

Wednesday, 4th December

Chair: Guenter Fafilek

9.00 plenary lecture: Karel Bouzek

Intensification of PEM water electrolysis – application of the anode catalyst support at elevated temperature

9.30 Filip Karas, Martin Paidar, Karel Bouzek

Preparation of the solid oxide water electrolysis cell by tape casting method

9.45 Debabrata Chanda, Jaromír Hnát, Martin Paidar, Karel Bouzek

The study on development of the nickel cobalt oxide based anode electrocatalyst and related membrane-electrode-assembly for alkaline water electrolysis

10.00 Petr Dzik; M Veselý, M. Neumann-Spallart

Ink-jet printed planar electrochemical cells – Part I

10.15 Petr Dzik; M Veselý, M. Neumann-Spallart

Ink-jet printed planar electrochemical cells – Part II

10.30-11.10 coffee break

Chair: Michael Neumann-Spallart

11.10 Pavel Janda, Hana Tarábková

Gaseous nanodomains at solid-liquid interface

11.30 Andreas Brüger, Guenter Fafilek, Michael Neumann-Spallart

Photoelectrocatalytic treatment of waste originated from gold mines

11.50 Michal Němeček, Roman Kodým, Dalimil Šnita, Karel Bouzek

Effect of operating parameters and segmentation of electrodes on the performance of pilot scale electro dialysis unit

12.05 Jakub Mališ, Luis Colmenares, Svein Sunde, Karel Bouzek

Durability of Pt and Pt-Co electrocatalysts for the proton exchange membrane fuel cells

12.20- 12.30 final remarks

12.30 -13.45 lunch

14.00 - departures

6th CZECH-AUSTRIAN WORKSHOP: NEW TRENDS IN PHOTO AND ELECTRO CATALYSIS



CONFERENCE PLACE: HOTEL HAPPY STAR, HNANICE, CZECH REPUBLIC

(www.hotelhappystar.cz)

Date: 2nd -4th December 2013



Main Czech partner: ICT Prague - Josef Krýsa

Main Austrian partner: Vienna University of Technology - Guenter Fafilek

Participants:

Czech Republic

Institute of Chemical Technology, Prague

J. Heyrovský Institute of Physical Chemistry AS CR

Institute of Chemical Process Fundamentals AS CR

Faculty of Chemistry, Brno University of Technology

Institute of Physics AS CR

Austria

Vienna University of Technology

Austrian Institute of Technology, Tulln

University of Vienna

Slovakia

Slovak University of Technology in Bratislava

France

CNRS/Université de Versailles

Germany

Friedrich-Alexander University, Erlangen



Program

Monday, 2nd December

13.00-13.30 - registration of participants

13.30 - Welcome talk

Chair: Ladislav Kavan

13.40 plenary lecture: Ulrike Diebold

Surface Science Model Studies of Photocatalytic Materials

14.10 Zuzana Barbieriková, Miroslava Bobeničová, Dana Dvoranová, Vlasta

Brezová, Christos Trapalis

On the photoactivity of anatase nanoplates with exposed {001} facets (an in situ EPR study)

14.30 Magda Morozová, Petr Klusoň, Petr Dzik, Michal Veselý, Michal Baudys, Josef Krýsa, Olina Šolcová

The influence of various deposition techniques on the structural and photoelectrochemical properties of the thin TiO₂ films

14.50 Hana Krýsová, Jana Trčková-Baráková, Ladislav Kavan

Nanofibrous TiO₂ composite electrodes for dye sensitized solar cells

15.10-15.45 coffee break – common photo

Chair: Ulrike Diebold

15.45 Zdeněk Hubička

Deposition of semiconductor thin films by reactive plasma processes

16.05 Michaela Brunclíková, Martin Zlámal, Petra Kšířová, Štěpán Kment, Zdeněk Hubička, Josef Krýsa

Plasma preparation of WO₃ layers and their characterization

16.20 Štěpán Kment, Zdeněk Hubička, Derek Sekora, Jiří Olejníček, Martin Zlámal, Michaela Brunclíková, Josef Krýsa

ALD Al₂O₃/HiPIMS Fe₂O₃ photoanodes for PEC water splitting

16.40 Lei Wang, Chong-Yong Lee, Anca Mazare, Kiyoung Lee, Julian Müller, Erdmann Spiecker, Patrik Schmuki

Enhancing the water splitting efficiency of Sn doped hematite nanoflakes by flame annealing

17.00 Josef Krýsa, Michal Baudys, Martin Zlámal and Andrew Mills

Standard assessment of photocatalytic activity using indicator inks

17.20 Michal Baudys, Josef Krýsa

Determination of photocatalytic activity of self-cleaning paints using smart inks

19.30 - dinner

21.00 - Informal discussions of teachers, young researchers and PhD students about the aspects and experiences from Czech-Austrian exchange programmes

Tuesday, 3rd December

Chair: Karel Bouzek

9.00 plenary lecture: Ladislav Kavan

Electrochemical characterization of TiO₂ blocking layers for dye sensitized solar cells

9.30 Martin Setvín, Cesare Franchini, Xianfeng Hao, Michael Schmid, Georg Kresse, Ulrike Diebold

Electron localization in TiO₂ rutile and anatase - small and large polarons

9.50 Markéta Zukalová, Barbora Lásková, Ladislav Kavan

Mechanism of Li-storage in TiO₂(B) and TiO₂(anatase)

10.10 Sabina Grigorescu, Chong-Yong Lee, Kiyoung Lee, Ioana Demetrescu, Patrik Schmuki

Thermal air oxidation of Fe: rapid hematite nanowire growth and photoelectrochemical water splitting performance

10.30 Martin Prokop, Tomáš Bystron, Karel Bouzek

Electrochemical synthesis of ferrate(VI) with inert anode

10.45-11.15 coffee break

Chair: Georg Waldner

11.15 Miroslava Bobeničová, Dana Dvoranová, Zuzana Barbieriková, Andrej Staško, Karol Lušpai, Lukáš Bučinský, Lucia Rišpanová, Vlasta Brezová

Paramagnetic intermediates in the redox processes of 2,6-dichlorophenolindophenol

11.35 Stijn Mertens

Metal clusters as super-redox species

11.55 Eva Plížingrová, Jan Šubrt, Josef Krýsa

Lyophilized colloidal solution of peroxo-polytitanic acid: Characterization and results of photocatalytic activity in layers

12.10 František Moulis, Libor Obal, Vlastimil Fíla, Josef Krýsa

Kinetic study of gas-phase photocatalytic flow reactor

12.25 Jana Pavlorková, Magdalena Drhová, Jiří Křišťál, Stanislav Hejda, Petr Klusoň

Microreactor platforms for homogeneous hydrogenations and photocatalytic reactions

12.40 Monika Drakselová, Roman Kodým, Svein Sunde, Karel Bouzek

Progress in the mathematical modelling of PEM type fuel cell catalyst degradation

12.55-14.00 - lunch

14.00-18.00 - individual discussions

19.30 - dinner

