Séminaire

mardi 12 novembre 2024 à 10h30

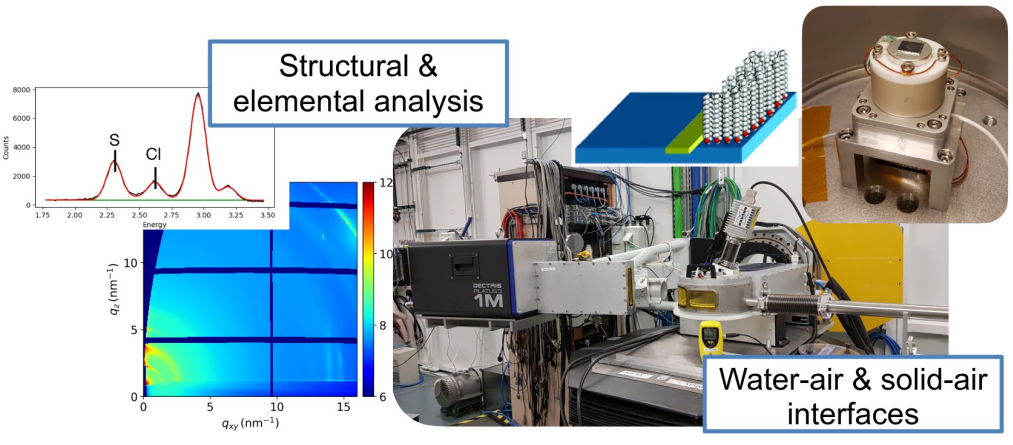
Amphithéâtre Henri Benoît

Arnaud Hemmerle

Synchrotron SOLEIL

Study of surfaces and interfaces in soft condensed matter at the SIRIUS beamline

Soft matter systems — such as lipid membranes, liquid crystals, colloids, and polymers — have macroscopic behaviors that are strongly influenced by their nanoscale organization. In general, the properties of surfaces and interfaces can be radically different than those of the bulk, which is particularly important for soft matter systems that often exhibit a large specific surface area. The SIRIUS beamline of the SOLEIL synchrotron is dedicated to the study of surfaces and interfaces by X-ray scattering and spectroscopy in the range of tender to hard X-rays (1.1 - 13 keV). Various grazing incidence techniques are available on the beamline, such as diffraction and wide angle scattering (GIXD/GIWAXS), small angle scattering (GISAXS), fluorescence in total reflection (TRXF), as well as specular (XRR) and off-specular (GIXOS) reflectometry. I will discuss how these complementary techniques are applied to the characterization of a wide range of areas within soft matter science, such as polymers for organic electronics, thin lipid films, and electrolytes at charged interfaces. In particular, I will emphasize recent developments on the beamline to meet the current challenges of in situ measurements.



Les personnes souhaitant rencontrer A. Hemmerle sont priées de prendre contact avec T. Charitat.

Les personnes souhaitant rencontrer A. Hemmerle sont priées de prendre contact avec T. Charitat.