CCMR Shared Facility Rates - Industry Use
(Updated February 2022)

Some rates consist of a fixed charge plus an hourly rate or a minimum charge.

Manager Labor Rate (assisted use rate charged in addition to instrument rates below)

Industry rate

$165.00 /hr

Electron Microscopy

Arctica-S/TEM
Thermo Kraken S/TEM
Cryo-S/TEM
FEI F20 TEM STEM
NION UltraSTEM 100
FEI Strata 400 STEM FIB
Thermo-Helios-G4-UX-FIB
FEI Tecnai 12 BioTwin TEM
Zeiss Gemini 500 SEM
LEO 1550 FESEM (Keck SEM)
Tescan-Mira3-FESEM

$240.00 /hr

$490.00 /hr

$490.00 /hr

$490.00 /hr

$490.00 /hr

$327.50 /hr

$490.00 /hr

$490.00 /hr

$490.00 /hr

$327.50 /hr

$327.50 /hr

TEM Sample Preparation:

Allied Multiprep Polishers
Allied TechCut5 Precision High Speed Saw
Leica Cryo- & Ultra- microtomes
Vibratory Polisher

$100.00 /hr

$135.00 /hr

$135.00 /hr

$135.00 /hr

Microscopy, Spectroscopy, Surface Analysis

Scienta Omicron ESCA 2SR XPS System
Surface-Science-Instruments-SSX-100-XPS-System
Keyence VK-X260 3D Laser Scanning Confocal Microscope
Asylum-MFP3D-Bio-AFM-SPM
Tencor Alpha Step 500 Stylus Profilometer
WITec-Alpha300R-Confocal-Raman-Microscope
Renishaw InVia Confocal Raman Microscope
3i-Marianias-Spinning-Disk-Confocal-Microscope
Bruker Hyperion FT-IR Spectrometer & Microscope
Bruker Vertex Vacuum FT-IR
Cary 5000 UV Vis NIR Spectrometer
Edinburgh FLS1000 Fluorescence and Lifetime Spectrometer

$60 +

$240.00 /hr

$140.00 /hr

$166.50 /hr

$166.50 /hr

$83.25 /hr

$192.00 /hr

$166.50 /hr

$94.00 /hr

$166.50 /hr

$166.50 /hr

$166.50 /hr

$141.50 /hr

$141.50 /hr
**JASCO 1500 CD Spectrometer**  
$141.50 /hr

**Novocontrol Broadband Dielectric Spectrometer**  
$23.50 +  
$141.50 /hr

**Novocontrol Thermal Stimulated Depolarization Current (TSDC)**  
$23.50 +  
$141.50 /hr

**Soft Matter/Polymer Analysis**

- **TA Instruments DHR3 Single Head Rheometer**  
  $130.50 /hr

- **Thermo Fisher Capillary Breakup Extensional Rheometer (CaBER)**  
  $130.50 /hr

- **Bruker Autoflex Max MALDI**  
  $300 +  
  $300.00 /hr

- **JAI-LC9110NEXT-Recycling-Preparative-GPC**  
  $52 +  
  $168.50 /hr

- **Waters Ambient-Temperature GPC**  
  $87.50 /hr

- **Waters Ambient-Temperature Aqueous GPC**  
  $87.50 /hr

- **Waters Breeze DMSO-GPC**  
  $87.50 /hr

- **TA Instruments Q500 Thermogravimetric Analyzer (TGA)**  
  $87.50 /hr

- **TA Instruments Q1000 Modulated Differential Scanning Calorimeter (MDSC)**  
  $87.50 /hr

**X-Ray and Diffraction Analysis**

- **Rigaku SmartLab X-Ray Diffractometer**  
  $135.00 /hr

- **Bruker D8 General Area Detector Diffraction System (GADDS)**  
  $27 +  
  $165.00 /hr

- **Bruker D8 Powder Diffractometer**  
  $165.00 /hr

- **Multiwire Back-Reflection Laue Detector**  
  $190.00 /hr

**Mechanical Properties Testing and Analysis**

- **TA Instruments DMA Q800 Dynamic Mechanical Thermal Analysis (DMTA)**  
  $31.20 +  
  $119.50 /hr

- **TA Instruments Q400EM Thermomechanical Analysis (TMA)**  
  $90.50 /hr

- **Micro Hardness Tester**  
  $15.50 +  
  $16.50 /hr

- **Micromechanical Analyzer**  
  $56.25 /hr

- **Linkham Microscope Tensile Stage**  
  $64.50 /hr

- **ATM Sonic sifter**  
  $28.00 /hr

**Thin Film Deposition, and Material Processing**

- **Varian Thermal Bell Jar Evaporator Clark Hall**  
  $182.00 /use

- **Sputter Deposition**  
  $239.00 /use

- **KJL Magnetron Sputtering Tool**  
  $340.00 /sample

- **Neocera EX200 Pulsed Laser Deposition System**  
  $120 +  
  $25.00 /hr
KSV-NIMA-KN4010 Dip Coater $21 + $45.00/hr
KSV-NIMA-KN2002 Langmuir Blodgett Trough $42 + $45.00/hr
Laurell WS-400A Spin Coater $31.50 + $45.00/hr

**Heat Treating**
All furnaces/oven in Clark and Bard: Vacuum tube furnace, ovens, air furnaces, controlled atmosphere furnaces, etc. $13 + $6.00/hr

**Electronic & Magnetic Measurements**
- Quantum Design Physical Property Measurement Systems (PPMS) $74 + $37.50/hr
- Quantum Design MPMS3 SQUID Magnetometer $74 + $47.00/hr
- Lakeshore Tabletop Magnetic-Cryogenic Probe System $33.50/hr
- Cascade CPS-06 Four Point Probe $19 + $33.50/hr

**Sample Preparation, Cutting, Polishing, etc.**

**Sample Prep**
- Enerpac Hydraulic Press $28.00/hr
- Buehler Simplemet II mounting press $20 + $28.00/hr
- Inert Gas Glove Box $47.00/use
- Fritsch-Planetary-Mill $44.00/use
- Ball Mill $16.50/hr
- Spex 8000 MIXER /MILL $44.75/hr
- Garlock GEM-T Jet mill $28.00/hr

**Cutting/Cleaning/Polishing**
- MicroMech Wafering Machine $31.25 + $56.00/hr
- Allied TechCut5 Precision High Speed Saw $135.00/hr
- Glass Bead Abrasive Unit (sand blasting)-Clark $45.00/hr
- SS White Sand Blasting Unit $31.20 + $44.75/hr
- Buehler SiC Grinding Papers-Bard $56.00/hr
- Struers Rotopol $67.50/hr
- Branson Ultrasonic Bath (large) $23 $22.50/hr
### Welding/Bonding

- **WestBond-747630E Wire Bonder**  
  $15.50 + $32.75/hr
- **TPT HB05 Manual Wire Bonder**  
  $15.50 + $32.75/hr
- **Portable Spot Welder Hughes HRW250B (Clark Hall)**  
  $23.50 /use

### Test Equipment Lending Library

(Visit the library in D21 Clark Hall to see all instruments, rates, or to consult with staff)

<table>
<thead>
<tr>
<th>Instrument Description</th>
<th>Rate</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>8000, 8003 Helium Leak Detectors</td>
<td>$16 +</td>
<td>$4.10/hr</td>
</tr>
<tr>
<td>8001-8002 - Portable RGA Pump Stations (Extorr or SRS)</td>
<td>$21 +</td>
<td>$1.65/hr</td>
</tr>
<tr>
<td>8010-8013 - Portable Turbo Pump Stations</td>
<td>$6 +</td>
<td>$0.45/hr</td>
</tr>
<tr>
<td>8020-8024 - Rough Pumps (Clark Hall)</td>
<td>$6 +</td>
<td>$0.45/hr</td>
</tr>
<tr>
<td>9000 - Stanford Research SR844 RF Lock-in Amplifier</td>
<td>$6 +</td>
<td>$0.56/hr</td>
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<tr>
<td>9001-9009, 9017 - Signal Recovery 7265 Lock-in Amplifiers</td>
<td>$6 +</td>
<td>$0.29/hr</td>
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<tr>
<td>9015 - Zurich Instruments 50MHz HF2Li Lock-in Amplifier</td>
<td>$6 +</td>
<td>$1.34/hr</td>
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<tr>
<td>9016 - Stanford Research SR844 RF Lock-in Amplifier</td>
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<tr>
<td>9018 - Signal Recovery 7270 Dual Lock-in Amplifier</td>
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<td>$0.41/hr</td>
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<tr>
<td>9023-9025 - Signal Recovery 5113 Preamplifiers</td>
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<td>$0.15/hr</td>
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<tr>
<td>9026-9030 - Stanford Research SR560 Low Noise Amplifiers</td>
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<tr>
<td>9040-9045 - Agilent E3630A Triple Output Power Supplies</td>
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<tr>
<td>9048-9052 - Extech DC and BK Precision AC Power Supplies</td>
<td>$6 +</td>
<td>$0.02/hr</td>
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<tr>
<td>9060-9065 - Yokogawa 7651 DC Programmable Power Sources</td>
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<tr>
<td>9070 - Agilent 33250A 80MHz Function/Arbitrary Waveform Generator</td>
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<tr>
<td>9071 - Tektronix AWG520 Arbitrary Waveform Generator</td>
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<tr>
<td>9072-9076 - HP 3325A Function Generators</td>
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<tr>
<td>9078 - Agilent 33521A Arbitrary Waveform Generator</td>
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<tr>
<td>9079 - Agilent 33250A-80MHz Arbitrary Waveform Generator</td>
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<tr>
<td>9080-9084 - Agilent E8257 PSG Analog Signal Generators</td>
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<tr>
<td>9085 - HP 8657B 2GHz Signal Generator</td>
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<td>9086 - HP MG3692C 20GHz Signal Generator</td>
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<tr>
<td>9091-9092 - Picosecond 10070A Pulse Generators</td>
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<tr>
<td>9101-9104 - Tektronix TDS2024 Four Channel Digital Oscilloscopes</td>
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<tr>
<td>9107-9109 - Agilent DSOX2012A 200MHz 2 channel Oscilloscope</td>
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<tr>
<td>9110-9111 - Tektronix TDS8000 Digital Sampling Oscilloscopes</td>
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<td>9112 - LeCroy 8500A Wavemaster Oscilloscope</td>
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<td>9113 - LeCroy SDA11000 Oscilloscope</td>
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<tr>
<td>9114-9116 - Tektronix TDS2024C Digital Storage Oscilloscopes</td>
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<tr>
<td>9120 - Agilent 35670A 102kHz Dynamic Signal Analyzer</td>
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<td>9121 - Agilent E5061A 1.5GHz Network Analyzer</td>
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<tr>
<td>9122</td>
<td>Hewlett Packard 8753D 6GHz Network Analyzer</td>
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<td>9123</td>
<td>Agilent 8722ES Network Analyzer</td>
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<tr>
<td>9131</td>
<td>Agilent E4408B 26.5GHz Spectrum Analyzer</td>
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<td>9132</td>
<td>Agilent 8565E Spectrum Analyzer</td>
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<td>9133</td>
<td>Agilent 8563E Spectrum Analyzer</td>
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<tr>
<td>9141-9144</td>
<td>FW Bell Hall Probes</td>
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<tr>
<td>9152</td>
<td>Extech IRC40 Thermal imager</td>
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<tr>
<td>9160</td>
<td>Keithley 6430 Sub-femtoamp Source Meter</td>
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<tr>
<td>9163</td>
<td>Yokogawa GS610 Source Measure Unit</td>
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<tr>
<td>9164-9167</td>
<td>Keithley 2450 Sourcemeters</td>
<td>$6</td>
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<tr>
<td>9168-9169</td>
<td>Keithley 2400 Sourcemeters</td>
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<tr>
<td>9170</td>
<td>Andeen Hagerling DCPAX/TP1 Capacitance/Loss Bridge</td>
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<tr>
<td>9171</td>
<td>Agilent 4284A Precision LCR Meter</td>
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<tr>
<td>9180-9183</td>
<td>National Instruments GPIB-to-USB Adaptors</td>
<td>$6</td>
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<tr>
<td>9201</td>
<td>Agilent E4991A RF Impedance/Material-Analyzer</td>
<td>$6</td>
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<tr>
<td>9203</td>
<td>Agilent B1500 Device Analyzer</td>
<td>$6</td>
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<tr>
<td>9204</td>
<td>Agilent HPE9300A Average Power Sensor E4418B</td>
<td>$6</td>
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</table>