



Chang Yeol Ryu, NSEC, RPI, Troy, NY 12180

6-week summer program



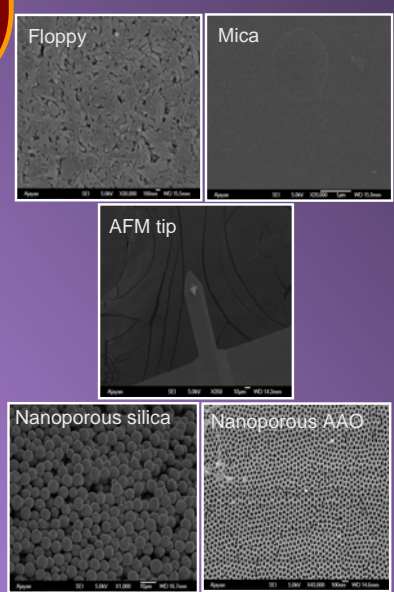
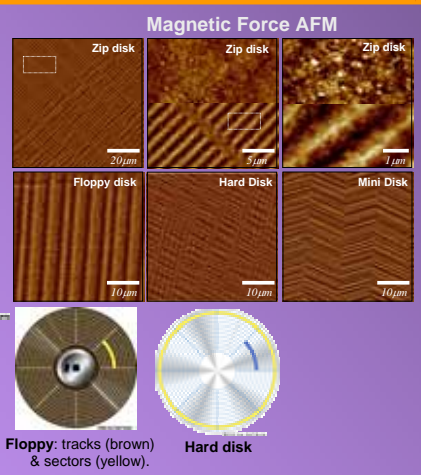
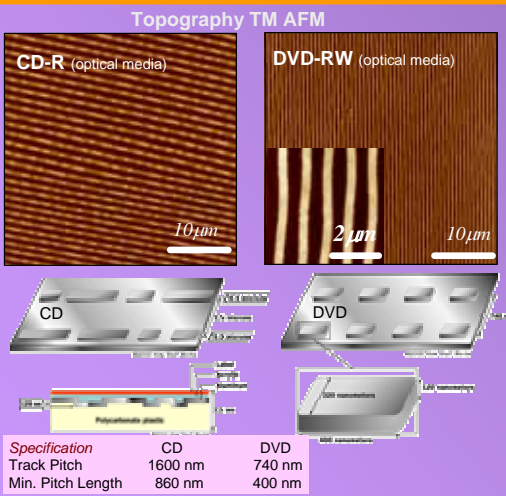
Motivation:
Design teaching modules (lecture and laboratory) for enabling high school teachers to attract students into nanoscale science and technology

CD, DVD, hard-disk, floppy, zip and minidisk Nanoporous silica and AAC



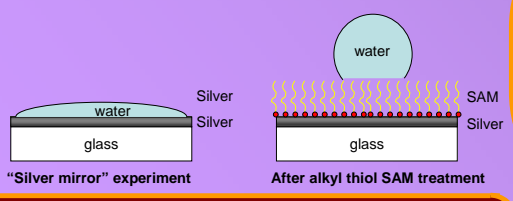
Lecture modules: To characterize man-made nanoscale structures in commercial or research grade materials using state-of-art microscopy (AFM and SEM) at RPI

PowerPoint Slides for lecturing
Virtual AFM modules



The schematic diagrams above were obtained from <http://www.howstuffworks.com/>

Hydrophilic vs. Hydrophobic concept!



Laboratory modules: Experiments that are compatible with high school laboratory courses using simple glass-wares & chemistry

Acknowledgement
NSF, NSF-NSEC, RPI

- HS laboratory modules developed**
- Self assembled monolayer (extension of Si mirror exp.)
 - Ni nanowire using electroplating and nanoporous filter

Collaborators

- Dr. Hoichang Yang (NSEC Staff, RPI),
- Professor Lee Park (Williams College, NSEC outreach partner)