

## UniSysCat Colloquium

Prof. Dr. Craig Barnes

*The University of Tennessee Knoxville*

Start Time: Wednesday, May 22, 2019 05:15 pm

End Time: Wednesday, May 22, 2019 06:45 pm

Chemistry Building, C 264

Technische Universität Berlin, Straße des 17. Juni 115, 10623 Berlin

### **Single Site Catalysts by Design: A Story of Vanadium, Titanium and Aluminum Silicates**

Prof. Dr. Craig Barnes

University of Tennessee

For a number of years my group has focused on developing a rational synthetic protocol for the preparation of single site catalysts within porous, metal oxide supports. To this end, we have developed a simple, broad based methodology for preparing atomically dispersed metal cations in silicate matrices utilizing an easily synthesized silicate building block and a cross-linking reaction between many metal halide precursors and the building block. Our results regarding the synthesis, characterization and catalytic activity for metallosilicate containing V, Ti and aluminum as selective oxidation and solid acid catalysts will be described.

Prof. Dr. Matthias Drieß

Organizer