

HPMI Policies and Procedures 2015

The High-Performance Materials Institute (HPMI) is a leading center in the materials R&D. HPMI consists of multidisciplinary professional researchers: students, staff and faculty. HPMI is dedicated to the following mission:

- Become a leader in developing cost-effective high-performance composites and multifunctional nanomaterials and product prototypes.
- Develop an interdisciplinary research team with a wide range of technical backgrounds for conducting world-class research towards making high-performance materials scalable, affordable and energy efficient.
- Develop unique capabilities for concept-prototype development, nanomanufacturing, advanced manufacturing.
- Establish a leading institute for undergraduate and graduate study and degree production in the related areas.
- Accelerate technical transfer and commercialization of the developed technologies to create local and national impacts.

Fulfilling our mission requires setting standards of excellence in professionalism and efficiency that will lead to a productive, safe and enjoyable working environment. Fulfilling our mission will also ensure that HPMI researchers further their careers in challenging and rewarding future employment.

The following standards are established to ensure a safe and productive working environment. This should also be considered as part of the professional training, which is expected in industry.

1. Laboratory Safety

All HPMI personnel and personnel utilizing HPMI or MRB labs and equipment must attend the FSU Environmental Health and Safety (EH&S) Hazardous Waste Awareness/Introduction to Laboratory Safety/Hazard Communication training within two months of being granted access and either attend the training or complete the online refresher training at least once in every 12 months. Dates for this training and other training offered by EH&S can be found at their training website

www.safety.fsu.edu/training.html Additional safety information may be found at the online FSU Laboratory Safety Manual link at the EH&S website www.safety.fsu.edu.

- a. In an emergency, call 911 immediately.
- b. Exit the building immediately at the sound of a fire alarm.
- c. Report any injury, accident or "near miss" to your supervisor as soon as possible.
- d. Become familiar with the location and operation of safety equipment like safety showers and fire extinguishers. Know the locations of the closest telephones and fire alarms.
- e. If you will be working after hours in any lab, obtain written email authorization from your PI advisor, first notifying the advisor with information regarding when you will be working, exactly what you will be doing and who you will be working with if involving something potentially dangerous. This should include any equipment or chemicals being used, so the PI can determine if special precautions should be taken. This authorization should be renewed at least once a week, including any updates.
- f. If operating any equipment that will generate at temperatures greater than 300° C after 5:30 pm, a responsible person must remain in the building and check on the equipment at least once every 30 minutes. Notify your PI advisor and Mr. Allen via email regarding the equipment in operation. One person may monitor multiple equipment, but the person must be familiar with the equipment and the experiment being monitored.
- g. Undergraduates should never work alone, especially after hours.
- h. Follow a written protocol for any experiment that includes emergency response procedures. If a protocol does not exist, notify your PI advisor. Review the Hazard analysis – risk assessment and the Risk assessment template on the resource page of the HPMI website. PI supervisors are responsible for ensuring that each lab worker is provided safety training specific to the hazards of the laboratory operations.
- i. Read and have readily available MSDS sheets for any chemical you are using. Most [MSDS sheets](#) are available at the Laboratory Safety Manual link at the EH&S website www.safety.fsu.edu. Review other resources as needed to obtain safety information. Understand the hazardous properties of chemicals. Know what to do if a chemical exposure occurs. Know what to do in case of a chemical spill. Know where chemical spill kits are

- located and how to use them. Clean up chemical spills only if safe. Call 911 if the spill is hazardous and cannot be contained.
- j. Ensure chemicals are properly stored based upon potential hazards.
 - k. Follow the MSDS instructions to select and utilize personal protection equipment (PPE) during experiments.
 - l. Wear necessary personal protection equipment ([PPE](#)) such as safety glasses, gloves, and lab coats while operating the machines or performing chemical experiments.
 - m. Clearly mark all beakers and containers indicating what is in the container. Avoid marking the lids of the containers since they may become separated from the container.
 - n. Do not use Parafilm covers on containers for more than one day.
 - o. Hazardous waste (HW):
 - i. No chemical waste can be disposed of in a drain.
 - ii. Dispose of waste in the proper container.
 - iii. Clearly label the waste that is being disposed of on the HW container.
 - iv. Ensure the tops of HW containers are securely closed.
 - v. When container is close to being full, call 644-0971 for pickup. Do not remove the container from the lab.
 - p. Do not reuse disposable gloves. Dispose of gloves in the trash. Do not leave the gloves on tables. Remove gloves by pulling the glove from the wrist to ensure what was the exterior of the glove is now on the inside. This prevents contaminating your bare hands.
 - q. Always wear closed-toe shoes in the labs. (No sandals)
 - r. Ensure anyone around your equipment is wearing the proper safety equipment and observing safety procedures.
 - s. No eating, drinking or smoking in the labs, unless the labs have been designated for eating and drinking by Environmental Health and Safety.
 - t. Restrict and control contact with nanotubes and do not allow contact with unprotected skin, especially in the powder or aerosol form. Ensure nanotubes do not become airborne in an unprotected area. Handle nanotube particles that are not in a liquid or a bulk form in a fume hood.
 - u. Keep your work area safe and clean. Prior to leaving ensure your work area and lab is clean, including:
 - i. Dispose of razor blades in the proper receptacle.
 - ii. Dispose of disposable gloves in the trash.
 - iii. Disconnecting any extension cords and remove any item that may be a trip or fire hazard.
 - iv. Minimize combustible materials, for example excess paper and cardboard boxes (Dispose of cardboard boxes when discarded by flattening the boxes and placing them by the dumpster).
 - v. Dispose of broken glass in the cardboard boxes marked for broken glass. This shall not be used for other trash or glass that is not broken.
 - vi. Clean sinks and any common area.

Violations of these rules are grounds for dismissal from the program.

2. Laboratory rules and ethics

- a. Obtain certification on equipment before you use any equipment or device in any HPMI labs. Review the Equipment Management Program policies and procedures contained in this document.
- b. Do not disconnect or remove lab equipment or computers.
- c. Report broken equipment to the lab engineer, Jerry Horne. Label the equipment as broken. Do not attempt to operate or repair equipment unless you are certified.
- d. For energy efficiency and safety, close fume hoods when not in use, and do not raise hoods above the designated height. Also, utilize fume hood log books for experiments.
- e. All equipment, tools and materials are shared, but these resources are assigned to different groups and researchers for management purposes. Obtain permission to use equipment, tools or materials not assigned to you.
- f. Provide only constructive comments to other researchers and be respectful to other researchers' work.

- g. All unattended research setups must have your name and contact information clearly visible.
- h. Do not stop or disturb other people's experiments or take another person's tools or supplies without permission, unless due to safety concerns.
- i. For major equipment and tools, the responsible researchers must coordinate times of use to ensure that all projects have access to resources.
- j. Use lab equipment and computers for instructional or research purposes only. Do not copy any computer programs. Do not save your personal programs or data to the laboratory computers.
- k. Laboratory notebooks are available. These notebooks are assigned based on the recommendation of your advisor, but remain the property of HPMI and must be returned prior to leaving HPMI.
- l. Prior to leaving HPMI, complete the checkout sheet found on the HPMI website resource page.

Violations of these rules are grounds for dismissal from the program.

3. Materials Research Building rules and information

- a. For training, safety and security, most labs have cameras that are in operation. These cameras are constantly recording, but are not monitored.
- b. Prior to inviting visitors or as soon as possible after inviting visitors, notify Mr. Allen and Ms. Gardner so that meeting space, proper agreements and welcoming can be arranged. In addition, we want to keep a record of visitors. A link has been established at the HPMI website to request visits.
- c. Clean lab coats are available in MRB 144. The coats should be placed in the hamper in 144 for cleaning.
- d. Do not wear lab coats or gloves in the lounge area or outside of the laboratory wing of the building. Use the service elevator if you must go to another floor.
- e. To protect the floor of the atrium, never slide chairs or tables and avoid taking equipment or supplies through the atrium. Use the loading dock entrance for bringing in equipment and supplies, when possible.
- f. While you may eat and drink in designated areas, ensure these areas remain clean.
- g. The break rooms are available as a privilege. Failure to keep the area clean may result in being restricted from the break room or dismissal from HPMI.
- h. No smoking within 50 feet of the building.
- i. Cubicles and desks are assigned by the HPMI director on a priority basis of Staff, Post-Docs, Doctoral students, Masters students and undergraduates. Do not use vacant cubicles.
- j. If you move furniture, ensure you move it back to the original location.
- k. Do not post messages, signs or banners on walls.

4. Security and sharing information

- a. Do not open the large bay door or prop open a perimeter door after normal working hours without notifying FSU police (644-1234). Police will respond when doors are left open after hours.
- b. Lab doors should not be propped open.
- c. Your FSU ID card serves as your access to the building and labs. Access for labs is assigned by W. Frank Allen based upon recommendation and approval of the researcher's advisor.
- d. Everyone should swipe his or her own card when entering after hours. Be aware of "piggy-backers," meaning other people entering the building or a lab after you swipe your card. The person swiping the card will be the person recorded and may be held responsible for any damage.
- e. The last person to leave the laboratory must ensure that doors are locked and equipment is turned off (unless designated by another researcher to remain in operation).
- f. You should be proud of your research, and we encourage you to inform people about HPMI and your work. However, many of our research projects are proprietary and specific technical details are confidential and should not be shared with others without proper agreements. As a member of a research laboratory, you have an obligation not to discuss, share or pass on any proprietary or confidential information to others outside of your research group, except with the permission of your advisor or the director. An inappropriate or inadvertent release of

confidential information may result in punitive consequences. Fla. Stat. 112.313(8) states that no employee may disclose or use information not available to the general public which was gained because of that employee's position for personal benefit or for the personal benefit of another person or business entity. If anyone asks detailed technical questions, consult with your advisor and W. Frank Allen (fallen@fsu.edu) for guidance.

5. Academic eligibility for HPMI personnel

- a. Undergraduate students must have a 3.0 cumulative GPA or work demonstrating their ability to maintain a 3.0 semester GPA while working 10 hours per week in order to be a candidate for employment by HPMI.
- b. Undergraduate students who fall below a 3.0 semester GPA during any semester while they are employed by HPMI are subject to have their employment terminated.
- c. Graduate students pursuing a M.S. degree must have a 3.3 cumulative GPA in order to be a candidate for employment by HPMI.
- d. Graduate students pursuing a M.S. degree who fall below a 3.3 semester GPA during any semester while they are employed by HPMI are subject to have their employment terminated.
- e. Graduate students pursuing a Ph.D. degree must have a 3.5 cumulative GPA in order to be a candidate for employment by HPMI.
- f. Graduate students pursuing a Ph.D. degree who fall below a 3.5 semester GPA during any semester while they are employed by HPMI are subject to have their employment terminated.
- g. If any student deems that exceptional circumstances led to their poor academic performance and subsequent termination, they may appeal the decision and provide an adequate explanation to the HPMI Director, in writing, within 5 days of their notice of termination. Decisions regarding appeals are final.

6. Materials and supply ordering procedures

- a. PLAN AHEAD – obtaining supplies will take time. Identify materials that will be required or may be required and order early.
- b. Items costing less than \$1,500 can be ordered with a single quotation. Items ranging in cost from \$1,500 to \$25,000 require two competitive quotes (quotes from other vendors) in addition to the preferred vendor's quote. Items costing more than \$25,000 should be handled by their advisor.
- c. Visit the resource page at HPMI website (www.hpmi.net) to obtain the form for ordering supplies and for supplemental information.
- d. Keep records of orders (vendors and items and dates) that you have submitted for your future reference in the event that follow up inquiries are necessary.

7. Package pickup (subject to change)

- a. Most items ordered through either university purchasing system will be delivered to the IME main office.
- b. Take the package ONLY AFTER the item has been recorded and ONLY IF your name is on the package.
- c. Questions regarding packages should be directed to John Taylor (jotaylor@eng.fsu.edu, 410-6341) or Shavaughn Robinson (robinsha@eng.fsu.edu 410-6646).

HPMI Equipment Management Policies and Procedures 2015

Two main components make HPMI a major national research center: our people and our equipment. HPMI has acquired many pieces of precision equipment with a value totaling millions of dollars. This equipment must be used with care. To protect our people and our equipment, we have established this equipment management plan. Use of the equipment is part of the **PRIVILEGE** of being an HPMI researcher. Equipment use is not a right. Users have the responsibility to follow this policy to ensure proper use of equipment.

1. General Information

- a. Contact the operations director prior to ordering any large equipment item or equipment requiring special connections.
- b. Each equipment item is assigned to an HPMI researcher who serves as the equipment manager.
- c. The equipment manager shall train and document HPMI personnel as certified users. The certified user list will be attached to log book or available on a website.
- d. Users must utilize the equipment use log books and shall keep true and accurate records of all dates and times in which the equipment is in use. Start the log book entry before you start your work.
- e. Improper use, failure to keep work space and equipment clean, or misconduct may result in disciplinary action including termination from the program. Gross misconduct or malicious misuse of equipment will result in termination and possible legal prosecution.
- f. Equipment use not related to FSU related research projects must be approved by a PI or the operations director.
- g. If you will be working after hours in any lab, obtain written email authorization from your PI advisor, first notifying the advisor with information regarding when you will be working, exactly what you will be doing and who you will be working with if involving something potentially dangerous. This should include any equipment or chemicals being used, so the PI can determine if special precautions should be taken. This authorization should be renewed at least once a week, including any updates.
- h. If operating any equipment that will generate at a temperature greater than 300° C after 5:30 pm, a responsible person must remain in the building and check on the equipment at least once every 30 minutes. Notify your advisor and Mr. Allen via email regarding the equipment in operation. One person may monitor multiple equipment; however, but the person must be familiar with the equipment and the experiment being conducted.
- i. Non-HPMI personnel using HPMI equipment must have prior approval. See the request form for training and certification on the resource forms of the [HPMI website](#). Requestors working in the labs must also read and understand the accompanying HPMI Policies & Procedures, which contains safety and security guidelines.

2. Equipment Managers' Responsibilities

- a. Provide training and certification for equipment use.
- b. Ensure a logbook is in place and used for assigned equipment. Conduct random checks and report any noncompliance to a PI or staff member.
- c. Post the certified user list in the log book and ensure only trained and certified personnel use the equipment.
- d. Maintain files of instrument manuals, operating instructions, maintenance and service records for each equipment.
- e. Maintenance: Perform or schedule routine and preventative maintenance and set up and maintain connections between instruments, computers, and printers.
- f. Arrange for repairs and replace consumables and accessories.
- g. Assist in specimen preparation serving as a supervisor/trainer.

3. Certified Users' Responsibilities:

- a. Users must read and sign the HPMI policies and procedures, and obtain approval and training from their advisor and receive certification training to operate any item of equipment.
- b. Users must attend the FSU Environmental Health and Safety (EH&S) Hazardous Waste Awareness/Introduction to Laboratory Safety/Hazard Communication training within two months of being granted access and either attend the training or complete the online refresher training at least once in every 12 months.
- c. Further safety training on specific laboratory or equipment operations may be required as necessary.
- d. The equipment log book **MUST** be filled out **BEFORE** starting use of the equipment. Noncompliance could result in disciplinary actions, including but not limited to loss of privilege of equipment use or termination from the program.
- e. Certified users may make reservations to use equipment anytime the equipment is available; however, be certain you allot sufficient time to complete your work without encroaching into

- the time reserved by other scheduled users. Make reasonable time estimates when scheduling.
- f. Users are not allowed to reserve more than two time slots within one week without permission of the equipment manager.
 - g. Cancellation policy: It is the user's responsibility to cancel reservation one (1) day in advance (2 days for SEM and AFM). Failure to do so may result the user being denied use of the equipment for a specified period.
 - h. Time slots will be held 30 minutes, after which the equipment manager may reassign the time to another user. If you will be late for your scheduled time, you must contact the equipment manager to hold your time slot.
 - i. Use equipment appropriately. Careless operation may result in disciplinary action up to termination of employment.
 - j. Clean equipment and work area, including common areas, such as sinks, after use.
 - k. Report any fault or malfunction in the log book and to the equipment supervisor.
 - l. Do **NOT** install any software without the approval of the equipment director.
 - m. Direct any questions to equipment manager.

I certify that I have received, read, understand and agree to comply with the HPMI Policies and Procedures and the HPMI Equipment Management Policies and Procedures for 2015 (05/15).

Signature: _____

Print Name: _____

Advisor: _____

Email: _____

Contact phone #: _____

Date: _____

I agree to have my photograph or image used for publicity purposes:

(Signed)

I understand that for training, safety and security, most labs have cameras that are in operation. These cameras are constantly recording, but are not monitored:

(Signed)