

### **XPAD: A Pixel Detector for Material Sciences**

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Currently available 2D detectors do not make full use of the high flux and high brilliance of third generation synchrotron sources. For this reason numerous experiments are still performed using slits and photomultipliers that allow only point detection. At the present time, the 2D detectors in most common use are CCD cameras with indirect photon detection.

The XPAD photon counting detector has been developed for materials science and small angle scattering experiments similar to those performed on the CRG-D2AM beamline at ESRF. At the time, its prototype is built of 8 modules of 8 chips for a total area of about 6.8x6.8 mm<sup>2</sup> and 200x192 pixels.

Recent results of powder diffraction of CaSrX zeolite [1] have proved that such 2D detectors present a new opportunity to improve the quality of our measurements. SAXS results will also be presented and compared to CCD ones.

[1] Basolo S., Berar J.-F., Boudet N., Breugnon P., Caillot B., Clemens J.-C., Delpierre P., Dinkespiler B., Koudobine I., Meessen Ch., Menouni M., Mouget Ch., Pangaud P., Potheau R., Vigeolas E., accepted in IEEE Trans. Nucl. Sci., conference IEEE-2004, Rome.

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