Melody Morris

150 Academy St
Newark DE 19711
morrism@udel.edu
(978) 495-1848

EDUCATION

University of Delaware Fall 2013-Present
Ph.D. Chemical Engineering
Cumulative GPA: 4.0

California Institute of Technology Fall 2009-June 2013
B.S. with Honors in Chemical Engineering
Cumulative GPA: 3.6

EMPLOYMENT HISTORY

Graduate Research Assistant under Professor Thomas H. Epps, III November 2013-Present
- Thesis Topic: Block polymers for lithium-ion battery electrolytes
- Synthesized novel ion-conducting polymers using ATRP and anionic polymerization techniques
- Characterized materials by proton NMR, size-exclusion chromatography (SEC), small-angle x-ray scattering (SAXS), neutron reflectivity (NR), AC impedance spectroscopy, and transmission electron microscopy (TEM)
- Selected to the 2016 National School on Neutron and X-ray Scattering at Argonne National Lab and Oak Ridge National Lab
- Mentored two undergraduate students (Bonnie Limpawuchara, Christine Castagna)
- Laboratory safety manager

Larson Scholars Undergraduate Research Fellow with Professor Robert H. Grubbs June 2012-2013
- Researched the self-assembly of asymmetric brush block copolymers for photonic crystals
- Performed polymerizations *via* ATRP and ROMP,
- Characterized samples with NMR, SEC, sample casting, and scanning electron microscopy
- Received a grade of A for senior thesis

Summer Undergraduate Research Fellow with Professor Bradley Olsen (MIT) Summer 2010, 2011
- Researched the use of elastin-like proteins as a method for directing enzyme self-assembly
- Performed cloning, protein expression, protein purification, sample casting, and SAXS experiments to determine the efficacy of the self-assembly
- Researched the effect on rheological properties of a physical double network hydrogel for artificial cartilage

TEACHING EXPERIENCE

Graduate Teaching Assistant for graduate level Introduction to Polymers Fall 2015
- Graded weekly homework assignments and created solution keys
- Provided weekly office hours and review sessions before exams
- Designed and presented two lectures (Kinetics of Step Growth Polymerization, Overview of Controlled Radical Polymerizations)