
X-Ray Photoelectron Spectroscopy (XPS)



Leibniz Institute
for high
performance
microelectronics

Technical Parameters

Photoelectron Spectrometer:

PHI VersaProbe II

X-Ray Source: Aluminium anode (Al K α ,
photon energy 1486,6 eV)

Ion Source: Ar⁺ Ions (Energy 0.25-5 keV)

Primary Beam: mono chromatised
AlK α - 1486,6 eV

Signal Detected: Photoelectrons

Elements Detected: Li – U Chemical
bonding information

Lateral Resolution: 10 μ m – 100 μ m

Depth Resolution: 2 - 5 nm (Profiling
Mode)

Detection Limit: 0.5 at%



Application areas

- Surface analysis of organic and inorganic materials
- Determining composition and chemical state information from surfaces
- Depth profiling for thin film composition
- Thin film oxide thickness measurements

Contact person

Dr. Ioan Costina

Phone: +49 335 5625 370

Fax: +49 335 5625 327

Email: [costina@ihp-
microelectronics.com](mailto:costina@ihp-microelectronics.com)
