

www.cmtevents.com

# Bioern Gen Bioernanol

# 28-29 May 2008 / GENEVA **SGS Group Headquarters**

**Production Technology, Economic Analysis** of Various Feedstocks, DDGs Markets, Water Management & Supply Chain issues

# PLUS half day session Commercialisation of BioButanol and Technical Challenges

promotion partners







asia, inc.

BIOFUELS





supported by



# KEY REASONS TO ATTEND

You will attain a comprehensive grounding in Ethanol Production from traditional & mostly \*2nd *Generation* Feedstocks

- Production Processes from various feedstocks and how they affect ethanol quality
- Markets & pricing for ethanol byproducts DDGS
- Cellulosic Ethanol, Economics, Technical Aspects and Parameters influencing Production Efficiency
- State of Cellulosic Ethanol Technologies Worldwide & Commercialisation strategies
- EU Certification of Sustainability for export
- Quality Inspection along the logistics chain
- Water Management Issue, purification of ethanol and new developments in membrane technology
- Biobutanol technical challenges and why is should be considered a better biofuel than ethanol

\* sugarcane bagasse & trash, corn straw (stover), rice straw, wheat straw, rice husks, municipal solid waste, sewage sludge, manure (cattle, poultry, swine), wood chips, switch grass **Course Leaders** 

### Cesar B. Granda, Ph.D.

Dr. Granda has been involved with biomass conversion to chemicals and fuels since 1997 conducting research in almost all unit operations of the process. He has experience in the sugar industry as well. Many technical publications and patents in these areas have resulted.

In his research, he has been involved in the preservation of sugarcane juice for processing into sugar and ethanol, pretreatment of sorghum & sugarcane fiber to increase biological digestibility, enzymatic degradation of sugarcane fibers into simple sugars for ethanol production, mixed-acid fermentation of lignocellulosic residues, conversion of organic acids and salts into alcohols (isopropanol and ethanol).

#### Hans Blaschek

Hans research areas include Genetic manipulation of microorganisms for biotechnological applications, examination of dry milling co-products as substrates for fermentation to value-added products, development of an integrated fermentation system for solvent production and recovery, pathogen transmission on minimally processed foods. Hans served for the U.S. Department of Agriculture as the Value-Added/Biofuels Panel Manager for NRI Competitive Grants Program from 1994-1995. He has also consulted on Biomass Conversion systems for Dupont. Hans served as a Research Collaborator and Consultant for Mitsubishi Chemical and Research Institute Technology for Earth (RITE), Kyoto, Japan since 1994.

Including other Industry Panelists from Frost & Sullivan, Ecofys, Hyflux, SGS

## Day 1 Wednesday, 28<sup>th</sup> May 2008

8:00 Registration & Coffee

#### 8:20 ETHANOL ECONOMICS; FEEDSTOCKS, PRODUCTION AND BY-PRODUCTS

 Global & regional ethanol capacities, update on planned projects
 Robert Outram
 Team Leader Specialty Chemicals
 Frost & Sullivan

#### **NEXT GEN ETHANOL PRODUCTION TECHNOLOGY & ECONOMICS** *Conducted by* **Dr. Cesar Granda**

9:00 E

### ETHANOL PRODUCTION

Brief Introduction to Mature technologies

- Squeezed sugar (Sugarcane) - Process description
- Starch (Corn)
  - Process description
- Distillation
  - Alcoholic distillation, description, capacities
- Anhydrous ethanol production
- 10:00 ADVANCED MEMBRANE TECHNOLOGY FOR ETHANOL DEWATERING Willy Yeo, Assistant VP Hyflux Pty Ltd
  - Yields /Overall process energetics

#### **CELLULOSIC ETHANOL**

- Historic background of cellulosic ethanol
- Importance of establishing a cellulosicethanol economy
- Potential feedstock & yields
- Characteristics of lignocellulose

Program topics, speakers and schedules published herein are confirmed as at printing time. Please refer to the event's timetable page at www.cmtevents.com for the most up-to-date information.

# Day 2

#### Thursday, 29th May 2008

	0.00			
<ul> <li>Some incentives for implementing cellulosic ethanol</li> <li>Agricultural waste burning phase out</li> <li>Lignocellulose yields</li> <li>Environmental impact of using wastes</li> <li>Potential ethanol yield from lignocellulosic sources</li> </ul>	9:00	<ul> <li>iv) Lignocellulose hydrolysis followed by Acetic-acid fermentation with downstream Chemical transformation into ethanol (the Zeachem process)</li> <li>Rationale: Acetic-acid fermentation vs. ethanol fermentation</li> </ul>		BIOBUTANOL - TECHNOLOGY, ECONOMICS & RECENT DEVELOPMENTS Conducted by Dr Hans Blaschek
<ul> <li>High-productivity crops (energy cane, Miscanthus hybrids, sweet sorghum, water hyacinth)</li> </ul>		<ul> <li>v) Mixed-acid fermentation of lignocellulose followed by downstream chemical transformation</li> </ul>	11:45	INTRODUCTION & HISTORY OF THE ABE FERMENTATION
<ul> <li>Harvesting, transportation and storage strategies (efficiency and economics)</li> </ul>		into ethanol and higher-alcohols (the MixAlco process)		METABOLIC PATHWAY
Lunch		<ul> <li>Alcohols conversion to gasoline, diesel and jet fuel</li> </ul>	12:30	Lunch
ETHANOL PRODUCTION FROM	10:30	OVERVIEW AND COMPARISON OF	2:00	CLOSTRIDIA STRAIN DEVELOPMENT AND CHARACTERIZATION
i) Gasification followed by Catalysis		INITIATIVES IN THE LIGNOCELLULOSE ETHANOL PLAYING FIELD		POST-GENOMIC CHARACTERIZATION
<ul> <li>Economics/yields</li> <li>Description of processes</li> </ul>		<ul> <li>Comparison of major initatives and ranking the major players, in terms of technology, feedstocks used,</li> </ul>		DOWNSTREAM PROCESSING AND RECOVERY INTEGRATED PROCESS
ii) Gasification followed by ethanol fermentation (Gaddy process)		commercialisation strategies Carlo Hamelinck Ecofys BV		SCALE UP AND COMMERCIALIZATION OF ABE
<ul> <li>iii) Lignocellulose hydrolysis processes followed by ethanol fermentation <ul> <li>Acid hydrolysis</li> <li>Enzymatic hydrolysis</li> <li>Pretreatment technologies for enhancing biodigestibility</li> <li>Ethanologenic microorganisms</li> </ul> </li> </ul>	11:15	CERTIFICATION OF SUSTAINABILITY AND QUALITY ALONG THE LOGISTIC CHAIN Kris Truyens, Alternative Fuels Services, SGS	5:00	Final Discussion. End of Conference
BREAKTHROUGHS IN CELLULOSIC		WHO SHOULD ATTEND		
ENZYMES TECHNOLOGY Inviting: Major Enzyme Company		<ul> <li>Business, Planning &amp; New Managers of Ethanol and Biodiesel Producers</li> </ul>		Commercial Managers of Shipping, Terminal, Logistics & Tanker Operations
Discussion and End of Day 1		<ul> <li>Ethanol Investors, Traders &amp; Financiers &amp; Risk Managers</li> </ul>	c •	Middle/New Executives in Biofuels Technology and R&D
		<ul> <li>Sales and Marketing Executives of Food / Grains / Agriculture and Industrial Biotechnology Corporations</li> </ul>	•	Feedstock and Biomass Suppliers Managers & Technical Executives incharge of Biofuels StartUps
		<ul> <li>Sales and Marketing Executives of Additives and Enzymes Companies</li> </ul>		Renewable Energy Cos

12:30

4:00

4:30

## REGISTRATION

Bioethanou
28-29 May 2008   GENEVA

PRIOR	ITAIRE
de non remise	Doutecho Post

En cas de non remise	Deutsche Post	- 1
prière de retourner à	Port payé	
Postfach 1100 36243 Niederaula	60544 Frankfurt Allemagne	
ALLEMAGNE	Luftpost / Prioritaire	

Fees: The full Registration Fee includes cost of all sessions, luncheon, coffee/tea & documentation

1 Person	Group fee for 3 or more* (from the same company)
EUR1,295	EUR995 (MIN SAVINGS OF EUR900)

\* Terms and conditions apply

Cancellations, Refunds & Transfers: A full refund will be promptly made for all written cancellations 3 weeks before the meeting. Thereafter, cancellations are not refundable. A substitute may be made at any time

If undeliverable, please return to: 80 Marine Parade Road # 13-02 Parkway Parade Sin	ngapore 449269 TO REGISTER
Update your details at www.cmtevents.com Name	Online: www.cmtevents.com Email: sasha@cmtsp.com.sg Fax: (65) 6345 5928
Position	Tel: (65) 6346 9124
Email	TELEGRAPHIC TRANSFER
Tel	Account Name: Centre for Management Technology A/C No: 251 - 004487 - 179
Fax	Bank:         HSBC Singapore           Branch:         Marine Parade, Singapore

ore Swift Code: HSBC SGSG TT must include additional EUR18 for Beneficiary's Bank charges. Delegates must bear all bank charges and local taxes (if applicable). Fees must be NETT of ALL charges.

#### **CUSTOMISED SPONSORSHIP** PACKAGES AVAILABLE

This event is an excellent platform to promote your organisation to influential players and investors in the industry. Sponsorship opportunities available include Corporate. Exclusive Luncheon. Cocktail & Documentation sponsor. Exhibition / catalogue display can be arranged upon request. Contact cynthia@cmtsp.com.sg or (65) 6346 9132.

Photocopy Registration Form to Preserve Brochure Copy. May 2008

#### ~ CMT'S 2008 EVENTS ~

# Bi**oethano**l

Bangkok, Thailand / 22-23 April

# **BiofuelsWorld**

Manila, The Philippines / 13-14 May

Conference covering biofuel developments in Asia, standards and sustainability, 2nd generation feedstock, process technologies.

Includes optional workshop on ALGAE

# <sup>2nd</sup> JatrophaWorld

Miami, Florida / 10-11 June

# Timely meeting for the emerging global jatropha industry

With growing interests in the Americas, CMT is bringing JatrophaWorld to where the action is. Be sure to join us next in Miami.



Gothenburg, Sweden / 13-14 October

#### 080538BEM02 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Name	
Position	
Email	
Tel	
Fax	
Company	

Address

City/Postcode

Country

#### **CONFERENCE VENUE**

SGS Group Headquarters 1 Place Des Alpes, 1211 Geneva 1, Switzerland

#### HOTEL

**Novotel Geneve Centre** Rue de Zurich 191201 Genève Tél: 022 909 90 90 Fax: 022 909 90 01 Please reserve your room with the hotel directly.

#### Register online ~ www.cmtevents.com