

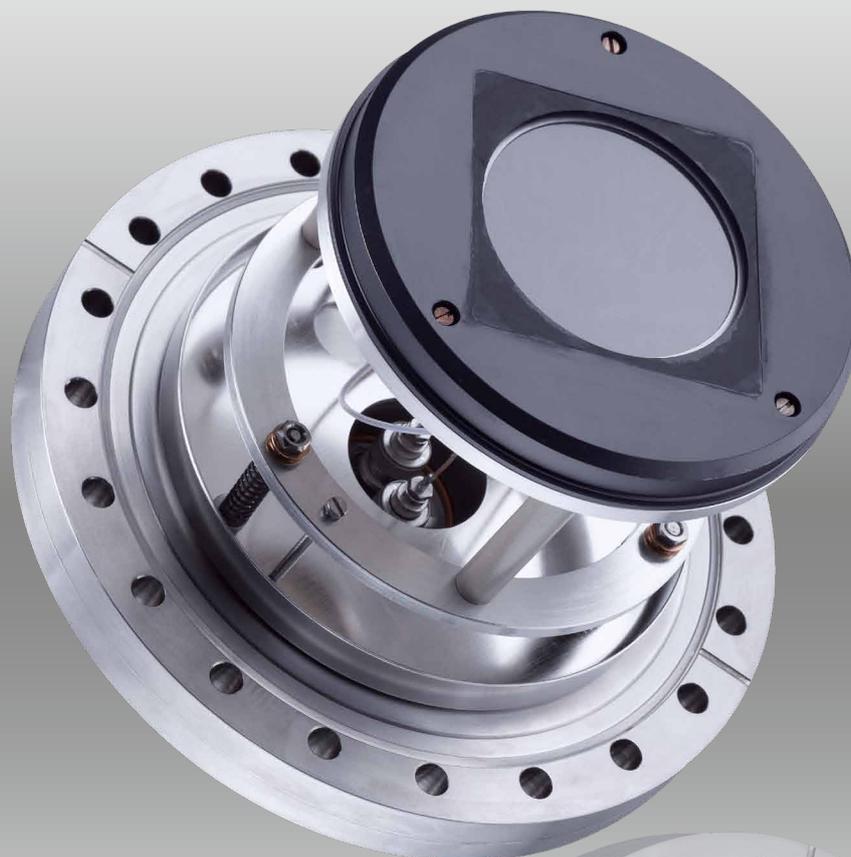
Components for Surface Analysis

1D-Delay Line Detector

Novel Multichannel Detector for PHOIBOS 100/150

Experience the New Dimension of Electron Detection and Speed up your Surface Analysis

- PHOIBOS 100/150 Detector Upgrade to 124/200 Parallel Channel Detection
- Scanned Mode or Snapshot Mode Operation
- Highest Count Rates at Excellent Energy Resolution
- Save 90 % Acquisition Time in Snapshot Mode
- Outstanding Linearity and Dynamics
- Real Count Rates for Reliable Quantification
- Excellent Time Resolution for Dynamic Experiments

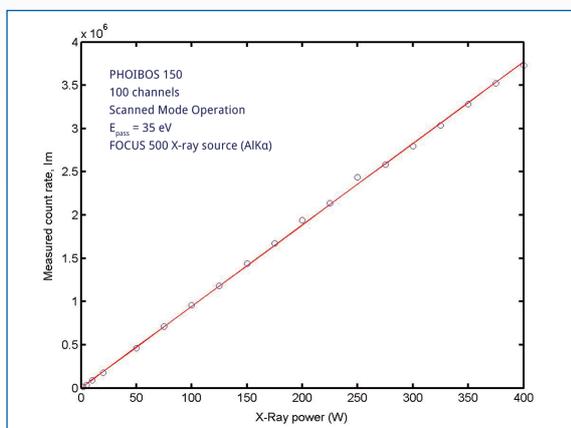


Motivation

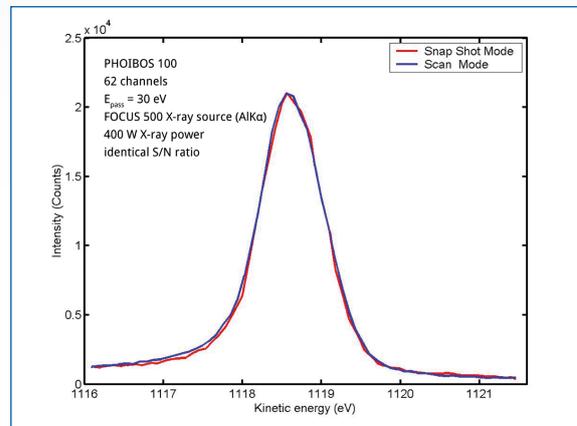
In the PHOIBOS 100/150 analyzers an energy window of about 20 % / 13 % of the pass energy is linearly dispersed over the detector area. The excellent MCD calibration of the PHOIBOS analyzers avoids compromises in energy resolution during summation of the scanned spectra from the single channels. Ultimate mechanical precision, the flexible lens and the outstanding channeltron array detectors made the PHOIBOS MCD series the most efficient and advanced energy analyzers for analytical applications in the market.

Nowadays an extremely fast data acquisition is mandatory for many experiments. The fastest way is snapshot operation giving a complete spectrum without scanning the energy. The new one dimensional Delayline detector 1D-DLD for the PHOIBOS 100/150 developed by Surface Concept and integrated by SPECS combines a convenient number of parallel channels for fast snapshot operation (124 or 200 channels), highest count rates at excellent energy resolution in scanned and snapshot mode, true count rate detection, and a high dynamic range of 106, all available at an attractive price.

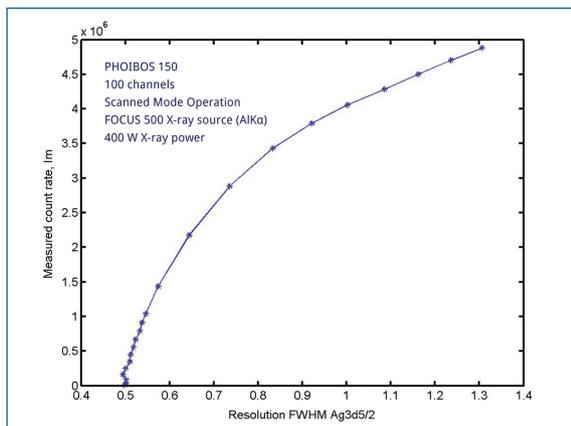
1D-DLD – Specifications and Results



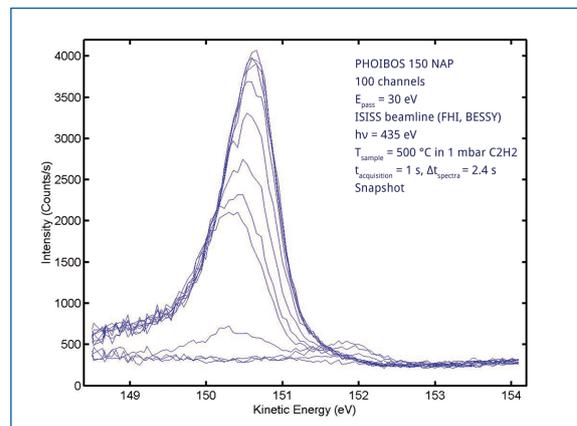
Detector Linearity



Comparison of scanned and snapshot mode operation



Count Rate and Energy Resolution



In situ growth of C film on Ni/SiO₂/Si

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