

## Jonathan D. Poplawsky

Research Staff  
Center for Nanophase Materials Sciences  
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[Publications](#)  
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### Education

Lehigh University	Physics	Ph.D., 2012
Bethlehem, PA, USA	Physics	M.S., 2010

### Research Interests

The experimental analysis of localized elemental compositional changes occurring at grain boundaries, interfaces, and cluster sites for energy related materials via atom probe tomography (APT). The main goal of this work is to link materials' atomic scale structure and composition to bulk electronic, ionic, chemical, or mechanical properties. Particular interests are catalyst, battery, photovoltaic, light emitting, and structural materials. Cathodoluminescence (CL), photoluminescence (PL), Electron Beam Induced Current (EBIC), Focused Ion Beam (FIB), electron back scattered diffraction (EBSD), and Scanning Transmission Electron Microscopy (STEM) techniques used to understand the origin of specific material properties are also of interest.

### Professional Experience

2014-Present	Research Staff, Center for Nanophase Materials Sciences, ORNL
2012-2014	Post-doctoral Research Associate, University of Tennessee
2007-2012	Research Assistant, Lehigh University

### Awards and Honors Received

2017	Most Notable CNMS User Project, ORNL CNMS
2014	Ceramographic Exhibit 2 <sup>nd</sup> place award, SEM, American Ceramic Society
2012	National Research Council Fellowship, Navy Research Laboratory
2011	Best Student Presentation Award, MAS CL Topical Conference
2010-2011	Sherman Fairchild Fellowship in Semiconductor Studies, Lehigh University
2008	Graduate Student Teaching Assistant Award, Lehigh University
2007	Excellence in Physics Award, University of Scranton
2007	Sigma Pi Sigma Honors, University of Scranton
2003-2007	Loyola Scholarship, University of Scranton

### Research Programs

2016-Present	<i>Supercomputers to Superalloys</i> (ORNL Laboratory Directed R&D)
2016-Present	A Design Basis for Future <i>Fe-based Superalloys</i> (ORNL Laboratory Directed R&D)

- 2016-Present *DAPPER: Data Analysis Parellel Package Maker – A Lego Set for Big Data Scientists* (ORNL Laboratory Directed R&D)
- 2014-2016 *Advanced Atom Probe Tomography for Nanoscience Applications* (ORNL Laboratory Directed R&D)

### **Publications and Patents**

Author or co-author in over 60 peer reviewed journal articles with over 1,500 citations.

### **Graduate and Post-doctoral Advisors**

Ph.D. Advisor: Dr. Volmar Dierolf (Lehigh University, Bethlehem, PA, USA)

Postdoctoral Advisor: Dr. Stephen J. Pennycook (ORNL, University of Tennessee)