CUNY ASRC NanoFab Rules of Conduct and Use

All users must read this document and sign the rules document to certify that they understand its contents. This policy was adopted to ensure everyone's safety and productivity in the facility.

Users are expected to be aware of, understand, and adhere to CUNY ASRC NanoFab Rules of Conduct policy. Questions regarding the rules should be addressed to Dr. Jacob Trevino at Jacob.Trevino@asrc.cuny.edu.

Conduct Rules

1. No user or project is more important than the safety of the users or the laboratory staff. Ignorance of the rules, working under pressure, lack of common sense, language difficulties, carelessness, and haste are not adequate excuses for unsafe behavior. If you are tired or do not have time to perform your work correctly and safely, please leave and return later. Anyone found to be in violation of any safety rule or otherwise compromising his or her personal safety or the safety of the others will be denied access to the cleanroom.
2. Every laboratory user must respect the laboratory, its equipment and other users.
3. No user can operate any equipment in the laboratory without having been properly trained and received check-out certification.
4. Every laboratory user must utilize the proper Personal Protective Equipment (PPE) when operating equipment or processing wafers with hazardous chemicals.
5. Safety glasses must be worn at all times.
6. No user can work with chemicals in the laboratory without another user present. Common solvents such as Methanol, Acetone, Isopropyl Alcohol, electron beam and photo resists and their developers are an exception to this rule.
7. No chemical or process may be left unattended without proper labeling and user identification.
8. All workspaces must be returned to a neat and clean status prior to a user leaving that workspace.
9. If a user cannot resolve an issue relating to the laboratory in a professional, courteous and respectful manner that issue will be brought to the attention of the Laboratory Manager for proper and expeditious resolution.
10. Users should point out rule violations or unsafe behavior immediately to the offenders, as well as later to the cleanroom management. Inappropriate
reactions by individuals to such corrections should also be reported. The access of everyone to the cleanroom depends on maintaining a safe working environment.

11. If you do not know how to do something, ask a NanoFab staff member before proceeding. DO NOT GUESS.
12. Before working with a chemical or a chemical process, users are required to read the materials safety data sheets (MSDS) for that chemical or process.

Breaking the Conduct Rules

If a user is found to be in violation of any of the above rules of conduct or any other rules communicated during in-person training sessions, or found to work in a manner that jeopardizes the safety of other NanoFab users or staff, disciplinary action in the form of temporary or permanent loss of cleanroom privileges shall result. The severity of the disciplinary action is at the sole discretion of the NanoFab staff.

Usage Policy

Cleanroom Stockroom

The ASRC NanoFab facility maintains a stock of common items used in the cleanroom, available for purchase by users. Since all of these items are purchased in bulk, the ASRC stock price is typically lower than the price extended by the vendors. Please consult the Cleanroom Stockroom website for the most up to date list of stocked items and prices.

Gowning Procedure for the Cleanroom

On days users plan to work in the ASRC NanoFab, users should arrive wearing closed toe shoes and long pants. Shorts and open toed shoes are not allowed in the cleanroom. Additionally, it is advised that valuables should be left elsewhere. A limited area is available next to the cleanroom entrance for jackets and small items; however this area is not monitored or secured by ASRC security.

1. Leave your belongings (jackets, bags, etc.) on the provided racks.
2. Place any items you need to bring into the cleanroom in the pass-through. You must wipe down the items with the provided alcohol wipes prior to placing them inside the pass-through.
3. Run both of your shoes through the shoe cleaner for 5 seconds each.
4. Put on a pair of blue shoe covers, a hairnet, and a beard cover if necessary. Make sure that all hair is covered (e.g., bangs should not be visible outside the hairnet).
5. Prior to entering the gowning area, take at least 3 steps per foot on the blue sticky mat.
6. Validate your access using the wall mounted retinal scanner and enter the gowning room. If the retinal scanner is unable to validate your entry, there is a reason for this. Do not attempt to enter the cleanroom or allow anyone else to enter the cleanroom if their entry cannot be validated.

7. Find and put on a snuggly fitting pair of cleanroom gloves.

8. The gowning bench divides the gowning room into a “clean” area (cleanroom side) and a “dirtier” area (pre-gowning side).

9. Gather your appropriately fitting cleanroom attire (coverall/shoe covers/hood), from either your storage locker or new attire that is stored on racks and take them to the gowning bench.

10. Prior to donning the cleanroom gown, inspect it for tears. If your garment becomes ripped or soiled during use, please change it.

11. Put on the cleanroom hood over the hairnet.

12. Put on the cleanroom jumpsuit making sure no portion of the suit touches the floor. Use the gowning bench if needed.

13. Put on the cleanroom shoe covers overtop the booties.

14. Put on the safety glasses.

15. Swing your legs over the gowning bench to the “clean side” of the room.

16. If you will be working primarily in the class 100 areas of the cleanroom, a face mask must also be worn.

17. Use the mirror to ensure your suit fits correctly and is without holes or significant damage.

18. Press the entrance button and enter the cleanroom.

**Bringing Objects into the Cleanroom**

In order to maintain the cleanliness standards of the ASRC NanoFab, users are discouraged from bringing in extraneous items into the cleanroom. Items such as tweezers and other wafer handling equipment, glassware, and any other items necessary for performing work in the cleanroom should be stored in the storage area inside the cleanroom. Any new item, not purchased through the ASRC cleanroom stockroom, must be first approved by ASRC NanoFab staff prior to bringing it the cleanroom. Users must unbox equipment, parts, etc. and remove packaging before bringing them into the cleanroom.

Users should utilize the cleanroom pass-through to bring any new items into the cleanroom. After fully gowning up, the items should be retrieved from the pass-through. All items are to be wiped down with a damp IPA wipe before being brought out of the wipe-down / storage room and into the main cleanroom area.

**Items NOT allowed in the cleanroom**

1. Wood pulp-based paper products, including regular paper, tissues, Kimwipes®, cardboard, books, magazines, and lab notebooks.
2. Styrofoam products, including packing material, disposable coolers, etc.
3. Any powders, powdered chemical samples, or materials that shed particles.
4. Food, gum, drinks, tobacco, cosmetics, or foam.
5. Erasers, pencils, clickable pens, felt-tipped pens other than Sharpie® markers.
6. Anything that can easily tear, shred, or efflux particles or plasticizers.

**De-Gowning Procedure**

1. Sit down on the bench and take off your shoe covers. If they are clean, you can put them in used shoe cover (note separate bins for large and medium sizes). If they are dirty or ripped, throw them away.
2. Take off your coverall, hood, and safety glasses and put it inside your locker (your coverall should have your name on it) or if it’s ripped or dirty, throw it in the garbage.
3. Walk around the bench and to exit the cleanroom gowning room
4. Remove the “first booties”. If they are pretty clean still, save them for reuse in the bin along the wall. If they are dirty, throw them away.
5. Remove gloves and the hairnet and throw them away.

**Housekeeping Expectations**

It is the responsibility of the users to keep the cleanroom and all its work areas and equipment neat and clean.

1. Glassware/plasticware is properly rinsed and removed from the hood, or stored on the storage racks inside the hoods after use.
2. Cleanroom wipes cannot be left in the hood.
3. All trash must be placed in the appropriate bins.
4. Empty chemical bottles must be rinsed, labeled, and placed in red bins
5. Chemical bottles containing chemicals are placed in their proper storage location. Lack of adherence to this rule will result in disciplinary action.
6. Lithography spinners and surrounding area must be cleaned thoroughly after use. If the foil on the spinners becomes torn or too dirty, users must change it. If the foil is relatively clean, users are still required to wipe it down with IPA.
7. Chemical gloves are only to be used and stored in designated areas.
8. Personal tools, materials, and glassware should be stored in the storage room when not in use
9. It is each user’s responsibility to clean up their work area in preparation for the next user.

All work surfaces should be clean and dry after work is completed, especially the areas inside the Acid Process hoods. If a user discovers liquid residue inside an Acid Process Hood, prior to wiping it up, the user must perform a ph test by using the supplied ph-strips in order to ensure that it is not an acid. If the liquid residue is found to be acidic, the user must immediately notify the NanoFab staff.
**After Hours Policy**

ASRC-NF staff strives to maintain and improve laboratory and user safety and efficiency. After hours work inside the cleanroom is an additional privilege that requires users to maintain a safe and productive environment.

*Normal Operation Hours =* 8:00am to 6:00pm weekdays, except CUNY staff holidays

*After-Hours Operation =* 7:00pm to 8:00am workdays, and all weekend and CUNY staff holiday hours. An up to date list of all CUNY staff holidays can be found at [http://www.cuny.edu/academics/calendars.html](http://www.cuny.edu/academics/calendars.html)

During After-Hours, a Buddy system rule is in effect at all times inside the cleanroom. The User must ensure there is a willing and qualified second person according to the following guidelines:

1. A Buddy must be a registered cleanroom user and must be located in the cleanroom at the time of duty.
2. The Buddy is allowed to leave the cleanroom, but cannot leave the ASRC and must check on the user every 30 minutes either electronically (phone/text) or in person. **Exception to Rule 2:** If the user is working in any acid hood, the Buddy must be present in the cleanroom for the duration of the work.

Failure to abide by the After-Hours Policy will result in loss of ASRC NF access. Additionally, users are encouraged to exit the cleanroom for a break at least one time every 3 hours while working. This guideline will help with lab safety and improve your productivity.

**Statement of Acceptance**

I will adhere to the guidelines provided in this document while a user of the ASRC NanoFabrication Facility and understand that failure to comply with any of the regulations will lead to revocation of privileges, suspension, and/or expulsion from the cleanroom.

**User Name (Print):**

**User Signature:**

**Date:**