



Small-angle Scattering Seminar Series

Organized by SAXS-SIG, Advanced Photon Source

A monthly seminar series, organized by Small Angle X-ray Scattering Special Interest Group (SAXS-SIG) at Advanced Photon Source, is focused on discussing, celebrating, and learning from new frontiers of science, research, and development based on small-angle scattering (SAS). This is a monthly seminar organized virtually over ZOOM where the speaker will be invited by SAXS-SIG. In order to join the seminar please subscribe to the small-angle mailing list here: <https://mailman.aps.anl.gov/mailman/listinfo/small-angle>

Upcoming Seminar

Date: Mar 30, 2022

Time: Wed, 11:00 AM (CST)

Speaker: Florian Meneau

Institution: Brazilian Synchrotron Light Source (LNLS)

Title: Coherent and incoherent Small Angle X-ray Scattering at the Brazilian synchrotron facility SIRIUS

Abstract: Sirius, the Brazilian synchrotron radiation facility, is a 3 GeV very low-emittance storage ring ($\epsilon = 0.25$ nm-rad), which design is based on a multi-bend-achromat (5BA) lattice. It will host two state-of-the-art small angle X-ray scattering beamlines, Cateretê and Sapucaia.

Cateretê is the coherent small angle X-ray scattering beamline dedicated to coherent diffraction imaging (CDI) as well as X-ray photon correlation spectroscopy (XPCS) studies and ultra-small angle X-ray scattering (USAXS). The beamline is in its final phase of commissioning, and will enable to perform imaging in reciprocal space, with a particular focus on *in situ* imaging as well as cryo-imaging experiments.

Sapucaia will be fully dedicated to Small-Angle X-ray Scattering technique (SAXS). The beamline will



Florian Meneau: Leader Researcher in the Cateretê group of the Soft and Biological Matter Division, Brazilian Synchrotron Light Source (LNLS)

permit to answer many questions concerning life science, structural biology and in a vast field of material science, including nanotechnology, polymers and rheology.

Both beamlines are equipped with the in-vacuum Medipix3 based detector, composed of 3000x3000 pixels of 55 μm . The detectors are placed in a vacuum chamber of 15 and 28 meters for the Sapucaia and Cateretê beamlines, respectively.

I will present the designs, performances and first results obtained during the commissioning phase.