

**Polymer Characterization Facility
165 S. T. Olin Laboratory**

Lab Safety Orientation



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Polymer Characterization Facility Manager

Asst. Director NMR & MS

B-71 S. T. Olin

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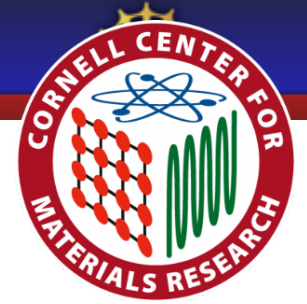


ccmr

Cornell Center for Materials Research

Cornell University, Ithaca, NY

<http://www.ccmr.cornell.edu>



Emergency Contacts

In the event of an emergency, first contact 9-1-1 immediately if there are any injuries. Contact Environmental Health and Safety for chemical hazards. Inform the Facility Manager or Support Staff immediately regarding any accidents or injuries, as a report will need to be documented.

Environmental Health and Safety, (5-8200, dehs-mailbox@cornell.edu)

Dimitrios Koumoulis (5-9021, amc88@cornell.edu), Facility Manager

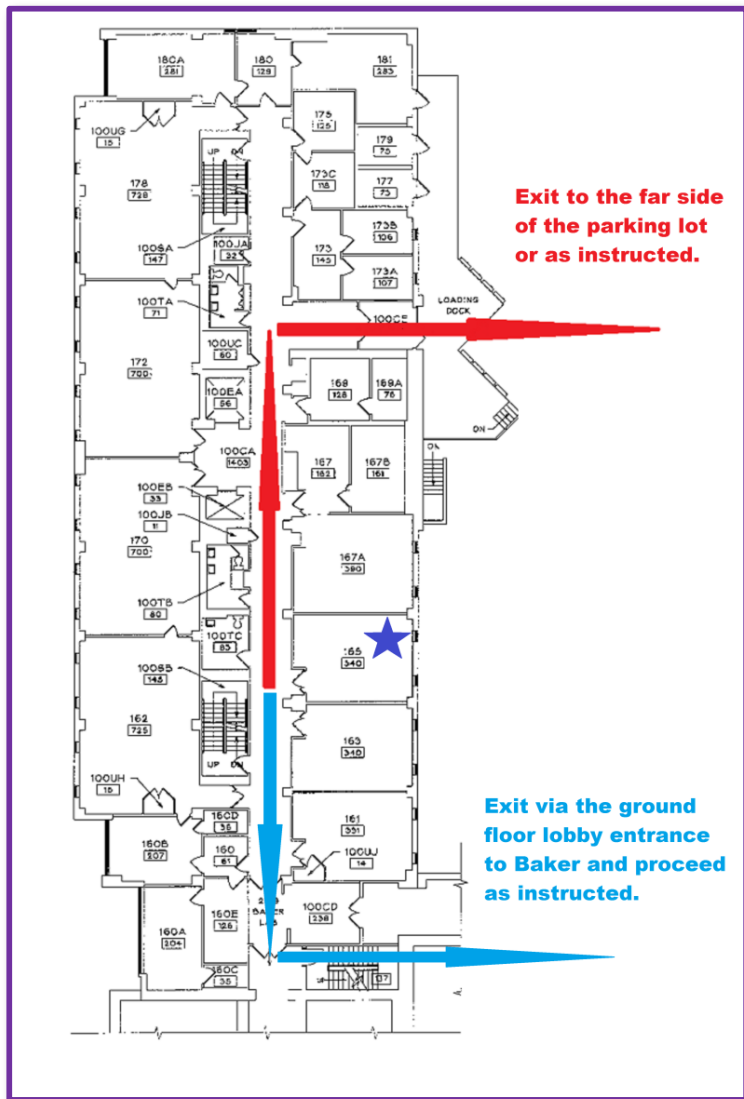
Steve Kriske (5-2367, sjk27@cornell.edu), Research Support Staff

Keane Leitch (5-8773, kjl44@cornell.edu), Physical Sciences Complex
Safety Officer

Dave Neish (5-7309, dnr2@cornell.edu), S. T. Olin Laboratory Building
Coordinator

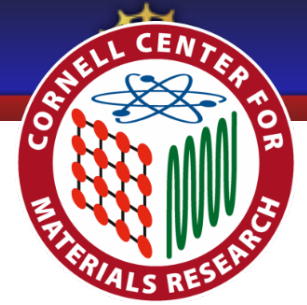


Emergency Exits



Polymer Characterization Facility

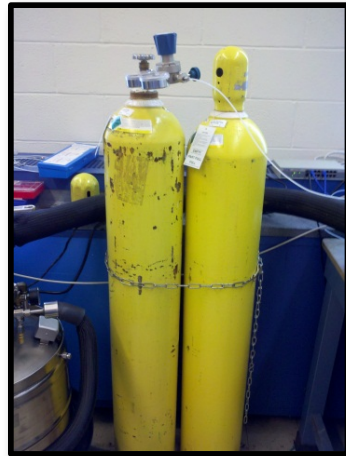
In case of a fire or other emergency, indicated by the sounding of the building alarm, **you MUST exit the lab and the building immediately.** Two potentially available exits are shown on the map to the left.



General Laboratory Hazards



**Cryogenic
Liquid
(Nitrogen)**



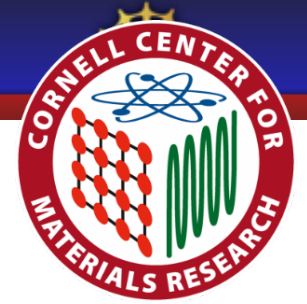
**Compressed
Gases (Air,
Carbon Dioxide)**



**Flammable Liquids
(Organic Solvents)**



**Chemical
Irritants**

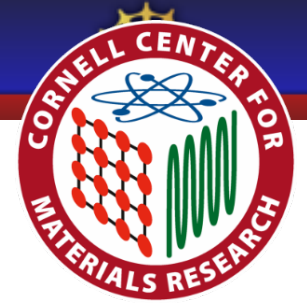


EH&S Lab Safety Courses

- The following laboratory safety courses, offered on-line or in the classroom by Cornell University EH&S, are **required** to access the Polymer Characterization Facility. EH&S course numbers follow in parentheses for your reference.
 - ***Laboratory Safety (2555-Laboratory)***
 - ***Chemical Waste Disposal (2716-ChemWaste)***

- Other training courses may be required for your individual research laboratories, or as dictated by your Group Safety Representative (GSR), Principle Investigator (PI), or your Department. Please consult with them for any additional requirements or suggestions.

- Visit <http://www.ehs.cornell.edu> for more information.



Personal Protective Equipment

- Appropriate dress is required **AT ALL TIMES** when working in the Facility.
 - ***No shorts, short pants, skirts with bare legs, sandals, open-toed shoes, midriff-baring tops, tank tops, etc.***
 - ***Long hair must be tied up and secured.***
- Lab gloves and safety glasses (provided) must be worn **AT ALL TIMES** while working in the Facility. **NO EXCEPTIONS!** Flame-retardant lab coats are highly recommended.
- Contaminated gloves must be removed **AFTER** handling solvents and chemicals, but **BEFORE** using communal equipment like computer keyboards and mice. **NO EXCEPTIONS!**
- Lab visitors are responsible for adhering to these same rules regarding lab conduct and safety, and **must be accompanied by a registered Facility user at all times!**



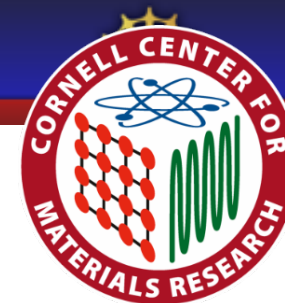
Working in the Facility

- Please do not wear headphones while working. It may limit your ability to hear in the case of an emergency.
- A HASP sign is provided outside of the laboratory door with the appropriate contacts and staff phone numbers.
- After appropriate measures are taken to ensure the health and safety of the lab workers, you must contact the Facility Staff in the event of any emergency.
- All of the labels and containers you bring into the Facility must be labeled in some fashion.
 - Name, Date, Chemical NAME (not abbreviation), concentration (if appropriate)
 - Unlabeled chemicals will be disposed of without notice.
- Please clean up after yourself when you are finished working!
- Only bring **your own** research samples or chemicals into the Facility.
 - Inventoried chemical supplies must be barcoded.
 - Research samples must be clearly labeled such that the substance, the user, and any hazards can be easily identified.
- Once you are finished working, you are responsible for removing your samples from the Facility. Anything left laying around may be discarded by the Facility Staff at any time.
- Solvents or reagents in 4 liter bottles must be transported in a rubber solvent container.
- MSDS's are available at the EH&S website and are bookmarked on the Netbook computer used for accessing CORAL.
- For more information about MSDS's, please visit:
 - <http://sp.ehs.cornell.edu/lab-research-safety/research-safety/msds/Pages/default.aspx>



Cleanup and Maintenance

- Users are responsible for cleaning up after themselves! Do **NOT** leave samples strewn about, dirty sample prep materials (spatulas, scoopulas, razor blades), Kimwipes, gloves, etc. This will help to reduce possible exposure and/or contamination.
- An acetone wash bottle is provided in the hood to clean glassware and used vials. Please rinse these items into the appropriate waste containers, also located inside the hood.
- If you are using a chemical that requires a special waste container and/or method of disposal, you must let the Facility Manager know so that a suitable container may be prepared.
- Large chemical spills must be reported to the Facility Manager, and subsequently to EH&S.

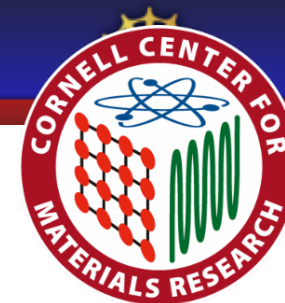


Chemical Waste

- Waste containers are provided in the hood to accommodate GPC sample waste (TCB/"Halogenated Waste", and THF/"Organic Waste"). Your GPC sample vials should be emptied into one of these two containers and rinsed with acetone before being disposed of in the glass waste container provided.
- Vial caps should be discarded into the **TRASH CAN** and **NOT THE GLASS WASTE CONTAINER!**
- "Other" organic waste and solvents should be disposed of in the container labeled "Organic Waste". A list of popular solvents and reagents is provided and is attached to the bottle. Please check off the one(s) you add to the container. If it is not on the list, please write it in.
- Aqueous waste (most likely from the aqueous GPC) can be added to the waste container labeled "Aqueous Waste" in the hood.
- If the container is full, please let the Facility Manager know so that it can be emptied and replaced with a new container.



Be sure your liquid chemical waste and excess solvent(s) ends up in one of these three bottles!



Glass Waste, Sharps Disposal, Trash, and Recycling



Disposable or broken glass, used pipette tips. No sharps, gloves, paper, etc.



Solid waste, gloves, vial caps. No sharps, paper, liquids, etc.



Recyclable paper products ONLY!



Disposable 1 cc syringes and 0.45 μ filters are provided for GPC sample filtration. Used syringe barrels and filters can go into the container by the sink.



Sharps used FOR ANY REASON should go into the “Sharps Only” disposal container, located in the back of the hood. This includes syringe needles (not available in the Facility), razor blades, X-Acto knives, etc.



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-1719875



Cornell Center for Materials Research

For more information please visit:
www.ccmr.cornell.edu/research/acknowledging-ccmr-funding/
or www.ccmr.cornell.edu/facilities/



CCMR Shared Facility Access Form (more information at <http://www.ccmr.cornell.edu/facilities/becoming-a-ccmr-facility-user/>)

Submit one form to *each* facility that you are requesting access to.

- 1) Print out this page. Illegible or incomplete forms may not be accepted.
- 2) Read the facility orientation completely. Required EH&S safety trainings for individual areas are listed below.

Trainings A, F, and W required for access to all facilities

Facility	Room	Required Trainings	Facility	Room	Required Trainings
Duffield Hall	150	CHR	Clark Hall	F03 (Keck)	-
	231 (Prep)	CH		All D21, D22	C*G*M*U*
Bard Hall	B47/A/B	C*L*U*		D15 (AFM)	-
	B55	G	D10	C*G*M*	
	B56	C	PSB	B71/B91/B95	CGR
	SB30	ABWL	ST Olin	B78	C
	SB56/58	R*	Snee Hall	1149 (μ probe)	R*

* required for specific activities, refer to orientation form.

Safety trainings key	
A	Laboratory safety (#2555-laboratory)
C	Cryogen handling (#3055-cryogensfty)
F	Fire safety (#5330-firesafety)
G	Compressed gas (#2335-compressed)
H	Globally Harmonized System (#5710-GHS) update
L	Laser safety (#2397-lasersafety)
M	Magnetic fields (#5035-magnetic)
R	Radiation producing equipment (#5033 EHS-RPE)
U	Fume hood (#3355-FumeHood)
W	Chemical waste disposal (#2716-chemwaste)

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

User Name _____ Cornell University ID card # _____

NetID/E-mail _____ 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 _____