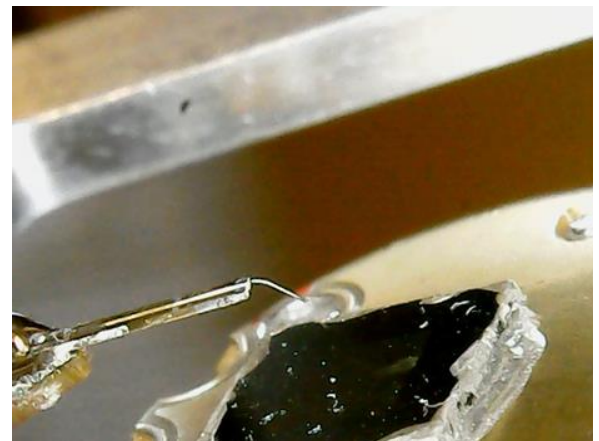
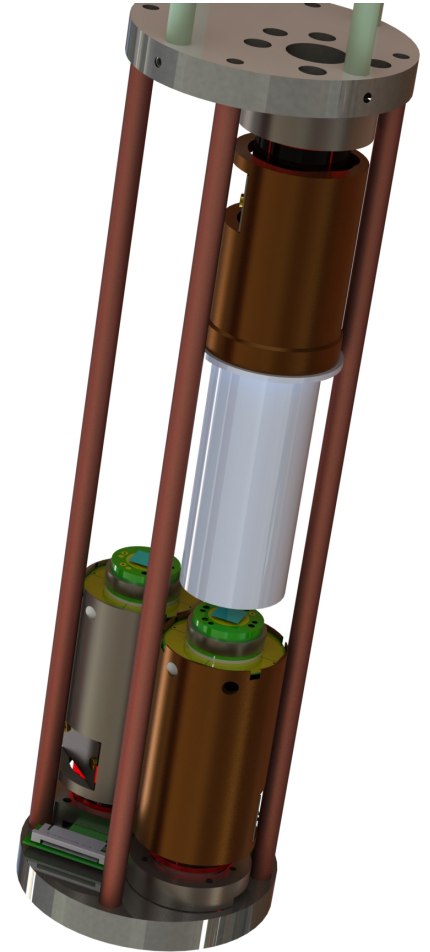
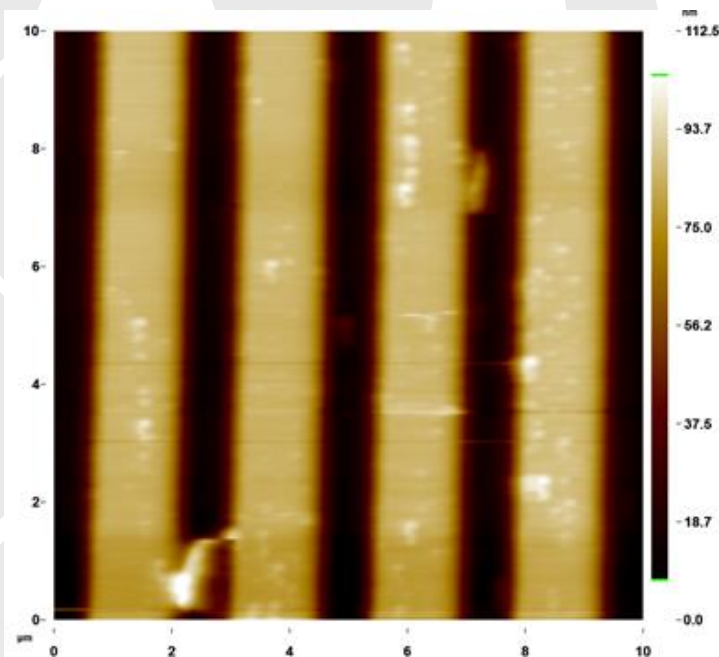


Nitrogen Vacancy (NV) Centre & Confocal (CFM) Microscope

- High NA Objective, 0.82NA / 0.95mm WD
- 532nm, SLM 10mW Laser
- 30x30x15µm Scan area @ 4K
- 48mm Outer Diameter
- 10mK to 300K temperature range
- APD for optical detection
- XYZ Nanopositioner / Scanner for sample
- Z Nanopositioner for Cold objective
- XYZ Nanopositioner for NV/QTF Sensor



Self Excited Quartz Fork Based AFM
& CalibratTuning Sample: Grating

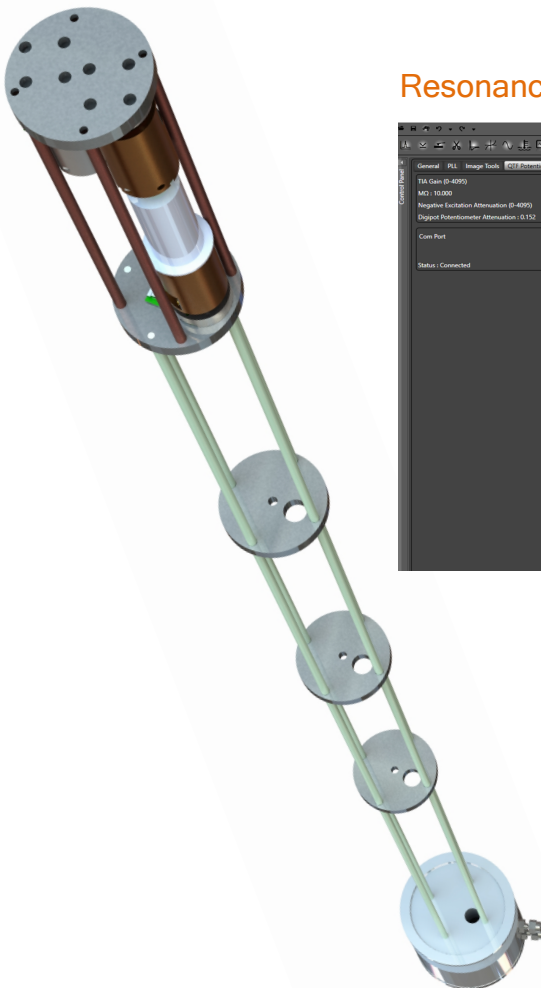


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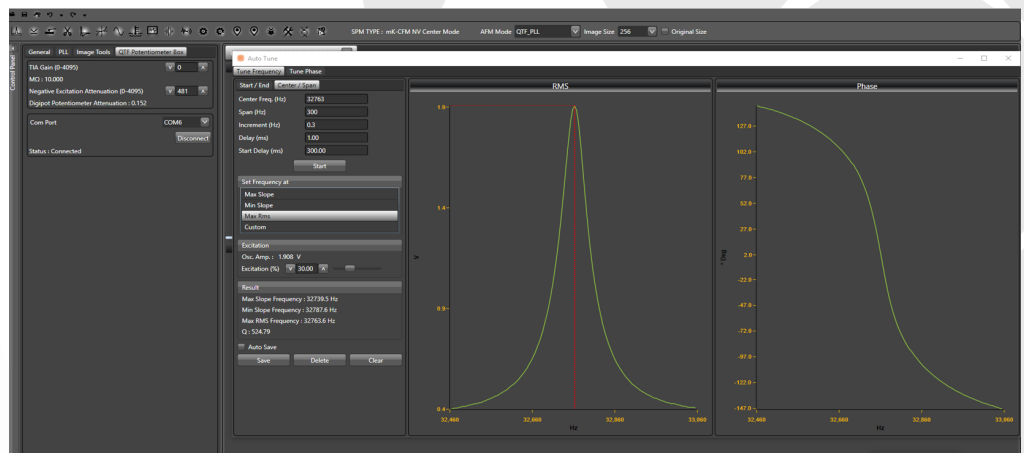


Scanning NV Centre /Confocal (CFM) Microscope Control Electronics

- State of the Art Ultra Low Noise FPGA Based AFM Controller with USB2.0 High speed interface
- 32 Bit Real time Processor with 128MB DDR SDRAM
- 2 Channel 16Bit / 100MHz ADC
- 2 Channel 16Bit / 100MHz DAC
- 7 Digital PID Loops on FPGA
- 19 Channel Piezo Nanopositioner Controller
- 16 Channel 24Bit / 175kHz ADC
- 24 Bit DACs for XYZ Scan Signals
- Low Noise High Voltage Amplifiers



Resonance Curve for Self Excited Quartz Tuning Forks



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Tél. 01 47 95 99 90
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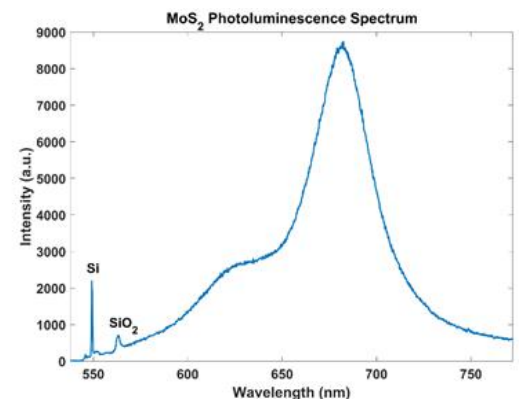
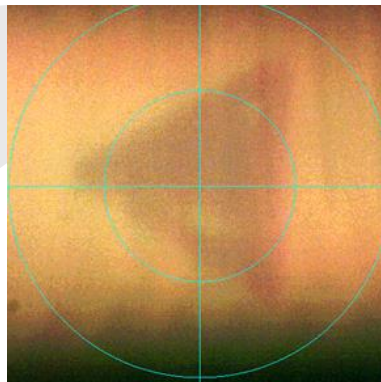
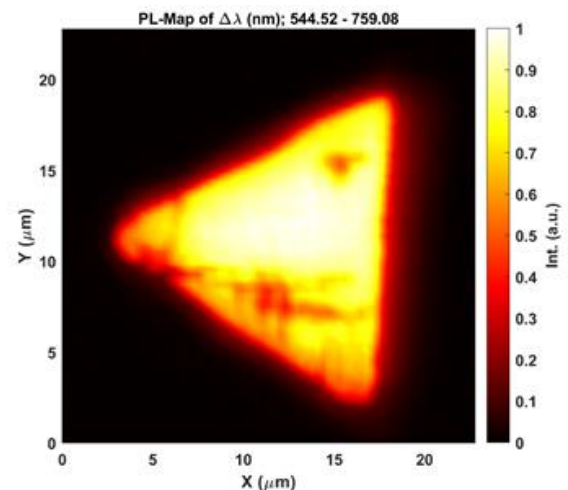
e-mail : bio@es-france.com
Site Web : www.es-france.com

mK-Confocal/Raman Microscope (mK-CFM/Raman)

- 0.82 NA / 0.95mm WD Low Temperature Compatible Objective
- 10mK-300K Temperature Range
- Up to 20 Tesla



MoS₂ PL Map*



* Data courtesy of Furkan Ağlarıcı, Çağlar Samaner, Serkan Ateş @ İzmir Institute of Technology, Turkey & Feridun Ay, Nihan Kosku Perkgöz @ Eskişehir Technical University, Turkey



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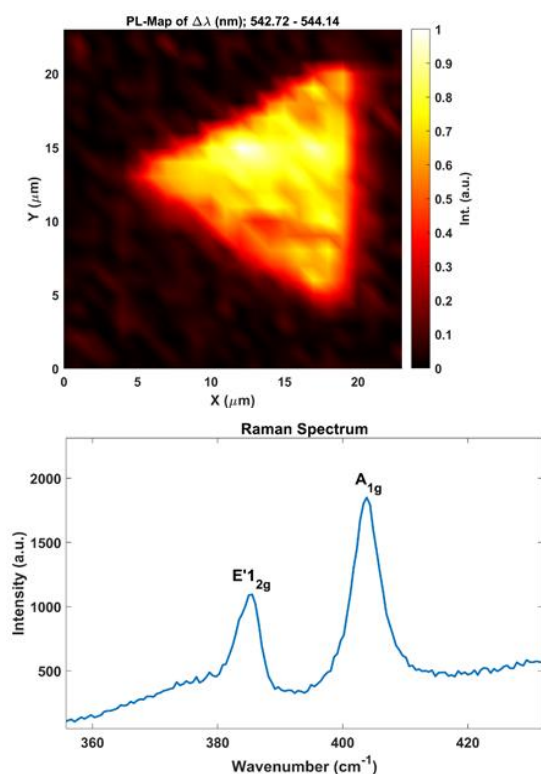


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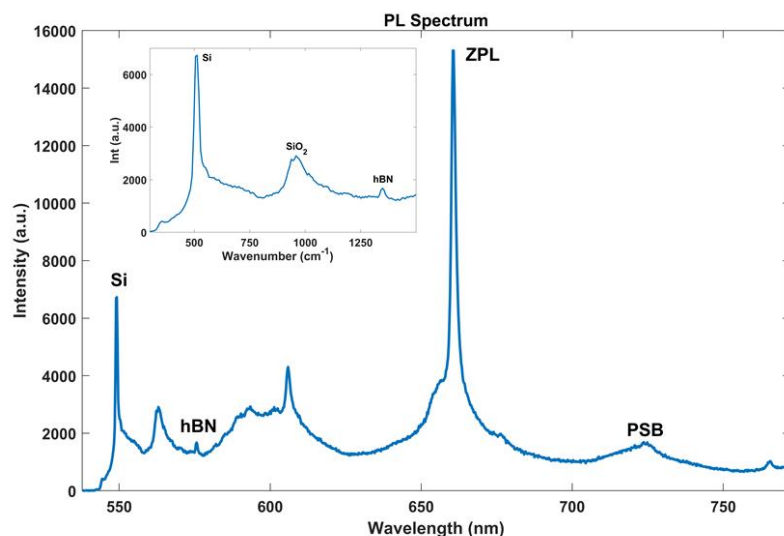


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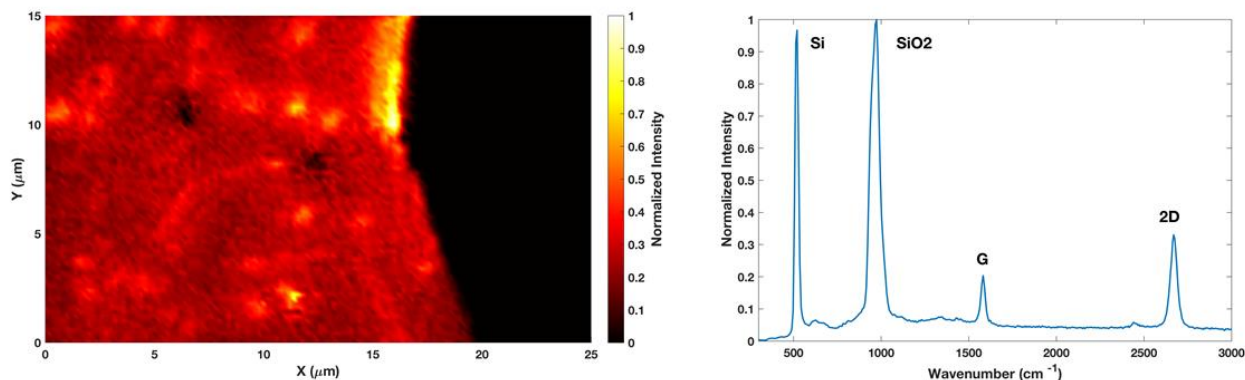
MoS₂ Raman Map*



hBN PL and Raman signals*



Single Layer Graphene Raman Map*



System Specifications

- Objective Approach :** 10mm stroke piezo nanopositioner with capacitive encoder
- Sample Approach :** Stick-slip type; 10mm Z, Ø3 mm XY range with 50 - 800nm step size
- Fine Sample Positioning :** Capacitive encoder with 2 μm resolution
- Sample Size :** 15x15x5mm maximum
- Sample Holder :** 5 pins connections for experiments: One bias voltage, 4 spares
- Temperature Range :** 10mK-300K (Limited by the cryogenic system)
- Magnetic Field :** up to 20T
- Operation :** Vacuum or exchange gas environment
- Compatibility :** Competible with most Dilution Refrigerators



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