

# 16<sup>th</sup> Symposium on Application of Plasma Processes, Workshop on Research of Plasma Physics and Applications in Visegrad Countries.

Second announcement



Grand hotel Permon Podbanské  
High Tatra, Slovakia  
January 20.- 25. 2007

## Symposium Office

SAPP XVI

Department of Experimental Physics  
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## Organizing Committee

Štefan Matejčík, Comenius University  
(chairman)

Ján Skalný, Comenius University (secretary)

Ján Matúška, Comenius University  
(secretary)

## Symposium Organizers

Department of Plasma Physics, Comenius  
University

Union of Slovak Mathematicians and  
Physicists

Research Institute for Solid State Physics and  
Optics of the Hungarian Academy of Sciences ,  
Budapest, Hungary

Department of Physical Electronics, Faculty of  
Sciences, Masaryk University, Czech Republic  
The Szewalski Institute of Fluid Flow machinery,  
Polish Academy of Sciences, Poland

## Supporting organization

[International Visegrad Fund](#), Bratislava,  
Slovakia

## Topics

1. Electrical discharges and other plasma sources
2. Elementary processes and plasma chemical reactions
3. Plasma-surface interactions
4. Plasma treatment of polymer and biological material
5. Nanometer-scaled plasma technologies

## Symposium Program

The Conference program will include 13 invited lectures, 18 short lectures (progress reports) and poster presentations.

Due to changes in the editorial board of the journal Acta Physica Slovaca, we are not able to prepare special issue at that journal.

## Program Structure

The scientific program is organized into two sessions:

Morning 8:30 – 10:30 (Invited lectures)

Afternoon 16:30 – 21:00 (Progress reports, posters)

Between the sessions there is time for informal discussions and sport activities

## Social Program

For details please visit:

[www.fmph.uniba.sk/sapp](http://www.fmph.uniba.sk/sapp)

## Conference Fee

For details please visit:

[www.fmph.uniba.sk/sapp](http://www.fmph.uniba.sk/sapp)

Type of room	Price
Single bed room	€ 490 (510 *)
Double bed room	€ 420 (440 *)
Accompany person	€ 330 (350 *)
Triple bed room	€ 350 (370 *)
Economy**	€ 300 (320 *)
Accompany person	€ 250 (270 *)

\*After November 1<sup>st</sup>, 2006

The conference fee is type of **ALL INCLUSIVE** (board, lodging, book of abstracts, welcome party, conference dinner and the service during the symposium).

Single, double and triple bed rooms are located in Grandhotel Permon  
Economy accommodation is located in Hotel Kriváň  
For more details please visit conference web page.

## Location

For details please visit:

[www.fmph.uniba.sk/sapp](http://www.fmph.uniba.sk/sapp)

## Travel

Conference shuttle bus from Bratislava will be provided by the organizers.

For more details please visit:

[www.fmph.uniba.sk/sapp](http://www.fmph.uniba.sk/sapp)

## Deadlines

Abstract submission: December 1st, 2006.

Preliminary registration: November 1st, 2006

3rd Announcement: December 15th, 2006

## Final Electronic registration

Please use the electronic registration at the conference webpage:

[www.fmph.uniba.sk/sapp](http://www.fmph.uniba.sk/sapp)

## Invited lectures

**K. Becker** - Microplasmas: Scientific Challenges, Technological Applications and Limitations

*Stevens Institute of Technology, New York, USA*

**M. Černák** - Low-cost and high-speed plasma surface treatments at atmospheric-pressure

*Comenius University, Bratislava, Slovakia*

**Z. Donko** - Modeling of dual-frequency capacitive discharges

*Academy of Sciences, Budapest, Hungary*

**I. Kossiy** - Resonance phenomena in nonmagnetized plasmas and their manifestation in microwave plasma source

*A.M.Prokhorov - General Physics Institute of Russian Academy of Sciences, Russia*

**P. Lukeš** - Electrical discharges in water  
*Czech Academy of Sciences, Prague, Czech republic*

**J. Mizeraczyk** - Atmospheric pressure microwave discharges for gaseous pollution control

*Academy of Sciences, Gdansk, Poland*

**M. Bilek** - A new multi-cathode high current pulsed cathodic arc thin film deposition system

*School of Physics, The University of Sydney, Australia*

**R. Schrittwieser** - Cavity-Hollow Cathode as Sputtering Source

*University Innsbruck, Austria*

**J. Vlček** - High-power pulsed magnetron discharges for ionized high-rate sputtering of films

*West Bohemian University, Plzen, Czech Republic*

**Z. Herman** - Collisions of slow ions with room-temperature and heated carbon and tungsten surfaces

*Czech Academy of Sciences, Prague, Czech republic*

**N. Mason** - Ion bombardment of astrochemical ices

*Open University, Milton Keynes, UK*

**T.D. Märk** - Elementary plasma reactions revisited: electron ionization and ion surface reaction

*University Innsbruck, Austria*

**P. Swiderek** - Investigation of electron-induced reactions in the condensed phase by thermal desorption spectrometry

*University Bremen, Germany*

## Progress Reports

### 1. Electrical discharges and other plasma source

**Z. Stara** - Removal of organic dyes from water solutions by the diaphragm discharge

**V. Chernyak** - Electrical discharge in a gas channel with a liquid wall and its application

**D. Dimitriu** - Transition to chaos by cascade of period-doubling bifurcations in plasma  
**K. Hensel** - Discharge in porous ceramics - its fundamental properties and applications

**T. Hoder** - Cross-correlation spectroscopy investigation of the coplanar barrier discharge in air at atmospheric pressure

**C. Ionita-Schrittwieser** - Multiple double layer structures in plasmas

**J. Limpouch** - Hard X-ray generation and particle acceleration in short-pulse laser target interactions

**P. Hartmann** - Numerical experiments on complex plasmas

**M. Dors** - Water remediation with a pulsed corona discharge

### 2. Elementary processes and plasma chemical reactions

**N. Asfandiarov** - Temporary anion states and dissociative electron attachment to nitrobenzene derivatives

**I. Bald** - DNA damage by LEE: DEA studies on gas phase biomolecules

**W. Barszczewska** - Dissociative electron attachment to chloro-bromo hydrocarbons

**J. Glosik** - High resolution laser spectroscopy of ions

**O. Ingolfsson** - Transient negative ions of Hexafluoroacetone Azine

$((CF_3)_2CNNC(CF_3)_2)$ ; formation and decay

**P. Papp** - Dissociative electron attachment to amino acids - theoretical study

### 3. Plasma-surface interactions

**P. Virostko** - Various types of plasma-jet systems applied for deposition of oxide films

**B. Grančič** - Structure and properties of superhard TiB<sub>2</sub> coatings prepared by DC magnetron sputtering

#### **4. Plasma treatment of polymer and biological material**

[H. Biederman](#) - Organic Coatings Prepared by RF Sputtering of Polymers

[I. Hudec](#) - The Influence of Plasma Treatment and Plasma Polymerization on Adhesion of Polyester Cords to Rubber

[A. Toth](#) - Plasma-based energetic particle beam treatment of polymeric materials

#### **5. Nanometer-scaled plasma technologies**

[A. Huczko](#) - Carbon Arc Plasmas a Source of Novel Nanocarbons

[H. Drexel](#) - Nano-crystalline Diamond Coatings - A Basic Technology for Various Applications

[A. Kolitsch](#) - Indium tin oxide thin film properties deposited by reactive pulsed magnetron sputtering

[V. Novokshenov](#) - Resonant excitation and control of high order dispersive nonlinear waves

[R. Vladoiu](#) - Tribological properties and characterization of the nanostructured carbon thin film deposited by Thermionic Vacuum Arc technology