

**THE CZECH ACADEMY OF SCIENCES
J. HEYROVSKÝ INSTITUTE OF PHYSICAL CHEMISTRY,
v.v.i., PRAGUE**

48th Heyrovský Discussion on

**Progress in Electrochemistry at
Liquid-liquid Interfaces and Liquid
Membranes**



**Castle Třešť
Czech Republic**

June 14-19, 2015 (Sun - Fri)

Final Circular
<http://www.jh-inst.cas.cz/~hdisc/2015/>

ORGANIZERS

Vladimír Mareček (co-chair), Zdeněk Samec (co-chair), Kateřina Minhová-Macounová (scientific secretary)

VENUE AND TRANSPORT

Location: Castle Třešť, town Třešť (120 km from Prague, 80 km from Brno), about 19 km south of the district town Jihlava

Departure of the charter bus from Prague to Třešť: **Sunday, June 14, at 3:00 p.m. from the J. Heyrovský Institute (Dolejškova 3, Prague 8)**, the estimated arrival to Třešť at 5:00 p.m. The Institute will be open on Sunday from 10:00 a.m.; you can deposit your luggage at the reception. Refreshment (coffee, soft drinks etc.) will be available in the foyer.

Departure of the bus from Třešť to Prague: **Friday June 19, 2015 at 9:00 a.m.**

Options for the transport from the airport to the J. Heyrovský Institute located in the vicinity of the station Ládví on the metro line C (http://www.prg.aero/cs/parkovani-a-doprava/doprava-na-letiste/autobusy-mhd/Contents/14/transport_map.pdf)

- 1) Purchase ticket for city transport 32,- CZK (*valid for 90minutes*). Take a **bus No. 100** and go to the end stop **ZLIČÍN**. Here transfer to the metro line B (yellow line) and go to the station **FLORENC**. Here transfer to the metro line C (red line) and go to the station **LÁDVÍ**.
- 2) Purchase ticket for city transport 32,- CZK (*valid for 90minutes*). Take a **bus No. 119** and go to the end stop **NÁDRAŽÍ VELESLAVÍN**. Here transfer to the metro line A (green line) and go to the station **MUZEUM**. Here transfer to the metro line C (red line) and go to the station **LÁDVÍ**.
- 3) **Airport Express Bus** (AE Bus, 60,- CZK paid to the bus driver). Bus will take you to the bus stop **HLAVNÍ NÁDRAŽÍ** (Main Railway station). Purchase ticket for city transport 24,- CZK (*valid for 30 minutes*) and use the metro line C (red line) to get to the metro station **LÁDVÍ**.
- 4) **AirportTAXI** ; AAA Radiotaxi - *taxi fare for the transport to the J. Heyrovsky Institute app. 600,- CZK*



AUTOBUSOVÁ DOPRAVA BUS SERVICE FROM THE BUSVERBINDUNG VOM Z LETIŠTĚ DO CENTRA AIRPORT TO THE CITY CENTRE FLUGHAFEN INS ZENTRUM

Denní provoz – Trvalý stav – duben 2015 Daytime operation – Permanent situation – April 2015 Tagesverkehr – Regelmäßiger Betriebsablauf – April 2015

Letiště Václava Havla Praha
Václav Havel Airport Prague



Zrychlené autobusové linky PID
Rapid public BUS lines

100 Letiště – Žitčín (metro B)
Airport – Žitčín (metro B)

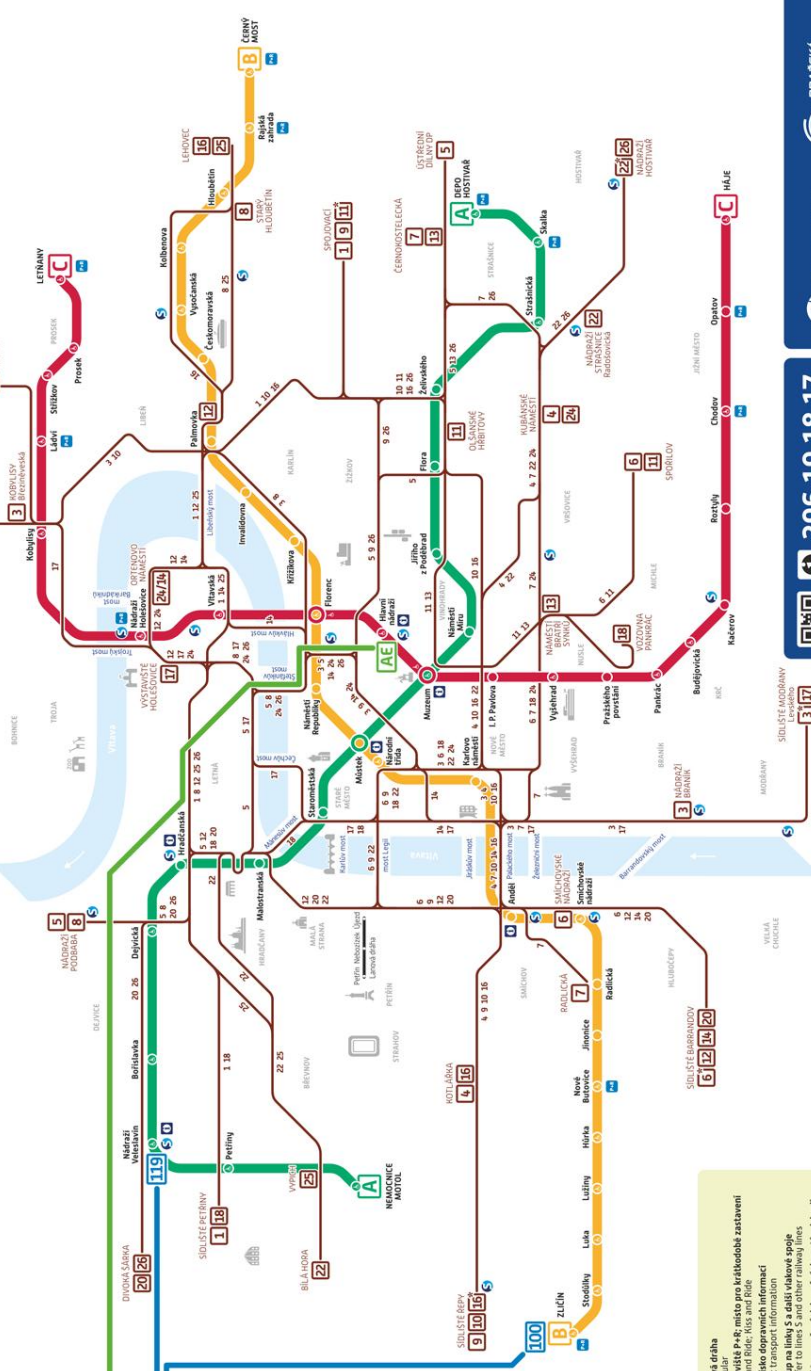
119 Letiště – Nádraží Vešperský (metro A)
Airport – Nádraží Vešperský (metro A)

AE Zvláštní linka AIRPORT EXPRESS
Special BUS line connection between Prague Airport and Prague Main Railway Station

Letiště – Národní republiky (metro B) – Masarykovo nádraží (metro B) – Hlavní nádraží (metro C)
Airport – Národní republiky (metro B) – Masarykovo nádraží (metro B) – Hlavní nádraží (metro C)

Zvláštní jízdné – Jízdenky u řidiče
Special fare – tickets are purchased from the driver

PRAHA PRAGUE PRAG



Linky metra se stanicemi s bezbariérovým a barierovým přístupem
Metro lines with and without barrier-free

Přestupní staniční metra
Metro transfer stations

Tramvajová linka a konečnou zastávku
Tram line with terminus

Autobusová doprava z letiště do centra
Bus service from the airport to city centre

Linková dráha
Funicular

Parkoviště P+K, místo pro kočárkové zastavení
Public parking, place for stroller stop

Středisko pro veřejnou informaci
Public transport information

Přestup na linky 5 se dalšími vlakovými spoji
Transfer to lines 5 and other railway lines

Do sádko označených konečných zastávek jízdi
Only selected connections run to these final stops



1 296 19 18 17

www.dpp.cz



Dopravní podnik hlavního města Prahy

Uzavřela dat: 19. 3. 2015

© Dopravní podnik hl. m. Prahy, akciová společnost



Options for the transport from the airport to the Castle Třešť

1) Take a long-distance bus from the Main Bus Terminal **FLORENC** located close to the metro station **FLORENC** on metro line C (red line)

Bus Schedule, Sunday, 14th June 2015

Prague-Florenc	Třešť	Platform	Bus line No.	Fare
16:00	18:18	19	340003 4	138,- CZK
18:10	20:24	15	760410 30	139,- CZK
20:20	22:34	15	760410 28	139,- CZK

Bus will take you to Třešť Square (náměstí); then walk about 10 minutes to Castle Třešť

2) **Airport TAXI** – AAA Radiotaxi - taxi fare app. 4 300,- CZK

PROGRAM OF THE 48th HEYROVSKÝ DISCUSSION

Sunday, 14th June 2015

- 15:00** Departure of a charter bus from the J. Heyrovský Institute, Prague 8, Dolejškova 3
17:00 Arrival at the Castle Třešť
18:00 Welcome drink
19:00 Dinner

Monday, 15th June 2015

- 7:30** Breakfast
9:00 Morning Session: **Novel methodologies and approaches**
9:00– 9:05 Opening
Chairman: **Z. Samec**
9:05 – 10:00 **A. A . Kornyshev:** ITIES for novel self-assembling plasmonic meta-materials: From ultra-sensitive sensors to variable mirrors
10:00 – 10:20 Coffee Break
10:20 – 10:50 **Y. Shao:** Probing the interfacial structures of liquid/liquid interfaces by scanning ion conductance microscopy
10:50 – 11:20 **T. Hinoue:** Photoionization Ion Transfer Voltammetry for the Determination of Lipophilic Substances
11:20 – 11:50 **P. Peljo:** Photo-ionic cells for direct solar energy storage: recent advances and challenges
11:50 – 12:20 **D. Plana:** Photo-electrochemistry of semiconductor nanostructures assembled at polarizable molecular interfaces
12:20 – 12:50 **M. Velický:** From liquid/liquid electrochemistry to membrane permeability and drug absorption
13:00 Lunch
14:00 Afternoon Session: **Applied aspects**
Chairman: **V. Mareček**
14:00 – 15:00 **T. Kakiuchi:** Significance and meaning of single ion activity in electroanalytical chemistry
15:00 – 15:30 **P. Bühlmann:** Lipophilic redox buffers for solvent polymeric solid-contact electrodes (and reference electrodes)
15:30 – 16:00 **V. Mansfeldova:** The time-resolved potentiometry based on ITIES
16:00 – 16:30 Coffee Break
16:30 – 17:00 **L. Murtomäki:** Metal extraction in microemulsion applying electrochemical control with potential determining ions
17:00 – 17:30 **H. Jensen:** Electrochemical Filtration using a Membrane Immobilized Oil Phase
17:30 – 18:00 **A. Uehara:** Electrochemical insight into the Brust-Schiffrin synthesis of Au nanoparticles
18:30 Concert
20:00 Dinner

Tuesday, 16th June 2015

- 7:30** Breakfast
9:00 Morning Session: **Interfacial layers and films**
Chairman: **P. Bühlmann**
9:00 – 10:00 **E. Bakker:** Thin layer electrochemistry with liquid membranes
10:00 – 10:20 Coffee Break
10:20 – 10:50 **G. Herzog:** Functionalized mesoporous silica electrogenerated at the liquid-liquid interface
10:50 – 11:20 **L. M. Yudi:** Self-assembled films of polyelectrolytes and phospholipids at liquid-liquid interfaces
11:20 – 11:50 **B. Su:** Nano-Liquid/Micelle and Liquid/Liquid Interfaces Supported by Silica Mesochannel Films: Charge Transfer Reactions and Analytical Applications
11:50 – 12:20 **H. Nagatani:** Selective characterization of dye species adsorbed at liquid-liquid Interfaces by polarization-modulation spectroscopy
12:20 – 12:50 **U. Olsson:** Structure and phase behavior of microemulsions

- 13:00** Lunch
14:00 Bus departure for sightseeing tour
19:00 Dinner

Wednesday, 17th June 2015

- 7:30** Breakfast
9:00 Morning Session: **Catalytic phenomena**
Chairman: **L. Murtomäki**
9:00 – 10:00 **H. Girault**: Catalytic phenomena at liquid-liquid interfaces: Functional nanorrafts
10:00 – 10:20 Coffee Break
10:20 – 10:50 **M. Schlossman**: Voltage tunable arrays of charged nanoparticles at ITIES
10:50 – 11:20 **P.S. Toth**: Preparation of low-dimensional carbon-based metal nano-clusters at the ITIES
11:20 – 11:50 **E. Smirnov**: Interfacial redox catalysis on gold nanoparticle films at soft interfaces
11:50 – 12:20 **M. Opallo**: Electrocatalysis at ionic liquid|aqueous interface
12:20 – 12:50 **N. Nishi**: Gold nanostructure formed at electrochemical ionic liquid-water interface
13:00 Lunch
14:00 Afternoon Session: **Biomimetic processes**
Chairman: **T. Kakiuchi**
14:00 – 15:00 **S. Amemiya**: Voltammetric Mechanism and Application of Ionophore-Facilitated Ion Transfer as Biomimetics
15:00 – 15:30 **K. Maeda**: Propagation and synchronization of potential oscillation in the multiple liquid membrane systems
15:30 – 16:00 **S. Dassie**: Facilitated proton transfer reactions across liquid-liquid interfaces. Computer simulations and experimental data
16:00 – 16:30 Coffee Break
16:30 – 17:00 **K. Kano**: Kinetic and thermodynamic analysis of hydrogen oxidation with [NiFe]-hydrogenase as a direct electron transfer-type electrocatalyst and its application to a biofuel cell
17:00 – 17:30 **Y. Yoshida**: Distribution equilibrium of ions between an aqueous phase and bilayer lipid membrane
17:30 – 18:00 **A. Volkov**: Cyclic voltammetry of memristors: interfacial electronics in vivo and in vitro
19:00 Garden Barbecue Party

Thursday, 18th June 2015

- 7:30** Breakfast
9:00 Morning Session: **Processes at micro- and nano-scale**
Chairman: **Y. Shao**
9:00 – 10:00 **M. Mirkin**: Nano-ITIES: reagent delivery and mechanistic studies
10:00 – 10:20 Coffee Break
10:20 – 10:50 **Z. Samec**: Temperature effects in ion transfer kinetics at the micro-interface between two immiscible electrolyte solutions
10:50 – 11:20 **V. Mareček**: Noise and ac impedance analysis of ion transfer kinetics at the micro liquid/liquid interface.
11:20 – 11:50 **A. Molina**: Simple and facilitated ion transfer at some asymmetric liquid|liquid interfaces
11:50 – 12:20 **H.J. Lee**: Ion selective sensors with microhole-liquid/liquid gel interfaces for environmental and biological applications
13:00 Lunch
14:00 Afternoon Session: **General aspects**
Chairman: (to be announced)
14:00 – 15:00 **I. Benjamin**: Molecular level insight into reactivity at the liquid/liquid interface
15:00 – 15:30 **M. Yamamoto**: Simulation of the electric-double layer and its effect on some voltammogram
15:30 – 16:00 **G. Horvai**: The role of truly interfacial molecules in understanding interfaces

- 16:00 – 16:30 Coffee Break
16:30 – 17:00 **T. Osakai:** A non-Bornian model for the Gibbs energy of transfer of organic ions across the interface between two immiscible electrolyte solutions
17:00 – 17:30 **Li Niu:** Two-polarized-interface systems: Overcoming challenge of ion transfer thermodynamic measurements at liquid/liquid interfaces
17:30 – 18:00 **A. Morita:** Theoretical analysis of sum frequency spectra and microscopic ion transport at liquid-liquid interfaces
- 19:00** Banquet

Friday, 19th June 2015

- 7:30** Breakfast
9:00 Departure of charter bus to Prague (arrival at noon)

PAYMENT

Conference fee is EUR 500,- (EUR 550,- after May 5, 2015) for participants, and EUR 300,- (EUR 350,- after May 5, 2015) for accompanying persons, students or post-docs.

Fee covers:

- *Transport by charter bus between Prague and Třešť*
- *Accommodation in single or double rooms*
- *Full board*
- *Welcome cocktail, banquet, and barbecue*
- *Half-day sightseeing tour*

OTHER GENERAL INFORMATION

See the conference web site at <http://www.jh-inst.cas.cz/~hdisc/2015/>

APPLICATIONS AND REQUEST FOR FURTHER INFORMATION

Prof. Zdeněk Samec
J. Heyrovský Institute of Physical Chemistry of the CAS, v.v.i
Dolejškova 3, 182 23 PRAGUE 8, Czech Republic

Phone: +420-266 052 011, +420-775 990 012
Fax: +420-286 582 307,
E-mail: zdenek.samec@jh-inst.cas.cz

Professor Zdeněk Samec

Professor Vladimír Mareček
on behalf of the Organizing Committee