



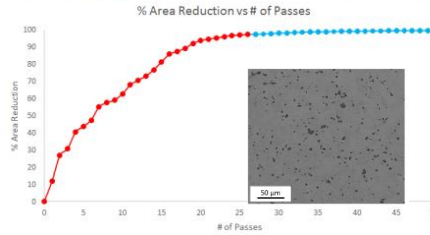
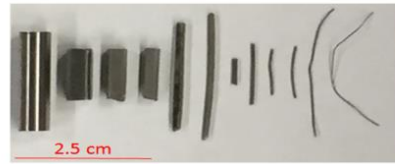
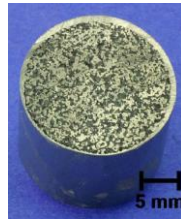
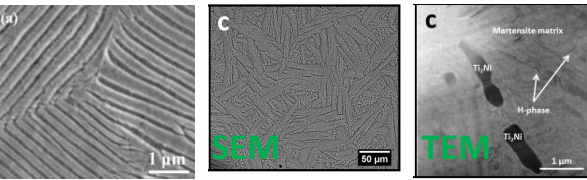
Marcus L. Young

Department of Materials Science and Engineering

Assistant Professor and Associate Chair for the Undergraduate Degree Program

Research Group: 1 Post-doc, 6 Ph.D. and 3 M.S. Students

Alloy, Porous & Composite Materials Development, Characterization, & Processing



➤ Expertise in Structural Metallic Alloys as well as Porous Metallic Materials and Metal Composites

➤ Shape Memory Alloys and High Entropy Alloys

➤ Active projects in areas from vacuum arc-melting buttons and processing to plate, rod, wire, powders, and foams

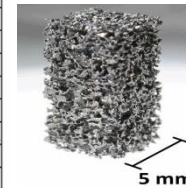
➤ Advanced characterization

➤ Synchrotron X-ray Diffraction and Imaging

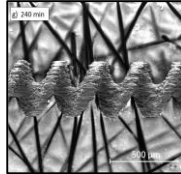
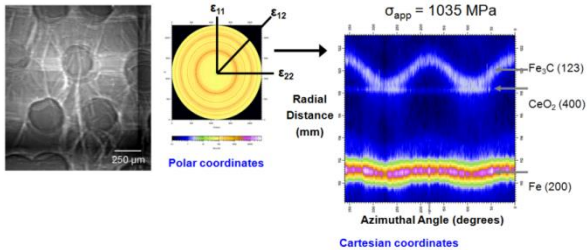
➤ Scanning Electron Microscopy / Focused Ion Beam with EDS and EBSD

➤ Transmission Electron Microscopy

➤ 3D Atom Probe Tomography



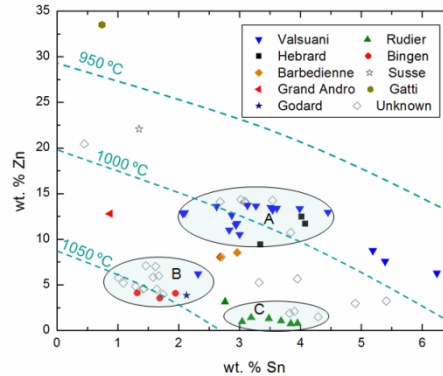
Neutron, Laboratory and Synchrotron X-ray Scattering



Characterization of Ancient and Modern Art and Archaeological Objects



Matisse's *The Serf*
Courtesy of the Art Institute of Chicago



Elemental compositions identified by foundry using ICP-OES and XRF

