

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

WS 2018/19



UNIVERSITÄT
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Thursday

17.01.2019

12:00 in H6, GEO

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Hot spots of C turnover in soil

In soil, storage of organic carbon contributes to its fertility and mitigates climate warming. However, until now we have only little insight to the spatial arrangement of organic matter and how this controls its residence time in soil, due to a lack of techniques that allow detection of organic carbon within an undisturbed soil environment.

We established a laser-ablation isotope-ratio-monitoring method, that allows to detect carbon and its stable isotope composition in soil and other materials with a resolution down to 10 μm . This technique now provides first results on, e.g., input rates of C through root systems, or on hot spots of soil organic carbon turnover in C3/C4 vegetation change experiments.