MARKUS FUCHS

LIST OF PUBLICATIONS

(DECEMBER 2025)

Peer-Reviewed Journals:

2025

Fuchs, M., Dietze, M., Brenning, A., Schepanski, K., Sauer, D. & Wagner, D. 2025. Desert pavements: A Hidden Key to Earth Surface Processes. Earth Surface Processes and Landforms 50, 15. DOI: 10.1002/esp.70213

Fuchs, M., Lomax. J., Junge, A., Langgut, D., Dunseth, Z. C., Shahack-Gross, R. & Finkelstein, I. 2025. Water Reservoirs and Cisterns: Effects of manual digging on sediment bleaching for OSL dating and the potential use of pollen from infill deposits as an environmental archive in a desert environment. ZfG. DOI: 10.1127/zfg/2025/0797

Brenning, A., Güldner, L., Schepanski, K., Dietze, M. & **Fuchs, M.** 2025. Geomorphic Distribution Modeling of Desert Pavements: Towards a Global Assessment. Geomorphometry 2025, Perugia, Italy. DOI: 10.5281/zenodo.15014982

Geis, A.-L., Sontag-González, M., Kolb, T., Jain, M. & **Fuchs, M.** 2025. Multi-method luminescence dating of late Cenozoic northern Upper Rhine Graben fluvial sediments. Quaternary Geochronology 90. DOI: 10.1016/j.quageo.2025.101689

Koochi, Z. R., Büdel, C., Walk, J., **Fuchs, M.**, Torabi, M., Karimi, A., Baumhauer, R. & Stauch, G. 2025. Late Quaternary geomorphological processes and landscape evolution in the Khur Basin, central Iran. E&G QSJ 74, 193-212.

Rousseau, D.-D., Chauvel, C., Hopcroft, P.O., Gutiérrez, P., Saulnier-Copard, S., Antoine P., **Fuchs, M.** & Ustrzycka, A. 2025. A remote input of African dust to Last Glacial Europe. Commun Earth Environ 6, 847. DOI: 10.1038/s43247-025-02888-9

Sontag-Gonzalez, M., Murari, M. K., Jain, M., Frouin, M. & Fuchs, M. 2025. Further investigations into the accuracy of infrared-radiofluorescence (IR-RF) and its inter-comparison with infrared photoluminescence (IRPL) dating. Geochronology 7, 289-308. DOI: 10.5194/gchron-7-289-2025

2024

Oehler, S., Stevens, T., Kolb, T., Possnere, G., & Fuchs, M. 2024. Combined optically stimulated luminescence and radiocarbon dating of aeolian dunes in Arctic Sweden. Permafrost and Periglacial Processes 35, 172-187. DOI: 10.1002/ppp.2216

Seregély, T., Kothieringer, K., Jansen, D., Fuchs, M., Kolb, T., Schäfer, A. 2024. Long-lasting rural Settlement Continuity and Land Use during the Bronze and Iron Ages in the Central European low mountain ranges. European Journal of Archaeology. doi:10.1017/eaa.2024.2

Sontag-Gonzalez, M., Mittelstraß, D., Kreutzer, S. & Fuchs, M. 2024. Wavelength calibration and spectral sensitivity correction of luminescence measurements for dosimetry applications: Method comparison tested on the IR-RF of K-feldspar. Radiation Measurements 159, 106876.

2023

Dreibrodt, S., Langan, C. C. M., **Fuchs, M.** & Bork, H.-R. 2023. The Anthropocene in Quaternary processes – examples from central European landscapes of the eastern Harz Mountains forelands (Germany). Quaternary Science Reviews 303, 107980.

Junge, A., Dunseth. Z. C., Shahack-Gross, R., Finkelstein, I. & Fuchs, M. 2023. The Archaeology and history of rock-cut cisterns and open water reservoirs in the Negev Highlands, Israel. Bulletin of the American Schools of Oriental Research (BASOR) 389. Doi: 10.1086/724457

Scherer S., Höpfer B., Deckers K., Fuchs M., Kandeler E., Lehndorff E., Lomax J., Marhan S., Poll C., Wroth K., Knopf T., Scholten T. & Kühn P. 2023. Archaeopedological reconstruction of Middle Bronze Age subsistence farming in SW-Germany from sedimentary archives in the Western Allgäu, Geoderma Regional 35. Doi: 10.1016/j.geodrs.2023.e00715

2022

Kolb, T., Tudyka, K., Kadereit, A., Lomax, J., Poręba, G., Zander, A., Zipf, L., **Fuchs, M.** 2022. The µDose-system: determination of environmental dose rates by combined alpha and beta counting – performance tests and practical experiences. Geochronology 4, 1-31.

Kothieringer, K., Seregély, T., Jansen, D., Steup, R., Schäfer, A., Lambers, K. & **Fuchs, M**. 2022. Mid- to Late Holocene landscape dynamics and rural settlement in the uplands of northern Bavaria, Germany. Geoarchaeology 38, 220-245.

Sontag-González, M. & **Fuchs, M.** 2022. Spectroscopic investigations of infrared-radiofluorescence (IR-RF) for equivalent dose estimation. Radiation Measurements 153. Doi: 10.1016/j.radmeas.2022.106733.

Sontag-González, M., Mittelstraß, D., Kreutzer, S. & **Fuchs, M.** 2022. Wavelength calibration and spectral sensitivity correction of luminescence measurements for dosimetry applications: Method comparison tested on the IR-RF of K-feldspar. Radiation Measurements 159. Doi: 10.1016/j.radmeas.2022.106876.

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Junge, A., Dunseth. Z. C., Shahack-Gross, R., Finkelstein, I. & **Fuchs, M.** 2021. Construction and usage of rock-cut cisterns: a chronological approach in the arid Negev Highlands, Israel. Archaeological and Anthropological Sciences. Doi: 10.1007/s12520-021-01366-5

Lomax, J., Wolf, D., Wolpert, T., Sahakyan, L., Hovakimyan, H., Faust, D. & **Fuchs, M.** 2021. Establishing a luminescence-based chronostratigraphy for the last glacial-interglacial cycle of the loess-palaeosol sequence Achajur (Armenia). Frontiers in Earth Science 9. doi.org/10.3389/feart.2021.755084

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Murari, M., Kreutzer, M., Frouin, M., Friedrich, J., Lauer, T., Klasen, N., Schmidt, C., Tsukamoto, S., Richter, D., Mercier, N. & **Fuchs, M.** 2021. Infrared Radiofluorescence (IR-RF): An inter-lab comparison. Geochronometria-D-21-00002R1.

Scherer, S., Deckers, K., Diete,l J., **Fuchs, M**., Henkner, J., Höpfer, B., Junge, A., Kandeler, E, Lehndorff, E., Leinweber, P., Lomax, J., Miera, J., Poll, C., Toffolo, M., Knopf, T, Scholten, T., Kühn, P. 2021. What's in a colluvial deposit? New perspectives from archaeopedology. Catena 198, 105040. doi.org/10.1016/j.catena.2020.105040

Scherer, S., Höpfer, B., Deckers, K., Fischer, E., **Fuchs, M.**, Kandeler, E., Lehndorff, E., Lomax, J., Marhan S., Marinova, E., Meister J., Poll C., Rahimova H., Rösch, M., Wroth K., Zastrow, J., Knopf T., Scholten T., Kühn P. 2021. Middle Bronze Age land use practices in the north-western Alpine foreland (Hegau) – A multi-proxy study of colluvial deposits, bogs and archaeological features. Soil 7, 269-304. doi.org/10.5194/soil-2020-84

2020

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Tudyka K., Bluszcz, A., Poreba, G., Miaosz, S., Adamiec, G., Kolarczyk, A., Kolb, T., Lomax, J. & **Fuchs, M.** 2020. Increased dose rate precision in combined α and β counting in the μDose system - a probabilistic approach to data analysis. Radiation Measurement 134, 106310.

2019

Fuchs, M. & Lomax, J. 2019. Stone pavements in arid environments: Does grain size matter for OSL dating? Quaternary Geochronology 49, 191-198.

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2018

Fuchs, M., 2018. Preface: Quaternary and Tertiary landscapes and their sediments in Hesse, Germany – a guidebook to selected field trips on geology, geomorphology and geoarchaeology. DEUQUA Spec. Pub., 1, 1–2.

Henkner, J., Ahlrichs, J., Downey, S., **Fuchs, M.**, James, B., Junge, A., Knopf, T., Scholten, T. & Kühn, P. 2018. Archaeopedological analysis of colluvial deposits in favourable and unfavourable areas: Reconstruction of land use dynamics in SW Germany. Royal Society Open Science 5, 171624.

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