



# THE OHIO STATE UNIVERSITY

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PhD and Postdoc positions available in the Arafin Group at the Electrical and Computer Engineering Department of The Ohio State University.

Multiple projects and positions are available in the areas of:

1. Photonic integrated circuit design, fabrication, and characterization
2. Molecular beam epitaxial growth of III-antimonides and the associated photonic devices
3. III-nitride based deep-UV lasers design, fabrication, and characterization

Applicants should have an interest in and/or experience with design of integrated photonic devices, device and subsystems characterization, materials growth, or nanofabrication.

### **About the Arafin Group:**

The Arafin Group conducts pioneering optics and photonics research for communications and sensing applications. In particular, this innovative and cutting-edge research is primarily directed toward III-V compound semiconductor technology for materials and devices: molecular beam epitaxial growth and characterization of materials, as well as realization of photonic devices using these materials. The Laboratory, belonging to this group, is equipped with a number of simulation and design tools for realizing photonic devices and even complex photonic integrated circuits. For the device fabrication, the group has the accesses to the OSU Nanotech West (<https://nanotech.osu.edu/>) as well as a number of other state-of-the-art shared facilities on-campus. The Laboratory also houses equipment for device and subsystem characterization.

### **Required for Postdoc:**

#### **Education:**

A Ph.D. in Physics, Electrical Engineering, Optics, or related area

#### **Experience:**

- Photonic device design using commercial software
- Molecular beam epitaxy for III-V materials growth
- Cleanroom processing
- Optical and electrical characterization
- Data analysis using graphical software and computer code
- An excellent record of innovation, demonstrated through publications and patents

To apply, send your CV and expression of interest to Prof. Shamsul Arafin ([arafin.1@osu.edu](mailto:arafin.1@osu.edu)).