

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	\$190
Metrohm 915 KF Ti-Touch	Volumetric Karl Fischer Titration	\$130	\$190
Metrohm 917 Coulometer	Coulometric Karl Fischer Titration	\$130	\$190
Nanoparticle tracking NS300	Nanoparticle tracking analysis	\$130	\$190
Novocontrol C47 Analyzer	Dielectric, Conductivity and Impedance Spectrometer	\$130	\$190
Q50-TGA	Thermogravimetric Analysis	\$130	\$190
Q800-DMA	Dynamic Mechanical Analysis	\$130	\$190
Shimadzu DTA-50	Differential Thermal Analysis	\$130	\$190
TA DHR-3 Rheometer	Discovery Hybrid Rheometer	\$130	\$190
TA DSC 2500	Differential Scanning Calorimetry	\$130	\$190
Tosoh EcoSEC GPC	Gel Permeation Chromatography	\$130	\$190
Laser and Spectroscopy Facility			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Agilent CARY 5000	Spectrophotometry	\$160	\$220
Custom Experiment	Custom Laser Experiments	\$160	\$220
Gaertner Ellipsometer	Ellipsometry	\$160	\$220
Horiba Xplora-Nano TERS-TEPL	Tip Enhanced Raman and PL Spectroscopy	\$160	\$220
Inspire OPO Laser	Time-Domain Thermoreflectance, Custom Laser Experiments	\$160	\$220
Keyence VK-X1000	Optical Profiler	\$170	\$230
Montana Cryo Station	Closed He Cycle Optical Cryo Station	\$70	\$130
Nanophoton Raman 11	Raman Spectroscopy/Microscopy	\$160	\$220
Neaspec IR AFM	Tip Enhanced Infrared Spectroscopy	\$160	\$220
Newport Solar Simulator	Custom Experiments	\$160	\$220
Nicolet Nexus 670 FTIR	Fourier Transform Infrared Spectroscopy	\$160	\$220
OL 750 Spectroradiometer	Spectroradiometry	\$160	\$220
Oxford Cryo Station	Closed He Cycle Cryo Station	\$70	\$130
Photoluminescence	Photoluminescence/Fluorescence	\$160	\$220
Quantum Diamond Microscope	N-vacancy magnetometry	\$160	\$220
Rame-Hart Contact Angle	Contact Angle Goniometry	\$160	\$220
SLM-ISS Fluorometer	Photoluminescence/Fluorescence	\$160	\$220
Thermo-Nicolet Is-50 FTIR	Fourier-Transform IR spectroscopy	\$160	\$220
Time Resolved PL	Photoluminescence/Fluorescence	\$160	\$220
Tsunami Ti-Sapphire Laser	Time-Domain Thermoreflectance	\$160	\$220
Tsunami Ti-Sapphire Laser 2	Time-Domain Thermoreflectance	\$160	\$220
Two Photon Microscopy	Optical Microscopy	\$160	\$220
Varian Cary5G UV-VIS-NIR	Spectrophotometry	\$160	\$220
Witec Alpha NSOM	Near Field Scanning Optical Microscopy	\$160	\$220
Woollam VAS Ellipsometer	Spectroscopic Ellipsometry	\$160	\$220

Micro & Nano-Fabrication Facility			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
ADT 7122 Wafer Dicer	Automated sample dicer	\$160	\$220
AJA Sputter Coater	Sputter Coater	\$160	\$220
AJA Sputter Coater 2	Sputter Coater	\$160	\$220
AJA Sputter Coater 3	Sputter Coater	\$160	\$220
AJA Sputter Coater 4	Sputter Coater	\$160	\$220
Atomic Layer Deposition	Atomic Layer Deposition	\$160	\$220
Atomic Layer Deposition 2	Atomic Layer Deposition	\$160	\$220
Ball Bonder	Ball Bonder	\$160	\$220
Cleanroom	Cleanroom	\$160	\$220
CM Furnace	Furnace	\$70	\$130
Desert Cryo Probe Station	Probe Station	\$160	\$220
E-beam Evaporator 1	Electron Beam Evaporation	\$160	\$220
E-beam Evaporator 2	Electron Beam Evaporation	\$160	\$220
E-beam Evaporator 4	Electron Beam Evaporation	\$160	\$220
Graphene Furnace	Furnace for the growth of carbon nanotubes and graphene layers	\$70	\$130
Harrick Plasma Cleaner	Plasma Cleaner	\$160	\$220
Heidelberg Maskless Writer	Maskless wafer aligner	\$165	\$225
Hydrogen Vacuum Furnace	Furnace	\$70	\$130
Ion Mill Evaporator	Ion Mill & Thermal Evaporator	\$160	\$220
Jandel 4 Point Probe	Four point probe	\$160	\$220
Lindberg 3 Zone Furnace-2 inch	Furnace	\$70	\$130
March RIE2	Reactive Ion Etcher for polymer samples	\$160	\$220
Mitutoyo Microscope	Optical Microscope	\$160	\$220
MTI Furnace - 2 inch	Furnace	\$70	\$130
Nanomaster RIE	Reactive Ion Etcher for polymer samples	\$160	\$220
Nanoscribe 3D Printer	Laser lithography 3D printer	\$165	\$225
Olympus Microscope	Optical Microscope	\$160	\$220
Oven-Vacuum	Oven	\$70	\$130
Parylene Coater	Parylene Deposition - SCS Labcoater 2	\$160	\$220
PECVD 2	Plasma Enhanced Chemical Vapor Deposition	\$160	\$220
Probe Station	Probe Station	\$160	\$220
Raith EBPG5150	Electron Beam Lithography	\$200	\$260
Raith e-Line	Electron Beam Lithography	\$160	\$220
RaithPrep	Cleanroom	\$160	\$220
Reactor Vacuum Furnace	Furnace	\$70	\$130
RIE - Plasma-Therm	Reactive Ion Etcher	\$160	\$220
RIE - SAMCO 10NR	Reactive Ion Etcher	\$160	\$220
RTA Furnace	Furnace	\$160	\$220
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	\$220
Tube Furnace - 6 inch	Furnace	\$70	\$130
Wedge Bonder	Wedge Bonder	\$160	\$220
Westbond Bonder	Wire Bonder	\$160	\$220
** 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	\$190
Asylum AFM 2	Atomic Force Microscopy	\$130	\$190
Asylum Cypher AFM	Atomic Force Microscopy/High Resolution	\$130	\$190
Asylum MFP-3D-Bio AFM	Atomic Force Microscopy for biological materials	\$130	\$190
Dektak 3030	Surface Profilometry	\$130	\$190
Hysitron Tip	Nanoindentation	\$70	\$130
Hysitron TriboIndenter	Nanoindentation	\$130	\$190
Leitz Microhardness	Microhardness tester	\$70	\$130
Molecular Vista PiFM-Raman	Photo-induced Force Microscopy	\$160	\$220
Piuma Nanoindenter	Nanoindentation	\$130	\$190
Microscopy-Scanning Electron			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
HELIOS 600i FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$230
Hitachi S4800 SEM	Scanning Electron Microscopy/High Resolution	\$170	\$230
JEOL 6060LV SEM	Scanning Electron Microscopy/Low Vacuum	\$140	\$200
JEOL 7000F SEM	Scanning Electron Microscopy/Analytical SEM	\$170	\$230
Scios 2 FIB	Scanning Electron/Focused Ion Beam Microscopy	\$170	\$230
Thermo Axia ChemSEM	Scanning Electron Microscopy/Low Vacuum	\$160	\$220
Microscopy-Transmission Electron			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Hitachi 9500	Transmission Electron Microscopy	\$170	\$230
JEOL 1400 TEM	Transmission Electron Microscopy	\$170	\$230
JEOL 2010 LaB6	Transmission Electron Microscopy	\$165	\$225
JEOL 2100 Cryo TEM	Transmission Electron Microscopy	\$165	\$225
Thermo Talos F200X TEM-STEM	Transmission Electron Microscopy	\$200	\$260
Thermo Themis Z TEM-STEM	(Scanning) Transmission Electron Microscopy/Analytical	\$200	\$260
ThermoFisher Glacios Cryo-TEM	Cryo-TEM for SPA, tomography and micro-ED	\$200	\$260
Support Equipment			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Allied Multiprep	TEM sample preparation	\$70	\$130
Carbon Rod Coater	SEM Carbon Coater	\$70	\$130
Carbon String Coater	SEM Carbon Coater	\$70	\$130
FEI Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$130
FEI Mark IV Vitrobot	Cryo-plunge for TEM sample preparation	\$70	\$130
Gatan CryoPIPS	Cryo-Ion Miller for TEM sample preparation	\$70	\$130
Gatan PECS II	Ion Miller for SEM sample preparation	\$70	\$130
Leica EM UC6 Microtome	Microtome for TEM sample preparation	\$70	\$130
PicoIndenter	Nanoindentation	\$165	\$225
Princeton WS-25 Wire Saw	Wire Saw - High Precision	\$70	\$130
SEM Sputter Coater 1	SEM Sputter Coater	\$70	\$130
SEM Sputter Coater 2	SEM Sputter Coater	\$70	\$130
Tergeo EM Plasma Cleaner	Plasma Cleaner for TEM sample preparation	\$70	\$130
Vibratory Polisher 1	Vibratory Polisher	\$70	\$130
Vibratory Polisher 2	Vibratory Polisher	\$70	\$130

Physical Property Measurement			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
QD MPMS3 SQUID	Magnetic Property Measurement System	\$70	\$130
QD MPMS3 SQUID B	Magnetic Property Measurement System	\$70	\$130
QD Opticool	Optical Cryostat	\$70	\$120
QD PPMS	Physical Property Measurement System	\$71	\$131
QD PPMS B	Physical Property Measurement System	\$71	\$131
Surface Analysis			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Cameca LEAP 5000XS APT	Local Electrode Atom Probe Tomography	\$200	\$260
KRATOS AXIS XPS	X-Ray Photoelectron Spectroscopy/Imaging XPS	\$160	\$220
Kratos Supra XPS	X-Ray Photoelectron Spectroscopy / Imaging and Depth Profiling	\$170	\$230
NEC Pelletron	Ion Accelerator/Rutherford Backscattering Spectroscopy	\$160	\$220
PEI Trift-III TOF-SIMS	Secondary Ion Mass Spectroscopy/Time-of-Flight	\$160	\$220
X-ray Analysis			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Bruker D8 Advance	X-ray diffraction with high-temperature stage	\$160	\$220
Dexco Laue	X-ray Diffraction/Laue	\$160	\$220
PANalytical XPert	High-resolution X-ray diffraction and reflectometry	\$160	\$220
SAXS	X-Ray scattering: SAXS, WAXS, GI-SAXS and GI-WAXS	\$160	\$220
Shimadzu EDXRF	X-Ray Fluorescence	\$160	\$220
Siemens-Bruker D5000 XRD	X-Ray Diffraction/Powder	\$160	\$220
MRL Carver BioMaker Lab			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Autoclave	Sterilization	\$50	\$110
Biosafety Cabinet-Room 0014	Biosafety Cabinet	\$0	\$60
Biosafety Cabinet-Room 0015	Biosafety Cabinet	\$0	\$60
CarverBioMakerLab	Lab suite access for sample prep and imaging	\$20	\$80
Cellink BioX 3D bioplotter	3D printing (tissue, cell, etc. using bioinks)	\$160	\$220
CO ₂ incubator	Cell culture	\$20	\$80
Fisher Gravity Incubator	Gravity Incubator	\$20	\$70
Fisher Isotemp Incubator	Isotemperature Incubator	\$20	\$70
GESIM nanoplotter	3D printing for cell spotting	\$160	\$220
Microfluidics flow control	Optional flow control for the printer	\$50	\$110
Microfluidics printer	3D printing of microfluidics structures	\$160	\$220
MTI electrospinner	3D printing of nanofibers	\$160	\$220
Nanodrop	DNA, RNA or protein concentration measurement	\$70	\$130
NUAIRE CO2 Incubator	CO2 incubator	\$20	\$80
Optima LE-80 Ultracentrifuge	Ultracentrifuge	\$70	\$130
Polarized Optical Microscope	Optical Microscopy	\$160	\$220
Thermo CO2 incubator-bottom	CO2 incubator	\$20	\$80
Thermo CO2 incubator-top	CO2 incubator	\$20	\$80
Zeiss Axio-Inverted Microscope	Fluorescence Microscopy	\$160	\$220
Zeiss LIVE7 Confocal Microscope	Fluorescence Confocal Microscopy	\$160	\$220

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	\$130
AMTEL-Advanced Materials Testing and Evaluation Laboratory			
Instrument	Technique	Self Use (\$/hr)	Staff Assisted & Training (\$/hr)
Servo-hydraulic 1*	Uniaxial testing	\$200	\$260
Servo-hydraulic 2*	Uniaxial testing	\$200	\$260
Servo-hydraulic 3*	Uniaxial testing	\$200	\$260
Servo-hydraulic 4*	Uniaxial testing	\$200	\$260
Servo-hydraulic 5*	Uniaxial testing	\$200	\$260
Servo-hydraulic 6-Bi-Axial*	Bi axial testing (axial and torsion)	\$300	\$360
Electro-Mechanical 1*	Uniaxial testing	\$200	\$260
Electro-Mechanical 2*	Uniaxial testing	\$200	\$260
Electro-Mechanical 3*	Uniaxial testing	\$200	\$260
Thermo-Mechanical 1*	Uniaxial testing with combined thermal loading	\$300	\$360
Thermo-Mechanical 2*	Uniaxial testing with combined thermal loading	\$300	\$360
Thermo-Mechanical 3*	Uniaxial testing with combined thermal loading	\$300	\$360
Thermo-Mechanical 4*	Uniaxial testing with combined thermal loading	\$300	\$360
Thermo-Mechanical 5*	Uniaxial testing with combined thermal loading	\$300	\$360
Split-Hopkinson Bar*	High strain rate material testing	\$275	\$335
Creep Stand*	Temperature dependent creep testing	\$100	\$160
Rotating Bending*	Rotating bending high cycle fatigue testing	\$100	\$160
Dynamic Mechanical Analysis*	Dynamic mechanical analysis	\$200	\$260
High Speed - Thermal Camera*	High speed and/or thermal imaging	\$100	\$160
Strain - Thermal Acquisition Box*	Additional strain, thermocouple, analog input data acquisition	\$100	\$160
3D Digital Image Correlation*	Calibration, acquisition, and/or analysis of 3D surface coordinates	\$100	\$160
100lbf Electrodynamical Shaker*	Electrodynamical Shaker	\$200	\$260
Laser vibrometer*	Non-contact vibration measurements of a surface	\$100	\$160
Paint Booth	Speckle painting for digital image correlation sample preparation	\$12	\$72
Laser Engraver	Engraving for digital image correlation sample preparation	\$12	\$72
Sand Blasting	Sandblasting for digital image correlation sample preparation	\$12	\$72
Wet-Dry Sander 1	Polishing for digital image correlation sample preparation	\$12	\$72
Wet-Dry Sander 2	Polishing for digital image correlation sample preparation	\$12	\$72
Vibration Polisher	Polishing for high magnification digital image correlation sample preparation	\$12	\$72
Pico Saw	Diamond blade wafer saw for sample preparation	\$24	\$84
Ultrasonic Bath	Ultrasonic bath for sample preparation	\$24	\$84
* 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	\$80
Calendaring	Hot roller press	\$50	\$110
Coin cell fabrication	Li-ion batteries coin cell fabrication in glovebox	\$50	\$110
Electrochem characterization*	Potentiostat, gavanostat, electrochemical impedance	\$70	\$130
Magnetic stirrer	Stirring and mixing solutions	\$20	\$80
Mixer - Thinky	Slurry mixing	\$20	\$80
Pouch cell fabrication	Li-ion batteries pouch cell fabrication in glovebox	\$50	\$110
Slurry coater	Automated coater for metal foils	\$60	\$120
Vacuum Oven - Battery Lab*	Up to 150C heating under vacuum	\$60	\$120
Vigor glovebox	With sealer, die cutter, welding and crimper	\$60	\$120
* Maximum charge of 1 hour per day of usage.			