

Experience with the Color X-Ray Camera at the BAMline

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The Color X-ray Camera CXC or SLcam[®] is an energy-resolving X-ray camera capable of energy- and space-resolved measurements. It consists of a high-speed CCD detector coupled to a polycapillary optic that conducts the X-ray photons from the probe to distinct pixels onto the detector.

The camera is capable of fast acquisition of spatially and energy resolved fluorescence images. A dedicated software enables the acquisition and the online processing of the spectral data for all 69696 pixels, leading to a real-time visualization of the elements distribution in a sample. It was developed in a joint project with BAM, IFG Berlin and PN Sensors.

In this contribution we will discuss the use of the CXC at our beamline, the BAMline at BESSY II and applications of the CXC from different areas, like biology and archaeometry.

Further we will address the need of further developments in the area of efficient X-ray optics and advanced data processing.