

# ORNL Publications

## *External Publication*

### *Job Posting Title*

Postdoctoral Research Associate —Radiochemist/Radiochemical Engineer / NB50630659

### *Posted Date*

08/18/2017

### *End Posting Date*

10/18/2017

### *Purpose*

The Nuclear Security and Isotope Technology Division (NSITD) performs a wide range of scientific, technical, and programmatic activities in all facets of the nuclear enterprise from nuclear nonproliferation and safeguards to research and development (R&D) pertaining to nuclear materials processing. NSITD has responsibility for much of the nuclear chemical processing and radiochemistry that is performed at the Oak Ridge National Laboratory. In particular, the Process Engineering Research (PER) Group applies chemistry, chemical engineering, and nuclear engineering fundamentals to the processing of nuclear materials, nuclear nonproliferation, safeguards and security, and national security. The PER Group is currently seeking applications for one or more Post-Doc positions. Sponsors include the U.S. Department of Energy Offices of Nuclear Energy, Science, and Environmental Management, the Department of Homeland Security, the National Nuclear Security Administration, and other government and private entities.

A distinguishing characteristic of the NSITD is the combination of fundamental, lab-scale research capabilities with the performance of larger-scale R&D to demonstrate and validate deployment concepts. The work conducted involves the use of nonhazardous materials in non-radiologic environments and the processing of radionuclides and hazardous chemicals in controlled (e.g., hood, glovebox, and hot cell) facilities. The work also leverages the extensive prior work in these fields through literature research on historical and current related work.

### *Major Duties/Responsibilities*

The successful candidate will support proposal development, planning, conducting, coordinating, and reporting R&D activities in support of various technical areas with emphasis on gamma spectroscopy, radiochemical processing, and analytical chemistry. The successful candidate will be capable of participating in multi-laboratory and multi-national laboratory scale collaborations on projects relating to nuclear process R&D activities. The successful candidate will be expected to: conceive research plans to address specific problems; participate in experiment planning including risk identification and mitigation; participate in equipment design, analysis, and setup; conduct experiments; collect and analyze data; and report results. Consistent with the Division's capabilities, the candidate will likely be required to participate in experiments at scales ranging from lab- to engineering-scale, including experimental work with radionuclides and hazardous chemicals in controlled facilities or in the field.

The successful candidate will be required to interact effectively with various personnel and sponsors, both within and outside of ORNL. The candidate is expected to be able to maintain proper records including laboratory notebooks, to work in a team environment with co-workers and management as well as independently, to document work performed in the forms of technical reports, papers, and presentations, and to participate in the development of research proposals. Excellent communication skills, including verbal, presentation, and writing skills are required.

### **Qualifications Required**

The successful candidate must have a PhD in chemistry, chemical engineering, nuclear engineering, or related discipline. An understanding of actinide chemistry and/or processing is necessary. Experience in actinide separations chemistry, and analytical methods utilized to evaluate actinide separations and reactions is required. Direct experience with handling radioactive materials is highly desirable. The ability to interact with individuals having differing scientific and engineering backgrounds, and the ability and willingness to acquire new knowledge and learn new skills are also required

This position requires the ability to obtain and maintain a clearance from the Department of Energy. As such, this position is a Workplace Substance Abuse (WSAP) testing designated position. WSAP positions require passing a pre-placement drug test and participation in an ongoing random drug testing program.

This position will remain open for a minimum of 5 days after which it will close when a qualified candidate is identified and/or hired.

We accept Word(.doc, .docx), Excel(.xls, .xlsx), PowerPoint(.ppt, .pptx), Adobe(.pdf), Rich Text Format(.rtf), HTML(.htm, .html) and text files(.txt) up to 2MB in size. Resumes from third party vendors will not be accepted; these resumes will be deleted and the candidates submitted will not be considered for employment.

If you have trouble applying for a position, please email [ORNLRecruiting@ornl.gov](mailto:ORNLRecruiting@ornl.gov).

Notice: If the position requires a Security Clearance, reviews and tests for the absence of any illegal drug as defined in 10 CFR 707.4 will be conducted by the employer and a background investigation by the Federal government may be required to obtain an access authorization prior to employment and subsequent reinvestigations may be required.

If the position is covered by the Counterintelligence Evaluation Program regulations at 10 CFR 709, a counterintelligence evaluation may include a counterintelligence-scope polygraph examination.

ORNL is an equal opportunity employer. All qualified applicants, including individuals with disabilities and protected veterans, are encouraged to apply. UT-Battelle is an E-Verify Employer.