UMF Equipment – Gatan 695

Precision Ion Polishing System

The Precision Ion Polishing System (PIPS) is used for thinning and/or polishing of plan-view, cross-sectional ceramic, or alloy samples for transmission electron microscopy (TEM) analysis. Since the ion polishing process is rather slow, it is important that the samples are pre-thinned to less than 30 µm by e.g., mechanical grinding and polishing, or chemical polishing. The instrument is equipped with two Penning ion guns (PIGs) using argon (Ar) ions for polishing. The voltage can be tuned between 100V-8kV to prevent damage to the sample.

Specifications:

- Precision ion polishing system for precise centering, control and reproducibility of your milling process.
- Compact, benchtop system designed to produce high-quality TEM specimens with exceptionally large, clean, electron-transparent areas.
- X, Y stage permits alignment of argon beams to region on the sample.
- Improved collimated beam provides useable voltages as low as 100 volts for rapid and damage free preparation of FIB lamella.
- 10” color touch screen for display and control of all PIPS II parameters.

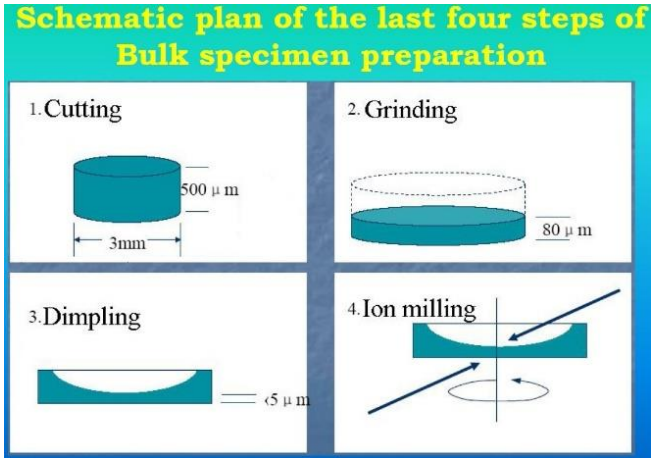
Please refer to https://www.gatan.com/products/tem-specimen-preparation/pips-ii-system for further details of the system.

For training arrangement, please log on URFMS website for further details of upcoming training session.

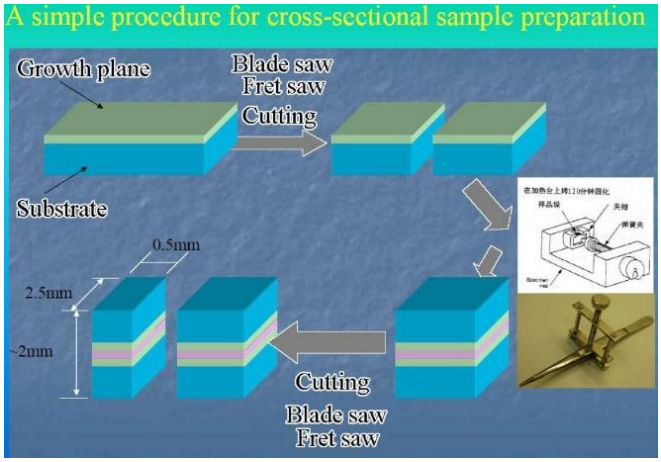
For any enquiry, please contact Dr. Wei Lu (Tel: 34002077; Email: wei.lu@polyu.edu.hk).

Thank you for your attention.

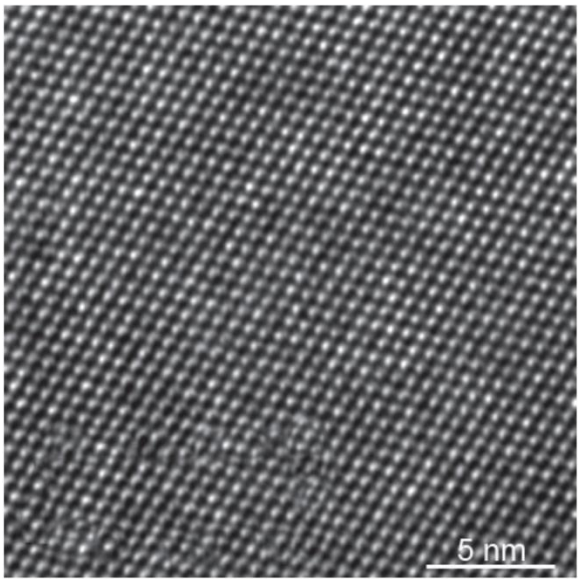
Applications:



Plan-view specimen preparation



Cross-sectional Specimen preparation



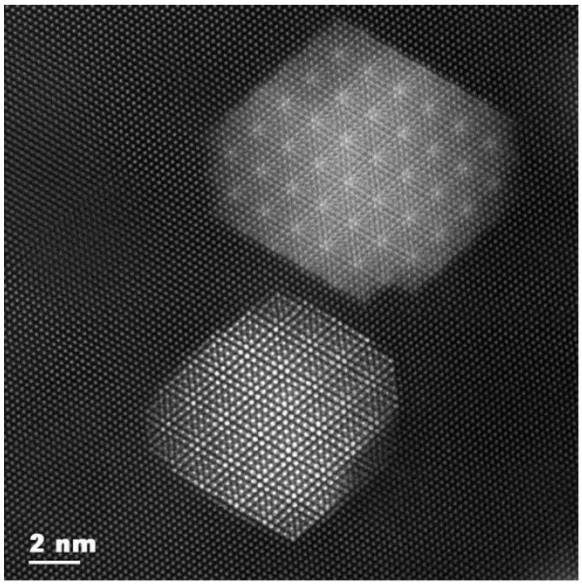


Figure 1. Silicon (111) sample prepared by PIPS II system under 240s milling at 300eV.
Figure 2. Surface contamination-free AlPb melt-spun ribbon with 1-3% at wt. Ga HR-STEM.