Matthew Chagnot | PhD. Candidate

Raleigh NC, 27607 | 817.962.9633 | mschagno@ncsu.edu | github.com/mchagnot

Skills & Techniques

Electrochemical Characterization (CV, Chronoamperometry, EIS, PITT), Raman Spectroscopy, Confocal Laser Scanning Profilometry, X-ray Diffraction, Transmission Electron Microscopy, Materials Chemistry, MATLAB-based diffusion modeling

Research Experience

Augustyn Group — NC State University   August 2019 — August 2024

Graduate research on lithium and proton insertion in transition metal oxides. TMO synthesis and electrochemical characterization. Built a diffusion-based computational model for cyclic voltammetry. **Three publications**.

3DAFSN Lab — University of Pennsylvania   Summer 2018

Undergraduate research. Manual processing of nanoporous tin and alumina for slurry electrodes and coin-cell assembly. Galvanostatic charge-discharge and cyclic voltammetry analysis of Na-ion cells.

Ringe Group — Rice University   September 2016 — January 2018

Undergraduate research. Synthesis, characterization, and galvanic replacement of plasmonic nanoparticles. **One publication**.

Education

North Carolina State University — Materials Science Engineering | PhD. Candidate   August 2019 — August 2024

Raleigh, NC

Rice University — BS, Materials Science Engineering | Business Minor   May 2019

Houston, TX

Professional Organizations

Society of Hispanic Professional Engineers- NC State University Chapter   April 2021 — Present

Leadership role: Graduate Ambassador Chair 2021-2022

Awards

3 Poster Awards   2020 — 2022

Louis Stokes Alliance for Minority Participation Bridge to the Doctorate Fellowship   August 2019