

MARKUS FUCHS

LIST OF PUBLICATIONS

(JANUARY 2025)

Peer-Reviewed Journals:

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/eea.2024.2

Sontag-Gonzalez, M., Geis, A.-L., Kolb, T. & Fuchs, M. 2024. W Chronostratigraphie der Forschungsbohrung Riedstadt-Erfelden: Erste Datierungsansätze mittels Infrarot-Radiofluoreszenz (IR-RF) (in German). *Geologisches Jahrbuch Hessen* 141, 29–38.

Sontag-Gonzalez, M., Murari, M. K., Jain, M., Frouin, M. & Fuchs, M., 2024. Further investigations into the accuracy of infrared-radiofluorescence (IR-RF) and its inter-comparison with infrared photoluminescence (IRPL) dating, *Geochronology Discussions*, 1–33. <https://doi.org/10.5194/gchron-2024-36>

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 μ Dose-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.

2021

- 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
- Murari, M., Kreutzer, M., King, G., Frouin, M., Friedrich, J., Lauer, T., Klasen, N., Schmidt, C., Tsukamoto, S., Richter, D., Mercier, N. & **Fuchs, M.** 2021. Infrared Radiofluorescence (IR-RF): a review. *Quaternary Geochronology* 64, 101155.
- 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., Dietel, 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

- Bertran, P., Andrieux, E., Bateman, M., **Fuchs, M.**, Klinge, M. & Marembert, F. 2020. Mapping and chronology of coversands and dunes from the Aquitaine Basin, southwest France. *Aeolian Research* 47. doi.org/10.1016/j.aeolia.2020.100628.
- Richter, C., Wolf, D., Walther, F., Meng, S., Sahakyan, L., Hovakimyan, H., Wolpert, T., **Fuchs, M.** & Faust, D. 2020. New insights into Transcaucasian glacial-interglacial climate conditions inferred from Quaternary gastropod faunas. *Journal of Quaternary Sciences* 35, 634-649.
- Rousseau, D.-D., Antoine, P., Boers, N., Lacroix, F., Ghil, M., Lomax, J., **Fuchs, M.**, Debret, M., Hatté, C., Moine, O., Gauthier, C., Jordanova, D., & Jordanova, N. 2020. DO-like events of the penultimate climate cycle: the loess point of view. *Climate of the Past*. doi.org/10.5194/cp-2019-122.
- Tudyka K., Bluszcz, A., Poreba, G., Miasosz, S., Adamiec, G., Kolarczyk, A., Kolb, T., Lomax, J. & **Fuchs, M.** 2020. Increased dose rate precision in combined α and β counting in the μ Dose 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.
- Antoine, P., Jordanova, D., Jordanova, N., Lomax, J., Lacroix, F., Till, J., Debret, M., Taylor, S. N., Hatté, C., Moine, O., **Fuchs, M.** & Rousseau, D.-D. 2019. A remarkable Late Saalian (MIS 6) loess (dust) accumulation in the Lower Danube at Harletz (Bulgaria). *Quaternary Science Reviews* 2017, 80-100.
- Lomax, J., Antoine, P., Rousseau, D.-D., Lacroix, F., Hatté, C., Taylor, S., Till, J., Debret, M., Moine, O., Jordanova, D. & **Fuchs, M.** 2019. A luminescence-based chronology for the Harletz loess sequence, Bulgaria. *Boreas* 48, 179-194.
- Miera, J. J., Henkner, J., Schmidt, K., **Fuchs, M.**, Scholten, T., Kühn, P. & Knopf, T. 2019. Neolithic settlement dynamics derived from archaeological data and colluvial deposits between the Baar and adjacent low mountain ranges, southwest Germany. *Quaternary Science Journal* 68, 75-93.
- Trigui, Y., Wolf, D., Sahakyan, L., Hovakimyan, H., Sahakyan, K., Zech, R., **Fuchs, M.**, Wolpert, T., Zech, M. & Faust, D. 2019. First calibration and application of leaf wax n-alkane biomarkers in loess-paleosol sequences and modern plants and soils in Armenia. *Geosciences* 9, 263.

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.
- Junge, A., Lomax, J., Shahack-Gross, R., Finkelstein, I. & **Fuchs, M.** 2018. Chronology of an ancient water reservoir and the History of Human Activity in the Negev Highlands, Israel. *Geoarchaeology* 33, 695-707.
- Kolb, T. & **Fuchs, M.** 2018. Luminescence dating of pre-Eemian (MIS 5e) fluvial terraces in Northern Bavaria (Germany) – benefits and limitations of applying a pIRIR₂₂₅ – approach. *Geomorphology* 321, 16-32.
- Lomax, J., Steup, R., Shumilovskikh, L., Hoselmann, C., Sauer, D., van Dienenhoven, V. & **Fuchs, M.** 2018. Quaternary environments of Giessen and its surrounding areas, DEUQUA Spec. Pub., 1, 15–28.
- Meyer-Heintze, S., Sprafke, T., Schulte, P., Terhorst, B., Lomax, J., **Fuchs, M.**, Lehmkuhl, F., Neugebauer-Maresch, C., Einwögerer, T., Händel, M. & Simon, U. 2018. The MIS 3/2 transition as recorded in a new sequence of Krems-Wachtberg – a multi-methodological approach. *Quaternary International* 464, 370-385.
- Murari, M., Kreutzer, S., & **Fuchs, M.** 2018. Further investigations on IR-RF: dose recovery and correction. *Radiation Measurement* 120, 110-119.
- Schirmer, W. & **Fuchs, M.** 2018. Loess at foot slope position in the Northern Franconian Alb (Germany). *Erlanger. Beitr. Petr. Min.* 28, 1-12.

2017

- Büdel, Ch., Padashi, S. M., Hoelzmann, P., **Fuchs, M.** & Baumhauer, R. 2017. The correlation of North-Iranian Late-Pleistocene and Holocene playa sediments to basin geomorphology. *Z. Geomorph. Suppl. N.F.* 61, 77-99.
- Dunseth, Z., Junge, A., Lomax, J., Boaretto, E., Finkelstein, I., **Fuchs, M.** & Shahack-Gross, R. 2017. Dating archaeological sites in an arid environment: A multi-method case study in the Negev Highlands, Israel. *Journal of Arid Environments* 144, 156-169.
- Henkner, J., Ahlrichs, J. J., Downey, S., **Fuchs, M.**, James, B., Knopf, T., Scholten, T., Teuber, S. & Kühn, P. 2017. Archaeopedology and chronostratigraphy of colluvial deposits as proxy for regional land use history (Baar, southwest Germany). *Catena* 155, 93-113.
- Henkner, J., Ahlrichs, J., Fischer, E., **Fuchs, M.**, Rösch, M., Scholten, T. & Kühn, P. 2017. Land use dynamics derived from colluvial deposits and bogs in the Black Forest, Germany. *Journal of Plant Nutrition and Soil Science* 181, 240-260.
- Kolb, T., **Fuchs, M.**, Moine, O., & Zöller, L. 2017. Quaternary river terraces as archives for paleoenvironmental reconstruction: new insights from the headwaters of the Main River, Germany. *Z. Geomorph. Suppl. N.F.* 61, 53-76.

- Kreutzer, S., Murari, M. K., Frouin, M., **Fuchs, M.** & Mercier, N. 2017. Always remain suspicious: a case study on tracking down a technical artefact while measuring IR-RF. *Ancient TL* 35, 20-30.
- Kühn, P., Lehndorff, E. & **Fuchs, M.** 2017. Lateglacial to Holocene pedogenesis and formation of colluvial deposits in a loess landscape of Central Europe (Wetterau, Germany). *Catena* 154, 118-135.
- Steup, R. & **Fuchs, M.** 2017. The loess sequence at Münzenberg (Wetterau/Germany): A reinterpretation based on new luminescence dating results. *Z. Geomorph. Suppl. N.F.* 61, 101-120.
- Schmidt, M., **Fuchs, M.**, Henderson, A.C.G., Kossler, A., Leng, M. J., Mackay, A. W., Shemang, E. & Riedel, F. 2017. First palaeolimnological features of a mega-lake phase in the Kalahari (Botswana) during Marine Isotope Stage 5, inferred from diatoms. *Journal of Paleolimnology* 58, 373-390.
- Zech, M., Kreutzer, S., Zech, R., Goslar, T., Meszner, S., McIntyre, C., Häggi, Ch., Eglinton, T., Faust, D. & **Fuchs, M.** 2017. Comparative C-14 and OSL dating of loess-paleosol sequences to evaluate post-depositional contamination of *n*-alkane biomarkers. *Quaternary Research* 87, 180-189.
- Zens, J., Zeeden, C., Römer, W., **Fuchs, M.**, Lehmkuhl, F. 2017. The Eltville Tephra (Western Europe) age revised: Integrating stratigraphic and dating information from different Last Glacial loess localities. *Palaeogeography, Palaeoclimatology, Palaeoecology* 466, 240-251.
- 2016
- Dietze, M., Dietze, E., Lomax, J., **Fuchs, M.**, Kleber, A. & Wells, S.G. 2016. Environmental history recorded in aeolian deposits under stone pavements, eastern Mojave Desert, USA. *Quaternary Research* 85, 4-16.
- Dunseth, Z., Junge, A., **Fuchs, M.**, Finkelstein, I. & Shahack-Gross, R. 2016. Geoarchaeological investigation at the Intermediate Bronze Age Negev Highlands Site of Mashabe Sade. *Tel Aviv* 43, 43-75.
- Junge, A., Lomax, J., Shahack-Gross, R., Dunseth, Z.C., Finkelstein, I. & **Fuchs, M.** 2016. OSL age determination of archaeological structures using trapped aeolian sediments: a case study from the Negev Highlands, Israel. *Geoarchaeology* 31, 550-563.
- Kolb, T., **Fuchs, M.**, & Zöller, L. 2016. Deciphering fluvial landscape evolution by luminescence dating of river terrace formation: a case study from Northern Bavaria, Germany. *Z. Geomorph. Suppl. N.F.* 60, 29-48.
- Long, H., **Fuchs, M.**, Yang, L. & Cheng, H. 2016. Abrupt sand-dune accumulation at the northeastern margin of the Tibetan Plateau challenges the wet MIS3a inferred from numerous lake-highstands. *Scientific Reports* 6, 25820; doi: 10.1038/srep25820.
- Richter, D., Mittelstraß, D., Kreutzer, S., Pintaske, R., Dornich, K. & **Fuchs M.** 2016. A new fully integrated X-ray irradiator system for dosimetric research. *Applied Radiation and Isotopes* 112, 122-130.

2015

- Fuchs, M.**, Dietze, M., Al-Qudah, K. & Lomax, J. 2015. Dating desert pavements - First results from a challenging environmental archive. *Quaternary Geochronology* 30, 342-349.
- Fuchs, M.**, Reverman, R., Owen, L.A. & Frankel, K. 2015. Reconstructing the timing of flash floods using terrestrial cosmogenic nuclide ^{10}Be surface exposure dating: A case study from the Leidy Creek alluvial fan and valley, White Mountains, California-Nevada, USA. *Quaternary Research* 83, 178-187.
- Fuchs, M.C., Kreutzer, S., Burow, C., Dietze, M., Fischer, M., Schmidt, C. & **Fuchs, M.** 2015. Data processing in luminescence dating analysis: An exemplary workflow using the R package 'Luminescence'. *Quaternary International* 362, 8-13.
- Kraushaar, S., Ollesch, G., Siebert, C., Vogel, H. J. & **Fuchs, M.** 2015. Long term sediment export estimates from Northern Jordan using Roman cisterns as sediment traps. *Geoarchaeology* 30, 369-378.
- Lomax, J., Kreutzer, S., Mittelstrass, D. & **Fuchs, M.** 2015. OSL, TL and IRSL emission spectra of sedimentary quartz and feldspar samples. *Radiation Measurements* 81, 251-256.
- Schmidt, C., Kreutzer, S., DeWitt, R. & **Fuchs, M.** 2015. Radiofluorescence of quartz: a review. *Quaternary Geochronology* 27, 66-77.

2014

- Gocke, M., Hambach, U., Eckmeier, E., Schwark, L., Zöller, L., **Fuchs, M.**, Löscher, M. & Wiesenberg, G.L.B. 2014. Introducing an improved multi-proxy approach paleoenvironmental reconstruction of loess-paleosol the Late Pleistocene Nussloch sequence (SW Germany). *Palaeogeography, Palaeoclimatology, Palaeoecology* 410, 300–315.
- Kreutzer, S., Lauer, T., Meszner, S., Krbetschek, M., Faust, D. & **Fuchs, M.** 2014. Chronology of the Quaternary profile Zeuchfeld in Saxony-Anhalt / Germany – a preliminary luminescence dating study. *Zeitschrift für Geomorphologie* 58, 5-26.
- Kreutzer, S., Schmidt, C., DeWitt, R. & **Fuchs, M.** 2014. The a-value of polymineral fine grain samples measured with the post-IR IRSL protocol. *Radiation Measurements* 69, 18-29.
- Lomax, J., **Fuchs, M.**, Preusser, F. & Fiebig, M., 2014. Luminescence based loess chronostratigraphy of the Upper Palaeolithic site Krems-Wachtberg, Austria. *Quaternary International* 351, 88-97.
- Lomax, J., Kreutzer, S. & **Fuchs, M.** 2014. Performance tests using the Lexsyg luminescence reader. *Geochronometria* 41, 327-333.
- Meszner, S., Kreutzer, S., **Fuchs, M.** & Faust, D. 2014. Identifying depositional and pedogenetic controls of Late Pleistocene loess-paleosol sequences (Saxony, Germany) by combined grain size and microscopic analyses. *Z. Geomorph. Suppl. N.F.* 58 (3), 63-90.
- Murari, M. K., Owen, L. A., Dortch, J. M., Caffee, M. W., Dietscha, C., **Fuchs, M.**, Haneberge, W. C., Sharma, M. C. & Townsend-Small, A. 2014. Timing and climatic drivers for glaciation across monsoon-influenced regions of the Himalayan-Tibetan orogen. *Quaternary Science Reviews* 88, 159-182.

Pecoroni, D., Friedrich, K., Sehr, J. & **Fuchs, M.** 2014. Phosphorgehalte in hessischen Böden und Bodenausgangsgesteinen. *Geol. Jb. Hessen* 138, 75-94.

Rousseau, D.-D., Chauvel, C., Sima, A., Hatté, C., Lacroix, F., Antoine, P., Balkanski, Y., **Fuchs, M.**, Mellet, C., Kageyama, M., Ramstein, G. & Lang, A. 2014. European Glacial dust deposits: Geochemical constraints on atmospheric dust cycle modeling. *Geophysical Research Letters*. doi: 10.1002/2014GL061382.

2013

Fuchs, M., Kreutzer, S., Rousseau, D.-D., Antoine, P., Hatté, C., Lacroix, F., Moine, O., Gauthier, C., Svoboda, J. & Lisa, L. 2013. The loess sequence of Dolní Věstonice, Czech Republic: A new OSL based chronology of the Last Climatic Cycle. *Boreas* 42, 664-677.

Antoine, P., Rousseau, D.-D., Degeai J.-P., Moine, O., Lacroix, F., Kreutzer, S., **Fuchs, M.**, Hatté, C., Gauthier, C., Svoboda, J. & Lisá, L. 2013. High-resolution record of the environmental response to climatic variations during the Last Interglaciale-Glacial cycle in Central Europe: the loess-palaeosol sequence of Dolní Vestonice (Czech Republic). *Quaternary Science Reviews* 67, 17-38.

Dreibrodt, S., Lubos, C., Hofmann, R., Müller-Scheessel, N., Richling, I., Nelle, O., **Fuchs, M.**, Rassmann, K., Kujundžić-Vejzagić, Z., Bork, H.-R. & Müller, J. 2013. Holocene river and slope activity in the Visoko Basin, Bosnia-Herzegovina – climate and land-use effects. *Journal of Quaternary Science* 28, 559-570.

Hatté, C., Gauthier, C., Rousseau, D.-D., Antoine, P., **Fuchs, M.**, Lacroix, F., Markovich, S. B., Moine, O. & Sima, A. 2013. Excursions to C4 vegetation recorded in the Upper Pleistocene loess of Surduk (Northern Serbia): an organic isotope geochemistry study. *Climate of the Past* 9, 1001-1014.

Kreutzer, S., Hülle, D., Thomsen, K.J., Hilgers, A., Kadereit, A. & **Fuchs, M.** 2013. Quantification of cross-bleaching during infrared (IR) light stimulation. *Ancient TL* 31, 1-10.

Larsen, A., Bork, H.-R., Fuelling, A., **Fuchs, M.** & Larsen, J.R. 2013. The processes and timing of sediment delivery from headwaters to the trunk streams of a Central European mountain gully catchment. *Geomorphology* 201, 215-226.

Meszner, S., Kreutzer, S., **Fuchs, M.** & Faust, D. 2013. Late Pleistocene landscape dynamics in Saxony / Germany – Paleoenvironmental reconstruction using loess-paleosol sequences. *Quaternary International* 296, 94-107.

Rousseau, D.-D., Ghil, M., Kukla, G., Sima, A., Antoine, P., **Fuchs, M.**, Hatté, C., Lacroix, F., Debret, M. & Moine, O. 2013. Major dust events in Europe during marine isotope stage 5 (130–74 ka): A climatic interpretation of the "markers". *Climate of the Past* 9, 2213-2230.

2012

Fuchs, M., Kreutzer, S., Fischer, M., Sauer, D. & Sørensen, R. 2012. OSL and IRSL dating of raised beach sand deposits along the southeastern coast of Norway. *Quaternary Geochronology* 10, 195-200.

- Berner, Z., Bleeck-Schmidt, S., Stüben, D., Neumann, T., **Fuchs, M.** & Lehmann, M. 2012. Floodplain deposits: a geochemical archive of flood history – A case study on the River Rhine, Germany. *Applied Geochemistry* 27, 543-561.
- DeVecchio, D.E., Heermance, R.V., **Fuchs, M.** & Owen, L.A. 2012. Climate-controlled landscape evolution in the Western Transverse Ranges, California: Insights from Quaternary geochronology of the Saugus Formation and strath terrace flights. *Lithosphere* 4, 110-130.
- DeVecchio, D.E., Keller, E.A., **Fuchs, M.** & Owen, L.A., 2012, Late Pleistocene structural evolution of the Camarillo fold belt: Implications for seismic hazard and fold growth in Southern California: *Lithosphere* 4, 91-109.
- Kreutzer, S., **Fuchs, M.**, Meszner, S. & Faust, D. 2012. OSL chronostratigraphy of a loess-palaeosol sequence in Saxony/Germany using quartz of different grain sizes. *Quaternary Geochronology* 10, 102-109.
- Kreutzer, S., Schmidt, C., Fuchs, M.C., Dietze, M., Fischer, M. & **Fuchs, M.** 2012. Introducing an R package for luminescence dating analysis. *Ancient TL* 30, 1–8.
- Long, H., Lai, Z., Frenzel, P., **Fuchs, M.** & Haberzettl, T. 2012. Holocene moist period recorded by the chronostratigraphy of a lake sedimentary sequence from Lake Tangra Yumco on the south Tibetan Plateau. *Quaternary Geochronology* 10, 136-142.
- Long, H., Lai, Z., **Fuchs, M.**, Zhang, J. & Yang, L. 2012. Palaeodunes intercalated in loess stratum from the western Chinese Loess Plateau: timing and palaeoclimatic implications. *Quaternary International* 263, 37-45.
- Long, H., Lai, Z.P., **Fuchs, M.**, Zhang, J.R. & Li, Y. 2012. Timing of Late Quaternary palaeolake evolution in Tengger Desert of northern China and its possible forcing mechanisms. *Global and Planetary Change* 92-93, 119-129.
- Suchodoletz H. von, Blanchard, H., Hilgers, A., Radtke, U., **Fuchs, M.**, Dietze, M. & Zöller, L. 2012. TL and ESR-dating of Middle Pleistocene lava flows on Lanzarote island, Canary Islands (Spain). *Quaternary Geochronology* 9, 54-64.
- Zech, M., Kreutzer, S., Goslar, T., Meszner, S., Krause, T., Faust, D. & **Fuchs, M.** 2012. Technical Note: n-Alkane lipid biomarkers in loess: post-sedimentary or syn-sedimentary? *Biogeosciences Discussions* 9, 9875-9896.

2011

- Fuchs, M.**, Will, M., Kunert, E., Kreutzer, S., Fischer, M. & Reverman, R. 2011. The temporal and spatial quantification of Holocene sediment dynamics in a meso-scale catchment in northern Bavaria / Germany. *The Holocene* 21, 1093-1104.
- Lubos, C.C.M., Dreibrodt, S., Nelle, O., Klamm, M., Friederich, S., Meller, H., Nadeau, M.J., Grootes, P.M., **Fuchs, M.** & Bork, H.-R. 2011. A multilayered prehistoric settlement structure (Tell?) at Niederröblingen, Germany and its implications. *Journal of Archaeological Sciences* 38, 1101-1110.
- Meszner, S., **Fuchs, M.** & Faust, D. 2011. Loess-Paleosol-Sequences from the loess area of Saxony (Germany). *Quaternary Science Journal* 60, 47-65.

Rousseau, D.-D., Antoine, P., Gerasimenko, N., Sima, A., **Fuchs, M.**, Hatté, Ch., Moine, O. & Zoeller, L. 2011. North Atlantic abrupt climatic events of the last glacial period recorded in Ukrainian loess deposits. *Climate of the Past* 7, 221-234.

2010

Fuchs, M., Fischer, M. & Reverman, R. 2010. Colluvial and alluvial sediment archives temporally resolved by OSL dating: Implications for reconstructing soil erosion. *Quaternary Geochronology* 5, 269-273.

Bruthans, J., Filippi, M., Zare, M., Churácková, Z., Asadi, N., **Fuchs, M.** & Adamovic, J. 2010. Evolution of salt diapir and karst morphology during the last glacial cycle: Effects of sea-level oscillation, diapir and regional uplift, and erosion. *Geomorphology* 121, 291-304.

Rockwell, T., Gath, E., Gonzalez, T., Madden, C., Verdugo, D., Lippincott, C., Dawson, T., Owen, L., **Fuchs, M.**, Cadena, A., Williams, P., Weldon, L. & Franceschi, P. 2010. Neotectonics and Paleoseismology of the Pedro Miguel fault zone in Panama: Earthquake hazard to the Panama Canal. *Bulletin of the Seismological Society of America* 100, 3097-3129.

Suchodoletz, H. von, Oberhänsli, H., Faust, D., Fuchs, M., Blanchet, C., Goldhammer, T. & Zöller, L. 2010. The evolution of Saharan dust input in Lanzarote (Canary Islands) – influenced by human activity in the Northwest Sahara during the Holocene? *The Holocene* 20, 169-179.

Suchodoletz, H. von, Oberhänsli, H., Hambach, U., Zöller, L., **Fuchs, M.** & Faust, D. 2010. Soil moisture fluctuations recorded in Saharan dust deposits on Lanzarote (Canary Islands) during the last 180 ka. *Quaternary Science Reviews* 29, 2173-2184.

2009

Fuchs, M. & Lang, A. 2009. Luminescence dating of hillslope deposits - a review. *Geomorphology* 109, 17-26.

Antoine, P., Rousseau, D.D., **Fuchs, M.**, Hatté, C., Gauthier, C., Marković, S., Jovanović, M., Gaudenyi, T., Moine, O. & Rossignol, J. 2009. High resolution record of the Last Climatic Cycle in the Southern Carpathian basin (Surduk, Vojvodina, Serbia). *Quaternary International* 198, 19-36.

Brown, A.G., Carey, C., Erkens, G., **Fuchs, M.**, Hoffman, T., Macaire, J.-J., Moldenhauer, K.-M. & D. E. Walling. 2009. From sedimentary records to sediment budgets: Multiple approaches to catchment sediment flux. *Geomorphology* 108, 35-47.

Müller, J., Seregély, T., Becker, C., Christensen, A.-M., **Fuchs, M.**, Kroll, H., Mischka, D., & Schüssler U. 2009. A revision of corded ware settlement pattern – New results for the Central European low mountain range. *Proceedings of the Prehistoric Society* 75, 125–142.

Vetter, T., Rieger A.-K., Klammer, O., **Fuchs, M.** & Nicolay, A. 2009a. Spätholozäne Abfluss- und Sedimentdyndamik im semiariden Nordwest-Ägypten und ihre anthropogene Modifikation. *Zentralblatt für Geologie und Paläontologie*, Part 1, Issue 1/2, 171-187.

Vetter, T., T., Rieger, A.-K., Klammer, O., **Fuchs, M.**, Nicolay, A., 2009b. Ancient rainwater harvesting systems in the northeastern Marmarica (northwestern Egypt). *Libyan Studies* 40, 9-23.

Zech, W., Zech, M., Zech, R., Peinemann, N., Morras, DE H., Moretti, L., Ogle, N., Kalim, R.M., **Fuchs, M.**, Schad, P. & Glaser, B. 2009. Late Quaternary palaeosol records from subtropical (38° S) to tropical (16° S) South America and palaeoclimatic implications. *Quaternary International* 196, 107-120.

2008

Fuchs, M. & Buerkert, A. 2008. A 20 ka fluvial sediment record from the Hajar Mountain range, N-Oman, and its implication for detecting arid - humid periods on the southeastern Arabian Peninsula. *Earth and Planetary Science Letters* 265, 546-558.

Fuchs, M., Kandel, A.W., Conard, N.J. & Felix-Henningsen, P. 2008. Geoarchaeological and chronostratigraphical investigations of open-air sites in the Geelbek dune field, S-Africa. *Geoarchaeology* 23, 425-449.

Fuchs, M. & Owen, L.A. 2008. Luminescence dating of glacial and associated sediments: review, recommendation and future directions. *Boreas* 37, 636-659.

Fuchs, M., Rousseau, D.-D., Antoine, P., Hatté, C., Gauthier, C., Marković, S. & Zoeller, L. 2008. Chronology of the Last Climatic Cycle (Upper Pleistocene) of the Surduk loess sequence, Vojvodina, Serbia. *Boreas* 37, 66-73.

Lai, Z.P., Zöller, L., **Fuchs, M.** & Brückner, H. 2008. Alpha efficiency determination for OSL of quartz extracted from Chinese loess. *Radiation Measurements* 43, 767-770.

Nigst, P.R., Viola, T.B., Haesaerts, P., Blockley, S., Damblon, F., Frank, C., **Fuchs, M.**, Götzing, M., Hambach, U., Mallol, C., Moreau, L., Niven, L., Richards, M., Richter, D., Zöller, L., Trnka, G. & Hublin, J.-J. 2008. New research on the Aurignacien of Central Europe: A first note on the 2006 fieldwork at Willendorf II. *Quartär* 55, 9-15.

Preusser, F., Degering, D., **Fuchs, M.**, Hilgers, A., Kadereit, A., Klasen, N., Krebschek, M., Richter, D., & Spencer, J. 2008. Luminescence dating: Basics, methods and applications. *Quaternary Science Journal* 57, 95-149.

Suchodoletz, H. von, **Fuchs, M.** & Zöller, L. 2008. Dating Saharan dust deposits on Lanzarote (Canary Islands) by luminescence dating techniques and their implication for palaeoclimate reconstruction of NW Africa. *Geochemistry, Geophysics, Geosystems* 9. DOI: 10.1029/2007GC001658.

Woda, C. & **Fuchs, M.**, 2008. On the applicability of the leading edge method to obtain equivalent doses in OSL dating and dosimetry. *Radiation Measurements*, 43, 26-37.

2007

Fuchs, M., 2007. An assessment of human versus climatic impacts on Holocene soil erosion in NE Peloponnese, Greece. *Quaternary Research* 67, 349-356.

Fuchs, M., Woda, C. & Buerkert, A. 2007. Chronostratigraphy of a sedimentary record from the Hajar mountain range, N-Oman. *Quaternary Geochronology* 2, 202-207.

2006

Fuchs, M. & Zöller, L. 2006. Geoarchäologie aus geomorphologischer Sicht – Eine konzeptionelle Betrachtung. *Erdkunde* 60, 139-146.

2005

Fuchs, M. & Wagner, G.A. 2005. The chronostratigraphy and geoarchaeological significance of an alluvial geoarchive: Comparative OSL and AMS 14C dating from Greece. *Archaeometry* 47, 849-860.

Fuchs, M. & Wagner, G.A. 2005. OSL dating of colluvial sediments and their implication of early human activities. A case study from Greece. *Geoarchaeological and Bioarchaeological Studies* 3, Vrije Universiteit Amsterdam, 423-427.

Fuchs, M., Straub, J. & Zöller, L. 2005. Residual Luminescence signals of recent river flood sediments: A Comparison between quartz and feldspar of fine- and coarse-grain sediments. *Ancient TL* 23 (1), 25-30.

Urban, B. & **Fuchs, M.** 2005. Late Pleistocene Vegetation of the Basin of Phlious, NE-Peloponnese, Greece. *Review of Palaeobotany and Palynology* 137, 15-29.

2004

Fuchs, M., Lang, A. & Wagner, G.A. 2004. The History of Holocene soil erosion in the Phlious Basin, NE-Peloponnese, Greece, provided by optical dating. *The Holocene* 14, 334-345.

Casselmann, C., **Fuchs, M.**, Ittamaier, D., Maran, J. & Wagner, G.A. 2004. Interdisziplinäre landschaftsarchäologische Forschungen im Becken von Phlious, 1998-2002. *Archäologischer Anzeiger* 1, 1-58.

Vandenbergh, D., Kasse, C., Hossain, S.M., De Corte, F., Van den haute, P., **Fuchs, M.** & Murray, A.S. 2004. Exploring the methodology of optical dating and comparison of optical and 14C ages of Late Weichselian coversands in the southern Netherlands. *Journal of Quaternary Science* 19, 73-86.

2003

Fuchs, M. & Wagner, G.A. 2003. Optical dating of sediments: Recognition of insufficient bleaching by small aliquots of quartz for reconstructing soil erosion in Greece. *Quaternary Science Reviews* 22, 1161-1167.

Kalchgruber, R., **Fuchs, M.**, Murray, A.S. & Wagner, G.A. 2003. Evaluating dose-rate distributions in natural sediments using α -Al₂O₃:C. *Radiation Measurements* 37, 293-297.

2001

Fuchs, M. & Lang, A. 2001. OSL dating of coarse-grain fluvial quartz using Single-Aliquot protocols on sediments from NE-Peloponnese, Greece. *Quaternary Science Reviews* 20, 783-787.

Other Journals:

- Kopecky-Hermanns, B., Fritsch, D. & **Fuchs, M.** 2021. Geoarchäologische Untersuchungen und Landschaftsrekonstruktion im Umfeld des Limes bei Laimerstadt, Landkreis Eichstätt. In: Mathias Pfeil (Ed.): Grenzen aus Holz – Die Limespalisade. Schriftenreihe des Bayerischen Landesamtes für Denkmalpflege 22, 113-128.
- Codreanu-Windauer, S., Ontrup, M., **Fuchs, M.** & Schneider, S. 2017. Der „Große Graben“ von Regensburg-Burgweinting. Berichte der Bayerischen Bodendenkmalpflege 58, 1-14.
- Elverfeldt, K. v., **Fuchs, M.** & Wardenga, U. 2016. 4. Forum Geomorphologie: Geschichte und Geschichten der deutschen Geomorphologie. Rundbrief Geographie 261, 19-20.
- Faust, D., Fuchs, M., Heckmann, T., Moldenhauer, K.-M., Schütt, B. & Zielhofer, C. 2009. Klimawandel – Bedrohung für die Erdoberfläche. In: Deutscher Arbeitskreis für Geomorphologie (Ed.): Die Erdoberfläche. Lebens- und Gestaltungsraum des Menschen, 3-15.
- Jäger, K.-D., **Fuchs, M.** & Zöller, L. 2006. In den Startlöchern – neuer Arbeitskreis Geoarchäologie. Archäologisches Nachrichtenblatt 11, 346-350.
- Lang, A., **Fuchs, M.** & Wagner, G.A. 2004. Acht Jahrtausende Bodenerosion - Bodensedimente als Archive der Kulturgeschichte. In: BMBF (Ed.) Alte Fragen - Neue Antworten. Neue naturwissenschaftliche Methoden in den Geisteswissenschaften, 54-63.

Invited Papers:

- Fuchs, M.** 2006. Mensch und Umwelt in der Antike Südgriechenlands. Geographische Rundschau 4, 4-11.
- Fuchs, M.**, Lang, A. & Maran, J. 2000. Rekonstruktion einer antiken Landschaft. Spektrum der Wissenschaft 11, 85-87.

Books:

- Fuchs, M.** 2008. Natürlich und anthropogen bedingte Landschaftsveränderung zeitlich dokumentiert in terrestrischen Sedimentarchiven und entschlüsselt durch die OSL-Datierungsmethode. Habilitationsschrift Universität Bayreuth.
- Fuchs, M.** 2001. Die OSL-Datierung von Archäosedimenten zur Rekonstruktion anthropogen bedingter Sedimentumlagerung. Geoarchäologische Untersuchungen im Becken von Phlious, NE-Peloponnes, Griechenland. Ibidem-Verlag, Stuttgart.

Book Chapters:

- Fuchs, M.**, Klasen, N. & Schmidt, C. 2020. Lumineszenzdatierung. In: Stolz, C. & C. Miller (Eds.). Geoarchäologie. Springer Nature.
- Fuchs, M.**, Deckers, K. & Schlöffel, M. 2020. Der Deutsche Arbeitskreis Geoarchäologie. In: Stolz, C. & C. Miller (Eds.). Geoarchäologie. Springer Nature.

- Fuchs, M.** 2019. Luminescence dating: Applications in fluvial and slope environments. In: M. Bateman (Ed.). *Handbook of Luminescence Dating*, Chapter 7, 222-258. Whittles Publishing, Dunbeath, Scotland.
- Fuchs, M.**, Fischer, M. & Zöller, L. 2008. Rekonstruktion der Bodenerosion im Umfeld der urgeschichtlichen Siedlung Wattendorf-Motzenstein, Oberfranken. In: J. Müller & T. Seregely (Eds.). *Endneolithische Siedlungsstrukturen in Oberfranken II. Universitätsforschungen zur Prähistorischen Archäologie* 155, 121-127. Bonn.
- Hatté, C, Antoine, P., Fuchs, M., Guyodo, Y., Lagroix, F., Moine, O., Piotrowska, N., & Rousseau, D.-D. 2024. Chronology of dust archives. In: *Encyclopedia of Quaternary Science*, <https://doi.org/10.1016/B978-0-323-99931-1.00166-5>.
- Antoine, P., Moine, O., Rousseau, D.-D., Lagroix, L., Kreutzer, S., Fuchs, M., Debret, M., Hatté, C., Gauthier, C., Svoboda, J., & Lisá, L. 2016. Loess-Palaeosol Sequence DV-09 (Dolní Vestonice brickyard). Chronostratigraphy and palaeoenvironments. In: J. A. Svoboda (Ed.). *The Dolní Vestonice studies. Studies in Paleoanthropology and Paleoethnology of Eurasia*. Vol. 21. Academy of Sciences of the Czech Republic, Institute of Archaeology at Brno.
- Dreibrodt, S., Hofmann, R., Lubos, C., Dazert, S., Zahrer, J., **Fuchs, M.** & Bork, H.-R. 2013. Ergebnisse geomorphologisch-geoarchäologischer Begleituntersuchungen an den Siedlungen im Visokobecken (Bosnien-Herzegowina). In: J. Müller, K. Rassmann & Z. Kujundic-Vejzagic (Eds.). *Okoliste 1 – Untersuchungen einer spätneolithischen Siedlungskammer in Zentralbosnien. Universitätsforschungen zur prähistorischen Archäologie* 228, 287-310. Bonn.
- Berner, Z.A., Bleek-Schmidt, S., Stüben, D., Neumann, T., **Fuchs, M.** & Lehmann, M. 2010. Reconstructing the history of paleo-floods: A geochemical approach. In: P. Birkle & I.S.Torres-Avarado (Eds.). *Water-Rock Interaction XIII*, 909-912, Taylor & Francis, London.
- Müller, J., Seregely, T., Becker, C., Christensen, A.-M., **Fuchs, M.**, Kroll, H., Mischka, D. & Schüssler, U. 2008. Wattendorf-Motzenstein: a corded ware settlement from Central European low mountain range. In: J. Müller, & T. Seregely (Eds.). *Endneolithische Siedlungsstrukturen in Oberfranken II. Universitätsforschungen zur prähistorischen Archäologie* 155, 189-195. Bonn.

Edited Volumes:

- Fuchs, M.** 2018. 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.
- Fuchs, M.** 2017. Geomorphology at various spatial and temporal scales, *Z. Geomorph. Suppl.* N.F 61.
- Fuchs, M.** & Deckers, K. 2006. Eastern Mediterranean / Near Eastern Geoarchaeology: Part 1. *Geoarchaeology* 21, 7.
- Deckers, K. & **Fuchs, M.** 2007. Eastern Mediterranean / Near Eastern Geoarchaeology: Part 2. *Geoarchaeology* 22, 6.
- Diller, Ch., Dittmann, A., **Fuchs, M.**, Haversath, J.-B., Liefner, I. & Luterbacher, J. 2014. *Festschrift - 150 Jahre Geographie in Gießen*, Heft 85.

Book Reviews:

Bertrams, Manuel: Late Quaternary landscape evolution in the Wadi Sabra (Jordan) based on sedimentological and geochemical investigations. Aachener Geographische Arbeiten, Heft 49. *Rezension in Erdkunde (2015) 69,3.*

Kiermayr-Bühn, Susanne: Leben mit dem Wetter. Klima, Alltag und Katastrophe in Süddeutschland seit 1600. Wissenschaftliche Buchgesellschaft Darmstadt, 2009. *Rezension in Erdkunde (2010) 64,4.*

Müllenhoff, Marc: Geoarchäologische, sedimentologische und morphodynamische Untersuchungen im Mündungsgebiet des Büyük Menderes (Mäander), Westtürkei: Marburger Geographische Schriften 141, 2005. *Book review in Erdkunde (2006) 60,1.*

Nützel, Werner: Einführung in die Geo-Archäologie des Vorderen Orients. Wiesbaden: Reichert, 2004. *Book review in Journal of the Economic and Social History of the Orient (2006), 49,3.*