

ADVANTAGES OF COUPLING SCATTERLESS COLLIMATION WITH HIGH BRILLIANCE MICROFOCUS SOURCES FOR SAXS APPLICATIONS

S. Rodrigues, P. Panine, P. Høghøj,

Xenocs SA, 19 rue François Blumet, F-38360 Sassenage, France

High brilliance microfocus sources coupled to advance X-ray optics are highly performant solutions for Small Angle X-ray Scattering measurements providing a well controlled spatial and angular beam distribution at sample position and on detector. We developed a unique X-ray beam delivery system coupling advanced single reflection multilayer optics to innovative scatterless collimation. This unique combination allows simplified collimation schemes with increased useful flux on the sample.

A review of different collimation designs with this unique combination will be presented. In particular we will present the advantages in terms of brightness preservation and reachable wave vector in SAXS for both compact and long-collimated set-ups.

New SAXS application measurements (for example with polymer samples and toluene samples) which highlight the benefits of this unique combination will be presented and discussed.