Job Title: Postdoctoral Research Associate - Advanced Battery Materials (RA-1)

Job ID: #467

Location: Sustainable Energy Technology Department, Brookhaven National Lab

Full/Part Time: Full-Time

Regular/Temporary: Post Doctorate-regular

Organization Overview:
The Sustainable Energy Technologies Department finds alternatives to fossil fuels and improves energy efficiency to meet our exponentially growing energy needs over the next century and beyond. The Department launches a significant effort of basic and applied research on developing advanced energy storage technologies, such as advanced battery and fuel cell technologies, in support of Department of energy's mission for securing U.S. leadership in clean energy technologies.

Position Description:
The Sustainable Energy Technologies Department currently has a full time opportunity for a Post Doctoral Research Associate position. This position involves fundamental research on synthesis and characterization of advanced cathodes for lithium ion batteries. The goal is to develop understanding of reaction pathways and kinetics during synthesis, and then use the knowledge to design and synthesize novel high-energy cathode materials. This research involves technique development for synthesis and characterization of battery materials, using on-site synchrotron X-ray, electron microscopy and dry-room facilities.

Essential Duties and Responsibilities:
* Developing synthetic approaches for preparing new cathode materials in Li-ion batteries and other advanced battery systems
* Performing structural and electrochemical characterization of electrode materials
* Developing and applying in-situ techniques to studies of chemical reactions during synthesis
* Studying the degradation mechanisms of battery electrodes
* Disseminating research findings with high-quality scientific papers and presentations

Position Requirements

Required Knowledge, Skills and Abilities:
* Ph.D. degree in Chemistry, Materials Science, Chemical/Mechanical Engineering, or closely related fields
* A strong background in synthesis, materials characterization, and electrochemistry
* Ability to work collaboratively with group members and internal/external colleagues
* Good verbal and written communication skills

Preferred Knowledge, Skills, and Abilities:
* Skills at materials characterization using synchrotron x-ray and electron microscopy
* Experience in in-situ studies of synthesis reactions
* Ability to analyze x-ray and/or neutron diffraction data through Rietveld refinement