyzing the Function of Catalase and the Ascorbateâ€"Glutathione Pathway in H₂O₂Processing: Insights from an Experimentally Constrained Kinetic Model. Antioxidants and Redox Signaling, 2019, 30, 1238-1268.	5.4	39
85	Cotranslational Proteolysis Dominates Glutathione Homeostasis to Support Proper Growth and Development Â. Plant Cell, 2009, 21, 3296-3314.	6.6	38
86	Analysis of catalase mutants underscores the essential role of <scp>CATALASE2</scp> for plant growth and day lengthâ€dependent oxidative signalling. Plant, Cell and Environment, 2019, 42, 688-700.	5.7	37
87	Acclimation to high CO₂ in maize is related to water status and dependent on leaf rank. Plant, Cell and Environment, 2011, 34, 314-331.	5.7	33
88	Glutathione oxidation in response to intracellular H₂O₂: Key but overlapping roles for dehydroascorbate reductases. Plant Signaling and Behavior, 2017, 12, e1356531.	2.4	33
89	Functional analysis of the role of hydrogen sulfide in the regulation of dark-induced leaf senescence in Arabidopsis. Scientific Reports, 2017, 7, 2615.	3.3	30
90	Biosynthesis of NAD and Its Manipulation in Plantsâ˜†. Advances in Botanical Research, 2011, , 153-201.	1.1	25

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91	PROTEIN PHOSPHATASE 2A-Bâ€²<i>Î³</i> Controls <i>Botrytis cinerea</i> Resistance and Developmental Leaf Senescence. Plant Physiology, 2020, 182, 1161-1181.	4.8	25
92	Conditional modulation of NAD levels and metabolite profiles in Nicotiana sylvestris by mitochondrial electron transport and carbon/nitrogen supply. Planta, 2010, 231, 1145-1157.	3.2	23
93	Analysis of cytosolic isocitrate dehydrogenase and glutathione reductase 1 in photoperiodâ€influenced responses to ozone using <i><scp>A</scp>rabidopsis</i> knockout mutants. Plant, Cell and Environment, 2013, 36, 1981-1991.	5.7	23
94	Analysis of knockout mutants suggests that Arabidopsis NADP-MALIC ENZYME2 does not play an essential role in responses to oxidative stress of intracellular or extracellular origin. Journal of Experimental Botany, 2013, 64, 3605-3614.	4.8	23
95	Glutathioneâ€dependent denitrosation of GSNOR1 promotes oxidative signalling downstream of H₂O₂. Plant, Cell and Environment, 2020, 43, 1175-1191.	5.7	22
96	Glutathione-dependent phytohormone responses. Plant Signaling and Behavior, 2013, 8, e24181.	2.4	21
97	Cytosolic Isocitrate Dehydrogenase from Arabidopsis thaliana Is Regulated by Glutathionylation. Antioxidants, 2019, 8, 16.	5.1	21
98	Analysis of the roles of the Arabidopsis peroxisomal isocitrate dehydrogenase in leaf metabolism and oxidative stress. Environmental and Experimental Botany, 2015, 114, 22-29.	4.2	19
99	Regulation of assimilate partitioning in leaves. Functional Plant Biology, 2000, 27, 507.	2.1	18
100	Lighting the fuse on toxic TNT. Science, 2015, 349, 1052-1053.	12.6	13
101	Shape-shifters building bridges? Stromules, matrixules and metabolite channelling in photorespiration. Trends in Plant Science, 2007, 12, 381-383.	8.8	12
102	Keeping a cool head: gene networks underlying chillingâ€induced male sterility in rice. Plant, Cell and Environment, 2015, 38, 1252-1254.	5.7	12
103	Measurement of Transcripts Associated with Photorespiration and Related Redox Signaling. Methods in Molecular Biology, 2017, 1653, 17-29.	0.9	3