

**Opportunity Title:** EPA Fellowship for Microplastic Research: Raman Analytical

Analysis

**Opportunity Reference Code:** EPA-ORD-CEMM-ACESD-2022-02

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-ORD-CEMM-ACESD-2022-02

**How to Apply** *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. All transcripts must be in English or include an official English translation. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations. Click [here](#) for detailed information about recommendations.

All documents must be in English or include an official English translation.

**Application Deadline** 11/25/2022 3:00:00 PM Eastern Time Zone

**Description** **\*Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

**EPA Office/Lab and Location:** A research project training opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Measurement and Modeling (CEMM), Atlantic Coastal Environmental Sciences Division (ACESD) located in Narragansett, Rhode Island.

ACESD conducts research to enhance the understanding of the effects of human activity on land and waters of the Atlantic seaboard. Researchers collect and analyze data to provide tools for diagnosing and predicting the effects of this activity on aquatic resources and wildlife. ACESD provides research support to EPA Program & Regional Offices and state & local governments. For additional information regarding the Atlantic Coastal Environmental Sciences Division, visit the home page at <https://www.epa.gov/aboutepa/about-atlantic-coastal-environmental-sciences-division>.

**Research Project:** Emerging contaminants including micro- and nanoplastics, are an increasing concern in our Nation's waterways. Method development for detection in environmental matrices and collection of basic information on fate and effects are critical to understanding and quantifying the risk of these growing emerging contaminant. In collaboration with a team of U.S. EPA scientists, the research participant will collaborate on experiments designed to develop methods to understand the fate and effects of micro- and nanoplastics. Our laboratory has several research efforts including method development for detecting and identifying micro- and nanoplastics in complex environmental matrices, source tracking of



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micro- and nanoplastic particles, and development of methods to evaluate changes in marine benthos from micro- and nanoplastic and other contaminant exposures.

The research participant will have the opportunity to be part of many aspects of on-going research projects including micro- and nanoplastics method development, and measuring impacts to marine benthic ecology. In addition, the research participant will have an opportunity to learn the many aspects of laboratory organization and maintenance necessary to implement research projects. The research participant will benefit from participating as part of the research U.S. EPA team, including attending and contributing to team meetings and discussions, and communicating their own research to the team. In addition, the research participant will learn the correct way to maintain and organize laboratory data and information, including physical samples, laboratory notebooks, and electronic files. The research participant will receive guidance in how to be compliant with all laboratory records management policies and requirements.

**Learning Objectives:** The research participant will develop skills in planning, conducting, and communicating scientific research in the context of a significant real-world environmental problem. The research participant will expand their knowledge concerning emerging contaminant pollution and related environmental issues in the coastal marine environment, and learn about research careers in general and bench-science method development in particular. The research participant will have opportunities to present research findings at major society conferences and to interact with a broad group of scientists at the U.S. EPA and elsewhere. The research participant will have latitude in exercising independent initiative and judgment in the research commensurate with the demonstrated level of training, expertise and experience.

**Mentor(s):** The mentor for this opportunity is Robert Burgess ([Burgess.robert@epa.gov](mailto:Burgess.robert@epa.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date: 2022.** All start dates are flexible and vary depending on numerous factors. Click [here](#) for detailed information about start dates.

**Appointment Length:** The appointment will initially be for one year and may be renewed up to four additional years upon EPA recommendation and subject to availability of funding.

**Level of Participation:** The appointment is full-time.

**Participant Stipend:** The participant will receive a monthly stipend commensurate with educational level and experience. Click [here](#) for detailed information about full-time stipends.

**EPA Security Clearance:** Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

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**ORISE Information:** This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and EPA. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5 year membership to the National Postdoctoral Association (NPA).








The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

**Questions:** Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process please email [ORISE.EPA.ORD@orau.org](mailto:ORISE.EPA.ORD@orau.org) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a bachelor's (plus 2 years experience), master's, or doctoral degree in one of the relevant fields (Chemistry, Chemical-biological Sciences, Civil Engineering, Environmental Engineering, Chemical Engineering, Chemical Oceanography, Environmental Sciences), or be currently pursuing a master's or doctoral degree. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Research experience in analytical methods, including Raman spectroscopy, analytical chemistry, oceanography, and the environmental sciences
- A strong background in laboratory experience

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Communications and Graphics Design** ([1](#) )
    - **Earth and Geosciences** ([7](#) )
    - **Engineering** ([10](#) )
    - **Environmental and Marine Sciences** ([14](#) )
    - **Life Health and Medical Sciences** ([6](#) )
    - **Science & Engineering-related** ([1](#) )