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Peer-reviewed journal articles

2024

1. Paul, S, Ammann, C., Wang, Y., Alewell, C., Leifeld, J., 2024. Can mineral soil coverage be a suitable option to mitigate greenhouse gas emissions from agriculturally managed peatlands? *Agriculture, Ecosystems & Environment* 375: 109197.
2. Sriskandarajah, N., Wüst-Galley, C., Heller, S., Leifeld, J., Määttä, T., Ouyang, Z., Runkle, B.R.K., Schiedung, M., Schmidt, M.W.I., Tumber-Dávila, S.J., Malhotra, A., 2024. Belowground plant allocation regulates rice methane emissions from degraded peat soils. *Scientific Reports* 14: 14593.
3. Liang, Z., Hermansen, C., Weber, P.L., Pesch, C., Greve, M.H., de Jonge, L.W., Mäenpää, M., Leifeld, J., Elsgaard, L., 2024. Underestimation of carbon dioxide emissions from organic-rich agricultural soils. *Communications Earth & Environment* 5: 286.
4. Rathnayake, D., Schmidt, H.-P., Leifeld, J., Bürge, D., Bucheli, T.D., Hagemann, N., 2024. Quantifying soil organic carbon after biochar application: How to avoid (the risk of) of counting CDR twice? *Frontiers in Climate* 6, doi: 10.3389/fclim.2024.1343516.
5. Wang, Y., Calanca, P., Leifeld, J., 2024. Sources of nitrous oxide emissions from agriculturally managed peatlands. *Global Change Biology* 30:e17144.
6. Don, A., Seidel, F., Leifeld, J., Kätterer, T., Martin, M., Pellerin, S., Emde, D., Seitz, D., Chenu, C., 2024. Reply letter to Munoz et al. 'on the importance of time in carbon sequestration in soils and climate change mitigation'—Keep carbon sequestration terminologies consistent and functional'. *Global Change Biology* 30: e17230.
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8. Fouché, J., Burgeon, V., Meersmans, J., Leifeld, J., Cornelis, J.-T., 2023. Accumulation of century-old biochar contributes to carbon storage and stabilization in the subsoil. *Geoderma* 440: 116717.
9. Keel, S.G., Bretscher, D., Leifeld, J., von Ow, A., Wüst-Galley, C., 2023. Soil carbon sequestration potential bounded by population growth, land availability, food production, and climate change. *Carbon Management* 14: 2244456.
10. Rodrigues, L., Budai, A., Elsgaard, L., Hardy, B., Keel, S.G., Mondini, C., Plaza, C., Leifeld, J., 2023. The importance of biochar quality and pyrolysis yield for soil carbon sequestration in practice. *European Journal of Soil Science* 74: e13396.
11. Wüst-Galley, C., Heller, S., Ammann, C., Paul, S., Doetterl, S., Leifeld, J., 2023. Methane and nitrous oxide emissions from rice grown on organic soils in the temperate zone. *Agriculture, Ecosystems and Environment* 356: 108641.
12. Mayer, M., Leifeld, J., Szidat, S., Mäder, P., Krause, H.-M., Steffens, M., 2023. Dynamic stability of mineral-associated organic matter: enhanced stability and turnover through organic fertilization in a temperate agricultural topsoil. *Soil Biology & Biochemistry*, <https://doi.org/10.1016/j.soilbio.2023.109095>.
13. Rathnayake, D., Schmidt, H. P., Leifeld, J., Mayer, J., Epper, C.A., Bucheli, T.D., Hagemann, N., 2023. Biochar from animal manure: a critical assessment on technical feasibility, economic viability and ecological impact. *GCB Bioenergy* 15: 1078-1104.
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16. Serk, H., Nilsson, M.B., Figurea, J., Krüger, J.P., Leifeld, J., Alewell, C., Schleucher, J., 2022. Organo-chemical characterization of peat reveals decomposition of specific hemicellulose structures as the main cause of organic matter loss in the acrotelm. *Environmental Science & Technology*: 17410–17419.
17. Leifeld, J., Keel, S.G., 2022. Quantifying negative radiative forcing of non-permanent and permanent soil carbon sinks. *Geoderma* 423: 115971.
18. Hardy, B., Borchard, N., Leifeld, J., 2022. Identification of thermal signature and quantification of charcoal in soil using differential scanning calorimetry and benzene polycarboxylic acid (BPCA) markers. *SOIL* 8: 451–466.
19. Groß-Schmölders, M., Klein, K., Emsens, W.-J., van Diggelen, R., Aggenbach, C.J.S., Liczner, Y., Frouz, J., Leifeld, J., Alewell, C., 2022. Stable isotopes ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) and biomarkers as indicators of the hydrological regime of fens in a European east–west transect. *Science of The Total Environment* 838: 156603.
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31. Paul, S.M., Ammann, C., Alewell, C., Leifeld, J., 2021. Carbon budget response of an agriculturally used fen to different soil moisture conditions. *Agricultural and Forest Meteorology* 300: 108319.
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