**Materials Seminar**

Department of Materials Science & Engineering

# Tuesday October 17, 2017

2:15 – 3:15 ~ SERF 307

**Please join us for refreshments at 2:10**

"Na, It’s Not Just Another Lithium Ion Battery Talk”

**Speaker:**



**Dr.** **Gabriel M. Veith**  
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Abstract:

Despite the large interest in Li-ion batteries there are other rechargeable battery systems which could be used in a number of important applications. One such redox couple involves sodium. In this presentation I will discuss work done at ORNL investigating these systems. Specific emphasis will be placed on identifying reaction mechanisms, reaction products and understanding the differences between the much large Na-ion compared to Li-ions. I will show under certain circumstances the Na atoms diffuse faster than the smaller Li with a lower activation energy potentially enabling a new class of grid storage systems.

Biography:

Gabriel received his PhD in 2002 from Rutgers University working in Solid State Materials Chemistry with Professor Martha Greenblatt focusing on structure-magnetic property correlations. He joined ORNL in 2002 as a post-doctoral researcher and became a Staff Scientist in 2005. His research has focused on developing new approaches to characterizing materials interfaces and relating surface chemistry to specific electrochemical and catalytic processes. In 2009 he was awarded the UT-Battelle Early Career Scientific Achievement Award. He is the Associate Editor for the Journal Catalyst. He is also the Honorary Scientific Advisor to the Charlotte-Mecklenburg (NC) Burglary Division. He has 169 published papers, 3 patents and 6 patents submitted.