

**CNMS Scanning Probe Microscopy of Electromechanical
Coupling Phenomena
Center for Nanophase Materials Science
Oak Ridge National Laboratory
Oak Ridge, Tennessee**

ORNL07-70-CNMS

Project Description:

The Center for Nanophase Materials Science (CNMS) at Oak Ridge National Laboratory (ORNL) is seeking a candidate to fill a postdoctoral position in the field of scanning probe microscopy. This program takes advantage of recently developed capabilities for Piezoresponse Force Microscopy (PFM) in liquid and ultra-high vacuum environments, and new spectroscopic modes for studies of polarization dynamics and correlated phenomena in a wide range of materials, including oxides, polymers, and biological systems. The CNMS (<http://cnms.ornl.gov>) is a collaborative nanoscience user research facility established by the Office of Science, U.S. Department of Energy. The CNMS has a diverse spectrum of nanoscience research activities including a nanofabrication facility; laboratory-based research on macromolecular materials, catalysts, functional nanomaterials, and magnetism and transport; characterization with electron microscopes, scanning probes, and x-ray diffraction and scattering; and theory, modeling, and simulation.

The successful applicant must demonstrate experience in the experimental application, development, and quantitative interpretation of modern scanning probe techniques. This position provides an opportunity to join an experienced team to develop methods and applications in directions such as identification and control of static and dynamic ferroelectric phenomena at the nanometer scale, electromechanical probing on the single-molecule level, and time-resolved measurements. In addition, the candidate will be involved in the CNMS user program, with wide opportunities for scientific collaborations.

Qualifications: PhD degree required

This position requires a Ph.D. in Materials Science, Physics, or Biophysics, with an emphasis on PFM or electrochemical SPM. Excellent oral and written communication skills are required, and presentations and publication of scientific results in peer-reviewed journals are expected. The applicant must have the ability to work in a team and interact effectively with a broad range of 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 and must complete all degree requirements before starting their appointment.

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 instructions, on how to apply, please see the instructions at

<http://www.ornl.gov/orise/edu/ornl/ornl-pdpm/application.htm> . When applying for this position, please reference the position title and number (ORNL07-70-CNMS). Questions regarding the position can be directed to Dr. Sergei V. Kalinin, sergei2@ornl.gov. Applications will be accepted until October 1, 2007 or until the position is filled.

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.