

## NUSNNI Seminar

**Date:** 27 June 2005, Monday

**Time:** 4:00pm - 5:30pm

**Venue:** Physics Resource Room , S13-2-15, Faculty of Science

**Speaker :** **Dr Leszek Stobinski**, Institute of Physical Chemistry, PAS, Warsaw, Poland and National Taipei University of Technology, Taipei, Taiwan

**Title:** *Carbon Nanotubes – New Material of the 21<sup>st</sup> Century*

In this presentation recent advances in design, preparation, modification and physico-chemical characterization of carbon nanotubes will be presented. Experimental results will be supported by computer simulations at different level of sophistication. Possible future applications of purified and modified carbon nanotubes will be given. Examples of complexed carbon nanotube by D-glucopyranose molecule and decorated by Pd nano-particles are shown below.

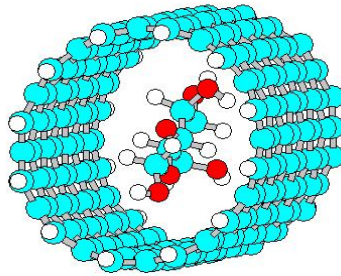


Fig. 1. Computer visualisation of the D-glucopyranose molecule inside the channel of SWCNT of 1 nm in diameter. The minimum distance between hydrogen atoms and the SWCNT wall is about 2.5 Å

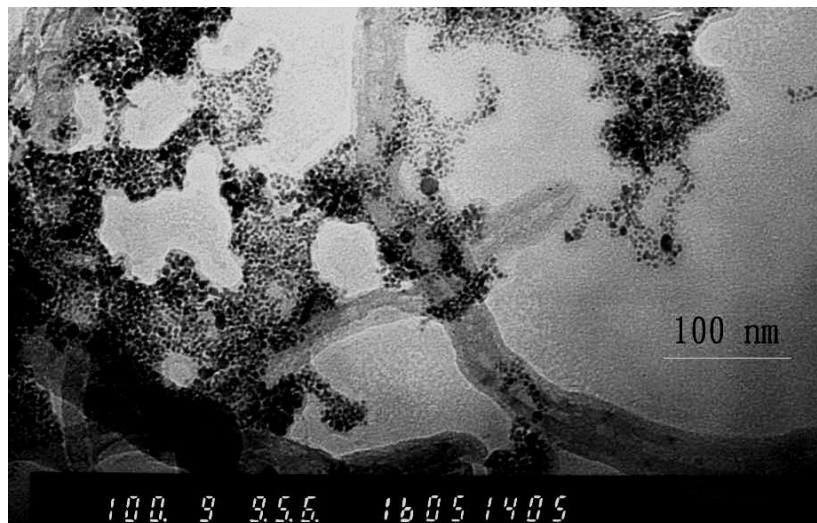


Fig. 2 Pd nano-particles (diam < 10 nm) on MWCNTs surface