Leo F M Marcelis

List of Publications by Year
in descending order

127 papers	6,236 citations	76326 40 h-index	82547 72 g-index
130 all docs	130 docs citations	130 times ranked	5361 citing authors

#	Article	IF	Citations
1	Light use efficiency of lettuce cultivation in vertical farms compared with greenhouse and field. Food and Energy Security, 2023, 12, .	4.3	15
2	High light intensity at End-Of-Production improves the nutritional value of basil but does not affect postharvest chilling tolerance. Food Chemistry, 2022, 369, 130913.	8.2	10
3	Effects of Green Light on Elongation Do Not Interact with Far-Red, Unless the Phytochrome Photostationary State (PSS) Changes in Tomato. Biology, 2022, 11, 151.	2.8	7
4	Does tomato breeding for improved performance under LED supplemental lighting make sense?. Euphytica, 2022, 218, 1.	1.2	0
5	NaCl affects photosynthetic and stomatal dynamics by osmotic effects and reduces photosynthetic capacity by ionic effects in tomato. Journal of Experimental Botany, 2022, 73, 3637-3650.	4.8	16
6	Lack of Blue Light Regulation of Antioxidants and Chilling Tolerance in Basil. Frontiers in Plant Science, 2022, 13, 852654.	3.6	11
7	Variation of Photosynthetic Induction in Major Horticultural Crops Is Mostly Driven by Differences in Stomatal Traits. Frontiers in Plant Science, 2022, 13, 860229.	3.6	4
8	Both major QTL and plastidâ€based inheritance of intumescence in diverse tomato (<scp><i>Solanum) Tj ETQq0 0 0 rgBT /Overlock 10 T 574-584.	1.9	2
9	Blue light increases anthocyanin content and delays fruit ripening in purple pepper fruit. Postharvest Biology and Technology, 2022, 192, 112024.	6.0	23
10	Light from below matters: Quantifying the consequences of responses to farâ€red light reflected upwards for plant performance in heterogeneous canopies. Plant, Cell and Environment, 2021, 44, 102-113.	5.7	8
11	Energy savings in greenhouses by transition from high-pressure sodium to LED lighting. Applied Energy, 2021, 281, 116019.	10.1	70
12	Crassulacean acid metabolism species differ in the contribution of C₃ and C₄ carboxylation to end of day CO₂ fixation. Physiologia Plantarum, 2021, 172, 134-145.	5.2	9
13	LEDs Make It Resilient: Effects on Plant Growth and Defense. Trends in Plant Science, 2021, 26, 496-508.	8.8	58
14	Turning plant interactions upside down: Light signals from below matter. Plant, Cell and Environment, 2021, 44, 1111-1118.	5.7	5
15	Yield dissection models to improve yield: a case study in tomato. In Silico Plants, 2021, 3, .	1.9	6
16	High Light Intensity Applied Shortly Before Harvest Improves Lettuce Nutritional Quality and Extends the Shelf Life. Frontiers in Plant Science, 2021, 12, 615355.	3.6	29
17	An analysis of simulated yield data for pepper shows how genotype Ã— environment interaction in yield can be understood in terms of yield components and their QTLs. Crop Science, 2021, 61, 1826-1842.	1.8	5
18	Unraveling the effects of blue light in an artificial solar background light on growth of tomato plants. Environmental and Experimental Botany, 2021, 184, 104377.	4.2	22

#	Article	IF	Citations
19	Vegetative traits can predict flowering quality in Phalaenopsis orchids despite large genotypic variation in response to light and temperature. PLoS ONE, 2021, 16, e0251405.	2.5	5
20	Row orientation affects the uniformity of light absorption, but hardly affects crop photosynthesis in hedgerow tomato crops. In Silico Plants, 2021, 3, .	1.9	8
21	Green light reduces elongation when partially replacing sole blue light independently from cryptochrome 1a. Physiologia Plantarum, 2021, 173, 1946-1955.	5.2	7
22	Genetic mapping of the tomato quality traits brix and blossom-end rot under supplemental LED and HPS lighting conditions. Euphytica, 2021, 217, 1.	1.2	4
23	Current status and future challenges in implementing and upscaling vertical farming systems. Nature Food, 2021, 2, 944-956.	14.0	154
24	Quantifying the contribution of bent shoots to plant photosynthesis and biomass production of flower shoots in rose (Rosa hybrida) using a functionalâ€“structural plant model. Annals of Botany, 2020, 126, 587-599.	2.9	13
25	Disentangling the effects of photosynthetically active radiation and red to far-red ratio on plant photosynthesis under canopy shading: a simulation study using a functionalâ€“structural plant model. Annals of Botany, 2020, 126, 635-646.	2.9	13
26	Farâ€red radiation stimulates dry mass partitioning to fruits by increasing fruit sink strength in tomato. New Phytologist, 2020, 228, 1914-1925.	7.3	51
27	High Stomatal Conductance in the Tomato Flacca Mutant Allows for Faster Photosynthetic Induction. Frontiers in Plant Science, 2020, 11, 1317.	3.6	20
28	Response of Basil Growth and Morphology to Light Intensity and Spectrum in a Vertical Farm. Frontiers in Plant Science, 2020, 11, 597906.	3.6	41
29	Substantial differences occur between canopy and ambient climate: Quantification of interactions in a greenhouse-canopy system. PLoS ONE, 2020, 15, e0233210.	2.5	12
30	Salt stress and fluctuating light have separate effects on photosynthetic acclimation, but interactively affect biomass. Plant, Cell and Environment, 2020, 43, 2192-2206.	5.7	35
31	Optimal light intensity for sustainable water and energy use in indoor cultivation of lettuce and basil under red and blue LEDs. Scientia Horticulturae, 2020, 272, 109508.	3.6	103
32	Vertical Farming: Moving from Genetic to Environmental Modification. Trends in Plant Science, 2020, 25, 724-727.	8.8	109
33	Vertical farming in Europe. , 2020, , 77-91.		29
34	Modulation of the Tomato Fruit Metabolome by LED Light. Metabolites, 2020, 10, 266.	2.9	22
35	Floral Induction in the Short-Day Plant Chrysanthemum Under Blue and Red Extended Long-Days. Frontiers in Plant Science, 2020, 11, 610041.	3.6	11
36	Adding Far-Red to Red-Blue Light-Emitting Diode Light Promotes Yield of Lettuce at Different Planting Densities. Frontiers in Plant Science, 2020, 11, 609977.	3.6	30

#	Article	IF	Citations
37	Dissecting the Genotypic Variation of Growth Responses to Far-Red Radiation in Tomato. Frontiers in Plant Science, 2020, 11, 614714.	3.6	2
38	Light response of photosynthesis and stomatal conductance of rose leaves in the canopy profile: the effect of lighting on the adaxial and the abaxial sides. Functional Plant Biology, 2020, 47, 639.	2.1	12
39	Nutrient solutions for Arabidopsis thaliana: a study on nutrient solution composition in hydroponics systems. Plant Methods, 2020, 16, 72.	4.3	27
40	Far-red radiation increases dry mass partitioning to fruits but reduces Botrytis cinerea resistance in tomato. Environmental and Experimental Botany, 2019, 168, 103889.	4.2	51
41	Resource use efficiency of indoor lettuce (Lactuca sativa L.) cultivation as affected by red:blue ratio provided by LED lighting. Scientific Reports, 2019, 9, 14127.	3.3	113
42	High light accelerates potato flowering independently of the FT-like flowering signal StSP3D. Environmental and Experimental Botany, 2019, 160, 35-44.	4.2	9
43	Light-Induced Vitamin C Accumulation in Tomato Fruits is Independent of Carbohydrate Availability. Plants, 2019, 8, 86.	3.5	34
44	Effects of Continuous or End-of-Day Far-Red Light on Tomato Plant Growth, Morphology, Light Absorption, and Fruit Production. Frontiers in Plant Science, 2019, 10, 322.	3.6	128
45	Unraveling the Role of Red:Blue LED Lights on Resource Use Efficiency and Nutritional Properties of Indoor Grown Sweet Basil. Frontiers in Plant Science, 2019, 10, 305.	3.6	154
46	The tuberization signal StSP6A represses flower bud development in potato. Journal of Experimental Botany, 2019, 70, 937-948.	4.8	35
47	Light regulation of vitamin C in tomato fruit is mediated through photosynthesis. Environmental and Experimental Botany, 2019, 158, 180-188.	4.2	27
48	Coincidence of potato CONSTANS (StCOL1) expression and light cannot explain nightâ€break repression of tuberization. Physiologia Plantarum, 2019, 167, 250-263.	5.2	4
49	Light regulates ascorbate in plants: An integrated view on physiology and biochemistry. Environmental and Experimental Botany, 2018, 147, 271-280.	4.2	56
50	Acclimation of photosynthesis to lightflecks in tomato leaves: interaction with progressive shading in a growing canopy. Physiologia Plantarum, 2018, 162, 506-517.	5.2	27
51	Testing New Concepts for Crop Cultivation in Space: Effects of Rooting Volume and Nitrogen Availability. Life, 2018, 8, 45.	2.4	11
52	Anthocyanin Biosynthesis and Degradation Mechanisms in Solanaceous Vegetables: A Review. Frontiers in Chemistry, 2018, 6, 52.	3.6	456
53	Adding Blue to Red Supplemental Light Increases Biomass and Yield of Greenhouse-Grown Tomatoes, but Only to an Optimum. Frontiers in Plant Science, 2018, 9, 2002.	3.6	100
54	Photosynthetic induction and its diffusional, carboxylation and electron transport processes as affected by CO₂partial pressure, temperature, air humidity and blue irradiance. Annals of Botany, 2017, 119, 191-205.	2.9	73

#	Article	IF	Citations
55	Phenotypic plasticity to altered apical bud temperature in <i>Cucumis sativus</i>: more leavesâ€smaller leaves and vice versa. Plant, Cell and Environment, 2017, 40, 69-79.	5.7	17
56	Elevated CO2 increases photosynthesis in fluctuating irradiance regardless of photosynthetic induction state. Journal of Experimental Botany, 2017, 68, 5629-5640.	4.8	38
57	Maximum Plant Uptakes for Water, Nutrients, and Oxygen Are Not Always Met by Irrigation Rate and Distribution in Water-based Cultivation Systems. Frontiers in Plant Science, 2017, 8, 562.	3.6	31
58	Effects of Diffuse Light on Radiation Use Efficiency of Two Anthurium Cultivars Depend on the Response of Stomatal Conductance to Dynamic Light Intensity. Frontiers in Plant Science, 2016, 7, 56.	3.6	17
59	Metabolic and diffusional limitations of photosynthesis in fluctuating irradiance in Arabidopsis thaliana. Scientific Reports, 2016, 6, 31252.	3.3	76
60	A unique approach to demonstrating that apical bud temperature specifically determines leaf initiation rate in the dicot Cucumis sativus. Planta, 2016, 243, 1071-1079.	3.2	14
61	Light mediated regulation of cell division, endoreduplication and cell expansion. Environmental and Experimental Botany, 2016, 121, 39-47.	4.2	27
62	Response of tomato crop growth and development to a vertical temperature gradient in a semi-closed greenhouse. Journal of Horticultural Science and Biotechnology, 2015, 90, 578-584.	1.9	27
63	Quantifying the sourceÃ¢â,¬â€œsink balance and carbohydrate content in three tomato cultivars. Frontiers in Plant Science, 2015, 6, 416.	3.6	47
64	Root phenotyping: from component trait in the lab to breeding: Table 1.. Journal of Experimental Botany, 2015, 66, 5389-5401.	4.8	163
65	What drives fruit growth?. Functional Plant Biology, 2015, 42, 817.	2.1	25
66	A multilevel analysis of fruit growth of two tomato cultivars in response to fruit temperature. Physiologia Plantarum, 2015, 153, 403-418.	5.2	12
67	Fruit illumination stimulates cell division but has no detectable effect on fruit size in tomato (<i>Solanum lycopersicum</i>). Physiologia Plantarum, 2015, 154, 114-127.	5.2	10
68	Dynamic photosynthesis in different environmental conditions. Journal of Experimental Botany, 2015, 66, 2415-2426.	4.8	173
69	The importance of a sterile rhizosphere when phenotyping for root exudation. Plant and Soil, 2015, 387, 131-142.	3.7	43
70	Impact of light on leaf initiation: a matter of photosynthate availability in the apical bud?. Functional Plant Biology, 2014, 41, 547.	2.1	14
71	Crop management impacts the efficiency of quantitative trait loci (QTL) detection and use: case study of fruit loadÃ—QTL interactions. Journal of Experimental Botany, 2014, 65, 11-22.	4.8	16
72	Responses of two Anthurium cultivars to high daily integrals of diffuse light. Scientia Horticulturae, 2014, 179, 306-313.	3.6	28

#	Article	IF	Citations
73	Enhancement of crop photosynthesis by diffuse light: quantifying the contributing factors. Annals of Botany, 2014, 114, 145-156.	2.9	131
74	Physiological mechanisms in plant growth models: do we need a supraâ€cellular systems biology approach?. Plant, Cell and Environment, 2013, 36, 1673-1690.	5.7	79
75	Meristem temperature substantially deviates from air temperature even in moderate environments: is the magnitude of this deviation speciesâ€specific?. Plant, Cell and Environment, 2013, 36, 1950-1960.	5.7	28
76	Understanding the effect of carbon status on stem diameter variations. Annals of Botany, 2013, 111, 31-46.	2.9	35
77	A dynamic model of tomato fruit growth integrating cell division, cell growth and endoreduplication. Functional Plant Biology, 2013, 40, 1098.	2.1	31
78	An overview of climate and crop yield in closed greenhouses. Journal of Horticultural Science and Biotechnology, 2012, 87, 193-202.	1.9	91
79	Histological and molecular investigation of the basis for variation in tomato fruit size in response to fruit load and genotype. Functional Plant Biology, 2012, 39, 754.	2.1	9
80	Estimation of leaf area for large scale phenotyping and modeling of rose genotypes. Scientia Horticulturae, 2012, 138, 227-234.	3.6	26
81	Leaf photosynthetic and morphological responses to elevated CO2 concentration and altered fruit number in the semi-closed greenhouse. Scientia Horticulturae, 2012, 145, 1-9.	3.6	28
82	Estimation of photosynthesis parameters for a modified Farquharâ€“von Caemmererâ€“Berry model using simultaneous estimation method and nonlinear mixed effects model. Environmental and Experimental Botany, 2012, 82, 66-73.	4.2	52
83	Evaluation of diel patterns of relative changes in cell turgor of tomato plants using leaf patch clamp pressure probes. Physiologia Plantarum, 2012, 146, 439-447.	5.2	12
84	Model Selection for Nondestructive Quantification of Fruit Growth in Pepper. Journal of the American Society for Horticultural Science, 2012, 137, 71-79.	1.0	20
85	Response of Cell Division and Cell Expansion to Local Fruit Heating in Tomato Fruit. Journal of the American Society for Horticultural Science, 2012, 137, 294-301.	1.0	19
86	Exploring the spatial distribution of light interception and photosynthesis of canopies by means of a functionalâ€“structural plant model. Annals of Botany, 2011, 107, 875-883.	2.9	145
87	Spectral dependence of photosynthesis and light absorptance in single leaves and canopy in rose. Scientia Horticulturae, 2011, 127, 548-554.	3.6	130
88	Quantifying abortion rates of reproductive organs and effects of contributing factors using time-to-event analysis. Functional Plant Biology, 2011, 38, 431.	2.1	12
89	A new method to determine the energy saving night temperature for vegetative growth of Phalaenopsis. Annals of Applied Biology, 2011, 158, 331-345.	2.5	14
90	How plant architecture affects light absorption and photosynthesis in tomato: towards an ideotype for plant architecture using a functionalâ€“structural plant model. Annals of Botany, 2011, 108, 1065-1073.	2.9	212

#	Article	IF	Citations
91	Towards a functionalâ€“structural plant model of cut-rose: simulation of light environment, light absorption, photosynthesis and interference with the plant structure. Annals of Botany, 2011, 108, 1121-1134.	2.9	82
92	Photochemical reflectance index as a mean of monitoring early water stress. Annals of Applied Biology, 2010, 157, 81-89.	2.5	58
93	Abortion of reproductive organs in sweet pepper (<i>Capsicum annuum</i>L.): a review. Journal of Horticultural Science and Biotechnology, 2009, 84, 467-475.	1.9	35
94	Genetic differences in fruit-set patterns are determined by differences in fruit sink strength and a source : sink threshold for fruit set. Annals of Botany, 2009, 104, 957-964.	2.9	32
95	Moderate water stress affects tomato leaf water relations in dependence on the nitrogen supply. Biologia Plantarum, 2007, 51, 707-712.	1.9	27
96	Differential effect of transpiration and Ca supply on growth and Ca concentration of tomato plants. Scientia Horticulturae, 2006, 111, 17-23.	3.6	19
97	Growth and physiological response of tomato plants to different periods of nitrogen starvation and recovery. Journal of Horticultural Science and Biotechnology, 2005, 80, 147-153.	1.9	13
98	Flower and fruit abortion in sweet pepper in relation to source and sink strength. Journal of Experimental Botany, 2004, 55, 2261-2268.	4.8	165
99	Regulation of K uptake, water uptake, and growth of tomato during K starvation and recovery. Scientia Horticulturae, 2004, 100, 83-101.	3.6	18
100	Interaction of nitrogen and phosphorus nutrition in determining growth. Plant and Soil, 2003, 248, 257-268.	3.7	161
101	Contrasting effects of N and P deprivation on the regulation of photosynthesis in tomato plants in relation to feedback limitation. Journal of Experimental Botany, 2003, 54, 1957-1967.	4.8	97
102	Regulation of nutrient uptake, water uptake and growth under calcium starvation and recovery. Journal of Horticultural Science and Biotechnology, 2003, 78, 343-349.	1.9	34
103	Interaction of nitrogen and phosphorus nutrition in determining growth. , 2003, , 257-268.		4
104	Interactive effects of nitrogen and irradiance on growth and partitioning of dry mass and nitrogen in young tomato plants. Functional Plant Biology, 2002, 29, 1319.	2.1	55
105	Growth and dry-mass partitioning in tomato as affected by phosphorus nutrition and light. Plant, Cell and Environment, 2001, 24, 1309-1317.	5.7	75
106	Regulation of Growth at Steady-state Nitrogen Nutrition in Lettuce (Lactuca sativa L.): Interactive Effects of Nitrogen and Irradiance. Annals of Botany, 2000, 86, 1073-1080.	2.9	52
107	Effect of salinity on growth, water use and nutrient use in radish (Raphanus sativus L.). Plant and Soil, 1999, 215, 57-64.	3.7	109
108	Modelling biomass production and yield of horticultural crops: a review. Scientia Horticulturae, 1998, 74, 83-111.	3.6	364

#	Article	IF	Citations
109	Evaluation under commercial conditions of a model of prediction of the yield and quality of cucumber fruits. Scientia Horticulturae, 1998, 76, 171-181.	3.6	26
110	Pithiness and Growth of Radish Tubers as Affected by Irradiance and Plant Density. Annals of Botany, 1997, 79, 397-402.	2.9	17
111	Effects of Seed Number on Competition and Dominance among Fruits inCapsicum annuumL.. Annals of Botany, 1997, 79, 687-693.	2.9	48
112	Influence of assimilate supply on leaf formation in sweet pepper and tomato. The Journal of Horticultural Science, 1996, 71, 405-414.	0.3	25
113	The contribution of fruit photosynthesis to the carbon requirement of cucumber fruits as affected by irradiance, temperature and ontogeny. Physiologia Plantarum, 1995, 93, 476-483.	5.2	27
114	Growth and maintenance respiratory costs of cucumber fruits as affected by temperature, and ontogeny and size of the fruits. Physiologia Plantarum, 1995, 93, 484-492.	5.2	26
115	Fruit shape in cucumber as influenced by position within the plant, fruit load and temperature. Scientia Horticulturae, 1994, 56, 299-308.	3.6	4
116	A Simulation Model for Dry Matter Partitioning in Cucumber. Annals of Botany, 1994, 74, 43-52.	2.9	100
117	Effect of assimilate supply on the growth of individual cucumber fruits. Physiologia Plantarum, 1993, 87, 313-320.	5.2	51
118	Effect of temperature on the growth of individual cucumber fruits. Physiologia Plantarum, 1993, 87, 321-328.	5.2	36
119	Fruit growth and biomass allocation to the fruits in cucumber. 1. Effect of fruit load and temperature. Scientia Horticulturae, 1993, 54, 107-121.	3.6	61
120	Fruit growth and biomass allocation to the fruits in cucumber. 2. Effect of irradiance. Scientia Horticulturae, 1993, 54, 123-130.	3.6	52
121	Effect of assimilate supply on the growth of individual cucumber fruits. Physiologia Plantarum, 1993, 87, 313-320.	5.2	36
122	Effect of temperature on the growth of individual cucumber fruits. Physiologia Plantarum, 1993, 87, 321-328.	5.2	33
123	Cell division and expansion in the cucumber fruit. The Journal of Horticultural Science, 1993, 68, 665-671.	0.3	32
124	The Dynamics of Growth and Dry Matter Distribution in Cucumber. Annals of Botany, 1992, 69, 487-492.	2.9	63
125	Non-destructive measurements and growth analysis of the cucumber fruit. The Journal of Horticultural Science, 1992, 67, 457-464.	0.3	35
126	Simulation of plant-water relations and photosynthesis of greenhouse crops. Scientia Horticulturae, 1989, 41, 9-18.	3.6	17

#	Article	IF	Citations
127	Apical application of aqueous solutions to roses via flower tubes â€" a technique with possibilities. Scientia Horticulturae, 1988, 34, 123-129.	3.6	5