

# CHARACTERIZATION.NANO EQUIPMENT USAGE RATES

**EFFECTIVE MARCH 2026**

TOOL	COST (\$/HR)			
	MIT / OTHER ACADEMICS		EXTERNAL	
	Self use	Staff assisted	Self use	Staff assisted
<b>ATOMIC FORCE MICROSCOPY</b>				
<u>AGILENT 5500 AFM</u>	52.50*	120.75	225.75*	519.23
<u>BRUKER ICON AFM</u>	52.50*	120.75	225.75*	519.23
<u>CYPHER S AFM</u>	52.50*	120.75	225.75*	519.23
<u>CYPHER VRS AFM</u>	52.50*	120.75	225.75*	519.23
<b>CLEANROOM METROLOGY</b>				
<u>AFM-ASYLUM JUPITER XR</u>				
<u>SEM-HITACHI REGULUS 8100</u>	Rates for these and other cleanroom metrology instruments can be found at: <a href="https://nanousers.mit.edu/fabnano-rates">nanousers.mit.edu/fabnano-rates</a>			
<u>SEM-ZEISS SIGMA 300</u>				
<b>ELECTRON MICROSCOPY</b>				
<u>AQUILOS CRYO-FIB/SEM</u>	87.50	155.75	376.25	669.73
<u>FEI HELIOS 600 FIB</u>	87.50	155.75	376.25	669.73
<u>FEI TECNAI TEM</u>	70.00	140.00	301.00	602.00
<u>GEMINI 450 SEM</u>	60.20	110.00	258.86	473.00
<u>HITACHI HF5000 ETEM</u>	70.00	140.00	301.00	602.00
<u>JEOL 2010F FEG TEM</u>	70.00	140.00	301.00	602.00
<u>JEOL 2011 TEM</u>	70.00	140.00	301.00	602.00
<u>QUATTRO ESEM</u>	60.20	110.00	258.86	473.00
<u>SIGMA HDVP SEM</u>	60.20	110.00	258.86	473.00
<u>TFS TALOS F200I</u>	70.00	140.00	301.00	602.00
<u>THEMIS Z STEM</u>	87.50	155.75	376.25	669.73
<u>VELION FIB SEM</u>	81.90	150.15	352.17	645.65

<b><u>ZEISS MERLIN HRSEM</u></b>	60.20	110.00	258.86	473.00
<b><u>MICROSCOPY ANALYSIS COMP</u></b>	5.00	73.75	21.50	314.98
<b>MAGNETIC</b>				
<b><u>MPMS3 DC AC VSM</u></b>	10.00	78.25	43.00	336.48
<b>MATERIALS PREP</b>				
<b><u>ALLIED MULTIPREP POLISHER</u></b>	12.60	97.30	54.18	418.39
<b><u>ALLIED TECHCUT</u></b>	12.60	97.30	54.18	418.39
<b><u>EMS150T SPUTTER COATER</u></b> Rates are per evaporation, not per hour.	17.85	86.10	76.76	370.23
<b><u>FISCHIONE 1010 ION MILL</u></b>	10.00	77.50	43.00	333.25
<b><u>FISCHIONE 1051 TEM MILL</u></b>	10.00	77.50	43.00	333.25
<b><u>FREEZE STAGE</u></b>	20.00	88.25	86.00	379.48
<b><u>GATAN PIPS</u></b>	10.00	77.50	43.00	333.25
<b><u>MICRO BALANCE</u></b>	48.00	116.25	206.40	499.88
<b><u>MICROSCOPE AXIOSKOP</u></b>	37.00	105.25	159.10	452.58
<b><u>MICROSCOPE SZX16</u></b>	30.00	98.25	129.00	422.48
<b><u>PELCO SC7 SPUTTER COATER</u></b>	17.85/hr + 29.75/run	86.00/hr + 42.00/run	76.76/hr + 127.93/run	369.80/hr + 180.60/run
<b><u>PLASMA CLEANER</u></b>	37.00	105.25	159.10	452.58
<b><u>UV OZONE CLEANER</u></b>	28.00	96.25	120.40	413.88
<b><u>VTI GLOVE BOX</u></b>	17.85/hr + 17.85/run	86.00/hr + 30.00/run	76.76/hr + 76.76/run	369.80/hr + 129.00/run
<b>OPTICAL SPECTROSCOPY</b>				
<b><u>ALPHA300 APYRON CONFOCAL RAMAN</u></b>	52.50	120.75	225.75	519.23
<b><u>FTIR 6700</u></b>	33.00	101.25	141.90	435.38
<b><u>FTIR IS50</u></b>	33.00	101.25	141.90	435.38
<b><u>ICP AES 5100</u></b>	35.00	103.25	150.50	443.98
<b><u>LEICA STELLARIS CRS</u></b>	52.50	120.75	225.75	519.23
<b><u>RENISHAW REFLEX RAMAN</u></b>	37.00	105.25	159.10	452.58
<b><u>UVVISNIR PE1050</u></b>	30.00	98.25	129.00	422.48
<b>SURFACE ANALYSIS</b>				
<b><u>BRUKER TRIBOINDENTER NANOINDENTER</u></b>	49.00*	78.40	210.70*	337.12
<b><u>FILMETRICS REFLECTOMETER</u></b>	37.00	105.25	159.10	452.58
<b><u>PHI 700 AUGER</u></b>	44.00	112.25	189.20	482.68

<b><u>PHI VERSAPROBE XPS</u></b>	44.00	112.25	189.20	482.68
<b><u>PROFILOMETER XT</u></b>	44.00	112.25	189.20	482.68
<b><u>OCM-D</u></b>	33.00	101.25	141.90	435.38
<b>X-RAY DIFFRACTION &amp; IMAGING</b>				
<b><u>BRUKER DISCOVER PLUS</u></b>	51.00**	119.25	219.30**	512.78
<b><u>HANDHELD XRF</u></b>	51.00	119.25	219.30	512.78
<b><u>LAUE</u></b>	51.00**	119.25	219.30**	512.78
<b><u>PANALYTICAL EMPYREAN</u></b>	51.00**	119.25	219.30**	512.78
<b><u>PANALYTICAL XPERT</u></b>	51.00**	119.25	219.30**	512.78
<b><u>SAXS</u></b>	51.00**	119.25	219.30**	512.78
<b><u>SMARTLAB</u></b>	51.00**	119.25	219.30**	512.78
<b><u>VERSA 620 XRM</u></b>	52.50	137.00	225.75	589.10
<b><u>XRAY INSPECTION</u></b>	42.00	84.00	180.60	361.20

Please note that rates are subject to change.

\* Rate drops to 50% regular rate after 8 hours for long sessions.

\*\* Rate drops to 33% regular rate during overnight sessions.

<b>TOOL</b>	<b>COST (\$/HR)</b>					
	<b>MIT</b>		<b>OTHER ACADEMICS</b>		<b>EXTERNAL</b>	
	<b>Self use</b>	<b>Staff assisted</b>	<b>Self use</b>	<b>Staff assisted</b>	<b>Self use</b>	<b>Staff assisted</b>
<b>CRYO-EM</b>						
<b><u>CHAMELEON</u></b> Grid consumable, per grid: \$33	210.00 / session	263.90 / session	600.00 / session	754.00 / session	1,680.00 / session	2,111.20 / session
<b><u>CLIPPING STATION</u></b> C-clip & ring consumable, per grid: \$10 C-clip & cryo-FIB ring consumable, per grid: \$33	8.75 / session	51.80 / session	25.00 / session	148.00 / session	70.00 / session	414.40 / session
<b><u>HYDRA BIO PFIB/SEM</u></b>	21.00	47.95	60.00	137.00	168.00	383.60
<b><u>TALOS ARCTICA G2 CRYO-TEM</u></b>	25.55	52.50	73.00	150.00	204.40	420.00
<b><u>TITAN KRIOS G3I CRYO-TEM</u></b>	33.95	60.90	97.00	174.00	271.60	487.20
<b><u>VITROBOT</u></b>	63.00 / session	143.50 / session	180.00 / session	410.00 / session	504.00 / session	1,148.00 / session