Univerzita Karlova v Praze, Přírodovědecká fakulta

Sekce chemie PřF UK v Praze
zve všechny zájemce na přednášku z cyklu

Quo Vadis Chemie

NEW MATERIALS AND CHEMISTRY: SMALL MOLECULES - GREAT PROGRESS

kterou přednese

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dne 22.4.2013 ve 14:00 hod.
v posluchárně CH2, v budově chemických kateder PřF UK
Hlavova 8, Praha 2

Abstrakt: Within this lecture a brief overview of our group topics including heteromultimetallic transition metal complex chemistry, spectro-electrochemistry, homogeneous catalysis (*C,C* cross-coupling reactions), dendrimers (stabilisation of metal and metal oxide nanoparticles, molecular batteries) and flexible conductive materials will be presented. After that the lecture will focus on the synthesis, properties, reactivity, structure and bonding of novel organometallic and metal-organic compounds and their use as precursor molecules in the area of material sciences. The application of Cu-, Ag-, Au-, Ru-, Co-, Pd-, Pt- and Rh-containing molecules for the preparation of thin metal films and structures by applying different deposition methods such as CVD (= Chemical Vapour Deposition), ALD (= Atomic Layer Deposition), spin-coating, spray-coating, combustion-CVD and inkjet printing will be discussed. Also, a new method for the generation and stabilisation of electric, conductive and magnetic metal and metal oxide nanoparticles will be envisaged. Finally, the possibility to use metal nanoparticles for joining materials at low temperature using the soldering process will be reported. Also the laser ablation for the generation of metallic structures from metal-organic complexes is one of the topics of the lecture.

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