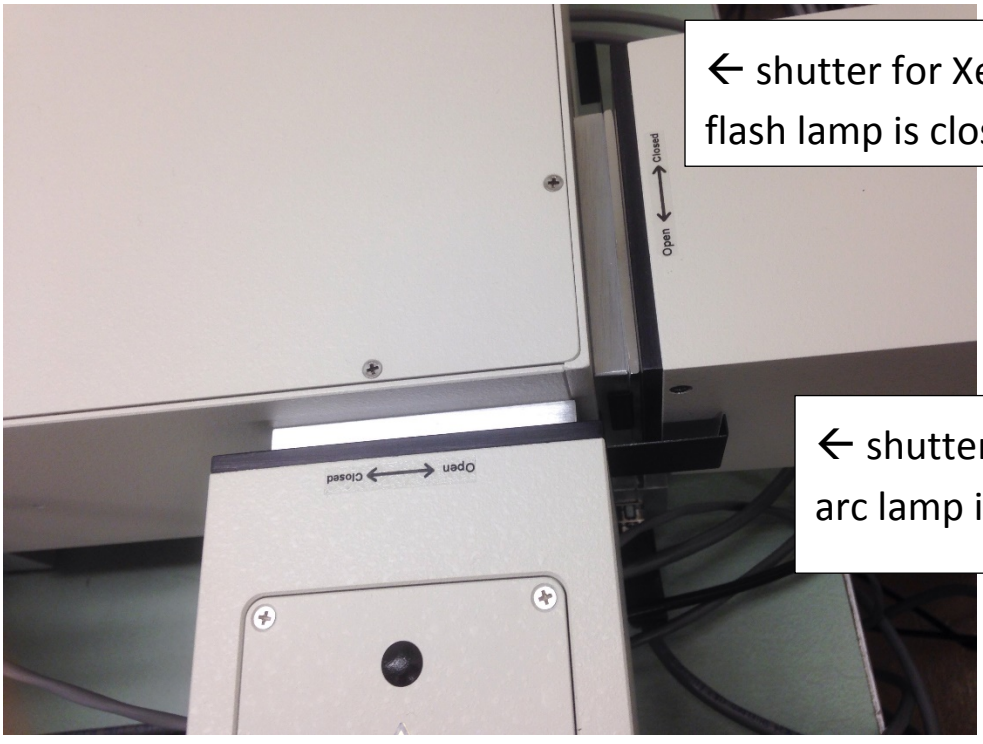
PTI Quanta Master User's Booklet

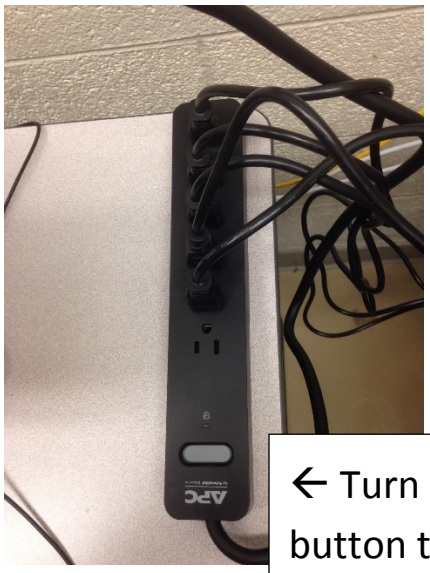
I. Steady-State Data Acquisition Using the Xenon Arc Lamp and PMT detector (up to 900 nm)

1) With the computer off, and with all instrument electronics off, turn on the power to the Xenon arc lamp, and press the ignite button.

2) Make sure that the shutter for the Xenon arc lamp is open, and that the shutter for the flash lamp is closed.



3) Turn on the power strip to power up all of the instrument electronic modules.



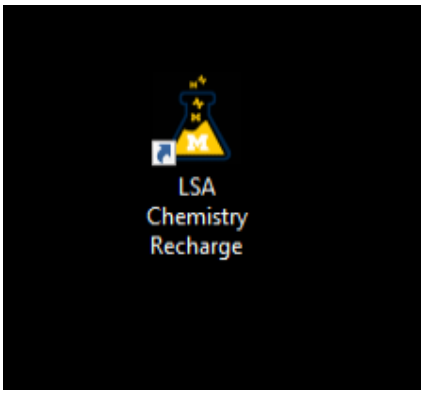
← Turn on power strip button to power on the instrument electronics

The power buttons on all four modules should then appear to be on

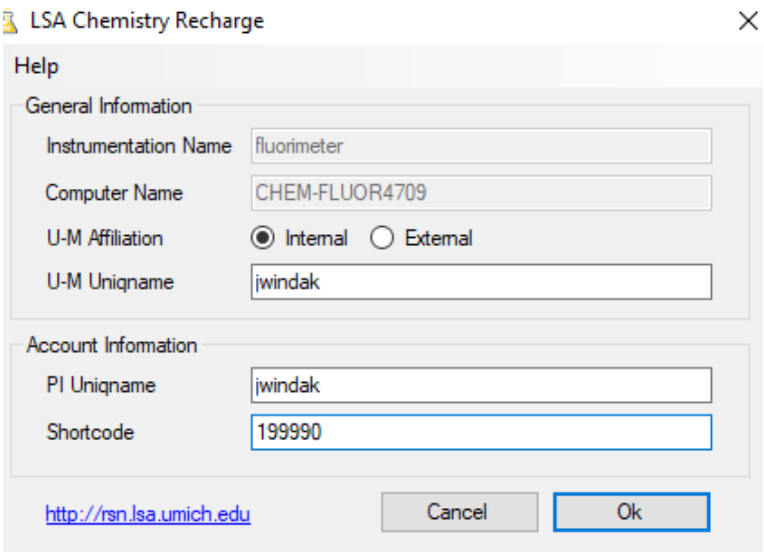
← All four modules should appear to be On

4) Turn on the computer system and log into Windows (the password is on a sign on the wall behind the computer).

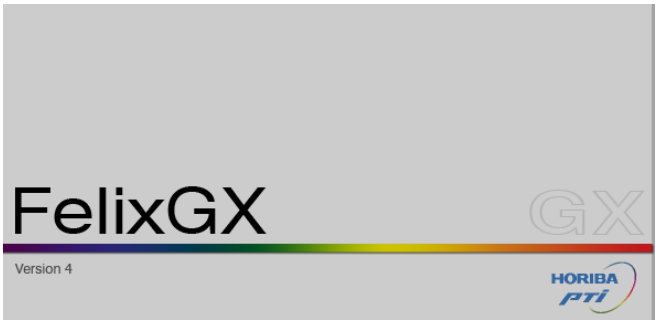
5) Double-click the LSA Chemistry Recharge icon in the center of the screen



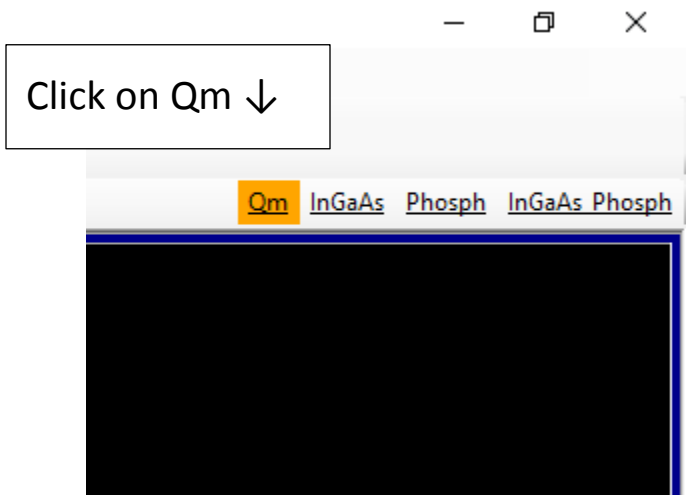
Enter your uniquename, your PI's uniquename, and your shortcode, and click on OK:



The Felix GX software will then automatically launch.

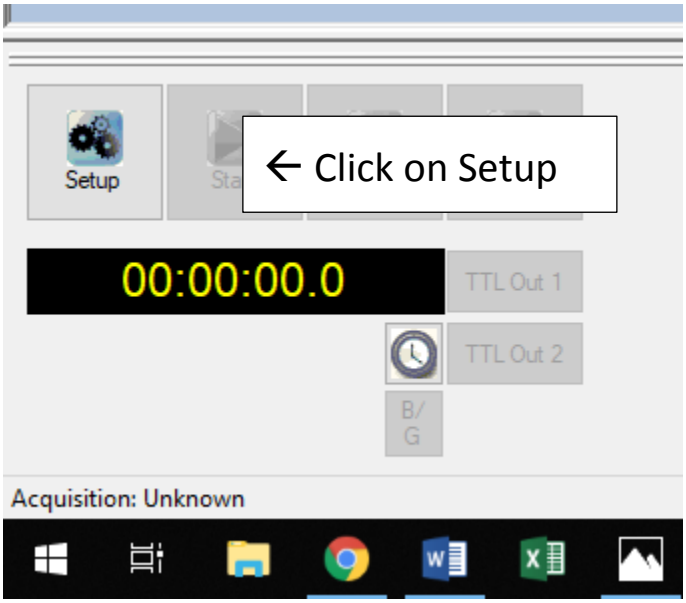


6) In the upper right hand side of the screen, click on Qm

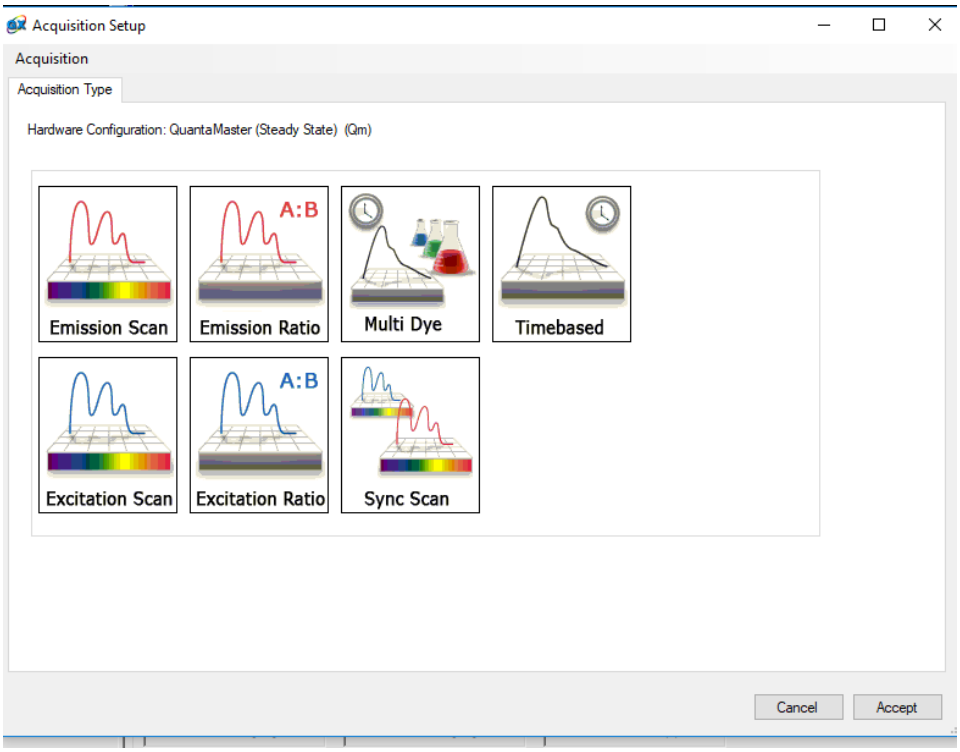


This will set up the instrument for steady-state experiments with the xenon arc lamp and PMT detector. A mirror in the excitation monochrometer will flip so that the xenon arc lamp is used as the light source. Another mirror will flip in the emission monochrometer so that the PMT detector will be used. The correct emission grating will also be put into place automatically.

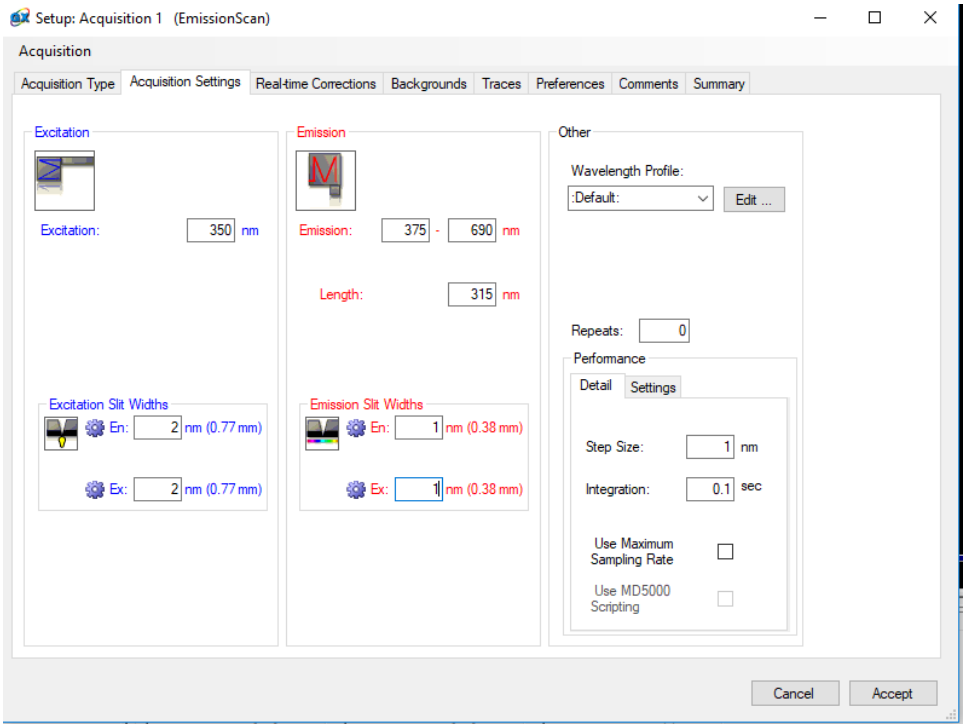
7) Click on the Setup button to set up your data acquisition parameters



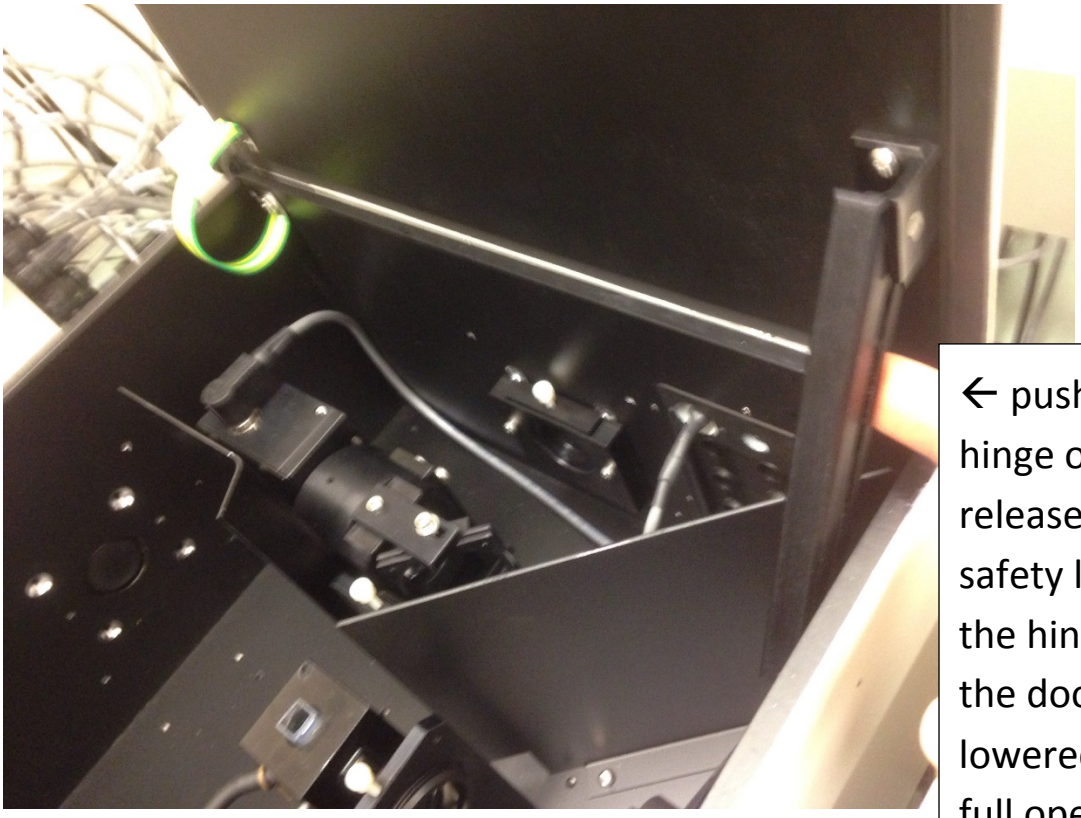
Then select the type of experiment that you wish to do:



Set your acquisition parameters and click Accept:

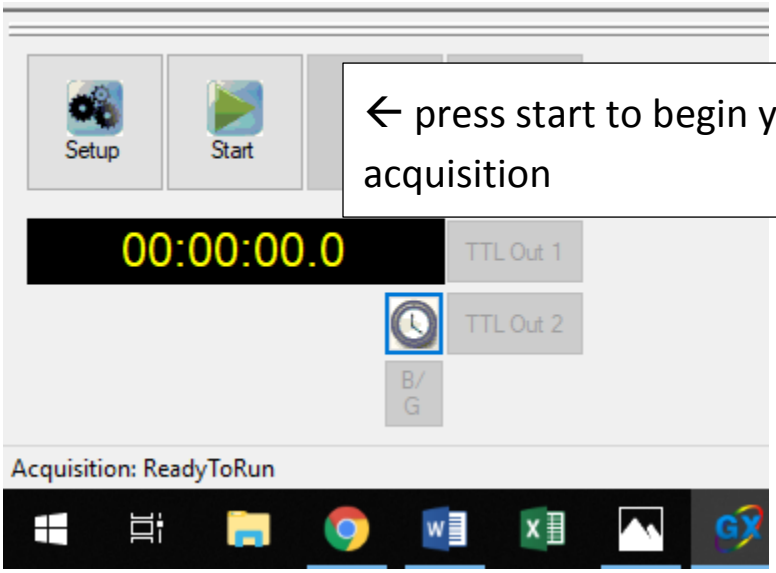


8) Insert your sample into the sample compartment. To lower the sample compartment lid from the full open position, you have to press out gently on the back of the hinge to release the safety lock.



← push back of hinge out to release the safety lock on the hinge so that the door can be lowered from the full open position

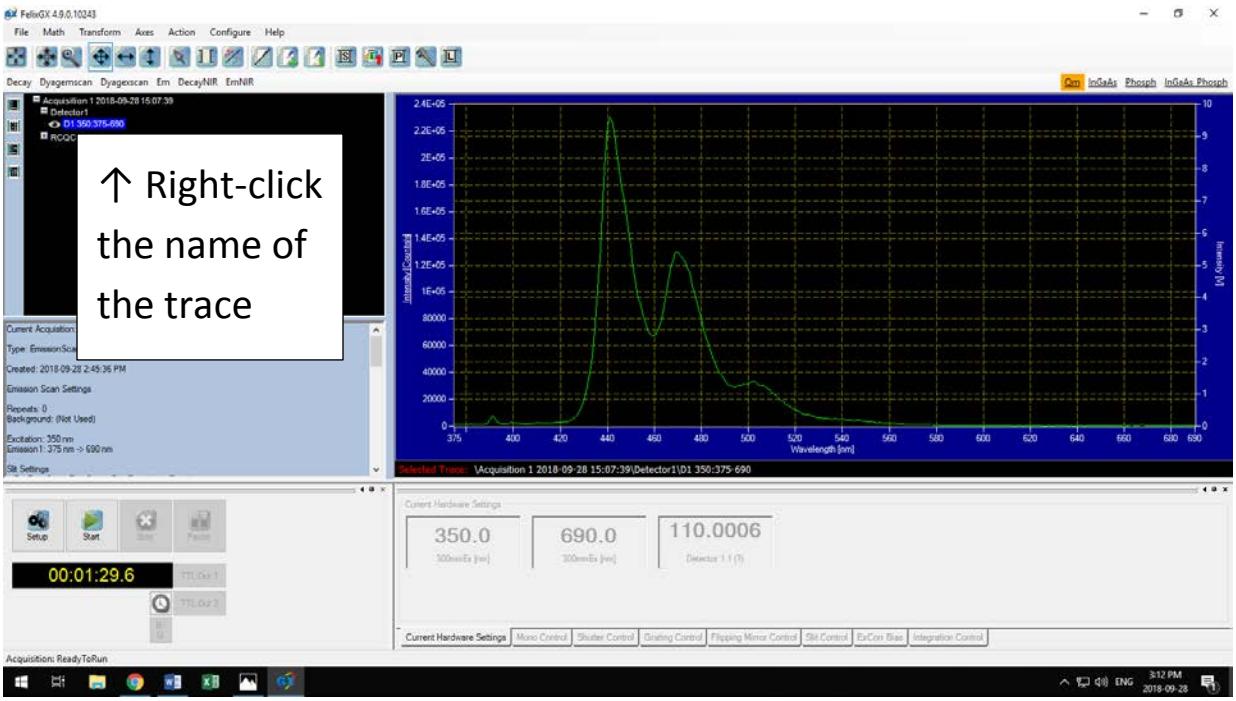
9) Press Start to collect your spectrum



← press start to begin your data acquisition

Once your spectra are collected, you can save them by right-clicking the name of the trace, and then click on Save As, and this will save them in a format that is readable by the Felix GX software.

If you want to export them as text data, Right-click the name of the trace, and then click on Export.



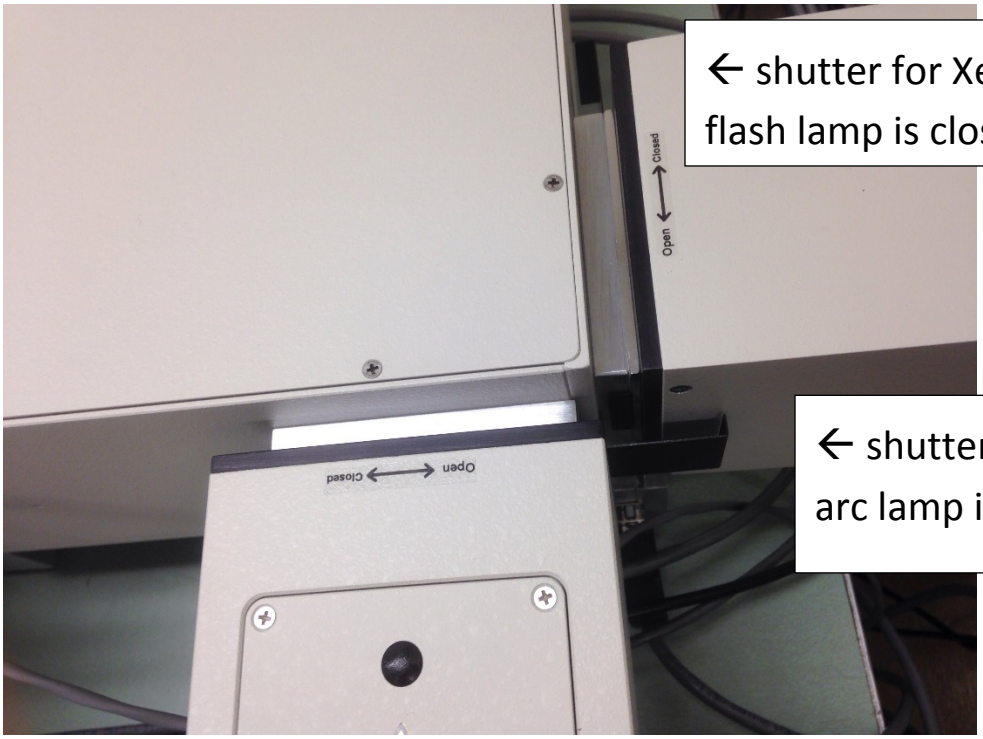
10) How to shut down the instrument when finished:

a) Close the Felix GX software
b) Power down the computer
c) Turn off the instrument electronics with the power strip
d) Turn off the Xenon arc lamp

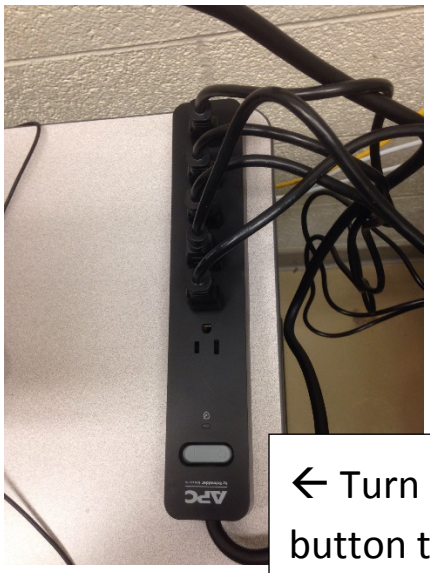
II. Steady-state Data Acquisition using the Xenon arc lamp and the Liquid Nitrogen Cooled InGaAs Detector (800 nm to 1600 nm)

1) With the computer off, and with all instrument electronics off, turn on the power to the Xenon arc lamp, and press the ignite button.

2) Make sure that the shutter for the Xenon arc lamp is open, and that the shutter for the flash lamp is closed.



3) Turn on the power strip to power up all of the instrument electronic modules.



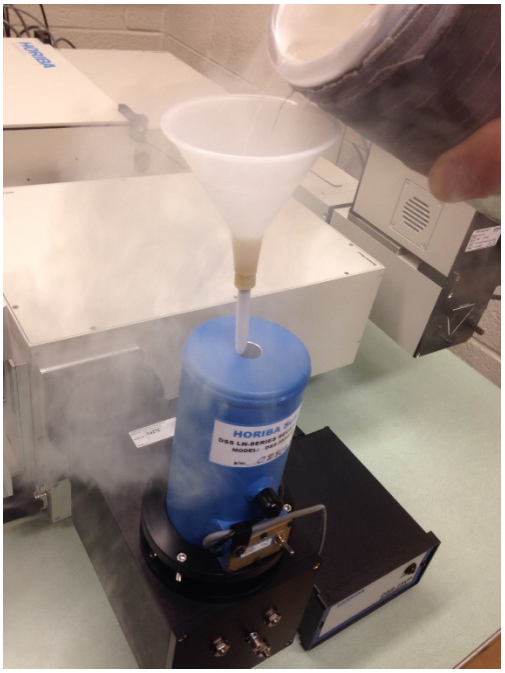
← Turn on power strip button to power on the instrument electronics

The power buttons on all four modules should then appear to be on

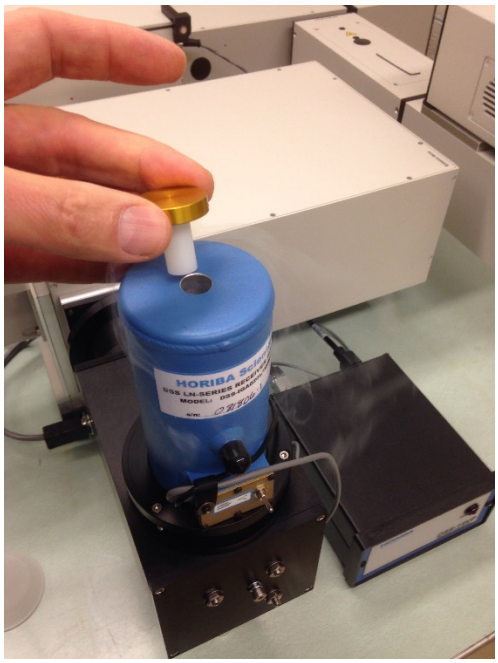
← All four modules should appear to be On

4) Turn on the computer system and log into Windows (the password is on a sign on the wall behind the computer).

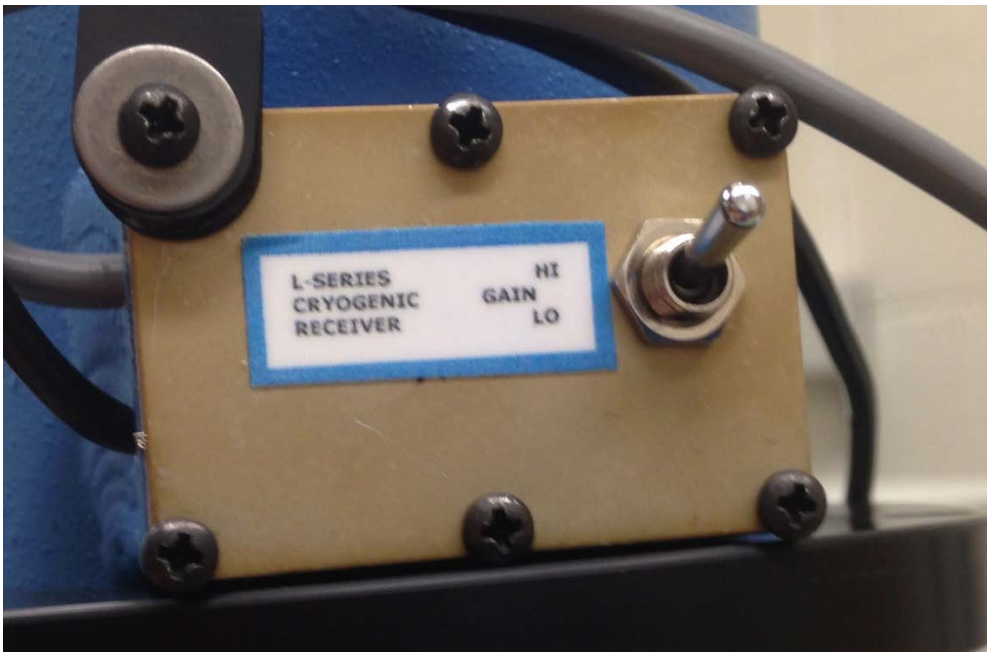
5) Slowly fill the InGaAs detector with liquid nitrogen, using the funnel.



6) After the detector is full, remove the funnel and insert the cap.



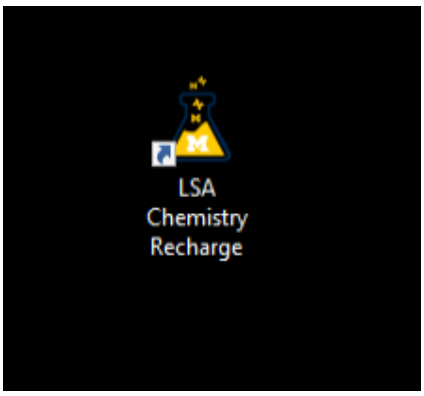
7) Be sure the switch on the front of the detector is set to “HI Gain”



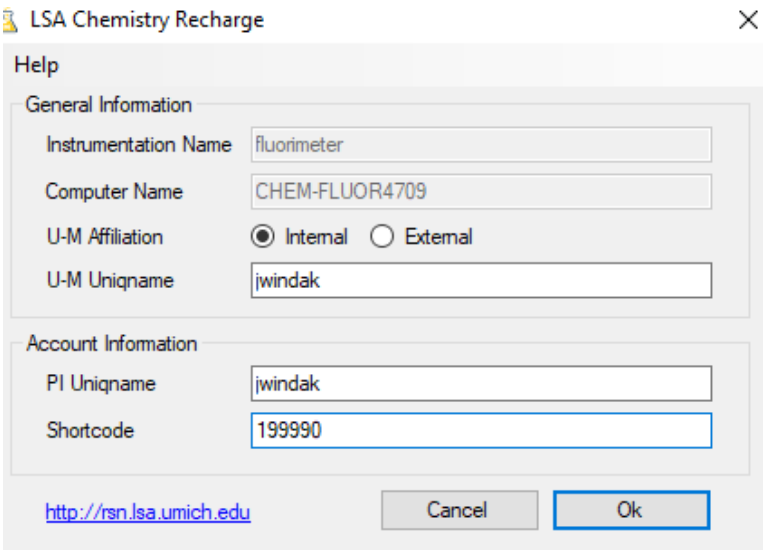
8) Please wait 10 minutes for the detector to completely cool. Then switch on the power to the detector.

9) Turn on the computer system and log into Windows (the password is on a sign on the wall behind the computer).

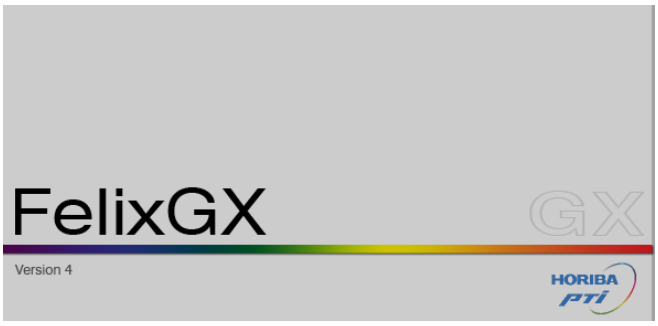
10) Double-click the LSA Chemistry Recharge icon in the center of the screen



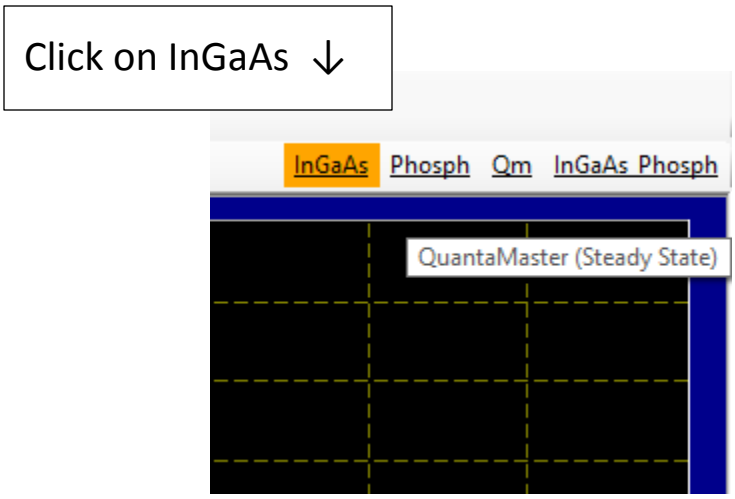
Enter your uniquename, your PI's uniquename, and your shortcode, and click on OK:



The Felix GX software will then automatically launch.

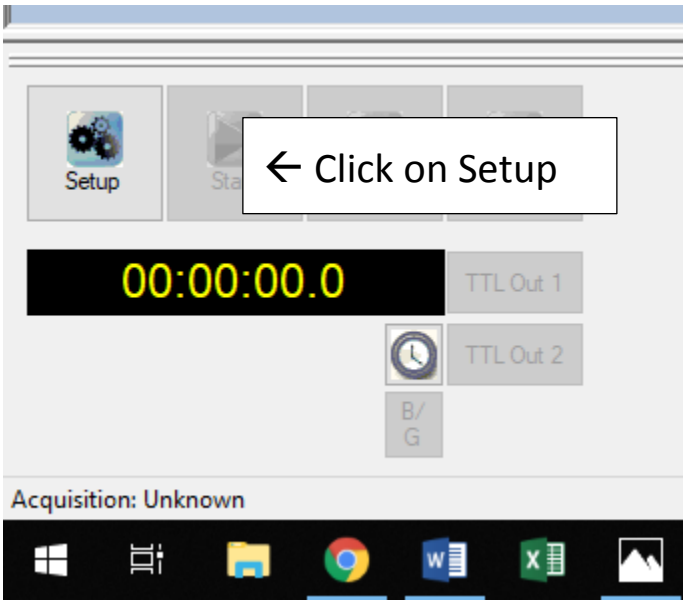


11) In the upper right hand side of the screen, click on InGaAs



This will set up the instrument for steady-state experiments with the xenon arc lamp and the InGaAs detector. A mirror in the excitation monochrometer will flip so that the xenon arc lamp is used as the light source. Another mirror will flip in the emission monochrometer so that the InGaAs detector will be used. The correct emission grating will also be put into place automatically.

12) Click on the Setup button to set up your data acquisition parameters



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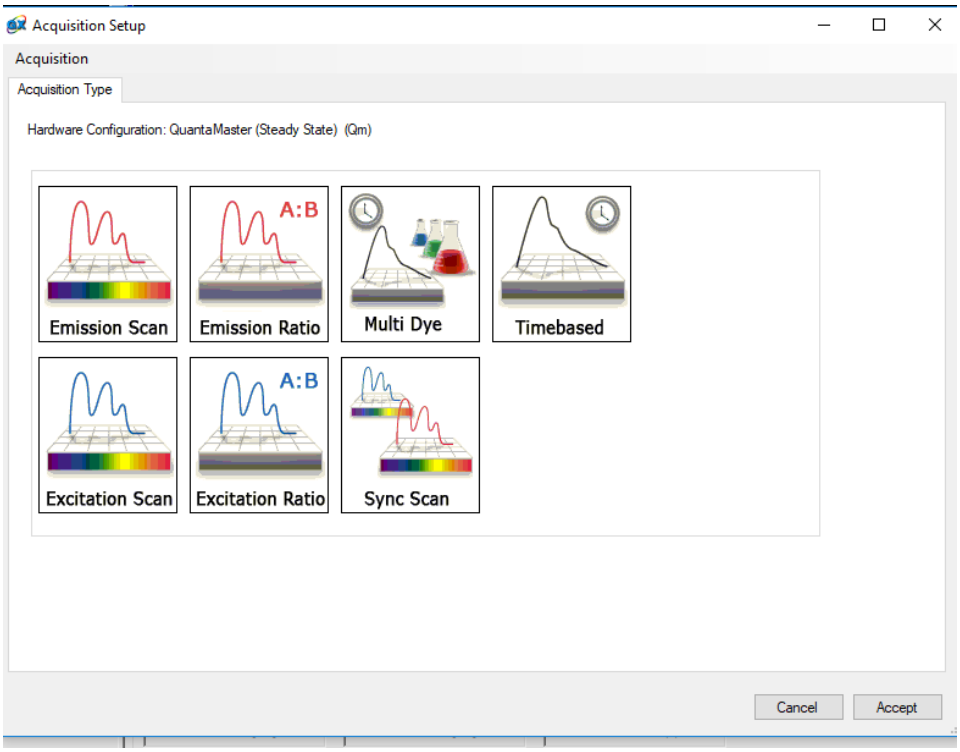
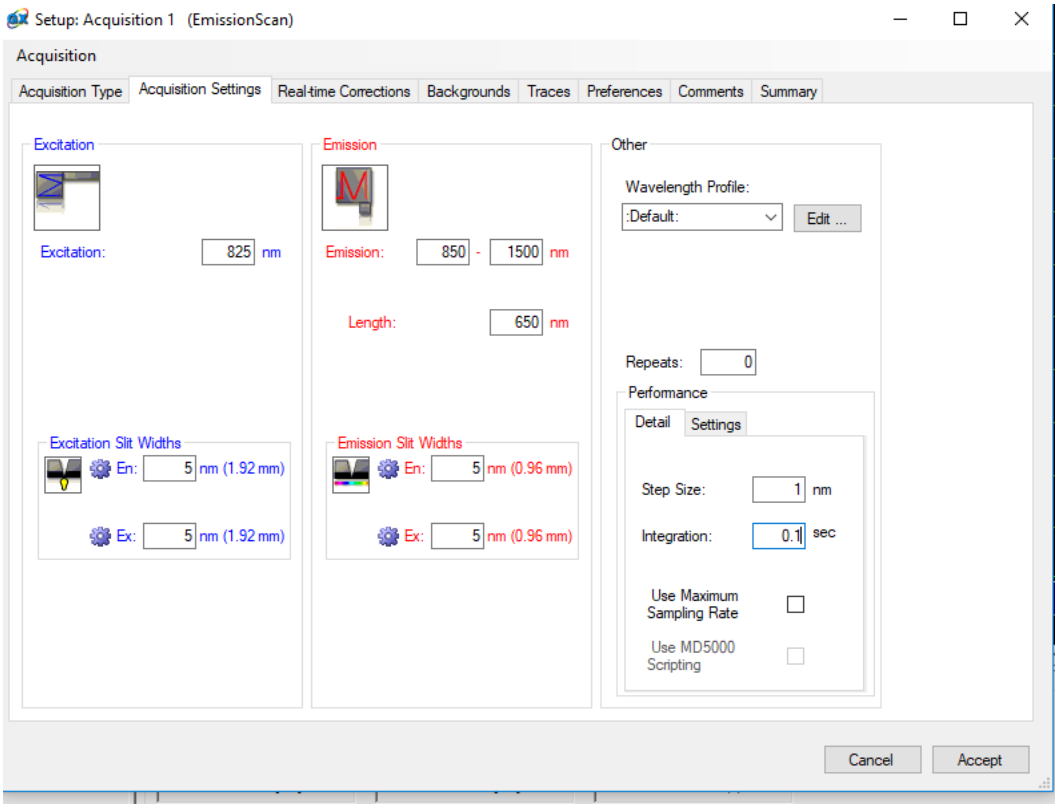
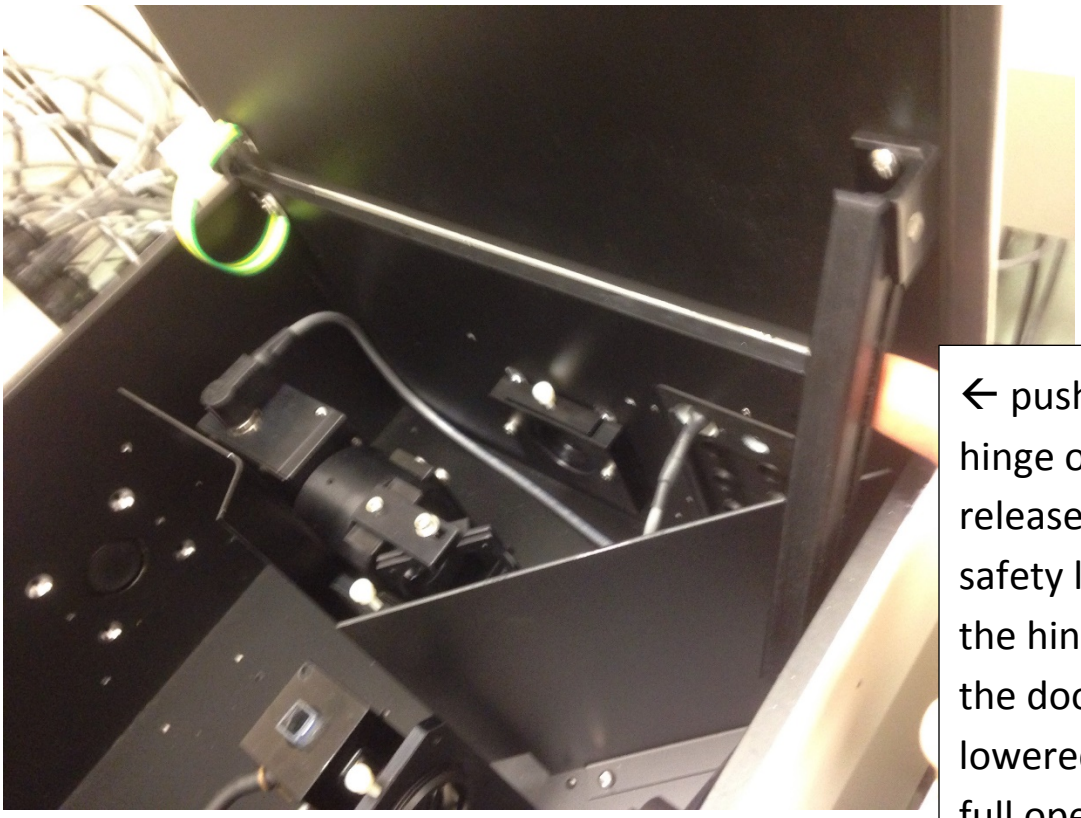


Set your acquisition parameters and click Accept:

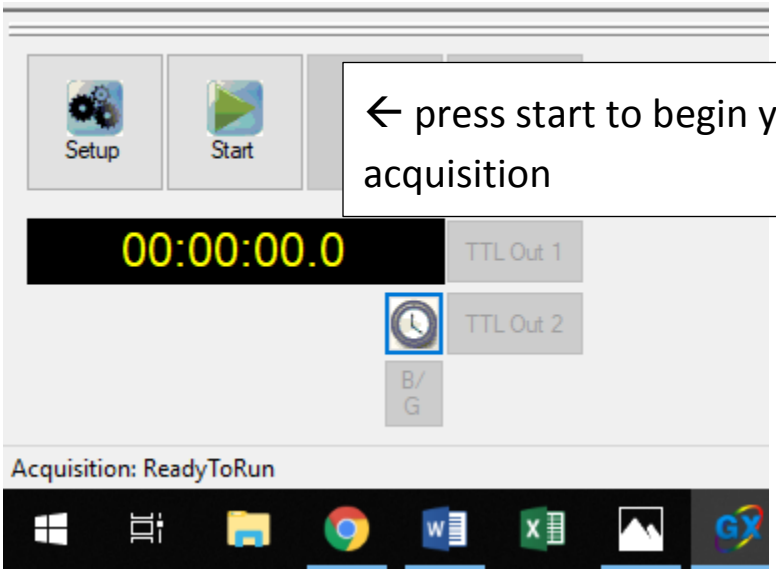


13) Insert your sample into the sample compartment. To lower the sample compartment lid from the full open position, you have to press out gently on the back of the hinge to release the safety lock.



← push back of hinge out to release the safety lock on the hinge so that the door can be lowered from the full open position

14) Press Start to collect your spectrum



← press start to begin your data acquisition

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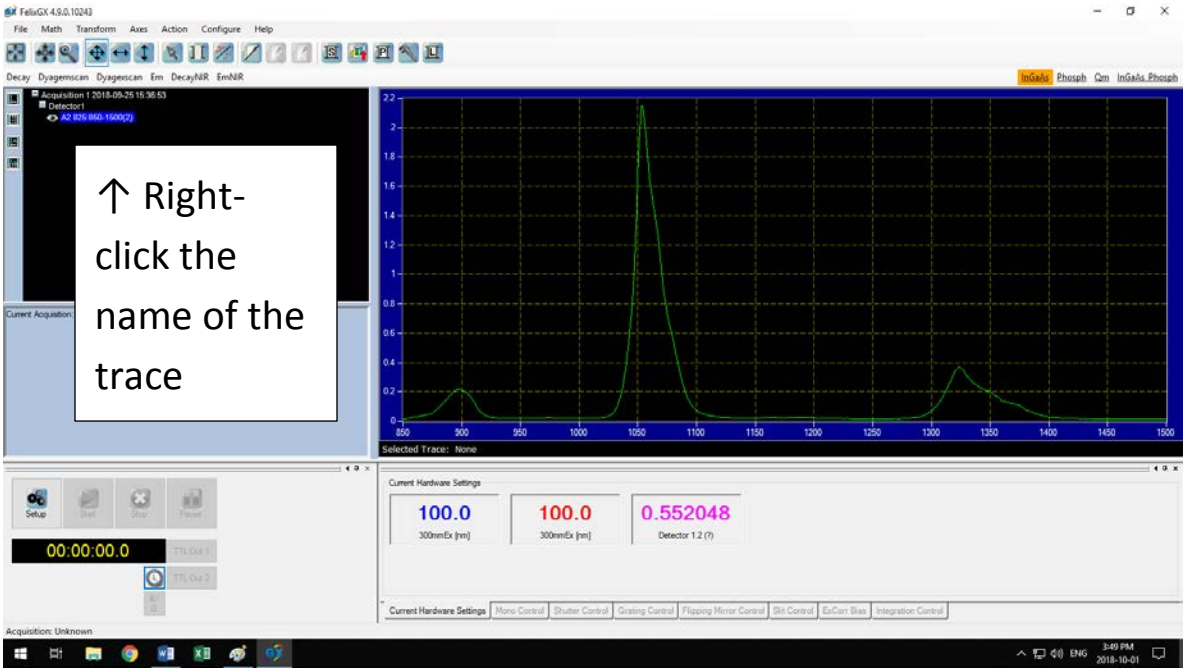
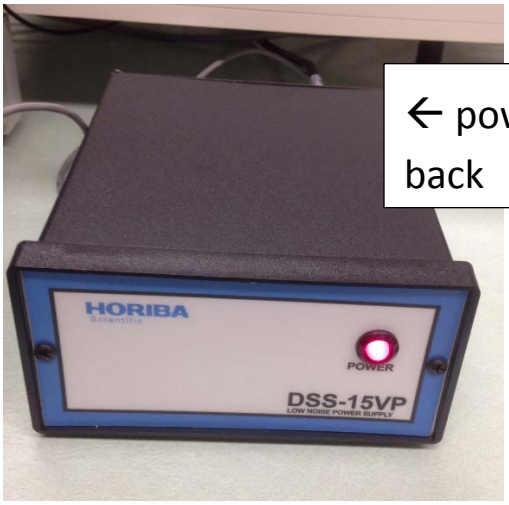
If you want to export them as text data, Right-click the name of the trace, and then click on Export.



15) How to shut down the instrument when finished:

a) Close the Felix GX software
b) Power down the computer
c) Important: Turn off the power to the InGaAs detector



← power switch is on the back

d) Turn off the instrument electronics with the power strip
e) Turn off the Xenon arc lamp