X-Ray Photoelectron Spectroscopy (XPS)

X-ray Photoelectron Spectroscopy (XPS) is used to measure the elemental composition, empirical formula, chemical state and electronic state of the elements that exist within a material. It has the ability to image and analyze features as small as 10µm in diameter.

Specifications:

- Photo-electrons ejected from top surface (0.5 – 7.5nm) of sample
- X-ray beam diameter: <10µm to 200µm
- Ion beam energies: 5eV to 5keV
- Ultra High Vacuum (UHV)

Applications:

- Scanning X-ray Imaging (SXI)
- Micro-area spectroscopy
- Macro-area spectroscopy
- Sputter depth profiling
- Angle-dependent depth profiling
- Line scan and mapping
- Ultraviolet Photoelectron Spectroscopy (UPS)

Process Capabilities:

- **Substrate**: small pieces of 2”-12” wafers
- Multilayer thin film samples