

FEI Introduces Nova NanoSEM

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New System is the World's First SEM for Ultra-High Resolution Characterization of Non-Conductive or Contaminating Samples

FEI Company released the newest member of its Nova(TM) family of SEM and DualBeam(TM) systems, the Nova NanoSEM. It is the world's first low-vacuum, field emission scanning electron microscope (FEG-SEM) solution for ultra-high resolution characterization of charging and/or contaminating samples such as organic materials, substrates, porous materials, plastics and polymers. This newest system joins FEI's growing line of market-leading tools that are enabling nanoscale research, development and manufacturing in a diverse range of markets and applications.

The Nova NanoSEM brings new capabilities to researchers and developers working with non-conductive and contaminating nanoscale materials. FEI's Helix detector technology, introduced with the Nova NanoSEM, combines magnetic immersion lens and low-vacuum SEM technologies for the first time in the history of field emission scanning electron microscopy. The combined effect delivers ultra-high resolution, low-vacuum characterization capabilities in an environment that suppresses charge build-up on non-conductive materials. The unique technology incorporated in the Nova NanoSEM also suppresses electron-beam induced contamination resulting from previous sample processing steps.

"The Nova NanoSEM, with its proprietary optics and detection systems, was developed to meet the growing needs of customers who are faced

with evolving applications and expanding challenges," commented Tony Edwards, FEI's business line manager for SEM and small DualBeam products. "FEI led the market with its ESEM technology for charging and non-coated samples. Now it extends its leadership by combining the most advanced low-vacuum and ultra-high resolution design features for these challenging yet critical sample types."

The Nova NanoSEM also features in-lens as well as low-vacuum secondary and back scatter electron (BSE) imaging modes, and FEI's proprietary beam gas chemistries for e-beam writing of nanostructures, making it the ideal SEM for research and advanced study of nanostructures and nano-materials.

The growing complexity and shrinking dimensions of materials, devices and biological samples, have resulted in increased demand for nanoscale characterization tools across all markets served by FEI. In 2004, FEI was the first electron optics manufacturer to deliver sub-Angstrom or atomic scale resolution on a commercially available transmission electron microscope. With the Nova NanoSEM and its other tools for enabling nanotechnology, FEI continues to lead advances in ultra-high resolution characterization and analysis of a wide variety of samples at nanoscale dimensions.

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