

3D Imaging of Advanced Materials using Soft X-ray Laminography at PolLux

Tuesday, 29 October 2019 16:40 (20 minutes)

The 3D imaging techniques based on hard X-ray radiation like computed tomography (CT) are commonly used to reveal the inner structure of sophisticated materials and complex objects. Although hard X-ray CT was invented more than 45 years ago[1], the use of soft X-rays in 3D imaging is still an exception so far[2], even though soft X-ray radiation involve some advantages in terms of chemical sensitivity and contrast properties[3-6].

We will present the new Soft X-ray Laminography (SoXL) setup implemented at the PolLux beamline going from 2D scanning transmission X-ray microscopy (STXM) to 3D imaging. In addition to a detailed introduction to the new setup, examples of already successful SoXL experiments from various research fields will also be shown. The realization of SoXL at PolLux is based on the fruitful collaboration of different research groups from SLS and their experience concerning 3D imaging. The emphasis of this presentation will be to advertise SoXL to a broader community within PSI and to reach potential users for futures projects.

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Session Classification: Contributed talks

Track Classification: Oral presentation