BL44B2

Theme: In-Situ Powder Diffraction Technique for Chemical Reactions

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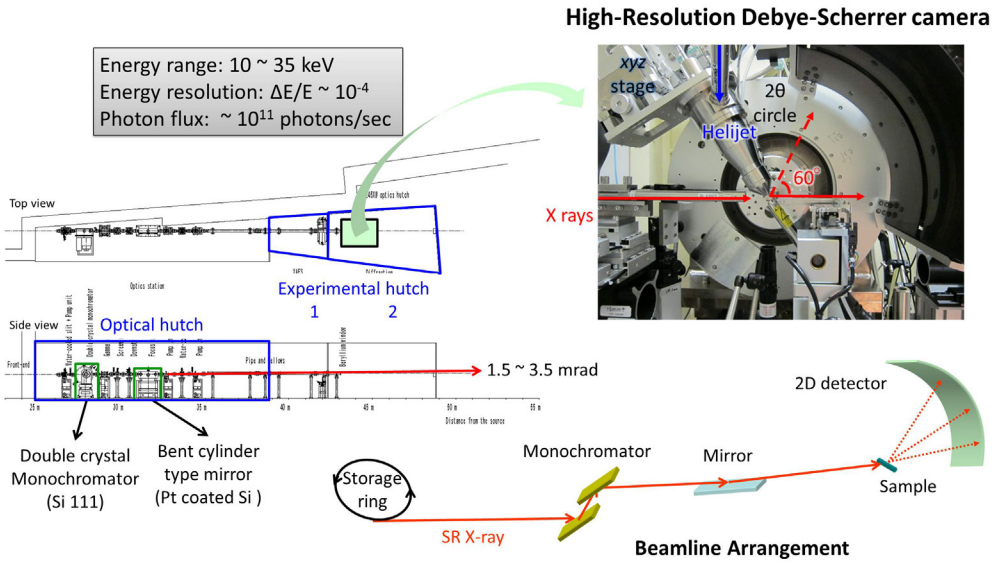
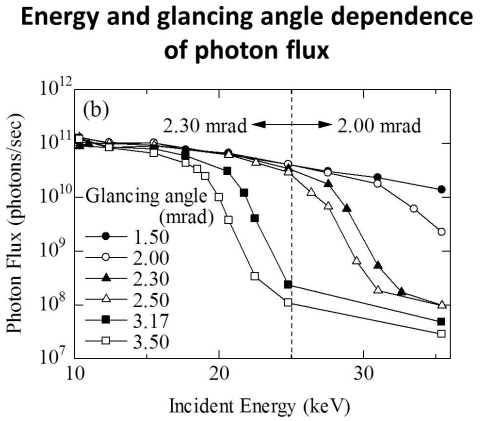
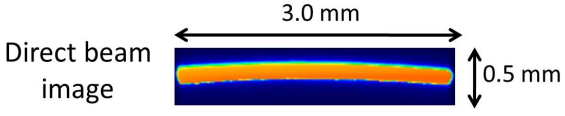
In-situ structure explorations under chemical reactions involve fast X-ray detectors as well as high-brilliance X-ray sources. This practical will give you an opportunity for experiencing the in-situ powder diffraction experiment with a reduction cell.

To achieve the purpose, the practice will be a following process at the RIKEN Materials Science beamline BL44B2:

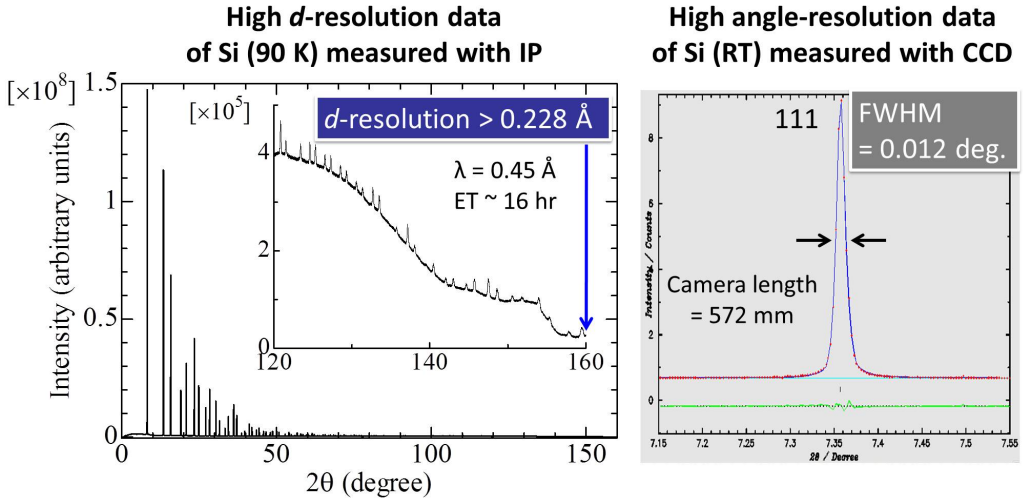
1) Setup of the optics and diffractometer



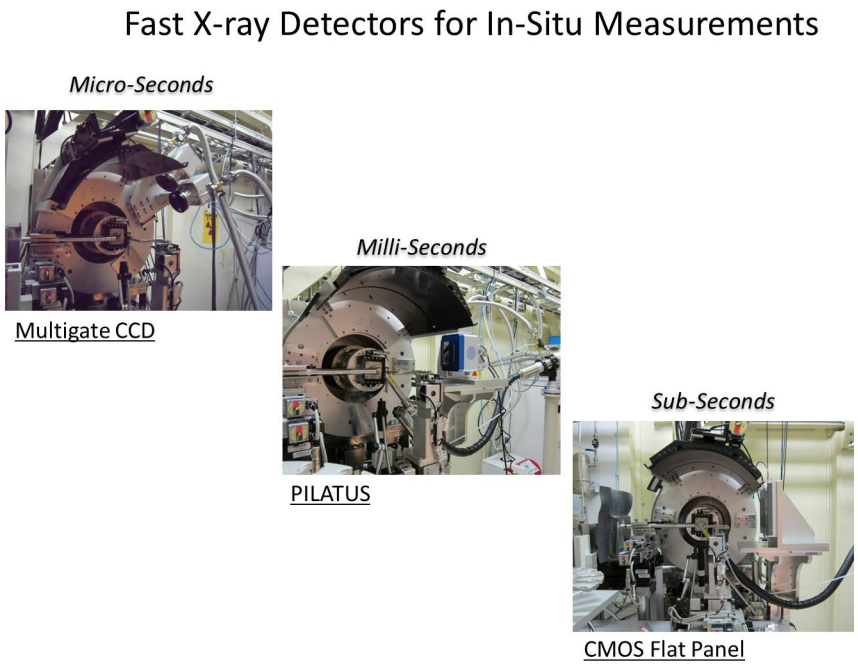




2) Data measurement of a standard sample with an imaging plate to check the alignment



3) Setup of a flat-panel CMOS detector



4) Setup of the in-situ temperature and humidity control cell under gas

5) Data measurement of some oxide material with the in-situ system

6) Interpretation on the time-dependence data from the viewpoint of chemical reaction

Further details will be explained by the beamline staff at the practice.