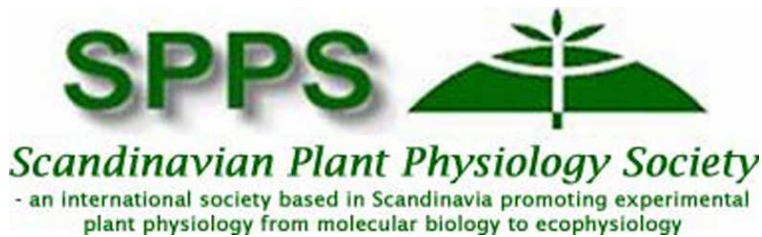


**NPC10: The 10th Nordic Photosynthesis Congress
PROGRAM**

**Lectures will be held in the Struve Hall of the Dorpat Convention Centre and Hotel,
Tartu**



Estunic Unikaalne Eestimaa OÜ

Monday, 11 October

- 17.00 Registration opens in the Reception of the Hotel
Posters mounted in the Foye of the Convention Centre
- 20.00 Get-together party in the Convention Centre

Tuesday, 12 October

9.00 Welcome addresses:

Karin Jaanson, Deputy Mayor of Tartu Toivo Maimets, Director of the Institute of Molecular and Cell Biology, University of Tartu

Session 1. Photosystem II and oxygen evolution. Chair: Fikret Mamedov

9.15 Agu Laisk, Tartu University:

Photosynthesis – a view from above the leaf

10.00 A. William Rutherford, iBITEC-S, URA CNRS 2096, CEA Saclay, Gif-sur-Yvette:

An evolutionary and comparative view of the photosystems

10.45 Coffee break, poster viewing

11.15 Johannes Messinger, Umeå University:

New insight into the electronic structure of the Mn_4O_xCa cluster in photosystem II based on 55Mn ENDOR spectroscopy and CA/SR exchange

11.45 Per E.M. Siegbahn, Stockholm University:

Theoretical studies of water oxidation in PSII

12.15 Felix M. Ho, Uppsala University:

Molecular dynamics simulation of a putative H^+ transport pathway in Photosystem II – insights from comparisons of in silico results and in vivo data

12.45 Göran Samuelsson, Umeå University:

The photosystem II associated carbonic anhydrase Cah3 of Chlamydomonas reinhardtii increases the efficiency of photosynthetic water oxidation at low hydrocarbonate levels

13.15 Lunch

Session 2. Towards man-made photosynthesis. Chair: Johannes Messinger

15.00 Holger Dau, Free University Berlin:

Efficiency, energetics and thermodynamic limits of photosynthetic water oxidation – from basic research to solar fuels

15.45 Oliver Lenz, Humboldt Universität zu Berlin:

Towards photosynthesis-driven H_2 production using O_2 -tolerant [NiFe]-hydrogenases

16.30 Coffee break, poster viewing

17.00 Per Gardeström, Umeå University:

Bio4Energy: A Swedish initiative connecting photosynthesis research to bioenergy and biofuel production from forest products

17.30 Anders Thapper, Uppsala University:

Photo-driven water oxidation with visible light using catalysts containing cobalt, iron and manganese

18.00 Lærke Marie Mønter Lassen, Department of Plant Biology and Biotechnology, KU-LIFE, Copenhagen:

Construction of a synthetic light-driven enzymatic supra-metabolon

18.30 Johannes Sjöholm, Uppsala University:

The split S_3 EPR signal from the water oxidizing complex in Photosystem II – pH dependence and possible mechanistic implications

19.00 End

Wednesday, 13 October

Session 3. Regulation of light harvesting. Chair: Stefan Jansson

- 9.00 Alexander V. Ruban, Queen Mary University of London:
Light harvesting in plants: principles and environmental trends
- 9.45 Roberto Bassi, Università di Verona:
The function of plant xanthophylls in photoprotection
- 10.30 Esa Tyystjärvi, University of Turku:
Mechanism of photoinhibition: magnetic field effect, singlet oxygen and kinetics
- 11.00 Coffee break, poster viewing
- 11.30 Jean-David Rochaix, University of Geneva:
Protein kinases and phosphatases involved in the adaptation to changing light conditions
- 12.15 Fredrik Mokvist, Uppsala University,
Photosystem II from spinach can be driven by far-red light
- 12.45 Lunch

Session 4. Regulation of electron transport Chair: Agu Laisk

- 15.00 David M. Kramer, Michigan State University, East Lansing, and Washington State University, Pullman, WA:
Balancing the energy budget of steady-state photosynthesis
- 15.45 Giovanni Finazzi, Université Joseph Fourier (UJF), CEA Grenoble :
Acclimation of electron flow as a response to environmental changes
- 16.30 Coffee break, poster viewing
- 17.00 Vello Oja, Tartu University:
The size of the lumenal proton pool in leaves during induction and steady-state photosynthesis
- 17.30 Eero Talts, Tartu University:
Cyclic electron flow – measurement and proposed proton-uncoupled pathway
- 18.00 Paula Mulo, University of Turku:
Redox-regulated membrane attachment of ferredoxin-NADP⁺ oxidoreductase (FNR) is mediated by the Tic62 protein
- 18.30 Minna Lintala, University of Turku:
Depletion of leaf-type ferredoxin-NADP⁺-oxidoreductase results in permanent induction of photoprotective mechanisms in chloroplasts of Arabidopsis thaliana
- 19.00 End

Thursday, 14 October

Session 5. Biogenesis and adaptation Chair: Göran Samuelsson

- 9.00 Galina Riznichenko, Moscow State University:
Direct multiparticle models of photosynthetic protein interactions
- 9.30 Eevi Rintamäki, University of Turku:
Regulation of chloroplast biogenesis by a novel chloroplast thioredoxin NTRC
- 10.00 Saijaliisa Kangasjärvi, University of Turku:
Cross-talk in light acclimation and disease resistance in Arabidopsis thaliana
- 10.30 Coffee break, poster viewing
- 11.00 Anett Kiss, Umeå University:
Functional analysis of the two light-harvesting-like proteins OHP1 and Lil3
- 11.30 Andreas Busch, University of Münster:
Involvement of Ca²⁺ sensing receptor (CAS) and Ca²⁺ in the integrated regulation of chloroplast photo-acclimation and photo-adaptation
- 12.00 Markus Nurmi, University of Turku:
Thylakoid calcium sensing receptor CaS as a regulator of stomatal closure
- 12.30 Lunch

Session 6. Processes related to photosynthesis Chair: Per Gardeström

- 14.30 Boy J.H.M. Possen, Finnish Forest Research Institute
Dissecting adaptation capacity of Silver birch (Betula pendula Roth) to climate change
- 14.50 Bahtijor Rasulov¹ and Katja Hüve², ¹University of Tartu; ²Estonian University of Life Sciences:
A kinetic analysis of leaf isoprene emission and photosynthesis in aspen
- 15.10 Hillar Eichelmann, Tartu University:
The rate of nitrite reduction in leaves as indicated by O₂ and CO₂ exchange during photosynthesis
- 15.30 Olav Keerberg, Estonian University of Life Sciences
Photosynthetic carbon metabolism, respiration and starch degradation in leaves of Arabidopsis under high temperature stress
- 15.50 Coffee break, poster viewing
- 16.10 Vladimir Chikov, Kazan Institute of Biochemistry and Biophysics, Russia:
Using the products of photosynthesis in the production process of plants
- 16.30 Sándor Lenk¹, Budapest University of Technology and Economics
Fluorescence excitation kinetics for further studies of plant photosynthetic activity measured by the FluoroMeterModul (FMM) instrument based on an embedded computer
- 16.50 Ending of the meeting
- 19.00 Conference Dinner in the White Hall of Tartu University, The Dome on Toome Hill**