

Conference chair:

Professor Dr. Fritz Scholz
Institut für Biochemie
Ernst-Moritz-Arndt-Universität Greifswald

Conference venue:

Alfried Krupp Wissenschaftskolleg Greifswald
Martin-Luther-Straße 14
17489 Greifswald

Information:

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Alfried Krupp Wissenschaftskolleg
Greifswald

The Role of Radicals in Chemistry and Biology

International conference of the Alfried Krupp Graduate School „Studies of the interaction of free oxygen radicals with molecules at electrodes and applications to biochemical and medical systems“

March 21–25, 2011

Monday, March 21, 2011

Welcome address

Fritz Scholz (Greifswald)

Lectures

8.30 – 10.00

The crucial step in the road towards efficient fuel cells: the reduction of oxygen

Ákos Kriston (Budapest)

10.15 – 11.45

Introduction to Infrared Reflection Absorption spectroscopy (IRRAS)

Jacek Lipkowski (Guelph)

12.00 – 13.00

Lunch break

13.00 – 14.30

Surface tension measurements at electrified interfaces – Some thermodynamic aspects

Gyöző G. Láng (Budapest)

14.45 – 16.15

Potential Difference IRRAS of films formed by soluble molecules and Photon Polarization Modulation Infrared Reflection Absorption Spectroscopy (PM-IRRAS) of model biological membranes

Jacek Lipkowski (Guelph)

Tuesday, March 22, 2011

Lectures

8.30 – 10.00

IRRAS of peptides and proteins at electrode surfaces

Jacek Lipkowski (Guelph)

10.15 – 11.45

Electrochemistry of Molecules with Two (or more) Redox Centers

Jiří Ludvík (Prague)

12.00 – 13.00

Lunch break

13.00 – 14.30

Phthalaldehyde and other two Isomeric Benzenedicarboxaldehydes – reactivity with biologically important nucleophiles

Jiří Ludvík (Prague)

14.45 – 16.15

Immuno-modulatory properties of bio-liberated gold ions

Agnete Larsen (Aarhus)

Wednesday, March 23, 2011

Lecture

8.30 – 10.00

Cardiolipin – ein Phospholipid mit noch unbekanntem Facetten

Lorenz Schild (Magdeburg)

Short lectures of the PhD students

10.15 – 10.45

Influence of OH[•] radicals on nucleation and growth of platinum on gold

Gustav Sievers (Greifswald)

10.50 – 11.20

The attack of OH[•] radicals on gold surfaces

Katja Vahl (Greifswald)

11.25 – 11.55

AFM measurements of the dynamics of structural changes of polycation covered surfaces induced by free radicals

Florian Berg (Greifswald)

12.00 – 13.00

Lunch break

Lectures

13.00 – 14.30

Structural basis and substance classes of herbal antioxidants

Ulrike Lindequist (Greifswald)

14.45 – 16.15

Electrochemical modelling of nanotoxicity

Andrew L. Nelson (Leeds)

Thursday, March 24, 2011

Lecture

8.30 – 10.00

The role of different subcellular organelles in the generation of free radicals and the importance of protective mechanisms, as shown in the example of the pancreatic beta cells

Sigurd Lenzen (Hannover)

Short lectures of the PhD students

10.15 – 10.45

The role of reactive oxygen species in the function and differentiation of monocytes

Nguyen Huu Hung (Greifswald)

10.50 – 11.20

Involvement of ROS in immune cell recruitment to inflammatory sites

Bich Thu Tran (Greifswald)

11.25 – 11.55

The effects of oxidants and antioxidants on beta cell function

Carmen Härdtner (Greifswald)

12.00 – 13.00

Lunch break

Friday, March 25, 2011

Practical courses at the research institutes