

BL12B2 NSRRC BM

BL12B2 is being operated to serve users for material science and biological structure. The optical component of B2 is equipped with Collimating Mirror (CM), Double Crystal Monochromator (DCM) and Focusing Mirror (FM). The spot size of the beam is about $250\mu\text{m}$ squared at the protein end station and the total flux is about 1.5×10^{11} at 12keV (see Fig.1). There are four end stations in the experimental hutch, EXAFS, X-ray diffraction, X-ray scattering and protein crystallography (PX) end stations. The beam time has been shared between material science users and bio-structure users with approximately equal amount. More than 90% of the B2 users are from Taiwan.

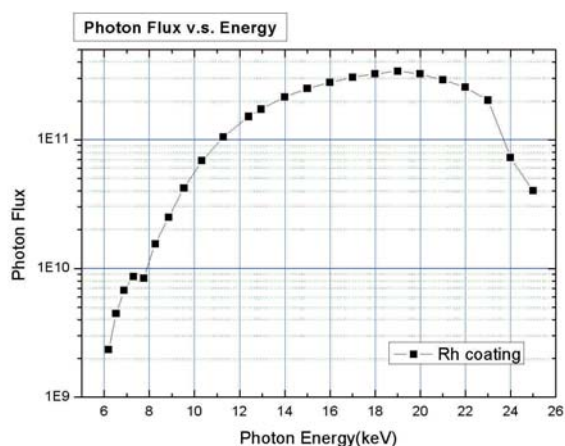


Fig.1 Photon flux versus photon energy at sample position of protein end station.

EXAFS, X-ray diffraction and X-ray scattering end stations mainly serves for material science users. The users cover a wide variety of material science topics, such as strongly correlated systems, nano-science, systems under extreme conditions (high pressure), etc.

The upgrade of current protein crystallography (PX) end station has been planned (see Fig.2). The aim of our upgrade is to have our PX data collection system fully compatible with other SPring-8 PX beamlines. It is expected not only to accelerate our present users' data collection speed but to also give easier access to Japanese PX community. The details of the upgrade are as follows. First, all the equipments except detector (ADSC Q4R)

will be renewed. Second, operation software, SPring-8 original software BSS will be installed. Third, automatic sample changer system (SPACE) will be installed. These upgrades are to be scheduled to finish by the end of 2008 and open to users from the beginning of 2009.

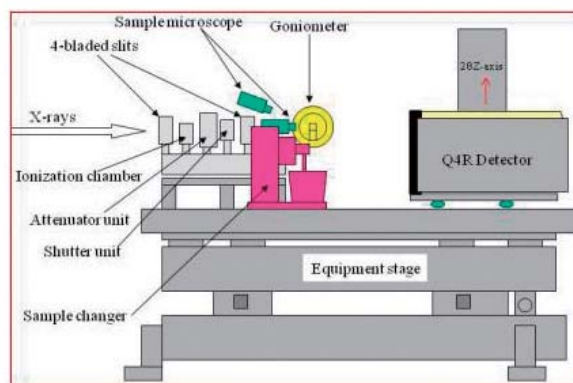


Fig.2 Schematic image of new protein end station.

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