Contribution ID: **93** Type: **Poster**

Development of a Sample Environment for in-situ Dynamic Light Scattering in Combination with Small Angle Neutron Scattering for the Investigation of Soft Matter at the European Spallation Source ESS

Monday, 17 September 2018 17:45 (15 minutes)

At the moment, with the construction of the European Spallation Source ESS in Lund, the most modern and most powerful scientific neutron source in the world is being built.
The aim of our composite project "FlexiProb"is to develop three different sample environments for the investigation of soft matter samples to maximize the potential of the new neutron source with regard to the expected very high neutron flux. These are sample environments for small angle neutron scattering (SANS) combined with *in-situ* dynamic light scattering (DLS), under gracing incidence (GISANS) and on free-standing liquid films and foams.All sample environments are constructed on an universal carrier system developed at the FZ Jülich to ensure a high repeatability, a maximum flexibility as well as a minimum switching time between different sample environments.
The *in-situ* DLS/SANS module developed in our subproject will provide additional control parameters e.g. the sample stability during the SANS measurements. Thus, we will also develop a special sample holder for about 40 samples which allows the simultaneous measurement of SANS and DLS at two different scattering angles and which provides a precise temperature control. [1]

[1] The authors acknowledge funding from the German Federal Ministry of Education and Research BMBF within the joint project "FlexiProb: Flexible Porobenumgebungen für die Untersuchung weicher Materie an der ESS"(05K2016).

Primary author: SCHMID, Andreas (Universität Bielefeld)

Co-authors: JAKSCH, Sebastian (Physicist); FRIELINGHAUS, Henrich (JCNS); SCHRADER, Tobias; SCHNEIDER, Harald (European Spallation Suurce ERIC, FLUCO Platform); HELLWEG, Thomas (Universität Bielefeld, PCIII)

Presenter: SCHMID, Andreas (Universität Bielefeld)

Session Classification: Poster session 1

Track Classification: P1 Instrumentation and methods