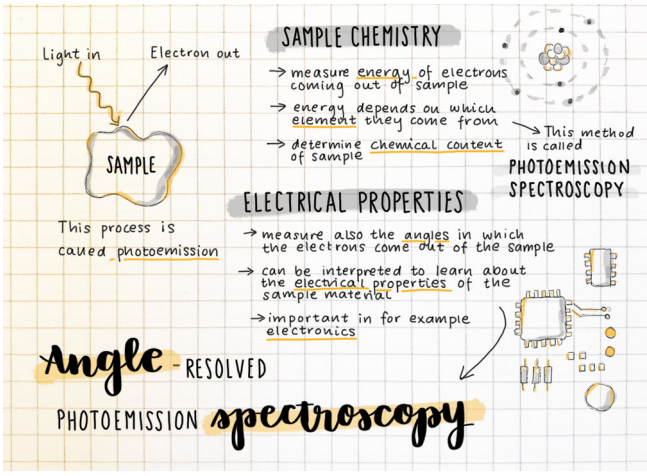
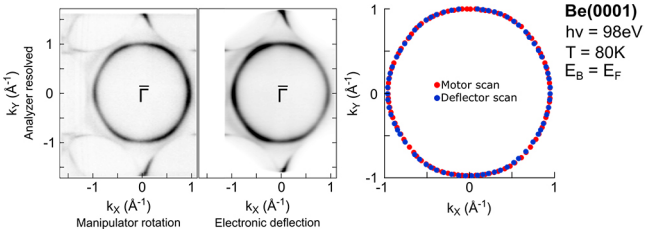
Bloch – a very versatile tool

Bloch, with an energy range from 10 to 1 000 eV, consists of two branchlines and is dedicated to ARPES, spin-ARPES and core-level spectroscopy.

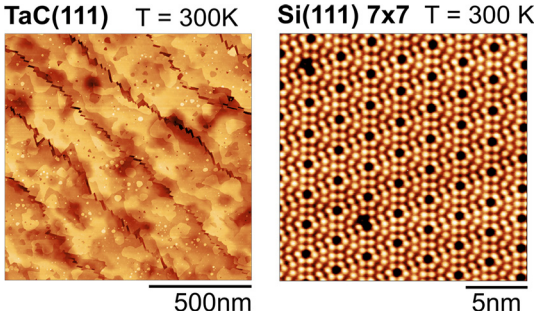


The ARPES branchline has very high angle- and energy- resolution with high flux and polarization control. Electronic deflector scans enable accurate Fermi surface mapping without moving the sample.



Manipulator rotation and electronic deflection give the same results.

It comes with two sample preparation chambers, for high and low vapour pressure evaporations. In addition to enabling a higher throughput, this reduces the risk of contamination for experiments which demand high levels of cleanliness.



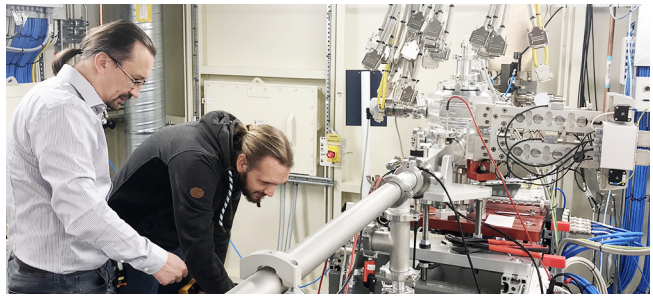
The ARPES branchline is equipped with STM for imaging samples on lengthscales from µm down to nm. Stable, atomic resolution imaging combined with lock-in dI/dV spectroscopy provides a powerful real-space complement to ARPES studies.

The first commissioning experiments was done in spring 2018 and the first open call for users is anticipated to take place early 2019. Stay tuned at www.maxiv.se/bloch

Short beamline updates

The **Balder** beamline commissioning is well underway.

The nominal beam quality has been reached at the sample position: a ~100 µm focus size at almost 10^{13} ph/s flux at 9 keV. Fine alignment in a broader energy range and beam dynamics studies are the next objectives.



Konstantin Klementiev, Beamline Manager and Justus Just, Postdoc, setting up ionization chambers and electrometers.

Recently **BioMAX** started its third user run operating the first time the ISARA sample changer (IRELEC, France) on a regular basis. The ISARA system supports up to 400 samples within a single large dewar. Currently the Universal Puck standard is used to organize and transfer samples using a double-gripper tool. A sample exchange takes approximately 30 sec.

Within the first two weeks of operation, four user groups mounted 320 samples. Due to one occurred hard-stop, two samples where lost during this initial operation. This infrastructure including the control software MXCuBE3 is currently prepared for later remote operation.

Beamline scientist Gustavo de Lima is mounting user samples during the first sample changer user operation.