

Vanderbilt University is a private institution that was founded in 1873. Its setting is urban, and the campus size is 333 acres in the heart of Nashville, 1.5 miles (2.4 km) from downtown. Vanderbilt University's ranking in the 2022 edition of Best Colleges is National Universities, #14.

Vanderbilt enrolls approximately 13,800 students from the US and over 100 foreign countries. It is [classified](#) among "R1: Doctoral Universities – Very high research activity". Several research centers and institutes are affiliated with the university, including the [Vanderbilt Institute of Nanoscale Sciences and Engineering](#), [Robert Penn Warren Center for the Humanities](#), the [Freedom Forum First Amendment Center](#), and [Dyer Observatory](#). [Vanderbilt University Medical Center](#), formerly part of the university, became a separate institution in 2016. With the exception of the off-campus [observatory](#), all of the university's facilities are situated on its 330-acre (1.3 km<sup>2</sup>) campus in the heart of Nashville, 1.5 miles (2.4 km) from downtown.

### **Job overview:**

3 fully funded graduate student positions are available for outstanding and motivated candidates in the Kidambi Research Group at Vanderbilt University in Nashville, TN, USA. Our research aims to advance the science and technology for scalable nanomaterial synthesis. Our multidisciplinary research in collaboration with academic and industrial partners focuses on novel separations, catalysis, healthcare, energy, and electronic applications.

The group is based in the [Chemical and Biomolecular Engineering Department](#) and are affiliated with the [Vanderbilt Institute of Nanoscale Science and Engineering \(VINSE\)](#), the [Interdisciplinary Materials Science Program](#) and the [Vanderbilt University Data Science Institute](#).

### Current projects include:

1. Atomically thin membranes: Fabrication of atomically thin membranes for ionic and molecular separations with a focus on understanding nanoscale mass transport.
2. Novel separation processes: Design of novel separation processes by leveraging nanoscale interactions.
3. 1D and 2D material synthesis and characterizations: We are interested in the synthesis of new 1D and 2D materials via bottom-up synthesis processes with a focus on understanding growth mechanisms.
4. In-situ metrology: Exploring material synthesis and material properties using in-situ metrology.

### **Essential Functions**

- Conduct research experiments relevant to the scope of the project.
- Collect and analyze data, develop new approaches to promote current research.
- Summarize data in the form of reports, manuscripts/papers and presentations for review.
- Prepare manuscript for publication in leading scientific journals and assist in grant writing.
- Keep updated with developments in field to develop and maintain expertise.

- Maintain lab equipment and order supplies.
- Train, and mentor other junior researchers.

### **Application Process**

If you would like to join our team, please contact Prof. Kidambi by email [piran.kidambi@vanderbilt.edu](mailto:piran.kidambi@vanderbilt.edu) and include your C.V. with a brief description of interests specific to our work. Requirements change based on funding and project needs. Preference is for candidates with an B.S. and/or M.S. in chemical engineering, material science or other closely related disciplines but we are always excited to meet outstanding and motivated candidates with a can-do attitude from any discipline.

### **Compensation and Benefits**

Fully funded graduate student positions include a stipend and tuition fees.