

# Characterization Facility

## University of MN Institute of Technology CHARACTERIZATION FACILITY ACADEMIC RATES

Hourly fees are charged to recover maintenance, supply, and personnel costs related to the equipment. For each instrument rate there is a surcharge for specialist assistance, training, or sample analysis.

The rate for this specialist time is \$39.00 an hour for University of Minnesota or other U.S. academic users. Weekdays, between 5PM and 8AM, and all day Saturday and Sunday, the rate is \$58.50 an hour.

There are NO DISCOUNTS ON UNIVERSITY HOLIDAYS unless they fall on a weekend.

These rates are effective as of July 1, 2007 and supersede any rate sheets of earlier effective date.  
**NOTE: EVENING RATES BEGIN AT 6:00pm and SPECIALIST RATES CHANGE AT 5:00pm**

Item	Academic
Technical staff face time	\$39.00
Ion Beam Analysis (IBA), ToF-SIMS	\$40.00
Jeol 1200EX & 1210; FEI Tecnai T 12 & FEI Tecnai G2 30 FEG-TEM Transmission electron microscopes	\$34.00; after 2 hrs, eve & wkend, \$10.80
Environmental Scanning electron microscope (ESEM)	\$15.50
FEG Scanning electron microscopes (Jeol 6500 & 6700, Hitachi S900 & S4700)	\$40.20; after 2 hrs, eve & wkend, \$13.40
Cryo EM Surcharge (plus 5 or 20 l LN2)	\$15.70
Small angle X-ray scattering 2D SAXS, 6m SAXS, SAXSess	\$20.60; after 2 hrs, \$6.70
D5005, Rigaku D-MaxB, Rapid XRD	\$20.00
Scintag, Microdiffractometer, Siemens D500 (with sample changer)	\$20.00; after 2 hrs, \$6.50
X-pert	\$15.00; after 3 hrs, \$2.00
Scanning probe microscopes (SPM, Hysitron Triboscope)	\$16.00
NanoIndenter (NanoXP), Hysitron TriboIndenter, Micromechanical tester (MMT)	\$11.30; eve \$5.65
FTIR	\$16.00
Raman	\$20.00
Video enhanced microscopes (VEM)	\$13.90
Optical profilometer (Zygo)	\$13.90
Stylus profilometer (Tencor)	\$13.90

Spectroscopic ellipsometer	\$16.00; eve & wkend, \$8.00
Auger (plus 1.5 staff hours required per sample)	\$17.00
XPS (PHI 555)	\$17.00
XPS (SSI)	\$40.00
Microtome	\$10.30; after 2 hrs, eve & wkend, \$3.60
Cryo Microtome Surcharge (plus >25 l LN2)	\$3.60
Metal evaporator, DV502, MED010, VCR IBC	\$13.90 per evap
Specimen Preparation (mills, coring, polishers, saws)	\$3.60
Specimen Coating (Carbon, sputter, evap)	\$13.90 per evap
Critical Point Dryer	\$17.50 per run
High Pressure Freezer (plus >25 l LN2)	\$11.30 per run
Freeze Fracture (plus >25 l LN2)	\$33.00 per run
Freeze Substitution & Embedding (2-4 days plus >50 l LN2)	\$11.30 per day
LN2 is not included in the above procedures and is billed separately	\$1.15 per liter