

Brno University of Technology
Department of Electrical and Electronic Technology

International Workshop IRP 3.3.
Electrochemical Power Sources

Brno, November 28 - 29, 2019

Workshop Organisation

Thursday, November 28:

Electrotechnology department meeting room
Technická 10, 4th floor, room N 4.38

Friday, November 29:

Dean's office meeting room
Technická 10, 2nd floor

Workshop Chairman:

Doc Ing. Marie Sedlaříková, CSc.

Lectures

Thursday, November 28th

12:30 **Registration**

13:00 **Opening of Workshop**

Assoc. Prof. Ing. Marie Sedlaříková, CSc.
Organisation Committee

Lithium Batteries and Related Systems

13:10 – 16:20

M. Míka

Fast ion-conducting glass for solid electrolytes

O. Čech

Amorphous sulfur copolymer prepared by inverse vulcanization

Y. Veselkova

Aprotic gel polymer electrolytes based on MMA

J. Libich

Electrode Materials for Sodium-Ion Batteries IV.

Lead –Acid Batteries

J. Zimáková

Research and development of lead-acid accumulators

Application of Batteries for Electromobility and Industry, Simulations

P. Vyrůbal , M. Mačák

Numerical simulations in electrochemistry and thermal battery management

J. Maxa

Research of the supersonic flow under low pressures for the areas of the electron microscopy.

J. Máca

Ionic liquids and their use in electrolytes

Photovoltaic Systems

J. Vaněk

Testing methods of photovoltaic cells and modules

Application of Batteries for Electromobility and Industry, Simulations

16:20 – 17:20

P. Vanýsek

International Cooperation – European Energy Research Alliance and Priorities in the Energy Storage Research Field

M. Sedlaříková

Introduction AKTION and NATO projects

J. Libich

International Cooperation – Academic staff mobility programme

J. Libich – TU Wien

M. Ortiz – University of La Plata

Discussions about Mutual Cooperation

Friday, November 29th

Lithium Batteries and Related Systems II

9:00 – 10:30

Vito Di Noto

Superior Doped Olivine Cathodes for Fast Charge/Discharge Lithium Batteries

G. Fafilek

A Novel in-situ Grazing-Incidence-XRD Electrochemical Cell for the Characterisation of Electrodes

P. Janderka

Scanning probe electrochemistry with high resolution dc-/ac-/ic-SECM

A. Straková Fedorková

Upcoming Horizon H2020 project

Coffee Break

Laboratories

10:30 – 12:30

Laboratory Lectures and Practical Exercises

The participants will get a first-hand (“hands-on”) feeling for steps in Li-ion battery cell assembly and analysis.

a) Lecture points:

- General design and construction of a Li-ion battery.
- Electrode slurry preparation.
- Electrode manufacturing.
- Testing EL-CELL assembly.
- Cell formation and testing on potentiostat Bio-Logic.

b) “Elektrikárium”

c) Laboratories 3D printing and simulations, 3D printed Robot and many others

13:00

Closing the Workshop

