Crystal Structure Analysis

Beamline: **BL02B1**

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Subgroups: Structural Phase Transition
High Precise Molecular Crystallography
Powder Diffraction
Diffuse Scattering

Source Characteristics: Bending magnet, E_c=28.9keV
Brilliance at 50keV: 2×10^{15}ph/s/mm^{2}mrad^2/0.1%.b.w.
Beam divergence: 1.5mrad (horizontal)
Power density: 1.5 kW/mrad^2

Optics:

Distance from source	Optical element	Function
28.7m	first mirror (Si body, Pt coat)	higher harmonics elimination, vertical focusing
31.7m	double Si crystal monochromator	monochromatization, horizontal focusing
38.3m	second mirror (quartz body, Pt coat)	vertical focusing
46.0m	experimental station (hutch)	7-circle diffractometer (double 2θ-axis)

X-rays at sample: Energy range: 4 ~ 50keV
Energy resolution: $\Delta E/E=10^{-4}$
Beam size: 1×1mm^2
Photon flux: $10^{10} \sim 10^{13}$ph/s

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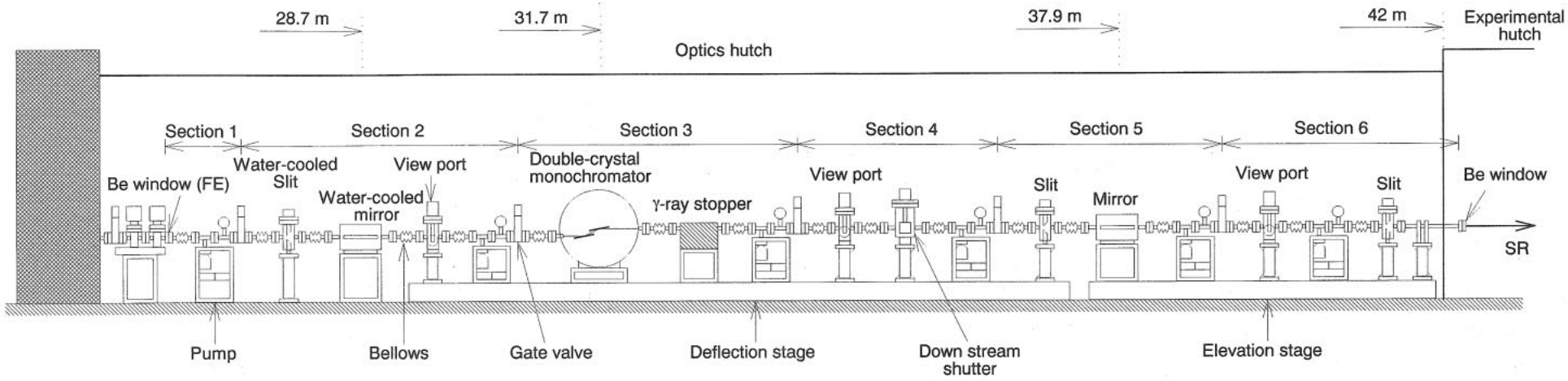

Fig. Schematic view of the Crystal Structural Analysis Beamline

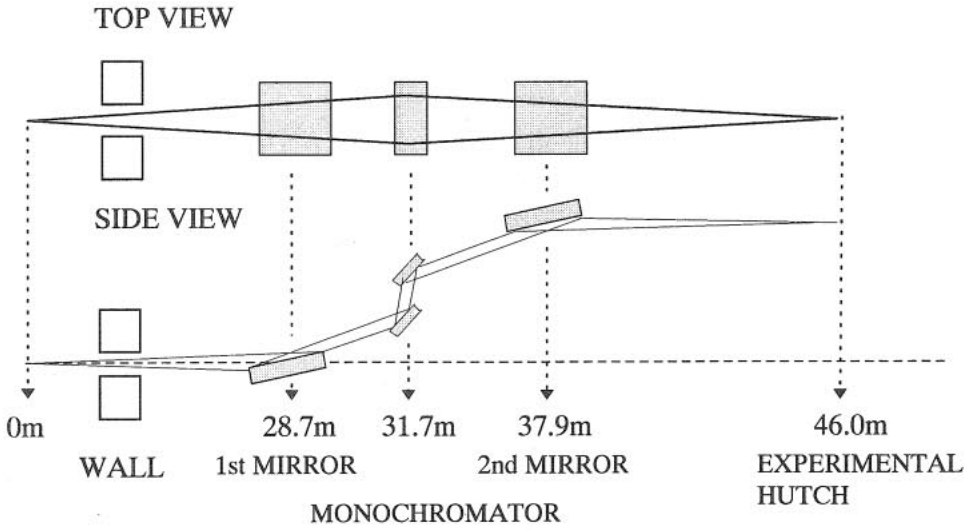

Fig. Optical layout of the Crystal Structural Analysis Beamline for the low-energy case (< ~ 20 keV)