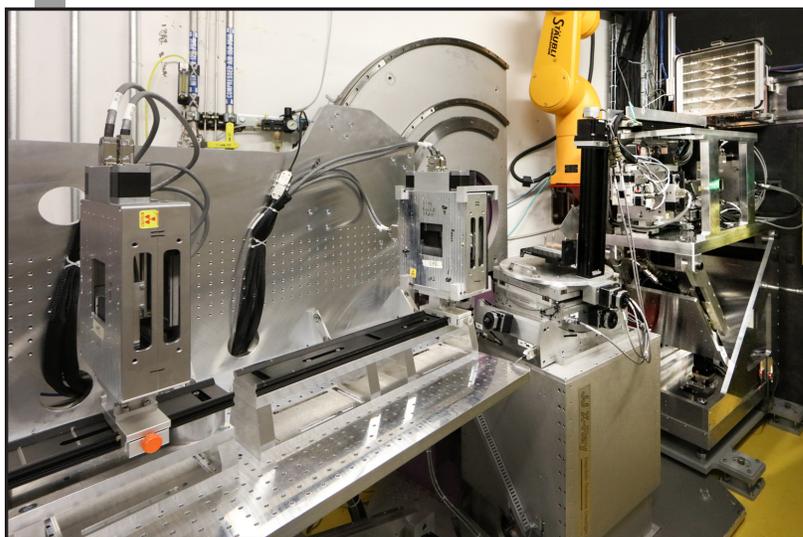


LIQUIDS REFLECTOMETER

The Liquids Reflectometer features a horizontal sample geometry and thus can accommodate air/liquid surfaces in addition to air/solid and liquid/solid interfaces. Active vibration isolation minimizes capillary-wave production by the external environment. Data rates and Q range covered at a single scattering angle setting are

sufficiently high to permit “real-time” kinetic studies on many systems. Time-resolved experiments include investigations of chemical kinetics, solid-state reactions, phase transitions, and chemical reactions in general.

SPECIFICATIONS

Source-to-sample distance	13.6 m
Sample-to-detector distance	1.5 m
Detector size	17 x 20 cm ²
Detector resolution	1.3 x 1.3 mm ²
Moderator	Coupled supercritical hydrogen
Bandwidth	$\Delta\lambda = 3.4 \text{ \AA}$
Wavelength range	$2.5 \text{ \AA} < \lambda < 17.5 \text{ \AA}$
Q range (air/liquid)	$0.008 \text{ \AA}^{-1} < Q < 0.3 \text{ \AA}^{-1}$
Q range (air/solid)	$0.008 \text{ \AA}^{-1} < Q < 0.3 \text{ \AA}^{-1}$
Minimum reflectivity	1×10^{-7}

Status: Available to users

APPLICATIONS

The Liquids Reflectometer is useful for a wide range of science. Current areas of interest include biomaterials, polymers, electrochemistry, corrosion, and chemistry involving thin layers of surfactants or other materials on the surfaces of liquids, such as cell-membrane analogs. These systems provide a flexible platform to study structure-property relationships at the boundary between hard and soft matter, with applications in biomimetics, bio-sensing, and bio-compatible films; hydrogen storage, batteries, and fuel cells; and polymers.

FOR MORE INFORMATION, CONTACT

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