

II LATIN AMERICAN
CONGRESS

Bio refineries

Materials and Energy

May 4th, 5th and 6th, 2009. Concepción, Chile.

Expocorma, Autopista Concepción - Coronel Km 18.

Announcement

It is our pleasure to invite you to the Second Latin American Congress on Biorefineries for Materials and Energy to be held May 4-6, 2009 in Concepción, Chile. This meeting is charged to use Latin American renewable resources in a sustainable fashion.

The Congress offers a forum to national and foreign researchers and experts for a debate on scientific and engineering advances in the use of forest biomass as a source of fuels, new materials and chemical products, as well as a stimulating discussion on the challenges and opportunities for regional, national and Latin American cooperation in these endeavors. In parallel, the 4th International Colloquium on Eucalyptus Pulp will be held. These two events complement each other.

The Congress is being organized by the Unit of Technology Development (UDT) of the University of Concepción and the Technical Association of Pulp and Paper of Chile (ATCP-Chile). The main topics of the congress are:

Topics:

1. Biorefinery progress
2. Biochemical transformation
3. Biogas as an alternative fuel
4. Thermochemical transformation
5. Fractionation of lignocellulosics
6. Chemical products and biopolymers

Also, two Workshops will be available to create a more in depth discussion about the following topics:

1. **Workshop of Biomass Pyrolysis**, May 7th, 2009 in Concepción.
Focused on fast biomass pyrolysis to obtain chemical products and fuels. National and international experts will give a lecture on the current state-of-the-art with feasibility to implement these technologies in Latin America.
2. **Workshop of Degradable Plastics**, May 8th, 2009 in Santiago.
Will focus on commercial and normative aspects of the use of degradable plastics, as well as, the feasibility to apply these plastic materials in Chile.

Registration and Fees

| | Before 15/Apr/09 | After 15/Apr/09 |
|-------------------------------------|---------------------|--------------------|
| Members ATCP | US\$ 200 | US\$ 250 |
| Contributors (speaker or poster) | - | - |
| Students* | US\$ 80 | US\$ 100 |
| Other participants | US\$ 300 | US\$ 350 |

Note: Registration for the Second Latin American Congress on Biorefineries entitles to attend both Biomass Pyrolysis Workshop and Degradable Plastics Workshop without additional charge.

*The registration cost for students does not include the Official Dinner. For further information, please visit the website of the Congress at <http://www.bio-refineries.cl/>

www.bio-refineries.cl

Organiza:



Patrocina:



Auspicia:



Program: II Latin American Congress on Bio-refineries: Materials and Energy

Sunday May 3th

18:00 - 20:00 **Cocktail**

Monday May 4th

08:30-09:30 **Registration**

Congress and Colloquium Opening Session

- 09:30-09:45 **Welcoming Remarks**
Alex Berg. UDT, Chile.
Ramiro Peralta. ATCP, Chile.
Celso Foelkel. ABTCP, Brazil.
- 09:45-10:15 **Daniel Contesse.** Ex-President of CORMA, Chile.
- 10:15-10:45 *The future of pine and eucalyptus pulp multi-product mill biorefinery*
Peter Axegard. STFI, Sweden.
- 10:45-11:00 **Coffee Break/ Poster Session**
- 11:00-11:25 *Biorefinery – A production system for the future. A success story for a medium enterprise.*
Eckhard Weidner. Fraunhofer UMSICHT, Germany.
- 11:25-11:50 *Forestry biomass as a feedstock for energy production in Chile: Challenges and opportunities. (Spanish)*
Claudio Zaror. University of Concepción, Chile.
- 11:50-12:15 *Biofuels as part of future biorefineries-concepts under European conditions.*
Franziska Mueller-Langer. German Biomass Research Centre, Germany
- 12:15-12:40 *Logistics for 2nd generation biofuels*
Frank Schultmann. University of Karlsruhe, Germany.

12:45-14:15 **Lunch**

Session I: Thermocatalytic Transformation

Chairman: Andreas Hornung

- 14:15-14:45 **Keynote Presentation:**
High integrative, CO₂ negative, high efficient power generation from ash rich biomass coupled with production of algae based bio oils as well as black earth avoiding effluents at Hainhaus/Odenwald using the BtVB process.
A. Hornung, A. Apfelbacher, S. Sagi. Aston University, United Kingdom.
- 14:45-15:10 *Pirólisis of residual biomass: Biochar conversion yield and synthesis gas quality. (Spanish)*
M. Poppenwimmer, H. Raupenstrauch, R. Muñoz, **R. Navia.** University of La Frontera, Chile.
- 15:10-15:35 *Thermocatalytic transformation of compounds present in bio-oil. (Spanish)*
P. Ruiz, C. Aguilar, **N. Escalona,** R. García y G. Oviedo. University of Concepción, Chile.
- 15:35-16:00 *Development of a molecular reactor for the generation of gas from biomass. Results. (Spanish)*
M. Gutiérrez, S. Gutiérrez, M. Rodríguez. University of Chile, Chile.

- 16:00-16:25 *Techno-economic evaluation of cogeneration cycle using biomass gasification technologies. (Spanish)*
O. Farias y A. Concha. University of Concepción, Chile.
- 16:25-16:50 *Cogeneration using residual forest biomass- A comparative analysis of cost of production. (Spanish)*
C. Bidart, A. Berg. University of Karlsruhe, Germany.

16:50-17:00 **Coffee Break/ Poster Session**

Session II: Fractionation of Lignocellulosics

Chairman: María Elena Lienqueo

- 17:00-17:30 **Keynote Presentation:**
Use of ionic liquids in the pre-treatment of lignocellulosic materials for production of second generation bioethanol. (Spanish)
V. Cortinez, R. Pezoa, O. Salazar, A. Garcías, R. Carmona, **M. E. Lienqueo.** University of Chile, Chile.
- 17:30-17:55 *Lignocellulosic biomass for the production of platform chemicals-economic and ecological assessment of a biorefinery concept.*
M. Haase, M. Fröhling, J. Schweinle, B. Himmelrech. University of Karlsruhe, Germany.
- 17:55-18:20 *Organosolv cooking as a facile fractionation method for annual plants.*
H. Mikkonen, T. Oksanen, S. Alakurtti and A. Suurnäkki. VTT, Finland.

Tuesday May 5th

08:30-09:00 **Registration**

Session III: Biogas

Chairman: José Antonio Ruiz

- 09:00-09:30 **Keynote Presentation:**
Gaseous biogenic fuels: The Government's role. (Spanish)
José Antonio Ruiz, National Energy Commission, Chile.
- 09:30-09:55 *Kinetic analysis of methane production from beer handcrafted industry organic wastes. (Spanish)*
J.E. Gontupil, **C.A. Ulloa,** G.G. Merino. University of Concepción, Chile.
- 09:55-10:20 *Biomethane and biohydrogen-production and utilization.*
S. Rasi, H. Tähti, O. Pakarinen, J. Rintala. University of Jyväskylä, Finland.
- 10:20-10:45 *Modelling and simulation of biogas production from salmon industry wastewater: effects of the hydraulic residence time and temperature. (Spanish)*
César Huiliñir. University of Concepción, Chile.
- 10:45-11:00 **Coffee Break/ Poster Session**
- 11:00-11:30 Chairman: Stephan Kabasci
Keynote Presentation:
Biogas technology for the energetic utilization of biomass, by-products and waste.
Stephan Kabasci. Fraunhofer UMSICHT, Germany.
- 11:30-11:55 *Upgrading of biogas to biomethane – basics, technical solutions and examples*
Christoph Zimmermann, UTEC GmbH, Germany.

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| 11:55-12:20 | <i>Biogas: Design, Technologies and profitability of cogeneration projects. (Spanish)</i> Matías Errázuriz. UTEC-Wetland, Chile. |
| 12:20-12:45 | <i>Sustainable use of biogas as a fuel in Chile. (Spanish)</i> M. Flores, R. Jiménez, A. Berg, C. Bidart. University of Concepción, Chile. |
| 12:45-14:15 | Lunch |
| Session IV: | Biochemical Transformation Chairman: Jaime Baeza |
| 14:15-14:45 | Keynote Presentation: Bioenercel Consortium Jaime Baeza. University of Concepción, Chile. |
| 14:45-15:10 | <i>Identification of cellulose enzymes for bioethanol production from lignocellulosic biomass.</i> A. Guerrero, M. E. Lienqueo, O. Salazar. University of Chile, Chile. |
| 15:10-15:35 | <i>Acid hydrolysis of radiata pine to produce ethanol by simultaneous saccharification and fermentation. (Spanish)</i> H. Franco, R. Mendoça, J. Freer, J. Baeza, N. Durán. University of Concepción, Chile. |
| 15:35-16:00 | <i>A chromatography approach for the biological pre-treatment of lignocellulose to obtain bioethanol. (Spanish)</i> A. García, S. Hyvärinen, R. Carmona, M.E. Lienqueo, O. Salazar. University of Chile, Chile. |
| 16:00-16:15 | Coffee Break/ Poster Session Chairman: Joachim Venus |
| 16:15-16:45 | Keynote Presentation: <i>Pilot plant for the bioconversion of sugar containing feedstocks.</i> Joachim Venus. Leibniz-Institute for Agricultural Engineering, Germany. |
| 16:45-17:10 | <i>Estimation of fermentation growth rate based on measurable parameter.</i> L. AbdulKareem, A. Al-Jamall. University of Nottingham, United Kingdom. |
| 17:10-17:35 | <i>Glycerol-based polyesters for the removal of sodium from biodiesel. (Spanish)</i> C. Toro, P. Hidalgo, R. Navia, R. Betancourt. University of La Frontera, Chile. |
| 17:35-18:00 | <i>Technological and logistic barriers and opportunities of the sustainable use of biomass from native forests in Chile. (Spanish)</i> Nora Szarka. University of Concepción, Chile. |
| 20:00 | Official Dinner |

Wednesday May 6th

Session V: Chemical Products, Biopolymers

Chairman: Carmen Michels

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| 09:00-09:30 | Keynote Presentation: <i>Bioplastics-products from renewable resources</i> Carmen Michels. Fraunhofer UMSICHT, Germany. |
| 09:30-09:55 | <i>BioPlastics-next generation polymer materials for reducing carbon and environmental footprint.</i> Dan Gravier. Michigan State University, United States. |
| 09:55-10:20 | <i>Effect of citrate plasticizers on the thermal and rheological properties of polylactic acid. (Spanish)</i> J. D. Sierra, M. Noriega, S. Ospina, E. Cardona. ICIPC, Colombia. |
| 10:20-10:45 | <i>Plastic materials for a sustainable development (Spanish)</i> Patricia Eisenberg. INTI, Argentina. |
| 10:45-11:10 | <i>Green Polyethylene from Braskem, a vision beyond the renewable raw material.</i> Eder Felipetto. Braskem S.A, Brazil. |
| 11:10-11:25 | Coffee Break/ Poster Session |
| 11:25-11:55 | Chairman: Dietrich Meier Keynote Presentation: <i>Processes and products in wood based biorefineries.</i> Dietrich Meier. Johann Heinrich von Thünen-Institut, Germany. |
| 11:55-12:20 | <i>Biorefinery opportunities for the pulp industry.</i> Herbert Sixta. Helsinki University of Technology, Finland. |
| 12:20-12:45 | <i>Industrial applications of vegetable tannins. (Spanish)</i> Eduardo Cassel. Pontifical Catholic University of Rio Grande do Sul, Brazil. |
| 12:45-13:10 | <i>Materials from forest biomass: an opportunity for Chile. (Spanish)</i> S. Rodríguez, C. Fuentealba, J. Carrasco, J. Bravo, A. Maldonado, L. Olave, J. Castaño, L. Radovic. University of Concepción, Chile. |
| 13:30-18:00 | Field Trip |

