

Tescan SOLARIS 2

for Semiconductors

Ga⁺ FIB–SEM solution for high–quality automated TEM sample preparation

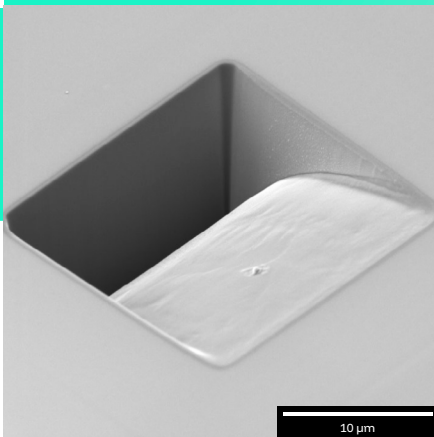


Fig. 1: Excellent edge sharpness and uniformly smooth cut-face achieved during fabrication of a large cross-section on a silicon sample using high FIB current (20 nA).

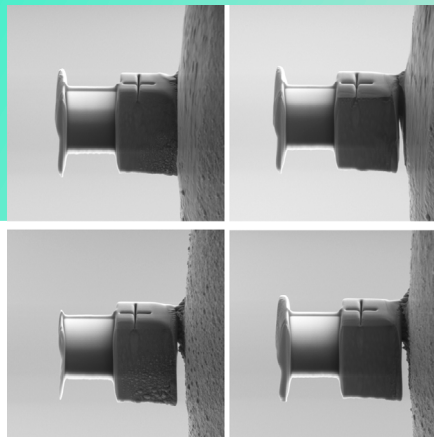


Fig. 2: 4x Si TEM samples prepared automatically reaching final thickness <50 nm. Each site was prepared in <35 min using TEM AutoPrep™ Pro including lift-out and FIB thinning steps at 30, 5 and 2 keV.

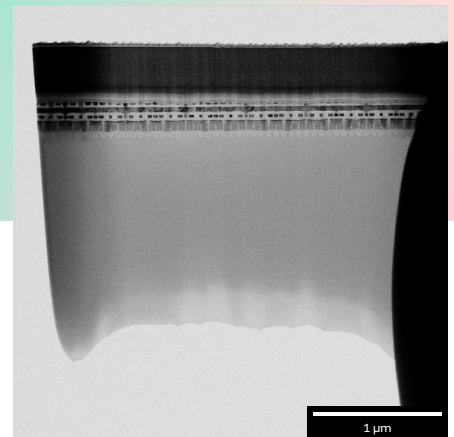


Fig. 3: High-quality inverted TEM lamella from 3 nm FinFET technology in Fin-cut orientation prepared by combination of automated and manual process on SOLARIS 2 FIB-SEM platform.

Key Benefits

Increase TEM sample preparation quality and sample turn-around in your lab by taking advantage of our new market-leading Orage™ 2 Ga FIB column delivering unmatched 500 eV performance and extreme high beam current density up to 100 nA — delivering up to 40% faster TEM specimen preparation.

Maximize productivity for all users with Tescan TEM AutoPrep™ Pro, which provides full TEM sample preparation process automation, unattended, including *in situ* sample lift-out and final low keV FIB polishing — consistently and repeatedly.

End-point precisely on a single line of transistors in your GAA or FinFET devices using high-resolution imaging capabilities of the Triglav™ SEM column equipped with a variety of in-column SE and BSE detectors that enhance contrast visualization at the beam coincident point during FIB processing.

Retain flexibility for advanced TEM lamella preparation with our OptiLift™ nanomanipulator placed in Tescan's unique “below FIB” position, which allows preparation of top-down, plan-view and inverted lamella geometries in a few simple manipulation steps including usage in automated workflows.

Ensure system readiness and minimize set-up time prior to initiating unattended sample preparation with fully automated electron column and ion column alignment routines that can be scheduled to run overnight using dedicated alignment samples.

Streamline the operating experience for everyone in the lab with modular, intuitive Essence™ software, which allows new users to achieve productivity quickly through guided workflows and specialized software modules.