

BROOKHAVEN NATIONAL LABORATORY

Brookhaven National Laboratory is a multipurpose research institution funded primarily by the U.S. Department of Energy's Office of Science. Located on the center of Long Island, New York, Brookhaven Lab brings world-class facilities and expertise to the most exciting and important questions in basic and applied science—from the birth of our universe to the sustainable energy technology of tomorrow. We operate cutting-edge large-scale facilities for studies in physics, chemistry, biology, medicine, applied science, and a wide range of advanced technologies. The Laboratory's almost 3,000 scientists, engineers, and support staff are joined each year by more than 4,000 visiting researchers from around the world. Our award-winning history, including seven Nobel Prizes, stretches back to 1947, and we continue to unravel mysteries from the nanoscale to the cosmic scale, and everything in between. Brookhaven is operated and managed by Brookhaven Science Associates, which was founded by the Research Foundation for the State University of New York on behalf of Stony Brook University, and Battelle, a nonprofit applied science and technology organization.

Organizational Overview

The mission of the Materials in a Radiation Environment (MRE) Program Office within the Nuclear Science and Technology Department is to increase access to synchrotron characterization techniques to researchers studying materials for nuclear energy applications. We develop unique experimental infrastructure and support a large user community dedicated to material science for advanced nuclear reactors and extending the life of existing reactors. We use various beamlines at the National Synchrotron Light Source-II to study radioactive materials and radiation effects. We are designing a new facility with multiple high-energy x-ray beamlines capable of handling more highly radioactive materials.

Job ID # 1189 – Scientific Associate III: Data Analysis Engineer

The Nuclear Science and Technology Department has an opening for a Data Analysis Specialist in the Materials in a Radiation Environment Program Office. The successful candidate will participate in the data analysis of high-energy x-ray techniques, including scattering, spectroscopy and imaging. The data analyst will use commercial software packages, open source software and NSLS-II specific applications to collect, process and analyze data from the NSLS-II for the nuclear energy materials science community. Python programming will be used to develop stand-alone applications, scripts and GUI's for automating the data analysis processes. MRE will be installing an X-ray Diffraction Computed Tomography System that will require development of reconstruction and imaging techniques. High-throughput and in situ experiments require automated analysis techniques.

The position requires a Bachelor's degree in physics, materials science or engineering (PhD preferred). Knowledge of python programming and data analysis techniques for X-ray characterization techniques is also required. Strong communication and interpersonal skills for interaction with a diverse group of scientists, engineers and technical staff is essential. Experience with large datasets, analytical modeling, statistical techniques and machine learning is preferred. Experience with imaging techniques, particularly tomography and combining data from separate techniques into one dataset to facilitate visualization is also an advantage. Responsibilities will include interfacing with controls engineers for data acquisition and supporting data analysis for users. This work includes participation in experimental planning, assistance with data collection and training users in data analysis.

**To learn more about this position and others available at
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