

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, 2024 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	\$210
Metrohm 915 KF Ti-Touch	Volumetric Karl Fischer Titration	\$130	\$210
Metrohm 917 Coulometer	Coulometric Karl Fischer Titration	\$130	\$210
Nanoparticle tracking NS300	Nanoparticle tracking analysis	\$130	\$210
Novocontrol C47 Analyzer	Dielectric, Conductivity and Impedance Spectrometer	\$130	\$210
Q50-TGA	Thermogravimetric Analysis	\$130	\$210
Q800-DMA	Dynamic Mechanical Analysis	\$130	\$210
Shimadzu DTA-50	Differential Thermal Analysis	\$130	\$210
TA DHR-3 Rheometer	Discovery Hybrid Rheometer	\$130	\$210
TA DSC 2500	Differential Scanning Calorimetry	\$130	\$210
TGA-MS Netzsch TG309-QMS403	Thermogravimetric Analysis with Mass Spectrometry	\$140	\$220
Tosoh EcoSEC GPC	Gel Permeation Chromatography	\$130	\$210
Laser and Spectroscopy Facility			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Agilent CARY 5000	Spectrophotometry	\$160	\$240
Custom Experiment	Custom Laser Experiments	\$160	\$240
Ellipsometer-RC2-JAWoollam	Spectroscopic and Mueller matrix ellipsometry	\$170	\$250
Gaertner Ellipsometer	Ellipsometry	\$160	\$240
Horiba Xplora-Nano TERS-TEPL	Tip Enhanced Raman and PL Spectroscopy	\$160	\$240
Inspire OPO Laser	Time-Domain Thermoreflectance, Custom Laser Experiments	\$160	\$240
LIBS - Keyence EA-300	Laser Induced Breakdown Spectroscopy	\$160	\$220
Keyence VK-X1000	Optical Profiler	\$170	\$250
Montana Cryo Station	Closed He Cycle Optical Cryo Station	\$70	\$150
Nanophoton Raman 11	Raman Spectroscopy/Microscopy	\$160	\$240
Neaspec IR AFM	Tip Enhanced Infrared Spectroscopy	\$160	\$240
Newport Solar Simulator	Custom Experiments	\$160	\$240
Nicolet Nexus 670 FTIR	Fourier Transform Infrared Spectroscopy	\$160	\$240
OL 750 Spectroradiometer	Spectroradiometry	\$160	\$240
Oxford Cryo Station	Closed He Cycle Cryo Station	\$70	\$150
Photoluminescence	Photoluminescence/Fluorescence	\$160	\$240
Quantum Diamond Microscope	N-vacancy magnetometry	\$160	\$240
Rame-Hart Contact Angle	Contact Angle Goniometry	\$160	\$240
SLM-ISS Fluorometer	Photoluminescence/Fluorescence	\$160	\$240
Solar Simulator - Oriel	Solar Simulator illuminator source	\$160	\$240
Thermo-Nicolet Is-50 FTIR	Fourier-Transform IR spectroscopy	\$160	\$240
Time Resolved PL	Photoluminescence/Fluorescence	\$160	\$240
Tsunami Ti-Sapphire Laser	Time-Domain Thermoreflectance	\$160	\$240
Tsunami Ti-Sapphire Laser 2	Time-Domain Thermoreflectance	\$160	\$240
Two Photon Microscopy	Optical Microscopy	\$160	\$240
Varian Cary5G UV-VIS-NIR	Spectrophotometry	\$160	\$240
Witec Alpha NSOM	Near Field Scanning Optical Microscopy	\$160	\$240
Woollam VAS Ellipsometer	Spectroscopic Ellipsometry	\$160	\$240

Micro & Nano-Fabrication Facility			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
ADT 7122 Wafer Dicer	Automated sample dicer	\$160	\$240
AJA Sputter Coater	Sputter Coater	\$160	\$240
AJA Sputter Coater 2	Sputter Coater	\$160	\$240
AJA Sputter Coater 3	Sputter Coater	\$160	\$240
AJA Sputter Coater 4	Sputter Coater	\$160	\$240
Atomic Layer Deposition	Atomic Layer Deposition	\$160	\$240
Atomic Layer Deposition 2	Atomic Layer Deposition	\$160	\$240
Ball Bonder	Ball Bonder	\$160	\$240
Cleanroom	Cleanroom	\$160	\$240
CM Furnace	Furnace	\$70	\$150
Desert Cryo Probe Station	Probe Station	\$160	\$240
E-beam Evaporator 1	Electron Beam Evaporation	\$160	\$240
E-beam Evaporator 2	Electron Beam Evaporation	\$160	\$240
E-beam Evaporator 4	Electron Beam Evaporation	\$160	\$240
Graphene Furnace	Furnace for the growth of carbon nanotubes and graphene layers	\$70	\$150
Harrick Plasma Cleaner	Plasma Cleaner	\$160	\$240
Heidelberg Maskless Writer	Maskless wafer aligner	\$165	\$245
Hydrogen Vacuum Furnace	Furnace	\$70	\$150
Ion Mill Evaporator	Ion Mill & Thermal Evaporator	\$160	\$240
Jandel 4 Point Probe	Four point probe	\$160	\$240
Lapping polishing bonding PM6	Precision Lapping and Polishing with Wafer Bonding	\$164	\$244
Lindberg 3 Zone Furnace-2 inch	Furnace	\$70	\$150
March RIE2	Reactive Ion Etcher for polymer samples	\$160	\$240
Mitutoyo Microscope	Optical Microscope	\$160	\$240
MTI Furnace - 2 inch	Furnace	\$70	\$150
Nanomaster RIE	Reactive Ion Etcher for polymer samples	\$160	\$240
Nanoscribe 3D Printer	Laser lithography 3D printer	\$165	\$245
Olympus Microscope	Optical Microscope	\$160	\$240
Oven-Vacuum	Oven	\$70	\$150
Parylene Coater	Parylene Deposition - SCS Labcoater 2	\$160	\$240
PECVD 2	Plasma Enhanced Chemical Vapor Deposition	\$160	\$240
Probe Station	Probe Station	\$160	\$240
Raith EBPG5150	Electron Beam Lithography	\$200	\$280
Raith e-Line	Electron Beam Lithography	\$160	\$240
RaithPrep	Cleanroom	\$160	\$240
Reactor Vacuum Furnace	Furnace	\$70	\$150
RIE - Plasma-Therm	Reactive Ion Etcher	\$160	\$240
RIE - SAMCO 10NR	Reactive Ion Etcher	\$160	\$240
RTA Furnace	Furnace	\$160	\$240
RTA Furnace-MTI 1200X-4-RTP	Furnace	\$160	\$240
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	\$240
Tube Furnace - 6 inch	Furnace	\$70	\$150
UV-Ozone Cleaner	UV-Ozone substrate cleaning tool	\$0	\$80
Wedge Bonder	Wedge Bonder	\$160	\$240
Westbond Bonder	Wire Bonder	\$160	\$240
** 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	\$210
Asylum AFM 2	Atomic Force Microscopy	\$130	\$210
Asylum Cypher AFM	Atomic Force Microscopy/High Resolution	\$130	\$210
Asylum MFP-3D-Bio AFM	Atomic Force Microscopy for biological materials	\$130	\$210
Dektak 3030	Surface Profilometry	\$130	\$210
Hysitron Tip	Nanoindentation	\$70	\$150
Hysitron TriboIndenter	Nanoindentation	\$130	\$210
Leitz Microhardness	Microhardness tester	\$70	\$150
Molecular Vista PiFM-Raman	Photo-induced Force Microscopy	\$160	\$240
Piuma Nanoindenter	Nanoindentation	\$130	\$210
SPM Offline Analysis	SPM Offline Analysis	\$2	\$82
Microscopy-Scanning Electron			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
HELIOS 600i FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$250
Hitachi S4800 SEM	Scanning Electron Microscopy/High Resolution	\$170	\$250
JEOL 6060LV SEM	Scanning Electron Microscopy/Low Vacuum	\$140	\$220
JEOL 7000F SEM	Scanning Electron Microscopy/Analytical SEM	\$170	\$250
Scios 2 FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$250
Thermo Axia ChemSEM	Scanning Electron Microscopy/Low Vacuum	\$160	\$240
Microscopy-Transmission Electron			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Hitachi 9500	Transmission Electron Microscopy	\$170	\$250
JEOL 1400 TEM	Transmission Electron Microscopy	\$170	\$250
JEOL 2010 LaB6	Transmission Electron Microscopy	\$165	\$245
JEOL 2100 Cryo TEM	Transmission Electron Microscopy	\$165	\$245
Thermo Talos F200X TEM-STEM	Transmission Electron Microscopy	\$200	\$280
Thermo Themis Z TEM-STEM	(Scanning) Transmission Electron Microscopy/Analytical	\$200	\$280
ThermoFisher Glacios Cryo-TEM	Cryo-TEM for SPA, tomography and micro-ED	\$200	\$280
Support Equipment			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Allied Multiprep	TEM sample preparation	\$70	\$150
Carbon Rod Coater	SEM Carbon Coater	\$70	\$150
Carbon String Coater	SEM Carbon Coater	\$70	\$150
FEI Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$150
FEI Mark IV Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$150
Gatan CryoPIPS	Cryo-Ion Miller for TEM sample preparation	\$70	\$150
Gatan PECS II	Ion Miller for SEM sample preparation	\$70	\$150
Leica EM UC6 Microtome	Microtome for TEM sample preparation	\$70	\$150
PicoIndenter	Nanoindentation	\$165	\$245
Princeton WS-25 Wire Saw	Wire Saw - High Precision	\$70	\$150
SEM Sputter Coater 1	SEM Sputter Coater	\$70	\$150
SEM Sputter Coater 2	SEM Sputter Coater	\$70	\$150
Tergeo EM Plasma Cleaner	Plasma Cleaner for TEM sample preparation	\$70	\$150
Vibratory Polisher 1	Vibratory Polisher	\$70	\$150
Vibratory Polisher 2	Vibratory Polisher	\$70	\$150

Physical Property Measurement			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
QD MPMS3 SQUID	Magnetic Property Measurement System	\$70	\$150
QD MPMS3 SQUID B	Magnetic Property Measurement System	\$70	\$150
QD Opticool	Optical Cryostat	\$70	\$120
QD PPMS	Physical Property Measurement System	\$71	\$151
QD PPMS B	Physical Property Measurement System	\$71	\$151
Surface Analysis			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Cameca LEAP 5000XS APT	Local Electrode Atom Probe Tomography	\$200	\$280
Kratos Supra XPS	X-Ray Photoelectron Spectroscopy / Imaging and Depth Profiling	\$170	\$250
NEC Pelletron	Ion Accelerator/Rutherford Backscattering Spectroscopy	\$160	\$240
PEI Trift-III TOF-SIMS	Secondary Ion Mass Spectroscopy/Time-of-Flight	\$160	\$240
X-ray Analysis			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Bruker D8 Advance	X-ray diffraction with high-temperature stage	\$160	\$240
Dexco Laue	X-ray Diffraction/Laue	\$160	\$240
PANalytical XPert	High-resolution X-ray diffraction and reflectometry	\$160	\$240
SAXS	X-Ray scattering: SAXS, WAXS, GI-SAXS and GI-WAXS	\$160	\$240
Shimadzu EDXRF	X-Ray Fluorescence	\$160	\$240
Siemens-Bruker D5000 XRD	X-Ray Diffraction/Powder	\$160	\$240
XRF-WDXRF Rigaku Supermini200	Wavelength-dispersive x-ray fluorescence spectroscopy	\$160	\$240
MRL Carver BioMaker Lab			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Autoclave	Sterilization	\$50	\$130
Biosafety Cabinet-Room 0014	Biosafety Cabinet	\$0	\$80
Biosafety Cabinet-Room 0015	Biosafety Cabinet	\$0	\$80
CarverBioMakerLab	Lab suite access for sample prep and imaging	\$20	\$100
Cellink BioX 3D bioplotter	3D printing (tissue, cell, etc. using bioinks)	\$160	\$240
Fisher Gravity Incubator	Gravity Incubator	\$0	\$80
Fisher Isotemp Incubator	Isotemperature Incubator	\$0	\$80
GESIM nanoplotter	3D printing for cell spotting	\$160	\$240
Microfluidics flow control	Optional flow control for the printer	\$50	\$130
Microfluidics printer	3D printing of microfluidics structures	\$160	\$240
MTI electrospinner	3D printing of nanofibers	\$160	\$240
Nanodrop	DNA, RNA or protein concentration measurement	\$70	\$150
Optima LE-80 Ultracentrifuge	Ultracentrifuge	\$70	\$150
Polarized Optical Microscope	Optical Microscopy	\$160	\$240
Thermo CO2 incubator-bottom*	CO2 incubator	\$20	\$100
Thermo CO2 incubator-top*	CO2 incubator	\$20	\$100
Zeiss Axio-Inverted Microscope	Fluorescence Microscopy	\$160	\$240
Zeiss LIVE7 Confocal Microscope	Fluorescence Confocal Microscopy	\$160	\$240
*Maximum charge of 2 hours per day of usage.			

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	\$150
AMTEL-Advanced Materials Testing and Evaluation Laboratory			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Servo-hydraulic 1*	Uniaxial testing	\$200	\$280
Servo-hydraulic 2*	Uniaxial testing	\$200	\$280
Servo-hydraulic 3*	Uniaxial testing	\$200	\$280
Servo-hydraulic 4*	Uniaxial testing	\$200	\$280
Servo-hydraulic 5*	Uniaxial testing	\$200	\$280
Servo-hydraulic 6-Bi-Axial*	Bi axial testing (axial and torsion)	\$300	\$380
Electro-Mechanical 1*	Uniaxial testing	\$200	\$280
Electro-Mechanical 2*	Uniaxial testing	\$200	\$280
Electro-Mechanical 3*	Uniaxial testing	\$200	\$280
Thermo-Mechanical 1*	Uniaxial testing with combined thermal loading	\$300	\$380
Thermo-Mechanical 2*	Uniaxial testing with combined thermal loading	\$300	\$380
Thermo-Mechanical 3*	Uniaxial testing with combined thermal loading	\$300	\$380
Thermo-Mechanical 4*	Uniaxial testing with combined thermal loading	\$300	\$380
Thermo-Mechanical 5*	Uniaxial testing with combined thermal loading	\$300	\$380
Split-Hopkinson Bar*	High strain rate material testing	\$275	\$355
Creep Stand*	Temperature dependent creep testing	\$100	\$180
Rotating Bending*	Rotating bending high cycle fatigue testing	\$100	\$180
Dynamic Mechanical Analysis*	Dynamic mechanical analysis	\$200	\$280
High Speed - Thermal Camera*	High speed and/or thermal imaging	\$100	\$180
Strain - Thermal Acquisition Box*	Additional strain, thermocouple, analog input data acquisition	\$100	\$180
3D Digital Image Correlation*	Calibration, acquisition, and/or analysis of 3D surface coordinates	\$100	\$180
100lbf Electrodynamic Shaker*	Electrodynamic Shaker	\$200	\$280
Laser vibrometer*	Non-contact vibration measurements of a surface	\$100	\$180
Paint Booth	Speckle painting for digital image correlation sample preparation	\$12	\$92
Laser Engraver	Engraving for digital image correlation sample preparation	\$12	\$92
Sand Blasting	Sandblasting for digital image correlation sample preparation	\$12	\$92
Wet-Dry Sander 1	Polishing for digital image correlation sample preparation	\$12	\$92
Wet-Dry Sander 2	Polishing for digital image correlation sample preparation	\$12	\$92
Vibration Polisher	Polishing for high magnification digital image correlation sample preparation	\$12	\$92
Pico Saw	Diamond blade wafer saw for sample preparation	\$24	\$104
Ultrasonic Bath	Ultrasonic bath for sample preparation	\$24	\$104
* 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	\$100
Calendaring	Hot roller press	\$50	\$130
Coin cell fabrication	Li-ion batteries coin cell fabrication in glovebox	\$50	\$130
Electrochem characterization*	Potentiostat, gavanostat, electrochemical impedance	\$70	\$150
Magnetic stirrer	Stirring and mixing solutions	\$20	\$100
Mixer - Thinky	Slurry mixing	\$20	\$100
Pouch cell fabrication	Li-ion batteries pouch cell fabrication in glovebox	\$50	\$130
Slurry coater	Automated coater for metal foils	\$60	\$140
Vacuum Oven - Battery Lab*	Up to 150C heating under vacuum	\$60	\$140
Vigor glovebox	With sealer, die cutter, welding and crimper	\$60	\$140
* Maximum charge of 1 hour per day of usage.			