

Arron Phillips

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Research Interests

Utilizing an interdisciplinary approach to micro and nano fabrication from synthetic techniques to characterization.

Education

Santa Fe College (Dual Enrolled during high school)	2007-2009
A.A. at Santa Fe College	2009-2011
B.S. in physics at the University of Florida	2011-Current
Over all GPA: 3.56 Major Specific GPA: 3.83	

Research Experience

1. Student Research Assistant at Lawrence Berkeley National Laboratory (LBNL), Materials Science Division, Berkeley, CA
Principle Investigator: Delia Milliron, Staff Scientist at the Molecular Foundry

January 2013-Current

- New methods for the cooperative assembly of inorganic mesoporous nanocomposites from inorganic clusters and semiconductor nanocrystals with intent to design original assembly strategies resulting in a novel class of mesoporous semiconducting materials.

Research Adviser: April Sawvel

- Using self-assembling monolayers (SAMs) to tune the work function of electrodes.

Research Adviser: Jessy Rivest

Techniques and skills: Metal thermal evaporation, spin-coating films, hydrothermal bomb use, glove box use, familiar working with nano particles, metal-oxide deposition, Dynamic Light Scattering, X-Ray Photoemission Spectroscopy (Advanced Light Source)

2. SULI intern at Lawrence Berkeley National Laboratory, Materials Science Division, Berkeley, CA

August-December 2012

Mentor: David Britt, Staff Scientist at the Molecular Foundry.

- Synthesis and characterization of metal-organic frameworks (MOFs).
- Controlling the formation of zinc imidazole frameworks (ZIFs) using metal-coordinating polymers.

Techniques and skills: Powder X-ray Diffraction, Scanning Electron Microscopy, Transmission Electron Microscopy, UV-Visible Spectrophotometer, Solvent Purification System, Schlenk line set up and use, Gas Absorption Measurements, NMR spectroscopy, and Sputter Deposition.

Teaching Experience

Tutor in the Mathematics Department of Santa Fe College

January-July 2011

Courses Taught: All levels from Algebra to Differential Equations.

Presentations

“Controlling the formation of zinc imidazole frameworks (ZIFs) using metal-coordinating polymers”, A. E. Phillips, D. K. Britt, Organic division presentation (oral) in the Molecular Foundry, Berkeley, CA, December 2012

“Controlling the formation of zinc imidazole frameworks (ZIFs) using metal-coordinating polymers”, A. E. Phillips, D. K. Britt, W. L. Queen, B. Helms, CSEE Laboratory wide undergraduate poster session, Lawrence Berkeley National Laboratory, Berkeley, CA, December 2012

Honors, Awards, and Scholarships

1. Graduated from Santa Fe College with honors

2011

2. Florida Bright Futures Scholarship

2009- Current

Additional Interests Include

Rock climbing, photography, painting, drawing, playing guitar, hiking, and learning new subjects.