Graphene Fabrication for Peltier Coolers

Venkat Chandrasekhar, Dima Dikin, Scott Mayle, Jesse Choe, Pavan Patel, Physics and Astronomy, Northwestern University

An SEM image of graphene grown on a Ni catalyst. A recipe to grow graphene was developed for use in a Peltier cooler. We are currently working on using Cu as the catalyst, as the growth of carbon layers is self-limited to one layer.

Graphene devices were also prepared using micro mechanical exfoliation. These devices were made using electron beam lithography.

An etching recipe was developed to help design more complex samples better suited to Peltier coolers. The left image shows a graphene sample with an etch mask. The right image shows the image after etching.