

## Hourly Use Rates for the Material Research Laboratory Facilities

*Rates for Private Sector companies and researchers.*

If you have any questions, please contact the MRL Business Office at 217-333-1372. Rates valid from January 1, 2021 and are subject to change by ILLINOIS per terms agreed upon in LICENSEE's usage contract.

<b>Center for Excellence in Soft Materials</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Malvern Zetasizer	Particle Size and Zeta Potential Measurements	\$130	\$180
Metrohm 915 KF Ti-Touch	Volumetric Karl Fischer Titration	\$130	\$180
Metrohm 917 Coulometer	Coulometric Karl Fischer Titration	\$130	\$180
Novocontrol C47 Analyzer	Dielectric, Conductivity and Impedance Spectrometer	\$130	\$180
Q50-TGA	Thermogravimetric Analysis	\$130	\$180
Q800-DMA	Dynamic Mechanical Analysis	\$130	\$180
Shimadzu DTA-50	Differential Thermal Analysis	\$130	\$180
TA Affinity ITC	Isothermal Titration Calorimetry	\$130	\$180
TA DSC 2500	Differential Scanning Calorimetry	\$130	\$180
TA DHR-3 Rheometer	Discovery Hybrid Rheometer	\$130	\$180
Tosoh EcoSEC GPC	Gel Permeation Chromatography	\$130	\$180
<b>Laser and Spectroscopy Facility</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Agilent CARY 5000	Spectrophotometry	\$160	\$210
Custom Experiment	Custom Laser Experiments	\$160	\$210
Gaertner Ellipsometer	Ellipsometry	\$160	\$210
Horiba Xplora-Nano TERS-TEPL	Tip Enhanced Raman Spectroscopy	\$160	\$210
Inspire OPO Laser	Time-Domain Thermoreflectance, Custom Laser Experiments	\$160	\$210
Inverted Materials Microscope	Optical Microscopy	\$160	\$210
Keyence VK-X1000	Optical Profiler	\$170	\$220
Mid-IR Twin OPA Laser Source	Sum Frequency Generation, Transient Absorption	\$160	\$210
Montana Cryo Station	Closed He Cycle Optical Cryo Station	\$70	\$120
Nanophoton Raman 11	Raman Spectroscopy/Microscopy	\$160	\$210
Neaspec IR AFM	Tip Enhanced Infrared Spectroscopy	\$160	\$210
Newport Solar Simulator	Custom Experiments	\$160	\$210
Nicolet Nexus 670 FTIR	Fourier Transform Infrared Spectroscopy	\$160	\$210
OL 750 Spectroradiometer	Spectroradiometry	\$160	\$210
Rame-Hart Contact Angle	Contact Angle Goniometry	\$160	\$210
Photoluminescence	Photoluminescence/Fluorescence	\$160	\$210
SLM ISS Fluorometer	Photoluminescence/Fluorescence	\$160	\$210
Time Resolved PL	Photoluminescence/Fluorescence	\$160	\$210
Tsunami Ti-Sapphire Laser	Time-Domain Thermoreflectance	\$160	\$210
Tsunami Ti-Sapphire Laser 2	Time-Domain Thermoreflectance	\$160	\$210
Two Photon Microscopy	Optical Microscopy	\$160	\$210
Varian Cary5G UV-VIS-NIR	Spectrophotometry	\$160	\$210
Witec Alpha NSOM	Near Field Scanning Optical Microscopy	\$160	\$210
Woollam VAS Ellipsometer	Spectroscopic Ellipsometry	\$160	\$210
Zeiss LSM7 Confocal	Fluorescence Microscopy	\$160	\$210

Micro & Nano-Fabrication Facility			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
AJA Sputter Coater	Sputter Coater	\$160	\$210
AJA Sputter Coater 2	Sputter Coater	\$160	\$210
AJA Sputter Coater 3	Sputter Coater	\$160	\$210
AJA Sputter Coater 4	Sputter Coater	\$160	\$210
Atomic Layer Deposition	Atomic Layer Deposition	\$160	\$210
Atomic Layer Deposition 2	Atomic Layer Deposition	\$160	\$210
Ball Bonder	Ball Bonder	\$160	\$210
Cleanroom	Cleanroom	\$160	\$210
CM Furnace	Furnace	\$70	\$120
CNT Furnace	Furnace	\$70	\$120
Desert Cryo Probe Station	Probe Station	\$160	\$210
E-beam Evaporator 1	Electron Beam Evaporation	\$160	\$210
E-beam Evaporator 2	Electron Beam Evaporation	\$160	\$210
E-beam Evaporator 4	Electron Beam Evaporation	\$160	\$210
Graphene Furnace	Furnace for the growth of carbon nanotubes and graphene layers	\$70	\$120
Harrick Plasma Cleaner	Plasma Cleaner	\$160	\$210
Heidelberg Maskless Writer	Maskless wafer aligner	\$165	\$215
Hydrogen Vacuum Furnace	Furnace	\$70	\$120
Ion Mill Evaporator	Ion Mill & Thermal Evaporator	\$160	\$210
Jandel 4 Point Probe	Four point probe	\$160	\$210
Lindberg 3 Zone Furnace - 2 inch	Furnace	\$70	\$120
March RIE	Reactive Ion Etcher for polymer samples	\$160	\$210
March RIE2	Reactive Ion Etcher for polymer samples	\$160	\$210
Mitutoyo Microscope	Optical Microscope	\$160	\$210
Nanomaster RIE	Reactive Ion Etcher for polymer samples	\$160	\$210
Nanoscribe 3D Printer	Laser lithography 3D printer	\$165	\$215
Olympus Microscope	Optical Microscope	\$160	\$210
Oven-Vacuum	Oven	\$70	\$120
PECVD	Plasma Enhanced Chemical Vapor Deposition	\$160	\$210
PECVD 2	Plasma Enhanced Chemical Vapor Deposition	\$160	\$210
Probe Station	Probe Station	\$160	\$210
Raith EBPG5150	Electron Beam Lithography	\$200	\$250
Raith e-Line	Electron Beam Lithography	\$160	\$210
RaithPrep	Cleanroom	\$160	\$210
Reactor Vacuum Furnace	Furnace	\$70	\$120
RIE	Reactive Ion Etcher	\$160	\$210
RTA Furnace	Furnace	\$160	\$210
Parylene Coater	Parylene Deposition - SCS Labcoater 2	\$160	\$210
Suss MJB3 - Deep UV	Mask Aligner - Deep UV	\$0	\$210
Suss MJB3 - Mask Aligner	Mask Aligner	\$0	\$210
Suss MJB4 - Mask Aligner	Mask Aligner	\$0	\$210
Thermal Evaporator	Thermal Evaporation	\$160	\$210
Tube Furnace - 6 inch	Furnace	\$70	\$120
Wedge Bonder	Wedge Bonder	\$160	\$210
Westbond Bonder	Wire Bonder	\$160	\$210

\*\* Deposition of gold, platinum or palladium incurs an additional charge of \$4 per every 10 nm deposited or fraction thereof.

<b>Microscopy-Biological</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Bio-BioSEM	Bio SEM Prep	N/A	\$78
Bio-Embed	Embedding & Deparaffinization	N/A	\$78
Bio-EMScopeVM	VDL Scope Tech Time	N/A	\$93
Bio-LMSect	Trim & LM Sectioning	N/A	\$78
Bio-NegDevelop	Negative Development	N/A	\$95
Bio-NegScan	Negative Scanning	N/A	\$80
Bio-NegStain	Negative Staining & Grids	N/A	\$80
Bio-OptoMicro	Optical Camera Tech Time	N/A	\$220
Bio-TEMsect	Trim & TEM Sectioning	N/A	\$94
Reichert Ultracut	Microtome for TEM sample preparation	\$70	\$120
<b>Microscopy-Scanning Probe</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Asylum AFM 1	Atomic Force Microscopy	\$130	\$180
Asylum AFM 2	Atomic Force Microscopy	\$130	\$180
Asylum Cypher AFM	Atomic Force Microscopy/High Resolution	\$130	\$180
Dektak 3030	Surface Profilometry	\$130	\$180
Hysitron Tip	Nanoindentation	\$70	\$120
Hysitron TriboIndenter	Nanoindentation	\$130	\$180
Leitz Microhardness	Microhardness tester	\$70	\$120
Piuma Nanoindenter	Nanoindentation	\$130	\$180
<b>Microscopy-Scanning Electron</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
HELIOS 600i FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$220
Hitachi S4700 SEM	Scanning Electron Microscopy/High Resolution	\$170	\$220
Hitachi S4800 SEM	Scanning Electron Microscopy/High Resolution	\$170	\$220
JEOL 6060LV SEM	Scanning Electron Microscopy/Low Vacuum	\$140	\$190
JEOL 7000F SEM	Scanning Electron Microscopy/Analytical SEM	\$170	\$220
Scios 2 FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$220
<b>Microscopy-Transmission Electron</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Hitachi 9500	Transmission Electron Microscopy	\$170	\$220
JEOL 2010 LaB6	Transmission Electron Microscopy	\$165	\$215
JEOL 2100 Cryo TEM	Transmission Electron Microscopy	\$165	\$215
Thermo Themis Z TEM-STEM	(Scanning) Transmission Electron Microscopy/Analytical	\$200	\$250
ThermoFisher Glacios Cryo-TEM	Cryo-TEM for Life Sciences	\$200	\$250
<b>Physical Property Measurement</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
QD MPMS3 SQUID	Magnetic Property Measurement System	\$70	\$120
QD MPMS3 SQUID B	Magnetic Property Measurement System	\$70	\$120
QD PPMS	Physical Property Measurement System	\$71	\$121
QD PPMS B	Physical Property Measurement System	\$71	\$121

<b>Surface Analysis</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Cameca LEAP 5000XS APT	Local Electrode Atom Probe Tomography	\$200	\$250
KRATOS AXIS XPS	X-Ray Photoelectron Spectroscopy/Imaging XPS	\$160	\$210
NEC Pelletron	Ion Accelerator/Rutherford Backscattering Spectroscopy	\$160	\$210
PEI Trift-III TOF-SIMS	Secondary Ion Mass Spectroscopy/Time-of-Flight	\$160	\$210
PEI660 Auger	Auger Spectroscopy	\$160	\$210
<b>X-ray Diffraction</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Bruker D8 Advance	X-ray diffraction with high-temperature stage	\$160	\$210
Dexco Laue	X-ray Diffraction/Laue	\$160	\$210
Philips Xpert	X-Ray Diffraction/High Resolution, Point or Line Focus	\$160	\$210
SAXS	X-Ray Diffraction	\$160	\$210
Shimadzu EDXRF	X-Ray Fluorescence	\$160	\$210
Siemens-Bruker D5000 XRD	X-Ray Diffraction/Powder	\$160	\$210
<b>Support Equipment</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Allied Multiprep	TEM sample preparation	\$70	\$120
Carbon Rod Coater	SEM Carbon Coater	\$70	\$120
Carbon String Coater	SEM Carbon Coater	\$70	\$120
FEI Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$120
FEI Mark IV Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$120
Gatan CryoPIPS	Cryo-Ion Miller for TEM sample preparation	\$70	\$120
Gatan PECS II	Ion Miller for SEM sample preparation	\$70	\$120
Gatan PIPS	Ion Miller for TEM sample preparation	\$70	\$120
Leica EM UC6 Microtome	Microtome for TEM sample preparation	\$70	\$120
PicoIndenter	Nanoindentation	\$165	\$215
Princeton WS-25 Wire Saw	Wire Saw - High Precision	\$70	\$120
SEM Sputter Coater 1	SEM Sputter Coater	\$70	\$120
SEM Sputter Coater 2	SEM Sputter Coater	\$70	\$120
Tergeo EM Plasma Cleaner	Plasma Cleaner for TEM sample preparation	\$70	\$120
Vibratory Polisher 1	Vibratory Polisher	\$70	\$120
Vibratory Polisher 2	Vibratory Polisher	\$70	\$120