
Analytical Capabilities of the JXA-8530F:
- nominal imaging resolution of 3 nm
- energy-dispersive silicon-drift X-ray spectrometer for microanalysis and imaging
- quantitative analysis of B–U with 5 wavelength-dispersive spectrometers
- panchromatic cathodoluminescence detector
- secondary-electron, backscattered-electron, cathodoluminescence, and X-ray maps can be acquired from samples up to 10 cm in size

Rapid, non-destructive analytical technique that requires no special sample preparation to produce spatially resolved (~1 µm-scale), high-quality data.

Current Research Topics Investigated in the ASU Electron Microprobe Laboratory:
- Petrology of Lunar Meteorites (Fig. 2) [3], Shock Metamorphosed Plagioclase in Martian Meteorites [4], High-Pressure Polymorphs in L6-Chondrites [5], Refractory Inclusions in CR2 Chondrites (Fig. 3) [6], including Wark-Lovering Rims (Fig. 4) [7], the Characterization of Standard Materials for the Analysis of Extraterrestrial Materials (Fig. 5), and the Chronology of Terrestrial Impact Rocks (Fig. 6).

References: