

## PolyX@SOLARIS – beamline for multimodal microimaging and spectromicroscopy

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PolyX (polychromatic X-rays and polycapillary X-ray optics) is a newly developed bending magnet beamline at SOLARIS National Synchrotron Radiation Centre in Kraków, Poland [1]. The beamline is dedicated to X-ray microimaging and X-ray spectromicroscopy [2].

PolyX offers several techniques:  $\mu$ CT ( $\sim 0.7\mu\text{m}$  resolution),  $\mu$ XRF,  $\mu$ XAS and  $\mu$ XES. Imaging resolution  $\sim 200\text{nm}$  will be possible via recently developed X-ray tomography with multiple ultranarrow cone beams [3]. The end station can be easily reconfigured; therefore, in addition to implementing other synchrotron methods at short notice, PolyX will also work as a test station for innovative hard X-ray methods as well as new solutions of X-ray optics, new imaging geometries or detection systems. PolyX can also provide a dedicated area for user experiments and/or user end-stations. A photo of the experimental setup is presented in Fig. 1.

The beamline operates in three modes: high flux (DMM, bandwidth 2%), high resolution (DCM, Si(111), bandwidth 0.02%) and a white beam mode. Polycapillary and monocapillary optics are used to generate hard X-ray beam in the energy range of 5-15keV with spot sizes in range  $\sim 5\mu\text{m}$ - $100\mu\text{m}$ .

In this contribution a model experiment will be presented to show how to combine techniques available at the beamline to obtain complementary information about the sample (i.e. internal structure -  $\mu$ CT, elemental distribution -  $\mu$ XRF, speciation -  $\mu$ XAS/ $\mu$ XES).

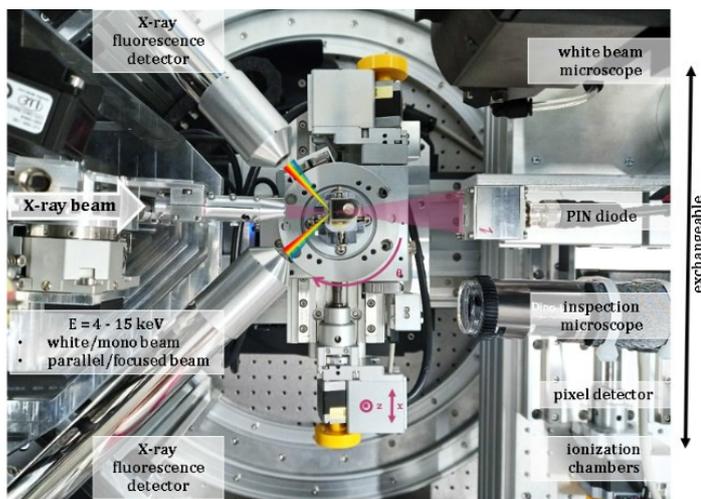


Figure 1 A photo of the PolyX experimental setup (top view).

**Acknowledgements:** The construction of PolyX is financed by Ministry of Polish Ministry of Science and Higher Education (6991/IA/SP/0010/2019). The work is supported under the Polish Ministry and Higher Education project: "Support for research and development with the use of research infrastructure of the National Synchrotron Radiation Centre SOLARIS" under contract nr 1/SOL/2021/2.

### References

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