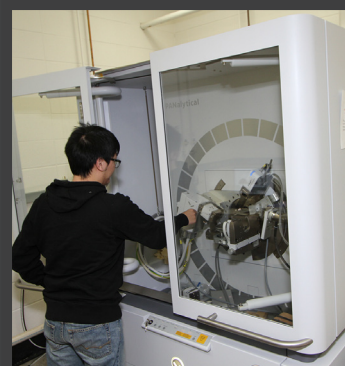


# WISCONSIN CENTERS FOR NANOSCALE TECHNOLOGY





# Wisconsin Centers for Nanoscale Technology

The Wisconsin Centers for Nanoscale Technology, located in the UW-Madison College of Engineering, are shared instrumentation facilities providing instrumentation, facilities, and expertise in microelectronics, nano-fabrication technology, electron microscopy, microanalysis and soft materials characterization in support of the University's research endeavor. The Wisconsin Centers for Nanoscale Technology give students and industrial users access to a state-of-the-art education and research facilities.

These facilities aid in the economic development of the state of Wisconsin through staff interaction with, and access to, state-of-the-art instrumentation for our industrial users. The facility is open to all qualified faculty, students, staff and external users.

For more information, visit our website at <https://wcnt.wisc.edu>

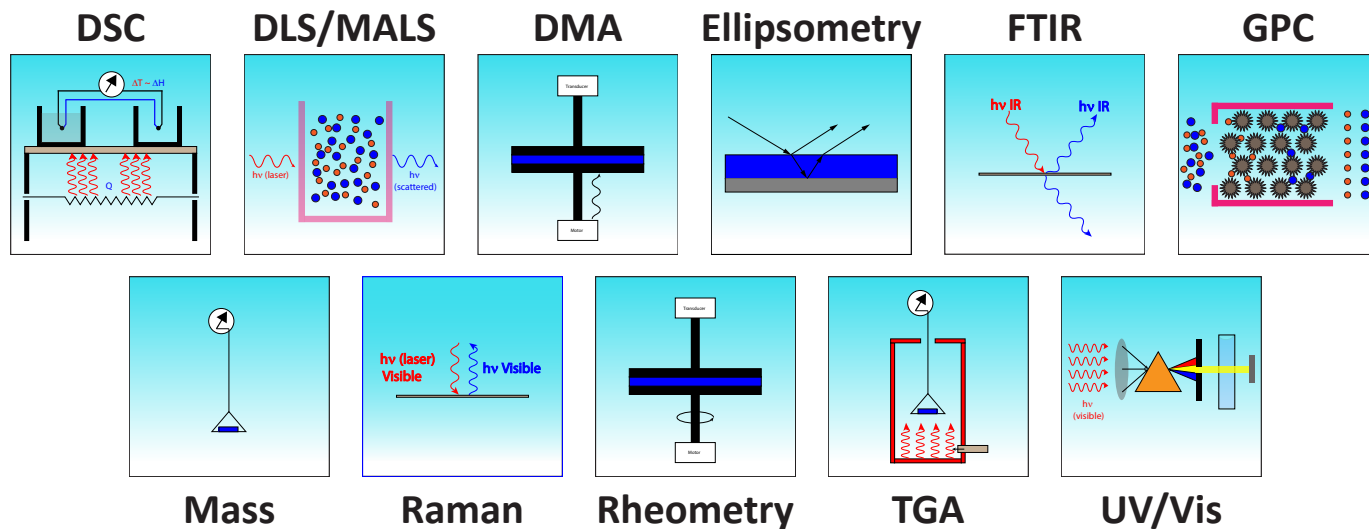
## Soft Materials Characterization Laboratory



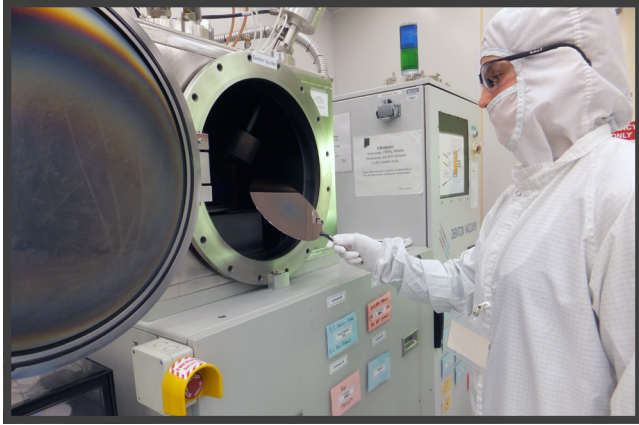
The Soft Materials Characterization Laboratory (SMCL) is a shared resource research facility for analysis and characterization of synthetic polymers, soft materials and polymer devices.

The Soft Materials Characterization Laboratory is equipped with approximately 50 instruments for spectroscopy, mechanical and thermal analysis, chromatography and preparation of soft materials.

### Techniques offered



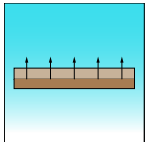
# Nanoscale Fabrication Center



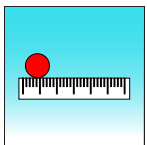
The Nanoscale Fabrication Center (NFC) is a shared resource research facility with instrumentation for nanofabrication technologies, products and innovations.

The Nanoscale Fabrication Center is equipped with over 70 instruments in a 10,000 square ft cleanroom environment that provides access to processes for deposition, etching, patterning and packaging of electronic and other materials.

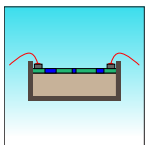
## Techniques offered



Additive



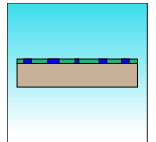
Metrology



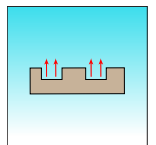
Assembly

- Additive Processes
  - ◇ Sputtering
  - ◇ Chemical Vapor Deposition
  - ◇ Evaporation
  - ◇ Spin Coating
- Metrology Processes
  - ◇ Electrical
  - ◇ Microscopy
  - ◇ Optical
  - ◇ Physical
- Packaging and Assembly Processes
  - ◇ Electrical connections
  - ◇ Assembly

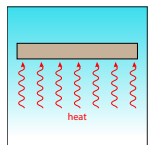
- Patterning Processes
  - ◇ Contact lithography
  - ◇ Electron Beam lithography
  - ◇ Projection lithography
- Subtractive Processes
  - ◇ Plasma etch
  - ◇ Wet chemical etch
  - ◇ Chemical vapor etch
- Thermal Processes
  - ◇ Annealing
  - ◇ Curing
  - ◇ Oxidation



Patterning



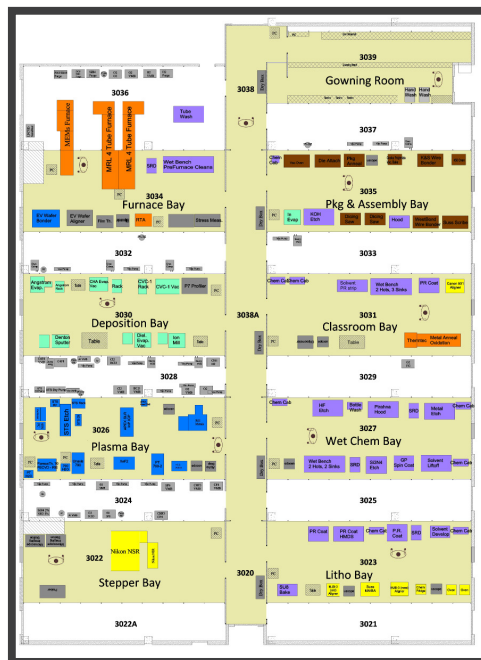
Subtractive



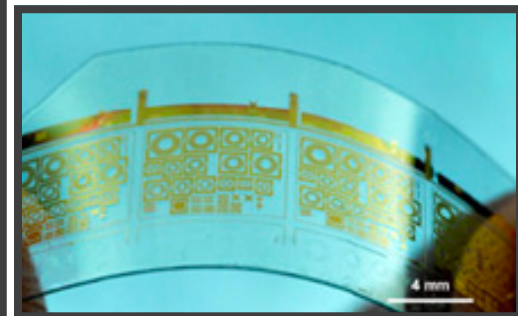
Thermal



User loading EBL

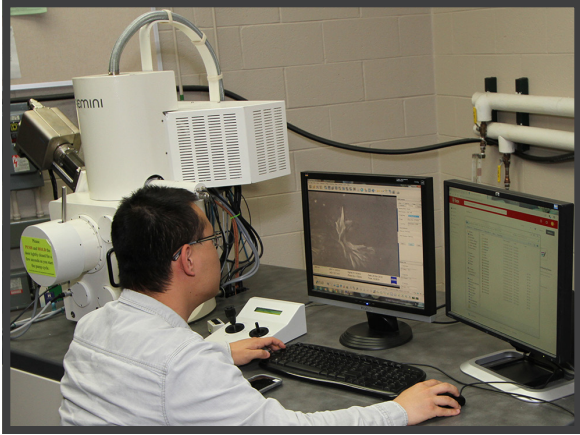


NFC Cleanroom



Flexible electronics  
fabricated in the NFC

# Nanoscale Imaging and Analysis Center



The Nanoscale Imaging and Analysis Center (NIAC) is a shared resource research facility with instrumentation for characterization of organic and inorganic materials using high end electron microscopy and microanalysis techniques.

The Nanoscale Imaging and Analysis Center is equipped with approximately 40 instruments for sample preparation, electron and light microscopy, atomic resolution microscopy, spectroscopy, x-ray analysis and surface analysis.

## Techniques offered

AFM

APT

EBS

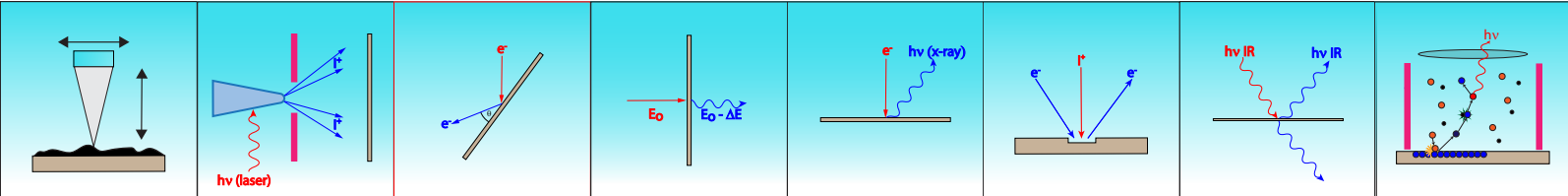
EELS

EDS

FIB/SEM

FTIR

GDOES



Indent

Raman

SEM

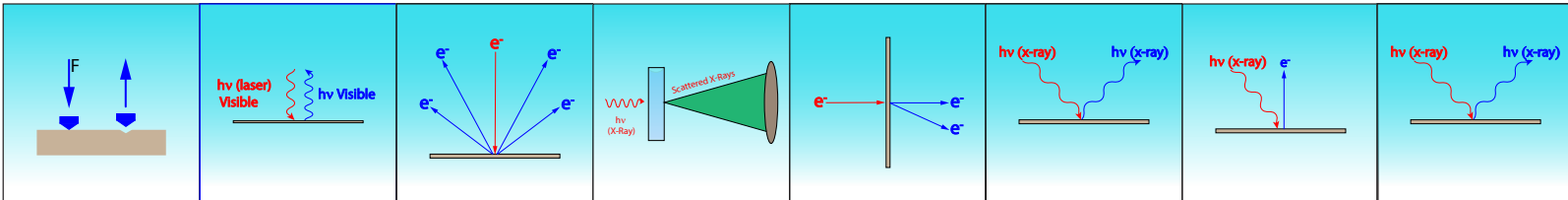
SAXS

TEM

XRD

XPS

XRR



UW-Madison Engineering Campus