<u>Preparation</u>

Gather Graphene, one sided office tape, 1x3 inch glass sheets, a laptop with the Amscope software installed, square silicon chips, paper towels, cue tips, and a set of tweezers. Avoid touching the shiny side of the silicon chips throughout the procedure. Gloves which should always be worn.

<u>Preparing Silicon Chips</u>

1) Set a silicon plate on top of a paper towel, with one glass sheet under the paper towel, and one class sheet on top of the paper towel and under the silicon sheet leaving space on the silicon sheet not in in contact with either glass sheet.

2) Using the tweezers, press on the part of the silicon sheet not in contact with either glass sheet until a smaller piece of silicone breaks off.

3) Repeat this process on the broken off part of the silicon sheet until a small square piece of silicone is made.

4) Repeat this process until 6+ square silicone chips have been made.

<u>Setting up graphene</u>

1) Using the one-sided tape, break off a piece big enough to fold two both sides of the tape to serve as handles, hold approximately 3 silicone chips with reasonable space in between, and fit onto a glass sheet

2) Place graphene onto the sticky side of the folded tape either gently with tweezers or naturally though electrostatic induction

3) Fold both sides of the graphene and peel it back to exfoliate the graphene, rinse and repeat until the graphene is reasonably distributed across the sticky side of the tape

4) Place 3 silicon chips on the tape shiny side down with a glass sheet attached on the other side.

5) Using a cue tip, gently smooth out any rough edges on the tape to prevent folds or air bubbles.

6) As slowly as possible, peel the tape off the glass sheet until all silicon chips are extractable

7) Place the silicon chips into a small sterile case and bring it to the optical microscope for analysis

<u>Analyzing Graphene</u>

1) Make sure the standard platform is loaded onto the microscope. If it isn't changing the platforms using the proper size allen wrench.

2) Place the case holding the chips onto the platform

3) Attach the camera to the top of the microscope if it is not already added

4) Plug the laptop into the microscope by USB and load up AmScope on the laptop

5) Select the correct camera under "Camera List" to begin analyzing the chips

6) Use the microscope adjustments to find proper resolution and move the camera around to different chips