TECHNOORG
L I N D A

SEMPrep2 Compact

High-quality site-specific sample preparation in SEM application

- Cross-sectional sample preparation by slope cutting in 90°, 45° and 30° by different sample holders
- Final polishing of traditional SEM and EBSD samples
- Load-lock system for faster and easier sample exchange
- High-energy ion gun for rapid milling
- Optional ultra high-energy ion gun specially recommended for ion milling extra hard materials or for extreme fast milling
- Automated parameter settings and operation
- Sample rotation and oscillation

DESCRIPTION

The SC-2100 model is equipped with a high-energy ion source for rapid slope cutting which provides cross-sectional SEM samples suitable for semiconductor failure analysis and other analytical purposes. The system also provides an ion milling based solution for significantly improving mechanically polished SEM samples and preparation of damage-free surfaces for EBSD technique. The new 16 keV ultra-high energy ion source is more powerful and has higher sputtering rate as before.

SPECIFICATIONS

• Ion source		high-energy ion gun operating up to 10 keV or optionally ultra high-energy ion gun operating up to 16 keV
• Sample stage	Sample size:	slope cutting sample holder (available with 30°, 45°, 90° tilted platforms) for 30°, 45° holders: max. 20 mm (l) x 16 mm (w) x 7 mm (th) for 90° holder: max. 20 mm (l) x 15.5 mm (w) x 5.5 mm (th) sample holder for surface cleaning (EBSD) using 3 different head type: flat head type: max. Ø36 mm x 0-5.5 mm standard type: max. Ø26 mm x 3-14 mm hollow type: max. Ø26 mm x 21.5 mm max. Ø32 mm x 15.8 mm
	Sample tilting:	0° to 30° in 0.1° increments
	Sample rotation:	in-plane rotation, 360° (available only for surface cleaning sample holder)
	Sample oscillation:	in-plane oscillation from ±10° to ±120° in 10° steps (application dependent)
• Vacuum system		Oil-free diaphragm and turbomolecular pumps with combined (Pirani/Penning) vacuum gauge
• Gas supply system		99.999% purity argon High-precision working gas flow control
• Computer control		Easy-to-use graphical interface, automated ion source setup, milling parameter setting and operation control

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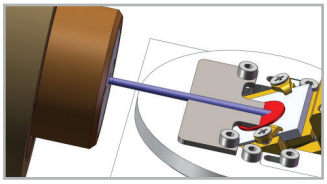
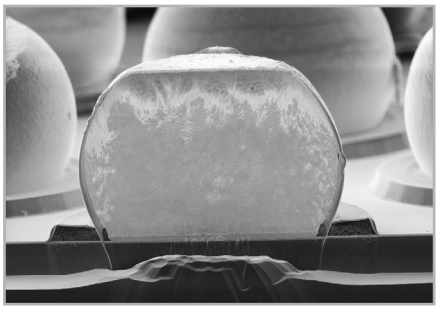
APPLICATIONS

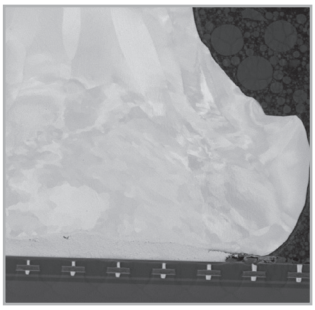
ION BEAM SLOPE CUTTING

To produce excellent quality planar cross-sections of different solid state materials for SEM/EBSD imaging and microanalysis.





Sn-Ag solder ball grid array (BGA)

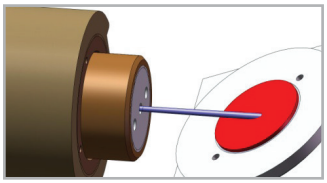


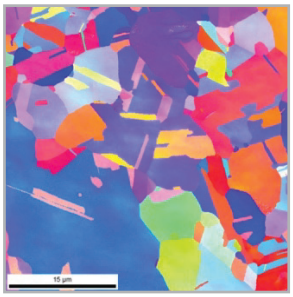
Metal wire bonding

EBSD image (OIM) made on an as-cut surface of copper

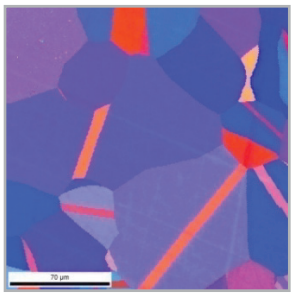
FINAL POLISHING

To produce samples for Electron Backscatter Diffraction (EBSD) study and Orientation Imaging Microscopy (OIM).

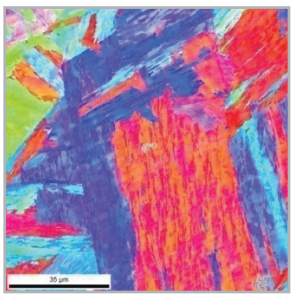




Copper

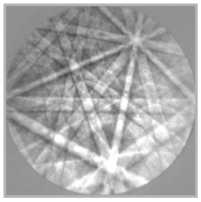


Nickel



Martensitic steel

Limestone



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