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Consumer grade CMOS cameras as energy dispersive soft x-ray detectors

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The advent and subsequent explosion of portable consumer electronics in the last twenty-five years has led to the development of mass produced, small form factor, high sensitivity, low noise and fast readout rate CMOS imaging sensors (CIS). These now ubiquitous CISs have found multiple scientific applications in nuclear physics and more recently have been adopted for x-ray fluorescence measurements in a single-photon counting regime for the soft x-ray range. Here we report a novel use of these CISs as low-cost detectors of fluorescence emission and soft x-ray scattering for x-ray absorption spectroscopy on the SGM Beamline, at the Canadian Light Source.

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CMOS

Keyword-2

Soft X-ray

Keyword-3

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