

Xenon Plasma Focused Ion Beam Milling for Obtaining Soft X-ray Transparent Samples

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1. PFIB Sample Holder

To determine the thickness of the milled windows it is crucial that the samples are mounted such that the electrons can freely pass through them. Therefore, the samples have to be mounted in a way that there is no material behind them. As the samples are approximately only 100 μm thick at this fabrication step, mounting them can be a challenging task with an increasing difficulty towards smaller samples. For this purpose, we designed a PFIB sample holder, where the samples are mounted across a dedicated cavity, fixed with two clamps to allow tilting as it is required for PFIB processing (see Fig. S1a). The holder is designed to allow mounting of samples with sizes down to 2.5 mm \times 2.5 mm and it is compatible with the standard carrier system of our PFIB tool as shown in Figure S1.

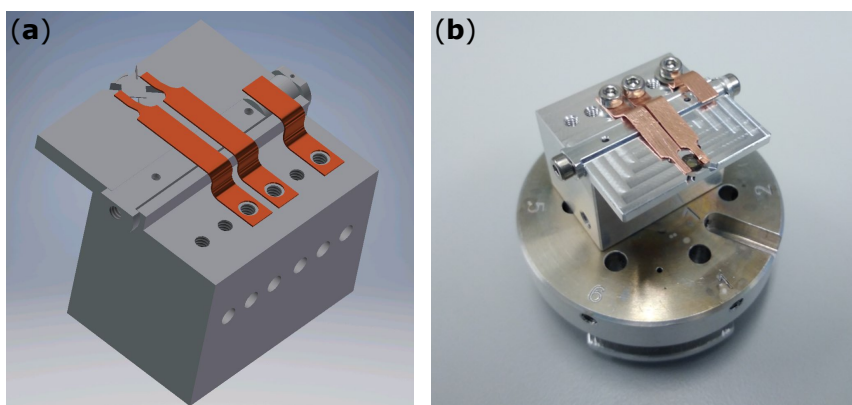


Figure S1. PFIB sample holder. (a) Design of the holder with the clamps for sample fixation in red. (b) Photo of the sample holder mounted on the PFIB carrier.