

Staff Scientist – Cleanroom– Req# 89904BR

Summary

The West Campus Cleanroom (YWCCR) at Yale University has an opening available immediately for highly qualified, highly motivated applicants for the position of Staff Scientist, with a focus on nanofabrication. YWCCR is a university service provider supporting the entirety of the Yale research enterprise with an emphasis on research being conducted within the multidisciplinary institutes on West Campus.

Successful applicants for these positions will be expected to work well in a multi-user facility and as part of a broader analytical services team. Reporting to the Materials Characterization Core Director, the Staff Scientist will provide technical support and instruct faculty, graduate student, and postdoctoral researchers in the use of various mass spectrometry and chromatography research instruments.

Duties

1. Provide support for an existing and continually operating cleanroom nanofabrication facility at West Campus (<https://ywccleanroom.yale.edu>). Assist in the deployment of newly acquired instrumentation and associated infrastructure renovations. Maintain accurate usage statistics and on-line instrument reservations tools and maintain an active web-presence.
2. Maintain cleanroom equipment: perform diagnostics and preventive maintenance, diagnose and correct malfunctions, interact with equipment vendors to identify and resolve problems to ensure the equipment is in proper working order.
3. Provide consultation and training for several nanofabrication instruments including reactive ion etcher, UHV e-beam evaporator, mask aligner, optical profiler, and process benches. Perform routine maintenance tasks, identify and correct malfunctions, interact with equipment vendors as necessary, to ensure equipment is in proper working order.
4. Develop test plans and perform experiments in support of on-going and proposed research at West Campus. Interact with faculty, postdoctorals, graduate students, and other researchers from West Campus who use the resources of the Cleanroom, to ensure that appropriate instruments and methods are employed to address technical nanofabrication and process problems.
5. Support the development of strategic research growth plans and the acquisition of new cleanroom instrumentation. Prepare and submit technical reports as requested. Keep abreast of developments in the field of nanofabrication to recommend, acquire and implement new instrumentation and accessories. Evaluate alternative techniques to assist in the research design and development. Provide scientific methods development support in partnership with faculty members and West Campus researchers.
6. Collaborate with existing West Campus Cores and other university resources, when appropriate, to advance research support.
7. Install and maintain appropriate software, and instruct researchers in its use. Install and maintain computer hardware and software used in support of the facility.
8. Collaborate with West Campus faculty, assist in the preparation research papers and grant proposals as appropriate.

Qualifications

1. Bachelor's degree in engineering, physics, applied physics or related field and five years relevant experience or an equivalent combination of education/experience.
2. Experience in operating reactive ion etching and e-beam lithography systems as well as other etching, deposition, and metrology processes used in device fabrication.
3. Relevant experience in micro/nano-electronics
4. Excellent interpersonal skills suited to a multiuser environment. Demonstrated ability to organize and support multiple projects for multiple users.

PREFERRED: Training and proven experience in cleanroom processes including, but not limited to, positive and negative resists, silanization, casting materials (e.g. PDMS), to create single and multilayer devices. Familiarity with all processes related to soft lithography used in the fabrication of micro- and nanoscale fluidic devices. Experience in service/user analytical facilities. Experience in preparation of scientific manuscripts and grant proposals.

To learn more about the position and to apply

