



## Conference Agenda - Updated on 13<sup>th</sup> of October 2022

### Monday 24/Oct/2022

---

- |               |  |
|---------------|--|
| 11:30 - 14:30 | <b>Side event: Nordic Research and Technology Infrastructure Workshop</b>  |
| 15.00 - 17.00 | <b>Visit to Bioruukki</b><br>Bus transportation from Scandic Park Hotel and back, bus leaves from hotel at 14.30 |
| 16.00 - 18.00 | <b>Pitching Training Session, Students</b>   |

### Tuesday 25/Oct/2022

---

- |              |   |
|--------------|---|
| 8:30 - 17:30 | Registration  |
| 9:00 - 9.05  | <b>Guidance and Practicalities</b><br>André Noël Chaker - moderator of the event  |
| 9:05 - 9:20  | <b>Opening of the Conference</b><br>Dr. Antti Vasara<br>President & CEO, VTT  |
| 9:20 - 9:50  | <b>Keynote, The Green Deal with Wood Biorefineries</b><br>Jori Ringman, Director General at Cepi<br>Cepi is the European association representing the paper industry  |
| 9:50 - 10:20 | <b>Keynote, Nordic RTOs Collaboration on Testbeds and Technology Infrastructures Strengthens the Impact on European Green Transition</b> Karin Johnson, CEO at RISE Processum AB<br>Mika Härkönen, Professor of Practice, VTT |

10:20 - 10:50	<p><b>Keynote, FinnCERES Flagship – A Competence Centre for the Materials Bioeconomy</b> Tekla Tammelin, Research Professor, VTT</p>
10:50 - 11:20	<p><b>Coffee &amp; poster viewing</b></p>
11:20 - 12:40	<p><b>Engineered Lignin Products</b></p> <p>Learnings and Aspects on Kraft Lignin Separation and Valorisation Mr. Per Tomani, RISE</p> <p>LignoForce™ lignin as a Biopolyol in Rigid Polyurethane Foams Dr. Michael Paleologou, FPIInnovations</p> <p>LigniOx lignins as Sustainable Bio-Based Dispersants Dr. Jouko Vyörykkä, DOW</p> <p>Fibenol's Biorefinery – from Secondary Woody Biomass to Chemical Building Blocks Mr. Uku Erik Tropp, Fibenol</p>
12:40 - 13:40	<p><b>Lunch</b></p>
13:40 - 15:00	<p><b>Low emission biorefineries and side-stream valorization</b></p> <p>New Methods to Control the Sodium and Sulphur Balance of Kraft pulp Mills Dr. Rickard Wadsborn, Stora Enso Erik van Zessen, Paques</p> <p>Valorization of Industrial Spruce Bark by Alkaline Extraction Dr. Marc Borrega, VTT</p> <p>Preparation, Characterization, and Application Evaluation of Different Sawdust-Based Green and Versatile Chemicals and Materials for Sawdust Valorization Dr. Jiebing Li, RISE</p> <p>Demonstration and Assessment of a Novel Biorefinery Concept for the Integration of Beechwood-Based Products as Platform and Fine Chemicals Mr. Roy Nitzsche, DBFZ</p>
15:00 – 16:30	<p><b>Coffee &amp; poster session</b></p>
16:30 – 17:30	<p><b>Students' Pitching Program</b></p>
19:00 - 20:30	<p><b>Helsinki City Reception</b> Helsinki City Hall, Entry with badge for pre-registered Pohjoisesplanadi 11-13</p>

## Wednesday 26/Oct/2022

---

- 8.00 - 9.00 Student Breakfast, only for invitees
- 8:30 - 17:00 Registration
- 9:00 - 9:30 **Marcus Wallenberg Prize 2022 winner keynote**  
Organic Superbase Salts (ILs) for Cellulose Dissolution and Biomass Processing  
Professor, Ilkka Kilpeläinen, University of Helsinki
- 9:30 - 9:50 **Circularity of Wood Sourced Carbon and Emerging policies**  
  
Current and Emerging Solutions for Carbon Neutrality in Wood Based Biorefinery  
Research Professor, Ali Harlin, VTT
- 9.50 – 11:10 **Novel Cellulose Modifications**  
  
Preparation of Dialdehyde Cellulose (DAC) from Cellulose Pulp and Its Applications as Reversible Wet Strength Agent  
Mr. Gerrit Schaper, Papiertechnische Stiftung (PTS)  
  
Nanocellulose-Based Antimicrobial Microparticles as an Alternative to Toxic Nano-Biocides  
Professor, Dr. Vanja Kokol, University of Maribor  
  
Efficient New Extraction Method for Highly Charged Phosphorylated CNC  
Mr. Marcel Kröger, Aalto  
  
Progress on Cellulose Esterification – Control Over Surface to Bulk Modification  
Dr. Alistair King, VTT
- 11:10 - 11:40 **Coffee & poster viewing**
- 11:40 - 13:00 **Structure – Function – Performance Interrelations in Materials Engineering**  
  
Multifunctional and Biobased Coating Aided by Digital Material Design  
Invited speaker, Professor Monika Österberg, Aalto  
  
Simulating the Impact of Nozzle Hole Locations and Diameters on Film Thickness in Spinning Process  
Dr. Kaarlo Nieminen, Aalto  
  
Capturing Colloidal Nano- and Microplastics with Plant-Based Nanocellulose Networks  
Ms. Ilona Leppänen, VTT  
  
High Performance Cellulose-Based Substrates for Flexible Printed Electronics  
Dr. Vinay Kumar, VTT

13:00 - 14:00	<b>Lunch</b>
14:00 – 14:30	<p><b>Panel discussion</b>  <b>The Challenges and Opportunities of Lignin</b>  Ananda Dias, New Business Manager at Suzano  Mikael Hannus, SVP of Group R&amp;D at Stora Enso  Mika Sipponen, Assistant Professor at Stockholm University &amp; co-founder Lignoflow Technologies  Per Tomani, Director Research &amp; Business Development, RISE</p>
14:30 - 15:30	<p><b>Low Emission Biorefineries and Side-Stream Valorization</b></p> <p>When Historical partners, METSA and FIRMENICH, Combine Technical Expertise to Improve Both Recovery Yields and Quality of Crude Sulfate Turpentine  Dr. Emmanuel Cazeils, Firmenich  Mr. Thomas Fant, Metsä Fibre</p> <p>Size Based Monitoring of Cellulose Hydrolysis Reaction for the Cellulose Nanocrystal (CNC) Production  Dr. Shubhankar Bhattacharyya, RISE Processum AB</p> <p>LigniOx Process Concept to Produce Lignin Dispersants at a Kraft Pulp Mill and an Organosolv Biorefinery  Dr. Anna Kalliola, VTT</p>
15:30-15:50	<p><b>High performing wood-based products for industrial scale</b></p> <p>Scalable Industrial Process for the Production of Nanofibrillated Cellulose Oxalate  Dr. Jonatan Henschen, Finecell Sweden AB</p>
15:50 - 16:30	<b>Coffee &amp; poster viewing</b>
16:30 - 17:30	<p><b>Low emission biorefineries and side-stream valorization</b></p> <p>Delignification of Kraft Pulp with Oxygen, Air and Nitrogen - Effect on Selectivity and Pulp Brightness  Ms. Jenny Sjöström, KTH</p> <p>Techno-Economic Analysis for Novel Biorefinery Concept Producing Biobased Acetic Anhydride  Dr. Kristian Melin, LUT</p> <p>Catalysis Solvolysis of Novel Organosolv Lignin into Phenolic monomers Dr. Sari Rautiainen, VTT</p>
19:00 - 23:00	<p><b>Conference Dinner &amp; The Gullichsen Award and The Boreal Alliance Award</b>  Restaurant Pörssi, Entry with badge for pre-registered  Address: Fabianinkatu 14</p>

## Thursday 27/Oct/2022

---

- 8:00 - 16:00 Registration
- 9:00 - 9:30 **Marcus Wallenberg Prize 2022 winner keynote**  
Novel Cellulose Fibers from Steam-Exploded Birch Wood as the Main Product in a New Biorefinery Concept  
Professor, Herbert Sixta, Aalto
- 9:30 - 10:30 **Panel discussion**  
**Turning Research Success to Commercial Success**  
Johannes Bogren, Vice President, Södra  
Åsa Ek, Acting SVP Head of Innovation, Division Biomaterials, Stora Enso  
Professor Kristiina Kruus, Dean in the School of Chemical Engineering, Aalto University  
Pia Nilsson, Director, Global Platform Development R&D, UPM  
Niklas von Weymarn, CEO, Metsä Spring Oy
- 10:30 – 11:00 **Coffee & poster viewing**
- 11:00 – 11:20 Lignin-Based Functional Fillers - a Disruptive Innovation  
Invited speaker, Dr.-Ing. Tobias Wittmann, SunCoal Industries GmbH
- 11:20 – 12:20 **Wood based textile solutions**  
  
Spinning of Regenerated Fibres from Paper Grade Pulp  
Dr. Taina Kamppuri, VTT  
  
Spinning and Additive Manufacture for Multiscale Cellulose Structures on Textiles and Printed Materials  
Dr. Guillermo Reyes, Aalto  
  
Sustainable Chemistries for Cellulosic textiles  
Dr. Anna-Stiina Jääskeläinen, Kemira
- 12:20 - 13:20 **Lunch**
- 13:20 - 14:40 **Engineered lignin products**  
  
Unlocking the Potential of Lignin in Material Applications via its Simultaneous Isolation and Multi-Functionalization  
Dr. Stefania Bertella, Aalto  
  
Lignin Based Polyacids to Substitute Fossil-Based Materials in Coatings Formulations  
Dr. Olesya Fearon, VTT  
  
Sustainable Lignin Polymer in Thermoformed Fiber Products  
Dr. Mihaela Tanase-Opedal, RISE PFI  
  
Product Development and Scale-Up of the Lignin Platform in an Aldehyde- Assisted Fractionation (AAF) Biorefinery  
Dr. Monique Bernardes Figueiredo, Bloom Biorenewables

14:40 - 15:10

**Coffee**

15:10 - 16:10

**Engineered Lignin Products**

LignoCity – Flexible Production of Tailor-Made Lignin

Ms. Maria Ölmhult, RISE

Mr. Anders Arkell, RISE

Lignin Nanoparticles-Based Antibacterial Coatings for Development of Antimicrobial Surfaces

Dr. Maria Morits, Aalto

Upgrading Biorefinery Lignins Through Green and Cost-Efficient Reactive Extraction

Dr. Davide Rigo, Aalto

16:10 - 16:20

**Closing the Conference and Announcing the Next NWBC**



**Ate Virtanen**

Vice President, Biomaterial processing and products

[atte.virtanen@vtt.fi](mailto:atte.virtanen@vtt.fi)



**Katariina Torvinen**

Research Manager, Biomaterial processing and products

[katariina.torvinen@vtt.fi](mailto:katariina.torvinen@vtt.fi)