

## **Protein Micro-Crystallography at the ESRF Microfocus Beamline**

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One feature of the high brilliance of third-generation synchrotron radiation sources is the possibility of reducing sample volume in single-crystal and fiber-diffraction experiments. Experiments in this area were initially developed at ESRF for the study of inorganic crystals down to sub-mm<sup>3</sup> sample volumes, but have also recently been applied to protein crystallography. The talk will give an overview on instrumentation developed for this purpose at the ESRF microfocus beamline (ID13) with beam sizes down to a few millimeters based on an ellipsoidal mirror and a Si-111 double monochromator. Emphasis will be given to single-crystal diffractometry and fiber diffraction, although scanning diffractometry will be also mentioned for the study of more complex biological objects. Single crystal experiments are currently not so much limited by sample volume as by sample handling, alignment, and radiation damage. It appears that the quality of data that can be obtained with a microbeam can be at least as good as that obtained on a larger crystal.