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Andrew McAllister

Résumé

Summary

Goal — A career where I can use my technical expertise to work on understand complicated problems facing society and then communicate those efforts (and possible solutions) to a wide variety of audiences.

Analytical Thinking — A PhD in applied physics with specific expertise in materials science, nanotechnology, energy efficiency, and high performance computing.

Communication — Sought out specific training and experiences presenting to, writing for and working with diverse audiences throughout my PhD.

Education

Expected: August 2018 — **PhD in Applied Physics**, *University of Michigan*, Ann Arbor, MI.
Relevant Coursework:
- Public Policy 650 – Introduction to Science and Technology Policy Analysis
- Engineering 580 – Teaching Engineering

2012 — **B.S. in Physics**, *Rensselaer Polytechnic Institute*, Troy, NY.
Magna cum laude, dual major in mathematics

Work Experience

June-August 2013 — **Computational Chemistry and Materials Science Fellow**, *Lawrence Livermore National Laboratory*, Livermore, CA.

Awards

2014 National Science Foundation Graduate Research Fellowship Program

2012 Nadia Trinkala Service Award [Link for Verification], Rensselaer Physics Department

2010 Founder's Award of Excellence [Link for Verification], Rensselaer Physics Department

2008 Boy Scouts of America, Eagle Scout

Leadership

2017-Present — **Senior Editor**, *Applied Physics Student Council, Students of Applied Physics Project*, Ann Arbor, MI.

2014-2015 — **President**, *Local Chapter of American Society for Engineering Education*, Ann Arbor, MI.

2009-2011 — **President**, *Local Chapter of Society of Physics Students*, Troy, NY.

Communication Training

August 2017 **ComSciCon Chicago [Link for more information]**, *Chicago, IL*.
Attended a conference based on science communication.

2016 **Researchers Expanding Lay-Audience Teaching and Engagement (RELATE) Workshops**.

- Over 3 months, worked on crafting messages and narratives, considering different audiences and making visual aids.
- Developed and produced a YouTube video [Link] highlighting my research.

Selected Communication Experience

General Audience Writing

1. **Atomistic Calculations Predict That Boron Incorporation Increases The Efficiency Of LEDs**, *2017*.
   Press release for research group. Picked up by the DOE, NERSC, and Semiconductor Today.
2. **Senior Editor**, *Students of Applied Physics , Applied Physics Student Council*.
   I work with PhD students to develop understandable and engaging articles about research in the applied physics department. Example article

Public Engagement

1. **Andrew McAllister**, LED Light Bulbs: Why Do They Cost an Arm and a Leg?, Nerd Nite 2017, Ann Arbor, MI

Technical Publications

1. **Andrew McAllister**, Dylan Bayerl, Emmanouil Kioupakis, Auger and radiative recombination in indium nitride, *Applied Physics Letters*, **112**, 251108 (2018) doi:10.1063/1.5038106
2. Kyeongwoon Chung, **Andrew McAllister**, David Bilby, Bong-Gi Kim, Min Sang Kwon, Emmanouil Kioupakis, Jinsang Kim, Designing interchain and intrachain properties of conjugated polymers for latent optical information encoding, *Chemical Science* **6**, 6980-6985 (2015) doi:10.1039/c5sc02403j

Contributed Technical Presentations

1. **Andrew McAllister**, Dylan Bayerl, Christina Jones, Emmanouil Kioupakis, Auger Recombination From First-principles in Group-III Nitride Alloys, American Physical Society March Meeting 2018, Los Angeles, CA
2. **Andrew McAllister**, Dylan Bayerl, Emmanouil Kioupakis, Radiative and Auger Recombination of Degenerate Carriers in InN American Physical Society March Meeting, 2017, New Orleans, LA
3. **Andrew McAllister**, Predictive modeling of quantum processes for optoelectronic devices, Physics Graduate Student Symposium, 2014, Ann Arbor, MI