CEITEC

Central European Institute of Technology

BRNO | CZECH REPUBLIC

Středoevropský technologický institut, výzkumná skupina Chytré nanostroje
Laboratoř metalomiky a nanotechnologií, Mendelova univerzita v Brně

# Seminář/Seminar PRO_4907

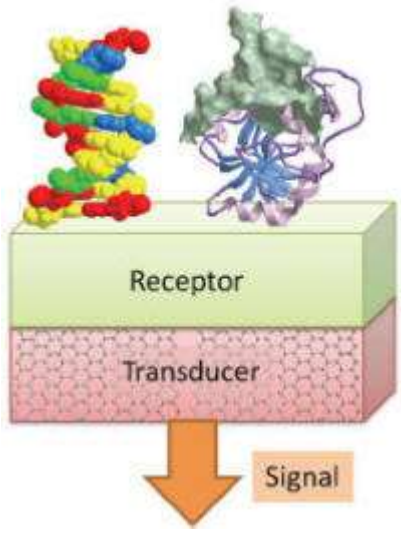
Vás zve na seminář:

## Next generation diagnostics

## *Assoc. prof. Dr. Martin Pumera, Ph.D.*


**Abstrakt**

Our research interests are closely related to the needs of the society. To address pressing needs in ***healthcare, environment, security and energy resources sustainability***, we carry out cutting edge research in following areas:




*Biomolecules analysis is a topic of high importance for many applications in various fields such as medicine, security, forensic science or environmental protection. There is enormous need in the market for new tools for the detection of DNA, proteins, bacteria, and viruses which can provide a fast and reliable response, allowing at the same time in-situ analysis. A biosensor is the ideal tool which can fulfil all the above mentioned requirements. In the development of the latter a key issue is represented by the choice of both the sensing platform and the detection technique. In our group we combine the outstanding performance of graphene as transducer material together with the highly sensitivity of electrochemical impedance spectroscopy for the label-free detection of biomolecules. Several chemically modified graphenes with different surface features and various functionalities are being tested in order to choose the more appropriate for the bio-functionalization with the species which are specific for the recognition of the target molecule. Our aim is to obtain a final product that will be integrated in lab-on-a-chip device for portable, simple and rapid diagnostics*.


## 29. 06. 2015, 12:00 h

**Department of Chemistry and Biochemistry and Central European Institut of Technology in Brno, room D06,** contact: kizek@sci.muni.cz