



ASG

Advanced silicon group is developing a silicon nanowire biosensor. Our sensor is a platform solution, that has promise in applications ranging from cancer diagnostics, to detection of bioweapons, to health monitoring. Our long-term vision is to lower the barriers for diagnostics to allow everyone access to good health care. The first application we are commercializing our sensor for is in biomanufacturing to help biomanufacturers make drugs safer and lower cost for patients. We are a 5-person company and are looking to hire two more engineers.

Job Description:

Since we are a small team and are still in development, every day your job as an engineer at ASG will be different. Hence, we are looking for someone that takes initiative and can learn about new fields and then apply that knowledge. For example, right now we are measuring the uniformity of our antibody binding to the nanowire array, performing simulations, running experiments to optimize the p-n junction in the device, setting up new lab equipment, interfacing that new equipment to computers, improving our functionalization process, and looking at better ways to electro-optically test our devices. Our work combines semiconductor physics, chemical engineering, biochemistry, medical devices, and bioengineering. Therefore, we realize that no one person can have all of the relevant skills.

Relevant skills and example responsibilities

- Ability to understand semiconductor device fabrication and geometries and model them using simulation software.
- Leverage expertise of consultants and partners effectively to move the project faster and to strengthen relationships that will help the company's position in the market.
- Assist with grant reporting.
- Analyze data and design experiments to evaluate device performance and feasibility
- Process semiconductor devices in a clean room environment.
- Image devices using a scanning electron microscope.
- Edit and write code to interface lab equipment to computers to make data collection more efficient.
- Assist in designing and ordering lab equipment.
- Perform biochemistry on and testing of our devices.
- Advanced degree in Chemical Engineering, Bioengineering, Biochemistry, Materials Engineering, or Electrical Engineering or the equivalent of industry experience. PhD preferred.
- Good understanding of semiconductor devices and manufacturing.
- Good background in modeling chemical kinetics and chemical/physical phenomena, making assumptions and reducing them to simple lumped parameter systems
- Being able to look at complex systems and identify the important parameters to control.
- Prior experience in semiconductor industry valuable.
- Excellent verbal and written communication skills to collaborate with different technical and business functions across the company.
- Understanding of CAD software and 3D printing

Location: Lowell, MA