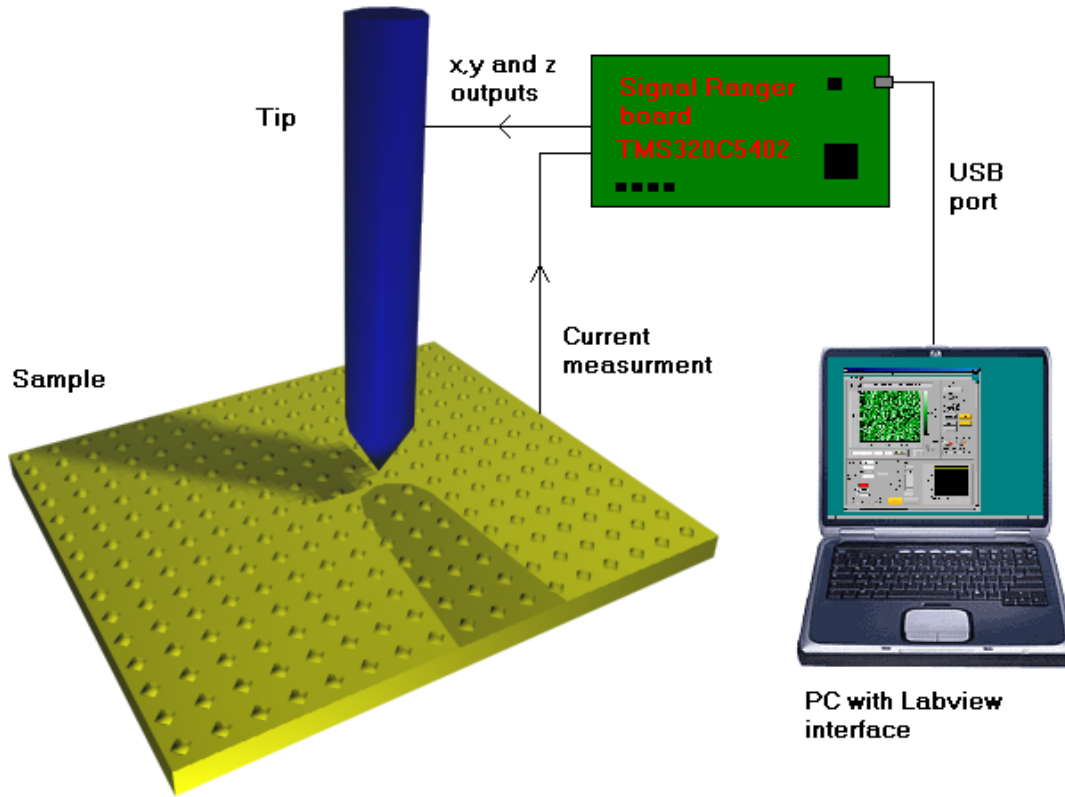


Example of the utilization on the Signal Ranger DSP board for a Scanning Tunneling Microscope (STM) at the University of Sherbrooke

System configuration:



**Images of a graphite surface (HOPG, Union Carbide/Advanced Ceramics)
Atomic resolution**



Image: 01-11-2002_17h26m58s.bin
Size (nm) : 16.38x16.38
Resolution (x,y) : 256x256
Pots x,y and z (dB) : -36.00,-36.00,-18.00
Static position (x,y and z) (nm) : 200.86,30.28,-90.69
Ramp speed (nm/ms) : 0.17
Z dynamic (nm) : +/- 32.53
Z resolution (nm) :0.003971
Number of average sample by pixel : 8.00
bias : +0.020V
Setpoint (nA) : 1.1056
Control parameters : P=-40.00dB I=-45.00dB
Fast 256 mode ON
Channel 1 : Z (go) Channel 2 : empty
Rotation (deg) : 70.0000

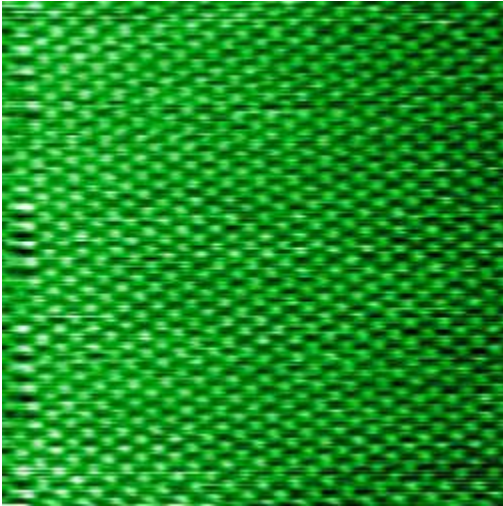


Image : 01-11-2002_17h31m37s.bin
Size (nm) : 8.19x8.19
Resolution (x,y) : 256x256
Pots x,y and z (dB) : -36.00,-36.00,-18.00
Static position (x,y and z) (nm) : 200.86,30.28,-90.91
Ramp speed (nm/ms) : 0.17
Z dynamic (nm) : +/- 32.53
Z resolution (nm) :0.003971
Number of average sample by pixel : 4.00
bias : +0.020V
Setpoint (nA) : 1.1056
Control parameters : P=-52.00dB I=-55.00dB
Fast 256 mode ON
Channel 1 : Z (go) Channel 2 : empty
Rotation (deg) : 60.0000

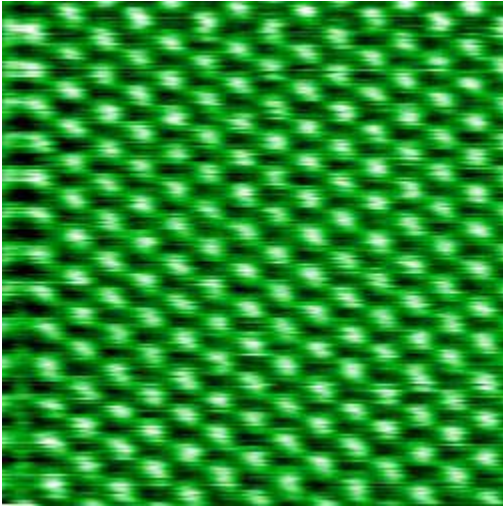


Image : 01-11-2002_17h35m56s.bin
Size (nm) : 4.10x4.10
Resolution (x,y) : 256x256
Pots x,y and z (dB) : -36.00,-36.00,-18.00
Static position (x,y and z) (nm) : 200.86,30.28,-90.91
Ramp speed (nm/ms) : 0.09
Z dynamic (nm) : +/- 32.53
Z resolution (nm) :0.003971
Number of average sample by pixel : 4.00
bias : +0.020V
Setpoint (nA) : 1.1056
Control parameters : P=-52.00dB I=-55.00dB
Fast 256 mode ON
Channel 1 : Z (go) Channel 2 : empty
Rotation (deg) : 67.0000

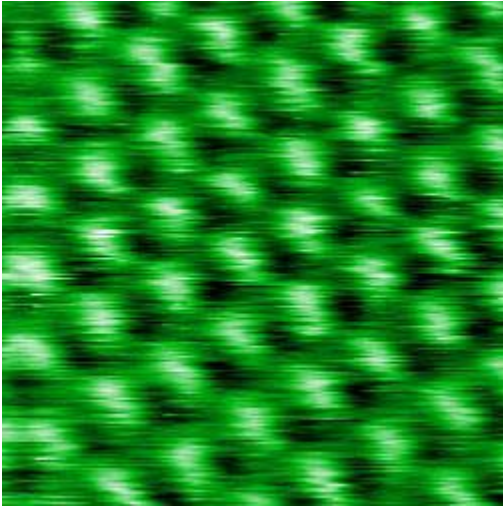


Image : 01-11-2002_17h37m50s.bin
Size (nm) : 2.05x2.05
Resolution (x,y) : 256x256
Pots x,y and z (dB) : -36.00,-36.00,-18.00
Static position (x,y and z) (nm) : 200.86,30.28,-90.91
Ramp speed (nm/ms) : 0.04
Z dynamic (nm) : +/- 32.53
Z resolution (nm) :0.003971
Number of average sample by pixel : 4.00
bias : +0.020V
Setpoint (nA) : 1.1056
Control parameters : P=-52.00dB I=-55.00dB
Fast 256 mode ON
Channel 1 : Z (go) Channel 2 : empty
Rotation (deg) : 70.0000
