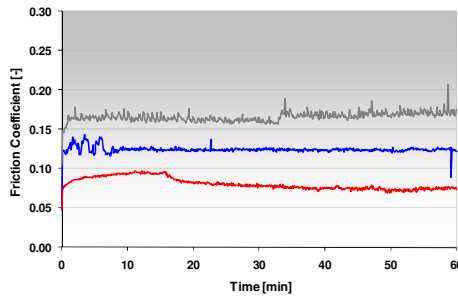
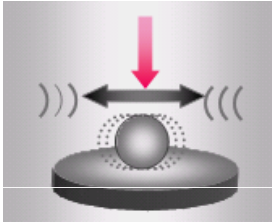


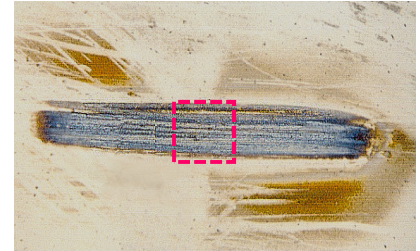
## AFM Characterization of HFRR Wear Tracks

After the rubbing test, using a HFRR (high-Frequency-Reciprocating-Rig, *PCS Instruments*) test rig, disc wear tracks are examined using the AFM (Atomic-Force-Microscopy). Using the AFM, valuable information on film thickness, roughness, topography as well as friction properties of the boundary films formed are revealed.

### HFRR Rubbing Test

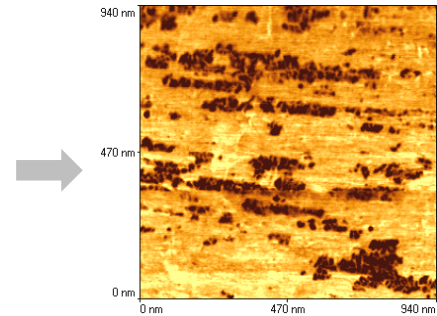
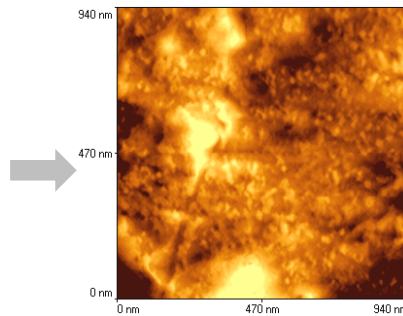
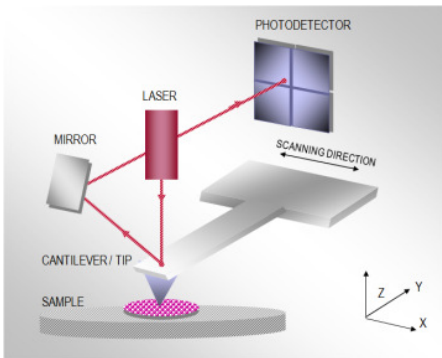


Typical HFRR friction plot



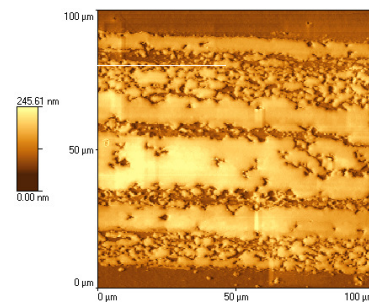
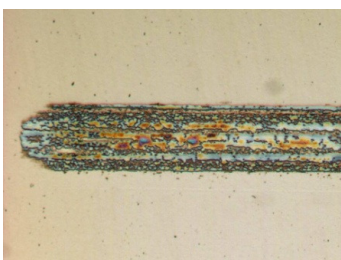
Typical HFRR disc wear track with marked scanning area

### AFM Surface Analysis

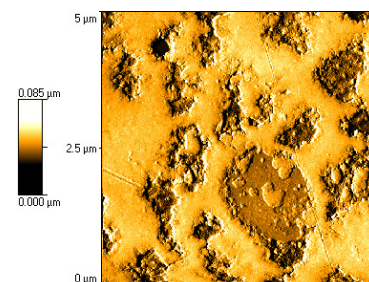
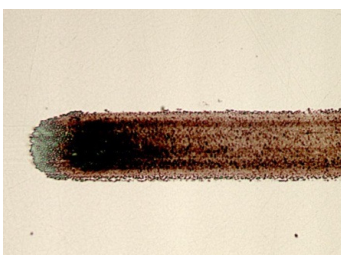
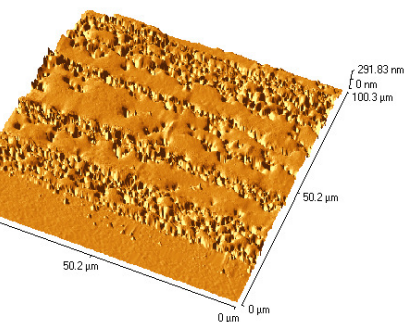


AFM TOPOGRAPHY and corresponding AFM LATERAL FORCE

### AFM Topography Examples



### AFM Topography 2D



### AFM Topography 3D

