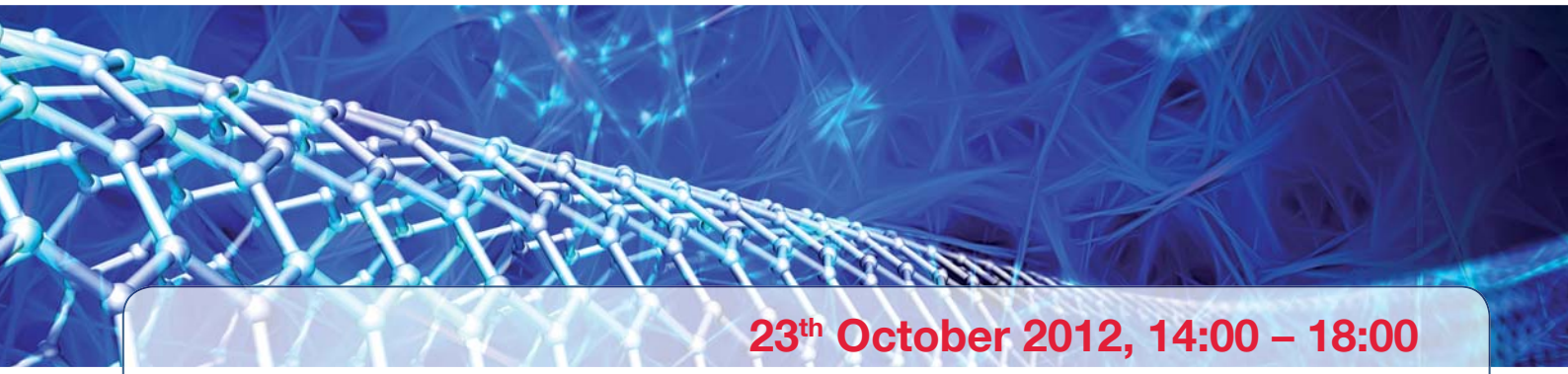
MINISTRY OF INDUSTRY AND TRADE

Konsulat der Tschechischen Republik in Düsseldorf

20 years CZECHINVEST

Czech Republic meets Germany

Nanotechnology Seminar



23th 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

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

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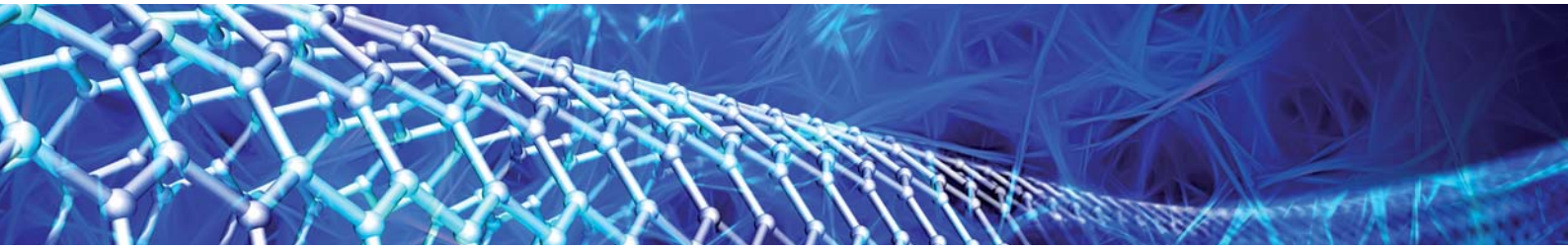
Czech Republic

IHK Industrie- und Handelskammer zu Dortmund

NMW.NRW Cluster NanoMikro+Werkstoffe



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

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

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 (μCT) 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 μCT system for different scientific and industrial applications will be detailed.

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 TiO2 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 TiO2 nanoparticles in high quality for cosmetics, photocatalysis and other applications.

www.advancedmaterials1.com

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