

Services and Support

Photoelectron spectroscopy training

Scientia Omicron electron spectroscopy systems and analysers are now being operated worldwide exceeding one hundred installations! Based on typical service and training requests, we now offer popular training packages to prolong equipment lifetime and achieve reliable results faster.

The training packages are available for the full range of our photoelectron spectroscopy products. This includes our latest ARPES Labs equipped with the DA30-L or DA20 deflection type analysers, as well as equipment from previous generations, where some well-established systems know-how might have been lost with the rotation of students and staff.

The goal is to teach best practices for a safe, efficient and productive use of your scientific equipment. We focus on hands-on oriented training, while providing the basic theoretical background.

We offer two levels of training, which can be tailored to meet your specific needs and capabilities:

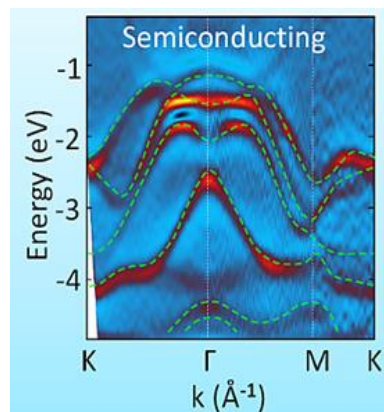
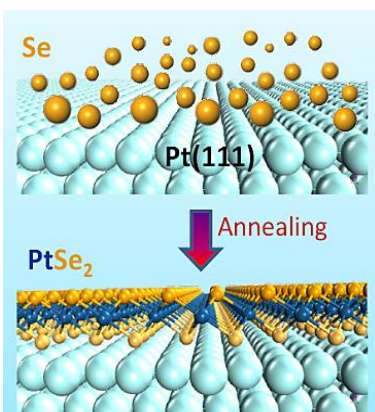
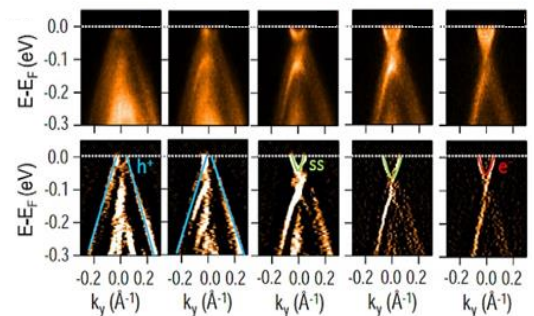
Level 1 - Essentials

These modules focus on general UHV and electron spectroscopy knowledge and are well suited as a general update or as an introduction. As part of the package, we will perform a basic health check of your setup. Depending on factors like status of the system, possibilities of sample preparation, and available light sources, at least two days of training are recommended. During the training, we will focus on how to conduct measurements in a secure and comfortable manner and achieving reliable results.

Consisting of *Module 01 – UHV system*, *Module 02 – Sample preparation*, *Module 03 – Light source*, *Module 04 – Performing standard measurements*, and *Module 05 – Data handling*.

Level 2 - Advanced

Suitable for customers who are already comfortable with the essentials covered in level 1. Several training modules are available with the goal of teaching advanced and specialty methods to get the maximum performance and productivity out of your equipment. Topics can include **automized measurements**, **sample cooling**, **analyser performance**, **spin detectors**, and **troubleshooting and maintenance**.



Europe Training Level 1 at a glance:

- From beginners to experts
- Basic system health check included
- Best practices and reliable results
- One full day at customer site 4000€
- Two full days at customer site 6000€
- Scientia Omicron Certificate for up to four attendees

Non-European-Countries:

- Please contact us for individual offers.

Training Details

Level 1 - Essentials

- Basic UHV training
- Hands-on measurements
- MISTRAL controller
- Analyser power supplies
- Vacuum setup and interlocks
- Loading of samples in and out of the UHV System
- Safe sample transfer and manipulator movement
- Sample preparation (annealing, sputtering, cleaving, evaporation)
- Light sources (HIS, VUV5k, X-ray, UV-X Laser)
- SES software essentials (defining regions and sequences, swept vs. fixed mode, binding energy vs. kinetic energy mode, transmission vs. angular mode, basic optimization)
- Sample alignment
- Different file formats, saving experiment parameters, loading data into IGOR
- Memory management
- Hints and tricks from experts

Level 2 - Advanced

- Cooling (LN2 and LHe, open and closed cycle cryostats)
- Temperature control with heaters
- Camera adjustment
- Advanced SES software control (MCP calibration, global detector setup, automatized Fermi surface measurements, deflector operation, ADC vs. pulse mode)
- Angular testing device
- Spin detector calibration
- Spin-resolved measurements
- Identify and isolate issues
- Problem solving strategies

How to contact us:

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