Opportunity Title: Nanomaterial Research Assistant at EPA
Opportunity Reference Code: EPA-SSP-0027-4R-7-26-17

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply

- Submit application and supporting documents by clicking on Apply Now button.
- *For more information, contact* EPAjobs@orau.org. Do not contact EPA directly.

Description

The EPA Environmental Research and Business Support Program has an immediate opening for a Nanomaterial Research Assistant with the Office of Research and Development at the EPA facility at the University of Nevada (UNLV), Las Vegas, NV.

The Office of Research and Development (ORD) at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

Then National Exposure Research Laboratory (NERL) Exposure Methods and Measurement Division (EMMD) is responsible for conducting studies for detecting, characterizing, quantifying, and monitoring of nanotechnology and emerging contaminates in the environment. Extensive research is needed which provides for accuracy, precision and sensitivity of analytical techniques.

The Environmental Methods and Measurement Division (EMMD) of the National Exposure Research Laboratory (NERL), Office of Research and Development (ORD) at the U.S. Environmental Protection Agency (EPA) is seeking a candidate to develop new approaches to isolate and detect a variety of engineered nanomaterials from complex environmental matrices. Nanomaterials may include silver, gold, titanium dioxide, zinc oxide, zero valent iron, cerium oxide, fullerenes and/or carbon nanotubes. EMMD conducts studies for detecting, characterizing, quantifying, and monitoring of nanotechnology and emerging contaminates in the environment.

The selected candidate shall conduct research to analyze for sample handling, sample preservation, nanomaterial separation techniques/methods and analytical procedures that can be used to detect and monitor releases of and exposures to nanomaterials.

The selected candidate will receive training to provide the technical resources and expertise needed to compile information, contribute to research products and meet milestones and project objectives. He/she will provide services in support of research directed under the Chemical Safety and Sustainability Team.

Responsibilities will include working with analytical, organic and surface analysis of nanostructured materials:

- Assisting with the characterization and measurement research to determine nanoparticle size/surface

charge/mass/composition/speciation in the environmental media of water, soils and sediment via liquid chromatography/mass spectrometry (LC/MS), and/or scanning electron microscope (SEM), for validating real environmental samples and Q-Sun Weathering System to season the samples, and
- Developing effective pre-concentration or extraction methods is required in order to adequately address the problems associated with complex environmental matrices.

Separation/isolation techniques will be based on the type of nanomaterials, matrix effect and technical requirements:

- Learning the utilization of a solid-phase liquid extractor (i.e., AutoTrace) instrument for water extractions and the Accelerated Solvent Extractor (ASE) system for soil and sediment extractions.

General laboratory support may include, but not limited to:

- Preparing solutions,
- Maintaining of laboratory equipment on a routine basis, and
- Maintaining research supplies and materials.

The selected candidate shall perform duties, as requested, according to specifications and instructions provided by the mentor. Where appropriate, he/she will maintain careful and accurate records in designated laboratory notebooks. These notebooks, and all other data produced under this order will be the property of the Environmental Protection Agency.

Location: This job will be located at EPA's facility at the University of Nevada (UNLV), Las Vegas, NV.

Salary: Selected applicants will become temporary employees of ORAU and will receive an hourly wage of $20.34 for hours worked.

Working Conditions: The selected candidate shall be supervised by a mentor who will provide day-to-day direction, as well as coach, advise and counsel the candidate, and review his/her work. The mentor for this position will be a federal EPA employee.

This position will involve work in a laboratory setting and can involve exposure to hazardous elements. The selected candidate will be working in a laboratory environment, with potential exposure to dangerous and toxic materials. He/she will be required to wear safety apparel and to closely observe safety requirements. Safety training, and proper personal protective equipment (PPE), will be provided before the selected candidate will be allowed to work in the laboratory.

Travel: If funding is available and research presents viable data, the candidate may submit poster or oral presentation at scientific conference/meeting.

Expected Start Date: The position is full time and expected to begin October 2017. The selected applicant will be a temporary employee of

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ORAU working as a contractor to EPA. The contract period is through May 14, 2018.

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Qualifications

Eligible applicants must:

- Be at least 18 years of age **and**
- Have earned at least a Bachelor's degree in biology, toxicology, chemistry, physics, or an environmental-science related field from an accredited university or college within the last 24 months **and**
- Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

Required Knowledge, Skills, Work Experience, and Education

Successful candidate shall:

- Demonstrate education and experience in advanced laboratory techniques, including one or more of the following: liquid chromatography/mass spectroscopy (LC/MS), scanning electron microscope (SEM), AutoTrace, and accelerated solvent extractor (ASE) system,
- Demonstrate a working knowledge of basic laboratory equipment, (i.e., pH meters, balances, pipetting, etc.),
- Demonstrate a working knowledge of standard preparation, using basic laboratory skills to prepare standards for calibration curves and spiking solutions,
- Possess strong written and oral communication skills, and
- Possess past experience demonstrating comprehension skills.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (13 👁)
  - **Life Health and Medical Sciences** (45 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (1 👁)

Affirmation

I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor's degree in biology, toxicology, chemistry, physics, or an environmental-science related field from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the

spouse or child of an EPA ORD employee.

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