Henrik Hartmann

List of Publications by Year
in descending order

78 papers	7,734 citations	81900 39 h-index	64796 79 g-index
81 all docs	81 docs citations	81 times ranked	8343 citing authors

#	Article	IF	Citations
1	Natureâ€based framework for sustainable afforestation in global drylands under changing climate. Global Change Biology, 2022, 28, 2202-2220.	9.5	30
2	Differential responses of grassland community nonstructural carbohydrate to experimental drought along a natural aridity gradient. Science of the Total Environment, 2022, 822, 153589.	8.0	14
3	Climate Change Risks to Global Forest Health: Emergence of Unexpected Events of Elevated Tree Mortality Worldwide. Annual Review of Plant Biology, 2022, 73, 673-702.	18.7	117
4	Mechanisms of woody-plant mortality under rising drought, CO2 and vapour pressure deficit. Nature Reviews Earth & Environment, 2022, 3, 294-308.	29.7	163
5	Global field observations of tree die-off reveal hotter-drought fingerprint for Earthâ€™s forests. Nature Communications, 2022, 13, 1761.	12.8	171
6	Amplifying effects of recurrent drought on the dynamics of tree growth and water use in a subalpine forest. Plant, Cell and Environment, 2022, 45, 2617-2635.	5.7	3
7	Timing and Order of Extreme Drought and Wetness Determine Bioclimatic Sensitivity of Tree Growth. Earth's Future, 2022, 10, .	6.3	7
8	Species- and compound-specific dynamics of nonstructural carbohydrates toward the worldâ€™s upper distribution of vascular plants. Environmental and Experimental Botany, 2022, 201, 104985.	4.2	5
9	Emergent vulnerability to climate-driven disturbances in European forests. Nature Communications, 2021, 12, 1081.	12.8	139
10	Starch and lipid storage strategies in tropical trees relate to growth and mortality. New Phytologist, 2021, 230, 139-154.	7.3	25
11	A whole-plant perspective of isohydry: stem-level support for leaf-level plant water regulation. Tree Physiology, 2021, 41, 901-905.	3.1	29
12	Low-cost chamber design for simultaneous CO2 and O2 flux measurements between tree stems and the atmosphere. Tree Physiology, 2021, 41, 1767-1780.	3.1	9
13	Storage of carbon reserves in spruce trees is prioritized over growth in the face of carbon limitation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	45
14	Terrestrial ecosystems buffer inputs through storage and recycling of elements. Biogeochemistry, 2021, 156, 351-373.	3.5	3
15	Mature beech and spruce trees under drought â€“ Higher C investment in reproduction at the expense of whole-tree NSC stores. Environmental and Experimental Botany, 2021, 191, 104615.	4.2	11
16	Contrasting life-history traits of black spruce and jack pine influence their physiological response to drought and growth recovery in northeastern boreal Canada. Science of the Total Environment, 2021, 794, 148514.	8.0	11
17	Precipitation Gradient Drives Divergent Relationship between Non-Structural Carbohydrates and Water Availability in Pinus tabulaeformis of Northern China. Forests, 2021, 12, 133.	2.1	7
18	Freshwater wetland plants respond nonlinearly to inundation over a sustained period. American Journal of Botany, 2021, 108, 1917-1931.	1.7	3

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19	Tree defence and bark beetles in a drying world: carbon partitioning, functioning and modelling. New Phytologist, 2020, 225, 26-36.	7.3	144
20	Probability distributions of nonstructural carbon ages and transit times provide insights into carbon allocation dynamics of mature trees. New Phytologist, 2020, 226, 1299-1311.	7.3	27
21	Plant carbon allocation in a changing world â€“ challenges and progress: introduction to a Virtual Issue on carbon allocation. New Phytologist, 2020, 227, 981-988.	7.3	105
22	Drought-modulated allometric patterns of trees in semi-arid forests. Communications Biology, 2020, 3, 405.	4.4	19
23	Rhizosphere activity in an old-growth forest reacts rapidly to changes in soil moisture and shapes whole-tree carbon allocation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24885-24892.	7.1	50
24	Drought-Induced Xylem Embolism Limits the Recovery of Leaf Gas Exchange in Scots Pine. Plant Physiology, 2020, 184, 852-864.	4.8	47
25	Strong overestimation of waterâ€use efficiency responses to rising CO₂ in treeâ€ring studies. Global Change Biology, 2020, 26, 4538-4558.	9.5	36
26	Editorial: Woody Plants and Forest Ecosystems in a Complex Worldâ€"Ecological Interactions and Physiological Functioning Above and Below Ground. Frontiers in Plant Science, 2020, 11, 173.	3.6	7
27	Stem and leaf functional traits allow successional classification in six pioneer and non-pioneer tree species in Tropical Moist Broadleaved Forests. Ecological Indicators, 2020, 113, 106254.	6.3	9
28	A first assessment of the impact of the extreme 2018 summer drought on Central European forests. Basic and Applied Ecology, 2020, 45, 86-103.	2.7	482
29	Production of constitutive and induced secondary metabolites is coordinated with growth and storage in Norway spruce saplings. Tree Physiology, 2020, 40, 928-942.	3.1	18
30	Droughts, Wildfires, and Forest Carbon Cycling: A Pantropical Synthesis. Annual Review of Earth and Planetary Sciences, 2019, 47, 555-581.	11.0	131
31	Taxonomy, together with ontogeny and growing conditions, drives needleleaf species' sensitivity to climate in boreal North America. Global Change Biology, 2019, 25, 2793-2809.	9.5	46
32	Isotope labeling reveals contribution of newly fixed carbon to carbon storage and monoterpenes production under water deficit and carbon limitation. Environmental and Experimental Botany, 2019, 162, 333-344.	4.2	15
33	Repeated summer drought delays sugar export from the leaf and impairs phloem transport in mature beech. Tree Physiology, 2019, 39, 192-200.	3.1	40
34	Carbon isotope fractionation including photosynthetic and post-photosynthetic processes in C3 plants: Low [CO2] matters. Geochimica Et Cosmochimica Acta, 2019, 245, 1-15.	3.9	24
35	Eyes on the future â€“ evidence for tradeâ€offs between growth, storage and defense in Norway spruce. New Phytologist, 2019, 222, 144-158.	7.3	88
36	Drought timing and local climate determine the sensitivity of eastern temperate forests to drought. Global Change Biology, 2018, 24, 2339-2351.	9.5	168

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37	Detours on the phloem sugar highway: stem carbon storage and remobilization. Current Opinion in Plant Biology, 2018, 43, 89-95.	7.1	56
38	Research frontiers for improving our understanding of droughtâ€induced tree and forest mortality. New Phytologist, 2018, 218, 15-28.	7.3	334
39	Foliar nutrient resorption differs between arbuscular mycorrhizal and ectomycorrhizal trees at local and global scales. Global Ecology and Biogeography, 2018, 27, 875-885.	5.8	55
40	Drivers and mechanisms of tree mortality in moist tropical forests. New Phytologist, 2018, 219, 851-869.	7.3	341
41	Living on next to nothing: tree seedlings can survive weeks with very low carbohydrate concentrations. New Phytologist, 2018, 218, 107-118.	7.3	69
42	Identifying differences in carbohydrate dynamics of seedlings and mature trees to improve carbon allocation in models for trees and forests. Environmental and Experimental Botany, 2018, 152, 7-18.	4.2	115
43	Facilitation by leguminous shrubs increases along a precipitation gradient. Functional Ecology, 2018, 32, 203-213.	3.6	21
44	Climate change drives tree mortality. Science, 2018, 362, 758-758.	12.6	35
45	Standardized protocols and procedures can precisely and accurately quantify non-structural carbohydrates. Tree Physiology, 2018, 38, 1764-1778.	3.1	171
46	New Perspectives on CO₂, Temperature, and Light Effects on BVOC Emissions Using Online Measurements by PTR-MS and Cavity Ring-Down Spectroscopy. Environmental Science & Technology, 2018, 52, 13811-13823.	10.0	31
47	Untangling methodological and scale considerations in growth and productivity trend estimates of Canadaâ€™s forests. Environmental Research Letters, 2018, 13, 093001.	5.2	24
48	The sweet side of global changeâ€“dynamic responses of non-structural carbohydrates to drought, elevated CO2 and nitrogen fertilization in tree species. Tree Physiology, 2018, 38, 1706-1723.	3.1	51
49	Early-Warning Signals of Individual Tree Mortality Based on Annual Radial Growth. Frontiers in Plant Science, 2018, 9, 1964.	3.6	117
50	Increasing carbon availability stimulates growth and secondary metabolites via modulation of phytohormones in winter wheat. Journal of Experimental Botany, 2017, 68, 1251-1263.	4.8	29
51	Release of resource constraints allows greater carbon allocation to secondary metabolites and storage in winter wheat. Plant, Cell and Environment, 2017, 40, 672-685.	5.7	18
52	Ecosystem dynamics and management after forest dieâ€off: a global synthesis with conceptual stateâ€andâ€transition models. Ecosphere, 2017, 8, e02034.	2.2	56
53	A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. Nature Ecology and Evolution, 2017, 1, 1285-1291.	7.8	739
54	A synthesis of radial growth patterns preceding tree mortality. Global Change Biology, 2017, 23, 1675-1690.	9.5	394

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55	How fresh is maple syrup? Sugar maple trees mobilize carbon stored several years previously during early springtime sapâ€ascent. New Phytologist, 2016, 209, 1410-1416.	7.3	54
56	Understanding the roles of nonstructural carbohydrates in forest trees â€“ from what we can measure to what we want to know. New Phytologist, 2016, 211, 386-403.	7.3	532
57	Pinus sylvestris switches respiration substrates under shading but not during drought. New Phytologist, 2015, 207, 542-550.	7.3	44
58	Influence of Rhizobia Inoculation on Biomass Gain and Tissue Nitrogen Content of Leucaena leucocephala Seedlings under Drought. Forests, 2015, 6, 3686-3703.	2.1	13
59	Online investigation of respiratory quotients in Pinus sylvestris and Picea abies during drought and shading by means of cavity-enhanced Raman multi-gas spectrometry. Analyst, The, 2015, 140, 4473-4481.	3.5	50
60	Plant carbon limitation does not reduce nitrogen transfer from arbuscular mycorrhizal fungi to Plantago lanceolata. Plant and Soil, 2015, 396, 369-380.	3.7	31
61	Allocation to carbon storage pools in Norway spruce saplings under drought and low CO2. Tree Physiology, 2015, 35, 243-252.	3.1	71
62	Non-structural carbohydrates in woody plants compared among laboratories. Tree Physiology, 2015, 35, tpv073.	3.1	163
63	Forest health and global change. Science, 2015, 349, 814-818.	12.6	697
64	Carbon dynamics and stability between native Masson pine and exotic slash pine plantations in subtropical China. European Journal of Forest Research, 2014, 133, 307-321.	2.5	24
65	High temperature causes negative wholeâ€plant carbon balance under mild drought. New Phytologist, 2013, 200, 330-339.	7.3	108
66	Thirst beats hunger â€“ declining hydration during drought prevents carbon starvation in Norway spruce saplings. New Phytologist, 2013, 200, 340-349.	7.3	220
67	Lethal drought leads to reduction in nonstructural carbohydrates in <scp>N</scp>orway spruce tree roots but not in the canopy. Functional Ecology, 2013, 27, 413-427.	3.6	194
68	The impact of induced drought on transpiration and growth in a temperate pine plantation forest. Hydrological Processes, 2012, 26, 1779-1791.	2.6	45
69	Interannual variation in competitive interactions from natural and anthropogenic disturbances in a temperate forest tree species: Implications for ecological interpretation. Forest Ecology and Management, 2011, 261, 1936-1944.	3.2	15
70	Will a 385 million year-struggle for light become a struggle for water and for carbon? - How trees may cope with more frequent climate change-type drought events. Global Change Biology, 2011, 17, 642-655.	9.5	161
71	Negative or positive effects of plantation and intensive forestry on biodiversity: A matter of scale and perspective. Forestry Chronicle, 2010, 86, 354-364.	0.6	51
72	Sugar maple (Acer saccharum Marsh.) growth is influenced by close conspecifics and skid trail proximity following selection harvest. Forest Ecology and Management, 2009, 258, 823-831.	3.2	18

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73	Using longitudinal survival probabilities to test field vigour estimates in sugar maple (Acer) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	3.2	25
74	The Role of Forest Tent Caterpillar Defoliations and Partial Harvest in the Decline and Death of Sugar Maple. Annals of Botany, 2008, 102, 377-387.	2.9	32
75	Effects of above- and belowground partial harvest disturbance on growth and water status of residual sugar maple. Tree Physiology, 2008, 28, 1851-1862.	3.1	12
76	Improving tree mortality models by accounting for environmental influences. Canadian Journal of Forest Research, 2007, 37, 2106-2114.	1.7	9
77	Predicted and Observed Sugar Maple Mortality in Relation to Site Quality Indicators. Northern Journal of Applied Forestry, 2007, 24, 258-264.	0.5	4
78	Carbon starvation during drought-induced tree mortality â€“ are we chasing a myth?. The Journal of Plant Hydraulics, 0, 2, e005.	1.0	57