

Biographical Sketch

Liz N. Santiago-Martoral

Current status:

PhD Candidate

Dept. of Chemistry, UPR-Río Piedras

Email: liz.santiago3@upr.edu

Education:

2010-2016 BS Chemistry, UPR-Río Piedras

2016- present PhD Chemistry

Current Research interest:

My research is focused on developing an integral system using Lyotropic Liquid Crystals (LLC) as host for enzymes to explore the functionalization of water remediation membranes. The goal is to design a material that can provide a critical understanding of mass transport, selective molecule rejection, and serve as an energy source during osmotically driven processes.

Research Experience:

2016 – Present Graduate Research Assistant- UPRRP, Mentor: Dr. Eduardo Nicolau

Fall 2017 Graduate Intern- NASA Ames Research Center, Mentor: Michael Flynn

Summer 2015 Undergraduate intern-NASA Ames Research Center, Mentor: Enid Contés

2014-2016 Undergraduate Research Assistant- UPRRP, Mentor: Dr. Eduardo Nicolau

Other Activities and Professional Affiliations:

2018 BioXFEL X-ray Data Collection and Data Analysis Workshop

2017 UPRR Education and Professional Studies: Future Entrepreneurs Workshop

2017- present College of Chemist of Puerto Rico (CQPR)

2016 Institute on Teaching and Mentoring Conference- Proposal Writing Workshop

2016- present Chemistry Graduate Association

2014- present American Chemical Society (ACS)

Honors:

2020 Graduate Research Initiative for Scientific Enhancement (RISE) Fellowship

2019-2020 NASA EPSCoR Grant

2018-2019 NASA P.R. Space Grant Fellowship

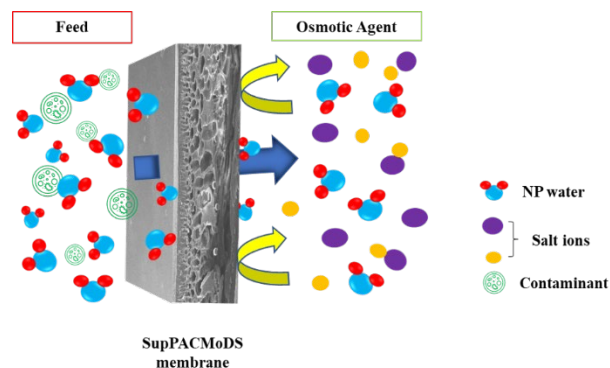
2016-2018 Bridge to Doctorate Fellowship, PRLSAMP

2015 PRLSAMP Sponsored Summer Research Grant

2014-2016 NASA P.R. Space Grant Fellowship

Graduate Presentations

Implementation of lyotropic liquid crystals for the functionalization of bio-reactive forward osmosis membranes at the ACS Senior Technical Meeting at Mayaguez Resort and Casino in Mayaguez, Puerto Rico. November 9, 2019



Biographical Sketch

Biomimetic water purification membranes using Liquid crystals at the Junior Technical Meeting and the Puerto Rico Interdisciplinary Scientific Meeting (JTM/PRISM) at the University of Puerto Rico Mayaguez, Mayaguez. May 4, 2019

Novel biomimetic membrane for water filtration purposes using Lipidic Cubic Phases (LCP's) at the 6th Annual BioXFEL International Conference and External Advisers' Meeting at the Hyatt Regency Mission Bay in San Diego, C.A. February 12-14, 2019

Evaluation of Bicontinuous cubic phase/enzyme interaction as an active layer material for water purifications applications at the ACS Senior Technical meeting at Costa Bahia Hotel in San German, Puerto Rico. November 9-11, 2018

Assessment of Bicontinuous cubic phases as reactive biomimetic membrane material for the degradation of urea in water remediation applications at the Gordon Conference: 2018 Bioinspired Materials at Les Diablerets Conference Center in Les Diablerets Switzerland. June 24-29, 2018

Pairing Lipidic Cubic Phases (LCP's) with Enzymes to Prepare Biomimetic Membranes for Applications in Water Remediation at the Junior Technical Meeting and the Puerto Rico Interdisciplinary Scientific Meeting (JTM/PRISM) at the University of El Turabo, Caguas. April 28, 2018

Protein-phospholipids conjugates for urea reactive membranes in water purification applications in the American Chemical Society National Meeting at Ernest N. Morial Convention Center, New Orleans. March 18, 2018

Protein phospholipids conjugates for the design of urea reactive membranes for water reclamation applications in the Lilly Academy Technical Forum at Puerto Rico Convention Center, San Juan. March 24, 2017

Journal Publications

1. Cruz-Tato, P., Ortiz-Quiles, E., Vega-Figueroa, K., **Santiago-Martoral, L.**, Flynn, M., Diaz-Vazquez, L., Nicolau, E. Metalized Nanocellulose Composites as a Feasible Material for Membrane Supports: Design and Applications for Water Treatment. *Env. Sci. & Tech.* **2017**, 51, 4585-4595
2. **Santiago-Martoral, L.**, Figueroa, A., Nicolau, E. Lyotropic Liquid Crystal-based Membranes for Water Remediation: Fabrication, Characterization and Performance Evaluation. *ACS Omega.* **2020**, 5, 29, 17940–17946