

TEM lamella preparation in FIB-SEM: Optimization of quality, accuracy and throughput

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Driven by semiconductor failure analysis and manufacturing support, the requirements to TEM lamella preparation using focused ion beam-scanning electron microscope instruments (FIB-SEM) are being tightened in all directions. Lamella thinning down to 10 nm with an end-pointing accuracy down to 1 nm, or large lamella areas of up to several 100 μm^2 are needed more and more often. Increased requirements to lamella quality and throughput lead to new application techniques, hardware developments and extensive automation. We will present examples and possible solutions.