



Abstract:

Magnetic applications are ubiquitous in modern technology, yet the available materials are relatively limited in number and tunability. Bottom-up design is therefore appealing as it offers the possibility of atomic-level understanding and customization. Magnetic properties, however, often translate poorly between atomic, molecular, nano, and bulk scales. In this seminar, I will discuss our efforts to design magnetic systems with well-defined, robust magnetic parameters that translate across different size scales. Part one will focus on designing molecules that efficiently transfer the immense single-ion anisotropy of lanthanides into two-center anisotropy such that it can be preserved during the extension to multidimensional materials. The second part will utilize the weak interparticle coupling of colloidally prepared ferrite nanoparticles to explore magnetostructural correlations to design tunneling magnetoresistive materials.

Read more: <https://profiles.ucsd.edu/jeffrey.rinehart>

COLLOQUE DÉPARTEMENTAL DEPARTMENTAL COLLOQUIUM

*The Department of Chemistry and Biomolecular Sciences is pleased to welcome **Professor Jeffrey Rinehart** Université of California, San Diego*

“Designing molecular and nanoscale materials for bottom-up control of magnetism”

**Mercredi 10 octobre | Wednesday October 10
2018**

**Pavillon / Hall: D'lorio 214
Heure / Time: 11h30**

REFRESHMENTS/RAFRAÎCHISSEMENTS at 11:10