

Opportunity Title: EPA Organic Materials in Polymer Consumer Products

Fellowship

Opportunity Reference Code: EPA-ORD-CESER-LRTD-2020-03

Organization U.S. Environmental Protection Agency (EPA)

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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 8/17/2020 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 opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Solutions and Emergency Response (CESER), Land Remediation and Technology Division (LRTD) located in Cincinnati, Ohio.

Research Project: The research participant will be conducting research experiments, analyzing data, and writing peer-reviewed journal articles. This research project will be to study the transformations of nano- and microplastics, pesticides, and persistent organic pollutants. The primary focus of this research project will be on nano- and microplastic environmental contamination. Secondary focus will be on organic pesticide interactions with nano-fertilizers and nano-pesticides.

Learning Objectives: The research participant will learn how to conduct research on the characterization and quantification of anthropogenic organic materials to understand their chemical behavior, fate, transport, transformation, and adverse effects on environmental and human health. There may be future learning opportunities involving halogenated persistent organic pollutants (POPs). The research participant will have access to a large array of analytical/physical technologies in their research activities, including, but not limited to Gas Chromatography – Tandem Mass Spectrometry (GC-MS-MS), Liquid



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Chromatography – Tandem Mass Spectrometry (LC-MS-MS), Transmission Electron Microscopy (TEM), Dynamic Light Scattering (DLS), Fourier Transform Infrared Spectroscopy (FTIR), microwave technology, X-Ray Absorption Spectroscopy (XAS), X-Ray Diffraction (XRD), and single particle - Inductively Coupled Plasma with Mass Spectrometry (splCP/MS).

Mentor(s): The mentor for this opportunity is Souhail Al-Abed (al-abad.souhail@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: September 2020. 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 three 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.

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.

Questions: Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process please email EPArpp@ornl.gov and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a master's or doctoral degree in one of the relevant fields, or be currently pursuing one of the degrees and will reach completion by September 1, 2020. Degree must have been received within five years of the appointment start date.

Preferred skills:






- Strong verbal and writing skills
- Ability to learn in both as a part of a team and independently
- Basic knowledge of analytical instrumentation related to analysis of organic

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compounds in environmental media including, but not limited to: gas chromatography - tandem mass spectrometry (GC-MS-MS), liquid chromatography - tandem mass spectrometry (LC-MS-MS), Fourier transform infrared spectroscopy (FTIR), and Raman spectroscopy

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 9/1/2020 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (3 )
 - **Communications and Graphics Design** (2 )
 - **Engineering** (2 )
 - **Environmental and Marine Sciences** (2 )
 - **Science & Engineering-related** (1 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).