



12th

WORLD CONGRESS ON ANAEROBIC DIGESTION

OCTOBER 31st – NOVEMBER 4th, 2010 . GUADALAJARA, JALISCO – MEXICO



Specialist
Conferences

Program



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12th

WORLD CONGRESS ON ANAEROBIC DIGESTION

OCTOBER 31st – NOVEMBER 4th, 2010 . GUADALAJARA, JALISCO – MEXICO



Specialist
Conferences

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Water & Wastewater



WELCOME LETTER



Dr. Adalberto Noyola
Chairman

On behalf of the Organizing Committee, I welcome you to the 12th World Congress on Anaerobic Digestion (AD12), the major scientific meeting on this subject, under the auspices of the Specialist Group on Anaerobic Digestion of the International Water Association (IWA).

On this occasion, we gather in Guadalajara, the second / third most important city of Mexico, and a symbol of the country in many aspects. We are convinced that Guadalajara and Fiesta Americana Hotel are a great venue for our congress. The quality of the scientific and technical contributions, complemented by the touristic /technical visit to Casa Herradura and the gala dinner at Hospicio Cabañas, a UNESCO World Heritage building, will make of AD12 a memorable experience for all attending colleagues.

The program that you hold in your hands contains 35 platform sessions with 167 peer reviewed contributions. Also, three daily poster sessions that gathers 159 posters. These are complemented by four key-note lectures and the same number of 90 minutes workshops on relevant topics.

The Scientific Committee has done a great job in reviewing all submissions and putting together the scientific program. The acceptance ratio for platform submission is 0.65, a proof of a rigorous review process. Overall, more papers were accepted for the following themes: AD of solid waste; industrial wastewater treatment; recovery of energy from waste materials; and microbial ecology and molecular biology.

An additional feature of the program is the inclusion of a 40 minutes session for presenting the scientific findings of the 2007 Lettinga Award, and the announcement of the new winner for the 2010 edition of this important grant. Also, for the first time, the venue of the next congress (AD13) will be voted at the previous congress, the candidates being Harbin, China; Montpellier, France; Santiago de Compostela, Spain; and Hannover, Germany.

We want to point out the important contribution of our sponsors: Paques bv (gold sponsor) Applitek and Casa Herradura (bronze sponsors). Also, 14 exhibitors are present, showing their technology and service offers. We hope that all of them will make new contacts and good business.

One year of hard and committed work has come to an end. We hope that this team effort will result in an interesting congress, with fruitful discussions and learning experiences, but also, in new friends and colleagues. We will know that we succeeded if you return home with good memories and willing to come back in a near future.

Have a rewarding congress and a great time in Guadalajara

Adalberto Noyola
Chairman
12th World Congress on Anaerobic Digestion



- MAP

GENERAL INFORMATION

ABSTRACT BOOK

A book of abstracts will be packed into delegate's bag. It will contain abstracts texts for oral and poster presentations.

BADGES

The name badge issued to delegates at registration serves as an admission pass to all scientific sessions, exhibition and social events. Delegates are asked to wear their name badge at all times.

Speakers' and exhibitors' badges will be provided with a distinctive label.

BANK

Branches of major banks may be found around the Fiesta Americana Hotel. Generally, weekday opening hours for banks are 9:00- 16:00 hrs.

Automatic cash machines (ATM) can be found at the hotel lobby and in the commercial area at the hotel premises.

BUSINESS CENTRE AT FIESTA AMERICANA

Fax and photocopying services.

Meeting rooms available.

CAR RENTING

There are several known companies like Hertz, Europcar, Avis, Dollar, Alamo, National, Thrifty, Budget, Sixt, Optima, U-Save.

Journey time from airport to downtown 30 to 45 minutes

CERTIFICATE OF PARTICIPATION

A Certificate of Participation for speakers and poster authors will be provided at their specific session.

CERTIFICATE OF ATTENDANCE

A Certificate of attendance will be provided at the registration desk.

CREDIT CARDS

Commonly accepted credit cards in hotels, restaurants and stores are: American Express, Visa and MasterCard.

COFFEE BREAKS

Coffee breaks will be served two times during the day, except on Wednesday (one morning service)

Please refer to the program pages for official break times.

DRESS CODE

You may dress informally for the Congress and Welcome reception.

The dress code for Gala Dinner is smart-casual

DISCLAIMER

The Organizing Committee of AD12 accept no liability for injuries or losses of whatever nature incurred by participants and/or for loss, theft or damage to their luggage and/or personal belongings.

ELECTRICITY

The voltage in Mexico is 110-120 V

EXHIBITION OPENING TIMES

Exhibition will be open from 9.00 to 19.00 h, excepting Wednesday, it will be open from 9.00 to 13.00 h

FIRST AID

Please refer to Hotel reception desk

GALA DINNER

The closing dinner will take place at the "Hospicio Cabañas" on Thursday 4th from 19.00 to 01.00 next day. Transportation will be available.

GENERAL INFORMATION

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INTERNET FACILITIES

Wi-Fi facilities are available everywhere in the hotel

LANGUAGE

English is the official language of the Congress. No translation will be provided.

LOST PROPERTY

Please refer to Hotel reception desk

LUNCH

Lunch is included in the registration fee for all delegates. Lunch will be served at Galeria Fiesta and Stelaris Room at 12:30 all days, except on Wednesday when a box lunch will be provided at the buses serving Casa Herradura visit. Lunch is included in the registration fee

MESSAGES

A board for message notification will be available at the congress registration area.

POSTERS

Posters will be displayed on Monday, Tuesday (four sessions) and Thursday (three sessions). Poster should be displayed before 9.00 a.m and removed after 18.30 h. Posters left overnight will be removed by staff before 8.00 a.m without responsibility for damages of loses. Presenters are requested to be available for questions at specific dates and times. Refer to poster information section for specific details.

PROCEEDINGS

A CD including full text of platform and poster presentations will be packed into delegate's bag

REGISTRATION OPENING TIMES

Registration area will be open on Sunday 31st from 16.00 to 20 h and on Monday and Tuesday from 8.00 to 18.00 h.

SECURITY

Any security problems or concerns should be reported to AD12 staff.

TAXIS

At "Miguel Hidalgo y Costilla" International Airport look for authorized taxis. To do so, you must go to a specialized booth clearly marked with a "Taxis" sign. Journey time from airport to hotel is about 30 minutes. At the hotel ask the front desk manager to call an authorized taxi for you.

Taxi phone number 36-30-00-50

VENUE

The congress will take place in Fiesta Americana Hotel. This hotel is placed at the Glorieta de la Minerva.

ADDRESS:

Hotel Fiesta Americana
Aurelio Aceves 225, Glorieta Minerva
Col. Vallarta Poniente
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México
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PROGRAM AT A GLANCE

SUNDAY 31st OCTOBER 2010

16:00-20:00 Registration
19:00-21:00 Welcome reception

MONDAY 1st NOVEMBER 2010

08:00-18:00 Registration
09:00-09:30 Opening Ceremony (welcome remarks)
Prof. Adalberto Noyola
Chair of the AD12 Organizing committee
Prof. Damien Batstone
Chair of the Anaerobic Digestion Specialist Group IWA
Mexican Authority (to be confirmed)

09:30-10:15 **Plenary session**
Towards High-Efficiency Energy-Producing Wastewater Treatment
Prof. Perry McCarty (UNITED STATES)

10:15-10:45 Coffee Break/Poster Exhibition

10:45-12:25	First parallel sessions			
	Session A1.1: Industrial wastewater treatment Room: Las Flores 1	Session B1.1: AD of solid waste Room: Las Flores 2	Session C1.1: Microbial fuel cells Room: Las Flores 3	Session D1.1: Sewage treatment Room: Jalisco
12:25-13:30	Lunch/Poster Exhibition			
13:30-15:20	Second parallel sessions			
	Session A1.2: Industrial wastewater treatment Room: Las Flores 1	Session B1.2: AD of solid waste Room: Las Flores 2	Session C1.2: Full Scale Room: Las Flores 3	Session D1.2: Sewage treatment Room: Jalisco
15:20-16:00	Coffee Break/Poster Exhibition			
16:00-17:40	Third parallel sessions			
	Session A1.3: Industrial wastewater treatment Room: Las Flores 1	Session B1.3: AD of solid waste Room: Las Flores 2	Session C1.3: Full Scale/AD modeling Room: Las Flores 3	Session D1.3: Sewage treatment/Gas production and utilization Room: Jalisco
17:40-18:30	Poster Exhibition			

TUESDAY 2nd NOVEMBER 2010

9:00-10:00 **Plenary session**
Current research and contributions of Latin America on Anaerobic Digestion
Prof. E. Foresti (BRAZIL)

10:00-10:45 Coffee Break/Poster Exhibition

10:45-12:25	First parallel sessions			
	Session A2.1: Industrial wastewater treatment/Sulfate-sulfide conversion Room: Las Flores 1	Session B2.1: AD of solid waste Room: Las Flores 2	Session C2.1: AD modeling Room: Las Flores 3	Session D2.1: Gas production and utilization/Growth mode Room: Jalisco
12:25-13:30	Lunch and Poster Exhibition			
13:30-15:30	Second parallel sessions			
	Session A2.2: Sulfate-sulfide conversion/Lettinga award Room: Las Flores 1	Session B2.2: AD of solid waste/AD of sludge and biosolids production Room: Las Flores 2	Session C2.2: AD modeling/Microbial ecology and molecular biology Room: Las Flores 3	Session D2.2: New developments on AD Room: Jalisco
15:20-16:00	Coffee Break/Poster Exhibition			

PROGRAM AT A GLANCE

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WEDNESDAY 3rd NOVEMBER 2010

9:00-10:00 **Plenary session**

Applications of Anaerobic Technology in East Asia

Prof. Herbert H P Fang (Hong Kong, CHINA)

10:00-10:30 Coffee Break

10:30-12:35 First parallel sessions

Session A3.1: Recovery of energy from waste materials Room: Las Flores 1	Session B3.1: AD of sludge and biosolids production Room: Las Flores 2	Session C3.1: Microbial ecology and molecular biology Room: Las Flores 3	Session D3.1: New developments on AD Room: Jalisco
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12:30-13:00 **Departure to technical visit (Casa Herradura Tour)**

13:30-19:00 **Box Lunch/Tequila tour**

THURSDAY 4th NOVEMBER 2010

9:00-10:20 First parallel sessions

Session A4.1: Nutrient recovery issues related to AD Room: Las Flores 1	Session B4.1: AD of sludge and biosolids production Room: Las Flores 2	Session C4.1: Automation and control of AD processes Room: Las Flores 3	Session D4.1: New developments Room: Jalisco
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10:20-10:45 Coffee Break/Poster Exhibition

10:45-12:25 Second parallel sessions

Session A4.2: Recovery of energy from waste materials Room: Las Flores 1	Session B4.2: Biodegradation of recalcitrant chemicals Room: Las Flores 2	Session C4.2: Microbial ecology and molecular biology Room: Las Flores 3	Session D4.2: New developments on AD/ Process inhibition Room: Jalisco
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12:25-13:30 Lunch and poster Exhibition

13:30-15:30 Third parallel sessions

Session A4.3: Recovery of energy from waste materials Room: Las Flores 1	Session B4.3: Biodegradation of recalcitrant chemicals Room: Las Flores 2	Session C4.3: Microbial ecology and molecular biology/Process inhibition Room: Las Flores 3	
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14:50-15:30 Coffee Break/Poster Exhibition

15:30-16:30 Presentation of AD13 Candidates

New Developments and Technologies for Energy Recovery from Biomass and Organic Residues

Prof. Bruce Rittmann (UNITED STATES)

17:30-17:45 Presentation of AD12 outcomes

Prof. Adalberto Noyola

17:45-18:00 Closure Ceremony

19:00-01:00 Gala Dinner

FRIDAY 5th NOVEMBER 2010

TECHNICAL VISITS

10:00 Hershey's

10:30 Grupo Modelo Brewery

11:00 Cuauhtemoc Moctezuma Brewery

KEY-NOTE LECTURES



Monday, November 1st, 2010

9:30-10:15 Plenary session

Las Flores Room

**TOWARDS HIGH-EFFICIENCY ENERGY-
PRODUCING WASTEWATER TREATMENT**

Perry L. McCarty

WCU Professor, Inha University, Incheon, Korea, and Silas H. Palmer Professor Emeritus, Stanford University

Perry L. McCarty, Silas H. Palmer Professor Emeritus, joined the Stanford University faculty in 1962. From 1980 to 1985 he was Chairman of Stanford's Department of Civil and Environmental Engineering. He has a B.S. Degree in civil engineering from Wayne State University (1953), and M.S. (1957) and Sc.D. (1959) degrees in sanitary engineering from

M.I.T. He currently has an appointment as WCU Professor at Inha University, Korea. The focus of his research and teaching has been in biological processes for the control of environmental contaminants, with focus on anaerobic processes. McCarty has been elected to the U.S. National Academy of Engineering, the American Academy of Arts and Sciences, and to Honorary Membership in the American Academy of Environmental Engineers. He has received numerous awards, the most notable being the John and Alice Tyler Prize for Environmental Achievement in 1992, the Athalie Richardson Irvine Clarke Prize for Outstanding Achievements in Water Science and Technology in 1997, and the Stockholm Water Prize in 2007. Prof. McCarty has over 350 publications, and is coauthor of the textbooks, "Chemistry for Environmental Engineering and Science, and Environmental Biotechnology - Principles and Applications".

ABSTRACT

Anaerobic treatment is widely used for concentrated industrial wastewaters, but application for domestic wastewater treatment has been limited. Anaerobic treatment of dilute wastewaters is not new, there have been numerous applications. Greater usage has been limited, partly due to the common belief that anaerobic treatment is not as efficient as aerobic treatment and is a slow process, requiring long detention times. There is much information in the literature that counters these beliefs, and there are several newer processes that are showing excellent potential for highly efficient anaerobic treatment of dilute wastewaters, processes that operate with low detention times that rival those commonly used for aerobic treatment. With growing concerns over fossil fuel usage and climate change, greater emphasis on anaerobic treatment is desirable. With 100% of typical domestic wastewater treated anaerobically, resulting methane production would be about 95 L per m³ with a primary energy value of 0.96 kwh/m³, more than double that from a conventional aerobic secondary treatment plant with sludge digestion. If used to drive a generator, about one-third or 0.32 kwh/m³ of electricity could be produced along with 0.64 kwh/m³ of waste heat that could be used for digester and treatment plant heating and biosolids drying. This should be more than sufficient for operation of the entire anaerobic treatment plant. Indeed, there may be sufficient excess available for sale. A typical secondary anaerobic treatment plant might best be preceded by primary treatment, which reduces the suspended solids load on the secondary treatment unit. A brief aeration of the effluent might be used to reduce biological activity there while stripping dissolved methane from the effluent and increasing the wastewater DO level for subsequent discharge. A final passage through a membrane can produce a high quality effluent for possible reuse. Clearly more research in this direction is desirable.



Tuesday, November 2nd, 2010

9:00-10:00 Plenary session

Las Flores Room

**CURRENT RESEARCH AND CONTRIBUTIONS OF
LATIN AMERICA ON ANAEROBIC DIGESTION**

Eugenio Foresti

Professor, Department of Hydraulic and Sanitary Engineering, School of Engineering of Sao Carlos (EESC), University of Sao Paulo (USP), Brazil

Eugenio Foresti graduated in Civil Engineering (EESC-USP) in 1970. He started his research activities in biological processes for wastewater treatment while preparing his MSc thesis in Hydraulic and Sanitary Engineering at EESC - USP. He got MSc in 1972 and PhD in 1982. He had already initiated to research on anaerobic processes in 1974, operating a pilot anaerobic filter for treating meat cannery industrial wastewater. He continued to work on anaerobic processes during the post-doctoral program conducted at the University of Newcastle upon Tyne, England (1985-1986). The post-doctoral research examined the effect of influent organic matter concentration on the performance of UASB reactors. In the last eighteen years, he was the senior coordinator of four large thematic projects funded by FAPESP (Research Support Foundation of Sao Paulo State - Brazil) on the development of anaerobic processes and new reactors' configurations. These thematic projects included researches on post-treatment of anaerobic effluents. The last four year duration project was entitled "Development of combined systems for wastewater treatment aiming at the removal of pollutants and the recovery of energy and products of the carbon nitrogen and sulfur cycles.

ABSTRACT

The Latin America (LA) has contributed to the development and application of anaerobic digestion, especially in wastewater treatment. The forum for the presentation of the progress periodically achieved has been the event called "Latin American Workshop and Symposium on Anaerobic Digestion", which begun in 1990 and had its ninth edition in 2008, Easter Island, Chile. Workshop themes included: Microbiology, Process Modeling, New Technologies, Pre- and Post-Treatment, Municipal and Industrial Wastewater, Solid Waste, Recalcitrant Compounds, Full Scale Reactors, Production of Energy Carriers (methane and hydrogen). This lecture intends to address some of the papers presented at the Easter Island event and also bring some recent results from papers published in journals. The use of an anaerobic reactor as the core biological treatment unit probably consists of the most important contribution of LA to lower the costs of domestic sewage treatment systems. The knowledge accumulated along many years allowed for the application of large-scale UASB reactors attending a wide range of population from over one million to some thousands inhabitants. A variety of post-treatment options has been applied, including activated sludge followed by dissolved air flotation; submerged bio-filters; trickling filters; irrigation; etc. Besides the UASB technology, bench-scale researches include the use of different reactor configurations, such as Anaerobic Sequencing Batch Reactors, with and without immobilized biomass. Efforts have also been made to develop systems and reactors able to use endogenous electron donors (methane, sulfide) for denitrification. The production of biohydrogen from wastewater and agricultural wastes is also an important subject for research groups of several LA countries. The anaerobic treatment of recalcitrant/toxic compounds such as chlorinated phenols, azo-dyes, surfactants and BTEX have been investigated in bench-scale reactors. The researches have been driven to provide insights for field application and also to elucidate fundamentals aspects related to microbiology and biochemistry of the processes.

KEY-NOTE LECTURES



Wednesday, November 3rd, 2010

9:00-10:00 Plenary session

Las Flores Room

**APPLICATIONS OF ANAEROBIC
TECHNOLOGY IN EAST ASIA**

Herbert H. P. Fang

Chair Professor of Environmental Engineering, The University of Hong Kong

Herbert H.P. Fang, Chair Professor of Environmental Engineering at the University of Hong Kong, received his BSc (1965) from National Taiwan University, and MSc (1968) and PhD (1972) from University of Rochester, NY, all in Chemical Engineering. After three years of post-doctoral

research and twelve years of industrial experience in process development in the US, he left for HKU to teach in 1987. Professor Fang is an expert in environmental biotechnologies, including anaerobic degradation, nutrient removal, membrane separation, biofilm, bioremediation, etc. He has published over 170 journal articles with over 3500 citations. Professor Fang is the recipient of several research awards, including China's State Scientific and Technological Progress Award (2008), Scientific Technology Award (Guangdong Province), Technology Advanced Award (Ministry of Education), Hong Kong's Croucher Award and HKU's Outstanding Researcher Award and Outstanding Research Student Supervisor Award. His present research interests include bioremediation of contaminated anthropogenic sediment, hydrogen production from wastewater and wastes, biodegradation of recalcitrant pollutants, etc., using DNA-based molecular techniques and advanced analytical technologies. He has served on the editorial board of a number of international journals, and as visiting professor of eleven universities in China and the Honorary Chair Professor of Fengchia University in Taiwan.

ABSTRACT

In Taiwan, more than 80 anaerobic reactors have been installed, using anaerobic filter, UASB and fluidized bed reactors, to treat wastewaters from petrochemical and electronic industries, producing phenolic and polyester resins, sizing latex, adhesives, plasticizers, synthetic fibers and, most recently, thin film transistor liquid crystal display (TFT-LCD). These reactors with sizes ranging from 80 to 12,000 m³ are able to effectively remove refractory pollutants with proper startup and microbial acclimation. In Japan, over 300 UASB and EGSB full-scale plants are now in operation for the treatment of brewery, soft drink, food and chemical wastewaters. Anaerobic sludge digestion began in 1932, and is now used in over 300 sewage treatment plants with a total digester volume of 2.1x10⁶ m³, producing enough methane to heat the digester or to generate biofuel or electricity. Since 2006 after enactment of the Basic Act for the Promotion of the Recycle-Oriented Society, over 70 methane fermentation plants have been in operation treating livestock waste, and another 50 plants for the treatment of food wastes and the organic fraction of MSW. Information related to China has been scattered and never fully documented. In addition to those installed by international companies, many more have now been designed and installed by local companies using UASB and EGSB technology to treat wastewaters from alcohol, starch, sugar, brewery, slaughterhouse, biochemical and pulp/paper industries; many reactors in operation are up to 5000 m³ in size. In addition, an anaerobic hydrolytic pre-treatment process, replacing the conventional primary sedimentation, has also been demonstrated in full-scale municipal wastewater treatment. More recently, the government policies have encouraged the production of renewable energy, leading to the rapid spread of using anaerobic technology for the treatment of municipal solid wastes and livestock wastes. Details of these will be discussed.



Thursday, November 4th, 2010
16:30-17:30 Plenary session (Final Lecture)
Las Flores Room

**NEW DEVELOPMENTS AND TECHNOLOGIES FOR ENERGY
 RECOVERY FROM BIOMASS AND ORGANIC RESIDUES**

Bruce E. Rittmann
 Center for Environmental Biotechnology, Arizona State University

Dr. Bruce E. Rittmann is Regents' Professor of Environmental Engineering and Director of the Center for Environmental Biotechnology in the Biodesign Institute at Arizona State University. His research focuses on the scientific and engineering fundamentals needed to "manage microbial communities to provide services to society." One of his largest services is microbial generation of renewable energy. In particular, Dr. Rittmann and his team are recognized leaders in the areas of microbial fuel cells, microbial electrolysis cells, methanogenesis, biohydrogen, and photosynthetic bacteria. Dr. Rittmann is a member of the National Academy of Engineering and a Fellow of the American Association for the Advancement of Sciences. Dr. Rittmann was awarded the first Clarke Prize for Outstanding Achievements in Water Science and Technology from the National Water Research Institute and the Walter Huber Research Prize and the Simon Freese Award from ASCE. Dr. Rittmann is on the List of Most Highly Cited Researchers of the ISI and has published over 430 journal articles, books, and book chapters. Together with Dr. Perry McCarty, Dr. Rittmann authored the textbook Environmental Biotechnology: Principles and Applications (McGraw-Hill Book Co.), which is translated into Spanish, Chinese, Korean, and Japanese.

ABSTRACT

Residual biomass from agriculture, animal farms, and food processing could provide as much as 25% of the world's energy demand if it could be converted into convenient energy forms at high efficiency. Most all of our society's demand for fossil fuels could be replaced by renewable, biomass-based energy if we were able to produce a large amount of "new biomass" in an environmentally and socially acceptable manner. This presentation highlights the microbial systems that convert biomass to useful energy outputs, the help we need to give them, and microbial means to create enough new biomass.

Microbial systems. Methanogenesis is a long-standing means to produce renewable CH₄ that can enter the existing natural-gas infrastructure. Anaerobic consortia that include methanogens produce renewable CH₄. A very new discovery is that anode-respiring bacteria (ARB) live as a biofilm on a fuel-cell anode, oxidizing simple organic molecules and conducting the electrons to the anode. Renewable electrical power is generated in a microbial fuel cell (MFC) when the electrons reduce O₂ to H₂O at the cathode, while renewable H₂ is generated in a microbial electrolysis cell (MEC) when the electrons reduce H₂O to H₂.

Help. Almost all biomass is made up of complex organic molecule and solids. Rapid and complete conversion of the energy value requires that the complex organics be made readily bioavailable to the microbial communities. A suite of pre-treatment techniques is emerging to make the biomass readily bioavailable.

New biomass. Photosynthetic microorganisms (cyanobacteria and algae) have a real biomass yields roughly 100 times larger than plants, do not compete for arable land, and can be designed to have minimal consumption of water and nutrients. Development of photobioreactor systems is a promising direction to produce biomass able to supplant much of the world's need for fossil fuels, including petroleum.

WORKSHOPS

TUESDAY, NOVEMBER 2TH, 2010
16:00-17:30 H

WORKSHOP 1

Room: Las Flores 1

ANAEROBIC DIGESTION IN THE CITIES OF THE FUTURE

Coordinator: Willy Verstraete, Ghent University, Belgium

- Separation up-front is the line to go for decentralised anaerobic treatment of domestic sewage, Willy Verstraete, (Belgium)
- Maximising environmental goods by a multi-objective approach of sewage treatment, David Stuckey, (United Kingdom)
- Large and small-scale resource recovery system examples for domestic wastewater, Perry McCarty, (United States)

WORKSHOP 2

Room: Las Flores 2

ANAEROBIC DIGESTION IN DEVELOPING COUNTRIES

Coordinator: Oscar Monroy, Metropolitan Autonomous University, Mexico

- Domestic biogas plants in developing countries, Henri Spanjers, (Netherlands)
- Anaerobic Treatment of Domestic Wastewater in Latin America: advances and challenges, Carlos Chernicharo, (Brazil)
- Recent development of anaerobic technology in Asia, Anaerobic digestion in Asia, advances and challenges, Herbert Fang, (Hong Kong, China)

WORKSHOP 3

Room: Las Flores 3

ADVANCES IN ENERGY PRODUCTION

Coordinator: Jurg Keller, The University Of Queensland, Australia

- Recent advances in mixed culture fermentations (Robert Kleerebezem/Mark van Loosdrecht, TU Delft, The Netherlands)
- Metabolic modeling (Jorge Rodríguez-Spain)
- Recent advances in algal biofuel production (Jean-Philippe Steyer/Nicolas Bernet INRA Narbonne, France)
- Recent advances in Bioelectrochemical systems (René Rozendal, The University of Queensland, Australia)

WORKSHOP 4

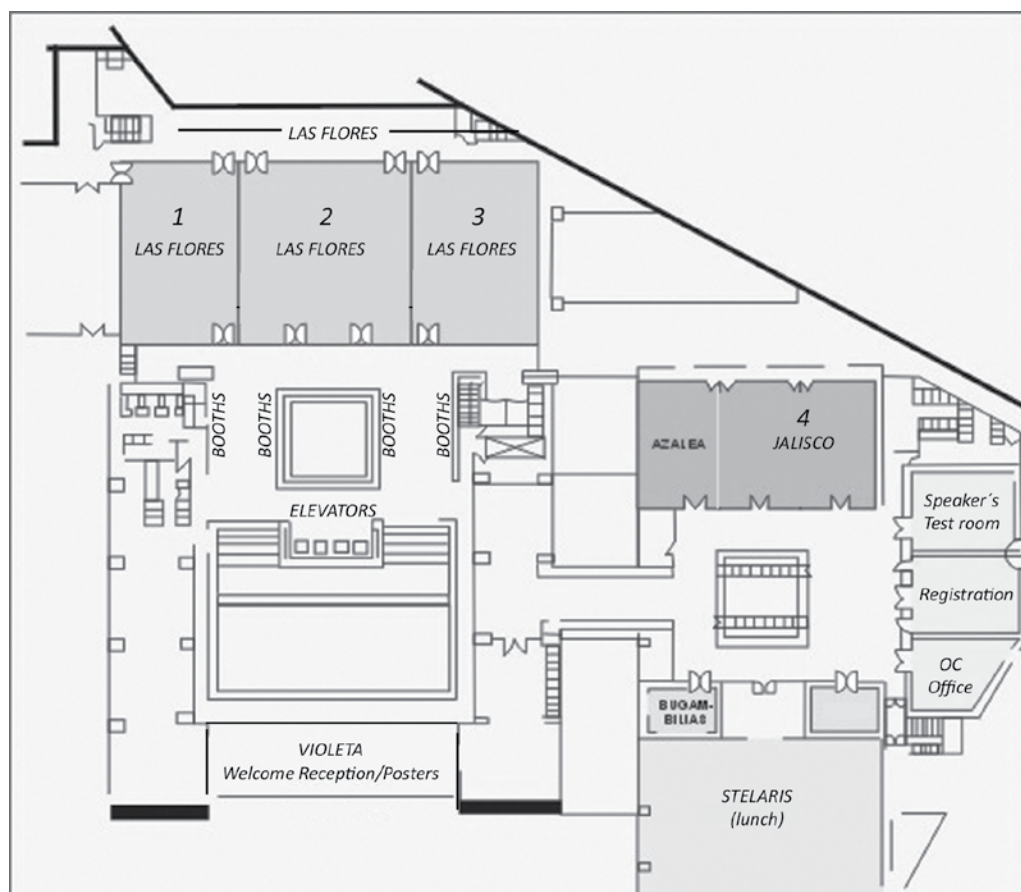
Room: Jalisco

NUTRIENT RECOVERY

Coordinator: Jules van Lier, Delft University of Technology, Netherlands

- Reusing the nutrients of anaerobically pre-treated sewage in irrigated agriculture, Jules van Lier, TU Delft, Netherlands
- Phosphorus recovery by struvite precipitation in combined treatment of urban and industrial wastewaters, Erik Van Zessen (PAQUES, The Netherlands)
- Application of digestates for agriculture application in Australia: Opportunities and challenges, Chirag Mheta (Queensland University, Australia).





CONFERENCE PROGRAM

SUNDAY 31st OCTOBER 2010

- 16:00-20:00 Registration
 19:00-21:00 Welcome reception

MONDAY 1st NOVEMBER 2010

- 08:00-18:00 Registration
 09:00-09:30 Opening Ceremony (welcome remarks)
 Prof. Adalberto Noyola
 Chair of the AD12 Organizing committee
 Prof. Damien Batstone
 Chair of the Anaerobic Digestion Specialist Group IWA
 Mexican Authority (to be confirmed)
Plenary session
 09:30-10:15 **Towards High-Efficiency Energy-Producing Wastewater Treatment**
 Prof. Perry McCarty (UNITED STATES)
 10:15-10:45 **Coffee Break/Poster Exhibition**

MONDAY 1st NOVEMBER 2010

10:45-12:25 First parallel sessions

Session A1.1: Industrial wastewater treatment					Session B1.1: AD of solid waste		Session C1.1: Microbial fuel cells		Session D1.1: Sewage treatment	
Chair: Pavel Jenicek Room: Las Flores 1					Mario T. Kato Room: Las Flores 2		Willy Verstraete Room: Las Flores 3		Grietje Zeeman Room: Jalisco	
IWA-5056	Anaerobic biofilm processes: a review of 15 years of research. Nicolas Bernet, Renaud Escudie, Frédéric Habouzit, Jean-Philippe Steyer, (FRANCE)	IWA-4782	Influence of the moisture content on the specific methanogenic activity. Baptiste Laubie, Pierre Buffière, Hassen Benbelkacem, Rémy Bayard, (FRANCE)	Anaerobic digestion in dry conditions: Influence of the moisture content on the specific methanogenic activity. Baptiste Laubie, Pierre Buffière, Hassen Benbelkacem, Rémy Bayard, (FRANCE)	IWA-4780	Submersible Microbial Fuel Cell for Electricity Production from Sewage Sludge. Yifeng Zhang, Lola González Ollas, Prawit Konigian, Irini Angelidaki, (DENMARK)	IWA-5008	Anaerobic municipal wastewater treatment - Energy potential and Greenhouse Gas Emissions. Linda Hinken, Ingo Urban, Dirk Weichgrebe, Karl-Heinz Rosenwinkel, (GERMANY)		
IWA-4968	Effect of Agitation on the Performance of an Anaerobic Sequencing Batch Biofilm Reactor in the Treatment of Dairy Effluents. Thais Z. Penteado, Roberta S. S. Santana, André L. B. Dibiasi, Samantha C. de Pinho, Rogers Ribeiro, Giovana Tommaso, (BRAZIL)	IWA-4914	Fermentation of Lignocellulosic Biomass Derived Sugars to L-Lactate by Thermophilic Bacillus coagulans. Satoshi Akao, Yusuke Sakae, Yoshihiko Hosoi, Hideaki Nagare, Morihiro Maeda, Taku Fujiwara, (JAPAN)	Fermentation of Lignocellulosic Biomass Derived Sugars to L-Lactate by Thermophilic Bacillus coagulans. Satoshi Akao, Yusuke Sakae, Yoshihiko Hosoi, Hideaki Nagare, Morihiro Maeda, Taku Fujiwara, (JAPAN)	IWA-4958	Removal of recalcitrant organic pollutants from wastewater in a bioelectrochemical system. Yang Mu, Jinyou Shen, Rene Rozendal, Korneel Rabaey, Jurg Keller, (AUSTRALIA)	IWA-5096	Methane and hydrogen sulfide emissions in UASB reactors treating domestic wastewater. Cláudio L. Souza, Carlos Chernicharo, Gilberto C. Melo, (BRAZIL)		
IWA-4927	Anaerobic Fixed-bed Reactors with Small Buoyant Supports: Influence of Media Design on Biomass Retention, Fluidization and Reactor Performance. Rangaraj Ganesh, Philippe Sousbie, Renaud Escudie, Joseph V. Thanikal, Michel Torrijos, Jean Philippe Steyer, (FRANCE)	IWA-4874	Biochemical methane potential (BMP) of solid organic materials: results obtained from an international interlaboratory study. Francisco Raposo, Victoria Fernández-Cegri, M.A. de la Rubia, Rafael Borja, Fabrice Beline, Cristina Cavinato, Goksel Demirel, Belén Fernández, Jean-Claude Frigon, Jana Koubova, Ramón Méndez, Glaucio Menin, Andy Peene, Paul Scherer, Michel Torrijos, G. Rangaraj, H. Uellendahl, I. Wierinck, Vinnie de Wilde, (SPAIN)	Biochemical methane potential (BMP) of solid organic materials: results obtained from an international interlaboratory study. Francisco Raposo, Victoria Fernández-Cegri, M.A. de la Rubia, Rafael Borja, Fabrice Beline, Cristina Cavinato, Goksel Demirel, Belén Fernández, Jean-Claude Frigon, Jana Koubova, Ramón Méndez, Glaucio Menin, Andy Peene, Paul Scherer, Michel Torrijos, G. Rangaraj, H. Uellendahl, I. Wierinck, Vinnie de Wilde, (SPAIN)	IWA-4961	Bioelectrochemical Nitrogen and COD removal from Synthetic Wastewater. Bernardino Virdis, Korneel Rabaey, Rene A. Rozendal, Jurg Keller, (AUSTRALIA)	IWA-4778	Recovery of methane from anaerobic process effluent using poly-di-methyl-siloxane membrane contactors. Joanna Cookney, Ewan J. McAdam, Elise Cartmell, Bruce Jefferson, (UNITED KINGDOM)		
IWA-5098	Industrial wastewater treatment by on-site pilot static granular bed reactor (SGBR) Jaeyoung Park, Jin Hwan Oh, Eric A. Evans, Michael F. Lally, Keith L. Hobson, Timothy Ellis (UNITED STATES)	IWA-5085	Biogas Potential from the Anaerobic Digestion of Papaya Waste (Carica papaya) Using Different Bio-Additives. Nelson Caballero-Arzápalo, Cinthia C. Gamba-Loira, Roland Meyer-Pittroff (MEXICO)	Biogas Potential from the Anaerobic Digestion of Papaya Waste (Carica papaya) Using Different Bio-Additives. Nelson Caballero-Arzápalo, Cinthia C. Gamba-Loira, Roland Meyer-Pittroff (MEXICO)	IWA-4998	Oxalate degradation in a bioelectrochemical system. August Bonmati, Yang Mu, René Rozendal, Jurg Keller, Korneel Rabaey (SPAIN)	IWA-4920	Quantification of dissolved methane in UASB reactors treating domestic wastewater under different operating conditions. Claudio L. Souza, Carlos Chernicharo, Sergio F. Aquino (BRAZIL)		
IWA-4804	Anaerobic Flat Sheet Membrane Bioreactor Treating Food Processing Wastewater: Pilot-Scale Performance. Kripa Shankar Singh, Daryl Burke, Candidate, Shannon R. Grant, (CANADA)	IWA-4871	Methods for assessing biological reactivity of solid organic waste before and after solid state anaerobic digestion. Remy Bayard, Lorena González-Ramírez, Jérémy Guendouz, Hassen Benbelkacem, Pierre Buffière, (FRANCE)	Methods for assessing biological reactivity of solid organic waste before and after solid state anaerobic digestion. Remy Bayard, Lorena González-Ramírez, Jérémy Guendouz, Hassen Benbelkacem, Pierre Buffière, (FRANCE)	IWA-5022	Development of a Continuously Operated Upflow Microbial Desalination Cell for Efficient Salt Removal. Kyle S. Jacobson, David Drew, Zhen He, (UNITED STATES)	IWA-4921	Low temperature (12°C) anaerobic treatment of sewage. Dermot Hughes, Olivia Kelly, Gavin Collins, Vincent O'Flaherty (IRELAND)		
	Lunch/Poster Exhibition									
12:25-13:30										

MONDAY 1st NOVEMBER 2010

Second parallel sessions

Session A1.2: Industrial wastewater treatment		Session B1.2: AD of solid waste		Session C1.2: Full Scale		Session D1.2: Sewage treatment	
Henri Spanjers Room: Las Flores 1		Joan Mata Álvarez Room: Las Flores 2		James Field Room: Las Flores 3		Carlos Chernicharo Room: Jalisco	
IWA-4984	Slaughterhouse wastewater treatment in a UASB reactor with intermittent upflow presentation. Marco A. Garzón-Zúñiga, Violeta E. Escalante-Estrada, (MEXICO)	IWA-4788	Degradation characteristics of poly(lactide) in thermophilic anaerobic digestion with hyperthermophilic solubilization phase. Feng Wang, Takumi Oishi, Taira Hidaka, Shojiro Osumi, Jun Tsubota, Hiroshi Tsuno, (JAPAN)	IWA-5032	Resource recovery from source separated domestic waste(water) streams, full scale results. Grietje Zeeman, Katarzyna Kuja, (NETHERLANDS)	IWA-5068	Influence of hydraulic retention time on anaerobic membrane bioreactor performance and fouling. Mónica Liliana Salazar, Juan Manuel Morgan Sagastume, Adalberto Noyola, (MEXICO)
IWA-5094	Performance parameters of an Anaerobic Hybrid Reactor treating slaughterhouse wastewater. Saioa Soroa, Gómez Jairo, Jaime L. García-Heras, (SPAIN)	IWA-4884	Two-phase thermophilic anaerobic digestion process for biogas production treating biowaste. Cristina Cavinato, David Bolzonella, Francesco Fatone, Franco Cecchi, Paolo Pavan, (ITALY)	IWA-4982	Engineering and Operational Flaws in UASB Reactors Treating Municipal Sewage. Jeroen van der Lubbe, Barry Hefferman, Jules B. van Lier, (NETHERLANDS)	IWA-4870	The effect of operational conditions on the hydrodynamic characteristics of the sludge bed in UASB reactors. Renato Carra Leito, Sandra T. Santaella, Adrianus C. van Haandel, Grietje Zeeman, Gatze Lettinga, (BRAZIL)
IWA-4906	Treatment of slaughterhouse wastewater in upflow anaerobic sludge blanket reactor. Petia Mijaylova, Marié Reyes Pantoja, Erika Lomeli Serrano, (MEXICO)	IWA-4879	Bound water measurement in dry anaerobic digesters. Diana García-Bernet, Jean-Philippe Steyer, Renaud Escudie, (FRANCE)	IWA-5084	Development and technical experience with fluidized bed reactors for anaerobic waste water treatment in the sugar industry. Hans-Joachim Jördening, (GERMANY)	IWA-5123	Enhancement of an UASB-septic tank performance for decentralised treatment of strong domestic sewage. Nidal Mahmoud, (PALESTINIAN TERRITORY, OCCUPIED)
IWA-4934	Combined Anaerobic and Activated Sludge Anoxic/Oxic Treatment for Piggery wastewater. Rajinikanth Rajagopal, Pierre Rousseau, Nicolas Bernet, Fabrice Béline, (FRANCIA)	IWA-4978	Difference in acid fermentation products under different microbial composition in thermophilic kitchen garbage treatment. Taira Hidaka, Teruaki Asahira, Jihoon Cheon, Yongjin Park, Hiroshi Tsuno, (JAPAN)	IWA-5026	The First Two Years of Full-Scale Anaerobic Membrane Bioreactor (AnMBR) Operation Treating High-Strength Industrial Wastewater. Scott Christian, Shannon Grant, Peter McCarthy, Dwain Wilson, Dale Mills, (CANADA)	IWA-4935	Full-scale Experience of Integrated Anaerobic-Aerobic Treatment of Domestic Sewage with the UBOX Reactor. Peter Yspeert, Paulo R. de Lamo, Elias T. Matsuo, Sjoerd Vellinga, (NETHERLANDS)
IWA-4898	Methods for stabilization of pH during anaerobic digestion of vinasse: preliminary results obtained with urea dosing. Edinéia L. Formagini, Luciene S. Santos, Paula L. Paulo, Marc Arpad Boncz, (BRAZIL)	IWA-5028	Temperature effects on the trophic stages of perennial rye grass anaerobic digestion. Denise Cysneiros, Anne Thuillier, Romain Villemont, Alyssa Littlestone, Therese Mahony, Vincent O'Flaherty, (IRELAND)	IWA-5019	Full scale application of anaerobic digestion of slaughterhouse wastes - long term experiences and resulting strategies. Roland Kirchmayr, Christoph Resch, Christian Maier, Markus Ortner, Rudolf Braun, Rudolf Großfurther, (AUSTRIA)	IWA-4789	Evaluation of sludge properties in a pilot scale UASB reactor for sewage treatment in temperate region. Kazuaki Syutsubo, Wilasinee Yoodhatchaval, Ikuo Tsushima, Nobuo Araki, Keiichi Kubota, Takashi Onodera, Masanobu Takahashi, Takashi Yamaguchi, Yutaka Yoneyama, (JAPAN)
15:20-16:00		Coffee Break/Poster Exhibition					

MONDAY 1st NOVEMBER 2010

16:00-17:40

Third parallel sessions

Session A1.3: Industrial wastewater treatment		Session B1.3: AD of solid waste		Session C1.3: Full Scale/AD modeling		Session D1.3: Sewage treatment/Gas production and utilization		
Juan M. Lema Room: Las Flores 1		Iriní Angelidaki Room: Las Flores 2		Jean Phillippe Steyer Room: Las Flores 3		David Jeison Room: Jalisco		
IWA-5024	16:00-16:20	Textile effluent treatment in a UASB reactor followed by a submerged aerated biofilter. Ferraz Júnior Antonio Djalma Neto, Mario T. Kato, Lourdinha Florêncio, <u>Sávia Gavazza</u> , (BRAZIL)	IWA-5097	Influence of particle size and temperature on methane production from Figueá's bagasse. <u>Liliana Castro</u> , Mabel Quintero, Alex Velásquez, Claudia Ortiz, Carolina Guzmán, Humberto Escalante, (COLOMBIA)	IWA-4945	Biogas Plant Digesters. <u>Ludek Kamarad</u> , Stefan Pohn, Michael Harasek, Guenther Bochmann, Roland Kirchmayr, Rudolf Braun, (AUSTRIA)	IWA-5031	Biogas Production from Surplus Brewery Yeast and Spent Brewery Grain in a Conventional UASB Reactor. Gregor D. <u>Zupančič</u> , Matej <u>Stražičar</u> , (SLOVENIA)
IWA-4960	16:20-16:40	Treatment of a synthetic dye wastewater using combinations of anaerobic-aerobic biological and physico-chemical processes: Comparison of five different treatment strategies. Debraj Bhattacharyya, Michelle M. LeBlanc, Poly R. Modak, Kripa <u>S. Singh</u> , Dennis A. Connor, (CANADA)	IWA-4799	Influence of thermal pre-treatment to increase digestibility of brewers' spent grains. Günther Bochmann, Markus Ortner, Bernhard Drosch, Martin Schönleib, Silvia Andres-Lainez, Roland Kirchmayr, Rudolf Braun, (AUSTRIA)	IWA-4805	Modelling Thermophilic Methanol and Cellulose Methanization Based on Microbial Ecology, Chemical Reactions and Isotope Enrichment in Products. <u>Vasily Vavilin</u> , Tianlun Li, Olivie Chapleur, Laurent Mazeas, Theodore Bouchez, (RUSSIAN FEDERATION)	IWA-4911	Microaerobic treatment of H2S in biogas: Removal capacity and optimal oxygen rate. <u>Israel Díaz</u> , Alexandre C. Lopes, Sara I. Pérez, María Fernández-Polanco, (SPAIN)
IWA-5066	16:40-17:00	Anaerobic digestion of OMW: Intermittent feeding strategy and LCFA oxidation profile. Marta Ramos Gonçalves, José C. Costa, Isabel P. Marques, Madalena Alves, (PORTUGAL)	IWA-5018	Optimization of hydrolysis solubilisation rate in a codigestion reactor. E. Houbbron, Gloria Inés González López, (MEXICO)	IWA-5062	Modeling of Relationship between Microbial Community Structure and Anaerobic Batch Reactor Performance of WAS. Ivan Ramírez, Alexis Mottet, Jean Philippe Steyer, Stephano Déleris, Fabien Vendrenne, Helene Cerrere, (COLOMBIA)	IWA-5054	Denitrification of domestic sewage anaerobic effluent with biogas: preliminary results. <u>Jorge Luis Rodrigues Pantoja Filho</u> , Eugenio Foresti, (BRAZIL)
IWA-4985	17:00-17:20	Characteristic of Anaerobic Degradation of Palm Oil Mill Effluent (POME) Wilasinee Yoochatchaval, S. Kumakura, D. Tanikawa, T. Yamaguchi, Yunus M.F.M, Chen S.S., K. Kubota, H. Harada, K. Syutsubo, (THAILAND)	IWA-4798	Effects of Mixture Ratio on Anaerobic Co-digestion with Fruit and Vegetable Waste (FVW) and Food Waste (FW) Jia Lin, <u>Jiane Zuo</u> , Kaijun Wang, Lili Gan, Peng Li, Fenglin Liu, Lei Chen, Hainan Gan, (CHINA)	IWA-5071	Modeling of an EGSB treating sugarcane vinasse using first order kinetics with variable coefficients. Iván López, <u>Liliana Borzacconi</u> , (URUGUAY)	IWA-4900	Metal analysis in anaerobic digester sludge - a preliminary investigation. Jimmy Rousset, Farryad Ishaq, Joanna Renshaw, Chris Buckley, <u>Cynthia Carliell-Marquet</u> , (UNITED KINGDOM)
IWA-5137	17:20-17:40	Influence of temperature on microbial population on an anaerobic sequencing batch reactor (ASBR) treating easily degradable substrate. <u>Francisca Rosenkranz</u> , Fabio Carrera, Marta Morán, Vinka Oyanedel, Gonzalo Ruiz-Filippi, Rolando Chamy. (CHILE)	IWA-4878	Methanogenic metabolic pathways and microbial population dynamic during municipal solid waste anaerobic digestion as revealed by stable isotope monitoring and fluorescent in situ hybridization. <u>Julien Grossin-Debattista</u> , Xian Qu, Intissar Liman, Jonathan Epissard, Angeline Guenne, M. Lemunier, H. Budzinski, Pl. He, T. Bouchez, Laurent Mazeas, (FRANCE)	IWA-4899	A Three Phase Anaerobic Digestion Model. Chris Brouckaert, David <u>Ikumi</u> , George Ekama, (SOUTH AFRICA)	IWA-4923	Full-scale Experience with THIOPAQ Technology. An Elegant Way to Desulphurize Biogas. <u>Erik van Zessen</u> , (NETHERLANDS)
Poster Exhibition								
17:40-18:30								

TUESDAY 2nd NOVEMBER 2010

13:30-15:30

Second parallel sessions

Session A2.2: Sulfate/sulfide conversion/Lettinga award
Jules van Lier

Room: Las Flores 1

Session B2.2: AD of solid waste/AD of sludge and biosolids production
Gonzalo Ruiz

Room: Las Flores 2

Session C2.2: AD modeling/ Microbial ecology and molecular biology
Liliana Borzacconi

Room: Las Flores 3

Session D2.2: New developments on AD
Jorge Rodríguez

Room: Jalisco

IWA-4918 13:40-14:00	A study of the metal removal mechanisms in sulfate reducing bioreactors: kinetics, speciation and solid phase characterization. <u>Denyis Kristalia Villa Gómez</u> , Stefano Papirio, Eric van Hullebusch, François Farges, Serguey Nikitenko, Piet Lens, (NETHERLANDS)	IWA-5124	A two-phase anaerobic system for municipal solid waste treatment. <u>Ligia Patricia Arenas</u> , Humberto Escalante, Marianny Y. Combariza, (COLOMBIA)	IWA-4937	Combination of batch experiments with continuous reactor data for ADM1 calibration: application to anaerobic digestion of pig slurry. <u>Romain Girault</u> , Pierre Rousseau, Jean-Philippe Steyer, Nicolas Bernet, Fabrice Béline, (FRANCE)	Anaerobic digestion in combination with 2nd generation ethanol production for maximizing biofuels yield from lignocellulosic biomass - testing in an integrated pilot-scale biorefinery plant. <u>Hinrich Uellendahl</u> , Birgitte K. Ahring, (DENMARK)
IWA-5016 14:00-14:20	Biofilm development during the start-up of a sulfate-reducing down-flow fluidized bed reactor at different COD/SO42- and HRT. <u>Elda Z. Piña-Salazar</u> , Mónica Meraz, Francisco J. Cervantes, Lourdes B. Celis, (MEXICO)	IWA-5051	Acidogenic Fermentation of Municipal Solid Waste and its Application to Bio-Electricity Production via Microbial Fuel Cells (MFCs). <u>Pelin Cavdar</u> , Elif Yilmaz, A. Evren Tugtas, <u>Baris Calli</u> , (TURKEY)	IWA-4944	Kinetic properties of a Microbial Community fermenting glucose in a Sequencing Batch Reactor. <u>Robbert Kleerebezem</u> , Mario Pronk, Francisco Fernández Morales, Mark Van Loosdrecht, (NETHERLANDS)	Biomethanation of synthetic gas using anaerobic granules within a closed loop gas lift reactor. <u>Serge R. Guiot</u> , Ruxandra Cimpola, Gael Carayon, (CANADA)
IWA-5095 14:20-14:40	Chemical and Biological Reduction of the Azo Dye AB113 Assisted By Sulphate-Reducing Bacteria in Attached-Growth Sequencing Batch Reactors. <u>Dorian Prato-García</u> , Francisco J. Torner-Morales, Francisco J. Cervantes, German Buitron, (MEXICO)	IWA-4936	Investigating the Effect of Acid Pretreatment of Waste Activated Sludge on Subsequent Anaerobic Digestion. <u>Des Charles Devlin</u> , Sandra R Esteves, Richard Dinsdale, Alan J Guwy, (UNITED KINGDOM)	IWA-4975	Simulation of the anaerobic digester behavior by using a simplified mathematical model and kinetic parameters calculated through the initial rate technique. <u>Andres Donoso-Bravo</u> , Guzman García, Sara Pérez-Elvira, Fernando Fdz-Polanco, (SPAIN)	Effect of pH control and substrate concentration on the hydrogen yield from fermentative hydrogen production. <u>Iosif Mariakakis</u> , Joerg Krampe, Heidrun Steinmetz, (GERMANY)
14:40-15:00	LETTINGA AWARD 2007 -PRESENTATION RESULTS "Immobilization of redox mediators in nanostructures for the anaerobic treatment of industrial wastewaters" Francisco J. Cervantes.	IWA-4955	Effect of Hydraulic Retention Time on Pretreatment of Blended Municipal Sludge. <u>Sebnem Koyunluoglu Aynur</u> , Rumana Riffat, <u>Sudhir Murthy</u> , (UNITED STATES)	IWA-4977	A kinetic analysis of an anaerobic/aerobic filter system treating a synthetic dairy wastewater. <u>Seung Lim</u> , Peter Fox, (UNITED STATES)	The techno-economical potential of renewable energy through the anaerobic digestion of microalgae. <u>Willy Verstraete</u> , Carlos Zamalloa, Johan Albrecht, Ellen Vulsteke, (BELGIUM)
15:00-15:20	LETTINGA AWARD 2010 PRESENTATION WINNER	IWA-4801	Life cycle assessment of anaerobically digested sludge reuse in agriculture. <u>Marta Carballa</u> , Almudena Hospido, Maite Moreira, Francisco Omil, Juan M. Lema, Gumersindo Feijoo, (SPAIN)	IWA-4907	Enrichment of Anaerobic Ammonium Oxidizing (Anammox) Bacteria from Wastewater Sludge. <u>Qais Banihani</u> , Wenjie Sun, James Field, Reyes Sierra Alvarez, (UNITED STATES)	Design for Augmented Methanisation" a contribution to sustainable biomethanation. <u>Paul Stopp</u> , Dirk Weichgrebe, Karl-Heinz Rosenwinkel, Gerhard Breves, Michael Strecker, (GERMANY)
15:20-16:00	Coffee Break/Poster Exhibition					
16:00-17:30	Workshop 1: AD in the cities of the future. Coordinator: W. Verstraete Room: Las Flores 1					
16:00-17:30	Workshop 2: Anaerobic Digestion in Developing Countries. Coordinator: Oscar Monroy Room: Las Flores 2					
16:00-17:30	Workshop 3: Advances in Energy Production. Coordinator: Jurg Keller Room: Las Flores 3					
16:00-17:30	Workshop 4: Nutrient Recovery using AD systems Coordinator: Jules van Lier Room: Jalisco					
17:30-18:30	Poster Exhibition					

WEDNESDAY 3rd NOVEMBER 2010

Plenary session

Applications of Anaerobic Technology in East Asia
Prof. Herbert H P Fang (Hong Kong, CHINA)

Coffee Break

10:00-10:30

First parallel sessions

Session A3.1: Recovery of energy from waste materials

Elias Razo

Room: Las Flores 1

Session B3.1: AD of sludge and biosolids production

Franciso Cervantes

Room: Las Flores 2

Session C3.1: Microbial ecology and molecular biology

Madalena Alves

Room: Las Flores 3

Session D3.1: New developments on AD

Robbert Kleerebezem

Room: Jalisco

Room: Las Flores 1			Room: Las Flores 2			Room: Las Flores 3			Room: Janisio		
10:30-10:50	IWA-4976	Biodegradation performance of lab-scale UASB systems treating black liquor from a pulping process. <u>Anne Klose</u> , <u>Udo Hamm</u> , (GERMANY)	IWA-4959	Anaerobic bioleaching of metals from organic wastes. <u>Ayoma Witharange</u> , <u>Roel Meulepas</u> , <u>Piet Lens</u> , (NETHERLANDS)	IWA-4883	Influence of substrate type and retention time on methanogenic compositions in anaerobic biogas reactors. <u>Seung Gu Shin</u> , <u>Bi Wen Zhou</u> , <u>Woong Kim</u> , <u>Gyuseong Han</u> , <u>Huijuan Li</u> , <u>Seokhwan Hwang</u> , (KOREA, REPUBLIC OF)	IWA-5009	How to get 500 million years of experience in anaerobic digestion: animal mimicking. <u>Jean Jacques Godon</u> , <u>Laure Arcemishbère</u> , <u>Renaud Escudé</u> , <u>Ariane Bize</u> , <u>Alain Guillot</u> , <u>Tianlun Li</u> , <u>Edouard Mambi</u> , <u>Alain Robert</u> , <u>Jean Philippe Steyer</u> , (FRANCE)			
10:50-11:10	IWA-5087	Anaerobic digestion of macroalgae: methane potentials, pre-treatment, inhibition and co-digestion. <u>Henrik Bangs Nielsen</u> , (DENMARK)	IWA-4950	Increasing economic performance from sludge digesters using trace element supplements. <u>Faryad Ishaq</u> , <u>Cynthia Carliell-Marquet</u> , <u>John Bridgeman</u> , (UNITED KINGDOM)	IWA-4964	Molecular and operational parameters are correlated in anaerobic lab-scale continuous stirred tank reactors. <u>Marta Carballa</u> , <u>Marianne Smits</u> , <u>Claudia Etchebehere</u> , <u>Nico Boon</u> , <u>Willy Verstraete</u> , (SPAIN)	IWA-4806	The Concept and Theory of Anaerobic Suspended Granular Sludge Bed (SGSB) Reactor for Wastewater Treatment. <u>Kailun Wang</u> , <u>Mingxia Zheng</u> , <u>Zhong Yan</u> , <u>Jingwen Yu</u> , <u>Zhengyu Jin</u> , <u>Guochen Zhang</u> , (CHINA)			
11:10-11:30	IWA-5088	Maize mono-digestion efficiency: results from laboratory tests. <u>Francesca Malpei</u> , <u>Elena Ficara</u> , (ITALY)	IWA-4943	Enhancement of the Conventional Anaerobic Digestion of Sludge. Comparison of four different strategies. <u>Sara Isabel Pérez Elvira</u> , <u>Maria Fdz-Polanco</u> , <u>Fernando Fdz-Polanco</u> , (SPAIN)	IWA-4969	Opening the Microbiological Black Box of a Thermophilic Biogas Fermentor with Beets as Substrate. <u>Paul Scherer</u> , <u>Niclas Krakat</u> , (GERMANY)	IWA-4904	Fast prediction of the methane potential of solid waste by Near Infrared spectroscopy. <u>Mathieu Lesteur</u> , <u>Eric Latrille</u> , <u>Véronique Bellon-Maurel</u> , <u>Jean-Michel Roger</u> , <u>Catherine Gonzalez</u> , <u>Guillaume Junqua</u> , <u>Jean-Philippe Steyer</u> , (FRANCE)			
11:30-11:50	IWA-5065	Blending Anaerobic Co-Digestates: Synergism and Economics. <u>Navaneethan Navaratnam</u> , <u>Peter Topczewski</u> , <u>Scott Royer</u> , <u>Daniel H. Zitomer</u> , (UNITED STATES)	IWA-4994	Relative kinetics of anaerobic digestion under thermophilic and mesophilic conditions. <u>Huoguo Ge</u> , <u>Paul Jensen</u> , <u>Damien Batstone</u> , (AUSTRALIA)	IWA-4997	Impact of reactor configuration on methanogenic community structure: a quantitative comparison of two different reactor configurations operated at mesophilic and psychrophilic temperatures (37°C, 25°C and 15°C) <u>Katarzyna Bialek</u> , <u>Jaai Kim</u> , <u>Changsoo Lee</u> , <u>Therese Mahony</u> , <u>Vincent O'Flaherty</u> , (IRELAND)	IWA-4912	Mechanisms of increased methane production through re-circulation of magnetic biomass carriers in an experimental continuously stirred tank reactor. <u>Jan Hellman</u> , <u>Anders E. Ek</u> , <u>Carina Sundberg</u> , <u>Mariana Johansson</u> , <u>Bo H. Svensson</u> , <u>Martin Karlsson</u> , (SWEDEN)			
12:05-12:10	IWA-4946	Effect of Mass Retention Times and Thermal Regime on the Performance of Series Hydrogenetic-Methanogenic Process for Biofuels Production. <u>Carlos Escamilla-Alvarado</u> , <u>Elvira Ríos-Leal</u> , <u>María T. Ponce-Noyola</u> , <u>Héctor Mario Poggi-Valardo</u> , (MEXICO)	IWA-4917	Comparison of the behaviour in mesophilic and thermophilic anaerobic digestion of sewage sludge coming from two WWTPs with different biological wastewater treatment. <u>Lucia Sobrados</u> , <u>Jairo Gomez</u> , <u>Ana Marta Lasheras</u> , <u>Jaime Luis Garcia-Heras</u> , <u>Estibaliz Huete</u> , (SPAIN)	IWA-5021	Impact of Bioaugmentation by Compost on the Performance and Ecology of an Anaerobic Digester Fed with Energy Crops. <u>Paul Scherer</u> , <u>Lukas Neumann</u> , <u>Monika Unbehauen</u> , <u>Olaf Schmidt</u> , (GERMANY)	IWA-5017	Autogenerative High Pressure Digestion: anaerobic digestion and biogas upgrading in a single step reactor system. <u>Ralph Lindeboom</u> , <u>Fernando G. Fermoso</u> , <u>Jan Weijma</u> , <u>Kirsten Zagt</u> , <u>Jules B. van Lier</u> , (NETHERLANDS)			
12:10-12:30				IWA-4948	Comparative 16S rRNA gene surveys of granular sludge from three upflow anaerobic bioreactors treating purified terephthalic acid (PTA) wastewater. <u>Sarah D. Perkins</u> , <u>Nicholas B. Scalfione</u> , <u>Largus T. Angenent</u> , (UNITED STATES)	IWA-5064	Anaerobic Membrane Bioreactors for Sustainable Domestic Wastewater Treatment at Psychrophilic Temperatures. <u>Adam Lee Smith</u> , <u>Nancy G. Love</u> , <u>Steven J. Skerlos</u> , <u>Lutgarde Raskin</u> , (UNITED STATES)				

12:30-13:00 Departure to technical visit (Tequila tour)

13:30-19:00 Box Lunch/Tequila tour

THURSDAY 4th NOVEMBER 2010

9:00-10:20

First parallel sessions

Session A4.1: Nutrient recovery issues related to AD				Session B4.1: AD of sludge and biosolids production		Session C4.1: Automation and control of AD processes		Session D4.1: New developments	
José Rodríguez Room: Las Flores 1		Nicolás Bernet Room: Las Flores 2		Víctor Alcaráz González Room: Las Flores 3		Jurg Keller Room: Jalisco			
IWA-4785	9:00-9:20	Fundamentals and Kinetics of Sulfide-Oxidizing Autotrophic Denitrification in Batch Reactors Containing Suspended and Immobilized Cells. <u>Bruna de Souza Moraes</u> , Theo S. Souza, Eugenio Foresti, (BRAZIL)	IWA-5046	Assessing the role of biochemical methane potential tests in determining anaerobic degradability rate and extent. Paul Jensen, Huoqing Ge, <u>Damien J. Batstone</u> , (AUSTRALIA)	IWA-4822	An asymptotic observer-based estimation scheme for solid waste anaerobic digestion. <u>Efren Aguilar</u> , Juan Paulo García-Sandoval, Cesar Arturo Aceves-Lara, Froylán Mario Espinoza -Escalante,(MEXICO)	IWA-4888	Submerged Anaerobic Membrane Bioreactor (SAMBR) Applied to Domestic Wastewater Treatment. Freddy Durán, Laura Carretero, Juan B. Giménez, Angel Robles, <u>María V. Ruano</u> , Marcela N. Gatti, Josep Ribes, José Ferrer, Aurora Seco, (SPAIN)	A Novel Pilot Plant for the Study of Submerged Anaerobic Membrane Bioreactor (SAMBR) Applied to Domestic Wastewater Treatment.
IWA-4915	9:20-9:40	Evidence of enhanced phosphate release from anaerobically digested sludge through sulfate reduction. <u>Masanobu Takashima</u> , Yoshihito Tanaka, (JAPAN)	IWA-4866	Food waste - the source of biogas production increase in the municipal WWTPs. <u>Stanislav Sedláček</u> , Miroslava Kubaská, Sona Lehotská, Igor Bodík, (SLOVAKIA)	IWA-4949	Cascade control for anaerobic digestion processes. <u>Juan Paulo García Sandoval</u> , Denis Dochain, Victor Gonzalez-Álvarez, (MEXICO)	IWA-4897	Anaerobic Membrane Bioreactor (AnMBR) Pilot-scale Treatment of Stillage from Tequila Production. Shannon R. Grant, Shannon Roy Grant, Scott J. Christian, Edith Vite, (CANADA)	
IWA-5086	9:40-10:00	Energy and phosphorus recovery from black water. <u>Marthe de Graaff</u> , Grietje Zeeman, Hardy Temmink, Cees J.N. Buisman, (NETHERLANDS)	IWA-4999	Anaerobic Digestion of Sewage Sludge with recycled active biomass. <u>Anastasija Y. Vanyushina</u> , Yuri A. Nikolaev, Oksana V. Kharkina, (RUSSIAN FEDERATION)	IWA-5023	Estimation of unmeasured inputs in anaerobic wastewater treatment processes: experimental validation. Emma A. Jauregui-Medina, Víctor Alcaraz-González, Hugo O. Méndez-Acosta, Víctor González-Álvarez, Juan P. García-Sandoval, Jean P. Steyer, (MEXICO)	IWA-4963	Fouling cake layer in a submerged anaerobic membrane bioreactor (SAMBR) treating saline wastewaters: curse or a blessing? <u>David Stuckey</u> , Yannis Vyrides, (UNITED KINGDOM)	
IWA-5070	10:00-10:20	Enhanced phosphorus removal from anaerobically digested dairy manure by electro-coagulation. <u>Qunbao Zhao</u> , Debbie Davidson, Tianxi Zhang, Jingwei Ma, Craig Frear, Shulin Chen, Joseph H. Harrison, (UNITED STATES)	IWA-5038	Bioaugmentation Can Improve Anaerobic Digester Performance After Organic Overload. Vaibhav P. Tale, James S. Maki, Craig R. Struble, <u>Daniel H. Zitomer</u> , (UNITED STATES)	IWA-5128	Online Estimation of VFA, alkalinity and bicarbonate concentrations by Electrical Conductivity Measurement During anaerobic Fermentation. <u>César-Arturo Aceves-Lara</u> , <u>Eric Latrille</u> , Thierry Conte, Jean-Philippe Steyer, (FRANCE)	IWA-4980	Pilot scale Anaerobic Submerged Membrane Bioreactor (AnSMBR) treating municipal wastewater: The fouling phenomenon and long term operation. Martínez Sosa David, Helmreich Brigitte, Netter Thomas, Paris Stefania, Bischof Franz, Horn Harald, (GERMANY)	
	10:20-10:45	Coffee Break/Poster Exhibition							

THURSDAY 4th NOVEMBER 2010					
10:45-12:25					
Second parallel sessions					
Session A4.2: Recovery of energy from waste materials		Session B4.2: Biodegradation of recalcitrant chemicals		Session C4.2: Microbial ecology and molecular biology	
Germán Buitrón Room: Las Flores 1		Daniel Zittomer Room: Las Flores 2		Lars Angenent Room: Las Flores 3	
IWA-5057 10:45-11:05	Hydrogen production from soft-drink wastewater in an upflow anaerobic packed-bed reactor. <u>Guilherme Peixoto</u> , Marcelo Zaiat, (BRAZIL)	Biodegradation of PAHs during the anaerobic digestion of sludge: modelling the limitations by bioavailability and cometabolism. <u>Glenda Cea Barcia</u> , Maialen Barret, Hélène Carrere, Liliana Delgadillo, Dominique Patureau, (FRANCE)	IWA-4875 Biodegradation of PAHs during the anaerobic digestion of sludge: modelling the limitations by bioavailability and cometabolism. <u>Glenda Cea Barcia</u> , Maialen Barret, Hélène Carrere, Liliana Delgadillo, Dominique Patureau, (FRANCE)	Impact of operating history on mixed culture fermentation microbial ecology and product mixture. <u>Yang Lu</u> , Bachelor of Biotechnology (Honours), Frances R Slater, Zuhaida Mohd-Zaki, Steven Pratt, Damien J. Batstone, (AUSTRALIA)	Mimicking biofouling in anaerobic membrane bioreactors. <u>Miguel Herrera-Robledo</u> , Concepción Arenas, Juan Manuel Morgan-Sagastume, Manuel Salmón, Víctor Castaño, Adalberto Noyola, (MEXICO)
IWA-4967 11:05-11:25	Biohydrogen production in two UASB reactors: influence of different start-up strategies. <u>Julian Carrillo-Reyes</u> , Elias Razo-Flores, Lourdes B. Celis, Felipe Alariste-Mondragón, (MEXICO)	2-Chlorophenol toxicity and degradation capacity of sulfate reducing biofilms. <u>Norberto Ulises García-Cruz</u> , Lourdes B. Celis, Jorge Gómez, Héctor Poggi, Mónica Meraz, (MEXICO)	IWA-4887 2-Chlorophenol toxicity and degradation capacity of sulfate reducing biofilms. <u>Norberto Ulises García-Cruz</u> , Lourdes B. Celis, Jorge Gómez, Héctor Poggi, Mónica Meraz, (MEXICO)	Enrichment and characterization of Anammox from municipal activated sludge. <u>Juliana Calabria de Araujo</u> , Ana P. Campos, Marcos M. Correa, Eduardo C. Silva, Maria H. Matte, Glavur R. Matte, Marcos Von Sperling, Carlos A. Chernicharo, (BRAZIL)	Application of two-phase slug-flow regime to control flux reduction on anaerobic membrane bioreactors (AnMBR) <u>Alvaro Torres</u> , Alberto Hemmelmann, Christian Vergara, David Jeison, (CHILE)
IWA-5130 11:25-11:45	Improvement of the hydrogen production using an acidogenic UASB reactor fed with raw cheese whey. <u>Veronica Perna</u> , Elena Castelló, Jorge Wenzel, Liliana Borzacconi, Claudia Etchebehere, (URUGUAY)	A four compartments model of the PAHs fate during anaerobic sludge digestion. <u>Liliana Rocío Delgadillo-Mirquez</u> , Laurent Lardon, Jean-Philippe Steyer, Dominique Patureau, (FRANCE)	IWA-4877 A four compartments model of the PAHs fate during anaerobic sludge digestion. <u>Liliana Rocío Delgadillo-Mirquez</u> , Laurent Lardon, Jean-Philippe Steyer, Dominique Patureau, (FRANCE)	Effect of xylose and nutrients concentration on ethanol production by a newly isolated extreme thermophilic Thermoanaerobacter sp. <u>Ana Faria Tomas</u> , Dimitar Karakashev, Irini Angelidaki, (DENMARK)	Pulse shear stress for anaerobic membrane bioreactor fouling control. <u>Jixiang Yang</u> , Henri Spanjers, Jules B. van Lier, (NETHERLANDS)
IWA-4892 11:45-12:05	Techno-economic analysis of bioethanol and biogas production in organic farming. <u>Piotr Oleskowicz-Popiel</u> , <u>Jens Elbye Schmidt</u> , (DENMARK)	Anaerobic digestion of 2-Chlorophenol (2CP) in a sequencing batch reactor (SBR) <u>Lizeth Beristain-Montiel</u> , Jorge Gómez, Oscar Monroy, Flor de María Cuervo-López, Florina Ramírez-Vives, (MEXICO)	IWA-4933 Anaerobic digestion of 2-Chlorophenol (2CP) in a sequencing batch reactor (SBR) <u>Lizeth Beristain-Montiel</u> , Jorge Gómez, Oscar Monroy, Flor de María Cuervo-López, Florina Ramírez-Vives, (MEXICO)	Microbial Community Analysis During Continuous Fermentation of Thermally Hydrolysed Waste Activated Sludge. <u>Dores G. Cirne</u> , Philip Bond, Steven Pratt, Paul Lant, Damien J. Batstone, (FRANCE)	Effect of emulsion stability on anaerobic degradation of wool grease emulsions. <u>Soledad Gutiérrez</u> , Alberto Hernández, Ana Laura Morales, Patricia Lema, (URUGUAY)
IWA-5069 12:05-12:25	ASBR with retained biomass on influent solids treating dairy manure: Effect of settling time. <u>Jingwei Ma</u> , Zhi-Wu Wang, Shulin Chen, (UNITED STATES)	Anaerobic biodegradation of 2,4,6-trichlorophenol in expanded granular sludge bed and fluidized bed bioreactors bioaugmented with Desulfotobacterium spp. <u>Daniel Puyol</u> , Angel F. Mohedano, Juan J. Rodriguez, Jose L. Sanz, (SPAIN)	IWA-4882 Anaerobic biodegradation of 2,4,6-trichlorophenol in expanded granular sludge bed and fluidized bed bioreactors bioaugmented with Desulfotobacterium spp. <u>Daniel Puyol</u> , Angel F. Mohedano, Juan J. Rodriguez, Jose L. Sanz, (SPAIN)	Phylogenetic Dynamics of Bacterial Communities in a Time Series of Nine Full-Scale Granular Upflow Digesters Treating Brewery Wastewater. <u>Jeffrey J. Werner</u> , Daniel B. Knights, Marcelo L. García, Nicolás Scalfone, Theresa A. Cummings, Allen R. Beers, Rob Knight, Largus T. Angenent, (UNITED STATES)	Annual Variation of Chemical Properties and Degradability by Anaerobic Digestion of Landfill Leachate at Benowo in Surabaya, Indonesia. <u>Minako Kawai</u> , Ipung Purwanti, Norio Nagao, Agus Slamet, Joni Hermana, Tatsuki Toda, (JAPAN)
12:25-13:30		Lunch and poster Exhibition			

Second parallel sessions

Session A4.2: Recovery of energy from waste materials

Session B4.2: Biodegradation of recalcitrant chemicals

Session C4.2: Microbial ecology and molecular biology

Session D4.2: New developments on AD/Process inhibition

THURSDAY 4th NOVEMBER 2010

13:30-15:30

Third parallel sessions

Session A4.3: Recovery of energy from waste materials Peter Yspeert Room: Las Flores 1		Session B4.3: Biodegradation of recalcitrant chemicals Manuel S. Rodriguez Susa Room: Las Flores 2		Session C4.3: Microbial ecology and molecular biology/Process inhibition Ivan Moreno Room: Las Flores 3	
13:30-13:50	IWA-4893 Continuous hydrogen and methane production in a two-stage cheese whey fermentation system. Ciria Berenice Cota-Navarro, Julián Carrillo-Reyes, Gustavo Davila-Vázquez, Felipe Alatríste-Mondragón, Elías Razo-Flores, (MEXICO)	IWA-5012 Priority pollutants, problem moving from water to sludge. Which solutions to future constraints? Patricia Camacho, Etienne Paul, Evelyn Gonze, René Moletta, Mar Esperanza, Samuel Martin . (FRANCE)	IWA-4962 Denaturing Gradient Gel Electrophoresis (DGGE) analysis of Archaeal and Bacterial populations in a Submerged Anaerobic Membrane Bioreactor (SAMBR) treating landfill leachate at low temperatures. David Stuckey, (UNITED KINGDOM)	IWA-5279 Investigation of bacterial and methanogenic archaea diversity in 22 full-scale biogas digesters by 454-pyrosequencing. Carina Sundberg, (SWEDEN)	IWA-5053 Bioaugmentation of Anaerobic Sludge with <i>Syntrophomonas zehnderi</i> as a Prospect for Enhanced Methane Production from Oleate. Ana J. Cavaleiro, Diana Z. Sousa, Madalena Alves, (PORTUGAL)
13:50-14:10	IWA-4922 Enhanced cellulosic hydrogen production from lime-treated cornstalk wastes by mixed anaerobic cultures. Guangli Cao, Nanqi Ren, Aijie Wang, (CHINA)	IWA-4779 Removal of organic matter and genotoxic effects in a fixed-bed anaerobic reactor treating kraft pulp bleaching effluents. Tatiana R. Chaparro, Eduardo C. Pires, (COLOMBIA)	IWA-4790 Anaerobic degradation of azo-dye Drimaren blue HFRL using yeast extract as source of redox mediators - evidence of extracellular dye reduction. Bruno E Baêta; Paula C Caldas; Sergio F Aquino; Silvana de Queiroz Silva, (BRAZIL)	IWA-4790 Oxytetracycline and chlortetracycline effect on pig manure anaerobic digestion. Juan A. Álvarez, Laura Otero, Juan Lema, Francisco Omil, (SPAIN)	
14:10-14:30	IWA-4797 Use of pre-treatments to improve the biomethanation of kitchen waste. Jingxing Ma, Hang T. Duong, Marianne Smits, Willy Verstraete, Marta Carballa, (SPAIN)	IWA-5089 Anaerobic treatment of Tequila Vinasses in an up flow fixed-bed reactor: start-up, operation and restart-up. Jesús Antonio Jáuregui Jáuregui, Hugo Oscar Méndez Acosta, Raúl Snell Castro, Víctor Alcaraz González, Víctor González Álvarez, (MEXICO)			
14:30-14:50		IWA-4880 Anaerobic degradation of azo-dye Drimaren blue HFRL using yeast extract as source of redox mediators - evidence of extracellular dye reduction. Bruno E Baêta; Paula C Caldas; Sergio F Aquino; Silvana de Queiroz Silva, (BRAZIL)			

Coffee Break/Poster Exhibition

14:50-15:30 Presentation of AD13 Candidates

15:30-16:30 Plenary session (Final Lecture)

New Developments and Technologies for Energy Recovery from Biomass and Organic Residues

Prof. Bruce Rittmann (UNITED STATES)

17:30-17:45 Presentation of AD12 outcomes

17:45-18:00 Closure Ceremony

19:00-01:00 Gala Dinner

FRIDAY 5th NOVEMBER 2010

TECHNICAL VISITS

10:00 Hershey's

10:30 Grupo Modelo Brewery

11:00 Cuauhtemoc Moctezuma Brewery

POSTERS PROGRAM

Posters will be displayed on Monday, Tuesday (four sessions) and Thursday (three sessions). Posters should be displayed before 9.00 a.m and removed after 18.30 h. Posters left overnight will be removed by staff before 8.00 a.m without responsibility for damages or losses.

Authors are requested to be available for questions during the following scheduled poster sessions:

Monday 1st, November, 2010	Tuesday, 2nd, November, 2010	Thursday, 4th, Novem- ber, 2010
10:15-10:45	10:00-10:45	10:20-10:45
12:25-13:30	12:25-13:30	12:25-13:30
15:20-16:00	15:20-16:00	14:50-15:30
17:40-18:30	17:30-18:30	

There will be 3 prizes awarded for each poster session, i.e. 9 prizes in total. All prizes will be announced at the Closing Ceremony.

MONDAY, NOVEMBER 1ST, 2010 10:00 – 18:30

INDUSTRIAL WASTEWATER TREATMENT

- P01.01 Effect of the organic Loading rate and ammoniacal loading rate on wastewater treatment of an animal food factory using a sequencing batch reactor (SBR). Diana Catalina D. Rodríguez, Paula Andrea P. Lara, Gustavo G. Peñuela, (COLOMBIA). IWA-4894
- P01.02 Effect of organic load and fill time on performance and methane production in an ASBR applied to the treatment of biodiesel production effluent. José Rodrigues, Vivian Selma, Luís Cotrim, Suzana Ratusznei, Marcelo Zaiat, Eugenio Foresti, (BRAZIL). IWA-4970
- P01.03 Effect of organic and shock load on the treatment of metalworking fluid wastewater by AnSBBR. IWA-4971
- José Rodrigues, Pedro Carvalhina, Anderson Flôres, Suzana Ratusznei, Marcelo Zaiat, Eugenio Foresti, (BRAZIL).
- P01.04 Industrial Wastewater Treatment Case Study of ConAgra Foods in Mexico. IWA-5027
- José Molina, Scott Christian, Mi Zai Yan, Sergio Razo, José Hernández, Shannon Grant, (México).
- P01.05 Ultrasound Assisted Method to Increase the Anaerobic Treatment of Fibreboard Manufacturing Wastewater in MBR Reactor. IWA-5048
- Ewa Neczaj, January Bién, Dorota Krzemińska, Malgorzata Worwag, (POLAND).

CONFERENCE PROGRAM

- P01.06 Performance of anaerobic systems with suspended, granular and immobilized biomass for treating wastewater with high fat content after enzymatic hydrolysis. IWA-5187
Daniela R. Rosa, Iolanda C. S. Duarte, Nora K. Saavedra, Maria B. Varesche, Marcelo Zaiat, Magali Christe Cammarota, Denise M. G. Freire, (BRAZIL).
- P01.07 Evaluation of upflow hybrid reactor (HUR), using pall-ring as bacterial support material, in order to purify raw effluents from the dairy industry. IWA-5194
Alonso Enrique Mendoza, (VENEZUELA).
- P01.08 The role of immobilized fulvic acids on alumina particles during the reductive dechlorination of carbon tetrachloride. IWA-5196
Luis H. Álvarez, Laura Jiménez, Virginia Hernández Montoya, Francisco J. Cervantes, (MEXICO).
- P01.09 Distillery Wastewater Treatment by Fixed-bed Anaerobic-Aerobic Ditch (FA₂D) System. IWA-5201
Hisatomo Fukui, Masahiro Tatara, (JAPAN)
- P01.10 Methane Emission from Palm Oil Mill Effluent (POME)-Treating Anaerobic Lagoons and Microbial Community Structures Involved in POME-Degradation. IWA-5208
Kengo Kubota, Daisuke Tanikawa, Makoto Kawauchi, Kazuaki Syutsubo, Yuji Sekiguchi, Mohammed Faisal Mohammed Yunus, Sau Soon Chen, Takashi Yamaguchi, Hideki Harada, (JAPAN)
- P01.11 Distillery Wastewater Treatment by Fixed-bed Anaerobic-Aerobic Ditch (FA₂D) System. IWA-5210
Hisatomo Fukui, Masahiro Tatara, (JAPAN)
- P01.12 Effect of zero-valent iron on the anaerobic bio-transformation and dechlorination of chloronitrobenzene. IWA-5214
Haizhuan Lin, Liang Zhu, Xiangyang Xu, Rong Cao, (CHINA).
- P01.13 Development of Revolutionary Anaerobic Wastewater Treatment System using a novel ER-An-DHS and UASB Reactor Combination. IWA-5241
Miyaoka Yuma, Tagawa Tadashi, Kadono Takuma, Dehama Kazuya, Sasaki Yuta, Takashi Yamaguchi, (JAPAN).
- P01.14 The treatment of leachate combined with domestic sewage in UASB reactor. IWA-5243
André Felipe de Melo Sales Santos, Mario Takayuki Kato, Lourdinha Florencio, Sávila Gavazza, (BRAZIL).
- P01.15 Anaerobic treatment of tequila wastewater with the IC reactor. IWA-5250
Peter Yspeert, Yolanda Yspeert-Hurtado, Peter Van der Heide, Michel Noordink, Ramiro Zapata Salas, (NETHERLANDS).

POSTERS PROGRAM

- P01.16 Integrated Process for the Production of Lipase and Methane from Olive Mill Waste-waters. IWA-5298

Cristiana Gonçalves, Madalena Alves, Isabel Belo, (PORTUGAL)

- P01.17 Two-stage anaerobic digestion treating wastewater from wet processing of coffee. IWA-5316

Yans Guardia Puebla, Adalberto Noyola Robles, Juan Manuel Morgan Sagastume, (MEXICO)

SULFATE/SULFIDE CONVERSION

- P02.01 Removal of Sulfate from Acid Mine Drainage with a Horizontal-Flow Anaerobic Immobilized Biomass Reactor. IWA-4683

Renata Piacentini Rodriguez, Marcelo Zaiat, (BRAZIL)

- P02.02 Enhanced Simultaneous Removal of Sulfur, Nitrogen and Carbon in An EGSB Reactor under Micro-aerobic Condition. IWA-4795

Aijie Wang, Chuan Chen, (CHINA)

- P02.03 Sulfate and organic matter removal in an ANSBBR: effect of temperature and feed strategy. IWA-4972

José Rodrigues, Augusto Costabile, Catarina Canto, Suzana Ratusznei, Marcelo Zaiat, Eugenio Foresti, (BRAZIL)

- P02.04 Sulfate-rich wastewater treatment using a Submerged Anaerobic Membrane Bioreactor (SAMBR). IWA-5270

Marcela Gatti, Nuria Martí, Juan Bautista Giménez, Laura Carretero, María Victoria Ruano, Aurora Seco, (SPAIN)

- P02.05 A thermophile sulfate reducing consortium from hydrothermal vent sediments in Punta de Mita, Nayarit. IWA-5276

Uriel Cid, Sergio Revah, Marcia Guadalupe Morales, (MEXICO)

RECOVERY OF ENERGY FROM WASTE MATERIALS

- P03.01 Anaerobic treatment of crude glycerol from biodiesel production in lab-scale and full-scale conditions. IWA-4777

Miroslav Hutnan, Nina Kolesarova, Igor Bodik, Viera Spalkova, (SLOVAKIA)

- P03.02 Enhanced hydrogen production by *Thermoanaerobacterium thermosaccharolyticum* W16 immobilized on biological carrier. IWA-4919

Guangli Cao, Ai-Jie Wang, Jing Yao, (CHINA)

CONFERENCE PROGRAM

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P03.03	The effect of nitrate concentration on simultaneous process of methane fermentation and denitrification in blue mussel treatment.	IWA-5003
	<u>Shinichi Akizuki</u> , (JAPAN)	
P03.04	Batch Biohydrogen production with glycerol as substrate with hydrogen continuous extraction and non continuous.	IWA-5133
	Estela Ximena Tapia, Juan Ramírez, <u>Gonzalo Ruiz Filippi</u> , Paola Porrier, Rolando Chamy, (CHILE)	
P03.05	Potential of Bio-hydrogen production from aircrafts wastewaters.	IWA-5198
	<u>Gloria Moreno</u> , Andrés Martínez, Iván Moreno Andrade, Germán Buitrón, (MEXICO)	
P03.06	Evaluation of the Colonization of two Carriers for Fermentative Hydrogen Production.	IWA-5199
	<u>Gamaliel Hernández</u> , Germán Buitrón, (MEXICO)	
P03.07	Methane production potentials of oil extracted microalgae.	IWA-5235
	<u>Viljami Kinnunen</u> , Jukka Rintala, (FINLAND)	
P03.08	Evaluation of Different Support Materials in Anaerobic Fluidized Bed Reactor for Hydrogen and Ethanol Production.	IWA-5245
	<u>Aruna Rocha Barros</u> , Cristiane Marques Reis, Eduardo Lucena Cavalcante Amorim, Edson Luiz Silva, (BRAZIL)	
P03.09	Possibilities of anaerobic digestion in the Arctic.	IWA-5249
	<u>Marianne Willemoes Jørgensen</u> , Irini Angelidaki, (DENAMARK)	
P03.10	Methane production by treatment of stillage from hydrated ethanol using a modified UASB.	IWA-5277
	<u>Elda España</u> , Javier Mijangos, Galdy Hernández, Jorge Domínguez, Liliana Alzate, (SWEDEN)	
P03.11	Parameters affecting degradation rate and bio-methane potential in batch experiment setups.	IWA-5283
	<u>Lotta Leven</u> , Anna Schnürer, (SWEDEN)	
P03.12	Influence of thermal pre-treatment to increased digestibility of brewers' spent grains. Günther Bochmann, Markus Ortner, Bernhard Drosch, Martin Schönlieb, Silvia Andres-Lainez, Roland Kirchmayr, Rudolf Braun, (AUSTRIA)	IWA-5317
P03.13	Staged Anaerobic Digestion as a means to Increase Specific Methanogenic Activity.	IWA-5510
	<u>Ben Bocher</u> , Daniel Zitomer, (UNITED STATES)	

NUTRIENT RECOVERY ISSUES RELATED TO AD

P04.01	Analysis and Optimization of Ammonia Stripping using Multi-fluid Model.	IWA-4957
	Liang Yu, <u>Quanbao Zhao</u> , Anping Jiang, Shulin Chen, (UNITED STATES)	

POSTERS PROGRAM

- P04.02 p-Cresol mineralization in a nitrifying sequential batch reactor.
Carlos David Silva Luna, Jorge Gómez, Flor Cuervo López, Anne Claire Texier, (MEXICO) IWA-5251
- P04.03 Nitrite effect on ammonium and nitrite oxidizing processes.
Carlos David Silva-Luna, Eric Houbbron, Flor Cuervo-López, Jorge Gómez, Anne-Claire Texier, (MEXICO) IWA-5262
- P04.04 Biogas residues as agricultural crop fertilizers - effect on soil microbiology. IWA-5268
Kajsa Risberg, (SWEDEN)
- P04.05 Anaerobic digestion of *Chlorella vulgaris* microalgae: slow nitrogen mineralization and partial COD removal. IWA-5315
 Monique Ras, Laurent Lardon, Eric Latrille, Nicolas Bernet, Bruno Sialve, Jean-Philippe Steyer, (FRANCE)

AD MODELING

- P05.01 Discussion on the Necessity and Rationality of Disintegration Existed in Anaerobic Digestion Stage Theory. IWA-4787
 Liu Xiaojian, Yan Zhong, Jia Limin (CHINA)
- P05.02 New Particulate Organic Matter Mapping in ADM1 for Sludge Digestion. IWA-4885
Alexis Mottet, Ivan Ramírez, Helene Carrere, Julie Jiménez, Stephane Deleris, Fabien Verdrenne, Jean-Philippe Steyer, (FRANCE)
- P05.03 Prediction of COD, pH and $\text{VFA}/\text{HCO}_3^-$ in a Sequential UASBR System with ANFIS for Strong Character Dairy Wastewater Treatment. IWA-4931
Dilek Erdirencelebi, Sukran Arici, (TURKEY)
- P05.04 Research on Mathematical Model for Anaerobic Digestion by Using System Dynamics Model. IWA-4979
Zhong Yan, Kaijun Wang, Mingxia Zheng, Guochen Zhang, (CHINA)
- P05.05 Biogas-Organic Load Relationship Model for Predicting the Anaerobic Digestion of Papaya Waste (Carica papaya) Influenced by *Bacillus* species and Rumen. IWA-5180
Nelson Caballero-Arzápalo, Cinthia Carolina Gamboa-Loira, Roland Meyer-Pittroff, (MEXICO)
- P05.06 Optimization of Two-Phase Solid-State Anaerobic Digestion - A Model-Based approach. IWA-5222
Marcel Pohl, Jan Mumme, Rainer Tölle, Bernd Linke, (GERMANY)
- P05.07 Quantitative analysis of the cellulolytic population in municipal solid waste under different leachate recycling regimes. IWA-5228
Christian Omar Martínez-Cámara, Juan Manuel Sánchez-Yáñez, Liliana Márquez-Benavides, (MEXICO)

CONFERENCE PROGRAM

- P05.08 Outcomes and conclusions from the European project Agrobiogas: An integrated approach for biogas production with agricultural waste. IWA-5242
Matthew John Wade, M. J. Wade, T. Q. Frandsen, A. Gali, J. Mata-Alvarez, S. Senechal and A. Schnurer (UNITED KINGDOM)
- P05.09 ADM1-based virtual plant for the anaerobic co-digestion of multiple organic substrates. IWA-5259
Santiago García, Zivko Južnič-Zonta, Juan M. Lema, Jorge Rodrigues, (SPAIN)
- P05.10 Modelling flowsheets for the Anaerobic Treatment of Domestic Wastewater. IWA-5271
David Stuckey, Rachel Fox, Simon Judd, Ana Soares, Bruce Jefferson, Sebastian Zacharias, (UNITED KINGDOM)
- P05.11 Exploring the possibility of using a simple neural network for the prediction of biogas production of a solid waste digester. IWA-5281
Eva Ericson, Eva Thorin, Jinyue Yan, (SWEDEN)
- P05.12 Maximum specific acetate uptake rate and decay kinetics in the ADM1 for soluble substrates in pilot experiments. IWA-5289
Janelcy Alferes, Francisco Molina, Jaime L. García-Heras, (SPAIN)

AUTOMATION AND CONTROL OF AD PROCESSES

- P06.01 Analytical determination of Chemical Oxygen Demand in samples considered to be difficult to analyze: solid substrates and liquid samples with high suspended solid concentrations. IWA-4873
Francisco Raposo, Victoria Fernández-Cegri, M.A. de la Rubia, Rafael Borja, Jesús Beltrán, Cristina Cavinato, Mia Clinckspoor, Goksel Demirer, Evan Diamadopoulos, Jean-Claude Frigon, Jana Koubova, Mylene Launay, Ramón Méndez, Glauco Menin, Joan Noguerol, Hinrich Huellendahl, Stephanie West, Vinnie de Wilde, (SPAIN)
- P06.02 Influence of temperature on the methanogenic activity of the anaerobic sludge during long-term storage. IWA-5254
Jana Koubova, Tomas Laska, Pavel Jenicek, (CZECH REPUBLIC)
- P06.03 On the optimal operation conditions for an anaerobic digestions process via bifurcation analysis. IWA-5313
Gerardo Lara-Cisneros, J. C. Montañez (MEXICO)

TUESDAY, NOVEMBER 2ND, 2010 10:00 – 18:30

AD OF SOLID WASTE

- P07.01 A linear programming tool for optimising anaerobic co-digester feeding. IWA-4791
 Juan A. Álvarez, Laura Otero, Juan Lema, (SPAIN)
- P07.02 Methane and biofertilizer production potential from rendering plant and slaughterhouse wastes. IWA-4872
Prasad Kaparaju, Suvi Bayr, Marianne Rantanen, Teija Paavola, Jukka Rintala, (FINLAND)
- P07.03 Enhancement of Sunflower Oil Cakes Anaerobic Digestion by Dilute Acid Pretreatment. IWA-4876
 Florian Denis Monlau, Eric Latrille, Aline Carvalho Da Costa, Jean-Philippe Steyer, H. Carrière, (FRANCE)
- P07.04 Anaerobic co-digestion of agro-industrial wastes. IWA-4986
 Juan A. Álvarez, Marta Carballa, Leticia Regueiro, Juan M. Lema, (SPAIN)
- P07.05 Two-phase anaerobic accelerated municipal solid wastes digestion. IWA-5099
Florina Ramírez, Antonina de Jesús-Rojas, Francisco Javier Martínez- Valdez, Reyna Isabel Rodríguez-Pimentel, Suyen Rodríguez-Pérez, Oscar Monroy-Hermosillo, (MEXICO)
- P07.06 Anaerobic digestion of chemically pretreated slaughterhouse solid waste. IWA-5171
Leticia Montoya, Jesús Cárdenas, Cyntia Flores, Adrián Rodríguez, Leticia Montoya, (MEXICO)
- P07.07 Nitrogen ammonia stripping from source segregated domestic food waste. IWA-5189
 Angeles de la Rubia, Mark Walker, Charles J. Banks, Sonia Heaven, Francisco Raposo, (SPAIN)
- P07.08 Berries spent pomace methanization using enzymatic treatment. IWA-5204
Alejandra Patricia Cerda, Maria Eugenia Martínez, Paola Poirrier, María Elvira Zúñiga, Carmen Soto, Julio Berríos, Manuel De la Vega, (CHILE)
- P07.10 Effect of total solids concentration on hydrogen production from kitchen wastes. IWA-5207
Carlos Ramos, Ivan Moreno-Andrade, Rolando Chamy, Germán Buitrón, (MEXICO)
- P07.11 Thermophilic anaerobic co-digestion of pretreated empty fruit bunches with palm oil mill effluent for efficient biogas production. IWA-5211
 Sompong O-thong, Cheng Fang, Irini Angelidaki, (Denmark)
- P07.12 Anaerobic co-digestion of Opuntia ficus indica and pig manure. IWA-5212
M. Begoña Ruiz Fuertes, Andrés Pascual Vidal, (SPAIN)

CONFERENCE PROGRAM

- P07.13 Hydrolysis of Whole Garbage (Plant-based Garbage Bag and MSWOF): pre-treatment of MSWOF for High-Efficiency AD. IWA-5218
Jun Tsubota, Shoujiro Osumi, F. Wang, T. Oishi, Taira Hidaka, Hiroshi Tsuno, (JAPAN)
- P07.14 Differences and shifts in the rheological characteristics of fluids in controlled stirred tank reactors for biogas production. IWA-5246
Annika Björn, Anna Karlsson, Bo H Svensson, Jörgen Ejlerstsson, (SWEDEN)
- P07.15 The Adhesion Property of Thermophilic Methanogens to the Solid Surface. IWA-5253
Toru Matsui, T. Moribe, H. Tanabe, Hisao Morisaki, (JAPAN)
- P07.16 Stability of high-solids anaerobic digestion: pilot-scale experiments under continuous mixing conditions. IWA-5256
Myriam Esteban-Gutierrez, Enrique Aymerich, (SPAIN)
- P07.17 Evaluation of sludge and solid waste anaerobic co-digestion: organic loading and pre-treatment effects. IWA-5260
Maxime Rouez, Patricia Camacho, Lynne Bouchy, Mélanie Lemunier, Samuel Martin, (FRANCE)
- P07.18 Hydrogen production from co-digestion process: characteristics and potential of substrates and preliminary experiments. IWA-5286
Mario Hernández, Manuel Rodríguez, (COLOMBIA)
- P07.19 Influence of pH and temperature on three reactors operated with complex substrates: An approach to hydrogen production. IWA-5287
Mario Hernández, Bertha Peñaranda, Manuel Rodríguez, (COLOMBIA)
- P07.20 Hydrolysis of cellulose-rich substrates in psychrophilic and mesophilic leach-bed reactors. IWA-5290
Ciara Keating, Denise Cysneiros, Anne Thuillier, Romain Villemont, Therese Mahony, Vincent O'Flaherty, (IRELAND)
- P07.21 Hydrogen production through anaerobic digestion of rabbit manure using *Clostridium beijerinckii* NCIMB 8052. IWA-5299
Mario Hernández, Bertha Peñaranda, Manuel Rodríguez, (COLOMBIA)
- P07.22 Anaerobic co-digestion from pig manure, rice straw and industrial clay residues. IWA-5314
Janet Jiménez Hernández, Margarita Elizabeth Cisneros Ortiz, Juan Manuel Morgan Sagastume, Yans Guardia Puebla, Osvaldo Romero Romero, Adalberto Noyola Robles, (MEXICO)

POSTERS PROGRAM

AD OF SLUDGE AND BIOSOLIDS PRODUCTION

- P08.01 Effect of moderate heat pre-treatment on the anaerobic activated sludge biodegradability. IWA-4800
Sergio Pérez, Valérie Dossat-Létisse, Etienne Paul, Dominique Lefebvre, Xavier Lefebvre, (FRANCE)
- P08.02 Evaluation of autohydrolysis pretreatment over high concentrated secondary sludge. IWA-4908
Andrea Carvajal, María M. Peña, Sara Perez-Elvira, Fernando Pdiz-Polanco, (SPAIN)
- P08.03 Improvement of municipal sludge anaerobic digestion yield by dissociating solid retention time and hydraulic retention time. IWA-5007
Tianlun Li, Patricia Camacho, Irina Mouilleron, Samuel Martin, Pascal Dauthuille, (FRANCE)
- P08.04 The study on Efficient Combination of Various Pretreatments for Sewage Sludge Solubilization. IWA-5015
Si-Kyung Cho, Dong-Hoon Kim, Hang-Sik Shin, (REPUBLIC OF KOREA)
- P08.05 Effects of inoculum/substrate ratio on methane yield of thickened sludge. IWA-5025
Seung Lim, Peter Fox, (UNITED STATES)
- P08.06 Thermolysis of waste sludges to enhance methane production. IWA-5033
Glauco Menin, Roberta Salvetti, Elena Ficara, Renato Vismara, Roberto Canziani, Francesca Malpei, (ITALY)
- P08.07 Integration of Technologies: Biogas Production, Fertilizer Production and Biogas Upgrading. IWA-5035
Olev Sokk, Rein Kuusik, Enn Loigu, Anne Menert, (ESTONIA)
- P08.08 Anaerobic digestion of secondary sludge in batch reactors. IWA-5230
Carlos Francisco Moreno, Mariano Gutiérrez, Oscar Monroy, Florina Ramírez, (MEXICO)
- P08.09 Accumulation of Long Chain Fatty Acids during mesophilic and thermophilic co-digestion of Sewage Sludge with Trapped Grease Waste. IWA-5233
Gracia Silvestre, Angela Rodríguez -Abalde, Belen Fernández, August Bonmati, (SPAIN)
- P08.10 Co-digestion of sewage sludge and grease trap sludge. IWA-5244
Ewa Neczaj, January Bien, Malgorzata Worwag, Malgorzata Kacprzak, (POLAND)
- P08.11 Effect of blood concentration in the anaerobic digestion of fish solid wastes for biogas production. IWA-5294
Rafael Germán Campos Montiel, A.D. Hernández Fuentes, G. Aguirre Alvarez, J. García Tolentino, Margarita Elizabeth Cisneros-Ortiz, R Villegas Cardenaz, (MEXICO)

CONFERENCE PROGRAM

- P08.12 Effect of organic and hydraulic overloads on anaerobic digestion process of mixed sludge. IWA-5323
- Karen Elizabeth Lazo, Yves Lesty, Paola Poirrier, Juan Carlos Ruiz, Rolando Chamy, (CHILE)

BIODEGRADATION OF RECALCITRANT CHEMICALS

- P09.01 Effect of sudden increase of PCE concentration on performance of fluidized bed bioreactors operated in simultaneous electron acceptor modes. IWA-4954
- Cuahtémoc Moreno-Medina, Luz de María Breton-Deval, Elvira Ríos-Leal, Juvencio Galíndez- Mayer, Alfredo Ortega-Clemente, Fabio Fava, Noemi Rinderknecht-Seijas, Hector Mario Poggi-Varaldo. (MEXICO)
- P09.02 Feasibility of nitrobenzene reduction in a newly designed up-flow Bioelectrocatalysis reactor (UBER). IWA-5050
- Aijie Wang, Dan Cui, Haoyi Cheng, Nanqi Ren, (CHINA)
- P09.03 Surfactant removal from a commercial laundry wastewater using an anaerobic sequential batch reactor. IWA-5209
- Eduardo Blanco, Dagoberto Yukio Okada, Maria Bernadete Amâncio Varesche, (BRAZIL)
- P09.04 Phenol and bisphenol A biodegradation during mesophilic and thermophilic municipal solid waste anaerobic digestion. IWA-5215
- Laurent Mazeas, Intissar Limam, Mohamed Ridha Driss, Angéline Guenne, Jonathan Epissard, Théodore Bouchez, Cécile Rouillon, Céline Madigou, (FRANCE)
- P09.05 Acidogenic Removal of Monochlorophenols. IWA-5219
- Xie Jiang, Yan Zhou, Wun Jern Ng, (SINGAPORE)
- P09.06 Simultaneous removal of ammonium, p-cresol and sulfide under nitrifying conditions: a new alternative. IWA-5227
- Dennys Nurit Pérez-González, Gehovana González-Blanco, Ricardo Beristain- Cardoso, Jorge Gómez, (MEXICO)
- P09.07 Influence of anaerobic process stability and diversity of co-substrates in degradation of linear alkylbenzene sulphonate. IWA-5238
- Dagoberto Yukio-Okada, Andressa Santos-Esteves, Tiago Palladino-Delforno, Julia Sumiko-Hirasawa, Yolanda Cristina Silveira-Duarte, Maria Bernadete Amancio-Varesche, (BRAZIL)
- P09.08 Removal of anionic surfactant in expanded granular sludge bed reactor. IWA-5240
- Tiago Palladino Delforno, Dagoberto Yukio Okada, Juliana Polizel, Maria Bernadete Amâncio Varesche, (BRAZIL)

POSTERS PROGRAM

- P09.09 Effect of the COD/SO₄ ratio in the removal of 2-chlorophenol sulphate reducing bio-films. IWA-5273

Ulises García, Lourdes Berenice Celis, Héctor Poggi, Monica Meraz, (MEXICO)

- P09.10 Anaerobic oxidation of phenol by quinone-reducing consortia. IWA-5326

Claudia Margarita Martinez, Francisco J. Cervantes, (MEXICO)

MICROBIAL FUEL CELLS

- P010.01 Biological production of H₂, CH₄ and electricity from microalgal biomass. IWA-5236

Aino-Maija Lakaniemi, Olli H. Tuovinen, Jaakko A. Puhakka, (FINLAND)

- P010.03 Sequential hydrogen and electricity production with a hot spring culture. IWA-5237

Marika E. Nissilä, Dogan Karadag, Jaakko A. Puhakka, (FINLAND)

- P010.04 Electricity Production in a Microbial Fuel Cell with a Floating Cathode. IWA-5258

Carlos Cervantes-Astorga, Germán Buitrón, (MEXICO)

FULL-SCALE EXPERIENCES

- P011.01 Experiences with continuous high-rate thermophilic dry anaerobic digestion of energy crops. IWA-5010

Bruno Mattheeuws, Luc De Baere, Filip Velghe, (BELGIUM)

- P011.02 Nutritional aspects of anaerobic digestion, a practical point of view. IWA-5055

Noemi Sánchez, Adrián Gebbett, (SPAIN)

- P011.03 New aspects of anaerobic treatment of brewery wastewater IWA-5093

Rita Hilliges, Dieter Schreff, Alvaro Carozzi, (GERMANY)

- P011.04 Methane Fermentation of Coffee and Tea Waste with Excess Activated Sludge. IWA-5231

Kazumasa Kamachi, Yuji Tsukamoto, Goro Onuma, Masaru Murakami, (JAPAN)

- P011.05 Complex System of Methane Fermentation and Biomass Boiler for Dairy Products Factory. IWA-5261

Toru Matsui, Masato Endo, Kazuhito Yaguchi, Tomoko Ishikawa, Toshiji Amano, (JAPAN)

CONFERENCE PROGRAM

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THURSDAY 4TH, NOVEMBER, 2010 10:20 – 18:30

SEWAGE TREATMENT

- P12.01 Potencial of biogas production and utilisation on the slovak wastewater treatment plants. IWA-5006
Igor Bodík, Stanislav Sedláček, Miroslava Kubaská, (SLOVAKIA)
- P12.02 Role of Anaerobic Digestion in DeSaR concept Applications in Rural areas of Jordan with Cesspool sanitations. IWA-5034
Lina Abu Ghunmi, Grietje Zeeman, Manar Fayyad, Jules B. van Lier, (JORDAN)
- P12.03 Pathogen removal in Upflow Anaerobic Sludge Blanket (UASB) Reactors. IWA-5059
Rosa Elena Yaya, Grietje Zeeman, Marc D'Engremont, Jules van Lier, (PERU)
- P.12.04 Hidraulic Residence Time effect on Anaerobic Hydrolysis for complex substrate under low temperatures and nitrogen deficiency conditions. IWA-5067
Paola Poirrier, Francisca Jaar, Jorge Jara, María Cristina Schiappacasse, (CHILE)
- P12.05 Volatile Acids Removal Potential by Methanogens and Propionate Syntrophs in the Anaerobic Baffled Reactor. IWA-5181
Eunyoung Lee, Luu Thi Thuy Giang, Perry L. McCarty, Jaeho Bae, (REPUBLIC OF KOREA)
- P12.06 The evaluation of an anaerobic filter for domestic waste water at ambient temperatures: kinetic parameters. IWA-5191
Lorna Guerrero, Silvio Montalvo, Einar Coronado, (CHILE)
- P12.07 Nitrification via Nitrite in Fluidized Bed Aerobic Reactor, using Chilean Natural Zeolite. IWA-5193
Gabriela Valdes, Lorna Guerrero, Silvio Montalvo, Gladys Vidal, Andrea Barahona, (CHILE)
- P.12.08 Recovery and biological oxidation of dissolved methane from anaerobic wastewater treatment process. IWA-5223
Norihisa Matsuura, Masashi Hatamoto, Shinya Ono, Haruhiko Sumino, Kazuaki SYUTSUBO, Takashi Yamaguchi, Akiyoshi Ohashi, (JAPAN)
- P12.09 Effect of hydraulic residence time (HRT) on anaerobic treatment of wastewater municipal in reactor EGSB. IWA-5301
Ricardo Cruz Huizache, Oscar Monroy Hermosillo, (MEXICO)

GAS PRODUCTION AND UTILIZATION

- P13.01 Influence of the Microbial Inoculum on Biohydrogen Production by Dark-Fermentation in Continuous Reactors. IWA-5049
Yan Rafrafi, Eric Trably, Eric Latrille, Jean-Philippe Steyer, (FRANCE)

POSTERS PROGRAM

- P13.02 Effect of ultrasound energy input on the hydrolysis and methane production of cattle slurry and animal by-products (ABP) from meat-processing industry. IWA-5182
Sami Luste, Sari Luostarinen, (FINLAND)
- P13.03 Fermentative hydrogen production on membrane bioreactors: A mini-review. IWA-5197
Christian Hernández, Germán Buitrón Méndez, (MEXICO)
- P13.04 Fermentative hydrogen production in anaerobic fluidized bed reactor: influence of alkalinity and glucose concentration. IWA-5203
 Eduardo Lucena Cavalcante de Amorim, Aruana Rocha Barros, Cristiane Marques Reis, Engenheira Edson Luiz Silva, (BRAZIL)
- P13.05 Evaluation of Biogas Production Dynamics in a Submerged Anaerobic Membrane Bioreactor (SAMBR) for Domestic Wastewater Treatment. IWA-5217
 Freddy Durán, Angel Robles, Maria Victoria Ruano, Josep Ribes, José Ferrer, (SPAIN)
- P13.06 Short time degradation capacity for 22 full scale biogas processes when adding acetate, propionate, phenyl acetate or oleic acid. IWA-5224
Madeleine Larsson, Carina Sundberg, Anna Karlsson, Bo H. Svensson, (SWEDEN)
- 13.07 Microalgae Used as a Substrate in Co-Fermentation Processes with Energy Crops. IWA-5232
Sebastian Schwede, Alexandra Kowalczyk, Mandy Gerber, Roland Span, (GERMANY)
- P13.08 Effects of fibrous diets on the ultimate methane potentials (B₀) of pig effluents. IWA-5257
 Guillaume Jarret, Jean-Yves Dourmad, José Martínez, (FRANCE)
- P13.09 Removal of H₂S from biogas using the chemical-biological iron cycle: kinetic characterization and pilot plant experiences. IWA-5291
 Luis Arellano-García; Héctor Treto, César Sánchez, Guillermo Baquerizo, Armando González-Sánchez, Sergio Revah, (MEXICO)

GROWTH MODES (E.G. GRANULATION, BIOFILMS)

- P14.01 Comparison of UASB and AF Reactor Performance: a Double approach, Pilot- and Full-scale Studies. IWA-4784
 Dores G. Cirne, Thierry Arnaud, Magali Farenc; Luis Castillo, Stephane Deleris, (FRANCE)
- P14.02 Enhancement of biogas production by addition of hemicellulolytic bacteria immobilised on activated zeolite. IWA-4956
Stefan Weiß, Michael Tauber, Walter Somitsch, Remo Meincke, Henry Müller, Gabriele Berg, Georg M Guebitz, (AUSTRIA)
- P14.03 Granulation of flocculent sludge in a UASB reactor using food waste leachate. IWA-5002
Yuichi Ezawa; Norio Nagao; Chiaki Niwa; Tatsuki Toda, (JAPAN)

CONFERENCE PROGRAM

- P14.04 Rapid start-up of a sulfidogenic biofilm reactor: overcoming acetate accumulation. IWA-5206
 Marisol Gallegos-García, Lourdes Berenice Celis, Elias Razo-Flores, (MEXICO)
- P14.05 The influence of external factors in the Extracellular Polymeric Substances produced by anaerobic granular sludge. IWA-5285
Diana Carolina Calvo Martínez, Manuel Salvador Rodríguez, (COLOMBIA)

NEW DEVELOPMENTS ON AD

- P15.01 Characterizing the EfOM of a psychrophilic UASB reactor with 3-D EEMs fluorescence spectroscopy and PARAFAC. IWA-4886
Mario Esparza-Soto, Juan J. Hernández-Torres, Fall Cheikh, (MEXICO)
- P15.02 Advanced Interpretation of Anaerobic Batch Test and Sources of Potential Errors. IWA-5013
 Selin Yüceer, Linda Hinken, Sebastian Meier, Dirk Weichgrebe, Karl Heinz Rosenwinkel, (GERMANY)
- P15.03 Culture conditions and cryoprotectant addition influences methanogenic activity after freeze-drying in air. IWA-5061
Ujwal H. Bhattad, James S. Maki, Craig A. Struble, Anne E. Schauer-Gimenez, Daniel H. Zitomer, (UNITED STATES)
- P15.04 Membrane assisted bioreactors for anaerobic treatment of saline wastewaters. IWA-5216
 Alberto Hemmelmann, Alvaro Torres, Christian Vergara, David Jeison, (CHILE)
- P15.05 Increasing the biogas yield of manure by wet explosion of the digested fiber fraction. IWA-5239
Rajib Biswas, Hinrich Uellendahl, Birgitte Kiær Ahring, (DENMARK)
- P15.06 A compact high-rate anaerobic reactor configuration for the treatment of effluents with high lipid content. IWA-5264
Madalena Aves, M. Picavet (PORTUGAL)
- P15.07 Critical flux in a submerged membrane into the upper zone of an UASB reactor. IWA-5311
Alexandra Cerón Vivas, Juan Manuel Morgan, Adalberto Noyola, (MEXICO).
- P15.08 Fast prediction of the hydrogen potential of solid waste by Near Infrared Spectroscopy. IWA-5312
 Mathieu Lesteur, Xin Mei Guo, Eric Latrille, Eric Trably, Jean-Michel Roger, Véronique Bel-lon-Maurel, Catherine Gonzalez, Guillaume Junqua, Jean-Philippe Steyer, (FRANCE)
- P15.09 A retrofitted activated-sludge plant with sequential nitrification and anammox obtains dischargeable effluent. IWA-5523
Willy Verstraete, Henri Spanjers, (BELIGIUM)

POSTERS PROGRAM

MICROBIAL ECOLOGY AND MOLECULAR BIOLOGY

- P16.01 Assessment of sediment from Yarayó River as inoculum for anaerobic treatment of bio-degradable. IWA-4792
Adis I. Terry, Eloisa Pozzi, Marcelo Zaiat, Bernadete Varesche, Suyén Rodríguez, Eduardo Cleto Pires, (BRAZIL)
- P16.02 Changes of the acetogenic population in a mesophilic anaerobic digester in response to increasing levels of ammonia. IWA-5131
Maria Westerholm, Bettina Müller, Veronica Arthurson, Anna Schnürer, (SWEDEN)
- P16.03 Population Dynamics of Methanogenic Archaea and Bacteria as Consequence of Changing Temperatures in a Thermophilic Fermenter fed with Energy Crops. IWA-5184
Paul Scherer, Niclas Krakat, (GERMANY)
- P16.04 Microbial community structure in anaerobic digesters for the co-digestion of switchgrass and cow manure. IWA-5185
Caroline Roy, Jean-Claude Frigon, Serge R. Guiot, (CANADA)
- P16.05 Degradation of volatile fatty acids, phenyl acetate and oleic acid under anaerobic methanogenic conditions -effects of Fe, Co and Ni. IWA-5186
Anna Karlsson, (BRAZIL)
- P16.06 Molecular evaluation of anaerobic systems with suspended, granular and immobilized biomass for treating wastewater with high fat content after enzymatic hydrolysis. IWA-5188
Daniela R. Rosa, Zolanda C. S. Duarte, Nora K. Saavedra, Maria B. Varesche, Marcelo Zaiat, Magali Christe Cammarota, Denise M. G. Freire, (BRAZIL)
- P16.07 Microorganisms in batch reactors related to nitrogen removal using different sizes of natural zeolite. IWA-5192
Camila Mery, Lorna Guerrero, Jorge Alonso-Gutierrez, Monica Figueroa, Juan Lema, Silvio Montalvo, Gladys Vidal, (CHILE)
- P16.08 Ecological engineering of microbial communities through substrate adaptation: consequences on anaerobic digestion of cellulose in municipal solid waste. IWA-5195
Olivier Chapleur, Laurent Mazeas, Théodore Bouchez, (FRANCE)
- P16.09 Deciphering microbial functions in granular sludge by two-pass TSA-FISH targeting functional genes. IWA-5200
Takuya Hasegawa, Shuji Kawakami, Kengo Kubota, Hiroyuki Imachi, Akiyoshi Ohashi, Hideki Harada, (JAPAN)

CONFERENCE PROGRAM

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- P16.10 Hydrogenotrophic methane producing microorganisms predominate in full-scale biogas reactors supplied with renewable substrates. IWA-5234
Edith Nettmann, Ingo Bergmann, Stefanie Pramschüfer, Kerstin Mundt, Vincent Plogsties, Christiane Herrmann, Michael Klocke, (GERMANY)
- P16.11 Quantitative analysis of syntrophic acetate oxidizing bacteria in large-scale biogas digesters. IWA-5247
Bettina Muller, (SWEDEN)
- P16.12 Improved methods for membrane phospholipid analysis in sludge from the biogas process. IWA-5248
Jenny Gustavsson, (SWEDEN)
- P16.13 Granulation in the Anaerobic Treatment of Pulp Mill Effluents. IWA-5255
Mingqing Ivy Yang, Elizabeth A. Edwards, D. Grant Allen, (CANADA)
- P16.14 Microbial Population Dynamics during the Start-up of a Submerged Anaerobic Membrane Bioreactor (SAMBR) for Domestic Wastewater Treatment. IWA-5269
Laura Carretero; Juan Bautista Giménez; Maria Victoria Ruano, Luis Borrás; Aurora Seco, (SPAIN)
- P16.15 Establishing the true low temperature limits for Anaerobic Digestion of Wastewater: Methane Production from 'Cold-Adapted' Soils and Sediments as Potential Reactor Seed. IWA-5288
Emma Jane Bowen, (UNITED KINGDOM)
- P16.16 Following bioaugmentation of a biogas fermenter fed with renewable biomass by Fluorescence in Situ Hybridization. IWA-5522
Paul Scherer, Lukas Neumann, (CHILE)

PROCESS INHIBITION

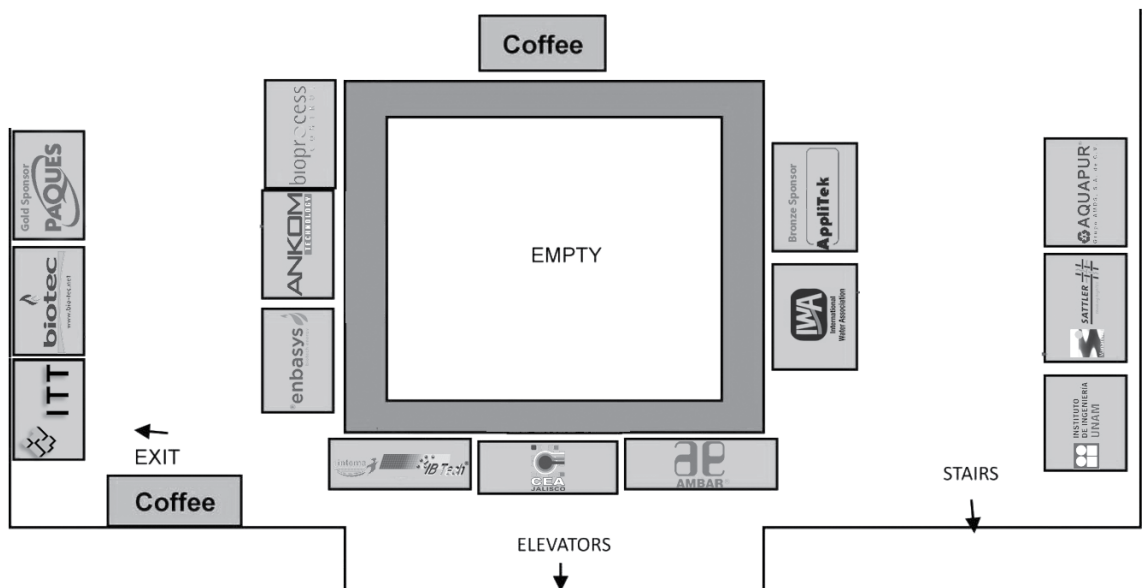
- P17.01 Inhibition of hydrolysis of lignocellulosic waste; the role of ammonia, humic acids and fulvic acids. IWA-4867
Tania Vasconcelos Fernandes, Grietje Zeeman, Jules B. van Lier, (NETHERLANDS)
- P17.02 Basic conditions for the anaerobic treatment of chicken manure. IWA-4929
Jan Liebetrau, Katrin Strach, Christian Krebs, (GERMANY)
- P17.03 Systematic investigation of the effect of feedstock composition, and filamentous bacteria cells on foaming in manure anaerobic digestion systems. IWA-5213
Sompong O-thong, Irini Angelidaki, F. Pacheco, Kanowan Boe, (DENMARK).

POSTERS PROGRAM

- P17.04 Impact of ammonia nitrogen in overloaded anaerobic digestion. IWA-5220
Jindřich Procházka, Josef Máca, Petr Dolejš, Pavel Jeníček, Michal Dohányos, (CZECH REPUBLIC)
- P17.05 Evaluation of the impact of silver nanoparticles on acidogenic fermentation in two-phase anaerobic digestion system. IWA-5221
Emma Jeong, So-Ryong Chae, Hang-Sik Shin, (REPUBLIC OF KOREA)
- P17.06 Anaerobic Digestion of Brewery Spent Grain: Inhibition by Phenolic Degradation Products. IWA-5252
Mija Sežun, Gregor D. Zupančič, Romana Marinšek Logar, Viktor Grilc, (SLOVENIA)

EXHIBITORS

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SOCIAL PROGRAM

WELCOME RECEPTION

(SUNDAY, OCTOBER 31st, 2010; 19:00 – 21:00)

Drinks and canapés will be served at the Fiesta Americana hotel in a friendly ambiance for greeting friends and meeting new colleagues.

TEQUILA TOUR- CASA HERRADURA

(WEDNESDAY, NOVEMBER 03rd, 2010; 14:00 – 22:00)

This is a very special touristic activity that offers to the participants a great opportunity to enjoy the beautiful blue agave landscape and an old tequila factory that uses the traditional way to produce this renowned spirituous beverage. Mexican dinner and tequila degustation will be enjoyed at the factory facilities.

GALA DINNER

(THURSDAY, NOVEMBER 04th, 2010; 19:00 – 01:00 NEXT DAY)

The closing dinner will take place at the magnificent Cabañas hospice, one of the most important civil buildings, not only of Guadalajara, but Mexico due to its neoclassical architecture and the great mural paintings of José Clemente Orozco. This building has been declared a World Heritage Site by UNESCO. Transportation will be available from the Hotel to the Cabañas Hospice and back to the Hotel.

TECHNICAL VISITS

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FRIDAY, NOVEMBER 5TH, 2010

Transportation will be available at Hotel Fiesta Americana

HERSHEY'S, (10.00 A.M)

Welcome by Hershey's group to the participants
Visit to the Production Process
Visit to the Wastewater Treatment Plant (AD process)

GRUPO MODELO BREWERY, (10.30 A.M)

Welcome by Grupo Modelo to the participants
Short Video about Grupo Modelo
Visit to the Production Process
Visit to the Wastewater Treatment Plant (AD process)
Degustation of the Grupo Modelo's Brands

CUAUHTÉMOC MOCTEZUMA BREWERY, (11:00 A.M)

Welcome by Cuauhtémoc Moctezuma group to the participants
Short Video about Cuauhtémoc Moctezuma group
Visit to the Production Process
Visit to the Wastewater Treatment Plant (AD process)
Degustation of the Cuauhtémoc Moctezuma's Brand

* TOURISTIC ACTIVITIES FOR ACCOMPANYING PERSONS

Optional tours information for accompanying persons will be provided at Congress Registration Desk.





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