Giai Petit

List of Publications by Year
in descending order

40 papers	1,961 citations	257450 24 h-index	289244 40 g-index
42 all docs	42 docs citations	42 times ranked	2314 citing authors

#	Article	IF	Citations
1	No xylem phenotypic plasticity in mature Picea abies and Fagus sylvatica trees after 5â€‰years of throughfall precipitation exclusion. Global Change Biology, 2022, 28, 4668-4683.	9.5	6
2	Susceptibility to Xylella fastidiosa and functional xylem anatomy in Olea europaea: revisiting a tale of plantâ€“pathogen interaction. AoB PLANTS, 2021, 13, plab027.	2.3	14
3	Plant respiration: Controlled by photosynthesis or biomass?. Global Change Biology, 2020, 26, 1739-1753.	9.5	66
4	New developments in understanding plant water transport under drought stress. New Phytologist, 2020, 227, 1025-1027.	7.3	6
5	Effects of climate change on treeline trees in Sagarmatha (Mt. Everest, Central Himalaya). Journal of Vegetation Science, 2020, 31, 1144-1153.	2.2	10
6	The total path length hydraulic resistance according to known anatomical patterns: What is the shape of the root-to-leaf tension gradient along the plant longitudinal axis?. Journal of Theoretical Biology, 2020, 502, 110369.	1.7	21
7	Scots pine trees react to drought by increasing xylem and phloem conductivities. Tree Physiology, 2020, 40, 774-781.	3.1	18
8	Vulnerability to xylem embolism correlates to wood parenchyma fraction in angiosperms but not in gymnosperms. Tree Physiology, 2019, 39, 1675-1684.	3.1	38
9	Does elevated air humidity modify hydraulically relevant anatomical traits of wood in Betula pendula?. Trees - Structure and Function, 2019, 33, 1361-1371.	1.9	5
10	Hydraulic recovery from xylem embolism in excised branches of twelve woody species: Relationships with parenchyma cells and non-structural carbohydrates. Plant Physiology and Biochemistry, 2019, 139, 513-520.	5.8	48
11	Similarities and differences in the balances between leaf, xylem and phloem structures in Fraxinus ornus along an environmental gradient. Tree Physiology, 2019, 39, 234-242.	3.1	19
12	A standardization method to disentangle environmental information from axial trends of xylem anatomical traits. Tree Physiology, 2019, 39, 495-502.	3.1	30
13	The potential of Mid-Infrared spectroscopy for prediction of wood density and vulnerability to embolism in woody angiosperms. Tree Physiology, 2019, 39, 503-510.	3.1	19
14	Within-ring variability of wood structure and its relationship to drought sensitivity in Norway spruce trunks. IAWA Journal, 2019, 40, 288-310.	2.7	7
15	Tree differences in primary and secondary growth drive convergent scaling in leaf area to sapwood area across Europe. New Phytologist, 2018, 218, 1383-1392.	7.3	18
16	Axial xylem architecture of Larix decidua exposed to CO 2 enrichment and soil warming at the tree line. Functional Ecology, 2018, 32, 273-287.	3.6	27
17	Structural and anatomical responses of Pinus sylvestris and Tilia platyphyllos seedlings exposed to water shortage. Trees - Structure and Function, 2018, 32, 1211-1218.	1.9	20
18	Xylem anatomical responses to climate variability in Himalayan birch trees at one of the worldâ€™s highest forest limit. Perspectives in Plant Ecology, Evolution and Systematics, 2018, 33, 34-41.	2.7	20

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19	Xylem anatomical adjustments prioritize hydraulic efficiency over safety as Norway spruce trees grow taller. Tree Physiology, 2018, 38, 1088-1097.	3.1	49
20	New research perspectives from a novel approach to quantify tracheid wall thickness. Tree Physiology, 2017, 37, 976-983.	3.1	56
21	Xâ€ray microtomography observations of xylem embolism in stems of Laurus nobilis are consistent with hydraulic measurements of percentage loss of conductance. New Phytologist, 2017, 213, 1068-1075.	7.3	60
22	Retrospective Analysis of Wood Anatomical Traits Reveals a Recent Extension in Tree Cambial Activity in Two High-Elevation Conifers. Frontiers in Plant Science, 2017, 8, 737.	3.6	54
23	Osmolality and Non-Structural Carbohydrate Composition in the Secondary Phloem of Trees across a Latitudinal Gradient in Europe. Frontiers in Plant Science, 2016, 7, 726.	3.6	60
24	Allometric Trajectories and â€œStressâ€• A Quantitative Approach. Frontiers in Plant Science, 2016, 7, 1681.	3.6	24
25	Interplay of growth rate and xylem plasticity for optimal coordination of carbon and hydraulic economies inFraxinus ornustrees. Tree Physiology, 2016, 36, 1310-1319.	3.1	33
26	Distilling allometric and environmental information from time series of conduit size: the standardization issue and its relationship to tree hydraulic architecture. Tree Physiology, 2015, 35, 27-33.	3.1	137
27	Divergent climate response on hydraulic-related xylem anatomical traits ofPicea abiesalong a 900-m altitudinal gradient. Tree Physiology, 2015, 35, 1378-1387.	3.1	58
28	Axial vessel widening in arborescent monocots. Tree Physiology, 2014, 34, 137-145.	3.1	13
29	Universal hydraulics of the flowering plants: vessel diameter scales with stem length across angiosperm lineages, habits and climates. Ecology Letters, 2014, 17, 988-997.	6.4	220
30	Comparative axial widening of phloem and xylem conduits in small woody plants. Trees - Structure and Function, 2014, 28, 915-921.	1.9	55
31	Axial conduit widening in woody species: a still neglected anatomical pattern. IAWA Journal, 2013, 34, 352-364.	2.7	131
32	Widening of xylem conduits in a conifer tree depends on the longer time of cell expansion downwards along the stem. Journal of Experimental Botany, 2012, 63, 837-845.	4.8	107
33	Testing the equi-resistance principle of the xylem transport system in a small ash tree: empirical support from anatomical analyses. Tree Physiology, 2012, 32, 171-177.	3.1	36
34	Hydraulic constraints limit height growth in trees at high altitude. New Phytologist, 2011, 189, 241-252.	7.3	89
35	Comment on â€œThe blind men and the elephant: the impact of context and scale in evaluating conflicts between plant hydraulic safety and efficiencyâ€•by Meinzer et al. (2010). Oecologia, 2011, 165, 271-274.	2.0	11
36	The challenge of tree height in Eucalyptus regnans: when xylem tapering overcomes hydraulic resistance. New Phytologist, 2010, 187, 1146-1153.	7.3	79

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37	Plant physiology in theory and practice: An analysis of the WBE model for vascular plants. Journal of Theoretical Biology, 2009, 259, 1-4.	1.7	85
38	Degree of tapering of xylem conduits in stems and roots of small Pinus cembra and Larix decidua trees. Botany, 2009, 87, 501-508.	1.0	34
39	Tapering of xylem conduits and hydraulic limitations in sycamore (Acer pseudoplatanus) trees. New Phytologist, 2008, 177, 653-664.	7.3	81
40	Sanioâ€™s laws revisited. Sizeâ€dependent changes in the xylem architecture of trees. Ecology Letters, 2007, 10, 1084-1093.	6.4	92