

Cyra Gallano

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Education

Drexel University

B.S./M.S. in Materials Science and Engineering
Member of Pennoni Honors College, Drexel University

Philadelphia, PA
Anticipated Graduation: June 2023
GPA: 3.96

STEM School Highlands Ranch

High School Diploma
STEM Scholar

Highlands Ranch, CO
2014-2018
GPA (Weighted/Unweighted): 4.27/3.73

Research Experiences

Argonne National Laboratory

Research Aide, Materials Science Division

Lemont, IL
April 2020 – September 2020

- Conducted several literature reviews on sputtering superconducting nitrides, gradient antireflection coatings, and magnetron sputtering
- Organized weekly journal club meetings with other students to discuss diverse research topics such as environmental science, magnonics, optics, superconducting materials, and acoustic levitation
- Modeled gradient and multilayer antireflection coatings via transfer matrix method
- Created and presented slides weekly on cosmology, radio frequency detectors, optics, and nanofabrication topics

Materials Electrochemistry Group

STAR Scholar, MSE Department, Drexel University

Philadelphia, PA
June 2019 – Present

- Performed oxidation experiments to investigate synthesis methods of transition metal carbide/transition metal oxide nanostructures for high performing electrodes in sodium ion battery systems
- Synthesized transition metal carbides via etching to be used as precursor in nanostructure creation
- Plotted and normalized XRD scans in Visual Studio Code Python to present during group meetings
- Presented a poster at STAR Scholars Summer Showcase symposium to the general public
- Prepared carbide transformation results for a manuscript that is currently under review

Publications

1. P. Ridely, **C. Gallano**, R. Andris, C. Schuck, Y. Gogotsi, and E. Pomerantseva, "MXene-Derived Bilayered Vanadium Oxides with Enhanced Stability in Li-Ion Batteries." *ACS Applied Energy Materials* (2020) **3**(11), 10892-10901.

Presentations

Oral

1. **C. Gallano** and E. Pomerantseva. "Reconstructing Layered Framework of 2D Transition Metal Carbides (MXenes) via Modification of Anionic Sublattice toward Formation of New Oxides". *National Conference on Undergraduate Research*, April 2021, Virtual.

Honors and Awards

- Goldwater Scholarship Nominee January 2021
- STAR Scholar Summer 2019
Competitively selected program that funds first year students to complete 350 hours of faculty mentored research over ten weeks in the summer quarter, before presenting results in a campus-wide poster session.
- Velay Fellow Summer 2019
1 of 10 rising sophomores selected for this summer-long cohort program for women in STEM interested in research careers. Velay Fellows participate in cohort events and mentorship experiences to help them reflect on and pursue their goals.

- Drexel University Dean's List Fall 2018 – Present
- Drexel University Dean's Scholarship Fall 2018 – Present

Skills

X-Ray Powder Diffraction Hydrothermal and wet chemical synthesis
 Visual Studio Code Python

Professional and Leadership Activities

- Member, Tau Beta Pi Honors Fraternity 2020 – Present
- Tutor, Academic Center for Engineers 2020 - Present
- Tutor, Engineering Learning Community 2019 – 2020
- Mentor, Engineering Learning Community 2019 – 2020
- Outreach Chair, Drexel Newman Catholic Community 2018 - 2019
- Member, American Institute of Aeronautics and Astronautics 2018 – Present
- Stellar Xplorers Competition 2017-2018
- President, STEM School Highlands Ranch Technology Student Association 2017- 2018