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McAllisterSci  
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# Andrew McAllister

## Résumé

### Summary

- Goal** A career where I can use my technical expertise to understand complicated problems and 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. Relentlessly pursues context when communicating ideas.

### Education

- Expected:** **PhD in Applied Physics**, *University of Michigan*, Ann Arbor, MI.  
**August 2018** Relevant Coursework:
  - Public Policy 650 – Introduction to Science and Technology Policy Analysis
- 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](#), Rensselaer Physics Department
- 2010** [Founder's Award of Excellence](#), Rensselaer Polytechnic Institute
- 2008** Boy Scouts of America, Eagle Scout

### Leadership

- 2018-Present** **Organizer**, *ComSciCon Michigan*, Ann Arbor, MI.  
Work with other graduate students to organize, publicize and run a conference devoted to science communication in Ann Arbor Michigan.
- 2017-Present** **Senior Editor**, *Students of Applied Physics Project*, *Applied Physics Student Council*, Ann Arbor, MI.  
Develop story ideas and edit articles that PhD students write about each other's research. [Example article](#)
- 2014-2015** **President**, *Local Chapter of American Society for Engineering Education*, Ann Arbor, MI.  
Organize and run meetings, ensure that skill workshops have teachers, plan future workshops based on the needs of University of Michigan students.
- 2009-2011** **President**, *Local Chapter of Society of Physics Students*, Troy, NY.  
Organize meetings and social events, foster a community of physics students, act as intermediary between faculty and students, help organize and run engagement events in local area.

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## Selected 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](https://doi.org/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](https://doi.org/10.1039/c5sc02403j)
3. **Andrew McAllister**, Daniel Åberg, André Schleife, and Emmanouil Kioupakis, Auger recombination in sodium-iodide scintillators from first principles, *Applied Physics Letters* **106**, 141901 (2015) [doi:10.1063/1.4914500](https://doi.org/10.1063/1.4914500)

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## Selected General Audience Writing

- 2018 [Using LEDs to Tell Plants What We Want From Them](#), Harvard's Science in the News Blog.
- 2017 [Atomistic Calculations Predict That Boron Incorporation Increases The Efficiency Of LEDs](#).  
Press release for research group. Picked up by the DOE, NERSC, and Semiconductor Today.

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## Selected Presentations

### Contributed Oral 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**, Emmanouil Kioupakis, Daniel Åberg, André Schleife, Auger recombination in scintillator materials from first principles, American Physical Society March Meeting, 2015, San Antonio, TX
4. **Andrew McAllister**, Predictive modeling of quantum processes for optoelectronic devices, Physics Graduate Student Symposium, 2014, Ann Arbor, MI

### Public Engagement

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

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## Communication Training

August 2017 [ComSciCon Chicago](#), Chicago, IL.

- 2016 **Researchers Expanding Lay-Audience Teaching and Engagement (RELATE) Workshops**.
- o Over 3 months, worked on crafting messages and narratives, considering different audiences and making visual aids.
  - o Developed and produced a [YouTube video](#) highlighting my research.