**General Safety and Health Guidelines for the use of Carbon-based Nanomaterials**

1. Ensure your research project is registered with EHS at: <http://www.ehss.vt.edu/programs/nano_safety.php>
2. An assessment of engineering controls, personal protective equipment and respiratory protection should be conducted to ensure appropriate for the specific process.
3. Weighing of dry or loose carbon nanomaterials must be done in a fume hood, glove box, or similar control device.
4. Routine handling of dry or loose carbon nanomaterials must be carried out in a fume hood, glove box or similar control device until it is dissolved in a liquid solution or becomes physically attached or embedded into a solid matrix.
5. The storage of dry or loose carbon nanomaterials should be in sealed containers to avoid accidental dispersal of particulates into the atmosphere and potential fire hazard. If greater than 1 gram, the carbon nanomaterials should be stored in metal containers to prevent electrostatic discharge.
6. Manipulation of quantities of dry or loose carbon nanomaterials greater than 1 gram, require the review of EHS before proceeding.
7. No manipulation of dry or loose carbon nanomaterials shall be conducted outside of the fume hood, glove box, or other similar control device without a hazard assessment, containment of the work area, respiratory protection, PPE and written procedures for cleanup and incidental spill response.
8. Fumes from tube furnaces or chemical reaction vessels shall be expelled by use of a fume hood or other local exhaust mechanisms.
9. Work area surfaces shall be routinely cleaned with damp wipes at least weekly for active labs. If surfaces are known to be contaminated, shall be cleaned immediately. A spray bottle of soapy solution and laboratory wipes should be available at all times.
10. Lab equipment and exhaust systems shall be cleaned with soapy water solution or other solvents prior to removal, remodeling or repair.
11. Skin contact with nanoparticles or nanoparticle solutions should be avoided by using appropriate PPE.
12. Safety goggles, nitrile gloves and closed toe shoes are required in the laboratory while handling carbon-based nanomaterials. Disposable impermeable lab coats or coveralls are required when there is a risk of contaminating clothing. Any contaminated PPE shall be disposed as hazardous waste through EHS.
13. Always rinse or change gloves once they have been exposed to nanomaterials.
14. Dispose of all nanomaterials waste and cleaning materials as hazardous waste through EHS.