

## **The MERLIN Compact VP**

- Resolution: 0.8nm @ 15KV; 1.4nm @ 1 KV; 0.8nm @ 30KV (STEM mode)
- Probe current: 5pA to 100nA
- Acceleration voltage: 0.02V to 30kV
- Magnification: 12 – 2,00,000X
- Electron Emitter: Thermal (Schottky) field emission gun.
- Detection Modes
  1. In-lens Duo: Switchable between on-axis in-lens secondary electron detection for highest surface sensitivity and energy selective backscattered detection for advanced materials contrasts.
  2. Secondary Ion: High efficiency in-lens SE detector Everhart Thornley Secondary Electron detector
  3. Variable Pressure: High efficiency VPSE detector for pressure up to 60 Pa
  4. STEM: Low voltage optimized bright field, 4 quadrant dark field, and high angular dark field transmission imaging.
- Specimen Stage: 5-Axes Motorized Eucentric Specimen Stage: X = 130mm; Y = 130mm; Z = 50mm; T = - 3° to 70°; R = 360°(continuous)
- Chamber: 330mm(Ø) x 270mm(h) 15 accessory ports for various options including CCD-Camera with IR-illumination
- Vacuum system: High vacuum mode and variable pressure mode
- Image Display: Single 19” TFT monitor with SEM image displayed at 1024 x 768 pixel

### **The FESEM installed in the EM facility has a wide range of applications:**

- Life Sciences imaging at high resolution;
- Correlative Microscopy with Shuttle and Find;
- Cryo SEM and freeze fracture for imaging hydrated samples or for beam/vacuum sensitive specimens;
- Variable pressure mode for sensitive samples;
- STEM mode for thin sections
- EDAX for chemical composition