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**11<sup>th</sup>**  
**ABAF**

**BRNO 2010**

**Advanced Batteries, Accumulators  
and Fuel Cells**

**INTERNATIONAL CONFERENCE**

**September 19<sup>th</sup> - September 22<sup>th</sup> 2010**

# **SCIENTIFIC AND SOCIAL PROGRAM**

**Organised by:**

**Department of Electrotechnology,**  
Faculty of Electrical Engineering and Communication,  
Brno University of Technology

**Institute of Inorganic Chemistry,**  
Academy of Science of Czech Republic, Řež near Prague

**Organizing committee:**  
Jiří Vondrák  
Marie Sedlaříková

**19. 09. 2010**

**Sunday**

17:00 *Welcome party, registration*

**20. 09. 2010**

**Monday**

10:00 *Opening Ceremony*

LITHIUM-IONS BATTERIES, GEL POLYMER ELECTROLYTES

10:30 KEY LECTURE

**Recent developments in the research of gel polymer electrolytes**

J. Vondrák, M. Sedlaříková, J. Velická, M. Macalík

11:15 *Coffee break*

11:30 **Electrochemical and TOF-SIMS investigation on PPy/PEG-LiFePO<sub>4</sub> cathode material for li-ion batteries**

A. Fedorková, R. Oriňákov, A. Oriňák, A. Heile, H. Wiemhöfer, H. Arlinghaus

11:50 **Crystalline Structure of Sputtered LiCoO<sub>2</sub> for Thin Film Lithium Ion Batteries**

L. Bohne, T. Pirk, W. Jaegermann

12:10 *Time for lunch*

13:10 **Electrospun Metal Oxides for Energy Storage**

M. Dušek, J. Pytel, M. Macák

13:30 **Synthesis of LiFePO<sub>4</sub>/C composite cathode for lithium-ion batteries**

O. Čech, J. E. Thomas, A. Visintin, M. Sedlaříková, J. Vondrák

13:50 **Sulfolane as a solvent for aprotic electrolytes**

J. Vondrák, M. Sedlaříková, M. Zatloukal, P. Dvořák

14:10 *Coffee break*

14:25 **Structural and chemical studies of the LiFePO<sub>4</sub>-MWCNTs cathode material for Li-ion batteries**

M. Filkusová, A. Fedorková, R. Oriňáková, M. Kupková

14:45 **Appllication of NOVA software in batttries and solar cells research**

P. Barath

17:00 *Evening party*

LITHIUM-IONS BATTERIES, SOLID ELECTROLYTES

09:00 KEY LECTURE

**New Materials for Advanced Lithium Ion Batteries**

H. Kren, M. Scharfegger, A. Droisner, C. God, S. Koller

09:45 **Investigation of the oxidative stability of electrolyte systems on 5 V cathode materials by insitu mass spectrometry**

C. God, O. Moser, C. Bayer, C. Stangl, S. Koller, K. W. Leitner, M. Schulz-Dobrick

10:05 *Coffee break*

10:20 **Amorphous solid in organic electrolyte on basis of  $\text{Li}_2\text{O-LiF-Li}_2\text{WO}_4\text{-B}_2\text{O}_3$  for lithium power sources**

A. Tron, I. Maksuta, E. Shembel

SUPERCAPACITORS

10:40 **Synthesis, characterization and electrochemical propeties of nanostructured electrode materials for supercapacitors**

M. Mladenov, N. Petrov, T. Budinova, B. Tsyntsarski, T. Petrov, D. Kovacheva, R. Raicheff

FUEL CELLS

11:00 **Low-temperature anomaly in ionic conductivity of scandia-stabilized zirconia**  
V. I. Barbashov, G. G. Levchenko, E. V. Nesova, N. E. Pismenova,

11:20 **Nanostructural composites for power cells based on molybdenum-modified carbon nanotubes**

M. O. Danilov, N. D. Ivanova, E. I. Boldirev, O. A. Stadnik, A. V. Filatov

11:40 **Introduction of devices useable for batteries, accumulators and fuel cells testing offered by Specion company**

J. Havlín

12:00 *Time for lunch*

13:00 *Poster section*

14:30 *Excursion to South of Moravia*

ELECTROLYZERS

09:00 **Research of material for electrolyzer**  
T. Knotek

CLASSICAL BATTERIES

09:20 **Automated evaluation of experiments using SQL Server**  
J. Neoral

09:40 **Influence of discharging depth and overcharging on performance of alpha nickel hydroxide**  
T. Máca, L. Nezgoda, V. Špachman, J. Vondrák, M. Sedlaříková

10:00 *Coffee break*

10:15 *Poster section*

11:45 *Time for lunch*

ELECTRIC VEHICLES

12:45 KEY LECTURE  
**Battery electric car conversion of Skoda Superb**  
J. Marušinec

13:30 **Practical experiences with Li-ion traction accumulator in an electric bike**  
P. Vorel, D. Červinka, I. Pazdera

13:50 **TriHyBus: The First Fuel Cells Hydrogen Bus in New EU Countries**  
A. Doucek, L. Janík

14:20 *Excursion - Electric vehicles, laboratories (Department of Electrotechnology)*

17:00 *Official closure of conference*  
*Dinner*

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We would like to express our thanks to the Brno University of Technology, Faculty of Electrical Engineering and Communication and to the Institute of Inorganic Chemistry AS CR for support and help with organising 11th ABAF conference.