Research Group
Smart Nanodevices would like to invite you to the seminar:

CEITEC
BRNO UNIVERSITY OF TECHNOLOGY

Separation approaches to enhance the selectivity of paper based microfluidic devices

DELIVERED BY

RNDr. Miroslav Macka, Ph.D.

CEITEC Brno University of Technology, Smart Nanodevices

ABSTRACT

Paperfluidics and paper-based analytical devices (μPADs) come to be very popular as ultimately portable and low-cost analytical platform. Arguably their weakest point is their often limited selectivity. Yet separation approaches have been implemented into μPADs to a limited degree. The speaker will first focus on elements critical to the success of μPADs. In the critical detection step, distance-based detection methods eliminate the need for any external detector/device and thus enable instrument-free assays. Then to implement a separation element in the μPADs, we explored the use of molecule imprinted polymer to modified μPADs with distance-based detection. We investigated this approach for analysis of proteins as markers in biological fluids such as urine, and of pesticides in environmental waters. Further we explored in situ formation of quantum dot nanoparticles to facilitate enzyme-based analysis using μPADs.

The speaker's involvement in CEITEC based IMPROVE project set in this broader area will be outlined.

THURSDAY START 16:00

30/04/2020

Seminar room X03

MENDELU, Zemědělská 1

EUROPEAN UNION
European Structural and Investment Funds
Operational Programme Research, Development and Education

MINISTRY OF EDUCATION, YOUTH AND SPORTS