

ADVANCED MATERIALS CHARACTERIZATION LABORATORY

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The Advanced Materials Characterization Laboratory was established in 2001 to provide advanced materials characterization instrumentation and expertise to Missouri S&T researchers as well as technological industries in Rolla and the state of Missouri. The laboratory combines advanced analytical resources from several departments on campus, as well as the Materials Research Center to provide a centralized point of contact for researchers.

The characterization equipment available in the AMCL includes: two dual-beam Focused Ion Beam/Scanning Electron microscope instruments, an environmental scanning electron microscope (SEM), with EDS, WDS and EBSD, and a transmission electron microscope (TEM), all of which are combined with energy dispersive X-ray Spectroscopy (EDS) systems, an e-beam lithography system, two x-ray diffractometers, an x-ray fluorescence analyzer, scanning tunneling and atomic force microscopes, an x-ray photoelectron spectrometer, a micro CT imaging system, and instruments for thermal analysis, including thermogravimetric analysis and differential scanning calorimetry.

Training in these methods and assistance in the use of the equipment are provided to faculty researchers, graduate and undergraduate students by the director and staff of the AMCL.