

## **Postdoctoral Research Associate in Materials Chemistry**

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

**ORNLO8-85-CSD**

### **Project Description:**

Materials Chemistry Group, Chemical Sciences Division (CSD) at Oak Ridge National Laboratory seeks a post-doctoral associate for a project on developing buffer layers for PV solar cells. Materials Chemistry Group is also engaged in research related to synthesis of nanoparticles and nanostructures and also the growth of epitaxial films using sol-gel processing for high temperature superconductor wires. The overall objective of this Project is to demonstrate buffer layer(s) for textured metal substrate that serve a multifunctional role in the development of single crystalline Photovoltaic (PV) solar cells. Specific goals include the identification of buffer materials that are suitable for selected PV materials and PV deposition processes, demonstration of preferred high-quality epitaxial buffer materials on textured substrate, and development of solution precursors suitable for the epitaxial formation of such buffers using low-cost solution methods. The successful candidates will join an interdisciplinary research team with expertise in thin film growth, materials chemistry, inorganic materials, neutron science and photovoltaics.

### **Qualifications:**

The position requires a Ph.D. in materials science, chemistry or similar related to the project. Expertise in synthesis of nanoparticles, nanocomposites, thin film growth using sol-gel processing and characterization using X-ray and microscopy related techniques is highly desirable. The candidate is expected to publish research results in scientific journals, maintain a strong commitment to the implementation and perpetuation of values and ethics and ensure compliance with environmental, safety, health and quality program requirements. Strong written and oral communication skills and the desire to work in a team environment on scientifically challenging problems are required. Applicants cannot have received the most recent degree more than five years prior to the date of application. Expected duration of these appointments is one year with the possibility of an extension. Interested candidates need to apply as soon as possible. Please reference the position title and number, when corresponding about this position.

### **How to Apply:**

Qualified applicants must apply online at [https://www2.ornl.gov/ORNL\\_POST/](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.

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.