

Postdoctoral Research Associate in Surface Chemistry of Oxide Surfaces by RAIRS

**Chemical Sciences Division
Physical Sciences Directorate
Oak Ridge National Laboratory
Oak Ridge, Tennessee**

ORNLO9-45-CSD

Project Description:

The Surface Chemistry and Heterogeneous Catalysis Group of the Chemical Sciences Division (http://www.ornl.gov/sci/csd/Research_areas/SCC_group.html) at Oak Ridge National Laboratory is seeking a post-doctoral associate to work on a research project in surface chemistry occurring on oxide surfaces and on metal particles supported by oxide surfaces.

The research will entail the use of ultra-high vacuum (UHV) based methods, especially reflection absorption infra-red spectroscopy (RAIRS), x-ray photoemission spectroscopy (XPS) and temperature programmed desorption (TPD) for the study of surfaces fabricated and controlled in UHV. Research will center around preparation of clean and metal loaded model oxide surfaces or films, especially reducible oxides such cerium oxide, and studies of the surface chemistry of redox catalytic reactions occurring on these surfaces. Research will be complemented by collaborations and interactions with others in the group who are working on synchrotron based soft x-ray photoemission spectroscopy, scanned probe microscopy and computational studies of related model systems.

Qualifications:

Candidates must have a PhD in physical chemistry or a closely related field. This position requires a strong experimentalist with demonstrated experience in UHV-based techniques as a minimum and demonstrated experience in UHV-based RAIRS an advantage. The candidate should be a self-starter, able to work independently and able to participate creatively in refining program directions. Presentations at national meetings and publication of scientific results in peer-reviewed journals are expected. The candidate must have good oral and written communication skills, and be able to interact effectively with a broad range of colleagues. 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 Question:

For more information about this position please contact Dr. Steven Overbury (overburysh@ornl.gov). Please reference this position title in your correspondence.

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/orni-pdpm/application.htm>. When applying for this position, please reference the position title and number. NOTE: The salary will be very competitive.

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.