

Martin Ashby Blood-Forsythe

Graduate Institution: Harvard University

Graduate Discipline: Experimental Condensed Matter Physics

Hometown: Putney, VT

Relevant SC Research: Basic Energy Sciences



Research Interest:

My current research interests are primarily focused on strongly correlated electron materials, high-temperature superconductors, and topological insulators (TIs). My interest in the physics of these materials began with a desire to research superconducting materials that could contribute to future energy technologies. This has grown into a broader appreciation of condensed matter physics. Proposals to use topological insulators in conjunction with superconductors for fault-tolerant quantum computation sparked my interest in topological insulators and TI/superconductor interfaces.

My interest in energy technologies and excitonics has also led me to

be involved in a variety of research projects aimed at improving solar cells: including dye-sensitized solar cells, self-assembled porphyrin J-aggregates, and semiconducting nanowires.

About Me:

I was born and grew up in southern Vermont. I did my undergraduate work at Haverford College in Pennsylvania, where I graduated summa cum laude. After graduating I spent a year at the University of Cambridge on a Churchill Scholarship, where I obtained a MPhil in Physics and worked in the Structure & Dynamics group under Prof. Jacqueline Cole. I have spent several years tutoring high school and undergraduate students in physics and mathematics.

At Cambridge I volunteered with a group called Science and Engineering Experience for Kids that brought local scientists and graduate students into elementary school classrooms to teach about physics and materials science topics. I just finished my first year of graduate school working in Prof. Jennifer Hoffman's lab in the physics department at Harvard University. Whether I ultimately find myself in academia or industry, my primary professional goal is to contribute to original research in areas of physics that have the potential to offer substantial technological and social benefits. Outside of research and classes, I enjoy cooking gourmet food, reading, singing, hiking, and spending time with my gigantic family.



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