bioAFMlab meeting April 24th 2007

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Present: Federica, Ivan, Xin, Werner, Maarten, Erwin, Yuana, Amol,
Anne France, Mart-Jan

In the display panel you can set Low and High pass filters:
They make flat surfaces look curved.

Maarten tells about the measurements on Vivianes MEMS devices. They succeeded in imaging the side of a MEMS device after flipping it up vertically. You can see the side of the etching profile with AFM.

Jan-Willem shows noise spectra that show that the MI has a new low pass filter in it.

Ivan Komissarov explains his project:
They need strain free LaCaMnO3 films to study I-M transition. On NdGaO substrate

Xin works on CrO2 films, which is a fully spin-polarized material. She likes to use the J-scanner, which is not available on the sixth floor, to measure the thickness of the films that she makes.

Erwin tried to burn carbon nanotubes with an electron beam but got a lot of carbon deposition.

Ivan likes to use the tapping mode, which has a problem on the sixth floor

Mart-Jan den Hollander works with Raoul. He tries to make a self-assembled monolayer of cystamine on gold. It will be used to attach photosynthetic membranes.

Werner tells about the module that converts the sixteen signals from the photodetector of the miniature cantilever set-up . that automatically sets the polarity

Erwin installed the cryo-can and got down to a pressure in the SEM of 1.7 * 10^-6 mbar. But with a large beam there still was a lot of contamination. Erwin will check whether we can order a plasma cleaner.

Amol says that one of the extra wires is coming loose.
Erwin adds that on one of the sliders there is a kink in the cable.

John van Noort is experimenting wit very small LEDs that give a lot of light. It could give an improvement over the laserdiodes which cause interference effects. The LEDs are incoherent light sources and therefore cannot give interference. It might also be a good source for illuminating the whole field of view of the optical microscope.

Jan-Willem shows a back-ground problem on his force distance curves.
There is an apar

Amol and Anne France made a lot of probes and sawed off the ends with the FIB

From 9 to 17 hrs on Monday Amol made 20 probes in the SEM in a single day.

Anne France is taking a few different kinds of probes to the TEM in Delft: Laser exposed probes, Au particle probes, Pt particle probe (cake if it is smaller than 20 nm).

AFM lab wiki
>To be able to login and edit the bioAFMlab wiki you cannot
>automatically use the same pass & usr of
>the reservation system.
>
>The 2 things, wiki and reservation, are 2 distinct applications. Most of the
>people have only made an account for reservations, and not for the wiki.
>Just create a new account for the wiki, by clicking on the Login
>button on any
>page of the wiki, and entering the same username of the reservation system
>(name@physics bla bla). You will get a pass by email. Then you can change it
>into the same one you use for the reservation system: login with the new
>pass->click Update Profile. There you are.
>
>Note: with this account you can also edit the Nanolab wiki. That means that
>you can also upload files in the Nanolab directories. Please use the already
>existing directories under "biospmlab" directory for the Bio SPM Lab wiki,
>otherwise things will get mixed up.