

Biomaterials

- High-Performance Liquid Chromatography (HPLC) for analysis of drugs and proteins
- Size Exclusion Chromatograph (SEC) for polymer analysis
- Cone-and-plate Rheometer
- Semi-automated drug release apparatus
- Inverted microscope
- CCD optical micrometer
- Flow Cytometer
- Stent Crimper
- Dynamic Light Scattering
- Nanosizer/Zeta potential
- Microtome
- Spray dryer
- High Speed Centrifuge
- Film Caster

Inorganic Materials Service Lab

- High temperature dilatometer
- Thermogravimetric analyzer
- Differential thermal analyzer
- Laser flash
- Impedance analyzer
- Micro-hardness tester
- BET surface area
- Nanosizer
- Porosimetry
- Densimeter
- Viscometer
- Oxygen Magnetron sputter
- Density Measurement Pycnometer
- Differential Scanning Calorimeter
- Dynamic Mechanical Analyzer
- Laser Particle Size Analyzer
- Thermogravimetric Analyzer
- Zeta Potential Analyzer
- Prism Coupler
- Ellipsometer
- Micro Surface Profiler
- Image Analyzer
- Stereozoom Microscope
- Diamond Cutter
- Manual Polisher and Grinder
- Hot mount Press

Materials Processing Service Lab

- Ball Mills (Planetary and Horizontal)
- Centrifuges
- Chemical Synthesis Rooms with fume hoods

- Cold Isostatic Press
- Electrostatic Atomizer (with supporting Digital Video Microscopy)
- Flame Spray
- Hot Press Vacuum Furnace
- Nano Surface Polishing
- Plasma Spray (DC & RF)
- Roll Compacter
- Spray Dryer
- Tape Caster
- X-Ray Sedigraph
- Hydraulic Presses
- UV-Vis Spectrophotometer
- Freeze Dryer

Heat Treatment Lab

- Tube Furnaces (Inert & Open Atmosphere)
- Box Furnaces (Inert & Open Atmosphere)
- Vacuum Tube Furnace
- Carbolite High Temperature Furnace
- Ovens
- Reflow Oven

Computer lab

- Over forty personal computers installed with Microsoft Office suite
- Access to NTU intranet, Internet and E-learning portal
- 1200 dpi capable laser printers
- USB Scanners
- DVD Writers
- Site license for ANSYS®, a finite element analysis software
- Site license for Digital Visual Fortran Developer
- Cambridge Engineering Material Selector software
- Chemdraw & Chem3D software
- Deckbuild & Tonyplot
- Tandberg MXP770 Video Conferencing Equipment

EMXRD

- Field Emission Transmission Electron Microscope (Jeol JEM 2100F)
- Transmission Electron Microscope (Jeol JEM 2010) equipped with EDX
- Field Emission Scanning Electron Microscope (Jeol JSM 6340F) equipped with EDX
- Low Vacuum Scanning Electron Microscope (Jeol JSM 5410LV) equipped with EDX
- Scanning Electron Microscope (Jeol JSM 6360) equipped with EDX
- Scanning Electron Microscope (Jeol JSM 5310) equipped with EDX
- X-Ray Fluorescence
- Small Angle X-ray Scattering System
- X-Ray Diffractometer (Shimadzu 6000)
- X-Ray Diffractometer (Rigaku Dmax 2200) equipped with:
 - Thin Film attachment
 - Pole Figure attachment
 - High Temperature attachment

- High precision ion millers (Gatan 691)
- Ultrasonic disk cutter (Gatan 601)
- Dimple grinders (Gatan 656)
- Electrolytic polishers (Fischione 120)
- Carbon / gold coaters (SPI-Module)

Nanomaterials Lab

- Transmission Polarizing Microscope
- Rotating Fatigue Machine
- Automatic Soft Hysteresisgraph (Walker Scientific AMH-20)
- Automatic Magnetic Hysteresisgraph (Walker Scientific AMH-10) equipped with temperature controller
- Vibrating Sample Magnetometer (Lakeshore 7300) (1.5 Tesla)
- Magnetic Annealing Furnace
- Melt Spinner
- Splat Quencher
- Arc Melter
- Automatic Twin Grinder
- Ferroelectric Test System & Probe Station
- Pulse Laser Deposition Excimer Laser System

Nanoelectronics Lab

- Spin Coater
- Rapid Thermal Processing System
- Electro-plating Station
- Thermal Evaporator
- RF Sputtering Systems
- Probing Station
- Wafer Scriber
- Screen Printer

Organic Materials Service Lab

- Fourier transformed infrared (FTIR) spectrometer
- UV-visible spectrometer / UV-visible Near Infrared Absorption spectrometer
- Full range of thermal analyzers
 - Differential Scanning Calorimeter
 - Thermogravimetric Analyzer
 - Dynamic Mechanical Analyzer
 - Micro Differential Scanning Calorimeter
 - Thermo Mechanical Analyzer
 - Dielectrical thermal Analyzer (DEA)
- Raman spectrometer system
- Atomic Force Microscope
- Injection molding machine and Extruders
- Dynamic contact angle & Surface Tension System
- Fluorescence Spectrophotometer
- Impact Tester
- Tensile Tester
- Microforce Tensile Tester

- Electrochemical synthesis
- LB trough
- Thermal evaporator
- Spin coating

Undergraduate

Type of facilities:

- **Experiment facilities:** Creep Measurement apparatus, Electro-chemicals polishers, Keithley 4-point probe stations, Roorkee 4-point probe stations, Microscopes, Atmospheric Conventional Box Oven and furnaces, Electronics measuring instruments like oscilloscopes, ,function generators etc.
- **Materials Testing Facilities:** Vickers Hardness Tester, Micro-hardness Testers, Static and Dynamic Mechanical Tensile Testers, Charpy Impact Tester.
- **Cutting facilities:** Lathe turning, milling, drilling, power-sawing, shearing, grinding and rolling machines.
- **Other equipment:** Inductelec Induction Generator, Lapping Machine.
- Micro Hardness Tester
- Rockwell Hardness Tester
- Vickers Hardness Tester (Digital)
- Instron Tensile Tester Machine (Models 4206 and 5567)
- Shimadzu Tensile Machine
- Abrasive Cut-off Machine