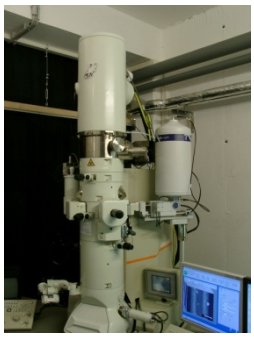
Leibniz Universität Hannover

Institut für Physikalische Chemie und Elektrochemie

Field-Emission Transmission Electron Microscope

JEOL JEM-2100F-UHR

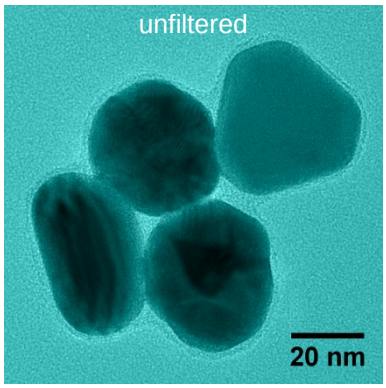


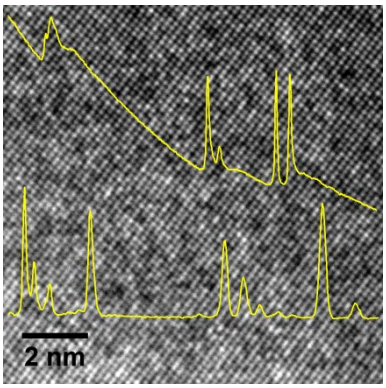
- Transmission Electron Microscopy (BF, DF, HRTEM)
- Scanning Transmission Electron Microscopy (STEM with BF, HAADF)
- Electron Diffraction (SAED, CBED, also energy-filtered)
- Energy-Filtered Transmission Electron Microscopy (EFTEM)
- Electron Energy Loss Spectroscopy (EELS, ELNES),

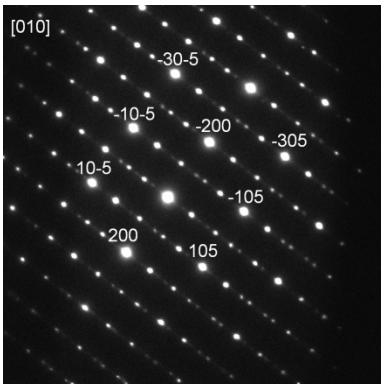
  Gatan Imaging Filter, GIF 2001, with 1k-CCD Camera
- Energy-Dispersive X-ray Spectroscopy (EDXS),

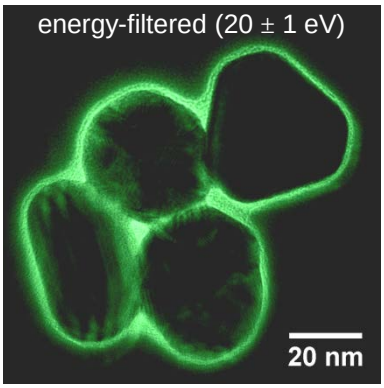
  Oxford Instruments INCA 200, detection from Be on

- Schottky field-emitter (ZrO_2/W(100))
- Acceleration voltage: 200 kV (160 kV)
- Point-resolution: ≤ 0.19 nm (C_s = 0.5 mm)
- Lattice resolution in STEM: ≤ 0.2 nm
- Energy resolution in EELS: ≤ 0.7 eV

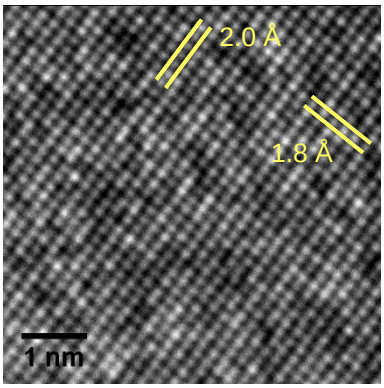




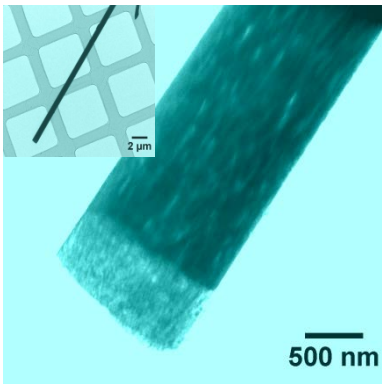




Gold conjugated with a protein



Perovskite along [012]
($Ba_{0.5}Sr_{0.5}Fe_{0.8}Zn_{0.2}O_{3-\delta}$)



TiO_{2-x} nanorod (anatase)
with planar defects

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