

**Postdoctoral Associate 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 Postdoctoral Associate to advance studies related to the dynamics and interactions of (micro)plastic materials in terrestrial soil environments. We are using carbon stable isotopes (^{13}C) to study microplastic decomposition, assimilation into biomass (phospholipid fatty acids, PLFAs), and mineralization to end-point gases, CO_2 and 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

- Conduct independent research leading to quality publication(s)
- Perform laboratory chemical work and analytical measurements using mostly IRMS and GCMS
- Conduct sample collection and processing
- Analyze data and interpret data
- Some mentorship of undergraduate and master students

Qualifications

- PhD degree (or complete before Sept 1, 2024) in geochemistry, chemistry, soil science, earth/environmental sciences, or other relevant fields
- Prior work in a geochemistry laboratory, including experience with PLFA extractions/analysis and/or CO_2/CH_4 measurements
- Hands-on use of isotope ratio mass spectrometers and their peripherals (GC Isolink, Elemental Analyzer, Gas Bench, and PreCon), knowledge of GCMS, Py-GCMS, FTIR/Raman and other spectroscopies
- Strong quantitative skills and demonstrated written and verbal communication skills
- Coursework in polymer science and/or green chemistry is also desirable

Compensation

The compensation for this full-time position is ~\$60-65K/year (a 2-year position), including health benefits and PTO

Deadline

Review of applications will start May 15th, 2024. The 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) in a single pdf file:

- Cover letter (up to 2 pages) that describes your experience and motivation
- CV including list of publications and other accomplishments
- Contact information (name, position, institution, email) for 3 references.

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.