

# Paola V. Méndez González

paola.mendez@utexas.edu | www.linkedin.com/in/paola-mendez

## EDUCATION

**Ph.D. Chemical Engineering**, University of Texas at Austin Expected May 2029  
**B.S. Chemical Engineering**, University of Puerto Rico Mayagüez Campus December 2023  
General GPA: **3.83/4.00** || Major GPA: **4.00/4.00**

## RESEARCH EXPERIENCE

**Graduate Research Assistant**, *Profs. Delia Milliron & Kent Zheng*, UT – Austin, TX 10/2024 – Present

- Studying ion intercalation in bimetallic oxide nanocrystals to develop novel battery chemistries.

**Undergraduate Research Student**, *Prof. David Suleiman*, UPRM – Mayagüez, PR 01/2020 – 05/2023

- Synthesized and characterized (FTIR and TGA) a blend membrane based on a combination of a triblock copolymer with isopentilamine and embedded MnO<sub>x</sub> composites for degradation of common contaminants in water.
- Tested capture and degradation of the model compounds under UV lighting using FTIR and measured solution uptake using immersion/weight gain of the sample.

**Undergraduate Research Student**, *Prof. Yossef Elabd*, Texas A&M – College Station, TX 06/2023 – 07/2023

- Evaluated poly(ethylene oxide) based solid polymer electrolytes (SPEs) to transport lithium ions and achieve all-solid state rechargeable lithium batteries.
- Investigated the effect of salt concentration and polymer blend composition of SPE films on thermal (DSC) and electrochemical (EIS) properties to accurately control added salt in the system for enhanced properties.

**Undergraduate Research Student**, *Prof. Jonathan Pokorski*, UCSD – La Jolla, CA 06/2022 – 07/2022

- Integrated living matter with polymeric materials to obtain unique functionalities beyond genetic means.
- Synthesized, characterized (NMR, FPLC, gel electrophoresis), and coupled norbornene-PEG-amine to lignin to create cell-polymer hybrid material that allows for continuous production of biologics.

**Undergraduate Research Student**, *Prof. Theoden Netoff*, UMN – Minneapolis, MN 06/2021 – 07/2021

- Examined micro-magnetic stimulation technology for improved implantable neuromodulation devices.
- Tested novel micro-coils that deliver high intensity but focal magnetic fields to stimulate the rat brain using calcium imaging and electrophysiology.

## INDUSTRIAL EXPERIENCE

**Polymer Process Development Intern**, Eastman Chemical – Kingsport, TN 01/2022 – 05/2022

- Initiated a small capital project to assess process shutdowns/production losses, collaborated with design engineers to automate pump discharge valves, and conducted a project risk analysis and assigned a prioritization value.
- Identified 19 valves installed on highly corrosive pipe service carrying hot acid to reduce process upsets.

## LEADERSHIP

**Executive Vice-President – Society of Hispanic Professional Engineers**, UPRM 05/2022 – 05/2023

- Organized Women in Leadership Summit, participation in Regional/National conferences, hurricane relief fund, and SHPE Jr. outreach activities.

**Professional Development Director – Society of Hispanic Professional Engineers**, UPRM 05/2021 – 05/2022

- Coordinated a professional development activity with 8 participating companies and 100 registered members.

**Social Engagements Director – Society of Hispanic Professional Engineers**, UPRM 08/2020 – 05/2021

- Coordinated social events that promote peer to peer networking and expand SHPE UPRM's network.

**Varsity Swimming Team – Liga Atlética Interuniversitaria**, UPRM 08/2018 – 05/2023

- Committed ~25 hours per week to trainings, meetings, and meets while maintaining full course load.

## SKILLS

- Fully bilingual (English and Spanish)
- Programming/Modeling (Python, MATLAB, Aspen Plus)
- Characterization (FTIR, TGA, NMR, DSC, EIS)
- Ex-vivo (Brain slicing and Electrophysiology)

## AWARDS & POSTER PRESENTATIONS

[1] **Provost's Graduate Excellence Fellowship**, University of Texas at Austin. (2024).

[2] **Honorable Mention in National Science Foundation Graduate Research Fellowship Program**. (2024).

[3] P Méndez, R Sun, Y Elabd, "Impact of Polymer Composition and Salt Concentration on Poly(ethylene oxide)/Poly(methyl methacrylate)/Salt Blend Polymer Electrolytes." **2<sup>nd</sup> Place in AIChE Annual Student Conference**, Orlando, FL. (2023).

[4] **Athletic Varsity Swimming Scholarship**, University of Puerto Rico Mayaguez (2018-2023)