



Gesellschaft Deutscher Chemiker  
Ortsverband Bonn

**Professor Dr. David Powers**  
**Texas A&M University**

**Tuesday, April 30 at 5 pm (17 Uhr s.t.)**  
**in Hörsaal 2**



***Making, Seeing, and Using Subvalent Nitrogen Species***

Direct C–H amination chemistry via electrophilic subvalent nitrogen intermediates could radically simplify access to nitrogen-containing small molecules by providing the chemical tools to selectively convert ubiquitous C–H bonds to valuable C–N bonds. At present, challenges in chemoselectivity, sustainability, and synthetic versatility prevent realization of the synthetic potential of C–H amination.

This talk will describe recent efforts from the Powers Laboratory that advance 1) new strategies to structurally characterize transient intermediates in C–H functionalization reactions, 2) novel metal-free approaches to the sustainable generation of strong oxidants needed in C–H functionalization reactions, and 3) bifunctional reagent platforms that enable rapid elaboration of the primary products of C–H amination. Future directions and challenges will be discussed.