



INTERNAL CHARGES FOR EQUIPMENT IN THE GRADUATE CENTER FOR MATERIALS RESEARCH

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***Effective September 1, 2023 thru August 31, 2024
(Revised 6/10/24)***

The Graduate Center for Materials Research (MRC) has a large variety of research equipment that is available for use by Missouri S&T faculty, staff, and students. For internal users, i.e., those users who pay via a Missouri S&T mocode, the equipment use charges are based on the costs incurred by MRC and are in accordance with University Policy and Office of Management and Budget (OMB) Circular A-21, "Cost Principles for Education Institutions". External users are charged for supplies, equipment depreciation, and operator salary via a pre-arranged Non-University Use of University Equipment, Facilities, and Resources Contract.

Missouri S&T faculty/students wanting to use this equipment should contact the persons listed below. Special scheduling arrangements can often be made to fit unique circumstances.

Equipment

Person to Contact for Scheduling

PrismaE SEM	Dr. Clarissa Wisner (Ext. 4393)
RAITH e-Line PLUS	Dr. Clarissa Wisner (Ext. 4393)
Dualbeam FIB/SEM	Dr. Jincheng Bai (Ext. 6467)
Helios Hydra CX (Dualbeam FIB)	Dr. Jincheng Bai (Ext. 6467)
TEM	Dr. Ahmed Darwish (Ext. 6467)
TGA/DTA/Digital Image System	Dr. Eric Bohannan (Ext. 4534)
X-Ray Diffraction	Dr. Eric Bohannan (Ext. 4534)
AFM/STM	Dr. Eric Bohannan (Ext. 4534)
TA Q600 Thermal Analysis	Dr. Eric Bohannan (Ext. 4534)
Netzsch Thermal Analysis	Dr. Eric Bohannan (Ext. 4534)
Horiba GD Profiler 2	James Claypool (Ext. 4358)
Xradia Micro CT	James Claypool (Ext. 4358)
Nanoindenter	James Claypool (Ext. 4358)
Atomic Force Microscope (AFM)	James Claypool (Ext. 4358)
XPS NEXSA	Brian Porter (Ext. 4395)
XRF – Oxford X-Supreme 8000	Brian Porter (Ext. 4395)
All other	Fred Eickelmann (Ext. 4356) or Director of MRC (Ext. 4873)

GRADUATE CENTER FOR MATERIALS RESEARCH EQUIPMENT USE CHARGES

Charges Billed to MoCode Account

I. X-Ray Diffraction Units

Philips Thin Film (MRD)

1. Internal Use Rate \$171.00/hr
2. Internal Use Rate for Unassisted User \$130.00/hr

Philips MPD Powder

1. Internal Use Rate \$60.00/hr
2. Internal Use Rate for Unassisted User \$32.00/hr

II. Thermal Analyzers

TA-DSC

1. Internal Use Rate \$9.00/hr
2. Internal Use Rate for Unassisted User \$1.00/hr

III. Scanning Tunneling/Atomic Force Microscope (AFM)

1. Internal Use Rate \$15.00/hr
2. Internal Use Rate for Unassisted User \$1.00/hr

IV. Dualbeam Focused Ion Beam/Scanning Electron Microscope (FIB/SEM)

1. Internal Use Rate \$75.00/hr
2. Internal Use Rate for Unassisted User \$60.00/hr

V. Helios Hydra CX (Dualbeam FIB)

1. Internal Use Rate \$73.00/hr
2. Internal Use Rate for Unassisted User \$43.00/hr

VI. Transmission Electron Microscope (TEM) (Tecnai F20 STEM)

1. Internal Use Rate \$120.00/hr
2. Internal Use Rate for Unassisted User \$85.00/hr

VII. RAITH e-Line PLUS E-beam Lithography

1. Internal Use Rate \$80.00/hr
2. Internal Use Rate for Unassisted User \$50.00/hr

VIII. XRF Oxford X-Supreme 8000 (Energy Dispersive X-ray Fluorescence)

1. Internal Use Rate \$44.00/hr
2. Internal Use Rate for Unassisted User \$20.00/hr

IX. TA Q600 SDT Thermal Analysis (Simultaneous DSC-TGA)

1. Internal Use Rate \$133.00/hr
2. Internal Use Rate for Unassisted User \$102.00/hr

X. PrismaE SEM		
1. Internal Use Rate		\$44.00/hr
2. Internal Use Rate for Unassisted User		\$12.00/hr
XI. XPS NEXSA		
1. Internal Use Rate		\$29.00/hr
2. Internal Use Rate for Unassisted User		\$10.00/hr
XII. Xradia Micro CT		
1. Internal Use Rate		\$214.00/hr
2. Internal Use Rate for Unassisted User		\$182.00/hr
XIII. Netzsch Thermal Analysis		
1. Internal Use Rate		\$21.00/hr
2. Internal Use Rate for Unassisted User		\$1.00/hr
XIV. Horiba GD Profiler 2		
1. Internal Use Rate		\$24.00/hr
2. Internal Use Rate for Unassisted User		\$1.00/hr
XV. Nanoindenter		
1. Internal Use Rate		\$63.00/hr
2. Internal Use Rate for Unassisted User		\$23.00/hr
XVI. Atomic Force Microscope (AFM)		
1. Internal Use Rate		\$35.00/hr
2. Internal Use Rate for Unassisted User		\$1.00/hr