HervÃ© Cochard

List of Publications by Year
in descending order

238 papers	22,231 citations	7568 77 h-index	10445 139 g-index
244 all docs	244 docs citations	244 times ranked	11647 citing authors

#	Article	IF	Citations
1	Global convergence in the vulnerability of forests to drought. Nature, 2012, 491, 752-755.	27.8	1,944
2	Hydraulic Failure Defines the Recovery and Point of Death in Water-Stressed Conifers. Plant Physiology, 2009, 149, 575-584.	4.8	604
3	Biophysical Perspectives of Xylem Evolution: is there a Tradeoff of Hydraulic Efficiency for Vulnerability to Dysfunction?. IAWA Journal, 1994, 15, 335-360.	2.7	488
4	Plant resistance to drought depends on timely stomatal closure. Ecology Letters, 2017, 20, 1437-1447.	6.4	486
5	Weak tradeoff between xylem safety and xylemâ€specific hydraulic efficiency across the world's woody plant species. New Phytologist, 2016, 209, 123-136.	7.3	466
6	An overview of models of stomatal conductance at the leaf level. Plant, Cell and Environment, 2010, 33, no-no.	5.7	462
7	Hanging by a thread? Forests and drought. Science, 2020, 368, 261-266.	12.6	431
8	Xylem embolism threshold for catastrophic hydraulic failure in angiosperm trees. Tree Physiology, 2013, 33, 672-683.	3.1	406
9	A synthesis of radial growth patterns preceding tree mortality. Global Change Biology, 2017, 23, 1675-1690.	9.5	394
10	Xylem dysfunction in Quercus: vessel sizes, tyloses, cavitation and seasonal changes in embolism. Tree Physiology, 1990, 6, 393-407.	3.1	351
11	Hydraulic adjustment of Scots pine across Europe. New Phytologist, 2009, 184, 353-364.	7.3	337
12	Methods for measuring plant vulnerability to cavitation: a critical review. Journal of Experimental Botany, 2013, 64, 4779-4791.	4.8	319
13	Decline of Leaf Hydraulic Conductance with Dehydration: Relationship to Leaf Size and Venation Architecture Â Â. Plant Physiology, 2011, 156, 832-843.	4.8	318
14	Hydraulic architecture of trees: main concepts and results. Annals of Forest Science, 2002, 59, 723-752.	2.0	311
15	Unraveling the Effects of Plant Hydraulics on Stomatal Closure during Water Stress in Walnut. Plant Physiology, 2002, 128, 282-290.	4.8	308
16	Use of Positive Pressures to Establish Vulnerability Curves. Plant Physiology, 1992, 100, 205-209.	4.8	297
17	Putative Role of Aquaporins in Variable Hydraulic Conductance of Leaves in Response to Light. Plant Physiology, 2007, 143, 122-133.	4.8	277
18	Drought-induced leaf shedding in walnut: evidence for vulnerability segmentation. Plant, Cell and Environment, 1993, 16, 879-882.	5.7	260

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19	Evaluation of a new centrifuge technique for rapid generation of xylem vulnerability curves. Physiologia Plantarum, 2005, 124, 410-418.	5.2	260
20	Iso/Anisohydry: A Plantâ€“Environment Interaction Rather Than a Simple Hydraulic Trait. Trends in Plant Science, 2018, 23, 112-120.	8.8	243
21	On the minimum leaf conductance: its role in models of plant water use, and ecological and environmental controls. New Phytologist, 2019, 221, 693-705.	7.3	228
22	Mechanism of waterâ€stress induced cavitation in conifers: bordered pit structure and function support the hypothesis of seal capillaryâ€seeding. Plant, Cell and Environment, 2010, 33, 2101-2111.	5.7	216
23	Vulnerability of several conifers to air embolism. Tree Physiology, 1992, 11, 73-83.	3.1	205
24	Xylem Wall Collapse in Water-Stressed Pine Needles. Plant Physiology, 2004, 134, 401-408.	4.8	203
25	Whole tree hydraulic conductance and water loss regulation in Quercus during drought: evidence for stomatal control of embolism?. Annales Des Sciences ForestiÃ¨res, 1996, 53, 197-206.	1.2	196
26	Adjustments and coordination of hydraulic, leaf and stem traits along a water availability gradient. New Phytologist, 2019, 223, 632-646.	7.3	184
27	Embolism resistance as a key mechanism to understand adaptive plant strategies. Current Opinion in Plant Biology, 2013, 16, 287-292.	7.1	181
28	Water stress-induced xylem hydraulic failure is a causal factor of tree mortality in beech and poplar. Annals of Botany, 2013, 112, 1431-1437.	2.9	175
29	Leaf Shrinkage with Dehydration: Coordination with Hydraulic Vulnerability and Drought Tolerance Â Â Â. Plant Physiology, 2014, 164, 1772-1788.	4.8	175
30	Limited genetic variability and phenotypic plasticity detected for cavitation resistance in a <scp>M</scp>editerranean pine. New Phytologist, 2014, 201, 874-886.	7.3	170
31	Water transfer in a mature oak stand (Quercus petraea): seasonal evolution and effects of a severe drought. Canadian Journal of Forest Research, 1993, 23, 1136-1143.	1.7	167
32	Mechanisms of woody-plant mortality under rising drought, CO2 and vapour pressure deficit. Nature Reviews Earth & Environment, 2022, 3, 294-308.	29.7	163
33	<scp>X</scp>â€ray microtomography (microâ€<scp>CT</scp>): a reference technology for highâ€resolution quantification of xylem embolism in trees. Plant, Cell and Environment, 2015, 38, 201-206.	5.7	160
34	Hydraulic architecture of leaf blades: where is the main resistance?. Plant, Cell and Environment, 2004, 27, 1257-1267.	5.7	159
35	Genotypic variability and phenotypic plasticity of cavitation resistance in Fagus sylvatica L. across Europe. Tree Physiology, 2011, 31, 1175-1182.	3.1	159
36	Vulnerability to air embolism of three European oak species (Quercus petraea (Matt) Liebl, Q pubescens) Tj ETQq0 0 0 rgBT /Overlock 10	1.2	158

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37	Recent advances in tree hydraulics highlight the ecological significance of the hydraulic safety margin. New Phytologist, 2014, 203, 355-358.	7.3	158
38	Cryo-Scanning Electron Microscopy Observations of Vessel Content during Transpiration in Walnut Petioles. Facts or Artifacts?. Plant Physiology, 2000, 124, 1191-1202.	4.8	157
39	Direct X-Ray Microtomography Observation Confirms the Induction of Embolism upon Xylem Cutting under Tension. Plant Physiology, 2015, 167, 40-43.	4.8	156
40	Axial and radial water flow in the trunks of oak trees: a quantitative and qualitative analysis. Tree Physiology, 1994, 14, 1383-1396.	3.1	153
41	Decoding Leaf Hydraulics with a Spatially Explicit Model: Principles of Venation Architecture and Implications for Its Evolution. American Naturalist, 2010, 175, 447-460.	2.1	146
42	The effects of acclimation to sunlight on the xylem vulnerability to embolism in Fagus sylvatica L.. Plant, Cell and Environment, 1999, 22, 101-108.	5.7	143
43	Summer and winter embolism in oak: impact on water relations. Annales Des Sciences ForestiÃ¨res, 1996, 53, 173-180.	1.2	141
44	A technique for measuring xylem hydraulic conductance under high negative pressures. Plant, Cell and Environment, 2002, 25, 815-819.	5.7	141
45	Experimental analysis of the role of water and carbon in tree stem diameter variations. Journal of Experimental Botany, 2004, 56, 135-44.	4.8	136
46	Cavitation vulnerability in roots and shoots: does Populus euphratica Oliv., a poplar from arid areas of Central Asia, differ from other poplar species?. Journal of Experimental Botany, 2005, 56, 2003-2010.	4.8	135
47	Diurnal cycles of embolism formation and repair in petioles of grapevine (Vitis vinifera cv. Chasselas). Journal of Experimental Botany, 2011, 62, 3885-3894.	4.8	135
48	Cavitation in trees. Comptes Rendus Physique, 2006, 7, 1018-1026.	0.9	134
49	Noninvasive Measurement of Vulnerability to Drought-Induced Embolism by X-Ray Microtomography. Plant Physiology, 2016, 170, 273-282.	4.8	133
50	Evidence for Hydraulic Vulnerability Segmentation and Lack of Xylem Refilling under Tension. Plant Physiology, 2016, 172, 1657-1668.	4.8	132
51	Winter embolism, mechanisms of xylem hydraulic conductivity recovery and springtime growth patterns in walnut and peach trees. Tree Physiology, 2002, 22, 1211-1220.	3.1	129
52	Uniform Selection as a Primary Force Reducing Population Genetic Differentiation of Cavitation Resistance across a Species Range. PLoS ONE, 2011, 6, e23476.	2.5	129
53	Water relations of a tropical vine-like bamboo (Rhipidocladum racemiflorum): root pressures, vulnerability to cavitation and seasonal changes in embolism. Journal of Experimental Botany, 1994, 45, 1085-1089.	4.8	122
54	New evidence for large negative xylem pressures and their measurement by the pressure chamber method. Plant, Cell and Environment, 1996, 19, 427-436.	5.7	121

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55	Hydraulic failure and repair are not routine in trees. Annals of Forest Science, 2013, 70, 659-661.	2.0	117
56	Mechanisms of xylem recovery from winter embolism in Fagus sylvatica. Tree Physiology, 2001, 21, 27-33.	3.1	115
57	Capacitive effect of cavitation in xylem conduits: results from a dynamic model. Plant, Cell and Environment, 2009, 32, 10-21.	5.7	115
58	Comparative impacts of water stress on the leaf anatomy of a drought-resistant and a drought-sensitive olive cultivar. Journal of Horticultural Science and Biotechnology, 2010, 85, 289-294.	1.9	113
59	Is xylem cavitation resistance a relevant criterion for screening drought resistance among Prunus species?. Journal of Plant Physiology, 2008, 165, 976-982.	3.5	111
60	Field comparison of transpiration, stomatal conductance and vulnerability to cavitation of Quercus petraea and Quercus robur under water stress. Annales Des Sciences ForestiÃ¨res, 1993, 50, 571-582.	1.2	106
61	Xylem embolism and drought-induced stomatal closure in maize. Planta, 2002, 215, 466-471.	3.2	106
62	Xylem vulnerability to cavitation varies among poplar and willow clones and correlates with yield. Tree Physiology, 2007, 27, 1761-1767.	3.1	106
63	Temperature effects on hydraulic conductance and water relations of Quercus robur L.. Journal of Experimental Botany, 2000, 51, 1255-1259.	4.8	104
64	Does sample length influence the shape of xylem embolism vulnerability curves? A test with the Cavitron spinning technique. Plant, Cell and Environment, 2010, 33, no-no.	5.7	103
65	Phenotypic plasticity in mesic populations of Pinus pinaster improves resistance to xylem embolism (P50) under severe drought. Trees - Structure and Function, 2011, 25, 1033-1042.	1.9	102
66	Leaf vein xylem conduit diameter influences susceptibility to embolism and hydraulic decline. New Phytologist, 2017, 213, 1076-1092.	7.3	102
67	Developmental control of xylem hydraulic resistances and vulnerability to embolism in Fraxinus excelsior L.: impacts on water relations. Journal of Experimental Botany, 1997, 48, 655-663.	4.8	101
68	A survey of root pressures in vines of a tropical lowland forest. Oecologia, 1997, 110, 191.	2.0	98
69	New Insights into the Mechanisms of Water-Stress-Induced Cavitation in Conifers. Plant Physiology, 2009, 151, 949-954.	4.8	97
70	Variation in xylem vulnerability to embolism in European beech from geographically marginal populations. Tree Physiology, 2018, 38, 173-185.	3.1	93
71	Vulnerability to cavitation in Olea europaea currentâ€year shoots: further evidence of an openâ€vessel artifact associated with centrifuge and airâ€injection techniques. Physiologia Plantarum, 2014, 152, 465-474.	5.2	92
72	Within crown variation in hydraulic architecture in beech (Fagus sylvatica L): evidence for a stomatal control of xylem embolism. Annals of Forest Science, 2002, 59, 19-27.	2.0	91

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73	Poplar vulnerability to xylem cavitation acclimates to drier soil conditions. Physiologia Plantarum, 2010, 139, 280-8.	5.2	90
74	Physiological differences explain the coâ€existence of different regeneration strategies in Mediterranean ecosystems. New Phytologist, 2014, 201, 1277-1288.	7.3	90
75	Winter stem xylem pressure in walnut trees: effects of carbohydrates, cooling and freezing. Tree Physiology, 2001, 21, 387-394.	3.1	89
76	Variation in photosynthetic performance and hydraulic architecture across European beech (Fagus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 35, 34-46.	3.1	83
77	Seasonal variation in xylem pressure of walnut trees: root and stem pressures. Tree Physiology, 2001, 21, 1123-1132.	3.1	82
78	Embolism Formation during Freezing in the Wood of Picea abies Â. Plant Physiology, 2007, 143, 60-67.	4.8	82
79	The evolution and function of vessel and pit characters with respect to cavitation resistance across 10 Prunus species. Tree Physiology, 2013, 33, 684-694.	3.1	82
80	Grapevine petioles are more sensitive to drought induced embolism than stems: evidence from in vivo MRI and microcomputed tomography observations of hydraulic vulnerability segmentation. Plant, Cell and Environment, 2016, 39, 1886-1894.	5.7	82
81	Balancing the risks of hydraulic failure and carbon starvation: a twig scale analysis in declining <scp>S</scp>cots pine. Plant, Cell and Environment, 2015, 38, 2575-2588.	5.7	79
82	How reliable are methods to assess xylem vulnerability to cavitation? The issue of 'open vessel' artifact in oaks. Tree Physiology, 2014, 34, 894-905.	3.1	78
83	Stem diameter variations and cold hardiness in walnut trees. Journal of Experimental Botany, 2001, 52, 2135-2142.	4.8	76
84	Could rapid diameter changes be facilitated by a variable hydraulic conductance?. Plant, Cell and Environment, 2012, 35, 150-157.	5.7	76
85	Vulnerability to cavitation, hydraulic efficiency, growth and survival in an insular pine (Pinus) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	2.9	76
86	Water relations of adult Norway spruce (Picea abies (L) Karst) under soil drought in the Vosges mountains: whole-tree hydraulic conductance, xylem embolism and water loss regulation. Annales Des Sciences ForestiÃ¨res, 1996, 53, 113-121.	1.2	75
87	Hydraulic architecture and water flow in growing grass tillers (Festuca arundinacea Schreb.). Plant, Cell and Environment, 2001, 24, 65-76.	5.7	75
88	Common trade-offs between xylem resistance to cavitation and other physiological traits do not hold among unrelated Populus deltoides Ã—Populus nigra hybrids. Plant, Cell and Environment, 2010, 33, no-no.	5.7	75
89	Insights into xylem vulnerability to cavitation in Fagus sylvatica L.: phenotypic and environmental sources of variability. Tree Physiology, 2010, 30, 1448-1455.	3.1	74
90	Are needles of Pinus pinaster more vulnerable to xylem embolism than branches? New insights from Xâ€ray computed tomography. Plant, Cell and Environment, 2016, 39, 860-870.	5.7	74

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91	Are symplast tolerance to intense drought conditions and xylem vulnerability to cavitation coordinated? An integrated analysis of photosynthetic, hydraulic and leaf level processes in two Mediterranean drought-resistant species. Environmental and Experimental Botany, 2010, 69, 233-242.	4.2	73
92	Desiccation and Mortality Dynamics in Seedlings of Different European Beech (Fagus sylvatica L.) Populations under Extreme Drought Conditions. Frontiers in Plant Science, 2016, 7, 751.	3.6	72
93	Herbaceous angiosperms are not more vulnerable to drought-induced embolism than angiosperm trees. Plant Physiology, 2016, 172, pp.00829.2016.	4.8	70
94	Changes in axial hydraulic conductivity along elongating leaf blades in relation to xylem maturation in tall fescue. New Phytologist, 2000, 146, 235-247.	7.3	69
95	Water relations and drought-induced embolism in olive (Olea europaea) varieties 'Meski' and 'Chemlali' during severe drought. Tree Physiology, 2008, 28, 971-976.	3.1	69
96	Evaluation of the impact of frost resistances on potential altitudinal limit of trees. Tree Physiology, 2013, 33, 891-902.	3.1	69
97	A new method for vulnerability analysis of small xylem areas reveals that compression wood of Norway spruce has lower hydraulic safety than opposite wood. Plant, Cell and Environment, 2003, 26, 1365-1371.	5.7	68
98	The Cohesionâ€Tension Theory. New Phytologist, 2004, 163, 451-452.	7.3	68
99	Interspecific variation in xylem vulnerability to cavitation among tropical tree and shrub species. Tree Physiology, 2005, 25, 1553-1562.	3.1	67
100	The sequence and thresholds of leaf hydraulic traits underlying grapevine varietal differences in drought tolerance. Journal of Experimental Botany, 2020, 71, 4333-4344.	4.8	67
101	Plasmodesmatal pores in the torus of bordered pit membranes affect cavitation resistance of conifer xylem. Plant, Cell and Environment, 2012, 35, 1109-1120.	5.7	66
102	Hydraulic efficiency and coordination with xylem resistance to cavitation, leaf function, and growth performance among eight unrelated Populus deltoidesÃ—Populus nigra hybrids. Journal of Experimental Botany, 2011, 62, 2093-2106.	4.8	63
103	Freeze-Thaw Stress: Effects of Temperature on Hydraulic Conductivity and Ultrasonic Activity in Ten Woody Angiosperms. Plant Physiology, 2014, 164, 992-998.	4.8	60
104	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
105	Plasticity in Vulnerability to Cavitation of Pinus canariensis Occurs Only at the Driest End of an Aridity Gradient. Frontiers in Plant Science, 2016, 7, 769.	3.6	60
106	A new validation of the Scholander pressure chamber technique based on stem diameter variations. Journal of Experimental Botany, 2001, 52, 1361-1365.	4.8	59
107	The effects of sap ionic composition on xylem vulnerability to cavitation. Journal of Experimental Botany, 2010, 61, 275-285.	4.8	59
108	Modelling the mechanical behaviour of pit membranes in bordered pits with respect to cavitation resistance in angiosperms. Annals of Botany, 2014, 114, 325-334.	2.9	59

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109	Neither xylem collapse, cavitation, or changing leaf conductance drive stomatal closure in wheat. Plant, Cell and Environment, 2020, 43, 854-865.	5.7	59
110	Unraveling the effects of plant hydraulics on stomatal closure during water stress in walnut. Plant Physiology, 2002, 128, 282-90.	4.8	59
111	Acclimation of mechanical and hydraulic functions in trees: impact of the thigmomorphogenetic process. Frontiers in Plant Science, 2015, 6, 266.	3.6	58
112	The earliest wood and its hydraulic properties documented inc. 407-million-year-old fossils using synchrotron microtomography. Botanical Journal of the Linnean Society, 2014, 175, 423-437.	1.6	56
113	Xylem resistance to embolism: presenting a simple diagnostic test for the open vessel artefact. New Phytologist, 2017, 215, 489-499.	7.3	56
114	Hydraulic architecture correlates with bud organogenesis and primary shoot growth in beech (Fagus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	3.1	55
115	Water loss regulation in mature Hevea brasiliensis: effects of intermittent drought in the rainy season and hydraulic regulation. Tree Physiology, 2011, 31, 751-762.	3.1	55
116	Grapevine acclimation to water deficit: the adjustment of stomatal and hydraulic conductance differs from petiole embolism vulnerability. Planta, 2017, 245, 1091-1104.	3.2	55
117	Strong leaf morphological, anatomical, and physiological responses of a subtropical woody bamboo (Sinarundinaria nitida) to contrasting light environments. Plant Ecology, 2014, 215, 97-109.	1.6	54
118	Variation of wood density and hydraulic properties of Douglas-fir (Pseudotsuga menziesii (Mirb.)) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3 257, 182-189.	3.2	53
119	How reliable is the doubleâ€ended pressure sleeve technique for assessing xylem vulnerability to cavitation in woody angiosperms?. Physiologia Plantarum, 2011, 142, 205-210.	5.2	53
120	An inconvenient truth about xylem resistance to embolism in the model species for refilling Laurus nobilis L.. Annals of Forest Science, 2018, 75, 1.	2.0	53
121	Understanding trait interactions and their impacts on growth in Scots pine branches across Europe. Functional Ecology, 2012, 26, 541-549.	3.6	52
122	Light-mediated Kleaf induction and contribution of both the PIP1s and PIP2s aquaporins in five tree species: walnut (Juglans regia) case study. Tree Physiology, 2012, 32, 423-434.	3.1	51
123	Extreme Aridity Pushes Trees to Their Physical Limits. Plant Physiology, 2015, 168, 804-807.	4.8	51
124	The Causes of Leaf Hydraulic Vulnerability and Its Influence on Gas Exchange in Arabidopsis thaliana. Plant Physiology, 2018, 178, 1584-1601.	4.8	50
125	Indirect Evidence for Genetic Differentiation in Vulnerability to Embolism in Pinus halepensis. Frontiers in Plant Science, 2016, 7, 768.	3.6	49
126	Coordination of stem and leaf traits define different strategies to regulate water loss and tolerance ranges to aridity. New Phytologist, 2021, 230, 497-509.	7.3	49

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127	Calcium Is a Major Determinant of Xylem Vulnerability to Cavitation. Plant Physiology, 2010, 153, 1932-1939.	4.8	48
128	Genetic variation of xylem hydraulic properties shows that wood density is involved in adaptation to drought in Douglas-fir (Pseudotsuga menziesii (Mirb.)). Annals of Forest Science, 2011, 68, 747-757.	2.0	48
129	Ultrasonic emissions reveal individual cavitation bubbles in water-stressed wood. Journal of the Royal Society Interface, 2014, 11, 20140480.	3.4	48
130	Hydraulic failure and tree mortality: from correlation to causation. Trends in Plant Science, 2022, 27, 335-345.	8.8	47
131	Arabidopsis thaliana as a model species for xylem hydraulics: does size matter?. Journal of Experimental Botany, 2013, 64, 2295-2305.	4.8	46
132	Xylem embolism and stomatal regulation in two rubber clones (Hevea brasiliensis Muell. Arg.). Trees - Structure and Function, 2004, 18, 109-114.	1.9	44
133	Aquaporins and Leaf Hydraulics: Poplar Sheds New Light. Plant and Cell Physiology, 2013, 54, 1963-1975.	3.1	44
134	Vulnerability to droughtâ€induced cavitation in poplars: synthesis and future opportunities. Plant, Cell and Environment, 2015, 38, 1233-1251.	5.7	44
135	Immunolabelling of intervessel pits for polysaccharides and lignin helps in understanding their hydraulic properties in Populus tremulaâ€‰Ã—â€‰alba. Annals of Botany, 2015, 115, 187-199.	2.9	44
136	Transient thermal dissipation method of xylem sap flow measurement: multi-species calibration and field evaluation. Tree Physiology, 2010, 30, 139-148.	3.1	43
137	Cork oak (Quercus suber L.) seedlings acclimate to elevated CO2 and water stress: photosynthesis, growth, wood anatomy and hydraulic conductivity. Trees - Structure and Function, 2012, 26, 1145-1157.	1.9	43
138	Drought and frost resistance of trees: a comparison of four species at different sites and altitudes. Annals of Forest Science, 2012, 69, 325-333.	2.0	42
139	The interplay of hydraulic failure and cell vitality explains tree capacity to recover from drought. Physiologia Plantarum, 2021, 172, 247-257.	5.2	42
140	Effects of drought stress and high density stem inoculations with Leptographium wingfieldii on hydraulic properties of young Scots pine trees. Tree Physiology, 2001, 21, 427-436.	3.1	41
141	Stem xylem resistance to cavitation is related to xylem structure but not to growth and water-use efficiency at the within-population level inPopulus nigraL.. Journal of Experimental Botany, 2015, 66, 4643-4652.	4.8	41
142	SurEau: a mechanistic model of plant water relations under extreme drought. Annals of Forest Science, 2021, 78, 1.	2.0	40
143	Hydraulic architecture, water relations and vulnerability to cavitation of Clusia uvitana Pittier: a C 3 â€CAM tropical hemiepiphyte. New Phytologist, 1994, 127, 287-295.	7.3	39
144	Hydraulic efficiency and safety of vascular and non-vascular components in Pinus pinaster leaves. Tree Physiology, 2012, 32, 1161-1170.	3.1	39

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145	Large hydraulic safety margins protect Neotropical canopy rainforest tree species against hydraulic failure during drought. Annals of Forest Science, 2019, 76, 1.	2.0	39
146	Genetic determinism of anatomical and hydraulic traits within an apple progeny. Plant, Cell and Environment, 2011, 34, 1276-1290.	5.7	38
147	Utilisation d'une chambre de transpiration portable pour l'estimation de l'Ã©vapotranspiration d'un sous-bois de pin maritime Ã molinie (Molinia coerulea (L) Moench). Annales Des Sciences ForestiÃ¨res, 1991, 48, 29-45.	1.2	37
148	A Structure Shaped by Fire, but Also Water: Ecological Consequences of the Variability in Bark Properties Across 31 Species From the Brazilian Cerrado. Frontiers in Plant Science, 2019, 10, 1718.	3.6	36
149	Drought-induced embolism in current-year shoots of two Mediterranean evergreen oaks. Forest Ecology and Management, 2012, 285, 1-10.	3.2	35
150	No trade-off between hydraulic and mechanical properties in several transgenic poplars modified for lignins metabolism. Environmental and Experimental Botany, 2012, 77, 185-195.	4.2	35
151	Effects of dessication on post-planting stress in bare-root Corsican pine seedlings. Tree Physiology, 1997, 17, 429-435.	3.1	34
152	Where do leaf water leaks come from? Tradeâ€offs underlying the variability in minimum conductance across tropical savanna species with contrasting growth strategies. New Phytologist, 2021, 229, 1415-1430.	7.3	34
153	Nighttime transpiration represents a negligible part of water loss and does not increase the risk of water stress in grapevine. Plant, Cell and Environment, 2021, 44, 387-398.	5.7	33
154	Hydraulic conductance of root and shoot measured with the transient and dynamic modes of the high-pressure flowmeter. Annals of Forest Science, 2002, 59, 389-396.	2.0	33
155	Responses to water stress in an ABAâ€unresponsive hybrid poplar (Populus koreana Ã— trichocarpa cv.) Tj ETQq1 1 0.784314 rgBT /Ov	7.3	32
156	Exploring the Hydraulic Failure Hypothesis of Esca Leaf Symptom Formation. Plant Physiology, 2019, 181, 1163-1174.	4.8	32
157	RNAi suppression of DNA methylation affects the drought stress response and genome integrity in transgenic poplar. New Phytologist, 2021, 232, 80-97.	7.3	31
158	Limitation of the Cavitron technique by conifer pit aspiration. Journal of Experimental Botany, 2010, 61, 3385-3393.	4.8	30
159	Effects of shoot bending on lateral fate and hydraulics: invariant and changing traits across five apple genotypes. Journal of Experimental Botany, 2007, 58, 3537-3547.	4.8	29
160	Hydraulic traits are associated with the distribution range of two closely related Mediterranean firs, Abies alba Mill. and Abies pinsapo Boiss.. Tree Physiology, 2011, 31, 1067-1075.	3.1	29
161	Modulation of bud survival in Populus nigra sprouts in response to water stress-induced embolism. Tree Physiology, 2013, 33, 261-274.	3.1	28
162	Embolism and mechanical resistances play a key role in dehydration tolerance of a perennial grass Dactylis glomerata L.. Annals of Botany, 2018, 122, 325-336.	2.9	28

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163	Apple shoot architecture: evidence for strong variability of bud size and composition and hydraulics within a branching zone. New Phytologist, 2008, 178, 798-807.	7.3	27
164	Direct observation and modelling of embolism spread between xylem conduits: a case study in Scots pine. Plant, Cell and Environment, 2016, 39, 2774-2785.	5.7	27
165	The DroughtBox: A new tool for phenotyping residual branch conductance and its temperature dependence during drought. Plant, Cell and Environment, 2020, 43, 1584-1594.	5.7	26
166	Lack of vulnerability segmentation in four angiosperm tree species: evidence from direct X-ray microtomography observation. Annals of Forest Science, 2020, 77, 1.	2.0	26
167	Drought acclimation of Quercus ilex leaves improves tolerance to moderate drought but not resistance to severe water stress. Plant, Cell and Environment, 2022, 45, 1967-1984.	5.7	26
168	Quantifying in situ phenotypic variability in the hydraulic properties of four tree species across their distribution range in Europe. PLoS ONE, 2018, 13, e0196075.	2.5	25
169	Short-time xylem relaxation results in reliable quantification of embolism in grapevine petioles and sheds new light on their hydraulic strategy. Tree Physiology, 2016, 36, 748-755.	3.1	24
170	Native-source climate determines the Douglas-fir potential of adaptation to drought. Forest Ecology and Management, 2019, 444, 9-20.	3.2	24
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