Jalianet Román Matías

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EDUCATION

Bachelor of Science in Chemistry
University of Puerto Rico – Mayagüez Campus (UPRM) **Graduation Date**: May 2023
Specialty Courses: Environmental Chemistry, Biochemistry, Drug Synthesis, Human Physiology

RESEARCH EXPERIENCE

PREM-CiE^{2}M Research in Material Sciences **October 2021-Present**
Dr. Joselyn Del Pilar, Associate Professor of UPRM

- Nanoplatelet synthesis using earth-abundant metals (CuS)
- Implementation of biomolecules as ligands for nanoparticle precursor.
- Manganite-based perovskites for dye-sensitized solar cells applications.
- Characterization techniques such as XRD, UV-Vis, and ATR IR were applied during the research.
- Train new undergraduate researchers in co-precipitation procedures for spinel-based photovoltaic technologies.

Research Experience for Undergraduate Students **June 2022-August 2022**
Sustainable Catalysis Research
Dr. Ive Hermans, University of Wisconsin-Madison

- Used *in situ* Raman spectroscopy to study Ag-based catalyst for propylene epoxidation using molecular oxygen.
- *Operando* Mass Spectrometry was used for catalytic conversion data of propylene oxide.
- Experience in characterization techniques such as Raman, UV-Vis, H-NMR, and Mass Spectrometry was acquired.

Phytoremediation research **August 2021-December 2021**
Dr. Carmen A. Vega Olivencia, professor of UPRM

- A phytoremediation ex situ technique was developed to extract Levofloxacin and Ciprofloxacin from different aqueous environments using seeds.
- Parts per million conditions were prepared in a laboratory environment.

PRESENTATIONS

Román J., Jansen J.H., Hermans, I. *Operando Raman spectroscopic studies on the active species for promoted Ag-based propylene epoxidation with molecular oxygen.* Poster presented at Southeastern Regional Meeting ACS. October 21, 2022. San Juan, Puerto Rico. (Poster: #803)

Román J., Jansen J.H., Hermans, I. *Operando Raman spectroscopic studies on the active species for promoted Ag-based propylene epoxidation with molecular oxygen.* Poster presented at Conference Across MRSEC-PREM, The Ohio State University. October 13, 2022. Columbus, Ohio.

Román J., Jansen J.H., Hermans, I. *Operando Raman spectroscopic studies on the active species for promoted Ag-based propylene epoxidation with molecular oxygen.* Poster at Summer Research Experience at the University of Wisconsin-Madison. August 4, 2022. Madison, Wisconsin.

Román J., Santos R., Del Pilar J. *Manganite-based Oxide Materials for Dye-sensitized Solar Cells.* Poster Presented at 10th Annual Partnership for Research and Education in Materials Symposium; May 6, 2022; Humacao, Puerto Rico

Santos R., **Román J**., Del Pilar J. *Revisiting Transition Metal Oxides as Photo-active Layer in*

Photovoltaic Devices. Presented at Puerto Rico Interdisciplinary Scientific Meeting; April 9, 2022; Humacao, Puerto Rico

LEADERSHIP ROLES

Come Colegial

President | 2022 – Present

A student organization created to eradicate food insecurity among university students.

- Seek funding for the organization's beneficiaries.
- Organize activities to meet students' nutritional needs.
- Host meetings with UPR academic senate and other Come UPR chapters.
- Prepare proposals to obtain government agencies' donations.
- Organize community service activities for 200^{+} volunteers.

Secretary | 2021 – 2022

- Plan activities with the organization's president and counselor.
- Maintain up-to-date information of 200^{+} volunteers and 60^{+} beneficiaries.
- Program activities weekly for board members and volunteers.

American Chemical Society – UPRM Chapter

Vice-president | 2022 – Present

- Work alongside the president to conduct and delegate tasks among board members.
- Contact national speakers to hold conferences on different Chemistry fields.

Spokesperson | 2021 – 2022

- Arrange fundraiser activities for the organization.
- Work alongside the green chemistry committee.

ADDITIONAL INFORMATION

- Fully Bilingual – English and Spanish
- Completed 100^{+} hours of volunteer work
- Proficient in Microsoft Office and Google Suite software