

- Laser Engineered Net Shaping
Optomec LENS 750



- Rutherford Backscattering Spectrometry



- Maskless Mesoscale Materials Deposition
Optomec M²D



- X-ray Photoelectron Spectrometer
PHI 5000 Versaprobe



- Physical Vapor Deposition
Kurt J. Lesker PVD-75



- Scanning Auger Nanoprobe
—PHI 670xi

CART Equipment also includes:

- Instrumented Impact Tester
Instron Dynatup 9250HV impact tester



- Scanning Electron Microscope
—JEOL JSM 5800
- Transmission Electron Microscope
—Philips EM420
- X-Ray Diffractometer (XRD)
—Scintag PAD V
- Optical Microscope
—Nikon Eclipse ME600



David Diercks , facilities manager

For more information about
CART equipment, contact David Diercks
at
940-369-8106
or
david.diercks@unt.edu

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CART

Center for Advanced Research
and Technology

University of North Texas
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cart.unt.edu



CART

Center for Advanced Research and Technology
University of North Texas

The Center for Advanced Research and Technology (CART) was established at the University of North Texas (UNT) in 2004 through support from the Army Research Laboratory.

CART is an umbrella organization that supports a variety of advanced scientific research activities within the university and with external partners. The areas of research encompass many disciplines including, engineering, materials science, physics, chemistry, and biology.

The UNT Discovery Park, a 550,000 ft² former Texas Instruments facility, houses the CART facilities along with those of the College of Engineering.

CART currently maintains and operates more than two dozen instruments for advanced characterization and processing.

- High-Resolution Analytical TEM

FEI Tecnai G2 F20 S-Twin
200keV field emission scanning transmission electron microscope (S/TEM)



- Dual Beam SEM/FIB

FEI Nova 200 NanoLab—
a dual column ultra-high resolution field emission scanning electron microscope (SEM) and focused ion beam (FIB)



- Local Electrode Atom Probe (LEAP)

Imago Scientific local electrode atom probe (LEAP) instrument with added laser-pulsed evaporation technique



- High Resolution X-ray Diffraction

Rigaku Ultima III high-resolution XRD



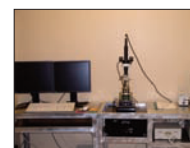
- Environmental SEM
FEI Quanta environmental scanning electron microscope (ESEM)



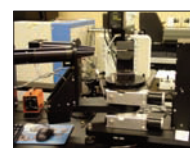
- Raman Spectrometer
Thermo Electron Almega XR



- Atomic Force Microscope
Veeco (Digital Instruments) Multimode Nanoscope III



- Variable Angle Spectroscopic Ellipsometer
J.A. Woollam variable-angle spectroscopic ellipsometer (VASE)



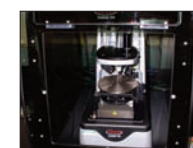
- Tribometer
Microphotonics pin-on-disk tribometer



- Fourier Transform Infrared Spectrometer
Thermo Electron Nicolet 6700 FTIR



- Profilometer
Veeco Dektak 150



- Rheometer
TA Instruments ARES-LS2 rheometer



- OLED Evaporator
Custom built deposition system for organic thin film applications



- Biopolymer Extruder
American Leistritz Extruder Corp extruder for film, sheet, and ribbon extrusion

