

High Resolution Powder Diffraction at ID22

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Following upgrade of the ESRF storage ring in 2019 to the extremely brilliant source (EBS), the ID22 high resolution powder diffraction beamline has been equipped with a Dectris Eiger pixel detector, mounted behind its thirteen-channel Si 111 multi-analyzer stage. The spatial resolution of this detector allows the effect of axial divergence, that causes low-angle peak asymmetry, to be corrected, thereby simultaneously improving peak shapes, angular resolution and counting statistics. The use of the beamline to study a variety of materials will be illustrated, including adsorption of CO₂ or other molecules in zeolites, and structural studies of organic and inorganic materials.