SWING: Small and Wide angle x-ray scatterING

SOLEIL staff:
J. Perez (Head of beamline)
A. Thureau (Beamline scientist)
P. Roblin (INRA associated scientist)
Y. Liatimi (Technical assistant)

Areas of application, instrumentation and methodologies used
Energy range: 4.5 - 16 keV

By providing information on the structure of matter on a nanometer to micrometer scale, the SWING beamline helps to answer the numerous questions relating to soft condensed matter, the conformation of macro-molecules in solution and composite materials in material sciences.

Small-angle and wide-angle scattering (SAXS, WAXS)
Sample environments : motorized stages and sample holders, thermostated quartz capillary cell for protein solutions, online HPLC and refractometer, injection robot, stopped-flow rapid mixing device, Anton Paar rheometer, Linkam THMS600 heated stage.

Major disciplines
Structural biology and chemistry of soft-matter. Low-resolution 3D structure in solution. Membrane proteins. Protein and nucleic acid complexes. Aggregate discrimination. Conformational changes. Characterization on the nanometric scale and kinetics of nucleation -growth, catalytic nanoparticles, rheological properties of nanomaterials, self-assembly mechanisms, zeolites and mesoporous materials, biovectors, organization of colloidal suspensions and nanocomposite structure/function relationships.