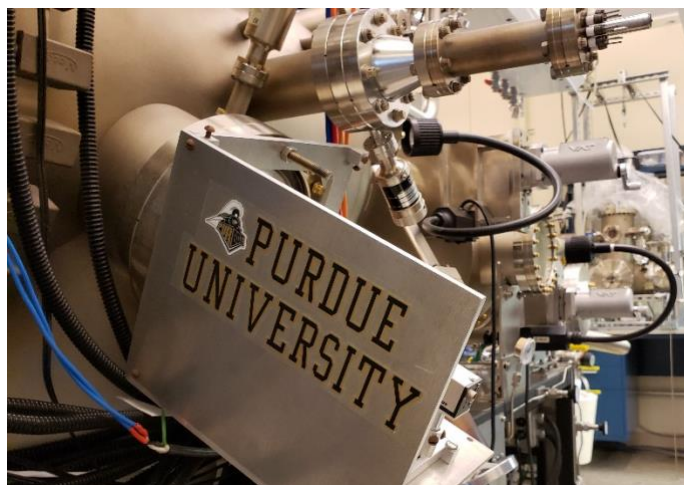


## **Epitaxy Research Scientist**

### **Description**

The Quantum Semiconductor Systems Group at Purdue University under the direction of Prof. Michael J. Manfra is searching for full-time epitaxy research scientist to drive innovation in our III-V semiconductor molecular beam epitaxy (MBE) growth facilities. We operate and maintain three MBE systems housed in the Birck Nanotechnology Center on the Purdue West Lafayette campus. Our group focuses on growth of ultra-high-quality two-dimensional electron gases for utilization in novel devices and exploration of new physics. We seek a seasoned epitaxy scientist who has proven experience with



MBE growth and system maintenance. An interest in hardware development is also highly desirable. The ideal candidate will have a PhD in physics, materials science, or electrical engineering and 5 years of integrated experience working with MBE systems. In addition to driving novel approaches to heterostructure design, responsibilities will include the following:

### **Responsibilities**

- Molecular beam epitaxy tool operation
- Optimization of growth conditions and MBE tool maintenance
- Growth of material for fabrication into devices used to study topological phases of matter
- Development of new growth techniques and protocols
- Characterization of grown material
- Documentation of growth parameters, characterization results, and layer structure
- Participation in local team meetings, including engagement with students and post-doctoral research fellows. Training of young researchers will be necessary.

### **Qualifications**

A successful candidate will have:

- PhD in physics, materials science, or an engineering discipline
- Proficiency with MBE equipment and techniques
- Significant understanding of crystallography, growth kinetics, and semiconductor defects
- An in-depth understanding of ultra-high vacuum principles
- Experience with AFM, SEM, XRD or other relevant characterization techniques
- Excellent written and oral communication skills
- Strong attention to detail and good organizational skills
- Strong desire to work in a collaborative team environment

Candidates may apply at: <https://careers.purdue.edu/job/West-Lafayette-Epitaxy-Research-Scientist-IN-47906/890485800/>

For additional information, please contact Michael Manfra directly at: [mmanfra@purdue.edu](mailto:mmanfra@purdue.edu)