

# Cornell Center for Materials Research

## SHARED FACILITIES

# Policies and Procedures



Version 2.2  
Effective November 1, 2013

*The Cornell Center for Materials Research is funded by the National Science Foundation as part of the Materials Research Science and Engineering Centers program under Award Number DMR-1120296. Additional support is provided by New York State, Cornell University, other national funding agencies and by industrial sources.*

# CCMR SHARED FACILITIES

## Policies and Procedures

### Policy Statement

---

The Cornell Center for Materials Research operates Shared Facilities to enable and facilitate scientific research, particularly in the area of materials science and engineering. The CCMR Shared Facilities are open to all researchers performing non-classified research from within and beyond Cornell University. The operation shall be conducted in compliance with Cornell regulations, applicable federal, state, and local regulations, University Health and Safety Board requirements, and other university health and safety standards. User fees are charged to all users to offset the costs incurred in providing scientific equipment and technical expertise.

### Reason for Policy

---

The CCMR provides its Shared Facilities with consistent operational practices to ensure compliance with applicable federal, state, and local regulations, University Health and Safety Board requirements, and other university health and safety standards.

### Who Should Read This Policy

---

CCMR Facility Staff  
CCMR Shared Facilities users  
CCMR Administrators

### Sponsoring Agency Acknowledgement

---

The CCMR facility system is funded partially by the National Science Foundation Materials Research Science and Engineering Centers (MRSEC) program through Cooperative Agreement DMR-1120296.

Researchers who make use of the CCMR facilities must acknowledge this use as follows:

*“This work made use of the Cornell Center for Materials Research Facilities supported by the National Science Foundation under Award Number DMR-1120296.”*

The cooperative agreements are available on request.

## Table of Contents

---

Policy Statement .....	ii
Reason for Policy .....	ii
Who Should Read This Policy .....	ii
Sponsoring Agency Acknowledgement .....	ii
Introduction .....	1
Related Documents.....	2
Access to Facilities .....	3
Commercial Use of Facilities .....	3
Proprietary or Confidential Use of Facilities.....	4
Use of Facilities for Classified Research.....	4
User Fees .....	4
Scheduled Time on Facility Equipment .....	5
Use of CCMR Instrumentation.....	5
Environmental Health and Safety .....	6
Facility Management .....	6
Bi-annual review of user fees .....	7
Consulting.....	7
Personal Use .....	7
Enforcement.....	7



## **Introduction**

---

The central mission of the Cornell Center for Materials Research (CCMR) is to explore and advance the forefront of the science and engineering of materials. The Center couples research and education in areas of importance and interest to society, through both internal and external interactions and programs. The CCMR is a world leader in the design, control, and fundamental understanding of materials — creating new materials while also pursuing experimental and theoretical studies of the assembly, processing, properties and behavior of materials. A detailed overview of the center and its activities is available online at the [CCMR website](#).

The CCMR operates a versatile suite of shared facilities which

- Enable the science and engineering programs undertaken by the MRSEC by providing world class materials analysis and processing equipment in an efficient and cost effective manner,
- Train and educate the next generation of materials researchers from Cornell and beyond,
- Leverage the MRSEC investment by incorporating support from beyond the MRSEC including government grants, foundation awards and industry donations,
- Broaden the impact of the MRSEC by serving a broad range of users: MRSEC, non-MRSEC, Cornell, other academic, government, industry, and even the K-12 community through CCMR Educational Outreach programs, and
- Provide a meeting place for this broad range of users that helps cross-fertilize materials research through interdepartmental and intergroup contacts.

All users pay fees for used services. These fees are based on a cost-recovery principle. Usage includes casual use, scheduled use, classroom or instructional use by all researchers, staff, students, and visitors.



## Related Documents

---

### U.S. Federal Government, Office of Management and Budget (OMB)

- OMB Circular A-21: Cost Principles for Educational Institutions  
[http://www.whitehouse.gov/omb/circulars\\_a021\\_2004](http://www.whitehouse.gov/omb/circulars_a021_2004)
- OMB Circular A-110: Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education. [http://www.whitehouse.gov/omb/circulars\\_a110](http://www.whitehouse.gov/omb/circulars_a110)

### National Science Foundation

- Important Notice 122: Principles Related to the Use and Operation of National Science Foundation-Supported Research Instrumentation and Facilities  
[www.nsf.gov/pubs/1998/iin122/iin122.txt](http://www.nsf.gov/pubs/1998/iin122/iin122.txt)
- Grant General Conditions (GC-1) and Cooperative Agreement General Conditions (CA-1)  
[www.nsf.gov/home/grants/grants\\_gac.htm](http://www.nsf.gov/home/grants/grants_gac.htm)
- NSF Grant Policy Manual [www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=papp](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp)

### Cornell University

- Cornell Policy 2.4: Health and Safety  
<http://www.dfa.cornell.edu/treasurer/policyoffice/policies/volumes/facilities/health.cfm>
- Cornell Policy 3.8: Program Income from Sponsored Projects  
[www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/finance/income.cfmProjects](http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/finance/income.cfmProjects)
- Cornell Policy 3.10: Recharge Operations and Service  
[www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/finance/recharge.cfmFacilities](http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/finance/recharge.cfmFacilities)
- Cornell Policy regarding conflict of interest and clarification of liability.  
[www.dfa.cornell.edu/dfa/cms/treasurer/policyoffice/policies/volumes/governance/upload/Conflicts.pdf](http://www.dfa.cornell.edu/dfa/cms/treasurer/policyoffice/policies/volumes/governance/upload/Conflicts.pdf)
- Cornell Policy 2.7 Reporting the use of Facilities:  
[www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/facilities/facilitiesreporting.cfm](http://www.dfa.cornell.edu/dfa/treasurer/policyoffice/policies/volumes/facilities/facilitiesreporting.cfm)
- Policy on Use of University Facilities: [www.osp.cornell.edu/Policies/space-policy.html](http://www.osp.cornell.edu/Policies/space-policy.html)



## **Access to Facilities**

---

The CCMR Shared Facilities are open to all researchers performing non-classified scientific research. Classified research is not permitted under any circumstances.

Use of the facilities in commercial or for-profit activities is permitted under certain circumstances; see section on Commercial Use of Facilities.

Use of the facilities to obtain confidential or proprietary data is permitted under certain circumstances; see section on Proprietary Research.

All users are required to obtain appropriate training and instruction specific for each instrument and to demonstrate sufficient proficiency before and during equipment usage. Many instruments require reservation in advance of use. In the unlikely event that equipment is simultaneously needed by more than one researcher, members of the academic community receive priority.

All users entering facilities are required to have taken the following Cornell EH&S safety trainings (individual facilities/rooms/instruments may have additional safety training requirements, more information at <http://www.ccmr.cornell.edu/facilities/safetyinfo/>) :

- Laboratory Safety training (#2555)
- Chemical Waste Disposal (#2716)
- Global Harmonization System update (#5711)

In general, facilities are open at all times to qualified users. Access to the facilities outside normal working hours is limited to trained and experienced users only and is at the discretion of the facility manager. In the event of a temporary closure, the CCMR will provide timely notification whenever possible.

## **Commercial Use of Facilities**

---

Current NSF and Cornell policy recognizes and encourages cooperation between universities and the industrial and manufacturing sectors. This cooperation in advanced study and research will promote a more rapid dissemination of knowledge and will contribute to economic development. The Center encourages its research groups and Facilities to forge interdisciplinary partnerships between the Center, industry and government.

Facilities must conform to the requirements stated in the relevant documents from the Federal Government, NSF and Cornell University:

1. Commercial use of the facility must not interfere with the research mission of the Center.
2. Appropriate fees must be charged to recover full costs.
3. Fees for services to commercial businesses must not be less than fees charged for equivalent services from viable commercial vendors or facilities.
4. Excess capacity must be available to handle the industrial usage.



Certain limited exceptions to this policy may be made, for example, to facilitate key research activities in the Center, or to foster industrial outreach under special circumstances. The Facility manager may recommend, in writing, a limited exception, which must be approved by the Director of the Facilities in advance of the proposed activity.

## **Proprietary or Confidential Use of Facilities**

---

In accordance with the [Cornell Policy on use of University Facilities](#) confidential use of CCMR facilities requires that:

- All details of the proprietary work to be done that are relevant to the safety of personnel or of the facility shall be made available to and approved by the facility manager prior to final approval of the activity. The facility manager shall assure that the proposed work conforms to usual safe operating procedures but shall not divulge technical aspects of the work that are confidential.
- There shall be no difference in the operating personnel or procedures of the facility for proprietary or non-proprietary work. There shall be no special security precautions, no special access restrictions, and no personnel clearance requirements. Users of University facilities for proprietary work shall accept this risk of disclosure.

## **Use of Facilities for Classified Research**

---

University Policy prohibits Cornell personnel from engaging in research on campus that is confidential or classified for National Security reasons. This applies to all CCMR facilities. ("Statement on Sensitive and Proprietary Research, " May, 1985).

## **User Fees**

---

- All users shall pay user fees.
- Fees charged to academic users are based on a cost-recovery principle.
- For-profit enterprises must pay the full cost of using facility resources. In addition, facilities may not *directly* compete with services provided by private companies in a manner that is prohibited by OMB Circular a-110.
- Those Facilities that receive financial support from the NSF MRSEC grant in support of the mission of the facilities shall be operated in a manner consistent with Cornell Policy 3.8: Program Income from Sponsored Projects.
- Operations of those Facilities that do not normally receive support from the NSF grant or other funding agencies shall be carried out in a manner consistent with Cornell Policy 3.10: Recharge Operations and Service Facilities.
- Facility manager and technical staff labor charges shall only cover *direct* services such as specimen preparation, instrument or equipment set-up, training of new users, and data gathering. Routine maintenance of instruments is not a direct service. Minor consultation on experimental techniques or simple instruction on the use of equipment is also not considered to be a direct service.



- Materials consumed during the normal operation of CCMR instrumentation are normally included in user fees and not billed separately. In a limited number of cases, users are charged for supplies (*e.g.*, AFM cantilevers) and billed at cost.
- On request, estimates can be made by facility managers for a finite project based on prior experience with the understanding that the quotation is subject to inaccuracy. The facility will not be held responsible for any unforeseen circumstances that do not permit the work to be completed within the estimated cost or time schedule. All work is subject to equipment availability.
- Current rates shall be posted on the [CCMR Shared Facilities website](#).

## **Scheduling Time on Facility Equipment (CCMR Coral)**

---

All users are required to [obtain a CCMR Coral account](#) for equipment reservation and activation. The Coral account does not presume instrument training—users must still obtain training for each instrument they will use.

Many instruments require a reservation in advance of use. Users that have obtained appropriate training and instruction specific for each instrument and demonstrated sufficient proficiency can make reservations [using Coral](#).

Reservation of equipment is on a first come, first serve basis. Users are expected to be respectful of the need of other users and make reservations accordingly.

Facilities managers reserve the right to reschedule or cancel reservations.

If a user schedules machine time or assistance and fails to cancel at least 24 hours in advance of the scheduled time, the user can be charged up to the entire reserved time at the applicable user fee.

## **Use of CCMR Instrumentation**

---

Violation of any of the following may result in suspension of facility or Coral privileges.

- To use a particular instrument, a user is required to have been trained by facility staff unless specifically posted otherwise.
- Instrumentation in Coral must be reserved **and enabled** by the user during use.
- Users are not allowed to share Coral netID logins, or to enable an instrument on behalf of another user.
- Disabling or circumventing Coral interlocks for the purpose of avoiding instrument permissions or machine time charges is strictly forbidden.
- Users are not to move or disturb the work of other researchers unless given permission by facility staff or the researcher. Notify facility staff about unattended samples.
- Users are expected to remove all samples and to leave the work area in as clean or cleaner condition compared to when they arrived.





## **Environmental Health and Safety**

---

The CCMR Shared Facilities strive to maintain a safe environment. All staff members and users shall conduct operations in compliance with all applicable federal, state, local regulations, and university policies, including the [University's Health and Safety Policy](#) and all other university safety practices and programs. All staff members and users shall obtain and maintain required safety training. The Facilities strive to maintain workplaces and equipment that are safe and well-kept. All personnel shall conduct self-audits to identify non-compliance items and if necessary shall take corrective measures.

Handling of nanomaterials (a material with two or three dimensions between 1 to 100 nm) in a CCMR facility may require special training and prior approval from the manager in charge. Detailed guidelines for the handling of nanomaterials in the CCMR Shared Facilities are provided in the individual facility [Safety Orientations](#).

## **Facility Management**

---

The management of CCMR Shared Facilities is the responsibility of the Shared Facilities Director. Each CCMR facility has a manager appointed by and reporting to the Shared Facilities Director. As appropriate, facilities may have additional professional staff members reporting to the facility manager. Each facility has one or more faculty advisors appointed by the CCMR Director.

### **Responsibilities of Shared Facilities Director:**

1. Supervise the operation of the CCMR Shared Facilities.
2. Establish appropriate Shared Facilities policies and ensure that CCMR Shared Facilities comply with these policies and with relevant University and government policies.
3. Hire and supervise facility staff. Assign and monitor special projects delegated to facility staff.
4. Establish and update annually, in collaboration with the Facility Advisors and the Facility Managers, three-year plans for each Facility.
5. Conduct periodic reviews of facility operations, activities and financial status.
6. Develop and implement an overall strategy and operations plan for the CCMR Shared Facilities
7. Serve as a resource for facility managers and staff.
8. Review and administer special requests and waivers.

### **Responsibilities of Facility Manager:**

1. Manage the day-to-day operation of facility and maintain the instruments to specifications.
2. Ensure that all users have the proper safety training(s) before granting access to instruments/rooms/areas.
3. Instruct and assist researchers using facility equipment.
4. Supervise any facility technical staff.
5. Establish and maintain sound safety practices in compliance with applicable regulations.
6. Remain current on research that utilizes techniques provided by the facility.



7. Coordinate and provide expert technical input to the annual update of the Facilities three-year strategic plans in collaboration with the Facility Advisor(s) and the Facility Director.
8. Implement these plans through preparation and submission of capital equipment proposals, acquisition and installation of new instrumentation.
9. Maintain facility records as required by the Center Financial Administration.

**Responsibilities of Faculty Advisor:**

1. Provide expert advice in the annual update of the Facilities three-year strategic plans.
2. Support the acquisition process of new equipment by collaborating on the preparation and submission of internal and external proposals.
3. Provide technical advice about facility resources.

**Responsibilities of Financial Administrator:**

1. Process monthly facility usage invoices and charges to user accounts.
2. Update the Coral user system with new users and account numbers.
3. Establish operating and capital facility accounts.

## **Bi-annual review of user fees:**

---

User fees in each facility shall be reviewed bi-annually or more frequently if required.

Equipment and labor rates are approved by the CCMR Director following advice from the Facilities Director based on a combination of factors including cost of service, external rates for comparable services, strategic importance to the overall research mission of the CCMR, and affordability from the perspective of users.

## **Consulting**

---

Faculty and facility staff that have external private consulting or other activities involving personal financial gain may use facility equipment for such purposes only after the approval by the Director of the Shared Facilities and only at the standard commercial rates. Any work must conform to the [University policy regarding conflict of interest](#) and clarification of liability.

## **Personal Use**

---

CCMR facilities may not be used for personal purposes by any individual without the prior approval of the Director of the Facilities. These activities must not diminish the available capacity in the facility to a level that will hinder the research mission of the Center, and must conform to [University policy regarding conflict of interest](#) and clarification of liability.

## **Enforcement:**

---

Any CCMR Facilities user who violates this policy or policies referenced herein forfeits his/her right to access the facilities and to use the affected equipment. At its discretion, the CCMR Management may revoke an offending user's access rights to equipment or facilities for a limited or extended period of time.