

Poster Presentation

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A new energy-dispersive position sensitive detector

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In this paper a new energy-dispersive position-sensitive line detector with an energy resolution better than 500eV will be introduced. This detector is based on the well known silicon strip technology and thus offers the same advantages in terms of intensity gain / measurement speed and angular resolution as its currently available predecessors. It can be operated both as a traditional line detector to acquire one-dimensional diffraction data, but also turned 90° (perpendicular to the diffractometer plane) to acquire two-dimensional diffraction images (e.g. He, 2009). Its remarkable energy resolution allows to effectively filter K β radiation and specimen fluorescence, eliminating the need for any K β -filters or secondary monochromators and related intensity losses in both one- and two-dimensional X-ray diffraction. The detector technology as well as application examples will be discussed.

[1] He, B.B. (2009): *Two-dimensional X-ray diffraction*. Wiley, ISBN 978-0-470-22722-0, 426pp.

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