

## 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, 2019 and are subject to change by ILLINOIS per terms agreed upon in LICENSEE's usage contract.

<b>Laser and Spectroscopy Facility</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Agilent CARY 5000	Spectrophotometry	\$160	\$195
Custom Experiment	Custom Laser Experiments	\$160	\$195
Gaertner Ellipsometer	Ellipsometry	\$160	\$195
Inspire OPO Laser	Time-Domain Thermoreflectance, Custom Laser Experiments	\$160	\$195
Inverted Materials Microscope	Optical Microscopy	\$160	\$195
Keyence VK-X1000	Optical Profiler	\$170	\$205
Mid-IR Twin OPA Laser Source	Sum Frequency Generation, Transient Absorption	\$160	\$195
Nanophoton Raman 11	Raman Spectroscopy/Microscopy	\$160	\$195
Neaspec IR AFM	Tip Enhanced Infrared Spectroscopy	\$160	\$195
Newport Solar Simulator	Custom Experiments	\$160	\$195
Nicolet Nexus 670 FTIR	Fourier Transform Infrared Spectroscopy	\$160	\$195
OL 750 Spectroradiometer	Spectroradiometry	\$160	\$195
Rame-Hart Contact Angle	Contact Angle Goniometry	\$160	\$195
Photoluminescence	Photoluminescence/Fluorescence	\$160	\$195
SLM ISS Fluorometer	Photoluminescence/Fluorescence	\$160	\$195
Time Resolved PL	Photoluminescence/Fluorescence	\$160	\$195
Tsunami Ti-Sapphire Laser	Time-Domain Thermoreflectance	\$160	\$195
Tsunami Ti-Sapphire Laser 2	Time-Domain Thermoreflectance	\$160	\$195
Varian Cary5G UV-VIS-NIR	Spectrophotometry	\$160	\$195
Woollam VAS Ellipsometer	Spectroscopic Ellipsometry	\$160	\$195
Zeiss LSM7 Confocal	Fluorescence Microscopy	\$160	\$195

<b>Micro &amp; Nano-Fabrication Facility</b>			
<b>Instrument</b>	<b>Technique</b>	<b>Self Use (\$/hr)</b>	<b>Staff Assisted &amp; Training (\$/hr)</b>
AJA Sputter Coater	Sputter Coater	\$160	\$195
AJA Sputter Coater 2	Sputter Coater	\$160	\$195
AJA Sputter Coater 3	Sputter Coater	\$160	\$195
AJA Sputter Coater 4	Sputter Coater	\$160	\$195
Atomic Layer Deposition	Atomic Layer Deposition	\$160	\$195
Atomic Layer Deposition 2	Atomic Layer Deposition	\$160	\$195
Ball Bonder	Ball Bonder	\$160	\$195
Cleanroom	Cleanroom	\$160	\$195
CM Furnace	Furnace	\$70	\$105
CNT Furnace	Furnace	\$70	\$105
Desert Cryo Probe Station	Probe Station	\$160	\$195
E-beam Evaporator 1	Electron Beam Evaporation	\$160	\$195
E-beam Evaporator 2	Electron Beam Evaporation	\$160	\$195
E-beam Evaporator 3	Electron Beam Evaporation	\$160	\$195
E-beam Evaporator 4	Electron Beam Evaporation	\$160	\$195
Harrick Plasma Cleaner	Plasma Cleaner	\$160	\$195
Hydrogen Vacuum Furnace	Furnace	\$70	\$105
Ion Mill Evaporator	Ion Mill & Thermal Evaporator	\$160	\$195
Jandel 4 Point Probe	Four point probe	\$160	\$195
Lindberg 1 Furnace - 2 inch	Furnace	\$70	\$105
Lindberg 2 Furnace - 2 inch	Furnace	\$70	\$105
March RIE	Reactive Ion Etcher for polymer samples	\$160	\$195
March RIE2	Reactive Ion Etcher for polymer samples	\$160	\$195
Mitutoyo Microscope	Optical Microscope	\$160	\$195
Nanomaster RIE	Reactive Ion Etcher for polymer samples	\$160	\$195
Nanoscribe 3D Printer	Laser lithography 3D printer	\$165	\$200
Olympus Microscope	Optical Microscope	\$160	\$195
Oven-Air	Oven	\$70	\$105
Oven-Vacuum	Oven	\$70	\$105
PECVD	Plasma Enhanced Chemical Vapor Deposition	\$160	\$195
PECVD 2	Plasma Enhanced Chemical Vapor Deposition	\$160	\$195
Probe Station	Probe Station	\$160	\$195
Raith e-Line	Electron Beam Lithography	\$160	\$195
RaithPrep	Cleanroom	\$160	\$195
RIE	Reactive Ion Etcher	\$160	\$195
RTA Furnace	Furnace	\$160	\$195
Suss MJB3 - Deep UV	Mask Aligner - Deep UV	\$0	\$53
Suss MJB3 - Mask Aligner	Mask Aligner	\$0	\$53
Suss MJB4 - Mask Aligner	Mask Aligner	\$0	\$53
Thermal Evaporator	Thermal Evaporation	\$160	\$195
Tube Furnace - 6 inch	Furnace	\$70	\$105
Wedge Bonder	Wedge Bonder	\$160	\$195
** Deposition of gold, platinum, or palladium incurs an additional charge of \$30 per every 100 nm deposited or fraction there of.			

<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	\$105
<b>Microscopy-Scanning Probe</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Asylum AFM 1	Atomic Force Microscopy	\$130	\$165
Asylum AFM 2	Atomic Force Microscopy	\$130	\$165
Asylum Cypher AFM	Atomic Force Microscopy/High Resolution	\$130	\$165
Hysitron Tip	Nanoindentation	\$70	\$105
Hysitron TriboIndenter	Nanoindentation	\$130	\$165
Piuma Nanoindenter	Nanoindentation	\$130	\$165
<b>Microscopy-Scanning Electron</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
HELIOS 600i FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$205
Hitachi S4700 SEM	Scanning Electron Microscopy/High Resolution	\$170	\$205
Hitachi S4800 SEM	Scanning Electron Microscopy/High Resolution	\$170	\$205
JEOL 6060LV SEM	Scanning Electron Microscopy/ Low Vacuum	\$140	\$175
JEOL 7000F SEM	Scanning Electron Microscopy/Analytical SEM	\$170	\$205
Scios 2 FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$205
<b>Microscopy-Transmission Electron</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Hitachi 9500	Transmission Electron Microscopy	\$170	\$205
JEOL 2010 LaB6	Transmission Electron Microscopy	\$165	\$200
JEOL 2010F EF-FEG	(Scanning) Transmission Electron Microscopy/Analytical	\$165	\$200
JEOL 2100 Cryo TEM	Transmission Electron Microscopy	\$165	\$200
JEOL 2200FS	(Scanning) Transmission Electron Microscopy/Analytical	\$170	\$205
PicoIndenter	Nanoindentation	\$165	\$200
Thermo Themis Z TEM-STEM	(Scanning) Transmission Electron Microscopy/Analytical	\$200	\$235

<b>Physical Property Measurement</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Malvern Zetasizer	Particle Size and Zeta Potential Measurements	\$130	\$165
Q50-TGA	Thermogravimetric Analysis	\$130	\$165
Q800-DMA	Dynamic Mechanical Analysis	\$130	\$165
Shimadzu DTA-50	Differential Thermal Analysis	\$130	\$165
TA DSC 2500	Differential Scanning Calorimetry	\$130	\$165
<b>Surface Analysis</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
KRATOS AXIS XPS	X-Ray Photoelectron Spectroscopy/Imaging XPS	\$160	\$195
NEC Pelletron	Ion Accelerator/Rutherford Backscattering Spectroscopy	\$160	\$195
PEI Trift-III TOF-SIMS	Secondary Ion Mass Spectroscopy/ Time-of-Flight	\$160	\$195
PEI5400 XPS	X-Ray Photoelectron Spectroscopy	\$160	\$195
PEI660 Auger	Auger Electron Spectroscopy	\$160	\$195
<b>X-ray Diffraction</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Dexco Laue	X-ray Diffraction/Laue	\$160	\$195
Philips XPert 1	X-Ray Diffraction/ High Resolution, Line Focus	\$160	\$195
Philips Xpert 2	X-Ray Diffraction/ Point Focus	\$160	\$195
SAXS	X-Ray Diffraction	\$160	\$195
Shimadzu EDXRF	X-Ray Fluorescence	\$160	\$195
Siemens-Bruker D5000 XRD	X-Ray Diffraction/ Powder	\$160	\$195
<b>Support Equipment</b>			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Allied Multiprep	TEM sample preparation	\$70	\$105
Bell Jar Evaporator	Bell Jar Evaporator	\$130	\$165
Carbon Rod Coater	SEM Carbon Coater	\$70	\$105
Carbon String Coater	SEM Carbon Coater	\$70	\$105
Dektak 3030	Surface Profilometry	\$130	\$165
FEI Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$105
Gatan CryoPIPS	Cryo-Ion Miller for TEM sample preparation	\$70	\$105
Gatan PECS II	Ion Miller for SEM sample preparation	\$70	\$105
Gatan PIPS	Ion Miller for TEM sample preparation	\$70	\$105
Leica EM UC6 Microtome	Microtome for TEM sample preparation	\$70	\$105
SEM Sputter Coater 1	SEM Sputter Coater	\$70	\$105
SEM Sputter Coater 2	SEM Sputter Coater	\$70	\$105
Tergeo EM Plasma Cleaner	Plasma Cleaner for TEM sample preparation	\$70	\$105
Vibratory Polisher 1	Vibratory Polisher	\$70	\$105
Vibratory Polisher 2	Vibratory Polisher	\$70	\$105