

**Masters student (funded) position at City University of New York (CUNY),  
Advanced Science Research Center (ASRC).**

The City University of New York is the nation's largest urban public university, and The Advanced Science Research Center (ASRC) is a 200,000 square-foot facility in upper Manhattan (New York City) designed to promote collaboration among scientists in five areas of global research and innovation: nanoscience, photonics, structural biology, neuroscience, and environmental sciences.

The Environmental Sciences Initiative and the Advanced Laboratory for Chemical and Isotopic Signatures at the ASRC is welcoming applications for a masters student to advance studies related to the dynamics and interactions of (micro)plastic materials in terrestrial soil environments. We are using carbon stable isotopes ( $^{13}\text{C}$ ) to study microplastic decomposition, assimilation into biomass (phospholipid fatty acids, PLFAs), and mineralization to end-point gases,  $\text{CO}_2$  and  $\text{CH}_4$ . Additional spectroscopy-based approaches (i.e., synchrotron-based scanning transmission X-ray microscopy and near-edge X-ray absorption fine-structure spectroscopy) will be used to account for the plastics' reactivity and association with soil aggregates. These tools along with isotopic mass balance approaches will help establish an understanding of plastic decomposition, and include a modeling of their assimilation and mineralization, transformation to lower weight products, and final conversion to carbon dioxide and methane in soil.

This project is supported by the National Science Foundation and includes collaborators at Columbia University, Lamont-Doherty Earth Observatory.

### **Responsibilities**

- Perform laboratory chemical work and analytical measurements using mostly IRMS and GCMS
- Maintain experiments and conduct sample collection
- Analyze and interpret data
- Preparing data for presentation, drafting and writing reports

### **Qualifications**

- BS degree in geochemistry, chemistry, soil science, earth/environmental sciences, or other relevant fields
- Previous laboratory-based research experience is highly desirable
- Basic understanding and/or prior use of GCMS, FTIR/Raman spectroscopy, isotope ratio mass spectrometry (IRMS), elemental analysis

### **Compensation**

The exact level of compensation for this appointment depends on several factors but will include a combination of salary (starting at ~\$25K/year, part-time) and/or tuition waivers.

### **Deadline**

Review of applications will start May 15, 2024. Anticipated start date is prior to August 15, 2024.

### **Application**

Interested candidates should submit the following materials to **Dr. Brian Giebel** ([bgiebel@gc.cuny.edu](mailto:bgiebel@gc.cuny.edu)) in a single pdf file:

- Cover letter (1-2 pages) that describes your experience and motivation
- Unofficial Transcripts
- CV or resume (including accomplishments and a list of publications, if applicable)
- Contact information (name, position, institution, email) for 2 references.

The qualified student applicant is expected to be enrolled in the Environmental and Atmospheric Sciences Masters Program at CUNY City College of New York and will have to submit a separate application to this program. This must be done prior to July 1, 2024 and in coordination with Dr. Giebel.

*We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin, disability status, protected veteran status, or any other characteristic protected by law.*