

International Workshop
Advanced Materials & Technologies

organized by

**Research Institute for Technical Physics and Materials Science
MTA- MFA, Budapest**



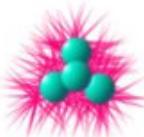
23rd – 25th March 2011

at

**MTA-MFA,
Konkoly Thege Miklós út 29-33, Budapest, Hungary**

endorsed by

Hungarian Society of Materials Science



and



Centrum excelentnosti progresívnych materiálov
s nano a submikrónovou štruktúrou



Podporujeme výskumné aktivity na Slovensku / Projekt je spolufinancovaný zo zdrojov EÚ

and

Bay Zoltán Foundation for Applied Research



Committee & Advisory Board

I. Bárszny, MTA-MFA, J. Gyulai - HSMS

J. Dusza, F. Lofaj – IMR SAS

N. Babcsán, G. Kaptay - Bay Zoltán Foundation

Local organizers:

C. Balázsi, O. Tapasztó

Program

March 23, 2011

- 11:30 Arrival to MTA-MFA – Lunch
- 13:30 **I. Bárszny**, director of MFA - **Opening**
- 13:35 **J. Gyulai** - president of Hungarian Society of Materials Science - Forewords
- 13:40 **I. Bárszny** - Research orientation of MFA
- 14:00 **C. Balázsi** - Research Activities at Ceramics and Nanocomposites Dept., MFA
- 14:15 **J. Dusza** - Centre of excellence NanoCEXmat
- 14:45 **F. Lofaj** - Research activities at IMR SAS
- 15:00 **P. Hvízdoš** - Key research facilities at IMR SAS
- 15:15 ***Signing ceremony of MOU document between MTA MFA and IMR SAS***
- 15:30 *Coffee break*
- Chairs *J. Dusza, C. Balázsi*
- 15:45 **M. Kašiarová** - Oxidation characteristics of Si_3N_4 based ceramics
- 16:05 **A. Kovalčíková** - Thermal shock resistance of Si_3N_4 -CNT ceramics
- 16:20 **P. Tatarko** - Mechanical properties of Si_3N_4 -SiC nanocomposites
- 16:35 **E. Čehová** - Depth sensing indentation of $\text{Al}_2\text{O}_3 + \text{SiC}$ nanoceramics
- 16:50 **G. Kaptay** - The Activity of Res. Group on Nanomaterials at the Bay-Logi
- 17:10 ***Closing***
- 19:00 Evening event

March 24, 2011

<u>Chairs</u>	<i>N. Babcsán, J. Dusza</i>
9:00	O. Tapasztó - Silicon nitride/CNT nanocomposites
9:15	J. Volk - ZnO nanowires for sensorics
9:30	A.L. Tóth - Scanning Electron Microscopy and related methods
9:45	I.E. Lukács - Electron beam lithography and electrospinning
10:00	<i>Coffee break</i>
<u>Chairs</u>	<i>N. Hegman, M. Kašiarová</i>
10:15	A. Duszová - Indentation testing of WC-Co hardmetals
10:30	V. Puchý - Microstructure and mechanical properties of ZrO ₂ -CNF
10:45	P. Horňák - Influence of deposition conditions of PECVD WC-C coatings on micro/nano hardness
11: 00	L. Hegedűsová - Contact strength of advanced ceramics
<u>Chairs</u>	<i>F. Lofaj, C. Balázsi</i>
11:15	N. Babcsán - Materials and Application Technology R&D at Bay-Logi
11:35	S. Beke - Oscillation Assisted Metal Foaming
11:50	J. Babcsán Kiss - Tribological behaviors of ion implanted ceramics
12:05	Gy. Számel - Heat conductivity of aerogels and aerogel sandwich structures
12:20 – 14:00	<i>Lunch break</i>
<u>Chairs</u>	<i>P. Hvízdos, J. Volk</i>
14:15	P. Sóki - 3D radioscopy
14:30	H. Robotka - Nanomedical Drug Production Technologies
14:45	N. Hegman - TEM Orientation mapping on nanoscale
15:00	I. Dódony - Electron Crystallography

15:00 – 15:20 *Coffee break*

- Chairs *J. Dusza, C. Balázsi*
- 15:20 **S. Kurunczi** – Immobilization in biosensorics
- 15:35 **P. Neumann** - Periodic, large scale nanolithography of graphene
- 15:50 **I. Tamáska** - Colour changes on cooling of lepidoptera scales containing photonic nanoarchitectures
- 16:05 **B. Pataki** - CdTe nanoparticles biosynthesized by yeast cells
- 16:20 **G. Piszter** - Color based discrimination of chitin–air nanocomposites in butterfly scales and their role in conspecific recognition
- 16:35 **Kiss Ákos Koppány**, Types of grain boundaries in thin Si films, produced by melt mediated crystallization
- 16:50 ***Closing***
- 19.00 Evening event

March 25, 2011

9.00 – 11.00 Visit at the MFA/ELTE/BME laboratories

Deadline for abstract submission is **15th February 2011**.

Submitted manuscripts are considered for reviewing and publishing in electronical journal of Hungarian Society of Materials Science (www.kfki.hu/anyagokvilaga).

The authors are encouraged to consider as publishing media the following other journals too:
Central European Journal of Engineering (<http://versita.com/ceje/>),
Central European Journal of Chemistry (<http://versita.com/cejc/>),
Recent Patents on Nanotechnology (<http://www.bentham.org/nanotec/index.htm>)

Registration fee is 80 Euro (50 Euro for one day) for each participant to the event which covers organizational costs, coffee and refreshments. The registration fee should be sent to bank account ERSTE Bank HU19 1164 4006 4556 5800 4400 0003 until 5th March 2011.

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http://www.mfa.kfki.hu/nanodp/ceramic/ceramic_eng.shtml