

Danielle Proffit

“Danielle”



Graduate Institution: Northwestern University

Location: Evanston, IL

Graduate Discipline: Materials Science and Engineering

Hometown: Charlotte, NC

Research Interests:

Synthesis and characterization of functional oxide materials, specifically those related to energy applications (ionic conductors, transparent conducting oxides, thermoelectric materials, multiferroic materials, etc); thin film deposition techniques; electrical properties; x-ray scattering techniques.

About me:

Graduate school has been an enjoyable experience so far. My experience started at the University of Wisconsin-Madison where I earned a Masters degree in Materials Science under Professor Chang-Beom Eom studying the growth of the conducting oxide CaRuO_3 by pulsed laser deposition. In 2009, I began work towards a PhD under Professor Thomas O. Mason at Northwestern University. Dr. Jeffrey Eastman at Argonne National Laboratory co-advises my project on the enhancement of ionic conductivity using epitaxial growth. Specifically, I grow $\delta\text{-Bi}_2\text{O}_3$ by chemical vapor deposition in the Materials Science Division at Argonne and study its structure and electrical properties at the Department of Energy User Facilities on Argonne's campus.

I attended North Carolina State University as an undergrad and participated in a variety of activities. Academically, I earned minors in Music Performance (Viola) and French in addition to my major in Materials Science and Engineering. As a Park Scholar, I also was trained in leadership and teamwork, an experience I value tremendously. During my first summer of college, I studied abroad in France. The following summers I took advantage of internships, working for Caterpillar, Micron, and Intel.

In the future, I hope to get a research position in industry or at a national laboratory. As an engineer, I enjoy solving tough problems, but also like to see the potential impact on technology and society. My problem of choice is energy, so I look forward to the rest of my adventure as a graduate student.



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