

# Industrial Consortium BM (BL16B2)

## 1. Introduction

The industrial consortium for materials research was organized in 1996 for industrial applications of high brilliance X-rays in SPring-8. The consortium is composed of 13 companies in the fields of electronics, steel, electric power and automobiles. JASRI acts as a secretariat. The beamline and experimental station have been constructed this year for XAFS and X-ray topography. The beamline BL16XU with an undulator source has also been constructed at the same time.

## 2. Outlines of the Beamline

Figure 1 shows the beamline layout. The first optical component in the beamline is the standard double crystal monochromator in SPring-8, and next is a cylindrical mirror with a bent system. We use X-rays from 4.5 to 60 keV for XAFS or X-ray topography by either the Si(111) or the Si(311) crystal. The lowest X-ray energy is selected for the XAFS measurement of Ti K edge.

The mirror is used to reduce higher harmonics and to focus the rays. Under the standard incidence at 5 mrad, a X-ray up to 13.5 keV is focused at 41 m point from the source and the 3rd harmonic component is eliminated. The components after the mirror are inclined to connect a change in the beam path to the base.

The hutches of BL16B2 and BL16XU are joined, and there are two specific doors for moving some components in the beamline and for entering from the experimental hutch. The status signal of the door between the two beamlines is connected with both interlock systems.

## 3. Experimental Station

The instrumentation for XAFS and X-ray topography is now being constructed. All systems, *i.e.*, slits, ionization chambers, a SSD, a cryostat and goniometers for XAFS as well as the precise diffractometer for X-ray topography are set on a base. Various other equipment and utilities such as a press for making a tablet and a gas supplier systems are being prepared.

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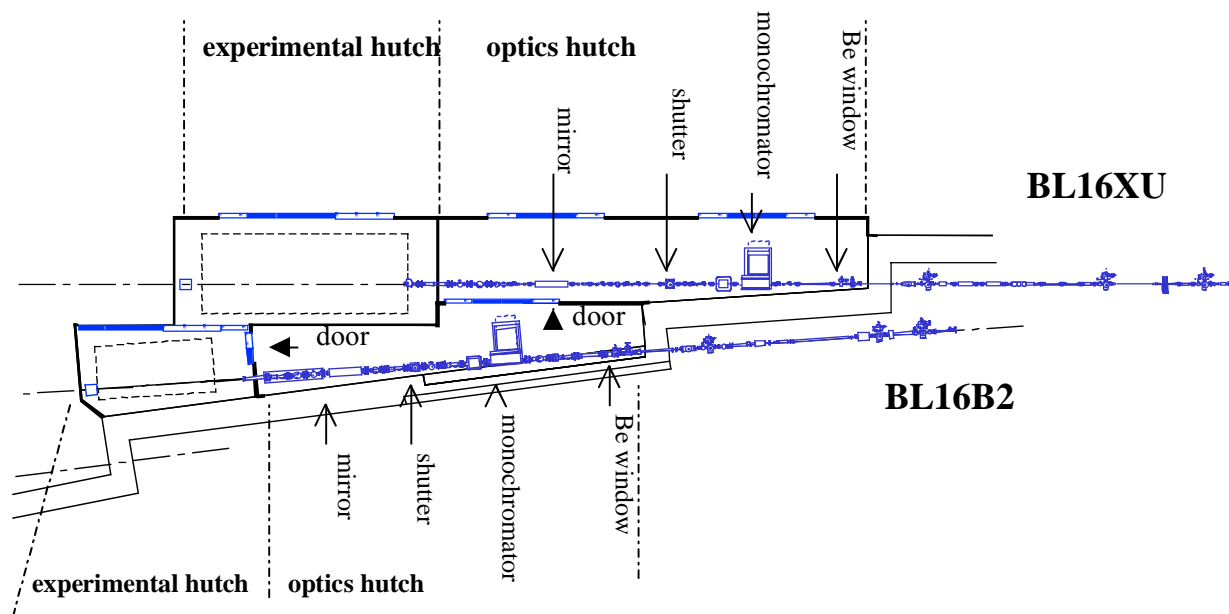


Fig. 1. Layout of the beamline (BL16B2, BL16XU).