

Viscoelastic properties of gels and glassy matter studied by XPCS

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X-ray photon correlation spectroscopy (XPCS) is a scattering technique well suited to study slow dynamics of matter. It relies on the large coherent flux which is available at modern 3rd generation synchrotron sources, and can be seen as the X-ray counterpart of DLS, dynamic light scattering with coherent visible laser light. In the talk I will discuss XPCS applications to quantify the dynamic state of gels and glassy soft condensed matter in the equilibrium and non-equilibrium states. Examples of surface- and bulk dynamics studied at beamline ID10A of the ESRF will be given. Finally, I will indicate some novel XPCS applications that may appear in the future.