

ISS Beamline, Capabilities and Opportunities

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High flux and fast scanning capabilities of the Inner Shell Spectroscopy beamline (ISS) will allow to characterize the electronic and structural changes during processing of materials for a wide range of in-situ and operando experiments. To increase the chemical sensitivity of the experiment, a wide range of detection systems, including silicon drift detectors, von Hamos spectrometers, and spherical backscattering analyzers are integrated into the sample environment providing simultaneously to the user fluorescence detection with 150eV- sub-eV resolution. Key to the in-situ and operando experiments is the gas handling capabilities and the sample handling system allowing full environmental control of the sample. This system includes the robotic exchange of the sample, the transportation of the sample under vacuum or inert atmosphere, and the preparation of the sample inside a glove box.

We will present a short overview on the beamline capabilities, the time lines of operations and present a vision on the future operation of the beamline.