

我們實驗室正在招募博士生(2026 Spring or Fall)，目前實驗室有兩位博士生，實驗室專注在半導體及 Biosensor 的研究，半導體的部分包含結構設計、製程、量測和模擬；biosensor 為攜帶型唾液檢測裝置的專利開發，主要針對癌症的標定。Dr. Ren 訓練嚴格且扎實，人很好、對學生要求也都很 reasonable，並且最慢 4 年畢業，有碩班學歷通常 3 年，文章及引用數量相對可觀(通常博班期間發表 > 20 篇 first-author papers 和 > 500 citations)，對於想在業界或學界發展都非常有幫助，歡迎有興趣的同學直接聯絡 Dr. Ren 或先私訊 Renee 聊聊 (第四年博班生, hwan@ufl.edu)，更多細節如下：

Dr. Fan Ren's lab at the University of Florida's Chemical Engineering Department is at the forefront of semiconductor science, materials engineering, and biosensor technology. The lab focuses on developing ultra-wide bandgap (UWBG) semiconductors to push the boundaries of power electronics and optoelectronics. Emphasizing advanced fabrication techniques, the team enhances material quality and device performance, driving breakthroughs in power devices such as transistors and diodes.

The lab is also pioneering the development of low-cost, wireless biosensors with real-time, handheld capabilities for personal and medical applications. Using AlGaIn/GaN high electron mobility transistors (HEMTs), the sensors amplify surface charge changes by 10^5 to 10^6 times (50-60 dB), offering fast, accurate, and accessible heart attack detection to improve patient care.

In addition, our team focuses on developing high-sensitivity biosensors for rapid and low-concentration detection of critical biomarkers, which plays a key role in early diagnosis and monitoring of breast cancer and oral cancer. By leveraging advanced materials and device engineering, we've achieved a significantly lower detection limit and enhanced signal response compared to conventional sensors. This project offers a dynamic and impactful environment for people who are interested in biomedical devices, sensing technologies, and translational healthcare applications.

Students in Dr. Ren's lab gain hands-on experience with cleanroom tools, device characterization techniques, and simulation methods, equipping them for careers in academia, industry, or research labs. Alumni have found success both in academia and industry, with some founding their own companies.

We are recruiting motivated Ph.D. students to join the team in Spring or Fall 2026. Students making satisfactory progress will receive guaranteed funding, including a stipend (~\$31k), tuition waiver, and health insurance, totaling approximately \$51k annually. In addition, students will receive a sign-

on bonus of \$2000 and a waiver for the application fee. Students with bachelor's degrees typically graduate within four years, while those with master's degrees finish in three years.

Interested candidates can contact Dr. Fan Ren at fren@che.ufl.edu with a CV (highlighting research experience and skills), or contact Renee (4th year PhD student) via her email hwan@ufl.edu.

Website: <https://www.che.ufl.edu/ren/>

Google Scholar:

<https://scholar.google.com/citations?user=stpKHXUAAAAJ&hl=en>