

DeepCore-X – High-Intensity HAXPES Brought to Your Local Lab

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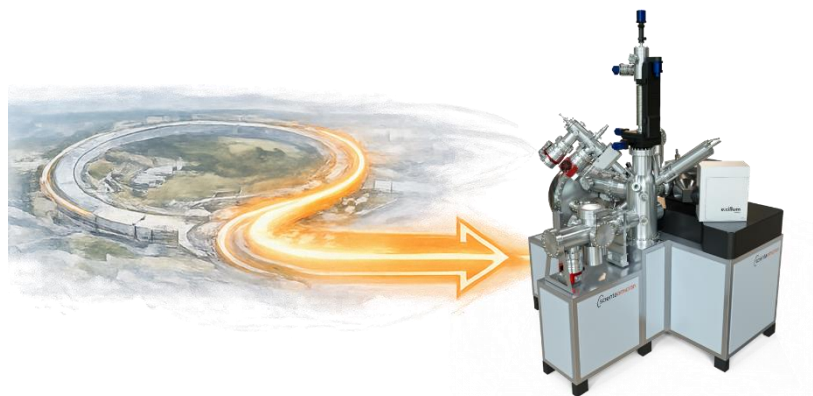


Figure 1: DeepCore-X redefines laboratory-based HAXPES by combining deep probing capability, automated high-throughput workflows, and operando measurement support. Its modular design and robust performance make it a versatile platform for buried interface studies across a broad range of materials systems, bridging the gap between conventional surface analysis and depth-resolved characterization—without the need for synchrotron access.

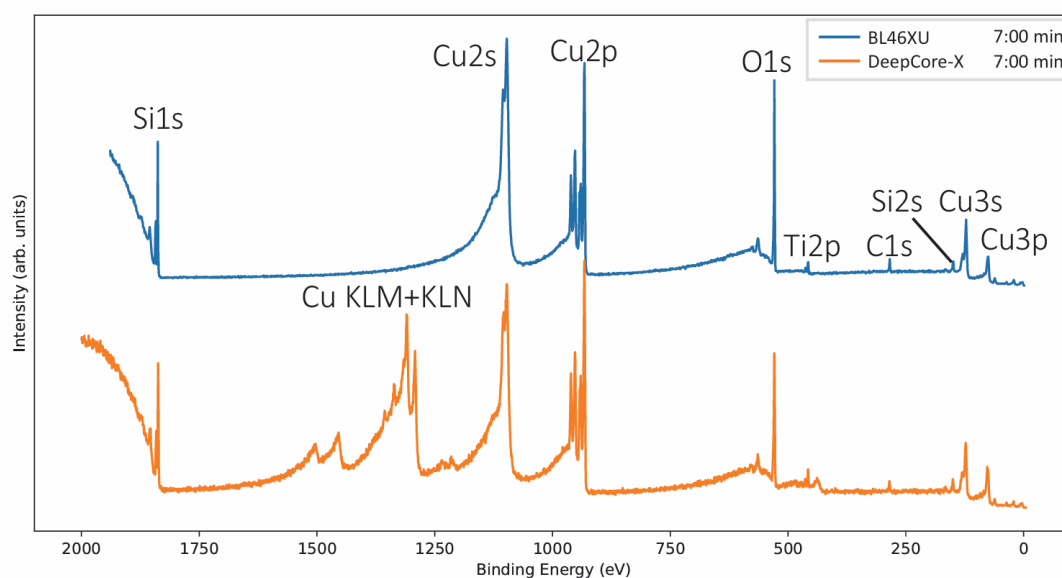


Figure 2: HAXPES overview spectra of a CuO (10nm)/TiO₂ (10nm)/Si-sub sample measured with equal acquisition time at BL46XU (Spring-8) ($h\nu=7.94\text{keV}$, energy resolution 0.2 eV) and DeepCore-X ($h\nu=9.25\text{keV}$, energy resolution 0.75 eV). Cu KLM+KLN Auger features seen in DeepCore-X data due to photon energy above Cu K edge. Samples and BL46XU data courtesy of Dr. Yasuno, Japan Synchrotron Radiation Research Institute (JASRI), SPring-8.