in collaboration with

presents

Biomass valorization: catalysis, new materials and applications

Pollution, climate change, depletion of traditional feedstocks, and intensification of the world-wide population density, thus increasingly stringent energy and food demands, call for the development of truly sustainable industrial processes and practices.

Biomass valorization is taking a hold of the scientific community as the renewable alternative to fossil resources for the sustainable production of fine and bulk chemicals. In particular, the chemical processing of biomass can open a wide range of possibilities for new platform chemicals and materials, including plastics, fuels, and pharmaceuticals.

This is where the **HUGS** consortium finds inspiration: easily harvested plants and their by-products can find a suitable place in the chemical industry, largely increasing the future's sustainability. The consortium's efforts strive to develop new (catalytic) processes for biomass conversion and innovative bio-based materials for a variety of applications including catalysis, polymers and adsorbents, with safety as a general focus of our experimental design.

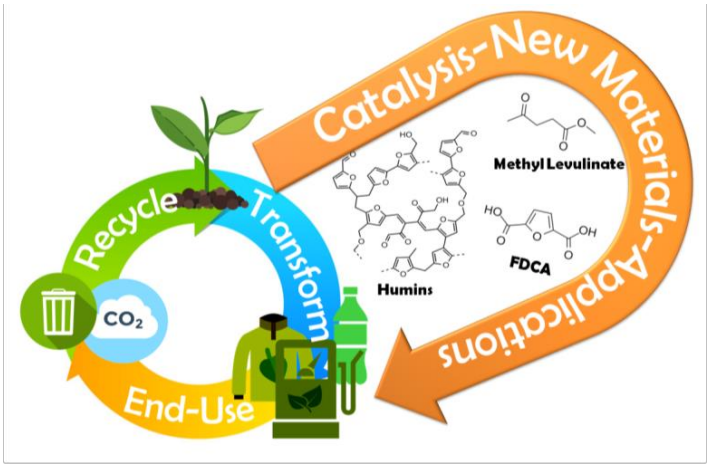
In collaboration with the **N.I.C.E.** conference 2018, the HUGS consortium will host five sessions on different valorization strategies for a truly sustainable development, as well as an industrial session.

Sustainability is a joint global effort, ranging from political to scientific development. Focusing on the science, we hope to inspire, discuss and develop with you a ***greener*** and ***brighter*** future.

Relevant links:

http://www.unice.fr/nice-conference/

http://www.uco.es/hugs/



The Sessions

Main topics

Green chemistry, Biomass valorization, Sustainable catalysis, Biobased chemistry and materials, Nanocomposites, Biobased polymers.

1. **Sustainable Materials for Catalysis**

   This session will be focused on the recent green chemistry advances in the design and application of sustainable catalytic (nano)materials from abundant and harmless resources. A particular focus will be given to bio-derived materials obtained via benign-by-design methodologies.

   Confirmed Keynote Speaker: Rajender S. Varma (U.S. Environmental Protection Agency)

2. **Catalysis for Biomass Conversion**

   This session will focus on the different applications of homogeneous and heterogeneous catalysis for the conversion of biomass derivatives such as humins, lignin and levulinates, towards sustainable platform and high-value chemicals.

   Confirmed Keynote Speaker: Katalin Barta (University of Groningen)

3. **Carbon based porous materials**

   In this session, the recent discoveries and future insights from the world of carbonaceous porous materials will be presented, with a close look to materials from sustainable precursors and their future applications.

   Confirmed Keynote Speaker: Magdalena Titirici (Queen Mary University of London)

4. **Importance of safety considerations in biorefinery**

   This session will focus on the physico-chemical and eco-toxicological safety considerations concerning development and application of bio-based chemicals and (nano)materials. Key areas in identifying the emerging risks to develop inherently safer design of materials and chemical processes will be highlighted.

   Confirmed Keynote Speaker: Philippe Garrigues (Bordeaux University)

5. **Development of new biobased materials for future applications**

   This session will focus on the latest research concerning development of new biobased polymers, showing the potential of these materials for common and future applications. A special attention will be given to biobased composites, involving natural fibers, wood-polymer composites, and the latest advances in cellulose composites and nanocomposites.

   Confirmed Keynote Speaker: Amar Mohanty (University of Guelph)

6. **Industrial Sustainable Development**

This session is dedicated to the industrial panel and workshop. Key exponents of leading chemical companies involved in innovation and sustainability will give their opinion on challenges, hopes, and controversies on the biomass conversion strategies, as well as address the public's doubts and concerns. The focus will be on the way different companies are engaged in topics as biomass conversion and valorization, catalysis for green chemistry, development of new building blocks for biobased materials and clean technologies. Each industrial speaker would have the possibility to give a short introduction about the sustainability commitment of their own company followed by an open discussion involving the audience, a moderator and the industrial speakers.

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Symposium Minor Sponsor – 2500 €

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