Next chapter in Nanoprototyping in the new generation of FIBSEM systems

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Nanoprototyping as a discipline is evolving at a fast pace and the industry providing the equipment must evolve with it. As an answer to the fast evolution of the industry, Tescan steps away from the "one module fits all" design to providing dedicated tools for specific groups of users. In the field of electron beam lithography (EBL) we have introduced the EBL kit module. For focused ion beam milling (FIB), deposition (FIBID), assisted etching (FIBIE) or electron beam deposition (FEBID) and etching (FEBIE) our reliable DrawBeam module provides great results. For the most advanced users with specific requirements, we have improved and expanded the SharkSEM Advanced addon with Tescan Stream Files (TSF).

EBL kit has a full support of the GDSII format which is widely used in the lithographic community and allows a full compatibility with the other lithographic equipment in your fab. Using the third-party editor KLayout you can define the whole patterning process from the origin to write fields and dose factors.

DrawBeam enables users to take the full advantage of their FIBSEM and is greatly enhanced when using a Gas Injection System (GIS). This CAD like editor allows you to prepare your designs using specifically designed objects for milling, polishing or deposition. Coupled with an included material database you can precisely set up the height or the depth of the final structure.

SharkSEM Advanced with Tescan Stream Files is the go-to solution to handle the most advanced tasks when none of the above-mentioned techniques and modules fully cover specific and challenging applications. Users get the possibility to program and develop their own patterning strategies based on their research in novel materials and patterning techniques. The biggest advantage are complex 3D depositions where precise patterning control is the key to a successful working prototype.

Our new and improved modules will open new possibilities for your research and development in nanoprototyping novel materials.

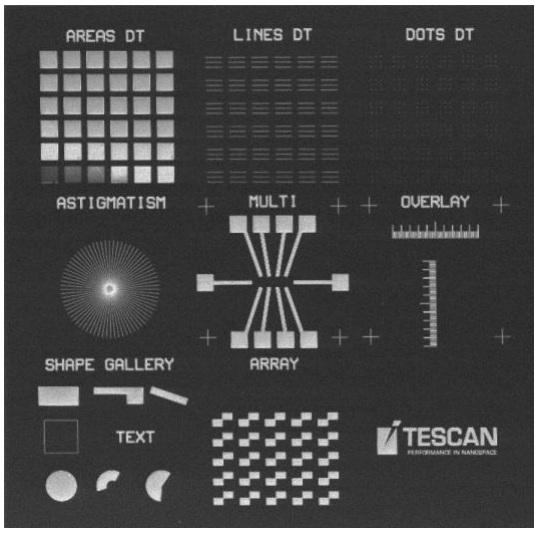

Figure 1 EBL kit test patterning exposed using SEM column.

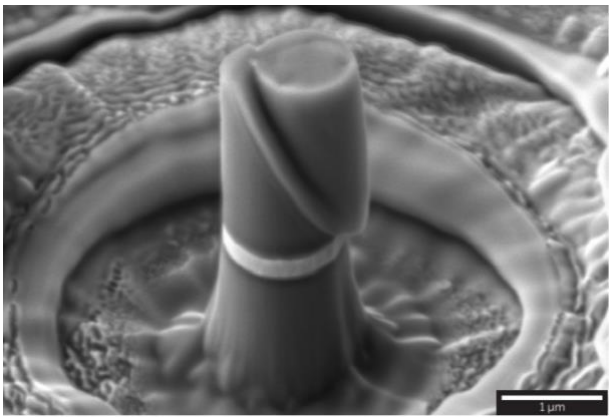

Figure 2 Micropillar for mechanical testing etched using DrawBeam and FIB.

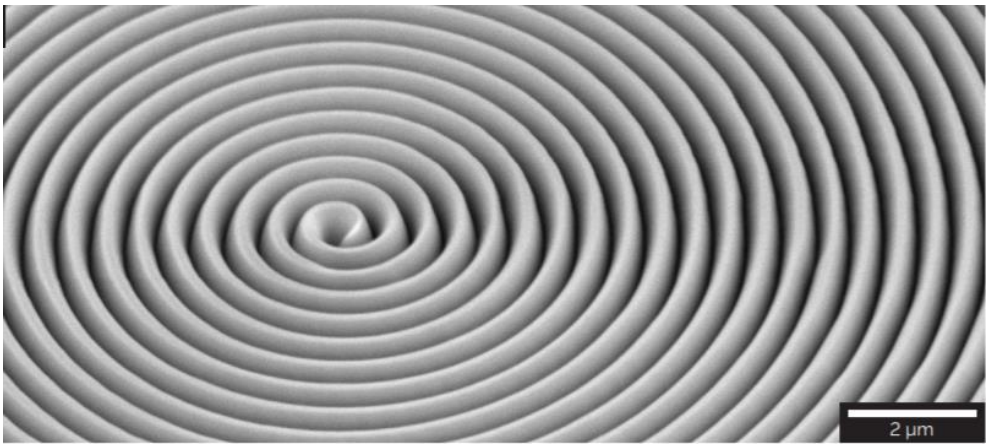

Figure 3 Spiral array milled using SharkSEM Advanced Tescan Stream Files functionality.