Anna Wieland

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Education

Heidelberg University
Advisor: Prof. Dr. Frank Keppler
Titel: *Stable carbon and hydrogen isotope ratios of wood lignin methoxy groups, environmental and tree physiological influences and the investigation as climate proxies*

PhD Student
since 2021

Heidelberg University
Advisor: Prof. Dr. Frank Keppler
Thesis: *Tree ring carbon and hydrogen isotope ratios of lignin methoxy groups as climate proxies* (1.1)

Master study
2018-2021

Heidelberg University
Advisor: Dr. Thomas Klintzsch
Thesis: *Light influences on the methane emission of different marine algae species* (1.5)

Bachelor study
2015-2018

Publication list

Wieland, A., Greule, M., Roemer, P., Esper, J., and Keppler, F.: Climate signals in stable carbon and hydrogen isotopes of lignin methoxy groups from southern German beech trees, Clim. Past, 18, 1849–1866, https://doi.org/https://doi.org/10.5194/cp-18-1849-2022, 2022.

Klintzsch, T., Geisinger, H., **Wieland, A**., Langer, G., Nehrke, G., Bizic, M., Greule, M., Lenhart, K., Borsch, C., Schroll, M., Keppler, F.: Stable Carbon Isotope Signature of Methan Released from Phytoplankton, Geophysical Research Letters (preprint).

Lu, Q., Liu, X., Treydte, K., Greule, M., **Wieland, A**., Liu, J., Zhao, L., Zhang, Y., Kang, H., Zhang, L., Zeng, X., Keppler, F., Chen, Z., and Xing, X.: Altitude-speci fi c differences in tree-ring d 2 H records of wood lignin methoxy in the Qinling mountains , central China, Quat. Sci. Rev., 300, 107895, https://doi.org/10.1016/j.quascirev.2022.107895, 2023.

Lu, Q., Liu, X., Tan, L., Keppler, F., Treydte, K., **Wieland, A**., Zhang, L., Shi, X., Zhang, Y., Wang, Y., Zeng, X., Liu, J., Zhao, L., Xu, G., and Xing, X.: Tree-ring δ2H records of lignin methoxy indicate spring temperature changes since 20th century in the Qinling Mountains, China, 76, 126020, https://doi.org/10.1016/j.dendro.2022.126020, 2022.

Greule, M., **Wieland, A**., and Keppler, F.: Measurements and applications of δ2H values of wood lignin methoxy groups for paleoclimatic studies, Quat. Sci. Rev., 268, 107107, https://doi.org/10.1016/j.quascirev.2021.107107, 2021.

Klintzsch, T., Langer, G., **Wieland, A**., Geisinger, H., Lenhart, K., Nehrke, G., and Keppler, F.: Effects of Temperature and Light on Methane Production of Widespread Marine Phytoplankton, J. Geophys. Res. Biogeosciences, 125, https://doi.org/10.1029/2020JG005793, 2020.

Klintzsch, T., Langer, G., Nehrke, G., **Wieland, A**., Lenhart, K., and Keppler, F.: Methane production by three widespread marine phytoplankton species: Release rates, precursor compounds, and potential relevance for the environment, 16, https://doi.org/10.5194/bg-16-4129-2019, 2019.

Conferences

Session Talk: Interdisciplinary Tree-Ring Research — **EGU**
Titel: *Climate signals in stable carbon and hydrogen isotopes of lignin methoxy groups* — May 2022

Session Talk: Oxygen and hydrogen isotope analyses of aquatic and terrestrial compounds: Advances in methods, models, and interpretation — **EGU**
Titel: *Recent progress in the application of hydrogen isotopes from tree-ring lignin methoxy groups as a climate proxy* — April 2023

Poster: Climate change and physiology — **GASIR**
Titel: *Advances in the use of stable hydrogen isotopes of wood lignin methoxy groups as a proxy to determine plant source water and for climate variability* — September 2023

Honors

Heinz Friedrich Schöler Environmental Prize in the Geosciences — 2021
excellent master thesis with reference to environmental topics