

Michel Havaux

List of Publications by Citations

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102
papers

9,840
citations

56
h-index

99
g-index

106
ext. papers

11,073
ext. citations

6.6
avg, IF

6.54
L-index

| # | Paper | IF | Citations |
|-----|--|------|-----------|
| 102 | Carotenoids as membrane stabilizers in chloroplasts. <i>Trends in Plant Science</i> , 1998 , 3, 147-151 | 13.1 | 501 |
| 101 | Singlet oxygen in plants: production, detoxification and signaling. <i>Trends in Plant Science</i> , 2009 , 14, 219-228 | 11.1 | 498 |
| 100 | Carotenoid oxidation products are stress signals that mediate gene responses to singlet oxygen in plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 5535-40 | 11.5 | 458 |
| 99 | Singlet oxygen is the major reactive oxygen species involved in photooxidative damage to plants. <i>Plant Physiology</i> , 2008 , 148, 960-8 | 6.6 | 399 |
| 98 | Vitamin E protects against photoinhibition and photooxidative stress in <i>Arabidopsis thaliana</i> . <i>Plant Cell</i> , 2005 , 17, 3451-69 | 11.6 | 384 |
| 97 | Zeaxanthin has enhanced antioxidant capacity with respect to all other xanthophylls in <i>Arabidopsis</i> leaves and functions independent of binding to PSII antennae. <i>Plant Physiology</i> , 2007 , 145, 1506-20 | 6.6 | 301 |
| 96 | Chemical quenching of singlet oxygen by carotenoids in plants. <i>Plant Physiology</i> , 2012 , 158, 1267-78 | 6.6 | 289 |
| 95 | Leaf chlorosis in oilseed rape plants (<i>Brassica napus</i>) grown on cadmium-polluted soil: causes and consequences for photosynthesis and growth. <i>Planta</i> , 2001 , 212, 696-709 | 4.7 | 284 |
| 94 | Carotenoid oxidation products as stress signals in plants. <i>Plant Journal</i> , 2014 , 79, 597-606 | 6.9 | 271 |
| 93 | The protective functions of carotenoid and flavonoid pigments against excess visible radiation at chilling temperature investigated in <i>Arabidopsis npq</i> and <i>tt</i> mutants. <i>Planta</i> , 2001 , 213, 953-66 | 4.7 | 268 |
| 92 | Early light-induced proteins protect <i>Arabidopsis</i> from photooxidative stress. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 4921-6 | 11.5 | 233 |
| 91 | A theoretical and experimental analysis of the qP and qN coefficients of chlorophyll fluorescence quenching and their relation to photochemical and nonphotochemical events. <i>Photosynthesis Research</i> , 1991 , 27, 41-55 | 3.7 | 233 |
| 90 | Photodamage of the photosynthetic apparatus and its dependence on the leaf developmental stage in the <i>npq1</i> <i>Arabidopsis</i> mutant deficient in the xanthophyll cycle enzyme violaxanthin de-epoxidase. <i>Plant Physiology</i> , 2000 , 124, 273-84 | 6.6 | 201 |
| 89 | 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. <i>BMC Plant Biology</i> , 2006 , 6, 32 | 5.3 | 193 |
| 88 | Characterization of thermal damage to the photosynthetic electron transport system in potato leaves. <i>Plant Science</i> , 1993 , 94, 19-33 | 5.3 | 192 |
| 87 | Short-term responses of Photosystem I to heat stress : Induction of a PS II-independent electron transport through PS I fed by stromal components. <i>Photosynthesis Research</i> , 1996 , 47, 85-97 | 3.7 | 190 |
| 86 | Cyclic electron flow around photosystem I in C(3) plants. In vivo control by the redox state of chloroplasts and involvement of the NADH-dehydrogenase complex. <i>Plant Physiology</i> , 2002 , 128, 760-9 | 6.6 | 164 |

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|----|--|------|-----|
| 85 | Temperature-dependent adjustment of the thermal stability of photosystem II in vivo: possible involvement of xanthophyll-cycle pigments. <i>Planta</i> , 1996 , 198, 324-333 | 4.7 | 161 |
| 84 | Cadmium distribution and microlocalization in oilseed rape (<i>Brassica napus</i>) after long-term growth on cadmium-contaminated soil. <i>Planta</i> , 2003 , 216, 939-50 | 4.7 | 156 |
| 83 | Zeaxanthin deficiency enhances the high light sensitivity of an ascorbate-deficient mutant of <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2003 , 133, 748-60 | 6.6 | 140 |
| 82 | Photoinhibition of photosynthesis in chilled potato leaves is not correlated with a loss of Photosystem-II activity : Preferential inactivation of Photosystem I. <i>Photosynthesis Research</i> , 1994 , 40, 75-92 | 3.7 | 140 |
| 81 | Enhanced photoprotection by protein-bound vs free xanthophyll pools: a comparative analysis of chlorophyll b and xanthophyll biosynthesis mutants. <i>Molecular Plant</i> , 2010 , 3, 576-93 | 14.4 | 136 |
| 80 | Elevated zeaxanthin bound to oligomeric LHCII enhances the resistance of <i>Arabidopsis</i> to photooxidative stress by a lipid-protective, antioxidant mechanism. <i>Journal of Biological Chemistry</i> , 2007 , 282, 22605-18 | 5.4 | 134 |
| 79 | The effect of zeaxanthin as the only xanthophyll on the structure and function of the photosynthetic apparatus in <i>Arabidopsis thaliana</i> . <i>Journal of Biological Chemistry</i> , 2004 , 279, 13878-88 | 5.4 | 123 |
| 78 | Elimination of high-light-inducible polypeptides related to eukaryotic chlorophyll a/b-binding proteins results in aberrant photoacclimation in <i>Synechocystis</i> PCC6803. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2003 , 1557, 21-33 | 4.6 | 116 |
| 77 | Vitamin E is essential for the tolerance of <i>Arabidopsis thaliana</i> to metal-induced oxidative stress. <i>Plant, Cell and Environment</i> , 2008 , 31, 244-57 | 8.4 | 115 |
| 76 | Light-induced acclimation of the <i>Arabidopsis chlorina1</i> mutant to singlet oxygen. <i>Plant Cell</i> , 2013 , 25, 1445-62 | 11.6 | 110 |
| 75 | The light stress-induced protein ELIP2 is a regulator of chlorophyll synthesis in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2007 , 50, 795-809 | 6.9 | 108 |
| 74 | Photosynthesis and state transitions in mitochondrial mutants of <i>Chlamydomonas reinhardtii</i> affected in respiration. <i>Plant Physiology</i> , 2003 , 133, 2010-20 | 6.6 | 106 |
| 73 | Nonenzymic carotenoid oxidation and photooxidative stress signalling in plants. <i>Journal of Experimental Botany</i> , 2013 , 64, 799-805 | 7 | 103 |
| 72 | The chlorophyll-binding protein IsiA is inducible by high light and protects the cyanobacterium <i>Synechocystis</i> PCC6803 from photooxidative stress. <i>FEBS Letters</i> , 2005 , 579, 2289-93 | 3.8 | 99 |
| 71 | Photo-oxidative stress in a xanthophyll-deficient mutant of <i>Chlamydomonas</i> . <i>Journal of Biological Chemistry</i> , 2004 , 279, 6337-44 | 5.4 | 94 |
| 70 | Spontaneous and thermoinduced photon emission: new methods to detect and quantify oxidative stress in plants. <i>Trends in Plant Science</i> , 2003 , 8, 409-13 | 13.1 | 94 |
| 69 | 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. <i>Plant Physiology</i> , 2015 , 167, 1592-603 | 6.6 | 90 |
| 68 | Vitamin B6 deficient plants display increased sensitivity to high light and photo-oxidative stress. <i>BMC Plant Biology</i> , 2009 , 9, 130 | 5.3 | 89 |

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|----|--|------|----|
| 67 | Thylakoid membrane fluidity and thermostability during the operation of the xanthophyll cycle in higher-plant chloroplasts. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1997 , 1330, 179-93 | 3.8 | 89 |
| 66 | The cyclic electron pathways around photosystem I in <i>Chlamydomonas reinhardtii</i> as determined in vivo by photoacoustic measurements of energy storage. <i>Planta</i> , 1994 , 193, 251 | 4.7 | 86 |
| 65 | Key players of singlet oxygen-induced cell death in plants. <i>Frontiers in Plant Science</i> , 2015 , 6, 39 | 6.2 | 82 |
| 64 | Chloroplast membrane photostability in chlP transgenic tobacco plants deficient in tocopherols. <i>Plant Physiology</i> , 2003 , 132, 300-10 | 6.6 | 80 |
| 63 | Suppression of both ELIP1 and ELIP2 in Arabidopsis does not affect tolerance to photoinhibition and photooxidative stress. <i>Plant Physiology</i> , 2006 , 141, 1264-73 | 6.6 | 77 |
| 62 | Thioredoxin m4 controls photosynthetic alternative electron pathways in Arabidopsis. <i>Plant Physiology</i> , 2013 , 161, 508-20 | 6.6 | 76 |
| 61 | Autoluminescence imaging: a non-invasive tool for mapping oxidative stress. <i>Trends in Plant Science</i> , 2006 , 11, 480-4 | 13.1 | 74 |
| 60 | Salt shock-inducible photosystem I cyclic electron transfer in <i>Synechocystis</i> PCC6803 relies on binding of ferredoxin:NADP(+) reductase to the thylakoid membranes via its CpcD phycobilisome-linker homologous N-terminal domain. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008 , 1457, 123-44 | 4.6 | 72 |
| 59 | Singlet Oxygen-Induced Cell Death in Arabidopsis under High-Light Stress Is Controlled by OX11 Kinase. <i>Plant Physiology</i> , 2016 , 170, 1757-71 | 6.6 | 71 |
| 58 | Photosynthesis, chlorophyll fluorescence, light-harvesting system and photoinhibition resistance of a zeaxanthin-accumulating mutant of Arabidopsis thaliana. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 1996 , 34, 87-94 | 6.7 | 71 |
| 57 | Carnosic Acid and Carnosol, Two Major Antioxidants of Rosemary, Act through Different Mechanisms. <i>Plant Physiology</i> , 2017 , 175, 1381-1394 | 6.6 | 70 |
| 56 | Using spontaneous photon emission to image lipid oxidation patterns in plant tissues. <i>Plant Journal</i> , 2011 , 67, 1103-15 | 6.9 | 70 |
| 55 | Dihydroactinidiolide, a high light-induced carotene derivative that can regulate gene expression and photoacclimation in Arabidopsis. <i>Molecular Plant</i> , 2014 , 7, 1248-51 | 14.4 | 67 |
| 54 | Double mutation cpSRP43--/cpSRP54-- is necessary to abolish the cpSRP pathway required for thylakoid targeting of the light-harvesting chlorophyll proteins. <i>Plant Journal</i> , 2002 , 29, 531-43 | 6.9 | 65 |
| 53 | Differential control of xanthophylls and light-induced stress proteins, as opposed to light-harvesting chlorophyll a/b proteins, during photosynthetic acclimation of barley leaves to light irradiance. <i>Plant Physiology</i> , 1998 , 118, 227-35 | 6.6 | 65 |
| 52 | Tocotrienols, the unsaturated forms of vitamin E, can function as antioxidants and lipid protectors in tobacco leaves. <i>Plant Physiology</i> , 2008 , 147, 764-78 | 6.6 | 63 |
| 51 | Chloroplast lipid droplet type II NAD(P)H quinone oxidoreductase is essential for prenylquinone metabolism and vitamin K1 accumulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 14354-9 | 11.5 | 62 |
| 50 | The protective function of the xanthophyll cycle in photosynthesis. <i>FEBS Letters</i> , 1994 , 353, 147-50 | 3.8 | 62 |

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| 49 | Decoding γ Cyclocitral-Mediated Retrograde Signaling Reveals the Role of a Detoxification Response in Plant Tolerance to Photooxidative Stress. <i>Plant Cell</i> , 2018 , 30, 2495-2511 | 11.6 | 62 |
| 48 | Plant tolerance to excess light energy and photooxidative damage relies on plastoquinone biosynthesis. <i>Scientific Reports</i> , 2015 , 5, 10919 | 4.9 | 60 |
| 47 | The chloroplastic lipocalin AtCHL prevents lipid peroxidation and protects Arabidopsis against oxidative stress. <i>Plant Journal</i> , 2009 , 60, 691-702 | 6.9 | 60 |
| 46 | 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. <i>Plant Journal</i> , 2010 , 61, 271-82 | 6.9 | 56 |
| 45 | The Plastid Lipocalin LCNP Is Required for Sustained Photoprotective Energy Dissipation in Arabidopsis. <i>Plant Cell</i> , 2018 , 30, 196-208 | 11.6 | 56 |
| 44 | Photosynthetic responses of leaves to water stress, expressed by photoacoustics and related methods : I. Probing the photoacoustic method as an indicator for water stress in vivo. <i>Plant Physiology</i> , 1986 , 82, 827-33 | 6.6 | 55 |
| 43 | A photosystem 1 psaFJ-null mutant of the cyanobacterium Synechocystis PCC 6803 expresses the isiAB operon under iron replete conditions. <i>FEBS Letters</i> , 2003 , 549, 52-6 | 3.8 | 54 |
| 42 | Circadian Stress Regimes Affect the Circadian Clock and Cause Jasmonic Acid-Dependent Cell Death in Cytokinin-Deficient Arabidopsis Plants. <i>Plant Cell</i> , 2016 , 28, 1616-39 | 11.6 | 51 |
| 41 | METHYLENE BLUE SENSITIVITY 1 (MBS1) is required for acclimation of Arabidopsis to singlet oxygen and acts downstream of γ Cyclocitral. <i>Plant, Cell and Environment</i> , 2017 , 40, 216-226 | 8.4 | 50 |
| 40 | Uncoupling High Light Responses from Singlet Oxygen Retrograde Signaling and Spatial-Temporal Systemic Acquired Acclimation. <i>Plant Physiology</i> , 2016 , 171, 1734-49 | 6.6 | 49 |
| 39 | Promotion of cyclic electron transport around photosystem I during the evolution of NADP-malic enzyme-type C4 photosynthesis in the genus Flaveria. <i>New Phytologist</i> , 2013 , 199, 832-42 | 9.8 | 48 |
| 38 | Flavodoxin accumulation contributes to enhanced cyclic electron flow around photosystem I in salt-stressed cells of Synechocystis sp. strain PCC 6803. <i>Physiologia Plantarum</i> , 1999 , 105, 670-678 | 4.6 | 45 |
| 37 | Arabidopsis lipocalins AtCHL and AtTIL have distinct but overlapping functions essential for lipid protection and seed longevity. <i>Plant, Cell and Environment</i> , 2014 , 37, 368-81 | 8.4 | 43 |
| 36 | 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. <i>Journal of Plant Physiology</i> , 2013 , 170, 633-45 | 3.6 | 43 |
| 35 | Chlorophyll thermofluorescence and thermoluminescence as complementary tools for the study of temperature stress in plants. <i>Photosynthesis Research</i> , 2007 , 93, 159-71 | 3.7 | 43 |
| 34 | Probing the FQR and NDH activities involved in cyclic electron transport around Photosystem I by the 'afterglow' luminescence. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2005 , 1709, 203-13 | 4.6 | 42 |
| 33 | Sensing β carotene oxidation in photosystem II to master plant stress tolerance. <i>New Phytologist</i> , 2019 , 223, 1776-1783 | 9.8 | 40 |
| 32 | Cyclic electron flow around PSI monitored by afterglow luminescence in leaves of maize inbred lines (<i>Zea mays</i> L.): correlation with chilling tolerance. <i>Planta</i> , 2005 , 221, 567-79 | 4.7 | 33 |

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| 31 | 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. <i>Environmental Microbiology</i> , 2008 , 10, 2574-85 | 5.2 | 32 |
| 30 | Enzymatic and Non-Enzymatic Mechanisms Contribute to Lipid Oxidation During Seed Aging. <i>Plant and Cell Physiology</i> , 2017 , 58, 925-933 | 4.9 | 31 |
| 29 | The Apocarotenoid β -Cyclocitric Acid Elicits Drought Tolerance in Plants. <i>IScience</i> , 2019 , 19, 461-473 | 6.1 | 30 |
| 28 | A proposed interplay between peroxidase, amine oxidase and lipoxygenase in the wounding-induced oxidative burst in <i>Pisum sativum</i> seedlings. <i>Phytochemistry</i> , 2015 , 112, 130-8 | 4 | 28 |
| 27 | The PsaE subunit of photosystem I prevents light-induced formation of reduced oxygen species in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008 , 1777, 308-16 | 4.6 | 28 |
| 26 | Photosynthetic light-harvesting function of carotenoids in higher-plant leaves exposed to high light irradiances. <i>Planta</i> , 1998 , 205, 242-250 | 4.7 | 26 |
| 25 | PSII-S gene expression, photosynthetic activity and abundance of plastid thioredoxin-related and lipid-associated proteins during chilling stress in <i>Solanum</i> species differing in freezing resistance. <i>Physiologia Plantarum</i> , 2001 , 113, 72-78 | 4.6 | 23 |
| 24 | β -Cyclocitral and derivatives: Emerging molecular signals serving multiple biological functions. <i>Plant Physiology and Biochemistry</i> , 2020 , 155, 35-41 | 5.4 | 22 |
| 23 | Plastoquinone In and Beyond Photosynthesis. <i>Trends in Plant Science</i> , 2020 , 25, 1252-1265 | 13.1 | 21 |
| 22 | Beyond Non-Photochemical Fluorescence Quenching: The Overlapping Antioxidant Functions of Zeaxanthin and Tocopherols. <i>Advances in Photosynthesis and Respiration</i> , 2014 , 583-603 | 1.7 | 20 |
| 21 | The plastoquinone pool outside the thylakoid membrane serves in plant photoprotection as a reservoir of singlet oxygen scavengers. <i>Plant, Cell and Environment</i> , 2018 , 41, 2277-2287 | 8.4 | 19 |
| 20 | Jasmonate: A decision maker between cell death and acclimation in the response of plants to singlet oxygen. <i>Plant Signaling and Behavior</i> , 2013 , 8, e26655 | 2.5 | 18 |
| 19 | The function of PROTOPORPHYRINOGEN IX OXIDASE in chlorophyll biosynthesis requires oxidised plastoquinone in. <i>Communications Biology</i> , 2019 , 2, 159 | 6.7 | 16 |
| 18 | OXI1 and DAD Regulate Light-Induced Cell Death Antagonistically through Jasmonate and Salicylate Levels. <i>Plant Physiology</i> , 2019 , 180, 1691-1708 | 6.6 | 16 |
| 17 | Plastoquinone homeostasis by proton gradient regulation 6 is essential for photosynthetic efficiency. <i>Communications Biology</i> , 2019 , 2, 220 | 6.7 | 14 |
| 16 | Mutation of the Atypical Kinase ABC1K3 Partially Rescues the PROTON GRADIENT REGULATION 6 Phenotype in. <i>Frontiers in Plant Science</i> , 2020 , 11, 337 | 6.2 | 14 |
| 15 | Chemical quenching of singlet oxygen by plastoquinols and their oxidation products in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2018 , 95, 848 | 6.9 | 14 |
| 14 | Endoplasmic reticulum-mediated unfolded protein response is an integral part of singlet oxygen signalling in plants. <i>Plant Journal</i> , 2020 , 102, 1266-1280 | 6.9 | 13 |

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| 13 | Resistance of native oak to recurrent drought conditions simulating predicted climatic changes in the Mediterranean region. <i>Plant, Cell and Environment</i> , 2018 , 41, 2299-2312 | 8.4 | 12 |
| 12 | Photoacoustically monitored thermal energy dissipation and xanthophyll cycle carotenoids in higher plant leaves. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 1997 , 40, 68-75 | 6.7 | 12 |
| 11 | Probing Electron Transport through and around Photosystem II in vivo by the Combined Use of Photoacoustic Spectroscopy and Chlorophyll Fluorometry. <i>Israel Journal of Chemistry</i> , 1998 , 38, 247-256 | 3.4 | 12 |
| 10 | ENERGYDEPENDENT QUENCHING OF CHLOROPHYLL FLUORESCENCE and THERMAL ENERGY DISSIPATION IN INTACT LEAVES DURING INDUCTION OF PHOTOSYNTHESIS. <i>Photochemistry and Photobiology</i> , 1990 , 51, 481-486 | 3.6 | 12 |
| 9 | Rapid screening for heat tolerance in Phaseolus species using the photoacoustic technique. <i>Plant Science</i> , 1987 , 48, 143-149 | 5.3 | 12 |
| 8 | Tanned or Sunburned: How Excessive Light Triggers Plant Cell Death. <i>Molecular Plant</i> , 2020 , 13, 1545-1554 | 5.4 | 8 |
| 7 | Interplay between antioxidants in response to photooxidative stress in Arabidopsis. <i>Free Radical Biology and Medicine</i> , 2020 , 160, 894-907 | 7.8 | 7 |
| 6 | Luminescence imaging of leaf damage induced by lipid peroxidation products and its modulation by Ecylocitral. <i>Physiologia Plantarum</i> , 2021 , 171, 246-259 | 4.6 | 5 |
| 5 | A Multi-OMICs Approach Sheds Light on the Higher Yield Phenotype and Enhanced Abiotic Stress Tolerance in Tobacco Lines Expressing the Carrot GGene. <i>Frontiers in Plant Science</i> , 2021 , 12, 624365 | 6.2 | 5 |
| 4 | A manipulation of carotenoid metabolism influence biomass partitioning and fitness in tomato.. <i>Metabolic Engineering</i> , 2022 , | 9.7 | 2 |
| 3 | Ecylocitric acid: a new apocarotenoid eliciting drought tolerance in plants | | 1 |
| 2 | Determination of ROS-Induced Lipid Peroxidation by HPLC-Based Quantification of Hydroxy Polyunsaturated Fatty Acids. <i>Methods in Molecular Biology</i> , 2022 , 181-189 | 1.4 | 1 |
| 1 | Plastoquinone homeostasis in plant acclimation to light intensity.. <i>Photosynthesis Research</i> , 2022 , 1 | 3.7 | 0 |