

In Prague 24<sup>th</sup> September 2008

**Report of the Czech Vacuum Society**  
**IUVSTA Technical Training Course Grant in 2008**

1. Course location: **Špindlerova bouda, Špindlerův Mlýn, Czech Republic**
2. Time: **26. – 29. 5. 2008**
3. Title of the course:  
**Summer School of Vacuum Technology - School of Nanotechnology and Engineering**

The school was organized by the Czech Vacuum Society.

**Organizing Committee:**

Karel Mašek  
Pavel Hedbávný  
Vladimír Matolín  
Hana Kacafírková  
Josef Voltr

The Technical Short Course was offered to Czech technicians, production engineers, junior researchers and students responsible for handling and operation of vacuum equipment used in micro- and nano- scale research and development, and production in the local industries and research institutions. The TTC provided an introduction to basic physical processes relevant for new vacuum technology in nanoscale. Personal interaction between the course instructors and the trainees should help in establishing long term contacts for future consulting and distribution of knowledge between academic circles, vacuum equipment producers and distributors, and vacuum practical users.

Language of the TTC: Czech language

**List of TTC lectures:**

- 1) **Vakuová technika pro nanotechnologie (Vacuum Technique for Nanotechnology)**  
*Z. Hůlek*, Pfeiffer Vacuum Austria, Praha
- 2) **Příprava nanostruktur: MBE a RHEED (Fabrication of nanostructures: MBE and RHEED)**  
*K. Mašek*, Charles University, Praha
- 3) **Nanotechnologie v heterogenní katalýze (Nanotechnology in Heterogeneous Catalysis)**  
*V. Matolín*, Charles University, Praha
- 4) **Úvod do fokusovaných iontových svazků (Introduction to Focused Ion Beams)**  
*T. Vystavěl, P. Skočovský, P. Wandrol*, FEI Czech Republic sro, Brno
- 5) **Rastrovací elektronová mikroskopie (SEM) v praxi (Scanning Electron Microscopy in Practice)**  
*F. Lopour*, Tescan sro, Brno
- 6) **STM – nanolaboratoř na špičce jehly (STM – Nano-laboratory at the Needle Tip)**  
*J. Mysliveček*, Charles University, Praha
- 7) **Elektronová litografie (Electron Litography)**  
*F. Matějka*, Ústav přístrojové techniky, Brno
- 8) **Nanosvět z pohledu iontů (Nanospace from Ion Viewpoint)**  
*P. Bábor*, Technical University, Brno

Part of TTC programme was company exhibition and discussion with company representatives.

**Czech Vacuum Society – TTC Report**  
**International Union for Vacuum Science, Technique, and Applications - Education Committee**  
**IUVSTA Technical Training Courses (ITTC) – Triennium 2007 - 2010**

**Number of participants: 47**

Students and young researchers: 24

Technical engineers: 16

Company representatives: 7

**TTC total incomes: 12500 CHF**

TTC fee: **7400 CHF** (185 CHF per participant)

Company fee: **1600 CHF**

IUVSTA grant: **3500 CHF** (IUVSTA support 87,50 CHF per regular participant – excluding company representatives)

**TTC costs:**

TTC costs at the location: **12100 CHF**

Organization costs and TTC textbook: **1050 CHF**

The difference between incomes and costs was covered by Czech Vacuum Society.

IUVSTA grant financial support was used to cover part of the regular participant stay expenses.

According to the opinion of organizers the TTC “**School of Nanotechnology and Engineering**” was successful. The organizers acknowledge IUVSTA support of the summer school.

On behalf of the Czech Vacuum Society

Karel Mašek and Vladimír Matolín

**Czech Vacuum Society**

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