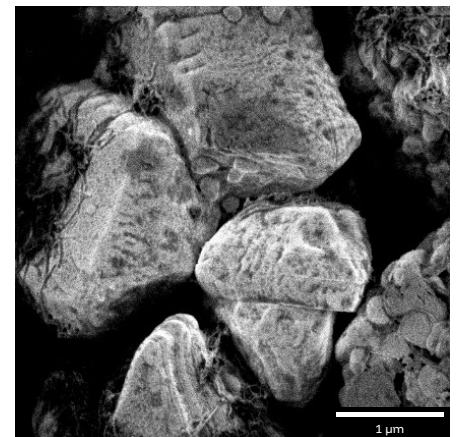
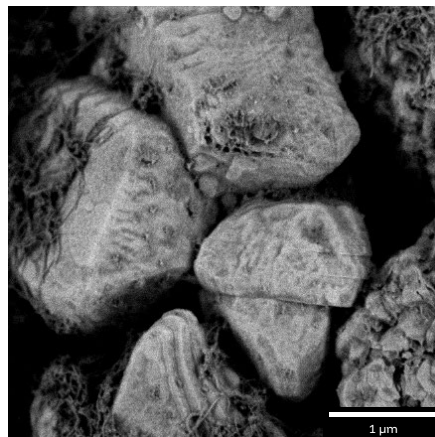
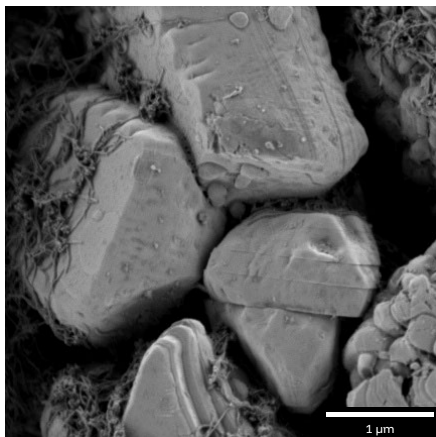


Tescan CLARA™

Maximum information from every scan and any sample—at the nanoscale

CLARA™ is an Ultra-High-Resolution Scanning electron microscope built to reveal more information from any sample – quickly, without metal coating and for every user. It combines nanoscale imaging at the lowest beam energies (<1 keV) with advanced contrast filtering, so users can see not only the finest nanoscale surface details, but also important material differences and hidden near-surface features that standard SEM imaging can miss. It is designed to work across challenging samples, including non-conductive, magnetic, and beam-sensitive materials, while keeping operation fast and approachable for users of any experience level.



SEM Image of NMC battery cathode at ~150kx magnification (4 µm Field of view) at 700 eV using MultiDetector™, showing nanoscale surface topography (left), conventional High Resolution BSE imaging (middle), and unique High-resolution energy-filtered low-loss BSE imaging revealing additional surface-sensitive contrast (right).

Key Benefits

See the finest details across more sample types, delivering ultra-high-resolution imaging at low keV even for non-conductive and magnetic materials, enabled by BrightBeam™ technology and a field-free combined electrostatic-magnetic objective design.

Reveal hidden surface and material features, delivering contrast information that conventional imaging can miss, enabled by selective BSE imaging differentiated by take-off angle and energy.

Extract more information from one region of interest, delivering up to four complementary contrast signals from the same sample area at one scan, enabled by the combination of in-column MultiDetector™ and Axial detectors, and chamber mounted SE and BSE detectors.

Move from imaging setup to results faster, delivering fast access to imaging and analytical conditions, enabled by In-Flight Beam Tracing® and automation.

Keep analysis moving on charging, outgassing and oversized samples, delivering switching on mouse-click between high

and low vacuum without manual intervention or loss of field of view, enabled by the CLARA Multivac™ workflow design.

Navigate confidently and quickly from overview to nanoscale detail, quickly locating features of interest with a smooth transition to high magnification, enabled by Wide Field Optics® and automated controls.

Make nanoscale microscopy easier for every user, delivering reliable results with less setup complexity, enabled by Essence™ software, automation, and the 3D collision model.

Automate routine and advanced workflows without coding, delivering higher productivity and repeatability for shared labs and multi-user environments, enabled by VisualCoder no-code workflow building and scripting through SEM Expert PI.

Expand from SEM imaging into a broader analytical platform, delivering future-ready capability for complex research and industrial problem solving, enabled by the large chamber, high port availability and integration of techniques such as EDS, EBSD, Raman, CL, WDS, EBL and 4D-STEM.