

Sponsored by



Centro Científico Tecnológico de Excelencia
Unidad de Desarrollo Tecnológico CCTE-UDT
Universidad de Concepción

Av. Cordillera N° 3624 Parque Industrial Coronel
Coronel
Chile

P.O. Box 4051 Correo 3
Concepción
Chile

Phone: ++56-41 26 61 811
Fax: ++ 56-41 27 51 233
e-mail: udt@udt.cl

Website: www.udt.cl



1ST

CHILEAN INTERNATIONAL SEMINAR ON
BIOGENIC GASES AS FUELS
FOR THE FUTURE

CCTE-UDT
Universidad de Concepción

SNG



2010

<http://sng2010.udt.cl/>

Contact

The main purpose of the BIOGENIC GASES AS FUELS FOR THE FUTURE-2010 seminar is to promote scientific and technical exchange between research institutions, industry, stakeholders and public agencies in the field of combustible biogenic gases. The three principal topics of this seminar relate to the implementation of biogas project, the gasification of biomass, and catalysts for biomass gasification and biogas upgrading.

Session 1. Implementation of biogas projects

This session focuses on the presentation of ongoing projects in Europe, aimed at producing biogas through fermentation, with sequential upgrading of biogas using established technologies, to be fed into the natural gas grid. Aspects such as environmental benefits, political and economic barriers will also be discussed.

Chairman: Owe Jönsson
Project Manager R&D at E.ON Gas Sverige AB, Sweden

Session 2. Gasification of biomass

Significantly less effort has been devoted to the development and commercialization of advanced biomass gasification systems than to coal gasification. However, since about the 1970s, considerable research has been carried out into the production of fuel gases, synthetic fuels and synthesis gases. In this section leading projects on methanization, cleaning and production of substitute natural gas from biomass will be discussed.

Chairman: Dr Ljubisa Radovic
Professor Pennsylvania State University, USA

Session 3. Catalysts for biomass gasification and biogas upgrading

Remarkable progress has been achieved in recent years in the development of biomass gasification processes for the production of Synthetic Natural Gas (SNG) and Synthesis Gas. Nonetheless, there is significant ongoing research about related subjects, such as catalytic gas upgrading and cleaning; conversion of carbon dioxide into valuable compounds through CO₂ reforming of methane, CO₂ methanation, methanol or ethanol synthesis from CO₂ and hydrogen; selective synthesis of high quality gasoline; and else.

In this session, leading concepts on catalytic biomass gasification; new process concepts of CO₂-reforming; novel, cheaper and efficient catalysts; will be discussed.

Chairman: Dr Patricio Ruíz
Professor Université Catholique de Louvain, Belgium

Tuesday, 29 June 2010

16:00 - 18:00 Registration - At Empreudec auditorium

Wednesday, 30 June 2010 - At Empreudec auditorium

9:00 - 9:10 Welcome to SNG Seminar-Dr Alex Berg Executive Director CCTE-UDT

Session 1. Implementation of biogas projects

Chairman : Owe Jönsson

9:10 Dr Carsten Herbes, Nawaro - Germany

Energy crop-based biomethane production on an industrial scale - the example of German market leader Nawaro BioEnergie AG

Owe Jönsson, E-On - Sweden

European experience of biogas production, injection into the gas grid and use as vehicle fuel

10:30 - 10:50 Coffee Break

Ian Nelson, Metrogas - Chile

Treatment and upgrading of biogas - Metrogas experience

Gerardo Muñoz Chacón, Metrogas - Chile

Proposed standard regarding biomethane in Chile

Karin Von Osten, Ministerio de Energía- Gobierno de Chile - Chile

Non conventional renewable energies in Chile: biogas development challenges

12:10 - 12:30 General discussion

12:30 - 13:30 Lunch

Session 2. Gasification of biomass

Chairman : Dr Ljubisa Radovic

13:30 Dr Ljubisa Radovic, Pennsylvania State University - USA

Biomass gasification: what exactly is different from coal gasification?

Robin Zwart, ECN - The Netherlands

Development status as well as remaining RD&D needs for the production of SNG via biomass gasification

14:50 - 15:10 Coffee Break

Owe Jönsson, E-On - Sweden

Medium scale biomass gasification for production of biomethane - swedish experiences

Dr Reinhard Rauch, Institute of Chemical Engineering, Vienna University of Technology - Austria

Results on production of BioSNG from product gas of a dual fluidised bed steam gasifier

María Mesonero Kromand, Departamento de Relaciones Internacionales, CONICYT - Chile

The European Union liaison office in CONICYT: Assisting researchers in applying to the European framework programmes

17:10 - 17:30 General discussion

20:00 Official Dinner

Thursday, 1 July 2010 - At EmpreUdeC Auditorium

Session 3. Catalysts for biomass gasification and biogas upgrading

Chairman : Dr Patricio Ruíz

9:00 Dr Patricio Ruíz, Université Catholique du Louvain - Belgium

New advances in the catalytic conversion of biomass gasification products into high added-value chemicals

Dr Ximena García, University of Concepción - Chile

Biomass gasification with potassium-based catalysts

10:20 - 10:40 Coffee Break

Dr Ate Aho, Process Chemistry Centre, Åbo Akademi University - Finland

Catalytic pyrolysis of biomass

Dr Reinhard Rauch, Institute of Chemical Engineering, Vienna University of Technology - Austria

Gas cleaning and treatment of product gas from dual fluidised steam gasification for CHP and synthesis applications

Dr Frédéric Vogel, Catalytic Process Engineering, Paul Scherrer Institut - Switzerland

Catalytic hydrothermal conversion of biomass to methane

12:40 - 13:10 General discussion and closure

13:20 - 14:20 Lunch