

Publications

Günter Hoch

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116. Li Y, **Hoch G** (2025) Physiological adjustments of temperate tree species and herbs in response to low root temperatures. *Tree Physiology*. <https://doi.org/10.1093/treephys/tpaf018>
115. Arend M, **Hoch G**, Kahmen A (2024) Stem growth phenology, not canopy greening constrains deciduous tree growth. *Tree Physiology*. doi: [org/10.1093/treephys/tpad160](https://doi.org/10.1093/treephys/tpad160)
114. Körner C, Hiltbrunner E, **Hoch G** (2024) Experimental evidence, global patterns of treeline position and climate provide no substance for a lignin limitation hypothesis of tree growth. *Alpine Botany*. <https://doi.org/10.1007/s00035-023-00305-5>
113. Li Y, **Hoch G** (2024) The sensitivity of root water uptake to cold root temperature follows species-specific upper elevational distribution limits of temperate tree species. *Plant, Cell & Environment*. 47: 2192-2205. doi.org/10.1111/pce.14874
112. Luo Y, Zohner C, Crowther TW, Feng J, **Hoch G**, Li P, Richardson AD, Vitasse Y, Gessler A (2024) Internal physiological drivers of leaf development in trees: Understanding the relationship between non-structural carbohydrates and leaf phenology. *Functional Ecology*. <https://doi.org/10.1111/1365-2435.14694>
111. Plavcová L, Jupa R, **Hoch G**, Mészáros M, Schánková K (2024) Seasonal coordination of aboveground vegetative and reproductive growth and storage in apple trees subjected to defoliation, flower and fruit thinning. *Trees* 38 (5):1109-1118. doi:10.1007/s00468-024-02539-0
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109. Wang S, **Hoch G**, Grun G, Kahmen A (2024) Water loss after stomatal closure: Quantifying leaf minimum conductance and minimal water use in 9 temperate European tree species during a severe drought. *Tree Physiology*. doi.org/10.1093/treephys/tpae027
108. Zahnd C, Zehnder M, Arend M, Kahmen A, **Hoch G** (2024) Uniform carbon reserve dynamics along the vertical light gradient in mature tree crowns. *Tree Physiol*. doi:10.1093/treephys/tpae005
107. Dietrich L, Kahmen A, **Hoch G**, Körner C (2023) Reply to: The three-dimensional structure of wood enables horizontal water transport needed to conduct water around lesions. *Scientific Reports* 13: 15066. doi.org/10.1038/s41598-023-41817-8
106. Körner C, **Hoch G** (2023) Not every high-latitude or high-elevation forest edge is a treeline. *Journal of Biogeography* 50 (5):838-845. doi:10.1111/jbi.14593
105. Körner C, Lenz A, **Hoch G** (2023) Chronic in situ tissue cooling does not reduce lignification at the Swiss treeline but enhances the risk of ‘blue’ frost rings. *Alpine Botany* 133:63-67. doi:10.1007/s00035-023-00293-6
104. Plavcová L, Jupa R, Meszaros M, **Hoch G** (2023) Whole-Tree Storage of Non-Structural Carbohydrates in Apple and Pear Trees on Size-Controlling Rootstocks. *Journal of plant growth regulation* 42: 7759-7769. doi: 10.1007/s00344-023-11052-6

103. Zahnd C, Arend M, Kahmen A, **Hoch G** (2023) Microclimatic gradients cause phenological variations within temperate tree canopies in autumn but not in spring. *Agricultural and Forest Meteorology* 331. doi: 10.1016/j.agrformet.2023.109340
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101. Arend M, Link RM, Zahnd C, **Hoch G**, Schuldt B, Kahmen A (2022) Lack of hydraulic recovery as a cause of post-drought foliage reduction and canopy decline in European beech. *New Phytologist*, 234:1195-1205. doi: 10.1111/nph.18065
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97. Wang W, Wang S, **Hoch G**, Wang Y, Gao G, Gu J, Xu H (2022). Whole-Tree Response of Non-Structural Carbohydrates, Carbon and Nitrogen Concentrations in Two Temperate Tree Species to 10-Year Nitrogen Fertilization. *Forests* 13: 302; <https://doi.org/10.3390/f13020302>
96. Wohlgemuth L, Rautio P, Ahrends B, Russ A, Vesterdal L, Waldner P, Timmermann V, Eickenscheidt N, Fürst A, Greve M, Roskams P, Thimonier A, Nicolas M, Kowalska A, Ingerslev M, Merilä P, Benham S, Jacoban C, **Hoch G**, Alewell C, Jiskra M (2022). Physiological and climate controls on foliar mercury uptake by European tree species. *Biogeosciences* 19: 1335-1353.
95. Arend M, Link RM, Patthey R, **Hoch G**, Schuldt B, Kahmen A (2021) Rapid hydraulic collapse as cause of drought-induced mortality in conifers. *PNAS* 118, e2025251118, doi: 10.1073/pnas.2025251118
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89. Zweifel R, Etzold S, Basler D, Bischoff R, Braun S, Buchmann N, Conedera M, Fonti P, Gessler A, Haeni M, **Hoch G**, Kahmen A, Köchli R, Maeder M, Nievergelt D, Peter M, Peters RL, Schaub M, Trotsiuk V, Walthert L, Wilhelm M, Eugster W (2021) TreeNet–The Biological Drought and Growth Indicator Network. *Front For Glob Change* 4. doi:10.3389/ffgc.2021.776905
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83. Schuldt B, Buras A, Arend M, Vitasse Y, Beierkuhnlein C, Damm A, Gharun M, Grams TEE, Hauck M, Hajek P, Jartmann H, Hiltbrunner E, **Hoch G**, Holloway-Phillips M, Körner C, Larysch E, Lübke T, Nelson DB, Rammig A, Rigling A, Rose L, Ruehr NK, Schumann K, Weiser F, Werner C, Wohlgemuth T, Zang CS, Kahmen A (2020) A first assessment of the impact of the extreme 2018 summer drought on Central European forests. *Basic and Applied Ecology* 45: 186-103
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