

## **Postdoctoral Research Associate in Li-Based Battery Materials**

### **Neutron Scattering Science Division and Center for Nanophase Materials Sciences Oak Ridge National Laboratory Oak Ridge, Tennessee**

ORNL10-73-NSSD

#### **Project Description:**

The Neutron Scattering Sciences Division (NSSD) of Oak Ridge National Laboratory (ORNL) (<http://www.ornl.gov>) operates two of the brightest neutron sources in the world, the Spallation Neutron Source (SNS) and the High Flux Isotope Reactor (HFIR), for basic and applied research in a broad array of disciplines including physics, chemistry, materials science and biology. SNS and HFIR are home to a group of scientists and a suite of instruments dedicated to the study of large-scale structures.

The Neutron Scattering Science Division (NSSD) (<http://neutrons.ornl.gov>) and Center for Nanophase Materials Sciences (CNMS) (<http://www.cnms.ornl.gov>) have an immediate opening for a post-doctoral research associate. Applications are sought from highly creative and motivated individuals who will join an interdisciplinary team to study and characterize the formation of surface layers on Li-based battery materials.

#### **Responsibilities:**

- Serves as primary researcher developing electrochemical cells, carrying out experiments, and analyzing data for the study of Li-based battery materials using neutron reflectivity, small-angle scattering, and diffraction.
- Prepares thin-film and bulk materials for characterization using neutrons and other methods.
- Initiates or maintains a scientific program involving these materials, including characterization using the neutron instruments at SNS and the synthesis and characterization facilities at the CNMS.
- Ensures compliance with environment, safety, health, and quality program requirements including ORNL's Integrated Safety Management System (ISMS).
- Maintains a strong commitment to the implementation and perpetuation of values and ethics.

#### **Qualifications:**

A Ph.D. within the last five years in Material Sciences, Physics, Chemistry, Chemical Engineering, or a related field is required, preferably in neutron/x-ray scattering, e.g. reflectivity, small-angle scattering, or diffraction (techniques for material characterization). Must possess mechanical and design skills. Previous experience in electrochemistry is desirable, but not required. The successful candidate should be a self-motivated individual able to work independently yet in a team environment on technically challenging problems and able to participate creatively in refining program direction. Presentation at national

meetings and publication of scientific results in peer-reviewed journals is expected. The candidate must have good oral and written communication skills and the ability to work in a multidisciplinary team and interact effectively with colleagues. Applicants must have received their most recent degree within five years and complete all degree requirements before starting their appointment.

**Technical Contact:**

Technical questions may be addressed to Dr. Ke An ([kean@ornl.gov](mailto:kean@ornl.gov)) or Dr. John Ankner ([anknerjf@ornl.gov](mailto:anknerjf@ornl.gov)).

**How to Apply:**

Qualified applicants must apply online at [https://www2.ornl.gov/ORNL\\_POST/](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). This appointment 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.