The Supra55VP FESEM allows surface examination down to nanometer scales in either high vacuum or in Variable Pressure (VP) model. It has an Energy Dispersive x-ray Spectrometer (EDS) for elemental analysis and mapping, an Electron BackScattered Diffraction (EBSD) system for crystal orientation and phase mapping using Kikuchi patterns, and Nanometer Pattern Generation System (NPGS) which provides powerful, versatile, and easy to use system for doing electron beam lithography. Detectors available: In-lens SE, Everhart-Thornley SE, VPSE, Robinson BSE, and STEM.