Jonathan Felts

"Johnny"

Graduate Institution: University of Illinois Urbana-Champaign

Location: Urbana, IL

Graduate Discipline: Mechanical Engineering

Hometown: Buford, GA

Research Interests:

My primary research focus is maturing the field of tip-based nanometer scale manufacturing and metrology using low power and relatively low cost atomic force microscopy equipment. My particular interest within this field is to apply this discipline to create organic nano-electronic devices such as photovoltaics and optical waveguides by thermally depositing and patterning unique organic composites. I am also working with industry partners to advance cutting edge nanometer scale chemical composition IR measurements from 100 nm resolution down to 10 nm, opening up opportunities for the study of copolymer and nanoparticle composite materials that have shown potential in organic photovoltaic devices.

About me:

Jonathan Felts earned a BS degree in mechanical engineering from Georgia Institute of Technology in 2008. He received his MS from Illinois in 2009, with a thesis project entitled, "Atomic Force Microscope Cantilever with Reduced Second Order Harmonic Frequency during Tip-Surface Contact," and is currently pursuing his PhD under the advisement of MechSE professor William P. King. His research focus is in tip-based methods for nanometer scale manufacturing and metrology. In addition to earning the DOE fellowship, Felt is the recipient of the Eugene and Lina Abraham Endowed PhD Supplemental Fellowship for 2010 and a member of Pi Tau Sigma and Tau Beta Pi honor societies. He has authored or co-authored three papers and has one patent application pending.