

ABOUT CEITEC NANO RESEARCH INFRASTRUCTURE

CEITEC Nano Research Infrastructure provides complex equipment, expertise and methods for nanotechnology and advanced materials R&D. The CEITEC Nano facilities for nanofabrication, nanocharacterization, structural analysis and X-ray tomography enable the user to carry out complete fabrication of nanostructures and nanodevices and their characterization down to the subnanometre level in an entirely clean environment.

Number
of instruments



70+

Cleanroom
area



2000 m²

Number
of expert staff



21+

Number
of users



200+

Instrument
hours



70 000 / year



USERS

Academic users: most users of the research infrastructure come from academic institutions in the region and worldwide. Academic users typically use the infrastructure via a self-service system. They get training and support from CEITEC Nano staff and then do the nanofabrication and/ or measurement on their own.

Commercial users: the research infrastructure also attracts high-tech companies giving them access to state-of-the-art equipment for nanotechnology and materials science. They typically order measurement or nanofabrication services and their samples are processed by CEITEC Nano staff.

CEITEC NANO LABS

Nanofabrication

Lithography

- EBL, FIB, UV, laser scanning, nanoimprint

Chemical lab

- Wet benches, multiple processes

(Plasma)chemical and thermal processes

- LPCVD, ALD, MOCVD
- PECVD, RIE, DRIE
- IBE, RIBE, CAIBE

Depositions (PVD)

- Magnetron sputtering
- E-beam evaporator
- IBAD

Packaging

- Wire bonder
- Laser dicer

Nanocharacterization

Microscopy

- SEM/FIB, SPM, SNOM, Kerr microscopy

UHV techniques

- XPS
- Scanning Auger microscopy
- SIMS, LEIS
- UHV complex system

Elmag measurements

- 9T, 1.4K ppms
- LT probe station
- Automated probe station
- High-temperature probe station

Optical measurements

- VUV-VIS-MIR spectroscopic ellipsometers and spectrometers, FTIR microscope

Structural analysis

Microscopy

- HRTEM
- HRSEM with EDS, WDS
- FIB/SEM
- Sample preparation (TEM lamella, sample polishing)

X-ray diffraction

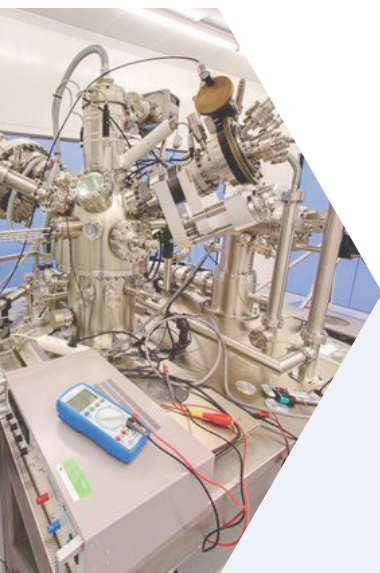
- High-resolution X-ray diffractometer
- Powder diffractometer

X-ray CT & LIBS

Computer tomography

- Micro CT
- Nano CT

Laser Spectroscopy



More about
CEITEC Nano
and possibilities on

<http://nano.ceitec.cz>