

## Czech Republic meets Germany **Nanotechnology Seminar**

**23<sup>th</sup> October 2012, 14:00 – 18:00**

**Ernst-Schneider-Saal, IHK Düsseldorf  
Ernst-Schneider-Platz 1, 40212 Düsseldorf**

### WELCOME ADDRESS

#### **Gerhard Eschenbaum**

Deputy Executive Director and Head of the International Business Division,  
IHK Düsseldorf

#### **Ondrej Karas**

Consul, Consulate of the Czech Republic Düsseldorf

#### **Harald Cremer**

Clustermanager NanoMikro + Werkstoffe.NRW  
Presentation of the Cluster NanoMicro+Materials

### SPEAKERS

#### **Vojtech Helikar – CzechInvest**

##### ***Current situation of nanotechnology industry in the Czech Republic***

CzechInvest is the investment and business development agency of the Czech Republic whose services and development programmes contribute to attracting foreign investment and to developing business relations. The field of nanotechnology has a long history in the Czech Republic, and the majority of domestic firms have an international reputation.

[www.czechinvest.org](http://www.czechinvest.org)

#### **Jiří Chvojka, Petr Mikeš – Technical University of Liberec**

##### ***Nanofibrous materials as a scaffolds for tissue engineering***

The main research is focused on the preparation of nanofibrous materials for medical applications. Here we deal with teoretical description of electrospinning and solving of practical problems of preparation of nanofibrous and nanocomposite layers such are: coaxial nanofibers, bi-component nanofibers, nanofibrous composite materials with encapsulated drugs etc. These materials are then in-vitro tested in our biological laboratory for adhesion and proliferation of human/animal cells. Other testing has been done for its biodegradation, biocompatibility and drug delivery.

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

### CZECHINVEST

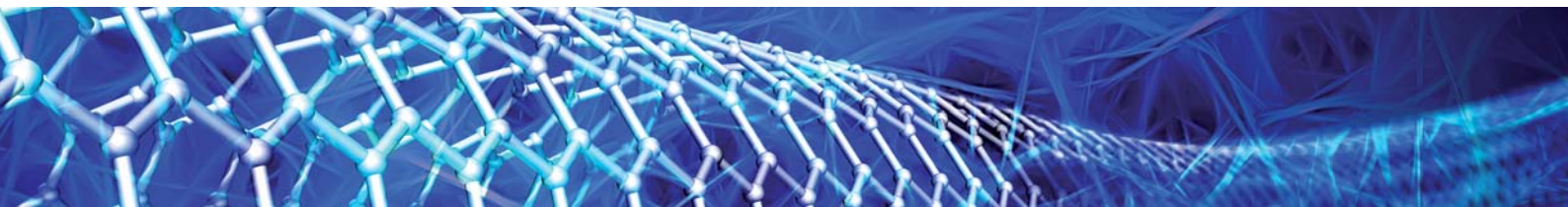
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## **Radek Zbořil, Vladimír Lapčík – Regional Centre of Advanced Technologies and Materials, Palacky Univerzity Olomouc**

### ***Innovation, Collaboration and Technology Transfer***

The main objective of the Regional Centre of Advanced Technologies and Materials (RCPTM) is the regular transfer of the developed high-tech technologies into the medicinal, industrial and environmental practice and the participation of the Centre in the prestigious international networks and consortia. RCPTM focuses predominantly on the top research in the metal oxide nanoparticles for catalytic and magnetic applications, carbon nanostructures, metal nanoparticles for antimicrobial and water treatment technologies, coordination chemistry, photonics, new instrumentation in optics and analytical chemistry. One of the main goals is also to offer the first-rank microscopic, spectroscopic, magnetic and other devices for the commercial utilization.

[www.rcptm.com](http://www.rcptm.com)

## **Liliana Berezkinová – Nanoprogres**

### ***Nanoprogres: A Czech-Based Nanotechnology Cluster Focusing on Nanomedicine***

Nanoprogres has been conducting commercially-driven research since 2010. The cluster is formed by 21 members - universities, R&D centres and small- and medium sized enterprises. The cluster's goal is to use its own coaxial nanofibers for the development of biomedical applications and to commercialize them.

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

## **Jozef Kaiser, Jan Proček – CEITEC Central European Institute of Technology, VUT Brno**

### ***Laser-Induced Breakdown Spectroscopy and Micro and Nano CT techniques for Research and Development***

The CEITEC BUT group of X-ray Micro CT and Nano CT is involved in the development and application of (micro and nano) computed tomography ( $\mu$ CT) techniques for visualization of the entire 3D structure of different samples with high spatial resolution, together with the development of laser-ablation based analytical techniques for 2D and 3D high-resolution elemental mapping. Laser-ablation based analytical techniques, namely Laser-Induced Breakdown Spectroscopy (LIBS) and Laser-Ablation Inductively Coupled Plasma Mass/Optical Emission Spectrometry (LA-ICP-MS/OES) have been proven by many authors in the last two decades as excellent tools for quantitative and qualitative microspatial analysis of wide variety of samples. The use of the recently installed state-of-the-art  $\mu$ CT system for different scientific and industrial applications will be detailed.

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

## **Luděk Novotný, Michaela Novotná – Advanced Materials-JTJ**

### ***FNR Coatings-Second generation of photocatalytic products – open door to large scale applications***

The company is a manufacturer of 2nd generation of photocatalytic products (FNR) with the efficacy up to 100x higher compared to the conventional 1st generation TiO<sub>2</sub> products. AMJTJ's photocatalytic technology improves air quality by efficiently removing allergens, odors, viruses, bacteria, toxins and other microorganisms. Superior performance of the coatings makes FNR ideal for indoor air cleaning. As a result, now several hospitals use FNR to create sanitary environments in children's oncology and other departments. FNR is a solution to the „Sick Building Syndrome“ and scored 2nd in the Czech prime minister prestigious award „*Innovation 2010*“. Simultaneously, Advanced Materials-JTJ developed a large-scale industrial process to make TiO<sub>2</sub> nanoparticles in high quality for cosmetics, photocatalysis and other applications.

[www.advancedmaterials1.com](http://www.advancedmaterials1.com)

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**Registration per e-mail: [duesseldorf@embassy.mzv.cz](mailto:duesseldorf@embassy.mzv.cz) or per fax: +49 211 566 942 29  
till 17th October 2012.**

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