

Henrik Hartmann

List of Publications by Year in descending order

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Version: 2024-02-01

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	A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. <i>Nature Ecology and Evolution</i> , 2017, 1, 1285-1291.	7.8	739
2	Forest health and global change. <i>Science</i> , 2015, 349, 814-818.	12.6	697
3	Understanding the roles of nonstructural carbohydrates in forest trees “ from what we can measure to what we want to know. <i>New Phytologist</i> , 2016, 211, 386-403.	7.3	532
4	A first assessment of the impact of the extreme 2018 summer drought on Central European forests. <i>Basic and Applied Ecology</i> , 2020, 45, 86-103.	2.7	482
5	A synthesis of radial growth patterns preceding tree mortality. <i>Global Change Biology</i> , 2017, 23, 1675-1690.	9.5	394
6	Drivers and mechanisms of tree mortality in moist tropical forests. <i>New Phytologist</i> , 2018, 219, 851-869.	7.3	341
7	Research frontiers for improving our understanding of drought-induced tree and forest mortality. <i>New Phytologist</i> , 2018, 218, 15-28.	7.3	334
8	Thirst beats hunger “ declining hydration during drought prevents carbon starvation in Norway spruce saplings. <i>New Phytologist</i> , 2013, 200, 340-349.	7.3	220
9	Lethal drought leads to reduction in nonstructural carbohydrates in Norway spruce tree roots but not in the canopy. <i>Functional Ecology</i> , 2013, 27, 413-427.	3.6	194
10	Standardized protocols and procedures can precisely and accurately quantify non-structural carbohydrates. <i>Tree Physiology</i> , 2018, 38, 1764-1778.	3.1	171
11	Global field observations of tree die-off reveal hotter-drought fingerprint for Earth’s forests. <i>Nature Communications</i> , 2022, 13, 1761.	12.8	171
12	Drought timing and local climate determine the sensitivity of eastern temperate forests to drought. <i>Global Change Biology</i> , 2018, 24, 2339-2351.	9.5	168
13	Non-structural carbohydrates in woody plants compared among laboratories. <i>Tree Physiology</i> , 2015, 35, tpv073.	3.1	163
14	Mechanisms of woody-plant mortality under rising drought, CO ₂ and vapour pressure deficit. <i>Nature Reviews Earth & Environment</i> , 2022, 3, 294-308.	29.7	163
15	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. <i>Global Change Biology</i> , 2011, 17, 642-655.	9.5	161
16	Tree defence and bark beetles in a drying world: carbon partitioning, functioning and modelling. <i>New Phytologist</i> , 2020, 225, 26-36.	7.3	144
17	Emergent vulnerability to climate-driven disturbances in European forests. <i>Nature Communications</i> , 2021, 12, 1081.	12.8	139
18	Droughts, Wildfires, and Forest Carbon Cycling: A Pantropical Synthesis. <i>Annual Review of Earth and Planetary Sciences</i> , 2019, 47, 555-581.	11.0	131

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19	Early-Warning Signals of Individual Tree Mortality Based on Annual Radial Growth. <i>Frontiers in Plant Science</i> , 2018, 9, 1964.	3.6	117
20	Climate Change Risks to Global Forest Health: Emergence of Unexpected Events of Elevated Tree Mortality Worldwide. <i>Annual Review of Plant Biology</i> , 2022, 73, 673-702.	18.7	117
21	Identifying differences in carbohydrate dynamics of seedlings and mature trees to improve carbon allocation in models for trees and forests. <i>Environmental and Experimental Botany</i> , 2018, 152, 7-18.	4.2	115
22	High temperature causes negative whole-plant carbon balance under mild drought. <i>New Phytologist</i> , 2013, 200, 330-339.	7.3	108
23	Plant carbon allocation in a changing world – challenges and progress: introduction to a Virtual Issue on carbon allocation. <i>New Phytologist</i> , 2020, 227, 981-988.	7.3	105
24	Eyes on the future – evidence for trade-offs between growth, storage and defense in Norway spruce. <i>New Phytologist</i> , 2019, 222, 144-158.	7.3	88
25	Allocation to carbon storage pools in Norway spruce saplings under drought and low CO ₂ . <i>Tree Physiology</i> , 2015, 35, 243-252.	3.1	71
26	Living on next to nothing: tree seedlings can survive weeks with very low carbohydrate concentrations. <i>New Phytologist</i> , 2018, 218, 107-118.	7.3	69
27	Carbon starvation during drought-induced tree mortality – are we chasing a myth?. <i>The Journal of Plant Hydraulics</i> , 0, 2, e005.	1.0	57
28	Ecosystem dynamics and management after forest die-off: a global synthesis with conceptual state-and-transition models. <i>Ecosphere</i> , 2017, 8, e02034.	2.2	56
29	Detours on the phloem sugar highway: stem carbon storage and remobilization. <i>Current Opinion in Plant Biology</i> , 2018, 43, 89-95.	7.1	56
30	Foliar nutrient resorption differs between arbuscular mycorrhizal and ectomycorrhizal trees at local and global scales. <i>Global Ecology and Biogeography</i> , 2018, 27, 875-885.	5.8	55
31	How fresh is maple syrup? Sugar maple trees mobilize carbon stored several years previously during early springtime sap ascent. <i>New Phytologist</i> , 2016, 209, 1410-1416.	7.3	54
32	Negative or positive effects of plantation and intensive forestry on biodiversity: A matter of scale and perspective. <i>Forestry Chronicle</i> , 2010, 86, 354-364.	0.6	51
33	The sweet side of global change – dynamic responses of non-structural carbohydrates to drought, elevated CO ₂ and nitrogen fertilization in tree species. <i>Tree Physiology</i> , 2018, 38, 1706-1723.	3.1	51
34	Online investigation of respiratory quotients in <i>Pinus sylvestris</i> and <i>Picea abies</i> during drought and shading by means of cavity-enhanced Raman multi-gas spectrometry. <i>Analyst</i> , 2015, 140, 4473-4481.	3.5	50
35	Rhizosphere activity in an old-growth forest reacts rapidly to changes in soil moisture and shapes whole-tree carbon allocation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 24885-24892.	7.1	50
36	Drought-Induced Xylem Embolism Limits the Recovery of Leaf Gas Exchange in Scots Pine. <i>Plant Physiology</i> , 2020, 184, 852-864.	4.8	47

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37	Taxonomy, together with ontogeny and growing conditions, drives needleleaf species' sensitivity to climate in boreal North America. <i>Global Change Biology</i> , 2019, 25, 2793-2809.	9.5	46
38	The impact of induced drought on transpiration and growth in a temperate pine plantation forest. <i>Hydrological Processes</i> , 2012, 26, 1779-1791.	2.6	45
39	Storage of carbon reserves in spruce trees is prioritized over growth in the face of carbon limitation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	45
40	<i>Pinus sylvestris</i> switches respiration substrates under shading but not during drought. <i>New Phytologist</i> , 2015, 207, 542-550.	7.3	44
41	Repeated summer drought delays sugar export from the leaf and impairs phloem transport in mature beech. <i>Tree Physiology</i> , 2019, 39, 192-200.	3.1	40
42	Strong overestimation of water-use efficiency responses to rising CO ₂ in tree-ring studies. <i>Global Change Biology</i> , 2020, 26, 4538-4558.	9.5	36
43	Climate change drives tree mortality. <i>Science</i> , 2018, 362, 758-758.	12.6	35
44	The Role of Forest Tent Caterpillar Defoliations and Partial Harvest in the Decline and Death of Sugar Maple. <i>Annals of Botany</i> , 2008, 102, 377-387.	2.9	32
45	Plant carbon limitation does not reduce nitrogen transfer from arbuscular mycorrhizal fungi to <i>Plantago lanceolata</i> . <i>Plant and Soil</i> , 2015, 396, 369-380.	3.7	31
46	New Perspectives on CO ₂ , Temperature, and Light Effects on BVOC Emissions Using Online Measurements by PTR-MS and Cavity Ring-Down Spectroscopy. <i>Environmental Science & Technology</i> , 2018, 52, 13811-13823.	10.0	31
47	Nature-based framework for sustainable afforestation in global drylands under changing climate. <i>Global Change Biology</i> , 2022, 28, 2202-2220.	9.5	30
48	Increasing carbon availability stimulates growth and secondary metabolites via modulation of phytohormones in winter wheat. <i>Journal of Experimental Botany</i> , 2017, 68, 1251-1263.	4.8	29
49	A whole-plant perspective of isohydry: stem-level support for leaf-level plant water regulation. <i>Tree Physiology</i> , 2021, 41, 901-905.	3.1	29
50	Probability distributions of nonstructural carbon ages and transit times provide insights into carbon allocation dynamics of mature trees. <i>New Phytologist</i> , 2020, 226, 1299-1311.	7.3	27
51	Using longitudinal survival probabilities to test field vigour estimates in sugar maple (<i>Acer</i>) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	8.2	25
52	Starch and lipid storage strategies in tropical trees relate to growth and mortality. <i>New Phytologist</i> , 2021, 230, 139-154.	7.3	25
53	Carbon dynamics and stability between native Masson pine and exotic slash pine plantations in subtropical China. <i>European Journal of Forest Research</i> , 2014, 133, 307-321.	2.5	24
54	Untangling methodological and scale considerations in growth and productivity trend estimates of Canada's forests. <i>Environmental Research Letters</i> , 2018, 13, 093001.	5.2	24

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55	Carbon isotope fractionation including photosynthetic and post-photosynthetic processes in C3 plants: Low [CO ₂] matters. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 245, 1-15.	3.9	24
56	Facilitation by leguminous shrubs increases along a precipitation gradient. <i>Functional Ecology</i> , 2018, 32, 203-213.	3.6	21
57	Drought-modulated allometric patterns of trees in semi-arid forests. <i>Communications Biology</i> , 2020, 3, 405.	4.4	19
58	Sugar maple (<i>Acer saccharum</i> Marsh.) growth is influenced by close conspecifics and skid trail proximity following selection harvest. <i>Forest Ecology and Management</i> , 2009, 258, 823-831.	3.2	18
59	Release of resource constraints allows greater carbon allocation to secondary metabolites and storage in winter wheat. <i>Plant, Cell and Environment</i> , 2017, 40, 672-685.	5.7	18
60	Production of constitutive and induced secondary metabolites is coordinated with growth and storage in Norway spruce saplings. <i>Tree Physiology</i> , 2020, 40, 928-942.	3.1	18
61	Interannual variation in competitive interactions from natural and anthropogenic disturbances in a temperate forest tree species: Implications for ecological interpretation. <i>Forest Ecology and Management</i> , 2011, 261, 1936-1944.	3.2	15
62	Isotope labeling reveals contribution of newly fixed carbon to carbon storage and monoterpenes production under water deficit and carbon limitation. <i>Environmental and Experimental Botany</i> , 2019, 162, 333-344.	4.2	15
63	Differential responses of grassland community nonstructural carbohydrate to experimental drought along a natural aridity gradient. <i>Science of the Total Environment</i> , 2022, 822, 153589.	8.0	14
64	Influence of Rhizobia Inoculation on Biomass Gain and Tissue Nitrogen Content of <i>Leucaena leucocephala</i> Seedlings under Drought. <i>Forests</i> , 2015, 6, 3686-3703.	2.1	13
65	Effects of above- and belowground partial harvest disturbance on growth and water status of residual sugar maple. <i>Tree Physiology</i> , 2008, 28, 1851-1862.	3.1	12
66	Mature beech and spruce trees under drought "Higher C investment in reproduction at the expense of whole-tree NSC stores. <i>Environmental and Experimental Botany</i> , 2021, 191, 104615.	4.2	11
67	Contrasting life-history traits of black spruce and jack pine influence their physiological response to drought and growth recovery in northeastern boreal Canada. <i>Science of the Total Environment</i> , 2021, 794, 148514.	8.0	11
68	Improving tree mortality models by accounting for environmental influences. <i>Canadian Journal of Forest Research</i> , 2007, 37, 2106-2114.	1.7	9
69	Stem and leaf functional traits allow successional classification in six pioneer and non-pioneer tree species in Tropical Moist Broadleaved Forests. <i>Ecological Indicators</i> , 2020, 113, 106254.	6.3	9
70	Low-cost chamber design for simultaneous CO ₂ and O ₂ flux measurements between tree stems and the atmosphere. <i>Tree Physiology</i> , 2021, 41, 1767-1780.	3.1	9
71	Editorial: Woody Plants and Forest Ecosystems in a Complex World "Ecological Interactions and Physiological Functioning Above and Below Ground. <i>Frontiers in Plant Science</i> , 2020, 11, 173.	3.6	7
72	Precipitation Gradient Drives Divergent Relationship between Non-Structural Carbohydrates and Water Availability in <i>Pinus tabulaeformis</i> of Northern China. <i>Forests</i> , 2021, 12, 133.	2.1	7

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73	Timing and Order of Extreme Drought and Wetness Determine Bioclimatic Sensitivity of Tree Growth. <i>Earth's Future</i> , 2022, 10, .	6.3	7
74	Species- and compound-specific dynamics of nonstructural carbohydrates toward the world's upper distribution of vascular plants. <i>Environmental and Experimental Botany</i> , 2022, 201, 104985.	4.2	5
75	Predicted and Observed Sugar Maple Mortality in Relation to Site Quality Indicators. <i>Northern Journal of Applied Forestry</i> , 2007, 24, 258-264.	0.5	4
76	Terrestrial ecosystems buffer inputs through storage and recycling of elements. <i>Biogeochemistry</i> , 2021, 156, 351-373.	3.5	3
77	Freshwater wetland plants respond nonlinearly to inundation over a sustained period. <i>American Journal of Botany</i> , 2021, 108, 1917-1931.	1.7	3
78	Amplifying effects of recurrent drought on the dynamics of tree growth and water use in a subalpine forest. <i>Plant, Cell and Environment</i> , 2022, 45, 2617-2635.	5.7	3