

BL12B2 NSRRC BM

The contract beamline BL12B2 of National Synchrotron Radiation Research Center (NSRRC, Taiwan) has been maintained to serve for material science and biological structure users. The optical components of BL12B2 include collimating mirror (CM), double crystal monochromator (DCM), and focusing mirror (FM). The designed focusing point is located at the sample position of PX table. The measured spot size of the beam is about $25 \times 160 \mu\text{m}^2$ at protein end station and total flux about 1.5×10^{11} at 12keV. There are four end stations, EXAFS, x-ray diffraction, x-ray scattering, and protein crystallography (PX) end stations, inside the experimental hutch of BL12B2. The beam time is shared between material science and bio-structure users with equal amount. More than 90% of the BL12B2 users are from Taiwan.

EXAFS, x-ray diffraction, x-ray scattering end stations are served for material science users. The user programs cover a wide variety of material science topics, such as strongly correlated system, nano-science, systems under extreme conditions such as high pressure, etc.

A major upgrade of protein crystallography(PX) end station has been completed and user operation started from the beginning of 2009. At 2009B, the detector Q4R has been upgraded to Q210r which has a wider detection area and faster read out speed, see Fig.1. Since new PX table is equipped with movable CCD stage, it is possible to carry out other types of experiments. We have tested high pressure XRD experiment using this new table at the 2009B cycle. X-ray holography experiment is also plan to carry out at the same position during the 2010A cycle.

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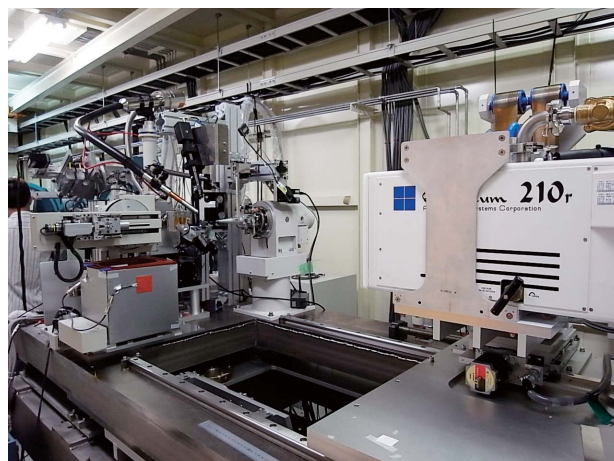


Fig.1 Current PX table set up at BL12B2 experiment hutch.