

Opportunity Title: EPA Postdoctoral Fellowship for Evaluation of Thermal Treatment Methods for the Destruction of Per- and Poly-fluoroalkyl Substances (PFAS)

Opportunity Reference Code: EPA-ORD-CEMM-AMCD-2023-01

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 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 9/30/2023 3:00:00 PM Eastern Time Zone

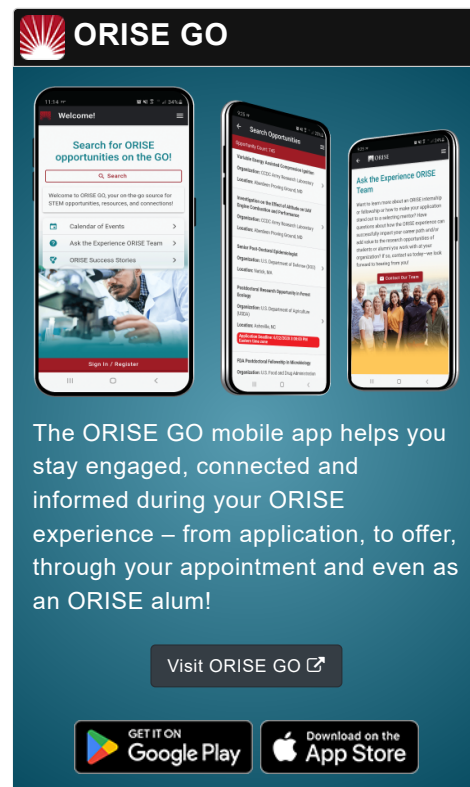
Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

EPA Office/Lab and Location: A research training opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Measurement & Modeling (CEMM), Air Methods and Characterization Division (AMCD), Combustion and Mobile Source Branch (CMSB), located in Research Triangle Park, North Carolina.

Research Project: The Combustion and Mobile Source Branch (CMSB) is investigating the destruction of PFAS by thermal treatment methods. This research project is focused on using emissions data from PFAS thermal treatment to develop models and determine the temperatures and residence times needed to completely destroy PFAS.

Activities the research participant may be involved in include:

- Running benchtop furnaces and catalytic reactors
- Pilot and full-scale incinerators and thermal treatment methods
- Emissions sampling and analysis for PFAS and other fluorinated by-products.
- Reducing and interpreting data
- Modeling the incineration of PFAS and comparing to experimental data



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- Manuscript preparation

Learning Objectives: The research participant will learn about how PFAS are transformed during thermal treatment, what by-products may be formed at various conditions, and determine temperature and residence time profiles for PFAS. Models of incineration of PFAS may be used and further developed to increase the understanding of PFAS' behavior during thermal treatment. The research participant may also have opportunities to use cutting edge methods and instrumentation, and may develop novel treatment methods. Research results can be disseminated through internal reports and presentations, peer-reviewed journal publications, and conference presentations.

Mentor(s): The mentor(s) for this opportunity is William Linak (linak.bill@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: July 1, 2023. 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.

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

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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 and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion no later than 6 months from the start of the appointment. Most recent degree must have been received within five years of the appointment start date.

Preferred skills:

- Experience collecting and interpreting IR spectra for the analysis of fluorinated organics.
- For this incineration focused research project, the best candidate will have experience with bench- and/or pilot-scale experimental combustion systems and modeling approaches designed to study combustion environments.
- Ideally the candidate will have a background in the thermal destruction of per- and poly-fluorinated alkyl substances (PFAS), good mechanical and communication skills, and experience with computational chemical kinetic approaches to simulate combustion environments as well as a good understanding of physical and analytical chemistry.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 1/1/2024 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (12 👁)
 - **Engineering** (27 👁)
 - **Physics** (16 👁)