

## Laboratoř Metalomiky a Nanotechnologií

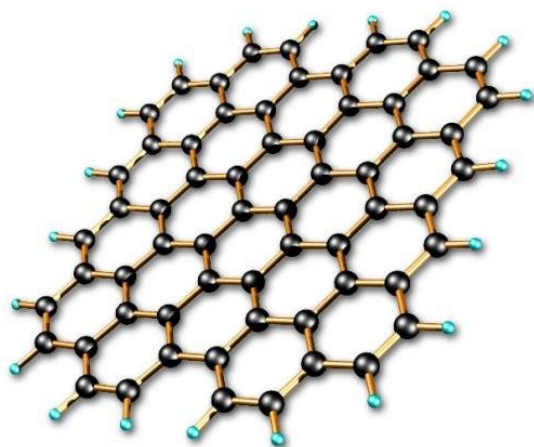
Vás zve na seminář k projektu ID 196:

### Characterization of nanocomposite of graphene oxide and nanoparticles

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#### Abstrakt

Graphene oxide (GO) films with two-dimensional structure can be successfully prepared via the modified Hummer method. It is proven that redox method is a promising way to synthesize GO films on a large scale. Modification of GO with Se, Cu, Ag<sub>3</sub>PO<sub>4</sub> and ZnO nanoparticles will be present in this seminar. Comprehensive characterizations of the properties of modified GO films were conducted. TEM and DFM analyses showed that GO



sheets prepared in this study had single and double lamellar layer structure and a thickness of 2~3 nm.

X-ray diffraction (XRD) was selected to measure the crystal structure of GO sheet. Fourier-transform infrared spectra analyzer (FT-IR) was used to certify the presence of oxygen-containing functional groups in GO films. The tests of UV-VIS spectrometer and TGA analyzer indicated that GO sheet possessed excellent optical response and outstanding thermal stability. Elemental analyzer (EA) and X-ray photoelectron

spectroscopy (XPS) analyzed the components synthetic material.

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