

Research Staff Position: Heterogeneous Catalysis for Energy Conversion

The Surface Chemistry and Catalysis Group in the [Chemical Sciences Division](http://www.ornl.gov/sci/csd/CSD%20Organization/CSDorganization.html) (CSD: <http://www.ornl.gov/sci/csd/CSD%20Organization/CSDorganization.html>) at [Oak Ridge National Laboratory](http://www.ornl.gov/) (ORNL: <http://www.ornl.gov/>) is seeking an early to mid-career candidate to be a member of the scientific staff and perform independent research in the field of heterogeneous catalysis. This research is expected to lead to new catalysts and new fundamental understanding of the chemical transformations that occur in processes relevant to energy production and conversion. The candidate will benefit from the diverse program in [Catalysis at ORNL](http://www.ornl.gov/sci/catalysis/) (<http://www.ornl.gov/sci/catalysis/>) and the unique capabilities at ORNL including world class computing (National Center for Computational Science), the BioEnergy Science Center (BESC), the Spallation Neutron Source (SNS), the Center for Nanophase Materials Sciences (CNMS), and the world-class electron microscopy (SHaRE).

The successful candidate is expected to independently initiate and execute all aspects of a scientific research program. Initially the candidate will make contributions to an on-going research program in heterogeneous catalysis and eventually transition to a leadership role. The focus of the on-going research is to understand the relationships between atomic and nanoscale structure of catalyst supports and the role they play in promoting or altering catalytic pathways. This project focuses on the synthesis and characterization of new catalytic materials combined with in situ and operando techniques to evaluate catalyst performance. Subsequently the applicant is expected to help grow programs in new directions by building strong teams and writing successful peer reviewed research proposals. Although the candidate will have flexibility in defining specific research directions, the research will broadly target fundamentals of energy utilization and conversions of renewable resources, such as probing the fundamentals of photocatalytic conversions of carbon dioxide or catalytic conversion of biomass. Success will be gauged through publication in high impact journals and by participation with the scientific community through scientific meetings, workshops, and service.

A PhD in Chemistry, Materials Chemistry, Chemical Engineering or closely related field is required. Additional post-doctoral or other experience of up to 10 years beyond PhD studies is a plus. The candidate must have a demonstrated ability to initiate and carry out an independent experimental research program resulting in peer reviewed publications. Specialization and a high level of expertise in a particular experimental technique are desirable but are not sufficient. Experience in conventional and cutting-edge experimental methods for characterization of catalyst structure and catalytic pathways as well as an appreciation for the role of chemical synthesis and computational modeling is desirable. The candidate will be expected to create new research directions and produce credible proposals to obtain funding to support these directions. Excellent oral and written communication skills in English are required and presentations and publication of scientific results in peer-reviewed, highly cited journals are expected. The applicant must have good organizational and management skills and have the ability to work in a team and interact efficiently with colleagues having a broad range of expertise.

Technical Contact: 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 by Viewing Open Positions at <http://jobs.ornl.gov/> and following links to the Physical Sciences-Professional entry level. Applicants should attach, in a single file, the following three components: a statement of their research expertise, curriculum vitae, and contact information for references.