Bard Hall Materials Facility
Safety Orientation
For rooms B47, B47A, B47B, B55, B56, SB30  Bard Hall

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Emergency Contact Info

- **In case of emergency:**
  - Dial 911 from a mobile phone
  - Use an emergency phone in the hallways or stairwells as marked on the map in the next page
  - Dial 5-1111 from a campus phone

- For non-emergency, urgent equipment issues, call the appropriate staff member using the number posted on the HASP signs on the doors.

- In the event you have any further questions regarding the proper procedures, safety regulations, or other concerns, please contact one of the Facility Staff.

- You may also find the following contacts may be able to assist you:
  - Matt Steel Facilities Coordinator, 140 Upson Hall, 607-229-4115
    coecis.cornell.edu/facilities
  - John Sinnott, CCMR Group Safety Representative – jps39@cornell.edu, 624 Clark Hall
Bard Basement CCMR Training and Evacuation Plan

In the event of an emergency, evacuation should be along the route outlined by the red arrows. To report emergencies please use the emergency phones in stairwell or on the loading dock.

- Colored rooms require general trainings for access.
- Colored rooms require laser safety training in addition to general safety trainings for access.
- Colored rooms require compressed gas training in addition to general safety trainings for access.
- Colored rooms require cryogen training in addition to general safety trainings for access.
Bard Sub-Basement CCMR Training and Evacuation Plan

In the event of an emergency, evacuation should be along the route outlined by the red arrows. To report emergencies please use the emergency phones in stairwell or on the loading dock.

- Colored rooms require laser safety training in addition to general safety trainings for access.
Area-Specific Hazards

In addition to general safety training and equipment-specific safety training outlined on the previous page, all users working in the following areas should be aware of hazards which could potentially impact users not specifically using these systems:

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**Cryogenic Hazards (B56):** Cryogenic liquids are used regularly for cooling components of the FTIR Microscope, the Dynamic Mechanical Analyzer, and the Dielectric Spectrometer. Due to the hazards associated with their use, all users in B56 should be aware when they are in use and observe appropriate safety practices. Wear safety glasses whenever cryogens are in use in the room, and do not touch any surface of a dewar, transfer line, or probe under cooling without cryogloves. If you notice a liquid or gas leak (or anything unusual) and the cryogen user is not present, notify them and/or the facility staff immediately.

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**Chemical Area (B47A):** The fume hood in B47A is available to all users because Chemical Waste Disposal training is required of any user of the Bard Materials Facility. A hazardous waste container for organic solvents is set up for general use. Use and disposal of other chemicals should be cleared with the facility staff and an appropriate MSDS should be provided. All containers must be labeled with the contents and the user’s name. Users in B47A not using the fume hood should assume that hazardous chemicals are present in the hood and observe appropriate safety practices. After use, the fume hood should be left down at an appropriate level indicated by the green arrows.

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**Lasers (B47B and SB30):** The Neocera Pulsed Laser Deposition system in B47B is equipped with a Class IV ultra-violet laser. The lighted sign above B47B indicates when that laser is in use—users should not enter B47B when the laser light is on and safety glasses should be worn when the laser is activated. There are Class IIIB lasers in SB30 for the Raman and NSOM systems—in normal operation these lasers are not entering the room as a direct beam and users are not required to wear laser safety goggles.

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**Compressed Gas (B55):** The regulators attached to the tanks of compressed gas that are used for the furnaces in B55 should not be changed without seeking permission from the facility staff every time.
Training required for facility access

General trainings required to access the facilities are as follows:
- Laboratory safety (EHS #2555-Laboratory)
- Chemical waste disposal (EHS #2716-Chemwaste)
- GHS-Globally Harmonized System (#5711-GHS)

In addition to general training, rooms with specific hazards require extra training to access.
- Access to rooms SB30 and B47B will require Laser safety training (EHS #2397-Laser safety)
- Access to room B55 will require compressed gas training (EHS #2335-compressed)

- Access to room B56 will require cryogen safety training (#3055-cryogensfty)

Access will only be granted once proof of training has been provided to the facility!
Other Facility Guidelines

Equipment Usage - Users are prohibited from using equipment for which they have not been trained. In general, equipment training will be done by facility staff; exceptions require explicit permission from the staff. Visitors or users’ colleagues may OBSERVE use of equipment without completing access/training requirements as long as they follow all necessary safety measures, but may not USE equipment until all requirements are properly completed. Use of equipment which has been enabled under someone else’s Coral account is strictly prohibited in all CCMR facilities. Each tool will have Standard Operating Procedures (SOP) posted at the tool describing:

a. All EH&S safety training required for use
b. All Personal Protective Equipment (PPE) required
c. Equipment-specific training required before use
d. General use procedures and emergency notes

Attire & Personal Protective Equipment (PPE) – All users are expected to wear closed-toed shoes. Users should wear long pants and sleeves if handling chemicals or cryogens. Long hair should be tied back to avoid any moving parts. Safety glasses are required for all users in chemical areas and should be worn in all areas when appropriate. Nitrile gloves should be available in all areas; if stock of gloves is low or has run out, please notify facility staff.

Food & Drinks – Food and drinks should not be stored or consumed anywhere in the facility other than in B57.

Other Notes –

- Keep all areas as neat and clean as possible.
- Cell phones, laptops, etc. may be used as long as use does not distract from appropriate facility use.
- Headphones may be used if one ear is left open and cords do not interfere with equipment use or create hazards.
- You should be able to access Red Rover (“eduroam”, “RedRover”, or “RedRover-Secure”) in the facility and surrounding areas.
Waste Disposal

All waste in the facility will fall into one of the following categories and should be disposed of accordingly:

- **Hazardous Waste** – All hazardous waste must be stored in a closed container and labeled as such, preferably with a pre-printed EH&S label. Hazardous waste must be collected and disposed of according to EH&S regulations as outlined in Chemical Waste Disposal training. Any user generating hazardous waste must complete this training.

- **Lab Glass** – Microscope slides, old or broken glass labware, silicon wafers, glass pipettes, and other glass used for scientific purposes which are not contaminated with hazardous materials should be disposed of in the appropriate containers in B56 or SB30.

- **Sharps** – Used blades and other sharp objects (see exceptions below) go in the container designated in B56.
  - **Syringes/needles/pipette tips** – These all have special storage/disposal guidelines. Consult with facility staff if you plan to use any of these in the facility.
  - **Recyclables** – Paper (excluding used paper towels), cardboard (boxes should be broken down), clean and empty drink containers, and other recyclables should be left in the small blue recycling bins in the individual rooms.

- **Trash** – Anything not fitting the above categories should go in the small trash bins in the individual rooms.

All samples in the facility must be properly labeled and should be removed from the facility after use/analysis. Any unlabeled samples left in the facility may be disposed of by the facility staff at any time.
Acknowledging the Facility

Please remember to properly acknowledge use of the CCMR Facilities in your presentations, publications, and conference proceedings.

Researchers who make use of these facilities must acknowledge the award number

**NSF DMR-1120296**

www.ccmr.cornell.edu/about/acknowledge.html

For more information, visit:

www.ccmr.cornell.edu/facilities
Submit one form to each facility that you are requesting access to.

1) Print out this page. Illegible or incomplete forms may be discarded.

2) Read the online facility orientation completely and sign below.

3) Circle the room(s), in gray below, to which you are requesting access.

4) Verify in CULearn (URL above) that all the required trainings show as completed on or after April 1, 2009.

5) Print a copy of your CU Learn All Learning and attach to this form.

6) Fill in user information, sign and bring completed forms to the appropriate facility manager.

User Name__________________________________________ Cornell University ID card # ___________________

NetID/E-mail________________________ Phone________________ Status_________ Department_____________ Advisor________________________

By signing below, I am attesting that I have read the facility orientation form and completed the necessary EH&S safety trainings.

User Signature________________________________________ Date _______/_____/______

Office use:
Door________ e-mail list________ entered by________

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<tr>
<th>Facility</th>
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* required for certain instruments, refer to orientation form.

Trainings key (in bold are required for all facilities):

A Laboratory safety training (#2555-laboratory)
H GHS-Globally Harmonized System (#5711-GHS)
W Chemical waste disposal (#2716-chemwaste)
L Laser safety (#2397-lasersafety)
C Training in handling cryogens (#3055-cryogensfty)
M Magnetic field safety training (#5035-magnetic)
R Radiation producing equipment safety (#5033 EHS-RPE)
G Compressed gas safety (#2335-compressed)
F Fire safety training (#5330-firesafety)
D How to Read an MSDS (#3755-MSDS)