

SAS2015 - Xenocs Lunch session – SAXS in the lab

Tuesday 15, September 2015 – 12:15 - 13:15

General abstract

Latest advances in x-ray equipment have led to redefine the current usage of SAXS/WAXS beamlines in the laboratory. Over the last few years, a growing number of publications bring out that SAXS systems in the lab are used not anymore as a preparatory step before a synchrotron trip but as a core tool in the research since today's performance of such beamlines in the lab is reaching the performance of second generation synchrotron facilities [1].

Furthermore, numerous studies include slow kinetics with characteristic times in the range of a few minutes to several hours [2,3] which do not require a milli-second time resolution, thus not entering in the scope of 3rd generation synchrotrons. These kinetics can be faithfully studied with laboratory systems down to second-time resolution.

Finally, thanks to recent progress in collimation, ultra –small angle scattering is also becoming achievable in the lab not only in classical Bonse-Hart 1D scanning geometry but also in 2D detection, allowing to perform grazing incidence experiments at ultra small angle [4] for instance.

As a reason, Xenocs is inviting selected guest speakers in a session dedicated to SAXS in the lab to share their current research activities, performing SAXS/WAXS measurements in their laboratory.

- [1] D.I. Svergun, M.H.J. Koch, P. Timmins and R. P. May in "Small angle x-ray and neutron scattering from solutions of biological macromolecules", Oxford University Press (2013) p 43
- [2] I. A Hamley, V. Casteletto in "Soft Matter characterization", Springer (2008) p1032, R. Borsali and R. Pecora Editors
- [3] P. Bauduin et al, Ang. Chemie, **2013**, 52, 12114-12118
- [4] N. Zheng, Z. Yi, Z. Li, R. Chen, Y. Lai and Y. Men, J. of App. Cryst, **2015**, 48 (608)