Stefan HÃ¶rtensteiner

List of Publications by Year
in descending order

85 papers	9,343 citations	41258 49 h-index	56606 83 g-index
97 all docs	97 docs citations	97 times ranked	6263 citing authors

#	Article	IF	Citations
1	Nitrogen metabolism and remobilization during senescence. Journal of Experimental Botany, 2002, 53, 927-937.	2.4	609
2	Chlorophyll breakdown in higher plants. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 977-988.	0.5	597
3	Pheophytin Pheophorbide Hydrolase (Pheophytinase) Is Involved in Chlorophyll Breakdown during Leaf Senescence in <i>Arabidopsis</i> Â Â. Plant Cell, 2009, 21, 767-785.	3.1	513
4	CHLOROPHYLL DEGRADATION. Annual Review of Plant Biology, 1999, 50, 67-95.	14.2	462
5	Chlorophyll breakdown: Pheophorbide a oxygenase is a Rieske-type iron-sulfur protein, encoded by the accelerated cell death 1 gene. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15259-15264.	3.3	399
6	Stay-green regulates chlorophyll and chlorophyll-binding protein degradation during senescence. Trends in Plant Science, 2009, 14, 155-162.	4.3	355
7	Recent advances in chlorophyll biosynthesis and breakdown in higher plants. Plant Molecular Biology, 2004, 56, 1-14.	2.0	318
8	STAY-GREEN and Chlorophyll Catabolic Enzymes Interact at Light-Harvesting Complex II for Chlorophyll Detoxification during Leaf Senescence in <i>Arabidopsis</i>. Plant Cell, 2012, 24, 507-518.	3.1	290
9	Chlorophyll Breakdown in Senescent Arabidopsis Leaves. Characterization of Chlorophyll Catabolites and of Chlorophyll Catabolic Enzymes Involved in the Degreening Reaction. Plant Physiology, 2005, 139, 52-63.	2.3	278
10	An ABCâ€transporter ofArabidopsis thalianahas both glutathioneâ€conjugate and chlorophyll catabolite transport activity. Plant Journal, 1998, 13, 773-780.	2.8	269
11	AtMRP2, an Arabidopsis ATP Binding Cassette Transporter Able to Transport Glutathione S-Conjugates and Chlorophyll Catabolites: Functional Comparisons with AtMRP1. Plant Cell, 1998, 10, 267-282.	3.1	255
12	In Vivo Participation of Red Chlorophyll Catabolite Reductase in Chlorophyll Breakdown. Plant Cell, 2007, 19, 369-387.	3.1	215
13	Chlorophyllase Is a Rate-Limiting Enzyme in Chlorophyll Catabolism and Is Posttranslationally Regulated. Plant Cell, 2007, 19, 1007-1022.	3.1	213
14	Update on the biochemistry of chlorophyll breakdown. Plant Molecular Biology, 2013, 82, 505-517.	2.0	191
15	Chlorophyll breakdown in senescent cotyledons of rape, Brassica napus L.: Enzymatic cleavage of phaeophorbide a in vitro. New Phytologist, 1995, 129, 237-246.	3.5	188
16	The biochemistry and molecular biology of chlorophyll breakdown. Journal of Experimental Botany, 2018, 69, 751-767.	2.4	188
17	Cross-Species Identification of Mendel's I Locus. Science, 2007, 315, 73-73.	6.0	168
18	Breakdown of chlorophyll: A nonenzymatic reaction accounts for the formation of the colorless "nonfluorescent" chlorophyll catabolites. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6910-6915.	3.3	163

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19	Molecular cloning, functional expression and characterisation of RCC reductase involved in chlorophyll catabolism. Plant Journal, 2000, 21, 189-198.	2.8	160
20	The Key Step in Chlorophyll Breakdown in Higher Plants. Journal of Biological Chemistry, 1998, 273, 15335-15339.	1.6	140
21	AtMRP2, and Arabidopsis ATP Binding Cassette Transporter Able to Transport Glutathione S-Conjugates and Chlorophyll Catabolites: Functional Comparisons with AtMRP1. Plant Cell, 1998, 10, 267.	3.1	140
22	Chlorophyll breakdown in senescent leaves identification of the biochemical lesion in a stayâ€green genotype of Festuca pratensis Huds.. New Phytologist, 1995, 129, 247-252.	3.5	129
23	Cytochrome P450 CYP89A9 Is Involved in the Formation of Major Chlorophyll Catabolites during Leaf Senescence in <i>Arabidopsis</i> Â Â. Plant Cell, 2013, 25, 1868-1880.	3.1	123
24	The chlorophyllases AtCLH1 and AtCLH2 are not essential for senescenceâ€related chlorophyll breakdown in <i>Arabidopsis thaliana</i>. FEBS Letters, 2007, 581, 5517-5525.	1.3	120
25	Tracking Down Chlorophyll Breakdown in Plants: Elucidation of the Constitution of aâ€œFluorescentâ€• Chlorophyll Catabolite. Angewandte Chemie International Edition in English, 1997, 36, 401-404.	4.4	117
26	Mechanism and Significance of Chlorophyll Breakdown. Journal of Plant Growth Regulation, 2014, 33, 4-20.	2.8	113
27	Arabidopsis STAY-GREEN2 Is a Negative Regulator of Chlorophyll Degradation during Leaf Senescence. Molecular Plant, 2014, 7, 1288-1302.	3.9	110
28	Different Mechanisms Are Responsible for Chlorophyll Dephytylation during Fruit Ripening and Leaf Senescence in Tomato Â Â. Plant Physiology, 2014, 166, 44-56.	2.3	101
29	From crop to model to crop: identifying the genetic basis of the staygreen mutation in the Lolium / Festuca forage and amenity grasses. New Phytologist, 2006, 172, 592-597.	3.5	98
30	How Plants Dispose of Chlorophyll Catabolites. Journal of Biological Chemistry, 1996, 271, 27233-27236.	1.6	96
31	Stay-green protein, defective in Mendelâ€™s green cotyledon mutant, acts independent and upstream of pheophorbide a oxygenase in the chlorophyll catabolic pathway. Plant Molecular Biology, 2008, 67, 243-256.	2.0	96
32	Accumulation of chlorophyll catabolites photosensitizes the hypersensitive response elicited by <i>Pseudomonas syringae</i> in Arabidopsis. New Phytologist, 2010, 188, 161-174.	3.5	91
33	MES16, a Member of the Methylesterase Protein Family, Specifically Demethylates Fluorescent Chlorophyll Catabolites during Chlorophyll Breakdown in Arabidopsis. Plant Physiology, 2012, 158, 628-641.	2.3	83
34	A Role for TIC55 as a Hydroxylase of Phyllobilins, the Products of Chlorophyll Breakdown during Plant Senescence. Plant Cell, 2016, 28, 2510-2527.	3.1	75
35	The loss of green color during chlorophyll degradation?a prerequisite to prevent cell death?. Planta, 2004, 219, 191-194.	1.6	74
36	Reexamination of Chlorophyllase Function Implies Its Involvement in Defense against Chewing Herbivores. Plant Physiology, 2015, 167, 660-670.	2.3	72

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37	Arabidopsis NAC016 promotes chlorophyll breakdown by directly upregulating STAYGREEN1 transcription. Plant Cell Reports, 2016, 35, 155-166.	2.8	72
38	Delayed degradation of chlorophylls and photosynthetic proteins in Arabidopsis autophagy mutants during stress-induced leaf yellowing. Journal of Experimental Botany, 2014, 65, 3915-3925.	2.4	69
39	Analysis of the chlorophyll catabolism pathway in leaves of an introgression senescence mutant of Lolium temulentum. Phytochemistry, 2004, 65, 1231-1238.	1.4	66
40	Comparative Mutant Analysis of Arabidopsis ABCC-Type ABC Transporters: AtMRP2 Contributes to Detoxification, Vacuolar Organic Anion Transport and Chlorophyll Degradation. Plant and Cell Physiology, 2008, 49, 557-569.	1.5	66
41	<i>Arabidopsis</i> STAYGREENâ€LIKE (SGRL) promotes abiotic stressâ€induced leaf yellowing during vegetative growth. FEBS Letters, 2014, 588, 3830-3837.	1.3	66
42	Chlorophyll breakdown in spinach: on the structure of five nonfluorescent chlorophyll catabolites. Photosynthesis Research, 2002, 74, 109-119.	1.6	65
43	7-Hydroxymethyl chlorophyll a reductase functions in metabolic channeling of chlorophyll breakdown intermediates during leaf senescence. Biochemical and Biophysical Research Communications, 2013, 430, 32-37.	1.0	62
44	Breakdown of Chlorophyll: A Fluorescent Chlorophyll Catabolite from Sweet Pepper (Capsicum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46	1.0	61
45	Chlorophyll Degradation: The Tocopherol Biosynthesis-Related Phytol Hydrolase in Arabidopsis Seeds Is Still Missing Ã‚Â Ã‚Â Ã‚Â . Plant Physiology, 2014, 166, 70-79.	2.3	58
46	Plastidial NAD-Dependent Malate Dehydrogenase: A Moonlighting Protein Involved in Early Chloroplast Development through Its Interaction with an FtsH12-FtsHi Protease Complex. Plant Cell, 2018, 30, 1745-1769.	3.1	55
47	Chlorophyll Breakdown in Tobacco: On the Structure of Two Nonfluorescent Chlorophyll Catabolites. Chemistry and Biodiversity, 2004, 1, 657-668.	1.0	54
48	Chlorophyll breakdown in Chlorella protothecoides: characterization of degreening and cloning of degreening-related genes. Plant Molecular Biology, 2000, 42, 439-450.	2.0	53
49	The Role of Pheophorbide a Oxygenase Expression and Activity in the Canola Green Seed Problem. Plant Physiology, 2006, 142, 88-97.	2.3	51
50	Water deficit induces chlorophyll degradation via the â€˜<scp>PAO</scp>/phyllobilinâ€™ pathway in leaves of homoioâ€•(<scp><i>C</i></scp><i>raterostigma pumilum</i>) and poikilochlorophyllous (<scp><i>X</i></scp><i>erophyta viscosa</i>) resurrection plants. Plant, Cell and Environment, 2014, 37, 2521-2531.	2.8	51
51	Chlorophyll catabolism and gene expression in the peel of ripening banana fruits. Physiologia Plantarum, 1999, 107, 32-38.	2.6	50
52	Chlorophyll Catabolites and the Biochemistry of Chlorophyll Breakdown. , 2006, , 237-260.		49
53	Chlorophyll Breakdown â€“ On a Nonfluorescent Chlorophyll Catabolite from Spinach. Helvetica Chimica Acta, 2001, 84, 2615.	1.0	48
54	ACCELERATED CELL DEATH 2 suppresses mitochondrial oxidative bursts and modulates cell death in Arabidopsis. Plant Journal, 2012, 69, 589-600.	2.8	47

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55	Mutations in the Arabidopsis ROL17/isopropylmalate synthase 1 locus alter amino acid content, modify the TOR network, and suppress the root hair cell development mutant lrx1. Journal of Experimental Botany, 2019, 70, 2313-2323.	2.4	43
56	Chlorophyll Breakdown in Maize: On the Structure of Two Nonfluorescent Chlorophyll Catabolites. Monatshefte FÃ¼r Chemie, 2006, 137, 751-763.	0.9	39
57	Down-regulation of tomato<i>PHYTOL KINASE</i>strongly impairs tocopherol biosynthesis and affects prenyllipid metabolism in an organ-specific manner. Journal of Experimental Botany, 2016, 67, 919-934.	2.4	39
58	A liquid chromatographyâ€"mass spectrometry platform for the analysis of phyllobilins, the major degradation products of chlorophyll in <i>Arabidopsis thaliana</i>. Plant Journal, 2016, 88, 505-518.	2.8	36
59	Chlorophyll breakdown in oilseed rape. , 2000, 64, 137-146.		35
60	A Divergent Path of Chlorophyll Breakdown in the Model Plant Arabidopsis thaliana. ChemBioChem, 2006, 7, 40-42.	1.3	34
61	Hydroxymethylated Phyllobilins: A Puzzling New Feature of the Dioxobilin Branch of Chlorophyll Breakdown. Chemistry - A European Journal, 2014, 20, 87-92.	1.7	33
62	Non-specific activities of the major herbicide-resistance gene BAR. Nature Plants, 2017, 3, 937-945.	4.7	33
63	NCC malonyltransferase catalyses the final step of chlorophyll breakdown in rape (Brassica Napus). Phytochemistry, 1998, 49, 953-956.	1.4	32
64	Pheophorbide <i>a</i> May Regulate Jasmonate Signaling during Dark-Induced Senescence. Plant Physiology, 2020, 182, 776-791.	2.3	32
65	Salinity in Autumn-Winter Season and Fruit Quality of Tomato Landraces. Frontiers in Plant Science, 2019, 10, 1078.	1.7	29
66	A Dioxobilinâ€Type Fluorescent Chlorophyll Catabolite as a Transient Early Intermediate of the Dioxobilinâ€Branch of Chlorophyll Breakdown in <i>Arabidopsis thaliana</i>. Angewandte Chemie - International Edition, 2015, 54, 13777-13781.	7.2	27
67	Pheophytinase Knockdown Impacts Carbon Metabolism and Nutraceutical Content Under Normal Growth Conditions in Tomato. Plant and Cell Physiology, 2016, 57, 642-653.	1.5	27
68	The wheat ABC transporter Lr34 modifies the lipid environment at the plasma membrane. Journal of Biological Chemistry, 2018, 293, 18667-18679.	1.6	26
69	Molecular Mechanisms Preventing Senescence in Response to Prolonged Darkness in a Desiccation-Tolerant Plant. Plant Physiology, 2018, 177, 1319-1338.	2.3	26
70	Catalytic and structural properties of pheophytinase, the phytol esterase involved in chlorophyll breakdown. Journal of Experimental Botany, 2018, 69, 879-889.	2.4	22
71	Hydroxymethylated Dioxobilins in Senescent <i>Arabidopsis thaliana</i> Leaves: Sign of a Puzzling Biosynthetic Intermezzo of Chlorophyll Breakdown. Chemistry - A European Journal, 2015, 21, 11664-11670.	1.7	20
72	The C-terminal cysteine-rich motif of NYE1/SGR1 is indispensable for its function in chlorophyll degradation in Arabidopsis. Plant Molecular Biology, 2019, 101, 257-268.	2.0	18

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73	Chlorophyll breakdownâ€"Regulation, biochemistry and phyllobilins as its products. Advances in Botanical Research, 2019, 90, 213-271.	0.5	18
74	Early Events in Plastid Protein Degradation in <i>stay-green</i><i>Arabidopsis</i> Reveal Differential Regulation beyond the Retention of LHCII and Chlorophyll. Journal of Proteome Research, 2012, 11, 5443-5452.	1.8	15
75	Subcellular localization of chlorophyllase2 reveals it is not involved in chlorophyll degradation during senescence in Arabidopsis thaliana. Plant Science, 2020, 290, 110314.	1.7	15
76	Chlorophyll and Chlorophyll Catabolite Analysis by HPLC. Methods in Molecular Biology, 2018, 1744, 223-235.	0.4	13
77	Cryptic chlorophyll breakdown in non-senescent green Arabidopsis thaliana leaves. Photosynthesis Research, 2019, 142, 69-85.	1.6	12
78	Frontiers in plant senescence research: from bench to bank. Plant Molecular Biology, 2013, 82, 503-504.	2.0	10
79	Chlorophyll Breakdown: Chemistry, Biochemistry, and Biology. Handbook of Porphyrin Science, 2013, , 117-185.	0.3	10
80	Evolution of chlorophyll degradation is associated with plant transition to land. Plant Journal, 2022, 109, 1473-1488.	2.8	10
81	Characterization of the pheophorbide a oxygenase/phyllobilin pathway of chlorophyll breakdown in grasses. Planta, 2018, 248, 875-892.	1.6	9
82	Inhibition of bacteriochlorophyll biosynthesis in the purple phototrophic bacteria Rhodospirillumrubrum and Rhodobacter capsulatus grown in the presence of a toxic concentration of selenite. BMC Microbiology, 2018, 18, 81.	1.3	6
83	The Pathway of Chlorophyll Degradation: Catabolites, Enzymes and Pathway Regulation. Advances in Photosynthesis and Respiration, 2013, , 363-392.	1.0	5
84	OUP accepted manuscript. Plant and Cell Physiology, 2018, 59, 2167-2168.	1.5	2
85	Isolation and Detection of the Chlorophyll Catabolite Hydroxylating Activity from Capsicum annuum Chromoplasts. Bio-protocol, 2017, 7, e2561.	0.2	0