

Deflection Upgrade for DA30-L(R) Enables Deflection mode

Deflection Mode Advantages:

- Improved k_y accuracy (resolution better than 0.1°)
- Time saving by electronic deflection
- Fixed matrix elements during scan
- Reduced manipulator requirements
- Ensures same spot for all $k//$
- Patented deflector concept
- Sequential full cone detection

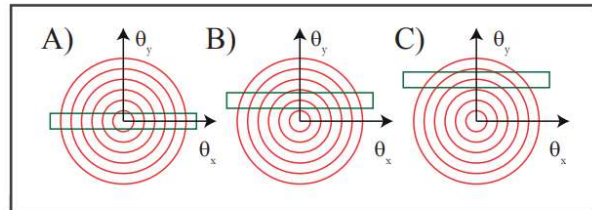


Figure 2: Sequential deflection along θ_y enables measurements of the whole acceptance cone of the analyser without tilting the sample.

A: Deflectors off. B and C: Increasing deflection along θ_y .

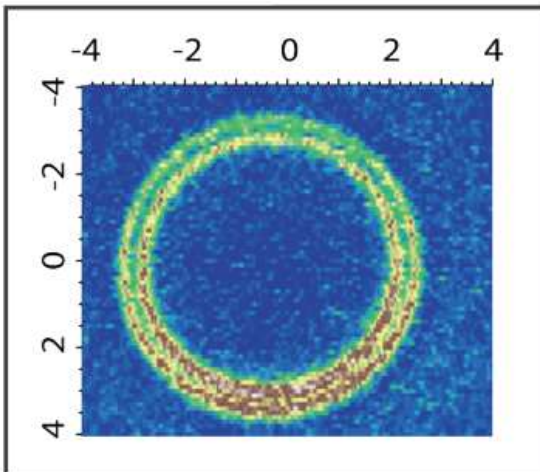


Figure 3: Fermi surface map of Au(111). Scan mode using angular mode 30.

Sample was not moved and spectrum was recorded at 77 K. Measuring time: less than 1 min.

Data Courtesy: Dr. Ivana Vobornik, CNR-IOM, TASC Laboratory, AREA Science Park, Trieste, Italy.

Measure electrons in a full cone of 30 degrees opening angle. Opens up for band mapping of the full surface Brillouin zone without the need to rotate the sample.

This possibility is a big advantage, since it ensures that the exact same position of the sample is probed during the whole measurement.

When measurements are performed without sample rotation an additional advantage is that matrix element effects, caused by variations in ionization cross section for different photon to sample angles, are avoided. This possibility also improves both spectral quality and measurement efficiency, since deflection is more accurate and faster than sample rotation. Another advantage, for some samples, is that when rotation requirements are decreased, it is possible to use sample manipulators with fewer degrees of freedom.

This in turn not only simplifies the experimental setup, but also allows for lower sample temperatures.

Summary

Part number:

- B004476 Deflection Upgrade for DA30-L(R)

Parts included:

- HV-cards
- JLD Filter box
- Optical fibres
- Lens table upgrade

Prerequisites:

- DA30-L(R) or DA30-L(R)-8000

Onsite effort:

- Does not require SO Engineer on site

Options:

- Combine with other upgrades, installation
And onsite training

How to contact us:

www.scientaomicron.com
info@scientaomicron.com