

Inorganic Radiochemistry Postdoctoral Researcher

The Burns Research Group currently has a postdoc opening for a highly motivated inorganic or radiochemist, preferably with f-element chemistry experience. Funding for this position is provided by the U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) through the Converting UNF Radioisotopes Into Energy (CURIE) Program. The successful candidate will contribute to research studying the co-crystallization of hexavalent actinides, with the aim to further develop a group actinide separation as a first step after dissolution in the used nuclear fuel recycle.

Relevant Skills and Experience

- This position requires the successful candidate to be an adept, hands-on chemist with experience in inorganic, analytical, or radiochemistry, preferably with experience in f-element chemistry.
- A fundamental understanding of metal coordination complexes in solution and solid phases utilization towards the application of separation processes such as solvent extraction, ion exchange, and crystallization is also desirable.
- The ability to work in a team-oriented, interdisciplinary environment that embraces change, risk, and flexibility is needed.
- This individual must be capable of handling multiple projects/tasks at the same time.
- A demonstrated ability to work independently and within a team with a sense of urgency for timelines is needed.
- The successful candidate must have excellent verbal and written communication skills.
- A passion and enthusiasm for innovation will be an asset.
- Proven problem-solving skills and good interpersonal relationships and people skills will be needed.

Essential duties:

- Design and carry out independent research focused on a hexavalent actinide co-crystallization separation approach.
- Obtain and analyze data from a variety of techniques including ICP-MS, UV-VIS, gamma spectroscopy.
- Handle radioactive materials in a safe manner.
- Keeps meticulous records in laboratory notebook and online data management systems and initial analysis of laboratory results.
- Write technical reports of experimental data to meet the sponsors' requirements and for manuscripts to be submitted for peer-reviewed journal article publication.
- Shares responsibility with other lab members for compliance with University safety procedures and maintaining common supplies and instruments.

- Conduct literature searches related to research projects.

Required qualifications:

- Ph.D. in Chemistry, preferably with experience in inorganic chemistry or radiochemistry.
- US Citizen or Green card holder.
- Excellent communication skills.
- High-quality, peer-reviewed publications

Preferred Skills/Desirable Qualifications:

- Experience in f-element separation
- Experience with UV-Vis spectroscopy
- Experience with actinide chemistry

If you are interested, please submit a Cover Letter, CV, and Research Statement to burnsjon@uab.edu