Summer School ZELCOR

"Zero waste biorefineries: technical advances and sustainability assessment"
This is the 1st Summer School on waste biorefineries in the context of ZELCOR and bioeconomy, with a focus on valorization of recalcitrant side streams. A panel of specialists in the biorefinery field will provide an up-to-date state-of-the-art based on the latest advances in terms of scientific knowledge, techno-economical developments and assessement methodologies.

Interested? CLICK HERE TO REGISTER

Organised by: The Graduate School VLAG, in co-operation with Wageningen Food & Biobased Research, INRA and NOVA
More information: The Graduate School VLAG
Date: 2 September 2018 - 6 September 2018
Venue: Wageningen International Congress Centre (WICC), Lawickse Allee 9, 6701 AN Wageningen, The Netherlands
For this summer school graduate school VLAG can give 1 ECTS credit for PhD students and 0,5 ECTS extra for a poster presentation.

Tentative program

2 September 2018

- Arrival participants from abroad on Sunday September 2nd 2018
- Welcome drink on location (19.00)
- Preparing poster exhibition

Day 1 - 3 September 2018
9.30 am: Welcoming and introductive presentation
(Prof. Stéphanie Baumberger & Dr. Richard Gosselink)

Feedstock availability, logistics, storage, handling and feeding

- **Lignocellulosic feedstocks for biorefineries**
  (Dr. Stephan Piotrowski, nova-Institut GmbH)

Zero waste biorefineries: examples and needs

- **Lignocellulosic biorefineries with integrated side stream valorisation: reality or future?**
  (Ed de Jong, Avantium BV)

Markets and products

- **Functionalities and markets for lignins**
  (Jairo Lora, Green Value Enterprises LLC)
- **Cosmetics needs in active biomolecules**
  (Fabio Apone, Arterra)
- **Feed markets for waste valorisation**
  (Alex Obach, Skretting ARC)
- **Functionalised packaging materials**
  (Jérome Vachon, SABIC)

Day 2 – 4 September 2018

Conversion processes and tools (Module 1 on biochemical conversion)

- **Potential of bacteria and synthetic biology for lignin conversion**
  (Prof. Tim Bugg, University of Warwick)
- **Microbial consortia and waste valorisation**
  (Guillermina Hernandez, INRA)
- **Insect potential in biorefineries**
  (Nathalie Berezina, Ynsect)

Conversion processes and tools (Module 2 on thermochemical conversion)

- **Thermochemical processes for the production of platform biomolecules**
  (Daan van Es, WFBR)
- **Technical and "green" potential of ionic liquids**
  (Guy Marlair, INERIS & Dr. Betty Cottyn, INRA)
- **Tool box for tuning lignin structure**
  (Prof. Stéphanie Baumberger, AgroParisTech)

Analytical techniques in biorefining with focus on recalcitrant streams

- **Analytical tools review for lignin characterisation**
  (Dr. Richard Gosselink, WFBR)
- **Humins: production and progress in structural investigation**
  (Annelie Jongerius, Avantium BV)

Day 3 - 5 September 2018

Value chain assessment of zero waste biorefineries and their products

- **Value-chain environmental assessment by LCA**
  (Harriëtte Bos, WFBR)
- **Taking into account techno-economical criteria in the design of biomass conversion processes**
  (Elke Breitmayer, nova-Institut GmbH)
- **LCA and environmental aspects** (Xun Liao, Quantis)
- Site visit in the afternoon

- **Evening lecture on Biobased Economy**

Day 4 - 6 September 2018

Case studies: design a zero waste biorefinery based on a lignocellulosic biomass, side stream.

- Case 1: Pulp & paper mill including full valorization of side streams
- Case 2: Lignocellulosic biorefinery with focus on production of biochemicals including full valorization of side streams
- Short presentation per group on results

Summary and achievements of the workshops and conclusion of the summer school
(Prof. Stéphanie Baumberger)

A seperate visit to the facilities of WFBR is optional.