

TITLE: Post-Doctoral Researcher: Li-ion Battery Recycling (U.S. Citizens preferred)

Overview: The Material Measurement Laboratory (MML), part of the National Institute of Standards and Technology (NIST), is seeking qualified persons (U.S. Citizens preferred) to support the Circular Economy program and critical minerals recovery research. The successful candidate will develop analytical elemental quantification methods for mixed Li-ion battery waste (e.g., black mass) using ICP-OES. This role involves validating characterization processes and improving supply chains for critical materials/minerals.

Duties

- Method Development: Establish bulk and trace analytical quantification methods for battery waste using ICP-OES and/or neutron activation.
- Sample Preparation: Perform milling, grinding, and acid digestion of complex battery materials and associated reference material.
- Data Analysis: Execute measurements, interpret complex datasets, and validate results against industry standards.
- Communication: Prepare findings for peer-reviewed publications, technical reports, and oral presentations.
- Compliance: Maintain strict adherence to institutional safety requirements, including radiological and hazardous chemical protocols.

Required Skills, Expertise and Qualifications

- Education: PhD in Chemistry, Chemical Engineering, Materials Science, or a related field.
- Technical Expertise: Proven experience with ICP-OES and acid digestion is required (> 3yrs.).
- Soft Skills: Excellent written/oral communication and a track record of meeting milestones in multidisciplinary teams.
- Safety & Environment: Must be comfortable working with large volumes of hazardous chemicals and under radiological conditions.
- Preferred Knowledge: Familiarity with Li-ion battery chemistry, mineral processing, mechanical separations, or nuclear analytical methods.

Employment Terms: This opportunity is to be an associate researcher in the NIST Chemical Sciences Division for a term of 1 year, with options to renew. Associate researchers are NOT Federal Employees, but they work along with NIST researchers and with NIST's often world class instrumentation. Relocation expenses will not be provided. U.S. Citizens hired into associate positions may have the opportunity to seek longer term Federal Employment.

Salary: \$62,000 – \$78,000

How to express interest: Persons (U.S. Citizens preferred) who meet all of the required qualifications and who would be interested in taking this position are invited to express their interest by sending an email that briefly describes their qualifications along with a CV to 646assoc@nist.gov. U.S. Citizens should note "U.S. Citizen" and the opportunity title in the email subject line. All others should note "Non-U.S. Citizen" and the opportunity title in the email subject line.