

## Scientists from CEITEC are introducing “nanoworld“ in the Technical Museum

**On the occasion of the exhibition of nanotechnologies, which has been held in the Technical Museum in Brno since December, scientists from CEITEC are initiating the general public into the world of nanotechnologies. The world that is invisible to the eye only, its secrets and possibilities are introduced to the public in six blocks. Nanotechnologies are expected to govern the world in the future. For instance nanomagnets, which will help with the treatment of cancer, can be a success.**

The management of the CEITEC project grouped the best research teams under one roof. One of them is the team of Professor Šíkola, specialized in nanotechnologies. This field is expected to reflect on all fields of science and mainly in the everyday life of humans in the future. That is why the CEITEC management considers it important and beneficial to inform about actual results in the field of nanotechnologies in “layman’s terms”.

Nanotechnologies are already influencing medicine, information technologies, engineering and the building industry. *“If we manage to build laboratories with such equipment that we desire from the European money, new nanotechnologies are the issue of the near future,”* Professor Tomáš Šíkola explains the reason for participating in the CEITEC project. *“In CEITEC we focus mainly on making the technologies cheaper and accessible to the general public,”* adds Šíkola.

Scientists from the Advanced Nano- and Microtechnologies programme are already working on the development of nanomagnets which will also find their use for example in the treatment of cancer. A magnet a millionth of a millimetre in size, is added to the drug. The magnet is controlled from the outside by another magnet directly to the tumour. The minimum of adverse effects would be achieved and the maximum amount of the medicinal substance would get to the organ affected by cancer. The treatment would be more effective, cheaper and last but not least considerably more pleasant for the patient.

CEITEC also focuses in another direction. For example it is trying to develop special nanosensors which will help to protect goods from falsification, even perhaps theft. In cooperation with other research programmes, there is a chip being developed, which will be implanted under the skin and will monitor and subsequently send out signals about the activities of various organs. So it will not be necessary to visit a doctor as often as nowadays.

*“If everything finishes as planned, the building of CEITEC laboratories could start in the beginning of next year and the work results of the scientists could come in the near future,”* adds Tomáš Hruša, Project Director.

### Project CEITEC

CEITEC will be an institution where research will be carried out and post-gradual and post-doctoral tuition will be done in various fields of science. The teams engaged in science in theoretical and applied levels are involved, mainly in the fields of natural sciences, biology, physics and chemistry including interdisciplinary fields.

[www.ceitec.cz](http://www.ceitec.cz)

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**Vision of the CEITEC centre: “We will create a centre of science excellence, whose results will contribute to the improvement of the quality of life and human health.”**