



# Stephanie L. Mora Garcia

*EXPAND Mentor*

## HONO Formation in the Marine Boundary Layer

Vicki Grassian/Grassian Lab (2022-2023)

### What you will do

Our lab seeks to better understand the chemistry of the atmosphere by recreating specific environments in the lab. This allows for controlled experiments where we can determine mechanistic information on the molecular level on significant atmospheric chemistry processes. In our lab, you will learn about the chemistry of the marine boundary layer and the chemistry occurring in indoor and geochemical environments. Specifically, you will be working with me on a project that aims to deduce the significance of HONO formation in the marine boundary layer (MBL) - the part of the atmosphere that is closest and interacts with the ocean surface. HONO is a pollutant gas but it is mainly studied for its role as a major source of hydroxyl radicals, the most potent oxidizing molecule in the troposphere. We use a spectroscopic instrument made in our lab to measure the amount of HONO that different sea spray aerosol (SSA) model composition solutions form. Come join me in a study where we are advancing the knowledge of the oxidizing potential of our atmosphere!

### Skills you will acquire

- Basic experimental atmospheric and analytical lab techniques as well as the use of a niche lab-made instrument (Incoherent Broadband Cavity Enhanced Absorption Spectrometer)
- Troubleshooting analytical chemistry instruments
- Creating peer review article level figures
- Preparing and delivering scientific presentations
- Software: Excel, Igor, Matlab
- BONUS: Engage in EDI related conversations in higher education with me!