

Multilayer Analyzer Array Detectors for X-ray Fluorescence

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The development of Multilayer Analyzer Array Detector [1] for X-ray fluorescence is to eliminate the count rate limitations encountered with the multi-element Ge detector. This type of detectors has been developed and is operational for the detection of x-ray fluorescence tunable in the energy region from 4 to 10 KeV at the BioCAT beamline of the Advanced Photon Source. The energy resolution of the detector is comparable to the solid state detector with a very high count rate. Utilizing the photon flux provided by the third generation source, the gain in the efficiency of data collection is over 10 times. We will discuss the further development of such detectors for more sensitive detection and in the lower energy region.

References

[1] K. Zhang., G. Rosenbaum, and G. Bunker, Journal of Synchrotron Radiation, **5**, 1227, (1998).