



# Wisconsin Centers for Nanoscale Technology

## Nanoscale Imaging and Analysis Center



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

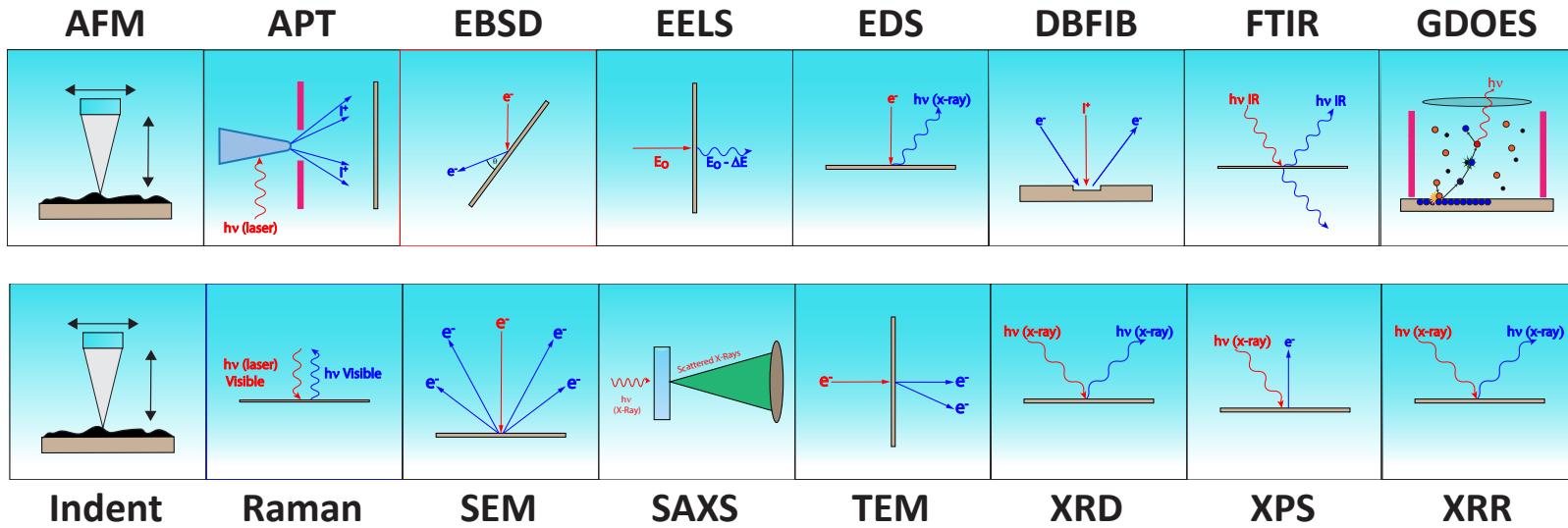
The Nanoscale Imaging and Analysis Center (NIAC) provides state-of-the-art instrumentation, support facilities, and expert technical assistance for research and education in materials. Additionally, NIAC serves materials science research needs of the University of Wisconsin-Madison, the state of Wisconsin, and the nation.

The center is located on the basement floor of the Materials Science and Engineering building on the University of Wisconsin-Madison campus.

## Techniques offered

- Atomic Force Microscopy
- Atom Probe Tomography
- Electron Backscattered Diffraction
- Electron Energy Loss Spectroscopy
- Energy Dispersive Spectroscopy
- Focused Ion Beam/Scanning Electron Microscopy
- Fourier Transform Infrared Spectroscopy
- Glow Discharge Optical Emission Spectroscopy

- Nanoindentation
- Raman Spectroscopy
- Scanning Electron Microscopy
- Small Angle X-ray Scattering
- Transmission Electron Microscopy
- X-ray diffraction
- X-ray Photoelectron Spectroscopy
- X-ray Reflectivity
- Film Thickness Interferometry



All instrumentation is available to qualified users from the University of Wisconsin system, other educational or government institutions, or industry. For more information, please visit <https://wcnt.wisc.edu>.



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### Instrumentation Available

#### MICROSCOPY

- Bruker Catalyst BioAFM Atomic Force Microscope
- Bruker MultiMode 8 Atomic Force Microscope
- Cameca 3000XSi Atom Probe Tomography Instrument
- Andor Spinning Disk Confocal Microscope
- FEI Helios G4 Plasma FIB/FESEM/EBSD/EDS
- Zeiss Auriga FIB/FESEM/EBSD/EDS
- Leica optical microscope with phase contrast imaging
- Zeiss LEO 1550VP FESEM/EDS
- Zeiss LEO 1530-1 FESEM/EDS/EBSD
- Zeiss LEO 1530-2 FESEM/EDS
- Philips CM200UT TEM
- FEI Tecnai T-12 Cryo TEM
- FEI Tecnai TF 30 TEM
- FEI Titan 80-200 Aberration Corrected (S)TEM/EDS/ EELS
- NanoMegas ASTAR TEM Orientation Imaging System

#### X-RAY ANALYSIS

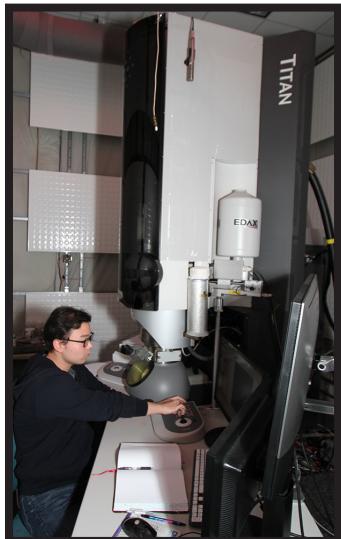
- Bruker D8 Discovery X-ray diffractometer
- Panalytical Empyrean X-ray diffractometer
- Panalytical XPert MRD X-ray diffractometer
- Rigaku Small Angle X-ray Scattering

#### SAMPLE PREPARATION

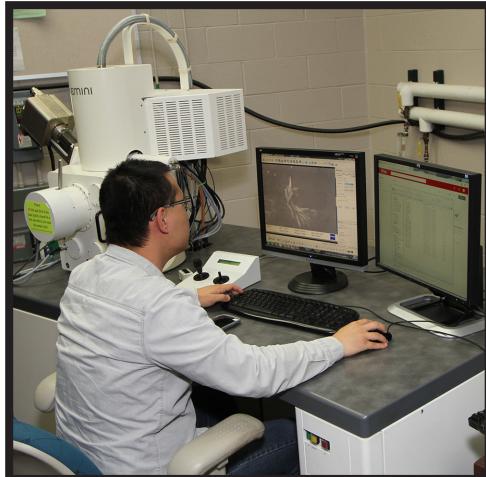
- Tousimis Critical Point Dryer
- Leica EM UC7 Cryo-UltraMicrotome
- Leica ACE600 Sputter Deposition system
- Denton DV-502A Metal Evaporator
- TEM Dimpler
- FEI Vitrobot Cryo vitrifier
- Fischione 1050 TEM Ion Mill
- Fischione 1040 TEM Ion Mill
- FEI Helios G4 UX Plasma Dual Beam FIB

#### SPECTROSCOPY

- Horiba Nanolog Spectrofluorometer
- Horiba Labram Aramis Raman Spectrometer
- Horiba Glow Discharge Optical Emission Spectrometer GD Profiler-2
- Thermo K alpha X-ray Photoelectron Spectrometer
- Zygo New View non-contact Profiler
- UV VIS Spectrometer Perkin-Elmer Lambda 10
- UV VIS NIR Spectrometer Perkin-Elmer Lambda 19
- FTIR Nicolet Magna 550
- FTIR Nicolet Magna 860
- FTIR Nicolet iS50R with PM-IRRAS
- Raman Imaging Microscope Thermo Scientific DXRxi



**FEI Titan 80-200 (S)TEM**



**Zeiss LEO 1530 SEM**



**Panalytical Empyrean XRD**