**Transmission Electron Microscope**

**Equipment:** Transmission Electron Microscope (TEM) JEOL 2100

**No. of Equipment: UPOL11**

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**Equipment Description**

Transmission Electron Microscope (TEM) JEOL 2100

Technical parameters:

* electron source: LaB6
* accelerating voltage: 80-200 kV
* point to point resolution in TEM mode: 0,19 nm
* STEM resolution: 1 nm
* microscope is equipped analytic method EDX
* special sample holders: vacuum holder for reactive samples

**Specification of expertise relevant to NanoEnviCz workpackages:**

**WP3**a,c-h, **WP4**a,b, **WP5**c, **WP6**a,e, **WP7**a-c,h,i,

**Detailed description of expertise**

**Please, specify the main research topics connected with equipment**:

The characterization of the nanomaterials samples (carbon structures, iron oxides, nanotubes, metal nanoparticles, ect.) with confirmation of the chemical composition

**Please, specify the secondary research topics connected with equipment**:

The characterization of biological samples

**Keywords describing research area:**

Transmission electron microscope (TEM), nanoparticles, biological samples, chemical composition

**Competence**

**Relevance for applied and industrial research:**

Microscopic measurement of powder materials with the confirmation of elemental composition

**Relevance for fundamental studies:**

The identification of nanoparticles – quality of production, size and shape, internal structure, confirmation of core-shell structures

Confirmation of the chemical composition –EDX spectra