



**College of Agriculture and Natural Resources
Department of Ecosystem Science and Management**

Two Ph.D. Positions in the Soil and Environmental Biogeochemistry Group

Two Ph.D. Positions are available immediately in the Soil and Environmental Biogeochemistry group in the Department of Ecosystem Science and Management at the University of Wyoming, USA.

Position 1. The student will work on phosphorus biogeochemical cycling in natural soils and mineral dust. Aeolian dust deposition to soils is ubiquitous and significant, and play an important role in nutrient (including P) cycling in terrestrial ecosystems. The research will combine both field and laboratory work and will employ synchrotron X-ray absorption spectroscopy, NMR spectroscopy and isotopic techniques to determine P speciation and track P cycling.

Position 2. The student will work on manganese (Mn) redox chemistry and how it affects metal and organic matter fate under laboratory conditions. Mn oxides have strong metal sorption and oxidation properties and can impose strong effects on elemental cycling in Mn-rich environment, such as ocean floors. The student will learn an array of synchrotron X-ray techniques, such as X-ray absorption spectroscopy and pair distribution function analysis.

The ideal candidate for each of the positions will have a MS degree in soil science, geochemistry/geology, environmental science and engineering with a strong background and interest in geochemical and mineralogical processes.

For pre-application evaluation, you may email your CV, unofficial transcripts with calculated GPAs, and contact information for three references to **Dr. Mengqiang Zhu** at mzhu6@uwyo.edu.