

### Providing Access to Experts & Instrumentation at Mines

#### Electron & Scanning Probe Microscopy

ASYLUM MFP-3D Scanning Probe Microscope  
 DIGITAL INSTRUMENTS Atomic Force Microscope  
 FEI Helios Nanolab 600i FIB/SEM  
 FEI Quanta 600i Environmental SEM  
 FEI Talos F200x TEM/STEM  
 FEI Tecnai T12  
 JEOL JSM-7000f Field Emission SEM  
 KEYENCE VHX-5000  
 PHENOM SEM  
 TESCAN S8252G Raman SEM/FIB  
 WITEC Laser Confocal Raman Microscope

#### Nanofabrication & Device Processing

Class 1,000 and Class 10,000 clean rooms  
 KARL SUSS MJB3 UV400 Mask Aligner  
 ULVAC-RIKO MILO-5000 Rapid Thermal Annealer  
 Plasma Preen System  
 Spin Coater/Hot Plate  
 Wet & Dry Oxidation Furnaces  
 Diffusion Furnace  
 Vacuum Furnace  
 AUTO GLOW 200 Reactive Ion Etcher  
 MARCH 1701 Reactive Ion Etcher  
 TPT hb05 Wire Bonder

#### Mass Spectrometry

IONTOF TOF-SIMS.V\*  
 SCIEX 5500 Triple Quad  
 SCIEX X500R QToF

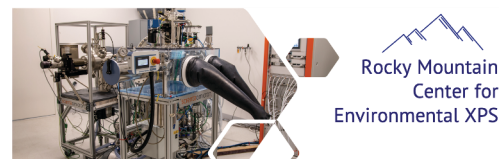
#### X-Ray Diffraction & Computed Tomography

PANALYTICAL Empyrean Modular X-Ray Diffractometer\*  
 PANALYTICAL X'Pert Pro X-Ray Diffractometer  
 ZEISS Versa 520 XCT\*

#### Thin Film Deposition & Surface Characterization

ANGSTROM Thermal Evaporator  
 AJA Sputtering System  
 High Temperature Thermal Evaporator  
 Semicore Sputtering System  
 Tabletop Gold Sputter Coater  
 Solar Simulator w/EQE  
 Electrical Probe Station  
 Four Point Probe  
 D-600 Profilometer  
 HL5500 Hall Effect Measurement System  
 CARY 5G UV-VIS Spectrometer  
 Optical Microscope

#### X-Ray Photoelectron Spectroscopy\*



#### Mechanical Testing

MARK-1- ESM 1500  
 MTS Alliance RT/100  
 INSTU-MET Renew 1125  
 SATEC SONNTAG Fatigue Testing System SF-1-U  
 DIC Fatigue Dynamics RBF-200 Rotating Bending Fatigue  
 DSI Gleeble 3500-GTC  
 MTS Exceed E22 Impact Tester  
 MTS Landmark 370.10  
 MTS Landmark 370.25  
 MTS 312.21 Top Actuator  
 MTS 312.21 Hydraulic Grips  
 MTS 312.21 Bending Under Tension  
 MTS 312.41  
 MTS 810 Material Test System 318.50  
 Extensometers  
 Digital Image Correction  
 Heater and Cooling Furnaces

\* Instrument has in situ capabilities

For more detailed information on instrumentation capabilities, to request access or assistance, and view user rates, please visit:

[Mines.edu/Shared-Facilities](https://mines.edu/Shared-Facilities)

## Meet the Team



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For more detailed  
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to request access or  
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X-Ray Facilities Manager  
& Technical Expert

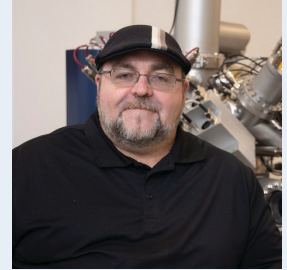
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