

# **Postdoctoral Research Associate in Crystallization of Self-Assembled Frameworks for Sulfate Separation**

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

ORNL10-70-CSD

## **Project Description:**

The Chemical Separations Group in the Chemical Sciences Division at Oak Ridge National Laboratory is seeking a postdoctoral research associate to study sulfate recognition and separation from competitive aqueous environments by selective crystallization of self-assembled frameworks, under the supervision of Dr. Radu Custelcean ([http://www.ornl.gov/sci/csd/Staff%20CV/cs\\_RCustelcean.html](http://www.ornl.gov/sci/csd/Staff%20CV/cs_RCustelcean.html)). This project is sponsored by the Environmental Management office from US DOE and is driven by the need to separate sulfate from nuclear wastes at Hanford and Savannah River DOE sites. The research will involve devising and optimizing crystallizations of coordination and hydrogen-bonding frameworks for efficient and selective sulfate separation using either known or yet to be developed functional ligands. As such, the project will balance fundamental and applied research, providing opportunities for both publications in scientific journals, and real-world experience.

## **Qualifications:**

A Ph.D. in Chemistry or closely related discipline is required, with background and demonstrated experience in crystallization techniques and characterization of crystalline solids by X-ray diffraction. The candidate must be able to work independently and have good oral and written communication skills. Experience or knowledge in some of the following areas is a plus: spectroscopic techniques (FTIR, NMR, ICP, MS), organic and materials synthesis, and supramolecular chemistry/crystal engineering concepts. 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. Applications will be accepted until the position is filled.

## **Technical Questions:**

Questions regarding the position can be directed to Radu Custelcean at [custelceanr@ornl.gov](mailto:custelceanr@ornl.gov). Please include the requisition number and title when corresponding.

## **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>.

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.