PhD-course, June 4-8 2018, 4 ECTS, University of Copenhagen

"Chemical imaging of plant cell walls"

The chemistry of plant cell walls varies between different ultrastructural layers. Physicochemical treatments and biological organisms such as fungi and bacteria may alter the chemistry unevenly and thus further increase the chemical heterogeneity. Consequently, detailed information about the chemistry and its spatial variability is often required to understand the causes and effects of a physiochemical or biological process.

This PhD-course introduces young researchers to a number of chemical imaging techniques that can provide spatially resolved chemical and structural information in high resolution. These include X-ray synchrotron techniques, Raman and Infrared Microspectroscopy, Ultraviolet MicroSpectroPhotometry, Atomic Force Microscopy, as well as advanced chemometric tools for analysing imaging data. The course is provided by an international team of expert researchers from Denmark, France, Germany, Switzerland and the USA.

In connection with the course, students can apply for a limited number of short research stays at Scandinavian research institutions with free access to some of the described techniques. Furthermore, the course is a chance to network with fellow young researchers from across Europe while enjoying springtime in Southern Scandinavia.

We look forward to welcoming you in Copenhagen!

Lecturers

Olivier Arnould, Université de Montpellier is an expert on the use of Atomic Force Microscopy on wood cell walls, especially to access their viscoelastic properties.

Joseph Jakes, Forest Products Laboratory has a strong background within wood cell wall structure-property relationships and extensive knowledge about X-ray synchrotron techniques.

Tobias Keplinger, ETH Zürich has in-depth knowledge on Raman microspectroscopy for the study of plant biomass.

Gerald Koch, Thünen Institute of Wood Research has for many years explored the use of Ultraviolet MicroSpectroPhotometry on plant materials.

Sara Piqueras Solsona, University of Copenhagen is an expert in chemometric data analysis of spectral images, including MCR-ALS.

Lisbeth G. Thygesen, University of Copenhagen has for 20+ years used and developed spectroscopic techniques for the characterisation of biomass.

Practical details

Course fee: € 200
Registration deadline: **May 15, 2018**

**Interested?
Send a mail to lgt@ign.ku.dk
to receive updates about course program, registration, accommodation, etc.**

UNIVERSITY OF COPENHAGEN
DEPARTMENT OF GEOSCIENCES AND
NATURAL RESOURCE MANAGEMENT