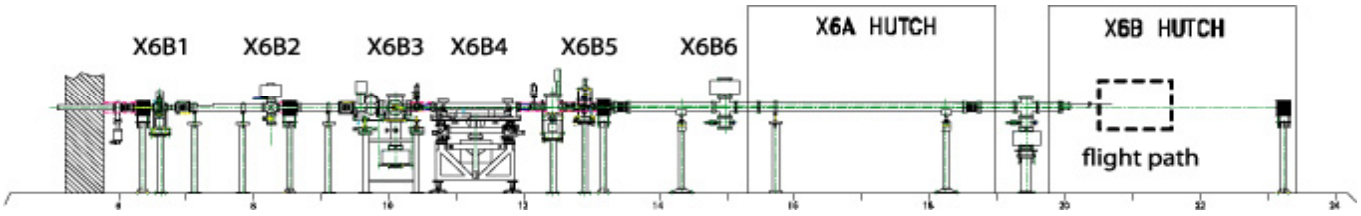
X-Ray Scattering

Beamline: X6B

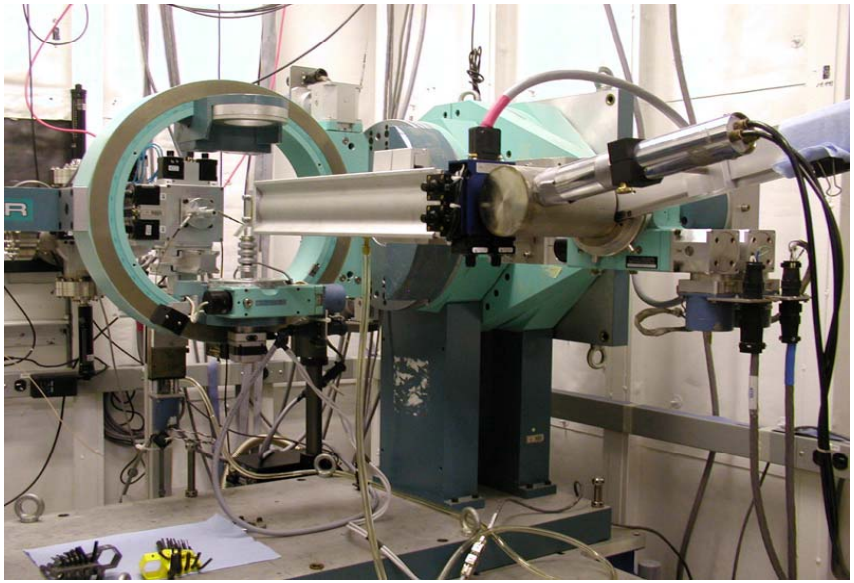
Beamline Type: facility beamline

PRT/CU Members: CFN



Techniques: X-ray scattering and diffraction

Research Program(s): Nanoscience, biomaterials, materials science, interfaces



Facility beamline with four-circle diffractometer.

1/3 time for single-channel detector setups:
- resonant diffraction
- reflectivity
- high-resolution surface scattering

CCD area detector mounts on two-theta arm
- 15 cm distance for diffraction, pole figures
- 60+ cm distance for “SAXS/GISAXS”

X21: Current Beamline Capabilities

Optics & Instrumentation:

- 27 pole hybrid wiggler
- interchangeable, cryogenically cooled double-crystal monochromator:
  - Si(111), ~5-20 keV, ~2×10^{12} photons/s, $\Delta E/E$ of ~10^{-3}
  - multilayer (Mo/B_4C), ~5-11 keV, ~10^{14} photons/s, $\Delta E/E$ of ~10^{-2}
- secondary, Si(220), monochromator
- 2 focusing mirrors for 2 hutches
- 3 instruments:

high-resolution scattering

scattering in a high magnetic field

real-time growth and processing studies