Michel Havaux

List of Publications by Year
in descending order

103 papers	12,156 citations	19636 61 h-index	30058 103 g-index
106 all docs	106 docs citations	106 times ranked	10297 citing authors

#	Article	IF	Citations
1	Singlet oxygen in plants: production, detoxification and signaling. Trends in Plant Science, 2009, 14, 219-228.	4.3	579
2	Carotenoids as membrane stabilizers in chloroplasts. Trends in Plant Science, 1998, 3, 147-151.	4.3	573
3	Carotenoid oxidation products are stress signals that mediate gene responses to singlet oxygen in plants. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5535-5540.	3.3	568
4	Singlet Oxygen Is the Major Reactive Oxygen Species Involved in Photooxidative Damage to Plants. Plant Physiology, 2008, 148, 960-968.	2.3	475
5	Vitamin E Protects against Photoinhibition and Photooxidative Stress in Arabidopsis thaliana. Plant Cell, 2005, 17, 3451-3469.	3.1	446
6	Carotenoid oxidation products as stress signals in plants. Plant Journal, 2014, 79, 597-606.	2.8	392
7	Chemical Quenching of Singlet Oxygen by Carotenoids in Plants Â Â. Plant Physiology, 2012, 158, 1267-1278.	2.3	384
8	Zeaxanthin Has Enhanced Antioxidant Capacity with Respect to All Other Xanthophylls in Arabidopsis Leaves and Functions Independent of Binding to PSII Antennae. Plant Physiology, 2007, 145, 1506-1520.	2.3	355
9	Leaf chlorosis in oilseed rape plants (Brassica napus) grown on cadmium-polluted soil: causes and consequences for photosynthesis and growth. Planta, 2001, 212, 696-709.	1.6	326
10	The protective functions of carotenoid and flavonoid pigments against excess visible radiation at chilling temperature investigated in Arabidopsis npq and tt mutants. Planta, 2001, 213, 953-966.	1.6	318
11	Early light-induced proteins protect Arabidopsis from photooxidative stress. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4921-4926.	3.3	289
12	A theoretical and experimental analysis of the qP and qN coefficients of chlorophyll fluorescence quenching and their relation to photochemical and nonphotochemical events. Photosynthesis Research, 1991, 27, 41-55.	1.6	256
13	Lutein is needed for efficient chlorophyll triplet quenching in the major LHCII antenna complex of higher plants and effective photoprotection in vivo under strong light. BMC Plant Biology, 2006, 6, 32.	1.6	232
14	Photodamage of the Photosynthetic Apparatus and Its Dependence on the Leaf Developmental Stage in the npq1 Arabidopsis Mutant Deficient in the Xanthophyll Cycle Enzyme Violaxanthin De-epoxidase. Plant Physiology, 2000, 124, 273-284.	2.3	218
15	Characterization of thermal damage to the photosynthetic electron transport system in potato leaves. Plant Science, 1993, 94, 19-33.	1.7	216
16	Short-term responses of Photosystem I to heat stress. Photosynthesis Research, 1996, 47, 85-97.	1.6	207
17	Cyclic Electron Flow around Photosystem I in C3Plants. In Vivo Control by the Redox State of Chloroplasts and Involvement of the NADH-Dehydrogenase Complex. Plant Physiology, 2002, 128, 760-769.	2.3	179
18	Cadmium distribution and microlocalization in oilseed rape (Brassica napus) after long-term growth on cadmium-contaminated soil. Planta, 2003, 216, 939-950.	1.6	179

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19	Temperature-dependent adjustment of the thermal stability of photosystem II in vivo: possible involvement of xanthophyll-cycle pigments. Planta, 1996, 198, 324-333.	1.6	176
20	Enhanced Photoprotection by Protein-Bound vs Free Xanthophyll Pools: A Comparative Analysis of Chlorophyll b and Xanthophyll Biosynthesis Mutants. Molecular Plant, 2010, 3, 576-593.	3.9	168
21	Vitamin E is essential for the tolerance of <i>Arabidopsis thaliana</i> to metalâ€induced oxidative stress. Plant, Cell and Environment, 2008, 31, 244-257.	2.8	167
22	Elevated Zeaxanthin Bound to Oligomeric LHCII Enhances the Resistance of Arabidopsis to Photooxidative Stress by a Lipid-protective, Antioxidant Mechanism. Journal of Biological Chemistry, 2007, 282, 22605-22618.	1.6	162
23	Photoinhibition of photosynthesis in chilled potato leaves is not correlated with a loss of Photosystem-II activity. Photosynthesis Research, 1994, 40, 75-92.	1.6	161
24	Zeaxanthin Deficiency Enhances the High Light Sensitivity of an Ascorbate-Deficient Mutant of Arabidopsis. Plant Physiology, 2003, 133, 748-760.	2.3	155
25	The Effect of Zeaxanthin as the Only Xanthophyll on the Structure and Function of the Photosynthetic Apparatus in Arabidopsis thaliana. Journal of Biological Chemistry, 2004, 279, 13878-13888.	1.6	140
26	Nonenzymic carotenoid oxidation and photooxidative stress signalling in plants. Journal of Experimental Botany, 2013, 64, 799-805.	2.4	135
27	Light-Induced Acclimation of the <i>Arabidopsis chlorina1</i> Mutant to Singlet Oxygen Â. Plant Cell, 2013, 25, 1445-1462.	3.1	133
28	The light stress-induced protein ELIP2 is a regulator of chlorophyll synthesis in Arabidopsis thaliana. Plant Journal, 2007, 50, 795-809.	2.8	128
29	Elimination of high-light-inducible polypeptides related to eukaryotic chlorophyll a/b-binding proteins results in aberrant photoacclimation in Synechocystis PCC6803. Biochimica Et Biophysica Acta - Bioenergetics, 2003, 1557, 21-33.	0.5	127
30	Carnosic Acid and Carnosol, Two Major Antioxidants of Rosemary, Act through Different Mechanisms. Plant Physiology, 2017, 175, 1381-1394.	2.3	124
31	Vitamin B6 deficient plants display increased sensitivity to high light and photo-oxidative stress. BMC Plant Biology, 2009, 9, 130.	1.6	122
32	Photosynthesis and State Transitions in Mitochondrial Mutants of Chlamydomonas reinhardtii Affected in Respiration. Plant Physiology, 2003, 133, 2010-2020.	2.3	119
33	The chlorophyll-binding protein IsiA is inducible by high light and protects the cyanobacteriumSynechocystisPCC6803 from photooxidative stress. FEBS Letters, 2005, 579, 2289-2293.	1.3	119
34	2-Cysteine Peroxiredoxins and Thylakoid Ascorbate Peroxidase Create a Water-Water Cycle That Is Essential to Protect the Photosynthetic Apparatus under High Light Stress Conditions. Plant Physiology, 2015, 167, 1592-1603.	2.3	119
35	Photo-oxidative Stress in a Xanthophyll-deficient Mutant of Chlamydomonas. Journal of Biological Chemistry, 2004, 279, 6337-6344.	1.6	110
36	Decoding Î²-Cyclocitral-Mediated Retrograde Signaling Reveals the Role of a Detoxification Response in Plant Tolerance to Photooxidative Stress. Plant Cell, 2018, 30, 2495-2511.	3.1	108

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37	The cyclic electron pathways around photosystem I in Chlamydomonas reinhardtii as determined in vivo by photoacoustic measurements of energy storage. Planta, 1994, 193, 251.	1.6	103
38	Key players of singlet oxygen-induced cell death in plants. Frontiers in Plant Science, 2015, 6, 39.	1.7	101
39	Thioredoxin m4 Controls Photosynthetic Alternative Electron Pathways in Arabidopsis Â Â. Plant Physiology, 2012, 161, 508-520.	2.3	100
40	Singlet Oxygen-Induced Cell Death in Arabidopsis under High-Light Stress Is Controlled by OXI1 Kinase. Plant Physiology, 2016, 170, 1757-1771.	2.3	100
41	Spontaneous and thermoinduced photon emission: new methods to detect and quantify oxidative stress in plants. Trends in Plant Science, 2003, 8, 409-413.	4.3	99
42	Thylakoid membrane fluidity and thermostability during the operation of the xanthophyll cycle in higher-plant chloroplasts. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1330, 179-193.	1.4	97
43	The chloroplastic lipocalin AtCHL prevents lipid peroxidation and protects Arabidopsis against oxidative stress. Plant Journal, 2009, 60, 691-702.	2.8	96
44	Suppression of Both ELIP1 and ELIP2 in Arabidopsis Does Not Affect Tolerance to Photoinhibition and Photooxidative Stress. Plant Physiology, 2006, 141, 1264-1273.	2.3	93
45	The Plastid Lipocalin LCNP Is Required for Sustained Photoprotective Energy Dissipation in Arabidopsis. Plant Cell, 2018, 30, 196-208.	3.1	93
46	Autoluminescence imaging: a non-invasive tool for mapping oxidative stress. Trends in Plant Science, 2006, 11, 480-484.	4.3	87
47	Chloroplast Membrane Photostability in chlPTransgenic Tobacco Plants Deficient in Tocopherols. Plant Physiology, 2003, 132, 300-310.	2.3	85
48	Using spontaneous photon emission to image lipid oxidation patterns in plant tissues. Plant Journal, 2011, 67, 1103-1115.	2.8	85
49	Plant tolerance to excess light energy and photooxidative damage relies on plastoquinone biosynthesis. Scientific Reports, 2015, 5, 10919.	1.6	85
50	Promotion of cyclic electron transport around photosystem I during the evolution of <scp>NADP</scp>â€“malic enzymeâ€type <scp>C</scp>₄ photosynthesis in the genus <i><scp>F</scp>laveria</i>. New Phytologist, 2013, 199, 832-842.	3.5	84
51	Dihydroactinidiolide, a High Light-Induced Î²-Carotene Derivative that Can Regulate Gene Expression and Photoacclimation in Arabidopsis. Molecular Plant, 2014, 7, 1248-1251.	3.9	82
52	Photosynthesis, chlorophyll fluorescence, light-harvesting system and photoinhibition resistance of a zeaxanthindashaccumulating mutant of Arabidopsis thaliana. Journal of Photochemistry and Photobiology B: Biology, 1996, 34, 87-94.	1.7	80
53	Salt shock-inducible Photosystem I cyclic electron transfer in Synechocystis PCC6803 relies on binding of ferredoxin:NADP+ reductase to the thylakoid membranes via its CpcD phycobilisome-linker homologous N-terminal domain. Biochimica Et Biophysica Acta - Bioenergetics, 2000, 1457, 129-144.	0.5	80
54	Chloroplast lipid droplet type II NAD(P)H quinone oxidoreductase is essential for prenylquinone metabolism and vitamin K ₁ accumulation. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14354-14359.	3.3	80

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55	METHYLENE BLUE SENSITIVITY 1 (MBS1) is required for acclimation of Arabidopsis to singlet oxygen and acts downstream of Î²â€cyclocitral. Plant, Cell and Environment, 2017, 40, 216-226.	2.8	76
56	Arabidopsis thaliana plastidial methionine sulfoxide reductases B, MSRBs, account for most leaf peptide MSR activity and are essential for growth under environmental constraints through a role in the preservation of photosystem antennae. Plant Journal, 2010, 61, 271-282.	2.8	75
57	Double mutation cpSRP43â€"/cpSRP54â€"is necessary to abolish the cpSRP pathway required for thylakoid targeting of the lightâ€harvesting chlorophyll proteins. Plant Journal, 2002, 29, 531-543.	2.8	72
58	Differential Control of Xanthophylls and Light-Induced Stress Proteins, as Opposed to Light-Harvesting Chlorophyll a/bProteins, during Photosynthetic Acclimation of Barley Leaves to Light Irradiance. Plant Physiology, 1998, 118, 227-235.	2.3	71
59	Tocotrienols, the Unsaturated Forms of Vitamin E, Can Function as Antioxidants and Lipid Protectors in Tobacco Leaves. Plant Physiology, 2008, 147, 764-778.	2.3	71
60	The protective function of the xanthophyll cycle in photosynthesis. FEBS Letters, 1994, 353, 147-150.	1.3	67
61	Circadian Stress Regimes Affect the Circadian Clock and Cause Jasmonic Acid-Dependent Cell Death in Cytokinin-Deficient Arabidopsis Plants. Plant Cell, 2016, 28, tpc.00016.2016.	3.1	66
62	Sensing Î²â€carotene oxidation in photosystem <scp>II</scp> to master plant stress tolerance. New Phytologist, 2019, 223, 1776-1783.	3.5	66
63	<i><scp>A</scp>rabidopsis</i> lipocalins <scp>AtCHL</scp> and <scp>AtTIL</scp> have distinct but overlapping functions essential for lipid protection and seed longevity. Plant, Cell and Environment, 2014, 37, 368-381.	2.8	63
64	The Apocarotenoid Î²-Cyclocitric Acid Elicits Drought Tolerance in Plants. IScience, 2019, 19, 461-473.	1.9	61
65	Photosynthetic Responses of Leaves to Water Stress, Expressed by Photoacoustics and Related Methods. Plant Physiology, 1986, 82, 827-833.	2.3	60
66	A photosystem 1psaFJ-nullmutant of the cyanobacteriumSynechocystisPCC 6803 expresses theisiABoperon under iron replete conditions. FEBS Letters, 2003, 549, 52-56.	1.3	59
67	Uncoupling High Light Responses from Singlet Oxygen Retrograde Signaling and Spatial-Temporal Systemic Acquired Acclimation. Plant Physiology, 2016, 171, 1734-1749.	2.3	59
68	Î²-Cyclocitral and derivatives: Emerging molecular signals serving multiple biological functions. Plant Physiology and Biochemistry, 2020, 155, 35-41.	2.8	59
69	Plastoquinone In and Beyond Photosynthesis. Trends in Plant Science, 2020, 25, 1252-1265.	4.3	58
70	Enzymatic and Non-Enzymatic Mechanisms Contribute to Lipid Oxidation During Seed Aging. Plant and Cell Physiology, 2017, 58, 925-933.	1.5	53
71	Flavodoxin accumulation contributes to enhanced cyclic electron flow around photosystem I in salt-stressed cells of Synechocystis sp. strain PCC 6803. Physiologia Plantarum, 1999, 105, 670-678.	2.6	51
72	A drought-sensitive barley variety displays oxidative stress and strongly increased contents in low-molecular weight antioxidant compounds during water deficit compared to a tolerant variety. Journal of Plant Physiology, 2013, 170, 633-645.	1.6	51

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73	Chlorophyll thermofluorescence and thermoluminescence as complementary tools for the study of temperature stress in plants. Photosynthesis Research, 2007, 93, 159-171.	1.6	49
74	Probing the FQR and NDH activities involved in cyclic electron transport around Photosystem I by the â€˜afterglowâ€™ luminescence. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1709, 203-213.	0.5	44
75	Beyond Non-Photochemical Fluorescence Quenching: The Overlapping Antioxidant Functions of Zeaxanthin and Tocopherols. Advances in Photosynthesis and Respiration, 2014, , 583-603.	1.0	38
76	The PsaE subunit of photosystem I prevents light-induced formation of reduced oxygen species in the cyanobacterium Synechocystis sp. PCC 6803. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 308-316.	0.5	36
77	A large gene cluster encoding peptide synthetases and polyketide synthases is involved in production of siderophores and oxidative stress response in the cyanobacterium <i>Anabaena</i> sp. strain PCC 7120. Environmental Microbiology, 2008, 10, 2574-2585.	1.8	35
78	A proposed interplay between peroxidase, amine oxidase and lipoxygenase in the wounding-induced oxidative burst in Pisum sativum seedlings. Phytochemistry, 2015, 112, 130-138.	1.4	34
79	Cyclic electron flow around PSI monitored by afterglow luminescence in leaves of maize inbred lines (Zea mays L.): correlation with chilling tolerance. Planta, 2005, 221, 567-579.	1.6	33
80	Tanned or Sunburned: How Excessive Light Triggers Plant Cell Death. Molecular Plant, 2020, 13, 1545-1555.	3.9	32
81	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
82	OXI1 and DAD Regulate Light-Induced Cell Death Antagonistically through Jasmonate and Salicylate Levels. Plant Physiology, 2019, 180, 1691-1708.	2.3	30
83	The function of PROTOPORPHYRINOGEN IX OXIDASE in chlorophyll biosynthesis requires oxidised plastoquinone in Chlamydomonas reinhardtii. Communications Biology, 2019, 2, 159.	2.0	28
84	Photosynthetic light-harvesting function of carotenoids in higher-plant leaves exposed to high light irradiances. Planta, 1998, 205, 242-250.	1.6	27
85	Endoplasmic reticulumâ€mediated unfolded protein response is an integral part of singlet oxygen signalling in plants. Plant Journal, 2020, 102, 1266-1280.	2.8	26
86	PSII-S gene expression, photosynthetic activity and abundance of plastid thioredoxin-related and lipid-associated proteins during chilling stress in Solanum species differing in freezing resistance. Physiologia Plantarum, 2001, 113, 72-78.	2.6	25
87	Plastoquinone homoeostasis by Arabidopsis proton gradient regulation 6 is essential for photosynthetic efficiency. Communications Biology, 2019, 2, 220.	2.0	24
88	Mutation of the Atypical Kinase ABC1K3 Partially Rescues the PROTON GRADIENT REGULATION 6 Phenotype in Arabidopsis thaliana. Frontiers in Plant Science, 2020, 11, 337.	1.7	23
89	Chemical quenching of singlet oxygen by plastoquinols and their oxidation products in Arabidopsis. Plant Journal, 2018, 95, 848-861.	2.8	22
90	Resistance of native oak to recurrent drought conditions simulating predicted climatic changes in the <scp>Mediterranean</scp> region. Plant, Cell and Environment, 2018, 41, 2299-2312.	2.8	20

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91	Interplay between antioxidants in response to photooxidative stress in Arabidopsis. Free Radical Biology and Medicine, 2020, 160, 894-907.	1.3	19
92	A manipulation of carotenoid metabolism influence biomass partitioning and fitness in tomato. Metabolic Engineering, 2022, 70, 166-180.	3.6	19
93	A guanosine tetraphosphate (ppGpp) mediated brake on photosynthesis is required for acclimation to nitrogen limitation in Arabidopsis. ELife, 2022, 11, .	2.8	19
94	Jasmonate. Plant Signaling and Behavior, 2013, 8, e26655.	1.2	18
95	Probing Electron Transport through and around Photosystem II in vivo by the Combined Use of Photoacoustic Spectroscopy and Chlorophyll Fluorometry. Israel Journal of Chemistry, 1998, 38, 247-256.	1.0	16
96	Rapid screening for heat tolerance in Phaseolus species using the photoacoustic technique. Plant Science, 1987, 48, 143-149.	1.7	14
97	Photoacoustically monitored thermal energy dissipation and xanthophyll cycle carotenoids in higher plant leaves. Journal of Photochemistry and Photobiology B: Biology, 1997, 40, 68-75.	1.7	14
98	"ENERGY"-DEPENDENT QUENCHING OF CHLOROPHYLL FLUORESCENCE and THERMAL ENERGY DISSIPATION IN INTACT LEAVES DURING INDUCTION OF PHOTOSYNTHESIS. Photochemistry and Photobiology, 1990, 51, 481-486.	1.3	13
99	A Multi-OMICs Approach Sheds Light on the Higher Yield Phenotype and Enhanced Abiotic Stress Tolerance in Tobacco Lines Expressing the Carrot lycopene Î²-cyclase1 Gene. Frontiers in Plant Science, 2021, 12, 624365.	1.7	12
100	Luminescence imaging of leaf damage induced by lipid peroxidation products and its modulation by Î²â€cyclocitral. Physiologia Plantarum, 2021, 171, 246-259.	2.6	10
101	Plastoquinone homeostasis in plant acclimation to light intensity. Photosynthesis Research, 2022, , 1.	1.6	7
102	Determination of ROS-Induced Lipid Peroxidation by HPLC-Based Quantification of Hydroxy Polyunsaturated Fatty Acids. Methods in Molecular Biology, 2022, , 181-189.	0.4	3
103	Imaging of Lipid Peroxidation-Associated Chemiluminescence in Plants: Spectral Features, Regulation and Origin of the Signal in Leaves and Roots. Antioxidants, 2022, 11, 1333.	2.2	2