- **Minicolloque n° 4** X **Oral** □ **Poster**

# Sample Environments for Soft Matter at ILL SANS Instruments

Anne MARTEL [a*], Lionel PORCAR [a], Ralf SCHWEINS [a], Sylvain PREVOST [a], et Olga MATSARSKAIA [a]

a. Institut Laue Langevin, 71, avenue des martyrs, Grenoble, France
* email : martela@ill.fr

Various techniques can be combined *in situ* with SANS either to condition the sample or to obtain complementary information. This talk will give an overview of the ones which are available at ILL SANS instruments, as well as some set up developed by our users.

For instance, among sample conditioners, the dialysis cell is used to change gradually the chemical environment of a sample while continuously acquiring SANS data, the rheometer enables to apply shear forces while measuring the viscosity and the SANS pattern evolution together, the high-pressure cell enables to follow structural changes imposed by up to 3 kbars of pressure, the chromatography enables to separate particles according to their size and exchange buffer and detergent around membrane protein right before they get exposed simultaneously to UV and neutron beam to record their UV absorbance and SANS pattern.

As complementary probes, the SAXS, the DLS and the fluorimetry will be highlighted as a way to measure other properties of the sample in the same time as SANS, in particular for kinetic studies. The Soft matter and biology scientists of ILL SANS instruments welcome your questions and suggestions for improvement and new development.

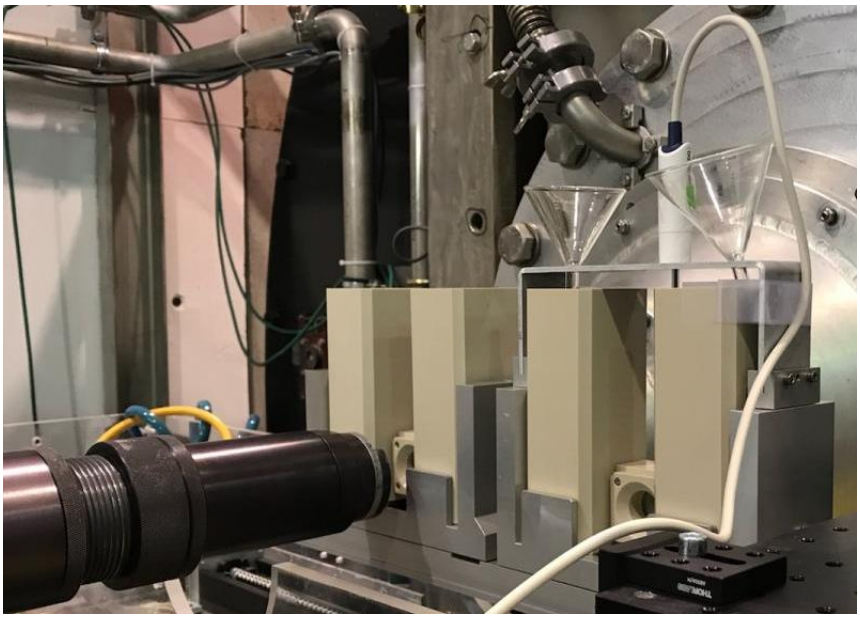

**Figure 1 :** Example of sample environment available on ILL SANS instruments for soft matter : the *in situ* dialysis cell (Photo from O. Sandre).