

X-ray surface diffraction from solid and liquid surfaces at the ESRF ID10 beamline

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Beamline ID10 at ESRF is a multi-purpose, high-brilliance undulator beamline. Endstation EH1 is dedicated to the high-resolution X-ray scattering and surface diffraction on liquid and solid interfaces, combining multiple techniques in a single instrument (XRD, GISAXS, GIWAXS, XRR, XAS). Among the applications are studies of Langmuir films, amphiphilic polymers and nanoparticles at the air-water interface, surface structure of complex fluids (colloid, gel, sol), structure and growth of two-dimensional crystals of molecules, macromolecules and proteins, morphology and crystalline structure of thin organic and non-organic films on solid substrates, strain, ordering and correlation of crystalline nanostructures, quantum dots, and wires on substrates, the structure of surface catalysts under reaction conditions. In this contribution, I will present recent examples of studies done at ID10, beamline developments, and its capabilities after the ESRF-EBS upgrade.

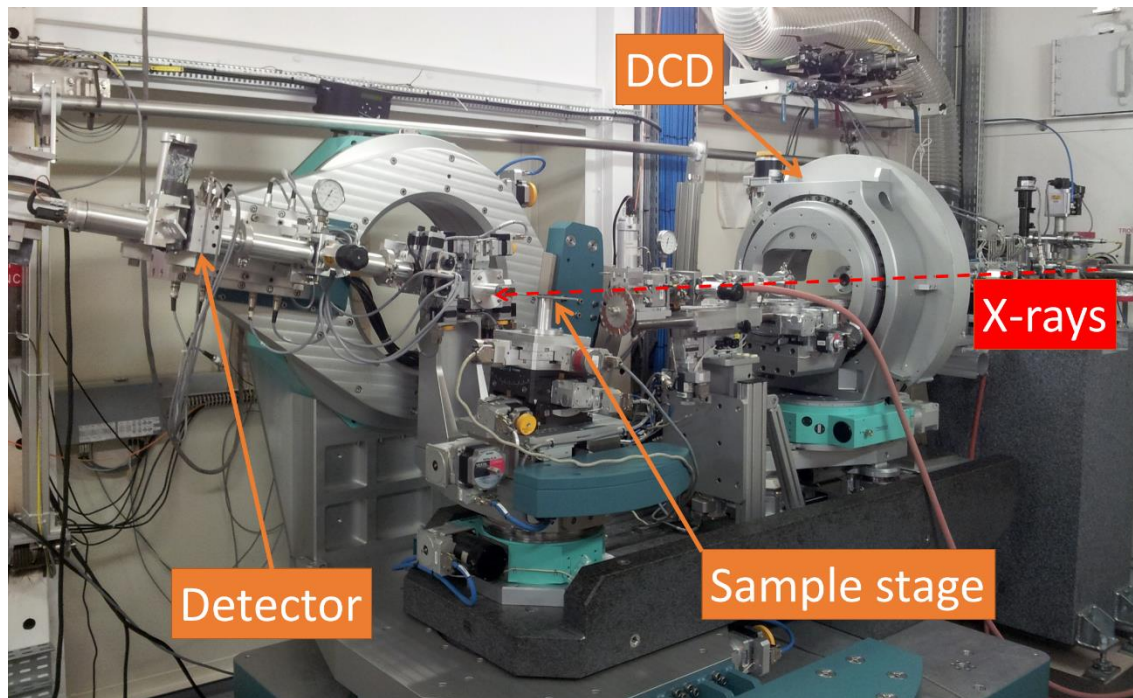


Figure 1 ID10 surface diffraction endstation