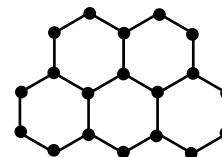


Graphene: The Wonder Material

Experiment 1: Use a pencil and write your name in the box below. Your written name is made up of layers of graphite as they slide off the pencil tip.



Experiment 2: Touch the graphite plate then look at your fingers. What you see are layers of carbon atoms (graphite). You may even have a sheet of graphene on your fingers! Clean fingers with a hand wipe.

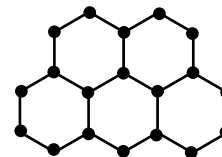
Experiment 3: Using a strip of scotch tape about 10" long, take one of the graphite crystals and place it about one inch from the end of the tape, sticky side up. Very carefully remove the crystal. Notice the crystal "sheet" left on the tape. Holding the end of the tape nearest the crystal sheet, fold over the tape so that the crystal sheet lays over a "clean" part of the tape so both sticky sides are touching. Now pull apart. You should be left with two crystal sheets. Continue folding over the crystal sheets creating new sheets. Keep doing until all the tape is filled with sheets. There's a very good chance that somewhere on your strip of tape is a one-atom thick sheet of graphene!

You've just completed the experiment that won the 2010 Nobel Prize in Physics! In 2004, Andre Geim and Konstantin Novoselov from the University of Manchester, discovered graphene by playing around with graphite crystals and scotch tape. Because of its amazing characteristics, graphene is thought to be the next wonder material and won these two scientists the Nobel Prize.

Stick your strip of graphite/graphene layers below.

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