

# AFTER-HOURS LAB ACCESS SOP

## PURPOSE:

This document describes the procedure for entering the Integrated Nanosystems Research Facility (INRF) and Bio-Organic Nanofabrication Facility (BiON). Using the proper personal protective equipment (PPE) and also adhering to the buddy protocol at all times and follow the COVID-19 safety requirements.

## SCOPE:

This SOP (standard operating procedure) applies to all after-hours users.

This SOP applies to entry as to after-hours buddy persons.

## AUTHORITY and RESPONSIBILITY

The Laboratory Manager and staff of the INRF and BiON along with the EH&S safety officers have the authority to implement and enforce the University of California, Irvine Lab Chemical Hygiene and Lab safety Manual.

The Laboratory Manager and staff are responsible for implementing this SOP and ensuring that all users entering the two facilities follow the SOP procedure. It is the responsibility of all personnel to read, understand and be able to perform the SOP.

## INTRODUCTION

INRF and BiON are responsible for teaching researchers and commercial users that work with corrosive, acidic, combustible and exotic materials, the dangers that could cause short- and long-term illness, burns from skin contact and inhalation. All these materials are contained in chemical cabinets, flammable cabinets and gas cabinets, laminar flow wet benches, chemical flow hoods.

## DEFINITIONS:

**FM:** Facility Management

**SOP:** Standard Operating Procedure

**CHO:** Chemical Hygiene Officer

**LFCWH:** Laminar Flow Chemical Wet Hood

**CWH:** Chemical Wet Hood

**SGC:** Safety Gas Cabinet

**PPE:** Personal Protective Equipment

**CDO:** Control Decomposition / Oxidation

**PM:** Preventive Maintenance

**HVAC:** Air Conditioning, Ventilation, Exhaust Systems

## MATERIALS:

Reusable gown  
Disposable gown  
Head cover  
Shoe covers  
Latex gloves  
Safety glasses

## **INSTRUMENTATION:**

HF monitor  
PH paper  
Exhaust indicator  
Gas monitoring  
Sash indicator

## **NOTES:**

All personnel entering the lab should be gowned before entering the facility. They should be wearing the necessary PPE before beginning work at all times.

## **PROTOCOL:**

After-hours entry to the cleanroom:

1. Contact front office to request after-hours access to INRF/BiON.
2. Inform the front office the nature of the work you will be performing.
3. Front office will review your profile on the Forged to see if you need additional training.
4. If the front office determines that you need additional training they will let you know, if no training is required the front office will check with staff for approval, if approved you will be given after-hours access. Access will be granted to users who have exceeded the minimum determined running time of each tool requested for after hours use. If they have not utilized the tool for the minimum time then they will need to complete this prior to after-hours authorization.
5. If additional training is required the requester will submit a training request through the Forged system.
6. Staff will schedule a training date and will inform the requester.
7. Upon the completion of the training staff will inform the front office.
8. The front office will administer the quiz to reflect the training by staff.
9. When the requester passes the quiz, the front office will schedule with staff a certification date with requester.
10. Upon completion of the certification the staff will inform the front office of their recommendations.
11. User must then complete the minimum required usage time on the equipment prior to after-hours authorization.
12. Users must reserve lab and equipment session date and time onto the Forged system prior to entering the lab.
13. Before beginning your after-hour session, you must enter your buddy into the guest section of Forged log-on it must contain their first and last name.

## **REFERENCES:**

INRF / BiON Lab Safety Manual  
INRF / BiON Lab SDS Sheets  
INRF / BiON COVID-19 Safety Protocol

## **AFTER HOUR EQUIPMENT AVAILABILITY:**

All the lithography equipment like aligners, flood exposure tools, spinners and developing benches. Deposition tools like e-beam 1, CHA thermal evaporator, Denton Sputter, First Nano CVD Furnace, Anneal Furnaces, Characterization tools like the SEM Hitachi S4700, and FEI Sirion SEM also Filmetrics F40-NSR, Four-Point Probe, Dektak 3 and the Dektak XT

## **AFTER HOUR INFRASTRUCTURE SUPPORT:**

In the HVAC and life safety equipment area that supports the lab temperature and the Storage gas cabinets, Laminar flow chemical wet benches, Chemical wet hood, the after-hours user needs to have a good understanding of this system since there might not be staff on sight. If a situation arises you will need to respond accordingly.

**INFRASTRUCTURE ISSUES HVAC SYSTEM:**

Procedure

1. Contact FM at ex 4-5520
2. Inform them of the situation and location.
3. Give them your contact information.
4. Inform INRF/BiON staff of the situation.
5. If this is a 911 situation stay in the area.

When working after hours there is a good possibility/or chance that no staff will be on sight so you will need to be able to describe lab and equipment situation that needs to be communicated with staff remotely. You will be responsible to place the tool in a safe condition or completely shut down that system or explain the hazard. And also turn on and off compress gases.

**LAB EQUIPMENT ISSUES:**

Procedure

1. Evaluate the situation of the equipment and respond according to your training.
2. If possible place the system in a safe condition.
3. Contact staff to explain situation.
4. Staff will instruct you on how to proceed.
5. Document the incident into the forged system for review.
6. Logoff the forged work station.
7. Place an out of service tag on the equipment.

**ELECTRICAL and MECHANICAL**

For electrical and plumbing issues on items such as Laminar flow chemical wet benches, chemical wet hoods, emergency eye washes and showers, these should be reported to FM, Lab staff and front office to arrange repairs.

Researchers are responsible for removable or placing the hazardous materials in a safe condition or informing them of the hazardous materials within and around the area. If necessary researchers would be the responsible person to completely shut down equipment if needed or the portion that was affected.

Procedure

1. Shut down or remove hazardous material.
2. Tag/out system as needed.
3. Researcher to remove hazardous material to temporary location (if needed).
4. Staff responsible for decontamination of area or unit (if needed)
5. EH&S to verify hazard level is safe, (if needed).
6. FM must wear PPE if required when cleaning up or performing repairs.
7. On completion of repairs FM will inform staff or front office
8. Staff will verify repairs are complete and return hazardous materials to proper storage area or perform equipment start-up (if needed).

I have read the After-Hours Lab SOP, understand and agree to adhere to the policies it contains.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Date

Equipment Requested:

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\_\_\_\_\_  
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