

Conference Program

3.09.2017 Sunday

16:00 Registration

18:00-21:00 Dinner

4.09.2017 Monday

7:30-8:45 Breakfast

8:45 Conference opening

09:00-11:00 Session: Critical electron properties and their role in energy conversion and storage

09:00 **PLENARY LECTURE: Joachim Maier** (Max Planck Institute for Solid State Research, Germany),
The role of defects and size for electrochemical energy storage

09:30 **Janusz Tobola** (AGH University of Science and Technology, Poland),
Electronic structure calculations in materials converting energy

10:00 **Janina Molenda** (AGH University of Science and Technology, Poland),
Electronic structure "engineering" as a new approach to materials design for Li-ion and Na-ion batteries

10:30-11:00 Coffee break

11:00-13:00 Session: Fundamentals of electrode/electrolyte interface in batteries

11:00 **Yoshitaka Tateyama** (NIMS, Japan),
DFT sampling calculation studies on electrode/electrolyte interfaces in batteries

11:30 **René Hausbrand** (Technische Universität Darmstadt, Germany),
Fundamental insights on battery materials and interfaces by surface science investigations

12:00 **Andrzej Czerwiński** (University of Warsaw, Poland),
Pd-AB₅ – new hybrid anode in Ni-MH battery

12:30-14:30 Lunch

14:30-16:30 Session: Young Scientists Forum

Michał Świętosławski, Łukasz Kondracki, Sebastian Wachowski, Przemysław P. Michalski, Grzegorz Brus, Paweł Jeżowski, Aleksey Yaremchenko, Tomasz Pietrzak

16:30-18:30 Poster Session + Coffee

19:00 – Conference dinner

5.09.2017 Tuesday

7:30-9:00 Breakfast

09:00-11:00 Session: Problems of energy conversion at high temperatures

09:00 **Ilan Riess** (Technion - Israel Institute of Technology),
Identifying the elementary steps of electro-catalytic reactions

09:30 **Constantinos Vayenas** (University of Patras, Greece),
Triode fuel cells

10:00 **Truls Norby** (University of Oslo, Norway),
High temperature electrolysis using proton conducting ceramic electrolytes
10:30 **Mogens Mogensen** (Technical University of Denmark),
Degradation mechanisms of solid oxide cells

11:00-11:30 Coffee break

11:30-12:30 Session: Strategies for development of new electrolytes for batteries

11:30 **Philippe Knauth** (Aix Marseille University, France),
Ion conduction in polymer membranes: application for electrochemical energy technologies
12:00 **Władysław Wiczonek** (Warsaw University of Technology, Poland),
New strategies in designing electrolytes for ambient temperature batteries

12:30-14:00 Lunch

14:00 – selection of: ▪ excursion to Morskie Oko (limited number of participants) ▪ excursion to Dolina Kościeliska ▪ thermal pools

19:00 Grill party

6.09.2015 Wednesday

7:30-8:30 Breakfast

09:00-10:00 Session: I. New materials for energy conversion and storage

09:00 **Paweł Kulesza** (University of Warsaw, Poland),
Reduced-graphene-oxide as active support for platinum and non-noble metal catalysts during oxygen electroreduction
09:30 **Anita Trenczek-Zajac** (AGH University of Science and Technology),
Shape-controlled titanium dioxide for photoelectrolysis
10:00 **Krzysztof Fic** (Poznan University of Technology, Poland),
Operando studies of electrode/electrolyte interface in electrochemical capacitor

10:30-11:00 Coffee break

11:00-12:40 Session: II. New materials for energy conversion and storage

11:00 **Tomasz Story** (Institute of Physics of the Polish Academy of Sciences),
IV-VI semiconductors as topological materials
11:30 **Nhu-Tarnawska Hoa Kim-Ngan** (Pedagogical University of Kraków, Poland)
Hydrogen absorption in U-based alloys with bcc structure
12:00 **Piotr Jasiński** (Gdańsk University of Technology)
Distribution of relaxation times as a tool to separate overlapped electrochemical processes in impedance spectra
12:30 **Konrad Świerczek** (AGH University of Science and Technology)
MIEC-type ceramic membranes with enhanced transport properties

13:00 Closing of the conference