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**Soil systems: Analytical methods for integrating the chemical, biophysical interface in soils**

**Literature meeting II**

**Course task: Assessment whether a soil system view is critical to your own scientific work**

***8th of June, 9:00 – 12:00***

***zoom meeting:*** <https://slu-se.zoom.us/j/61771604255?from=addon>

***passcode:*** 288509

**Soil interactions in the natural soil habitat: Technical advances**

* Explain in your own words at least two micro-analytical techniques including which information can be obtained from these methods and challenges in their application(s) to soil research
* Screen through all papers proposed in the literature list (see below) and summarize one of them (your own choice)
* Do you have any specific questions regarding the papers?

*Literature list*

Baveye PC, Otten W, Kravchenko A et al. 2018 Emergent Properties of Microbial Activity in Heterogeneous Soil Microenvironments : Different Research Approaches Are Slowly Converging, Yet Major Challenges Remain. *Frontier in Microbiology*, **9**, 1929.

Kleber M, Bourg IC, Coward EK, Hansel, CM, Myneni SCB, Nunan N 2021 Dynamic interactions at the mineral-organic matter interface. *Nature Reviews*, **2**, 402 – 421.

Shi A, Chakrawal A, Manzoni S, Fischer BMC, Nunan N, Herrmann AM 2021 Substrate spatial heterogeneity reduces soil microbial activity. *Soil Biology and Biogeochemistry*, **152**, 108068.

Fierer N, Wood SA, Bueno de Mesquita CP 2021 How microbes can, and cannot, be used to assess soil health. *Soil Biology and Biogeochemistry*, **153**, 108111. Vogel, H-J, Eberhardt, E, Franko, U, Land, B, Liess, M, Weller, U, Wiesmeier, M, Wollschläger, U (2019) Quantitative evaluation of soil functions: potential and state. *Frontiers in Environmental Science*, **7**, 164