# Read, sign, and submit the signature page (only) to the Lab Manager prior to first time use of an instrument; this is a one-time submission

<u>Training:</u> Only trained users can use the instruments without supervision. 'Super users' will be responsible for training and will work with new users until they become proficient. New users can use an instrument only after the 'super user' has certified proficiency. Training is available based on the schedule of the 'super users'. In general, it will be the 1<sup>st</sup> week (once a month on a Monday for AFM/IR –NanoIR2) or 3<sup>rd</sup> week of the month, if needed. The time will be set by the 'super user'. Cross training between other users is forbidden - training is provided by the 'super user' only. Potential users should 'shadow' (observe) trained users prior to the training but cannot operate the instrument until properly trained and certified.

The training request form has to be completed and returned to the lab manager to initiate the training process. The form is available on the NSTC website.

Requests for training for general instrumentation information can also be provided by special arrangement with the 'super user'. The training request form will have to be completed and 'training for information only' indicated on the form.

<u>Availability of Instruments:</u> Certain instruments will be available 24/7 for users; others have more restricted use (see tables at the end of this section).

<u>Do's and Do Not's:</u> Users must follow acceptable behavior regarding the use of the instrument. This is discussed during training and indicated in the SOPs for each instrument.

**Reservation:** Online reservation should be done before using an instrument. A reservation calendar is available on the NSTC website.

- Users are mandated to cancel unused bookings in advance (as soon as possible); notify the Lab Manager by email on any cancelation.
- Users may reserve instruments up to 7 days in advance for a 3 hours slot between 9:00 AM and 5:00 PM on weekdays.

**No-show** after 30 minutes forfeits the reservation. A maximum of 2 no-shows per month is acceptable; penalties apply after this limit. If there are no reservations for the instrument, it is open for use until the next reservation. Note that users should update the calendar if using the instrument on the free time slot.

<u>Filling the logbook:</u> Every user MUST fill out the logbook showing their name, advisor's name, time in, time out, and report any unusual observation in the comment section. Any error messages should also be added. All entries should be legible.

<u>Consumables:</u> All instrument consumables, supplies, PPE, etc. are the responsibility of the individual user. Using other research group's inventory is not allowed - the HONOR SYSTEM applies.

<u>Materials for testing</u>: Approved materials for testing are indicated on the instrument SOP. Any new material will have to be authorized by the responsible PI for the instrument/Lab Manager and tested before analysis on the instruments – contact the 'super user' for pre-testing of materials. The list of the 'super users' for each instrument can be found on the shared lab folder.

<u>Unauthorized usage or not following instructions:</u> A penalty will be imposed for unauthorized usage or users who do not follow the rules for the instruments. The penalty will be as follows:

1st offense.... Two weeks suspension and retraining

 $2^{nd}$  offense... Two months suspension and retraining; other measures may be required

3<sup>rd</sup> offense.... Account suspended completely

#### Offenses include (but are not limited to):

- Not filling in the log book at instrument startup
- Not scheduling usage on the online calendar
- Sharing passwords
- Leaving a mess on or near an instrument
- Breaking instruments, or parts thereof, and not reporting it
- Not following procedures outlined during training on SOP
- Training new users without authorization
- Using instruments without training

# **Shared Instruments**

Instrument	Room	Owner	Contact	Availability
Atomic Force Microscope (AFM) Veeco Dimension 3100	OTC3-305B	NSTC	Dr. Tetard Lab Manager	9-48
Atomic Force Microscope (AFM)/IR System – Anasys Instruments NanoIR2	R1-232	NSTC	Dr. Tetard Lab Manager	9-5
Atomic Layer Deposition (ALD) System – Ultratech Savannah S200	PVL-457	NSTC	Dr. Chanda Lab Manager	9-5
Confocal Microscope Keyence BZ-X800	R1-216	NSTC	Dr. Kang Dr. Rajaraman	9-5
Dynamic Light Scattering (DLS) & Laser Doppler Electrophoresis System Malvern Zetasizer ZS90	PVL-466	NSTC	Dr. Santra Lab Manager	24/7
Fluorescence Spectrometer Horiba Nanolog FL3-11	OTC3-305B	NSTC	Dr. Santra Lab Manager	9-4 <sup>8</sup>
FT-IR Spectrometer Shimadzu IRSpirit with QATR-S ATR	PVL-466	NSTC	Dr. Zhai Lab Manager	24/7
Gas Chromatograph (GC)/Mass Spectrometer (MS) Varian 431GC-210MS	PVL-454	NSTC	Dr. Zhai Lab Manager	9-5
Integrated Confocal Raman and TERS Microscope Horiba LabRAM HR Evolution Nano	OTC3-305B	NSTC	Dr. Khondaker Dr. Tetard	9-4 <sup>8</sup>
MicroPlate Reader Tecan Infinite M200 Pro	PVL-447	NSTC	Dr. Kang Dr. Gesquiere	9-5
Optical Microscope Olympus BX51M	PVL-466	NSTC	Dr. Zhai Lab Manager	24/7
Phase Contrast Inverted Microscope Olympus CK2	PVL-447	NSTC	Dr. Gesquiere Lab Manager	9-5
Scanning Electron Microscope (SEM) Zeiss NVision 40	OTC3-305B	NSTC	Dr. Khondaker Lab Manager	9-4 <sup>8</sup>
Spinning Disk Confocal Microscope Zeiss Axioskop 2 Mot Plus	PVL-448	NSTC	Dr. Gesquiere Lab Manager	9-5
Surface Profiler (3D) Keyence VK-X3000	OTC3-305B	NSTC	Dr. Rajaraman Lab Manager	9-4 <sup>8</sup>
Thin Film Deposition System AJA e-Beam	PVL-442	NSTC	Dr. Chanda Lab Manager	24/7
Thin Film Deposition System AJA Magnetron Sputterer	PVL-442	NSTC	Dr. Chanda Lab Manager	24/7

# **Shared Instruments, continued**

Thin Film Deposition System Thermionics e-Beam and RDM Thermal Evaporator	PVL-438	NSTC	Dr. Chanda Dr. Khondaker Lab Manager	24/7
UV-VIS Spectrophotometer Agilent Cary 300	PVL-466	NSTC	Dr. Santra Lab Manager	24/7

<sup>&</sup>lt;sup>8</sup>OTC 305B time access for general users

### **PI-Owned Instruments**

Instrument	Room	Owner	Contact	Availability
Dynamic Light Scattering (DLS) System – Precision DDLS/CoolBatch+40T	PVL-466	Dr. Zhai	Dr. Santra Lab Manager	24/7
FT-IR Spectrometer Perkin Elmer Spectrum 100 Series	R1-232	Drs. Zhai, Huo, Gesquiere, Santra	Dr. Tetard Lab Manager	9-5*
Gel Permeation Chromatography (GPC) System Jasco LC 2000 Plus Series	PVL-454	Drs. Zhai, Huo, Santra	Dr. Zhai Lab Manager	9-5*
Glovebox/Thin Film Deposition System – Mbraun MBEvap	PVL-457	Drs. Zhai, Dong, Gesquiere, Thomas, Khondaker	Dr. Gesquiere Dr. Dong Lab Manager	9-5 *
X-ray Photoelectron Spectrometer (XPS) – Fisons ESCALAB 2201-XL	PVL-438	Dr. Hickman	Dr. Hickman	24/7 *

<sup>\*</sup> Availability of these instruments is restricted to the specified groups in owner column

User	Supervisor/Ac	lvisor	
Name	Name		
Signature	Signature		
Date	Date		
For Official Use Only:			
Safety Training: Lab Safety	BioSafety	Others	

Employment: Status \_\_\_\_\_ End Date \_\_\_\_\_