

Postdoctoral Research Associate in Study of Internal Short Circuit and Thermal Runaway of Li-Ion Batteries

**Materials Science and Technology Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee**

ORNL10-49-MSTD

Project Description:

The Oak Ridge National Laboratory (ORNL) is seeking outstanding candidates for post-doctoral appointment in ORNL's Materials Science and Technology (MST) Division. The postdoctoral associate will actively participate in a project on the safety of Li-ion batteries. In particular, the candidate will be involved in the performance of experiments and data analysis of internal short circuit tests of Li-ion cells used for electronic devices as well as electric vehicles. The MST Division has world-leading capabilities to characterize the microstructure, thermophysical and mechanical properties of functional and structural materials and a strong record of collaboration with industry, universities and other research organizations.

Applicants should have a solid background in applied physics, electrochemistry and/or materials science and engineering, and demonstrated understanding of the relationships between thermophysical and mechanical properties/microstructure of materials. Experience with Li-ion cells is desirable. This position requires hands-on cell testing, materials characterization, and failure analysis.

This position provides an opportunity to join a multidisciplinary team working on collaborative programs to design cell testing and characterize materials and perform multi-scale modeling of the Li-ion cells.

Qualifications:

The position requires a Ph.D. degree in materials science, materials engineering, physics, or chemistry, and demonstrated experience using advanced techniques for materials characterization. Experience and background in electrochemistry, finite element stress and thermal analysis and materials characterization will be a plus. A highly motivated individual with excellent communication skills in English, the ability to work as part of a multidisciplinary team and a proven research track record is required. Applicants cannot have received the most recent degree more than five years prior to the date of application and must complete all degree requirements before starting their appointment.

Technical Questions:

Questions regarding the position can be directed to Hsin Wang, Senior Research Staff High Temperature Materials Laboratory, Oak Ridge National Laboratory, PO Box 2008, MS 6064, Oak Ridge, TN, 37831-6064. Please include the requisition number and title when corresponding.

How to Apply:

Qualified applicants must apply online at https://www2.ornl.gov/ORNL_POST/. All applicants will need to register before they can begin the online application. For complete instructions, on how to apply, please see the instructions at <http://www.ornl.gov/orise/edu/ornl/ornl-pdpm/application.htm>.

This appointment is offered through the ORNL Postgraduate Research Participation Program and is administered by the Oak Ridge Institute for Science and Education (ORISE). The program is open to all qualified U.S. and non-U.S. citizens without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.