



Inorganic Chemistry Seminar Series

Tuesday, February 27, 2018, 12:30 pm

Seaver Science Library 150

SSC Auditorium next to the library

Professor Michelle Dolgos

Department of Chemistry

Oregon State University

Structure-Property Relationships in Novel Piezoelectric and Ferroelectric Materials

Abstract:

Due to the environmental impact of lead, there is a considerable focus on the synthesis of lead-free piezoelectric materials. $\text{Pb}(\text{Zr,Ti})\text{O}_3$ (PZT) is the current industry standard for piezoelectric ceramics, but has a major disadvantage in that it contains lead. Our understanding of the high piezoelectric response in PZT is a direct result of the incredibly detailed structural studies that have been performed. Unfortunately, the same level of detail has not been applied to the lead-free counterparts of PZT. While some structural studies have examined both the average structure and local distortions of important lead-free piezoelectrics, there is currently not enough information to form a hypothesis about why PZT outperforms the

attempts to synthesize and characterize new high performing, lead-free piezoelectric and ferroelectric materials

Hosted by Professor Brent Melot

The scientific community is invited

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