

Opportunity Title: Data Curation and Analysis of Nanomaterial Database

Opportunity Reference Code: EPA-ORD-NHEERL-TAD-2019-02

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply A complete application consists of:

- An application
- Transcripts – [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

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

If you have questions, send an email to EPArpp@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 9/3/2019 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.

A research opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), National Health and Environmental Effects Research Laboratory (NHEERL), Toxicology Assessment Division (TAD) in Research Triangle Park, North Carolina.

The EPA Office of Research and Development (ORD) is involved in research on the potential environmental effects of engineered nanomaterials. We are building a database containing the results of ORD research on the environmental and biological effects of engineered nanomaterials, which will enable analysis of relationships between the physical and chemical properties of nanomaterials and their environmental actions. The database structure has been developed and is being populated with data from existing publications regarding the environmental fate, transport, transformations, exposure and toxic effects on ecological or human species. During this research opportunity the research participant will gain experience in curation of the data, reading manuscripts, extracting data relevant for the database, and collaborating with a research team to conduct novel analyses of the database. The research participant will have opportunities to write and co-author manuscripts based on analyses of the database. Knowledge of nanomaterial environmental and toxicological science will benefit the participant in understanding relevant parameters to extract from the published literature, as well as conducting novel assessments of the completed database.

Research learning objectives may include:

- Understanding nanomaterials, their role in industry and commerce, and potential release into the environment
- Understanding the physical and chemical properties of nanomaterials
- Learning about environmental fate, transport and transformation of nanomaterials
- Learning about nanomaterial toxicology
- Learning database structure and manipulation
- Conducting statistical analysis of the relationships between nanomaterial properties and their environmental actions including potential toxicity to humans or key environmental species
- Writing and editing scientific manuscripts for submission to peer-reviewed journals



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The mentor for this opportunity is Will Boyes (boyes.william@epa.gov).

Anticipated Appointment Start Date: October 7, 2019

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. The initial appointment is for one year, but may be renewed upon recommendation of EPA and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at EPA in the Research Triangle Park, North Carolina, area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

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

Preferred skills:

- Classes or training in organic chemistry, biochemistry, engineered nanomaterials, or environmental sciences
- Interest in discovery of novel relationships between nanomaterial properties and their actions in environmental or biological systems

- Eligibility Requirements**
- **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 7/1/2019 12:00:00 AM.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) 👁)
 - **Computer, Information, and Data Sciences** ([16](#) 👁)
 - **Earth and Geosciences** ([21](#) 👁)
 - **Engineering** ([27](#) 👁)
 - **Environmental and Marine Sciences** ([14](#) 👁)
 - **Life Health and Medical Sciences** ([45](#) 👁)
 - **Mathematics and Statistics** ([10](#) 👁)
 - **Physics** ([16](#) 👁)
 - **Science & Engineering-related** ([1](#) 👁)