Pre-Lab Exercises
Lab #9: Piezoelectricity and Thermoelectricity
MIT Nanomaker_Spring 2013

1) Watch the atomic force microscopy (AFM) tutorial from the Imaging Technology Group at the University of Illinois: http://virtual.itg.uiuc.edu/training/AFM_tutorial/

2) What is a piezoelectric crystal, and how are piezoelectric crystals used in AFM?

3) Compared to an optical microscope, what are the advantages/disadvantages of using AFM?

4) Watch the thermoelectricity tutorial from the National High Magnetic Field Laboratory: http://www.magnet.fsu.edu/education/tutorials/java/thomsoneffect/index.html

5) List a few thermoelectricity-based techniques that have been used in our daily life.

6) How thermoelectric elements can be used for energy harvesting? Examples?

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