

TRANSMISSION ELECTRON MICROSCOPY (TEM)

JEOL 2100

Transmission electron microscopy (TEM) is a precise and non-destructive method for detail analysis of the powder materials and biological samples. From the images one can obtain information about size, shape and internal structure of the samples with the maximum resolution of 0.19 nm. Due to EDS analysis it's possible to identify chemical composition of the samples.

ACQUIRED INFORMATION

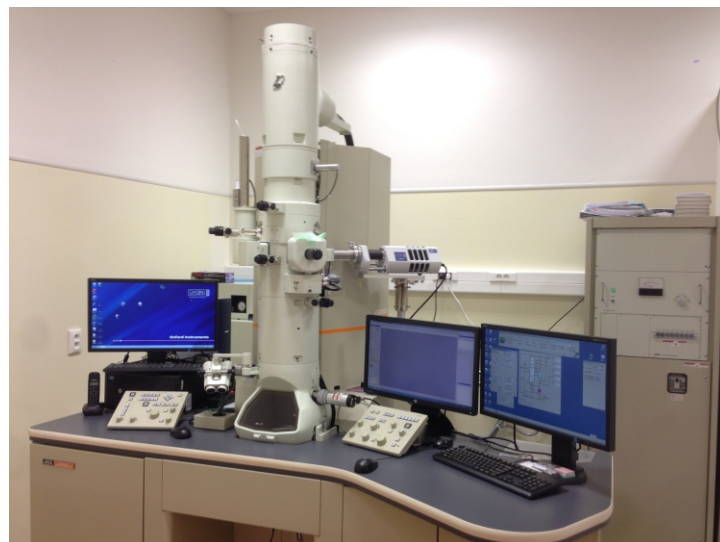
- > Size and shape of the particles (micro- and nano-)
- > Internal structure and morphology (e.g. core-shell)
- > Atomic planes
- > Chemical mapping (element composition)
- > Confirmation of crystalline or amorphous character

SAMPLE TYPES

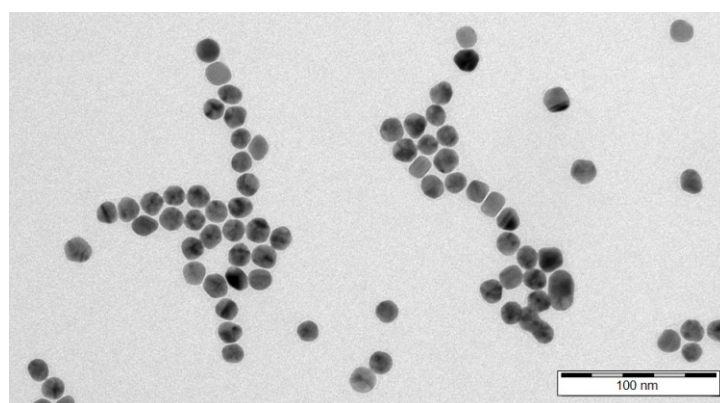
- > Powder or granular materials
- > Powdered nanomaterials
- > Biologic samples (e.g. cells)
- > All samples must be dry

MODES, CONDITIONS AND PRECISION

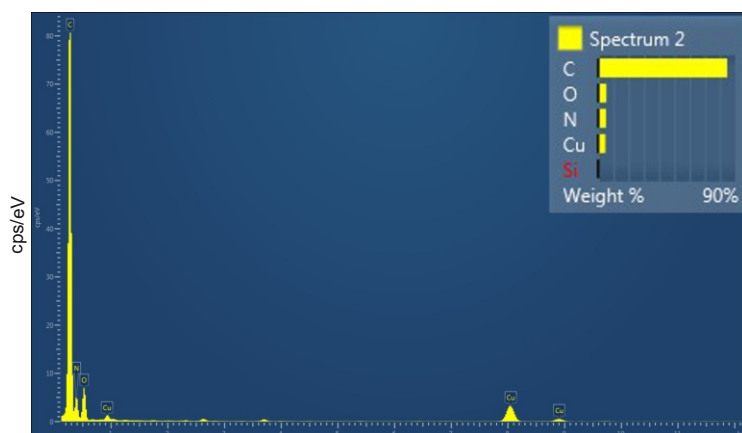
- > Accelerating voltage: 80-200 kV
- > Magnification: 1000x – 800 000x
- > Max. resolution: in TEM mode: 0.19 nm
- > Max. resolution in STEM mode: 1 nm
- > SAED (Selected area electron diffraction)
- > EDS (Energy Dispersive Spectrometry)



Transmission Electron microscope



Silver nanoparticles



EDS spectrum of graphene

DETAILED INFORMATION ON REQUEST



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