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S T U  
F E I

Slovak University of Technology in Bratislava  
Faculty of Electrical Engineering and Information Technology  
Department of Microelectronics



would like to invite you to attend a specialized Seminar organized within „The week of Science in Slovak Republic" featuring important speakers from abroad with focus on:

## **„Carbon nanotubes - material of the future"**

which will be held at FEI STU premises (Employee Club) in Block B on Monday, November 12 at 2:00 pm.

### Program:

#### **Introductory remarks – Viera**

**Skákalová 14.00**

**Siegmar Roth 14.00-14.50**

Max Planck Institute for Solid State Research  
Stuttgart, Germany  
e-mail: [S.roth@fkf.mpg.de](mailto:S.roth@fkf.mpg.de)

**Miroslav Haluška 14.50-15.20**

Micro- and Nano- Scale Engineering Group  
Technical University of Eindhoven  
Netherlands  
e-mail: [M.Haluska@tue.nl](mailto:M.Haluska@tue.nl)

**Dirk Obergfell 15.20-15.50**

Max Planck Institute for Solid State Research  
Stuttgart, Germany  
e-mail: [D.obergfell@fkf.mpg.de](mailto:D.obergfell@fkf.mpg.de)

**Coffee break 15.50-16.10**

**Hans Kuzmany 16.10-17.00**

Faculty of Physics  
University of Vienna, Austria  
e-mail: [hans.kuzmany@univie.ac.at](mailto:hans.kuzmany@univie.ac.at)

**Rudolf Pfeiffer 17.00-17.30**

Faculty of Physics  
University of Vienna, Austria  
e-mail: [rudolf.pfeiffer@univie.ac.at](mailto:rudolf.pfeiffer@univie.ac.at)

**Ferenc Simon: 17.30-18.00**

Department of Experimental Physics  
Budapest University of Technology and  
Economics, Hungary  
e-mail: [ferenc.simon@univie.ac.at](mailto:ferenc.simon@univie.ac.at)

#### **„Carbon nanotubes – what is that? "**

Introduction into physics and material science of carbon nanostructures. New effects, new applications.

#### **„Growth of carbon nanotubes"**

Methods of single wall carbon nanotubes growth and effect of the growth conditions on SWNT properties will be presented.

#### **„Magnetotransport in single wall carbon nanotubes and graphene"**

Magnetotransport at low temperatures was performed on individual SWNTs, peapods and graphene. The importance of combining transport with a structural investigation on the same nano-object is pointed out.

#### **„Recent efforts to make money from carbon nanotubes"**

Recent experience in strong Japan-Korean efforts to commercialize carbon nanotubes will be shared. These efforts cover low price production of the tubes, separation of metallic and semiconducting tubes, chirality selective growth, field emission applications, electro-optical applications, drug delivery, biosensing, and others.

#### **„Catalytic and non-catalytic growth of nanotubes inside nanotubes"**

A detailed growth study of nanotubes formed inside SWNTs filled by fullerenes and ferrocene, and their characterization with Raman spectroscopy, HR-TEM and x-ray diffraction will be presented.

#### **„Playing with the inside of carbon nanotubes: from strong correlation effects till drug delivery"**

The hollow inside of single-wall carbon nanotubes provides a unique degree of freedom to investigate chemical reactions inside this confined environment and to study the tube properties.