

2nd Lignin Summer course, Lund University
LIGNIN – A hidden gem for biorefineries

Time: August 14-16, 2019

Venue: Chemical Centre, Naturvetarvägen 16, Lund, Sweden

Registration for the course is made on-line at:

<https://docs.google.com/forms/d/1Pe20tN2-TauyNdJi1ULRdS9qFzsqAJuk74WNOXijcM/edit>

Course Program

August 14 th	Activity	Additional information
9.30-10.00	Registration/Coffee	
10.00	Course Introduction	
10.15-12.00	Lecture session 1	Lignin – origin and uses 1. <i>Lignin chemistry</i> - Göran Gellerstedt, KTH 2. <i>Separation of Lignin from Industrial Streams</i> - Christian Hulteberg, Lund University
12.00-13.00	Lunch	
13.00-16.30	Lecture session 2 with coffee break	Methods for lignin analysis 1. <i>Principles of chromatographic separation and detection</i> - Margareta Sandahl, Lund University 2. <i>Lignin applications</i> – GC, LC and SFC (M. Sandahl) 3. <i>Quality of the analytical result – method validation</i> (M. Sandahl) 4. <i>Analysis of lignin using NMR</i> - Sebastian Meier, DTU, Denmark
16:30-	Research presentations	Course participants work in pairs and present each other's work
Evening	City excursion & dinner	

August 15 th	Activity	Additional information
8.30-10.00	Lecture session 3	Chemical conversion of lignin 1. <i>Catalytic lignin depolymerization</i> - Bert Sels, KU Leuven, Belgium 2. <i>TBA</i>
10.00-12:00	Literature club - An article in four slides (<i>presentation of assigned articles by participants</i>)	
12.00-13.00	Lunch	
13.00-15.15	Lecture session 4 with coffee break	Biological conversion of lignin 1. <i>Microbial lignin degrading pathways</i> - Daniel Brink, Lund University) 2. <i>Screening for biological lignin degrading organisms</i> - Nadia Skorupa Parachin, University of Brasilia, Brazil 3. <i>Metabolic engineering for bio-catalytic valorisation of technical lignins</i> - Magnus Carlquist, Lund University
15:15-	Case study	Biochemical production from depolymerised lignin <i>(D. Brink, M. Carlquist, N. Parachin, M. Gorwa-Grauslund)</i>
Evening	Free time	

August 16 th	Activity	Additional information
8.30-11.00	Lecture session 5	<p>Chemical conversion of lignin</p> <p>1. <i>Lignin first approach to fractionate and valorize the whole tree</i> - Joseph Samec, Stockholm University</p> <p>Industrial perspectives</p> <ol style="list-style-type: none"> 1. <i>MoRe Lignin</i> - Hans Grundberg, MoRe Research, Örnsköldsvik 2. <i>Lignin use today and tomorrow</i> - Gudbrand Rødsrud, Borregaard, Sarpsborg, Norway
12.00-13.00	Lunch	
13.00-15.00	Wrap up & Visit of the laboratories	

The course content corresponds to 3 ECTS.

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