

The **200kV ZEISS LIBRA200FE** is a high-resolution electron microscope that can be operated both in standard transmission (TEM) and scanning (STEM) modes. It enables the observation of morphological and structural details with sub-nanometer resolution. Crystalline structure can be investigated in detail thanks to electron diffraction and HRTEM capabilities. The in-column Omega spectrometer and the Oxford EDS/EDX system provide complementary techniques to investigate chemical composition at the nanoscale in the form of elemental maps. Tomographic reconstruction of the three-dimensional shape of the specimen is also possible with improved accuracy thanks to the reduced missing wedge. The high flexibility in experimental scheme and data acquisition make the LIBRA200FE a unique investigation tool for high-resolution characterization in nanotechnology, materials and life science.

**ISTeM** delivers state-of-the-art technology, expert image collection and analysis, and welcomes customers on its premises even during image collection.

## We can answer to your questions...

- Morphology and size determination by TEM and STEM
- Crystal phase determination by electron diffraction
- Structural details of crystalline materials by HRTEM
- Quantitative chemical analysis by EELS (low-Z elements) and EDS/EDX (high-Z elements)
- Spatially resolved chemical analysis (elemental maps) with nanometer resolution by ESI and EDS/EDX
- Tomographic 3-D reconstruction of specimen shape in TEM and STEM modes
- Cryo-holder for soft materials
- Proprietary in-house image analysis software

**Electron Gun  
Illumination  
Objective lens  
Detector**

200 kV Schottky Field Emission  
Kohler type (4 lenses)  
HR,  $f=1.7$  mm,  $C_s=1.2$  mm,  $C_c=1.2$  mm  
2k x 2k SS-CCD

**Spatial  
Resolution**

Point Resolution: 0.24 nm  
Information Limit: 0.14 nm  
STEM Resolution: 0.3 nm

**Magnification**

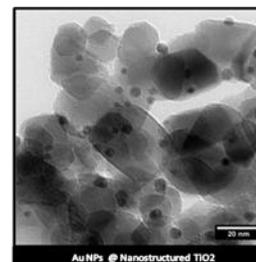
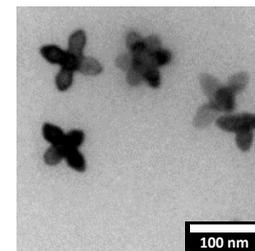
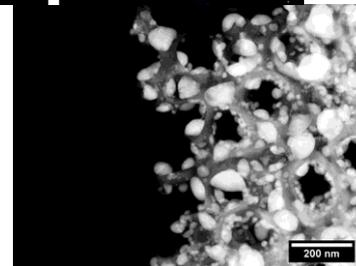
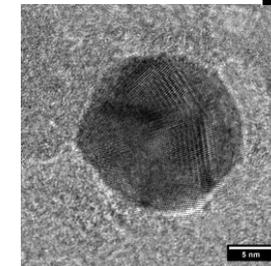
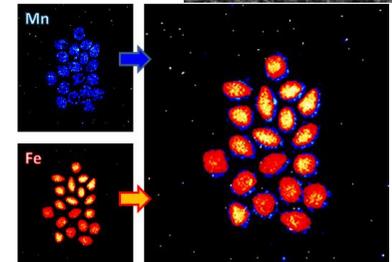
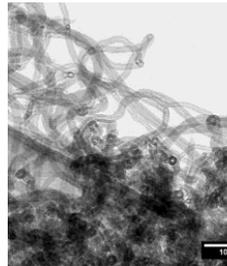
TEM 8 x - 1,000,000 x  
STEM 2,000 x - 5,000,000 x

**Spectrometer  
Energy  
Resolution**

In-column corrected Omega filter  
 $\leq 0.7$  eV

**Specimen  
Stages**

Analytical double tilt holder  
 $\pm 30^\circ / \pm 30^\circ$   
Cryo single tilt holder  $\pm 30^\circ$   
Tomographic dual-axis  
holder  $\pm 60^\circ$



# Contacts

## General Info:

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