



Dziekan Wydziału
Matematyczno-Przyrodniczego
i Dyrektor Instytut Fizyki
Akademii Jana Długosza
w Częstochowie zapraszają



**23 stycznia 2013 r. o godz. 12¹⁵
do Audytorium – sala 1023
Akademii Jana Długosza w
Częstochowie**
Al. Armii Krajowej 13/15



na

**Seminarium Wydziału
Matematyczno-Przyrodniczego**

na którym

M.Sc. Maroš Halama PhD.
Technical University of Košice, Faculty of Metallurgy,
Corrosion Control Lab, Slovakia

przedstawi wykład:

**Quantification of life-time of metallic nanoparticles
in biomedical and environmental applications**

Metallic nanoobjects often demonstrate unique physical-chemical properties due to their dimension and well known large surface/volume ratio. Such changes are mostly linked with enhanced reactivity, which could explain their potential health effects. It is thus inadequate to simply translate results obtained with large particles (bulk material) for NPs. The redox chemistry of NPs and their modulation by different constituents of the exposed environment may be a very important point to know. Indeed, it is known for example that the redox chemistry of different elements present on ambient particle may alter the bioavailability and toxicity of these elements etc. The study of redox properties, corrosion behaviour, stability and life-time of nanometer metallic particles in aqueous solution is complicated due to the fact that their surface may be modified drastically depending on the conditions. We are focusing on developing electrochemical/corrosion techniques and their hyphenation with other techniques which could answer question regarding dissolution rate of any metallic nanoparticles. (Maroš Halama)

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