

Postdoctoral Research Opportunity -Perovskite Solar Cells

The University of the District of Columbia

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Job Title Postdoctoral Research Opportunity -Perovskite Solar

Cells

Department Department of Electrical and Computer Engineering

Institution The University of the District of Columbia

Washington, District of Columbia

Date Posted Feb. 28, 2024

Application Deadline Aug. 15, 2024

Position Start Date Available immediately

Job Categories Post-Doc

Academic Field(s) Optics & Optical Engineering

Mechanical Engineering

Material/Metallurgy Energy Technology

Electrical and/or Electronics

Chemical/Petroleum Engineering - Other

Apply By Email hongmei.dang@udc.edu

Job Description

About

Photovoltaics and Microelectronics Research Laboratory (PMRL) in the Department of Electrical and Computer Engineering at The University of the District of Columbia (UDC) is located in Washington DC, 4 miles away to white house and is funded by Department of Energy-Solar Energy Technologies Office(SETO). The PMRL Laboratory focuses on research of earth-abundant photovoltaics and semiconductor processing, nanofabrication, characterization and simulation of photovoltaics and



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semiconductor devices. The project will collaborate with world-class neighboring organization-National Institute of Standards and Technology (NIST), Brookhaven National Laboratory, University of Virginia and Johns Hopkins University etc. A postdoctoral position is available in the Photovoltaics PMRL laboratory, Department of Electrical and Computer Engineering at The University of the District of Columbia (UDC). The position is for a full-time **Postdoctoral Research Associate** and will start at Summer or Fall, 2024.

Position Description

Photovoltaics and Microelectronics Research Laboratory is seeking a **Postdoctoral Research Associate** in fabrication and characterization of inorganic-organic hybrid perovskite solar cells for solar energy applications. The initial appointment is for one year, with possible renewal depending on funding availability. The principal investigator will continue to apply for funding to support your research.

This position will focus on development of inorganic-organic hybrid perovskite solar cells to improve efficiency and reliability. Your duties include: (1) fabrication of electron transport layer, perovskite layer, hole transport layer and electronics to form perovskite solar cells; (2) development of interface engineering at perovskite layer and electron transport layer to enhance efficiency and stability; 3) investigating reliability of perovskite solar cells according to standard reliability testing methods; 4) characterization of thin-films and perovskite solar cells via the use of a range of advanced techniques; 5) Assisting in supervising PhD and undergraduate students involved in the project.

Basic Qualifications:

The candidate must have PhD degree in relevant discipline area such as Chemistry, Materials Electrical Engineering, Electronics, Mechanical engineering etc. The candidate must have extensive and strong experiences on fabrication, characterization and modeling of perovskite solar cells and broad knowledge of the latest developments with Perovskite solar cells. The candidate has strong academic record with journal publications and presentations at conferences in perovskite solar cell area.

The candidate will advance perovskite solar cell efficiency and stability and achieve critical goals. The candidate will be expected to publish project results through journal publications, conference, and funding agency presentations.

Essential Duties and Responsibilities

- Conduct high quality research in the area of fabrication, characterization of perovskite solar cells.
- Supervise and works closely with graduate and undergraduate students in the project.



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- Present and publishes research findings at conferences and peer reviewed journals.
- Participate with teaching and outreach activities.
- Prepare progress reports for the funding sources.

Offer details:

Annual Salary: \$60000/year, One-year project, Start in Summer or Fall 2024, with the possibility to be extended depending on funding availability.

Other benefits

Benefits include medical, dental, and vision insurance. Depending upon length of appointment, selectee may be eligible for full benefits such as health and life insurance, annual (vacation) and sick leave.

Application

Open until filled, expect to start at Summer or Fall 2024 semester. A detailed CV with a list of publications should be included. Interested applicants should send your C.V. to Dr. Hongmei Dang (hongmei.dang@udc.edu). We do appreciate your time and effort in applying for this position. We are committed to responding within seven business days. The interview process is very straightforward. Looking forward to having you on board!

Job Type: Full-time

Pay: \$60,000 per year

Equal Opportunity Employer: The District of Columbia Government is an Equal Opportunity Employer. All qualified candidates will receive consideration without regard to race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, family responsibilities, matriculation, physical handicap, or political affiliation.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.



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Contact Hongmei Dang

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