



Postdoctoral Research Associate Position
Piezoresponse Force Microscopy of Ferroelectrics and
Multiferroic Materials and Devices
Center for Nanophase Materials Sciences, Oak Ridge National Laboratory

ORNL10-156-CNMS

Project Description

The Center for Nanophase Materials Science (CNMS) invites applications for an experimental postdoctoral position in the field of scanning probe microscopy of ferroelectric, multiferroic, and piezoelectric materials and devices. This program takes advantage of recently developed capabilities for Piezoresponse Force Microscopy in liquid and ultra-high vacuum environments, and new spectroscopic modes for studies of thermodynamics and kinetics of polarization switching in a wide range of ferroelectric and multiferroic materials, nanostructures, and devices. This position provides an opportunity to join an experienced team to pursue the directions such as identification and control of static and dynamic ferroelectric phenomena at nanometer scale, ferroelastic domain structure engineering, coupling between ferroelectric and electronic transport, ionic phenomena in ferroelectrics, and time-resolved measurements. The [CNMS](#) is a collaborative nanoscience user research facility for the synthesis, characterization, theory/modeling/simulation, and design of nanoscale materials established by the Office of Science, U.S. Department of Energy.

Qualifications

The successful applicant must demonstrate experience in the application of modern scanning probe techniques for ferroelectric materials and devices, good background in ferroelectric and oxide materials and should have a Ph.D. in materials science or condensed matter physics. The knowledge of MatLab is a plus. The applicant is expected to participate in a strong existing research program, as well as to support and collaborate with a wide range of users at the CNMS. The applicant must have the ability to work in a team and interact effectively with colleagues. Demonstrated ability to communicate in English to an international scientific audience is essential. Applicants cannot have received the most recent degree more than five years prior to the date of application appointment and must complete all degree requirements before starting their appointment.

Technical Questions

For more information about this position please contact Dr. Sergei Kalinin (sergei2@ornl.gov) and reference this position title and number in your correspondence. Applications will be accepted until October 1, 2010 or until the position is filled.

How to Apply

Qualified applicants may apply online at https://www2.ornl.gov/ORNL_POST/. All applicants will need to register before they can begin the online application. For complete information 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.