



CALIFORNIA NANOTECHNOLOGIES SCANNING ELECTRON MICROSCOPY SERVICES

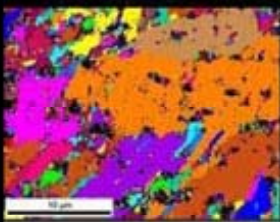


Cal Nano provides Thermally Assisted Field Emission Scanning Electron Microscopy Services (TA-FESEM). Fully equipped with an EDAX Genesis XM 2 Energy Dispersive Spectroscopy (EDS), EDAX Orientation Imaging (OIM) and XM 4 Electron Back Scatter Diffraction (EBSD).

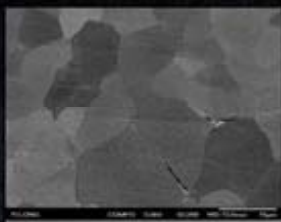
This tool is used to characterize the microstructure and surface morphology of materials up to 500 000X magnification. EDS and EBSD tools allow chemical analysis, grain orientation and texture analysis as well as phase analysis of the material.



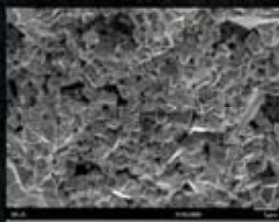
Ion beam polishing reveals material features unable to be observed with conventional techniques. High voltage electric discharge generates Ar⁺ ions that are partially shielded from the sample milling an atomically flat and polished area revealing internal crystal and grain structures. Conventional and nano-based powders and solids are effectively cross-sectioned for imaging without smearing, thermal damage, pullout or uneven polishing (hard and soft phases).



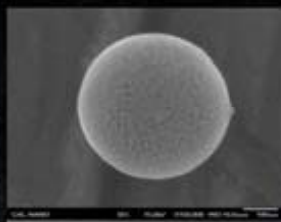
ORIENTATION



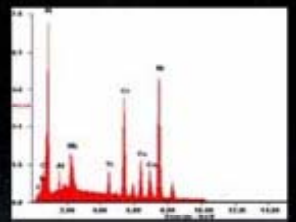
ION POLISHING



FRACTURE ANALYSIS



HIGH MAG >100 000x



ELEMENTAL