The new **TESCAN SEM** column **Triglav™** delivers a unique combination of immersion optics and crossover-free mode for UHR imaging at low energies. The single-pole type objective lens creates a magnetic field around the sample and dramatically decreases optical aberrations. Surface details of the specimen can be captured more reliably than ever before. For analysis, the TriLens™ technology improves resolution in the magnetic-field-free mode.

The TriLens™ objective system is based on the advantageous complementarity of three objective lenses: an **UH-resolution lens** (60° immersion lens), an **Analytical lens** and an **Intermediate lens** (IML). The combination of these lenses results in different working imaging modes.

TriSE™ – triple SE detection – gives a nearly noise-free comprehensive description of sample topography and allows the capture of the finest surface details. Each working mode – whether for ultra-high resolution, analysis or beam deceleration – is equipped with a dedicated **SE detector** placed in an ideal position with appropriate signal guiding electrodes.

TriBE™ – triple BSE detection – is used to distinguish BSE take-off angles and provides comprehensive information about material composition. A retractable **In-Chamber BSE** detector placed between the sample and the pole-piece provides both topographic and compositional contrast (from wide-angle electrons) suitable for observation of low-contrast samples. **Mid-Angle BSE** detector inside the column allows low-noise volume compositional mapping. **In-Beam BSE** detector captures true compositional information due to pure surface material contrast from axial backscattered electrons.