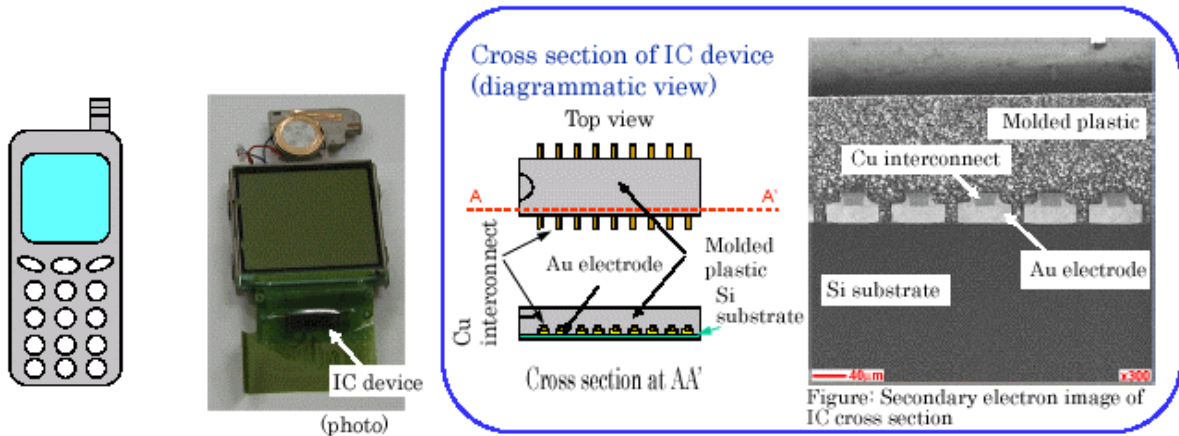


Auger Analysis of CP Cross Section

IC in cellular phone

An IC device to control a cellular phone LCD was cross sectioned using the CP, and analyzed in Auger spectroscopy.



The CP produced wide, clean cross sections from the bulk sample to allow the operator to study finer structures and observation of defects. Auger electron spectroscopy was used for micro area analysis 100 nm in diameter of the CP cross sections.

Auger analysis of defect at the interface of Au electrode and Si substrate

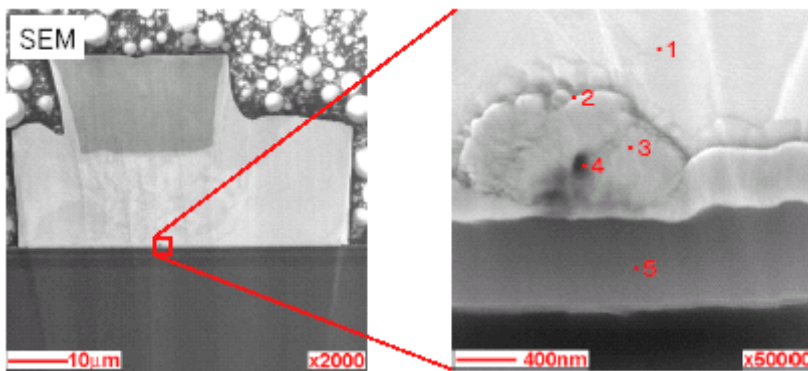


Figure: Secondary electron image of defect

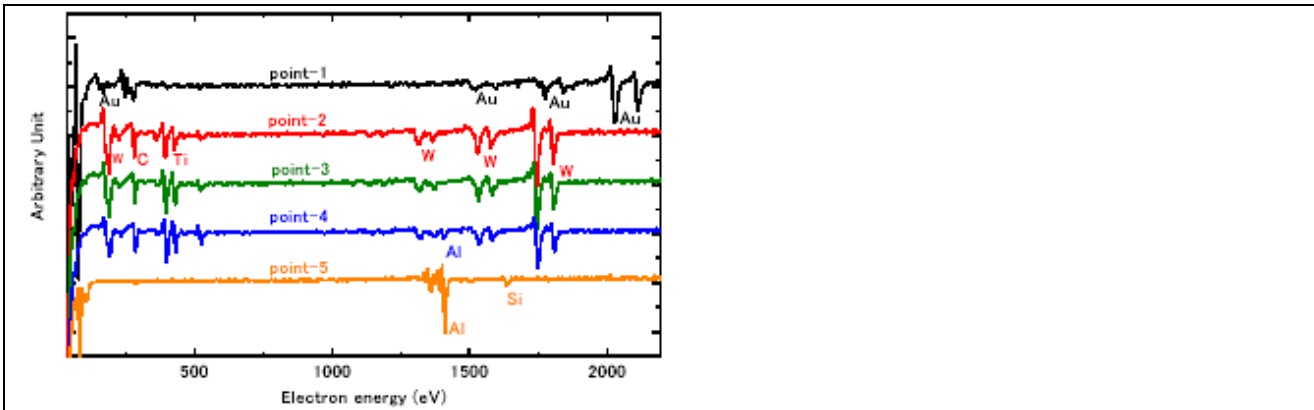
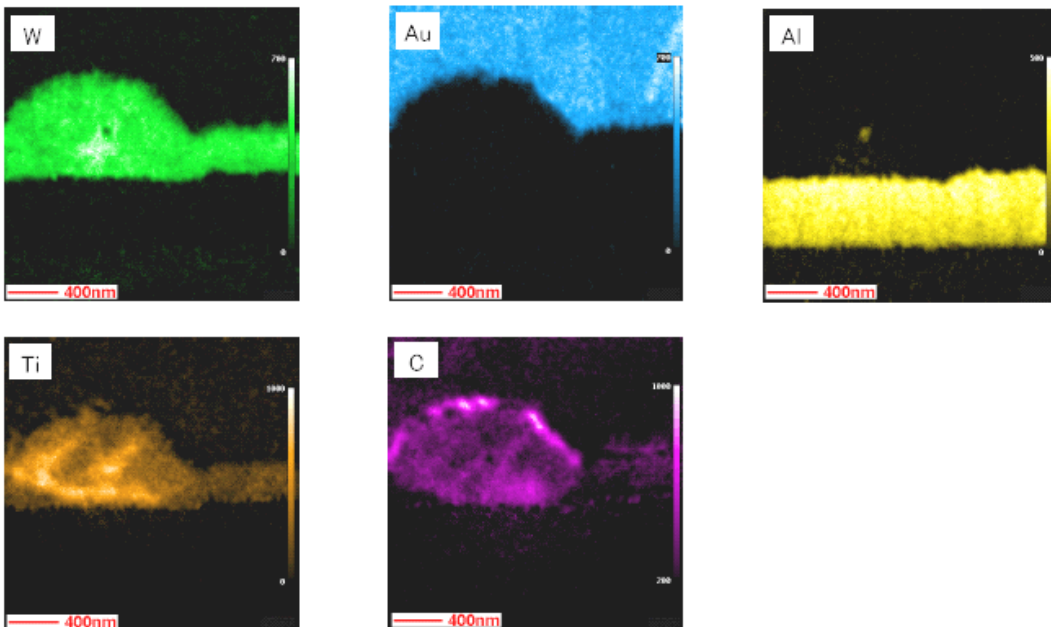


Figure: Auger spectra acquired at points 1 to 5

Auger maps (10 kV, 10 nA, 50,000x)



The CP cross section shows that W and T aggregated on the Al layer where the W layer should have developed. A great deal of C, an impurity, was also detected at the interface with the Au substrate. Al was also detected at the black spot (point-4) 100 nm in diameter in the center.

CP* : JEOL's cross section polisher