

Poly 308

Education

MS Chemistry, Concentration in Polymer Chemistry
University of Oregon, Eugene, OR

In Progress

BS Chemistry, with Departmental Honors (GPA: 3.7)
San Jose State University, San Jose, CA

May 2017

Research Experience

Nanotechnology Research Lab, Dr. Abraham Wolcott
San Jose State University, San Jose, CA

October 2015 – May 2017

- Member of Dr. Wolcott's inaugural nanoparticle (NP) research team responsible for laboratory set-up, taking inventory of and troubleshooting equipment, planning project trajectories, and acquiring supplies
- Synthesized and analyzed silica NP size via DLS and SEM, after being trained by staff scientists at Lawrence Berkeley National Laboratory, and determined surface chemistry via FT-IR analysis to verify proper dimensions and functionality

Biological Chemistry Research Lab, Dr. Lionel Cheruzel
San Jose State University, San Jose, CA

December 2013 – August 2014

- Ran enzymatic photocatalyzed reactions and monitored the enzyme efficiencies and reaction rates via UV-Vis spectroscopy
- Extracted product using organic manipulation techniques, performed and analyzed GC-MS data (Kato et. al), to verify region- and stereospecific structure

Non-Technical Work Experience

Chemistry Workshop Instructor

January 2014 – May 2017

San Jose State University, San Jose CA

- Led 20-student workshops to help students practice problem-solving techniques and understand lecture concepts in a friendly and less intimidating environment
- Created worksheets on current lecture topics with problems of varying difficulty to facilitate learning and demonstrated and explained how to solve them at the end of each session

Publications & Presentations

M. Kato, D. Nguyen, M. Gonzalez, A. Cortez, S. Mullen, L. Cheruzel*. Regio- and stereoselective hydroxylation of 10-undecenoic acid with light-driven P450 BM3 biocatalysts yielding a valuable synthon for natural product synthesis. *BioOrg. Med. Chem.* **2014**, *22*, 5687-5691.

Annual Biomedical Research Conference for Minority Students

November 2016

Tampa, FL

Poster presentation of "Core-Shell SiO₂-Gold Nanoparticles and Infrared Molecular Detection"

ACS Northern California Undergraduate Research Symposium

May 2014

San Francisco, CA

Poster presentation on "Light-Driven Reactions with P450 Enzymes"

Awards/Honors

NHI RISE Undergraduate Trainee
(Research Initiative for Scientific Enhancement)

January 2014

San Jose State University Deans Scholar Award

May 2014, 2015, & 2016

Volunteer Experience:

International Student Volunteers

June 2013

Dominican Republic

- Spent 2 weeks as a volunteer in rural areas of the Dominican Republic running a day camp for local elementary-aged children and also setting cement foundations into locals' homes
- Communicated fluently in Spanish with local workers and acted as translator for the group