

X-ray Scattering and Diffraction

X27C (AP-PRT), PRT Beamline

Technique(s)

X-ray diffraction, time resolved

X-ray diffraction, wide angle

X-ray scattering, small angle

X-ray scattering, wide angle

Research Type

Chemistry/materials research (with emphasis on polymers and soft matter) using combined SAXS & WAXD techniques. Ideal for investigation of structures, morphologies & dynamics from atomic, nanoscopic, microscopic to mesoscopic scales in real-time and/or in-situ mode.

Instrumentation

Optical system: 3 pin-hole collimation system

In-situ Instruments and Sample Holders: INSTEC heating stage (temp. range -190 to 600°C), air-cooled dual-cell temperature jump apparatus (temp. range 25°C to 350°C) and various sample chambers. 1-D position sensitive detector: 2 EMBL (European Molecular Biology Laboratory) detectors. 2-D area detector: Imaging plate (Fuji BAS 2500); MAR CCD. The availability of various samples chambers (listed on <http://www.bnl.gov/nsls/x27c/>) must be consulted on with the spokesperson.

Data Acquisition and Analysis Software: PC-based data acquisition software for EMBL detectors. Custom codes (SASDAP, WASDAP) and commercial packages (Grams32, Spyglass SigmPlot, POLAR, TINA2.1, Image GaugeV4.0) on the PC and the UNIX workstation for data analysis.

