

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, 2023 and are subject to change by ILLINOIS per terms agreed upon in LICENSEE's usage contract.

Center for Excellence in Soft Materials			
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
Nanoparticle tracking NS300	Nanoparticle tracking analysis	\$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 DHR-3 Rheometer	Discovery Hybrid Rheometer	\$130	\$180
TA DSC 2500	Differential Scanning Calorimetry	\$130	\$180
Tosoh EcoSEC GPC	Gel Permeation Chromatography	\$130	\$180
Laser and Spectroscopy Facility			
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 and PL Spectroscopy	\$160	\$210
Inspire OPO Laser	Time-Domain Thermoreflectance, Custom Laser Experiments	\$160	\$210
Keyence VK-X1000	Optical Profiler	\$170	\$220
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
Oxford Cryo Station	Closed He Cycle Cryo Station	\$70	\$120
Photoluminescence	Photoluminescence/Fluorescence	\$160	\$210
Quantum Diamond Microscope	N-vacancy magnetometry	\$160	\$210
Rame-Hart Contact Angle	Contact Angle Goniometry	\$160	\$210
SLM ISS Fluorometer	Photoluminescence/Fluorescence	\$160	\$210
Thermo-Nicolet Is-50 FTIR	Fourier-Transform IR spectroscopy	\$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

Micro & Nano-Fabrication Facility			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
ADT 7122 Wafer Dicer	Automated sample dicer	\$160	\$210
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
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
MTI Furnace - 2 inch	Furnace	\$70	\$120
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
Parylene Coater	Parylene Deposition - SCS Labcoater 2	\$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
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.			

Microscopy-Scanning Probe			
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
Asylum MFP-3D-Bio AFM	Atomic Force Microscopy for biological materials	\$130	\$180
Dektak 3030	Surface Profilometry	\$130	\$180
Hysitron Tip	Nanoindentation	\$70	\$120
Hysitron TriboIndenter	Nanoindentation	\$130	\$180
Leitz Microhardness	Microhardness tester	\$70	\$120
Molecular Vista PiFM-Raman	Photo-induced Force Microscopy	\$160	\$210
Piuma Nanoindenter	Nanoindentation	\$130	\$180
Microscopy-Scanning Electron			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
HELIOS 600i FIB	Scanning Electron/Focused Ion Beam Microscopy	\$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
Thermo Axia ChemSEM	Scanning Electron Microscopy/Low Vacuum	\$160	\$210
Microscopy-Transmission Electron			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Hitachi 9500	Transmission Electron Microscopy	\$170	\$220
JEOL 1400 TEM	Transmission Electron Microscopy	\$170	\$220
JEOL 2010 LaB6	Transmission Electron Microscopy	\$165	\$215
JEOL 2100 Cryo TEM	Transmission Electron Microscopy	\$165	\$215
Thermo Talos F200X TEM-STEM	Transmission Electron Microscopy	\$200	\$250
Thermo Themis Z TEM-STEM	(Scanning) Transmission Electron Microscopy/Analytical	\$200	\$250
ThermoFisher Glacios Cryo-TEM	Cryo-TEM for SPA, tomography and micro-ED	\$200	\$250
Support Equipment			
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
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

Physical Property Measurement			
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 Opticool	Optical Cryostat	\$70	\$120
QD PPMS	Physical Property Measurement System	\$71	\$121
QD PPMS B	Physical Property Measurement System	\$71	\$121
Surface Analysis			
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
Kratos Supra XPS	X-Ray Photoelectron Spectroscopy / Imaging and Depth Profiling	\$170	\$220
NEC Pelletron	Ion Accelerator/Rutherford Backscattering Spectroscopy	\$160	\$210
PEI Trift-III TOF-SIMS	Secondary Ion Mass Spectroscopy/Time-of-Flight	\$160	\$210
X-ray Analysis			
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
PANalytical XPert	High-resolution X-ray diffraction and reflectometry	\$160	\$210
SAXS	X-Ray scattering: SAXS, WAXS, GI-SAXS and GI-WAXS	\$160	\$210
Shimadzu EDXRF	X-Ray Fluorescence	\$160	\$210
Siemens-Bruker D5000 XRD	X-Ray Diffraction/Powder	\$160	\$210
MRL Carver BioMaker Lab			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Autoclave	Sterilization	\$50	\$100
Biosafety Cabinet-Room 0014	Biosafety Cabinet	\$0	\$50
Biosafety Cabinet-Room 0015	Biosafety Cabinet	\$0	\$50
CarverBioMakerLab	Lab suite access for sample prep and imaging	\$20	\$70
Cellink BioX 3D bioplotter	3D printing (tissue, cell, etc. using bioinks)	\$160	\$210
CO ₂ incubator	Cell culture	\$20	\$70
Fisher Gravity Incubator	Gravity Incubator	\$20	\$70
Fisher Isotemp Incubator	Isotemperature Incubator	\$20	\$70
GESIM nanoplotter	3D printing for cell spotting	\$160	\$210
Microfluidics flow control	Optional flow control for the printer	\$50	\$100
Microfluidics printer	3D printing of microfluidics structures	\$160	\$210
MTI electrospinner	3D printing of nanofibers	\$160	\$210
Nanodrop	DNA, RNA or protein concentration measurement	\$70	\$120
NUAIRE CO2 Incubator	CO2 incubator	\$20	\$70
Optima LE-80 Ultracentrifuge	Ultracentrifuge	\$70	\$120
Polarized Optical Microscope	Optical Microscopy	\$160	\$210
Thermo CO2 incubator-bottom	CO2 incubator	\$20	\$70
Thermo CO2 incubator-top	CO2 incubator	\$20	\$70
Zeiss Axio-Inverted Microscope	Fluorescence Microscopy	\$160	\$210
Zeiss LIVE7 Confocal Microscope	Fluorescence Confocal Microscopy	\$160	\$210

Biomaterial Services Lab			
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
AMTEL-Advanced Materials Testing and Evaluation Laboratory			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Servo-hydraulic 1*	Uniaxial testing	\$200	\$250
Servo-hydraulic 2*	Uniaxial testing	\$200	\$250
Servo-hydraulic 3*	Uniaxial testing	\$200	\$250
Servo-hydraulic 4*	Uniaxial testing	\$200	\$250
Servo-hydraulic 5*	Uniaxial testing	\$200	\$250
Servo-hydraulic 6 (Bi-Axial)*	Bi axial testing (axial and torsion)	\$300	\$350
Electro-Mechanical 1*	Uniaxial testing	\$200	\$250
Electro-Mechanical 2*	Uniaxial testing	\$200	\$250
Electro-Mechanical 3*	Uniaxial testing	\$200	\$250
Thermo-Mechanical 1*	Uniaxial testing with combined thermal loading	\$300	\$350
Thermo-Mechanical 2*	Uniaxial testing with combined thermal loading	\$300	\$350
Thermo-Mechanical 3*	Uniaxial testing with combined thermal loading	\$300	\$350
Thermo-Mechanical 4*	Uniaxial testing with combined thermal loading	\$300	\$350
Thermo-Mechanical 5*	Uniaxial testing with combined thermal loading	\$300	\$350
Split-Hopkinson Bar*	High strain rate material testing	\$275	\$325
Creep Stand*	Temperature dependent creep testing	\$100	\$150
Rotating Bending*	Rotating bending high cycle fatigue testing	\$100	\$150
Dynamic Mechanical Analysis*	Dynamic mechanical analysis	\$200	\$250
High Speed - Thermal Camera*	High speed and/or thermal imaging	\$100	\$150
Strain - Thermal Acquisition Box*	Additional strain, thermocouple, analog input data acquisition	\$100	\$150
3D Digital Image Correlation*	Calibration, acquisition, and/or analysis of 3D surface coordinates	\$100	\$150
Paint Booth	Speckle painting for digital image correlation sample preparation	\$12	\$62
Laser Engraver	Engraving for digital image correlation sample preparation	\$12	\$62
Sand Blasting	Sandblasting for digital image correlation sample preparation	\$12	\$62
Wet-Dry Sander 1	Polishing for digital image correlation sample preparation	\$12	\$62
Wet-Dry Sander 2	Polishing for digital image correlation sample preparation	\$12	\$62
Vibration Polisher	Polishing for high magnification digital image correlation sample prepara	\$12	\$62
Pico Saw	Diamond blade wafer saw for sample preparation	\$24	\$74
Ultrasonic Bath	Ultrasonic bath for sample preparation	\$24	\$74
* Maximum charge of 2 hours per day of usage.			

Battery Fabrication and Characterization Laboratory			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
BatteryLabAccess	Access to 15+ tools for cells/pouch fabrication	\$20	\$70
Calendaring	Hot roller press	\$50	\$100
Electrochem characterization*	Potentiostat, gavanostat, electrochemical impedance	\$70	\$120
Magnetic stirrer	Stirring and mixing solutions	\$0	\$50
Mixer - Thinky	Slurry mixing	\$20	\$70
Slurry coater	Automated coater for metal foils	\$60	\$110
Vacuum Oven - Battery Lab*	Up to 150C heating under vacuum	\$60	\$110
Vigor glovebox	With sealer, die cutter, welding and crimper	\$50	\$100
* Maximum charge of 1 hour per day of usage.			