



UNIVERSITY OF MINNESOTA  
Driven to Discover™

# Department of Chemistry

## *MPIG Seminar*

4 p.m. Tuesday, March 12, 2013 • 331 Smith Hall



Assistant Professor

**Matthew Allen**

Department of Chemistry  
Wayne State University

### *Lanthanide Chemistry in Magnetic Resonance Imaging and Catalysis*

Research interests: chemistry of magnetic resonance imaging (MRI) and asymmetric catalysis.

Website: <http://chem.wayne.edu/allengroup/>

#### **Abstract**

Research in the Allen laboratory is focused on the lanthanide chemistry of contrast agents for magnetic resonance imaging (MRI) and catalysts for aqueous asymmetric bond formation. A major research effort in our lab is focused on overcoming critical limitations to contrast agents using a variety of approaches, including studying the influence of coordination chemistry on the oxidative stability of  $\text{Eu}^{\text{II}}$  and new multimetallic lanthanide-containing complexes. We are also elucidating mechanistic details of water-tolerant lanthanide-catalyzed bond-forming reactions using luminescence-decay measurements to generate enantioselective catalysts. I will present our work focused on these two goals.

Host: Professor Valerie Pierre