

Kolloquium

Am Montag, dem 10. September 2012, um 16:15 Uhr hält

Prof. Dr. Vladimir A. Basiuk
vom Instituto de Ciencias Nucleares
an der Universidad Nacional Autónoma de México

einen Vortrag mit dem Titel

Carbon nanotubes and their applications

Der Vortrag findet im Raum A5 0-055 statt.

Abstract:

The talk deals with the brief history of carbon nanotube discovery, methods of preparation and characterization, types of carbon nanotubes, their covalent and noncovalent functionalization. The main focus is done on the evolution of ideas on possible and real applications of carbon nanotubes (field emission, nanoelectronic, and nanoelectromechanical devices, energy conversion and storage, hydrogen storage, probes for scanning probe microscopy, biomedical applications, space elevator, composites, sports tools, transport, thermal and electrostatic dissipating materials, membranes, filters, etc.), during two decades of their 'modern' history. The aspects of their toxicity are touched upon as well.

CV:

Prof. Vladimir A. Basiuk was born in 1961 in Chernigov (Ukraine). He graduated from T. G. Shevchenko State University of Kiev (Ukraine) and received his M.Sc. in 1983 in the area of chemical functionalization of silica with tetraazamacrocyclic complexes, under the supervision of Prof. Konstantin B. Yatsimirskii and Yaroslav D. Lampeka. In 1986, he obtained his Ph.D. from L. V. Piszarshevsky Institute of Physical Chemistry (National Academy of Sciences, Kiev, Ukraine) in the area of chemical modification of silica with nitrogen-containing compounds. From 1986 to 1994, he worked as a researcher at the Institute of Surface Chemistry (Kiev, Ukraine) on different aspects of the surface chemistry of silica, including chemically bonded station-thermal transformation of amino acids, and related aspects of the origins of life and chemical evolution. In 1994, he joined the Institute of Nuclear Sciences of the National Autonomous University of Mexico (Mexico City). There he became interested in quantum chemistry, mainly the study of the formation of organic compounds in the interstellar medium. Since 2001 his scientific interests have gradually shifted to the chemistry of carbon nanomaterials (carbon nanotubes and fullerenes), with an emphasis on theoretical nanoscience. At present, Basiuk's major field of research is theoretical chemistry of carbon nanotubes, conducting experimental studies in collaboration with Prof. Elena V. Basiuk. Prof. Basiuk has published about 130 journal papers. He is an associate editor of the Journal of Nanoscience and Nanotechnology. Currently, Prof. V.A. Basiuk is the Editor-in-Chief of Journal of Advanced Microscopy Research (American Scientific Publishers).

Eingeladen von: Prof. Dr.-Ing.habil. Sergej Fatikow

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