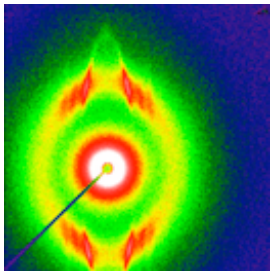

Contribution ID : **9** Type : **not specified**

Contr. Talk 12 - Effect of confinement on lyotropic lamellae dynamics under shear flow

Wednesday, 12 December 2018 11:10 (20)

Lyotropic lamellar phases under shear flow show surprising changes in the microscopic structures and physical properties. Lamellae-to-multi-lamellar-vesicle (MLV) transition has been widely investigated, whereas lamellae tilting and vesicles inclination have not been highlighted during this kind of transition. Flow instabilities and their correlation with structures and properties in a confined gap is also matter of investigation. Here time-resolved flow-small angle neutron scattering (SANS) experiments have been carried out using a 1-2 shear cell to detect inclination and deformation of the MLVs and to correlate spatially distributed structures in the Couette gap with progressive evolution of the local viscosity towards two significantly different values, leading to stable and periodic viscosity oscillations. The inclination angle of the MLVs has been addressed in terms of capillary number and its spatial behavior along the Couette gap in terms of gap confinement.

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Session Classification : Late morning session - Associated systems