

Einladung zum Vortrag  
im Rahmen des gemeinsamen Kolloquiums des Instituts für Biologie und  
Umweltwissenschaften und des Departments für Neurowissenschaften

## **Dr. habil. Marie Spohn**

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### **Element Cycling in Terrestrial Ecosystems – An Ecophysiological Perspective**

One of the large challenges in soil science is to understand how element inputs to terrestrial ecosystems affect soil carbon (C), nitrogen (N) and phosphorus (P) cycling and how the cycles of C, N and P are connected. Many important processes of element cycling in terrestrial ecosystems are catalyzed and driven by plants and by microorganisms. Thus, an ecophysiological perspective that takes into account the stoichiometry of the organisms and of their environment allows us to better understand and predict the rates of element cycling processes in soils. The talk will concentrate on processes of P cycling in soil, and I will present some recent results that I gained with my group in different terrestrial ecosystems. I will show results on (i) microbial weathering of the P-bearing mineral apatite along a climate sequence in Chile and how it is affected by organic C inputs, (ii) mineralization of organically bound P in temperate forest after decades of experimental N inputs, (iii) phosphatase activity in the rhizosphere and how it is affected by inorganic P inputs, and (iv) P uptake of P by ectomycorrhizal fungi and trees in two beech forests in Germany with contrasting soil P stocks. Together, these results show that an ecophysiological perspective on soil element cycling allows us to better understand P cycling in terrestrial ecosystems and how it is affected by element inputs.

**15.05.2018, 16 Uhr s.t., W04 1-162**

**Gastgeber: Prof. Dr. Luise Giani, Prof. Dr. Sascha Laubinger, Prof. Dr. Gudrun Massmann**

Gäste aller Institute sind herzlich willkommen