Post-doctoral Research Scientist
University of California, Davis, CA USA

Research Position in III-V Photonic Devices

The Integrated Nanodevices and Nanosystems Research Lab at the Electrical and Computer Engineering Department, University of California, Davis, is accepting applications for the position of a Postdoctoral Research Scientist specializing in design, micro/nanofabrication, and characterization of III-V semiconductor-based nanophotonic devices. The initial appointment is for one year and could be extended to two years, depending on the performance and available funding. Salary is negotiable, commensurate with qualifications and experience, and the position carries benefits.

About Integrated Nanodevices and Nanosystems Research (Inano): Inano’s research focuses on sensors and detectors for imaging and sensing of faint signals of light, chemicals, bio-agents, and disease; devices for high bit rate datacom, telecom and quantum communication; novel transistors and memory for extreme environments; and cost-effective energy harvesting with extreme efficiency. More at https://faculty.engineering.ucdavis.edu/islam/research/

Desired Skills: This position requires the ability to work well in a multidisciplinary team and industry partners. The candidate will be involved in developing, characterizing, and stabilizing nanofabrication processes and must exercise judgment on selections of work details and adaptations of technical alternatives and approaches.

- Ph.D. in Electrical Engineering, Material Science and Engineering, Mechanical Engineering, Physics, and related fields, with a focus in Semiconductor Optical Devices
- Solid understanding of band engineering and device physics
- Hands-on experience in design, fabrication, and testing of the semiconductor optical devices
- Skilled operation of standard test equipment
- Strong problem solving and excellent analytical skills
- Demonstrated ability to work as a member of an integrated product team
- Ability and willingness to work in a tightly knit team to meet aggressive goals, a flexible hands-on approach with an orientation towards quality.
- Excellent verbal and written communications skills.

Highly desirable capabilities:
- Experience in device design from first principle and fabrication in clean room, mask design experience.
- Experience with writing and executing test and design procedures.

Essential Duties and Responsibilities: The candidate will be responsible for the following tasks:

- Planning and execution of schedule and milestone
- Simulate, design, mask-layout, and fabrication of the semiconductor optical device
- Developing detailed design and fabrication steps, test plans, and procedures to perform verification/analysis
- Test optical, electrical, and thermal properties of new semiconductor devices and analyze test data to improve critical metrics of devices, including design of test setup
- Detail documentation and publications in conferences and journals

We are looking for talented, highly motivated, and energetic individuals who have the drive, passion, and determination to join an industry-university collaboration. If you like to be a part of our team and also like to be involved in exciting and challenging work in cutting-edge technology, please send your curriculum vitae and the names of three professional references to Prof. Saif Islam sislam@ucdavis.edu. Applications will be reviewed as received, and we will contact you if your qualification meets what we are looking for. If you don’t hear from us, we will build a profile for you for future opportunities.

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