

Erik Cheng

<https://www.linkedin.com/in/erikscheng/>

Email : cheng@utexas.edu

Mobile :XXXXXXXXXX

EDUCATION

- **University of Texas at Austin** Austin, TX
Pursuing PhD in Materials Science and Engineering; GPA: N/A Aug. 2018 – Present
- **University of California, Berkeley** Berkeley, CA
BS in Chemistry; GPA: 3.44 Aug. 2014 – May 2018

RESEARCH EXPERIENCE

- **University of Texas at Austin** Austin, TX
Graduate Research Assistant August 2018 - Present
 - Using DFT calculations to understand structure and surface chemistry of solid state materials in the group of Dr. Gyeong Hwang.
- **Nano Precision Medical** Emeryville, CA
Nanomaterials Intern Jun 2017- Aug 2017
 - Improved permeance model of porous films for use in analysis of permeometry data by accounting for pore constriction from adsorb layer formation. Incorporated model into Python script for automated parametric fitting.
 - Introduced improvements to, and validated, theoretical model of current generation in titanium anodization.
 - Designed and conducted experiments to determine effect of two step anodization on resulting titania characteristics. Characterized films with Wyko profilometry and various imaging tools, including skimage and ImageJ.
- **Sandia National Labs** Albuquerque, NM
R&D Student Intern June 2016 - August 2016
 - Studied effects of anodization conditions on results of aluminum anodization. Maintained anodizing solutions and equipment and quantified experimental results using weight, digital optical microscopy, and profilometry.
 - Studied effects of parameters in electroplating and patterning pipeline on quality of patterned electroplated gold.
 - Created electrodeposited patterns of gold on a nickel substrate, studying the effect of varying factors in template creation, strikes, and electrodeposition bath. Worked in Class 100 clean room and with strong acids/bases.
- **Saykally Group** Berkeley, CA
Undergraduate Research Assistant May 2015- May 2017
 - Studied the evaporation behavior of aqueous solutions of acids and bases using Raman thermometry techniques.
 - Maintained and operated experimental apparatus, including laser/optics, liquid pumps, and vacuum chamber.
 - Determined quality of data by observation of Raman spectrum features and analysis of data through processing in MATLAB and Igor, assessing results using theoretical cooling models.

TEACHING EXPERIENCE

- **University of California at Berkeley** Berkeley, CA
Undergraduate Student Instructor Aug 2017-May 2018
 - Delivered weekly lectures on Python programming and inferential statistics to a section of 30 students.
 - Supervised programming and statistics lab exercises, addressed student questions and managed technical issues.
 - Created instructional documents, practice and exam problems, and assisted in general course responsibilities.
- **University of California at Berkeley** Berkeley, CA
Course Tutor Jan 2017-May 2017
 - Led weekly tutoring sections of 5 students, reviewing and reinforcing concepts of Python programming and inferential statistics.
 - Held office hours, graded homework, and assisted in preparation of course materials and software.

PROJECTS AND PUBLICATIONS

- **Surprising Effects of Hydrochloric Acid on the Water Evaporation Coefficient Observed by Raman Thermometry:** Rizzuto, A. M., Cheng, E. S., Lam, R. K., Saykally, R. J. *J. Phys. Chem. C* (2017)
- **Understanding Bias in Sampling Users with Twitter's Streaming API :** Independent group study supervised by Prof. Deborah Nolan assessing sampling biases in Twitter's Streaming API. Performed using R. *Poster presented at UC Berkeley College of Chemistry Undergraduate Research Fair.* Berkeley, CA May 2017
- **Anodization as a Low Cost, Scalable, and Tunable Nanoscale Manufacturing Technique:** Cheng, E. S., Perez, C. *Presented at Rio Grande Symposium for Advanced Materials.* Albuquerque, NM, October 2016

AWARDS AND HONORS

- **Cockrell School of Engineering Graduate Fellowship** Fall 2018-Spring 2019
Awarded for outstanding academic performance to first year graduate students. University of Texas at Austin
- **Dean's List** Fall 2017
Term GPA in top 10 percent of undergraduate students in College of Chemistry. University of California at Berkeley