



**Postdoctoral Research Associate Position in
Directed Assembly of Optoelectronic Organic Material Architectures
Center for Nanophase Materials Sciences, Oak Ridge National Laboratory**

ORNL11-104-CNMS

Project Description

The Functional Hybrid Nanostructures group at the Center for Nanophase Materials Sciences (CNMS) at Oak Ridge National Laboratory is seeking to fill a postdoctoral research position in the area of thin film organic electronics fabrication and optoelectronic properties characterization. This position will provide a unique opportunity to perform research on the structure–function relationships of new classes of optoelectronic organic semiconductor materials, correlating fundamental understanding of their charge transport and optical properties with the nanostructure of their interfaces and architectures. The position provide exceptional opportunities for cross-cutting research collaboration and will require active collaboration with synthetic chemists, photochemists, various types of physical and chemical characterization tools, and neutron scattering personnel in order to fabricate and characterize prototype organic solar cells, field-effect transistors and other electronic devices with tailored interfaces and architectures that take advantage of characterization facilities at the CNMS and neutron scattering at the SNS. The [CNMS](#) is a collaborative nanoscience user research facility established by the Office of Science, U.S. Department of Energy.

Qualifications

Applicants must hold a Ph.D. in Chemistry, Physics, Material Science, and/or related disciplines with a strong background in photovoltaic research and organic electronic materials, ideally with extensive experience in organic electronic materials and semiconductor device fabrication and characterization. In addition, the applicant should have experience optical characterization methods (UV-vis and PL), as well as a good working knowledge and experience in vacuum evaporation/deposition, spin-coating and electrical properties (*I-V* curves) measurements, other valuable experience (AFM, SEM, TEM, WAXD) for the characterization of organic materials and hybrid assemblies. The applicant must have the ability to work in a team, interact effectively with colleagues and external collaborators. Demonstrated ability to communicate in English to an international scientific audience is essential. Applicants must have received their highest degree not more than five years prior to the date of application, and must complete all degree requirements before starting the appointment.

Technical Questions

Questions regarding the position can be directed to Dr. Kai Xiao (xiaok@ornl.gov), Dr. Iliia Ivanov (ivanovin@ornl.gov), or Dr. David Geohegan (geohegandb@ornl.gov). Please include the requisition number and title listed above when corresponding. Applications will be accepted until the position is filled.

How to Apply

Qualified applicants may apply online at https://www2.ornl.gov/ORNL_POST/. All applicants will need to register before beginning the online application. For complete information 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). This appointment 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.