

Sunday, August 29, 2004

- 16:00-20:00** | Registration
Foyer – Level 1
- 18:00-20:00** | Welcome Reception
Level 3 Exhibition Area

Monday, August 30, 2004

- 07:30-18:30** | Registration
Foyer – Level 1
- 08:30-08:35** | **Welcome Remarks**
S.R. Guiot, AD10 Congress Chair
Auditorium Le Grand Salon
- 08:35-08:50** | **Official Opening**
T.J. Mulcair, Québec's Minister of Environment, Canada
Auditorium Le Grand Salon
- 08:50-09:30** | **Opening Remarks**
To be determined
Auditorium Le Grand Salon
- 09:30-10:30** | **Plenary Session: Energy, Economy and the Environment: Long-Term Trends and Prospects**
V. Smil, University of Manitoba, Canada
Auditorium Le Grand Salon
- 10:30-11:00** | Coffee Break / Exhibition / Posters
Foyer – Levels 3 and 4
- 11:00-11:50** | **Plenary Session: With Anaerobic Treatment Approach Towards a More Sustainable and Robust Environmental Protection**
G. Lettinga, Wageningen University, The Netherlands
Auditorium Le Grand Salon

11:50-12:15 *J.B. van Lier, Wageningen University, The Netherlands, Addresses in memory of Alberto Rozzi, Maria Vinas and Fred Pohland*
Auditorium Le Grand Salon

12:15-14:15 Lunch
Salon Mont-Royal I-II

Exhibition
Foyer – Level 3

Poster Session I
Foyer – Level 4

14:15-18:30 **Workshop I: Agricultural Waste and Manure Management: The Anaerobic Perspective**
Salon International I-II

14:15-15:35	Session 1A: Acidogenesis Auditorium I Chaired by: <i>O. Monroy, T.J. Britz</i>	Session 1B: Microbial Ecology I Auditorium II Chaired by: <i>E. Colleran, Y. Sekiguchi</i>	Session 1C: Control I Salon Cartier I Chaired by: <i>J.M. Lema, P. Vanrolleghem</i>	Session 1D: Sulfur Salon Cartier II Chaired by: <i>R. Chamy, S.K. Gupta</i>
14:15-14:35	A Review of Two-Phase Applications to Define Best Practice for the Treatment of Various Waste Streams <i>I.E. Alexiou¹, K. Panter²</i> ¹ <i>CalRecovery-Europe Ltd., UK;</i> ² <i>RDP Technologies Inc., UK</i>	Behavior of Cellulose-Degrading Bacteria in Thermophilic Anaerobic Digestion Process <i>K. Syutsubo^{1,2}, Y. Nagaya², S. Sakai³, A. Miya²</i> ¹ <i>National Institute for Environmental Studies, Japan;</i> ² <i>Ebara Corp., Technologies, Japan;</i> ³ <i>Nagaoka University of Technology, Japan</i>	Effect of Co-Substrate, Biomass and Sulfate Concentration on the Performance of a Control Strategy Used to Determine the Anaerobic Phase Length of an Anaerobic/Aerobic SBR Degrading P-Nitrophenol <i>G. Buitrón, G. Moreno, M.E. García, J. Moreno</i> <i>National University of Mexico (UNAM), Mexico</i>	H ₂ S Removal from Biogas Using a Biotrickling Filter <i>L. Bailón Allegue, J. Bergmair, M. Haberbauer</i> <i>Profactor Produktionsforschungs GmbH, Austria</i>

14:35-14:55	<p>Effect of Pretreatment on Acid Fermentation of Organic Solid Waste <i>H.J. Kim</i>¹, <i>Y.G. Choi</i>², <i>D.Y. Kim</i>³, <i>D.H. Kim</i>⁴, <i>T.H. Chung</i>¹ ¹ <i>Seoul National University, Korea;</i> ² <i>Sungkyunkwan University, Korea;</i> ³ <i>Kyonggi Research Institute, Korea;</i> ⁴ <i>Seowon University, Korea</i></p>	<p>The Dynamics and Microbial Ecology of a Cellulose Degrading and Methanogenic Landfill Bioreactor <i>P.C. Burrell, C. O'Sullivan, M. Smith, W.P. Clarke, L.L. Blackall</i> <i>The University of Queensland, Australia</i></p>	<p>Towards an Economically Competitive Anaerobic Degradation Process - An ICA Approach <i>Jing Liu, G. Olsson, B. Mattiasson</i> <i>Lund University, Sweden</i></p>	<p>Effect of Sulphide and Dissolved Oxygen on the Degradation of Acetate and Propionate <i>B. Celis-García</i>¹, <i>F. Ramírez</i>¹, <i>S. Revah</i>¹, <i>E. Razo-Flores</i>^{2*}, <i>O. Monroy</i>¹ ¹ <i>Universidad Autónoma Metropolitana, Mexico;</i> ² <i>Instituto Mexicano del Petróleo, Mexico;</i> * <i>present address: Instituto Potosino de Investigación Científica y Tecnológica A.C., Mexico</i></p>
14:55-15:15	<p>Characterisation of High-Rate Acidogenesis Processes Using a Titration and Off-Gas Analysis (TOGA) Sensor <i>C. Wangnai, R.J. Zeng, J. Keller</i> <i>The University of Queensland, Australia</i></p>	<p>WITHDRAWN - Treatment of Oleate in an Anaerobic Buoyant Filter Bioreactor (BFBR): Microbiological Aspects <i>A. Haridas, S. Suresh, S. Ravikumar, V.B. Manilal</i> <i>CSIR, India</i> REPLACED BY PS-II.003</p>	<p>Application of an Automatic Fuzzy Logic Controller to Digest Anaerobically Fodder Beet Silage at a HRT of 6.5 Days and with an OLR of 14 kg VS / (m³*d) <i>P.A. Scherer, K. Lehmann</i> <i>Hamburg University of Applied Sciences, Germany</i></p>	<p>Optimization of Copper Sulphide Precipitation in an Anoxic Process with Sulphate-Reducing Bacteria <i>H.F. Hsu, S.Y. Chen, J.G. Lin</i> <i>National Chiao Tung University, Taiwan</i></p>
15:15-15:35	<p>Anaerobic Digestion of Mixed Municipal and Starch-Rich Wastewater: VFA Production and its Application to Denitrification <i>P. Elefsiniotis</i>¹, <i>D.G. Wareham</i>² ¹ <i>University of Auckland, New Zealand;</i> ² <i>University of Canterbury, New Zealand</i></p>	<p>Changes in Acetoclastic Methanogenic Activity and Archaeal Composition in a Full-Scale UASB Reactor Treating an Alcohol Distillery Effluent <i>M. Kolukirik</i>^{1,2}, <i>O. Ince</i>¹, <i>B. Kasapgil Ince</i>² ¹ <i>Istanbul Technical University, Turkey;</i> ² <i>Bogazici University, Turkey</i></p>	<p>Factors Affecting Measurement of Specific Methanogenic Activity <i>Y.T. Cho</i>¹, <i>J.C. Young</i>², <i>J.A. Jordan</i>³, <i>H.M. Moon</i>² ¹ <i>Cheong Chung College, Korea;</i> ² <i>University of Arkansas, USA;</i> ³ <i>Biothane Corp., USA</i></p>	<p>An Innovative Process of Simultaneous De-Sulfurization and De-Nitrification (SDD) by <i>Thiobacillus Denitrificans</i> <i>A.J. Wang, D.Z. Du, N.Q. Ren, M.Q. Chen</i> <i>Harbin Institute of Technology, China</i></p>
15:35-16:00	<p>Coffee Break / Exhibition / Posters Foyer – Levels 3 and 4</p>			

16:00-17:40	Session 2A: Technical Development Auditorium I	Session 2B: Microbial Ecology II Auditorium II	Session 2C: Modeling Salon Cartier I	Session 2D: Domestic Wastewater Salon Cartier II
16:00-16:20	Thermophilic Anaerobic Digester with Ultrafilter for Solids Stabilization <i>D.H. Zitomer¹, T.C. Bachman², D.S. Vogel¹</i> ¹ Marquette University, USA; ² Triad Engineering, USA	Roles of Methanogens on Volatile Organic Sulfur Compound Production in Anaerobically Digested Wastewater Biosolids <i>Yenchih Chen¹, M.J. Higgins¹, N.A. Maas¹, S.N. Murthy², W.E. Toffey³</i> ¹ Bucknell University, USA; ² District of Columbia Water and Sewer Authority, USA; ³ Philadelphia Water Dept., USA	Improved Thermodynamic Inhibition and Regulatory Functions for Modeling Anaerobic Processes <i>Y. Zheng¹, D.M. Bagley²</i> ¹ BEM Systems, Inc., USA; ² University of Toronto, Canada	The Effect of Operational Conditions on the Performance of UASB Reactors for Domestic Wastewater Treatment <i>R.C. Leitão¹, J.A. Silva-Filho², W. Sanders¹, A.C. van Haandel², G. Zeeman¹, G. Lettinga¹</i> ¹ Wageningen University, The Netherlands; ² Federal University of Campina Grande, Brazil
16:20-16:40	Anaerobic Digestion of Slaughter House Waste with UF-Membrane Separation and Recycling of Permeate After Free Ammonia Stripping <i>H. Siegrist¹, W. Hunziker², H. Hofer³</i> ¹ Swiss Federal Institute for Environmental Science and Technology, Switzerland; ² Hunziker AG, Food Recycling Company, Switzerland; ³ HTH Umwelttechnik, Switzerland	Startup of Anaerobic Membrane Bioreactor Treating Swine Waste <i>S. Padmasiri¹, J. Zhang¹, M. Fitch², B. Norddahi³, E. Morgenroth¹, L. Raskin¹</i> ¹ University of Illinois at Urbana-Champaign, USA; ² University of Missouri-Rolla, USA; ³ University of Southern Denmark, Denmark	Parameter Estimation of an Axial Dispersion Model of an UASB Reactor <i>Y. Zeng¹, P. Wu¹, J. Lou², B. Tartakovsky², S.R. Guiot²</i> ¹ Institute of High Performance Computing, Singapore; ² National Research Council Canada, Canada	Treatment of Municipal Wastewater in Anaerobic Ponds - Seasonal Performance Evaluation and Design Alternatives <i>R. Hranova</i> University of Botswana, Botswana

16:40-17:00	<p>Flow Pattern Visualization in a Mimic Anaerobic Digester: Experimental and Computational Studies <i>M.S. Vesvikar, R. Varma, K. Karim, M. Al-Dahhan</i> <i>Washington University, USA</i></p>	<p>The Role of Homoacetogenic Bacteria in Anaerobic Digester Sludges <i>P. Ryan, C. O'Reilly, T. Golden, E. Collieran</i> <i>National University of Ireland, Ireland</i></p>	<p>Continuity-Based Interfacing of Models for Wastewater Systems Described by Peterson Matrices <i>P.A. Vanrolleghem¹, C. Rosen², U. Zaher¹, J. Copp³, L. Benedetti¹, E. Ayesa⁴, U. Jeppsson²</i> ¹ Ghent University, Belgium; ² Lund University, Sweden; ³ Hydromantis, Inc., Canada; ⁴ CEIT, Spain</p>	<p>Performance and Perspectives of UASB Septic Tank for Treatment of Concentrated Black Water Within DESAR Concept <i>K. Kujawa-Roeleveld, T. Fernandes, Y. Wiryawan, A. Tawfik, M. Visser, G. Zeeman</i> <i>Wageningen University, The Netherlands</i></p>
17:00-17:20	<p>Continuous Microbial Fuel Cells Convert Carbohydrates to Electricity <i>K. Rabaey, W. Ossieur, M. Verhaege, W. Verstraete</i> <i>Ghent University, Belgium</i></p>	<p>Microbial Characteristics of a Methanogenic Phenol-Degrading Sludge <i>T. Zhang, H.H.P. Fang</i> <i>The University of Hong Kong, China</i></p>	<p>Application of the IWA Anaerobic Digestion Model (ADM1) for Simulating Full-Scale Anaerobic Sewage Sludge Digestion <i>Y. Shang, B.R. Johnson, R. Sieger</i> <i>CH2M HILL, USA</i></p>	<p>Anaerobic Digestion of Blackwater from Vacuum Toilets <i>C. Wendland, S. Deegener, J. Behrendt, R. Otterpohl</i> <i>Hamburg University of Technology, Germany</i></p>
17:20-17:40	<p>Enhanced Anaerobic Digestion Using Ultrasound <i>F.M. Hogan¹, S. Mormede¹, P.B. Clark¹, M.J. Crane²</i> ¹ WS Atkins Ltd, UK; ² Purac Ltd, UK</p>	<p>Strict Aerobes, Autochthonous or Passenger Microorganisms in Anaerobic Reactors? <i>S. Thierry^{1,2}, P. Mariaca², F. Ramirez², H. Macarie^{1,2,3}</i> ¹ Institut de recherche pour le développement (IRD-France), Mexico; ² Universidad Autónoma Metropolitana-Iztapalapa, Mexico; ³ CESB/ESIL, France</p>	<p>Criticizing Some Concepts of ADM1 <i>R. Kleerebezem, M.C.M. Van Loosdrecht</i> <i>Delft University of Technology, The Netherlands</i></p>	<p>Stimulation of Methanogenesis in Laboratory Scale UASB Reactors Treating Domestic Sewage by Applying Fe(0) and Electrolytic Hydrogen <i>H. Xu^{1,2}, S. Aiyuk², Y. Zhang^{1,2}, G. Chen¹, W. Verstraete²</i> ¹ Chinese Academy of Sciences, China; ² Ghent University, Belgium</p>
17:40-18:30	<p>Exhibition / Posters Foyer – Levels 3 and 4</p>			

Poster Session I

- PS-I.001** Quantification of Autotrophic Nitrifying Bacteria in Wastewater Treatment Systems
A. Cabezas, C. Etchebehere, L. Muxí
UDELAR, Uruguay
- PS-I.002** Ammonia Removal in Wastewater with Anaerobic Ammonium Oxidation Process
T.Y. Chan
Concordia University, Canada
- PS-I.003** Methane as Electron Donor for Denitrification: Influence of O₂ and Trace Metals on Process Kinetics and Reactor Performance
S. Gavazza dos Santos¹, I.K. Sakamoto², M. Zaiat², M.B. Varesche², E. Foresti²
¹ Universidade Federal de Pernambuco, Brazil; ² Universidade de São Paulo, Brazil
- PS-I.004** Autotrophic Nitrogen Removal with Anaerobic Granular Sludge and its Microbial Community
J. Lee¹, H.-C. Kim², S. Kwon³, Y.-H. Ahn²
¹ Dohwa Consulting Engineers Co., LTD, Korea; ² Yeungnam University, Korea; ³ Korea National Open University, Korea
- PS-I.005** A Study of Struvite Formation by Anaerobic Low-Temperature Digestion of Foodwaste
J.-J. Lee, D. J. Ko
Chonnam National University, Korea
- PS-I.006** Fertilizer Potential of Effluent from Thermophilic Anaerobic Digestion of Poultry Waste
J. Bombardiere, B.E. Liedl, M.L. Williams, J.M. Chatfield
West Virginia State College, USA
- PS-I.007** Influence of Natural Zeolite and sludge Source on Methanogenesis of Nitrogen Wastes
Z. Milán¹, F. Díaz², S. Montalvo², K. Ilangovan¹, O. Monroy¹
¹ Universidad Autónoma Metropolitana, Mexico; ² Instituto Superior Politécnico José Antonio Echeverría, Cuba
- PS-I.008** Biogas-Utilizing Nitrogen Removal with a Semi-Partitioned Reactor
M. Waki¹, K. Suzuki¹, T. Osada², Y. Tanaka¹, M. Ike³, M. Fujita³
¹ National Institute of Livestock and Grassland Science, Japan; ² National Agricultural Research Center for Hokkaido Region, Japan; ³ Osaka University, Japan
- PS-I.009** Development of a Rapid Radiorespirometric Assay for the Detection of Sulphide Produced by Sulphate Reducing Bacteria
A.C.M. Ferreira¹, H. Zylberberg¹, F.C.M. Magalhães², N.M.B. Leal², A.B. Silveira², A.C.A. da Costa³, M.M.M. Gonçalves³, M.V. Carreira³
¹ Radioisotopes and Dosimetry Institute, Brazil; ² Oswaldo Cruz Foundation, Brazil; ³ Rio de Janeiro State University, Brazil

- PS-I.010** Startup of a Biological Scrubber for Hydrogen Sulfide Removal from Anaerobic Digester Biogas
A. Pierkiel, J. Lanting
Biothane Corporation, USA
- PS-I.011** A Novel Way of Biological Sulfur-Reclamation from Sulfate-Reduction Process
N.Q. Ren, G.M. Liu, A.J. Wang, X. Wang, J. Tang
Harbin Institute of Technology, China
- PS-I.012** Sulfide Removal by Moderate Oxygenation of Anaerobic Sludge Environments
F.P. van der Zee, S. Villaverde, P.A. García, F. Fdz.-Polanco
University of Valladolid, Spain
- PS-I.013** Innovative Approach in Heat Recovery from Sludge Using “Cube” and “Square” Large Gap, Sludge-to-Sludge Heat Exchanger / Heat Recovery System
E. Schwartz, P. Lipert
DDI Heat Exchangers Inc., Canada
- PS-I.014** Extraction of Volatile Fatty Acids (VFAs) from Water Hyacinth Using Inexpensive Contraptions, and the Use of the VFAs as Feed Supplements in Conventional Biogas Digester
P. Sankar Ganesh, E.V. Ramasamy, S. Gajalakshmi, S.A. Abbasi
Pondicherry University, India
- PS-I.015** A New Approach for Resources Recovery from Municipal Sludge
Y.-H. Ahn, J.-D. Choi
Yeungnam University, Korea
- PS-I.016** Evaluation of Performance, Stabilization and Operation of Inverse Fluidized Bed Anaerobic Reactors Using Several Supports
A. Alvarado-Lassman^{1,2}, E. Rustrían³, M.A. García-Alvarado², G.C. Rodríguez-Jiménez², E. Houbron³
¹ Instituto Tecnológico de Orizaba, Mexico; ² Instituto Tecnológico de Veracruz, Mexico; ³ Universidad Veracruzana, Mexico
- PS-I.017** Laboratory Scale UASB Reactors are Plug-Flow with High Conversion Efficiency
D.J. Batstone, J.L.A. Hernandez, J.E. Schmidt
Technical University of Denmark, Denmark
- PS-I.018** Co-Digestion of Waste Activated Sludge with Olive Oil Mill and Dairy Effluents. A Feasible Industrial Solution Without Any Modification of Existing Structures
R. Boccadoro¹, F. Fatone², D. Bolzonella², P. Battistoni¹
¹ Marche Polytechnic University, Italy; ² University of Verona, Italy

- PS-I.019** Anaerobic Digestion of Food Waste and Biogas Recovery in One- and Two Phase System
W.-Chin Chen¹, W.-Ching Chen², N.-M. Wu¹
¹ Yuanpei University of Science and Technology, Taiwan; ² Industrial Technology Research Institute, Taiwan
- PS-I.020** Development of a Novel Two-Phase Anaerobic System for Treating Swine Wastewater
C. Feng¹, S. Shimata², N. Sugiura³, T. Maekawa³
¹ Science and Technology Promotion Foundation of Ibaraki, Japan; ² Shimada Water Environmental Equipment Company, Japan; ³ University of Tsukuba, Japan
- PS-I.021** Characteristics of a Novel Hybrid Filter Substituted for Granular Bed and Bio-Filters
M. Kuroda, T. Watanabe, Y.G. Choi, K.J. Cho, K. Kudo
Gunma University, Japan
- PS-I.022** Application of a Rapid Method for Indicating the Gas Production Potential of Organic Solids
A. Ochs, R. Widmann
University of Duisburg-Essen, Germany
- PS-I.023** Anaerobic Hydrolysis and Acidogenesis of Carbohydrate Polymers at Psychrophilic Conditions in a Membrane Reactor
P. Poirrier, J.M. Lema
University of Santiago de Compostela, Spain
- PS-I.024** Hydrodynamic Analysis of an Anaerobic Sequencing Batch Biofilm Reactor with Liquid-Phase Mass Transfer Improved by External Circulation for Synthetic Wastewater Treatment
E.F.M. Camargo¹, C.S.A. Canto¹, S.M. Ratusznei¹, J.A.D. Rodrigues¹, M. Zaiat², W. Borzani¹
¹ Instituto Mauá de Tecnologia, Brazil; ² Universidade de São Paulo, Brazil
- PS-I.025** Effect of Immobilization on Methanogenic Community in a Fixed-Bed Anaerobic Digestion
S. Sawayama, C. Tada, K. Tsukahara, T. Yagishita
National Institute of Advanced Industrial Science and Technology, Japan
- PS-I.026** Anaerobic Thermophilic Codigestion of Biowastes; the Effect of Load
T.M. Sivonen¹, M. Kymäläinen², R. Lepistö¹
¹ Tampere University of Technology, Finland; ² Häme Polytechnic, Finland
- PS-I.027** Light Enhances Biogas Production from Thermophilic Anaerobic Digester
C. Tada, S. Sawayama
National Institute of Advanced Industrial Science and Technology, Japan

- PS-I.028** An Advanced Reactor for Anaerobic Digestion by Using Chemically Modified Carbon Fibers as Working Electrodes
K. Umetsu¹, O. Hamamoto², T. Kishimoto¹, J. Takahashi¹
¹ Obihiro University of Agriculture and Veterinary Medicine, Japan; ² Mitsui Engineering & Shipbuilding Co., Ltd, Japan
- PS-I.029** Bioenergy Recovery Through Biological Hydrogen Production and Electricity Generation in Microbial Fuel Cells
B.E. Logan, S. Van Ginkel, S. Oh, H. Liu, B. Min
Penn State University, USA
- PS-I.030** Changes in Sludge Properties as Influenced by Ultrasonic Disintegration and Their Implications in Anaerobic Sludge Digestion
R. Xie¹, Y. Xing¹, S.W. Ng², Y.A. Ghani², K.E. Ooi², Y.L. Wah²
¹ Centre for Advanced Water Technology/SUI, Singapore; ² PUB, Singapore
- PS-I.031** Optimisation of Input Parameters to Improve a Fuzzy Logic-Based Control Tool for Anaerobic Digestion
A.M. Domnanovich, D.P.B.T.B. Strik, L. Zani, R. Braun, P. Holubar
University of Natural Resources and Applied Life Sciences, Austria
- PS-I.032** Optimization of the Biogas Process Using On-Line VFA Measurement
H. Hartmann, H.B. Nielsen, B.K. Ahring
The Technical University of Denmark, Denmark
- PS-I.033** Investigation of the Transferability of a Control Strategy Parameterised from a Two Population Model of a Fluidised Bed to a Lab Scale EGSB Anaerobic Reactor
G.C. Premier, F.R. Hawkes, K. Monson, D.L. Hawkes, A. Guwy, R. Dinsdale, S. Wilcox
University of Glamorgan, UK
- PS-I.034** Automatic Control of OLR Step-Changes on an EGSB Reactor Treating a Simulated Sucrose Wastewater, Based on On-Line Bicarbonate Alkalinity Data
K.D. Monson, G.C. Premier, R.M. Dinsdale, F.R. Hawkes, D.L. Hawkes
University of Glamorgan, UK
- PS-I.035** Performance Evaluation of Existing Anaerobic Lagoons for Treatment of Tannery Wastewater
C. Kalyanaraman, E. Ravindranath, R. Suthanthararajan, R. Bhuvaneshwari, B. Umamaheswari, K. Sri Bala Kameswari, S. Rajamani
Central Leather Research Institute (CLRI), India
- PS-I.036** The Influence of the Hydrolysis Rate of Co-Substrates on Process Behaviour
J. Liebetrau, E. Kraft, W. Bidlingmaier
Bauhaus-Universitaet Weimar, Germany

- PS-I.037** Automation of Anaerobic Sequencing Batch Reactors Utilized for Domestic Sewage Treatment
A. Sarti, A.W. Lamon, M. Zaiat, E. Foresti, P.E. Silveira
Universidade de São Paulo, Brazil
- PS-I.038** Neural Network Model Predictive Control of H₂S in Anaerobic Digestion Towards the Practical Use of Biogas in Fuel Cells
D.P.B.T.B. Strik, A.M. Domnanovich, L. Zani, R. Braun, P. Holubar
University of Natural Resources and Applied Life Sciences, Austria
- PS-I.039** Modelling Anaerobic Digestion for Control Purpose: Which Model Complexity and Which Parameter Accuracy [TELEMAC Contribution #2]
B. Chachuat¹, O. Bernard¹, J.-P. Steyer²
¹COMORE, INRIA, France; ²INRA, France
- PS-I.040** Design of Probabilistic Software Sensors for Anaerobic Digestion Monitoring [TELEMAC Contribution #3]
B. Chachuat¹, O. Bernard¹, J.A. Martinez²
¹COMORE, INRIA, France; ²AGRALCO. SOC. COOP, Spain
- PS-I.0041** Development of an On-Line Titrimetric Analyser for the Determination of Volatile Fatty Acids, Bicarbonate, and Alkalinity (TELEMAC Contribution #7)
K. De Neve¹, K. Lievens¹, J.P. Steyer², P. Vanrolleghem³
¹AppliTek, Belgium; ²INRA, France; ³University of Ghent, Belgium
- PS-I.0042** Protocol and Optimal Experimental Design to Set Up a Monitoring and Control System at an Anaerobic Digester
D.J.W. De Pauw, U. Zaher, P.A. Vanrolleghem
Ghent University, Belgium
- PS-I.0043** Misassumptions in COD Measurement in Wastewaters Containing High Concentration of VFA [TELEMAC Contribution #9]
R. Farina¹, O. Bernard², J.P. Steyer³, T. Conte³, J. Lema⁴, E. Roca⁴, G. Ruiz⁴, A. Franco⁴, C. Cellamare¹, A. Spagni¹, J.A. Martinez⁵
¹ENEA, Italy; ²COMORE, INRIA, France; ³INRA, France; ⁴Universidade de Santiago de Compostela, Spain; ⁵AGRALCO. SOC. COOP, Spain
- PS-I.044** Kinetic Parameters Estimation in an Anaerobic Digestion Processes Using Successive Quadratic Programming (SQP) [TELEMAC Contribution #11]
C.A. Aceves-Lara¹, E. Aguilar-Garnica¹, V. Alcaraz-González¹, O. González-Reynoso¹, J.P. Steyer², V. González-Álvarez¹
¹Universidad de Guadalajara, Mexico; ²LBE-INRA, France
- PS-I.045** Use of an ADM1 Based Virtual Plant for Validation of a Simple and Adaptive Closed Loop Controller [TELEMAC Contribution #14]
L. Mailleret¹, A. Hélias¹, O. Bernard¹, J. Rodríguez², G. Ruiz², E. Roca²
¹COMORE, INRIA, France; ²Universidade de Santiago de Compostela, Spain
- PS-I.046** Modification of the IWA-ADM1 for Application to Anaerobic Treatment of Ethanollic Wastewater from Wine Factories [TELEMAC Contribution #4]
G. Ruiz, J. Rodríguez, E. Roca, J.M. Lema
University of Santiago de Compostela, Spain

- PS-I.047** Compared Fuzzy Logic Approaches for Automatic Control of CH₄ Flow Rate Production and VFA Effluent Concentration in Anaerobic Digestion
[TELEMAC Contribution #13]
A. Puñal, L. Palazzotto, L. Lardon, J.P. Steyer
Institut national de la recherche agronomique, France
- PS-I.048** Modelling of Soluble Microbial Products Accumulation in Anaerobic Chemostats During Transient Conditions
S.F. Aquino¹, D.C. Stuckey²
¹ Minas Gerais State University (UFMG), Brazil; ² Imperial College, UK
- PS-I.049** Hybrid Reactor Kinetic Model in Treating Cellulose Wastewater
H. Ganjidoust, B. Ayati
Tarbiat Modarres University, Iran
- PS-I.050** Determining the Rate Limiting Step of Anaerobic Treatment
Y. Zheng¹, D.M. Bagley²
¹ BEM Systems, Inc., USA; ² University of Toronto, Canada
- PS-I.051** Integrating Anaerobic Digestion Into Plant-Wide Wastewater Treatment Modelling – Experience with Data from a Large Treatment Plant
J.B. Copp¹, A. Peerbolte², S. Snowling¹, O. Schraa¹, D. Froehlich³, E. Belia¹
¹ Hydromantis, Inc., Canada; ² Wageningen University, The Netherlands; ³ PIMA County, USA
- PS-I.052** Simplified Mathematical Model Validation Through UASB Reactor Operating in Pilot Scale Submitted to Daily Cyclical Variation Rates in Hydraulic Organic Loads
K.Q. de Carvalho, M.T. Salgado, E.C. Pires
Universidade de São Paulo, Brazil
- PS-I.053** Application of the IWA Anaerobic Digestion Model No1 (ADM1) to a Lab-Scale Digester Operated on the Source-Sorted Fraction of Municipal Solid Waste
M. Hansson¹, S. Hidén¹, Å. Nordberg¹, B. Carlsson²
¹ JTI - Swedish Institute of Agricultural and Environmental Engineering, Sweden; ² Uppsala University, Sweden
- PS-I.054** Importance of anaerobic digestion modelling on predicting the overall performance of wastewater treatment plants
R.M. Jones, I. Takacs
EnviroSim Associates Ltd., Canada
- PS-I.055** Determination of Multiple Decay Rate Coefficients in Anaerobic Batch Degradation of Organic Waste
H. Kang¹, K.-S. Shin¹, B. Richards²
¹ Chungnam National University, Korea; ² Cornell University, USA

- PS-I.056** Characterization of Biodegradable Solids Using Elemental Analysis
D.Y. Kim, H.J. Kim, T.H. Chung
Seoul National University, Korea
- PS-I.057** Waste Characterization for Implementation in ADM1
R. Kleerebezem, M.C.M. Van Loosdrecht
Delft University of Technology, The Netherlands
- PS-I.058** Hydrodynamic Characterization of an Anaerobic Reactor Using RTD Curves
I. López, L. Borzacconi
Universidad de la República, Uruguay
- PS-I.059** WITHDRAWN Use of Dynamic Simulation for Process Control and Optimization of the Anaerobic Digestion Process
M. Lübken, M. Wichern, P.A. Wilderer
Technical University of Munich, Germany
- PS-I.060** Simplified Kinetic Model for an Anaerobic Membrane Reactor with Submerged Filtration Module
L.M. Marelli, E.C. Pires
Universidade de São Paulo, Brazil
- PS-I.061** Integrated Process Control for Wastewater Treatment and Sludge Handling Using Dynamic Simulation
U. Moshage¹, T. Dockhorn¹, J. Alex², M. Ogurek², K. Niemann³
¹ Technical University Braunschweig, Germany; ² Institute for Automation und Communication, Germany; ³ GKE Consult GmbH, Germany
- PS-I.062** The Effect of History Extension on Adaptive - Network Based Fuzzy Inference System for a Real Scale Anaerobic Wastewater Treatment Plant
A. Perendeci¹, S. Arslan¹, A. Tanyolaç², S.S. Çelebi²
¹ Turkish Sugar Factories Corporation, Turkey; ² Hacettepe University, Turkey
- PS-I.063** Effect of Mixing Mode on the Behavior of ASBBR with Immobilized Biomass in Cheese Whey Treatment
L.H.S. Damasceno¹, J.A.D. Rodrigues², S.M. Ratusznei², M. Zaiat¹, E. Foresti¹
¹ Universidade de São Paulo, Brazil; ² Instituto Mauá de Tecnologia, Brazil
- PS-I.064** A Promising Approach for Modelling Product Formation in Mixed Culture Fermentations
J. Rodríguez¹, R. Kleerebezem², J.M. Lema¹, M.C.M. van Loosdrecht²
¹ University of Santiago de Compostela, Spain; ² Delft University of Technology, The Netherlands
- PS-I.065** Simplified Mathematical Model to Evaluate the Influence of Leachate Recirculation in the Urban Solid Waste (USW)
M.T. Salgado, K.Q. de Carvalho, E.C. Pires
Universidade de São Paulo, Brazil

- PS-I.066** Modelling of Chemical and Biological Processes of Solid Waste Decomposition: Effect of Initial Aeration to Remove a Delay in Methanogenesis
V.A. Vavilin¹, S. Jonsson², B.H. Svensson²
¹ *Russian Academy of Sciences, Russia;* ² *Linköping University, Sweden*
- PS-I.067** Modelling the Anaerobic Thermophilic Hydrolysis of Secondary Spent Sludge
S.E. Viguera-Carmona^{1,2}, F. Ramírez¹, A. Noyola³, O. Monroy¹
¹ *Universidad Autónoma Metropolitana, Mexico;* ² *Tecnológico de Estudios Superiores de Ecatepec, Mexico;* ³ *Universidad Nacional Autónoma de México, Mexico*
- PS-I.068** Integrated Biological, Chemical and Physical Processes Kinetic Model for the Anaerobic Digestion of Sewage Sludge
S.W. Sötemann, N.E. Ristow, P. Van Rensburg, M.C. Wentzel, R.E. Loewenthal, G.A. Ekama
University of Cape Town, South Africa
- PS-I.069** Using of ABT/AFBT Techniques to Predict Design-, Start-Up-, and Operation Parameters for Mesophilic Anaerobic Municipal Wastewater Treatment Using UASB Reactor
W. Abdel-Halim, D. Weichgrebe, K.-H. Rosenwinkel
Hannover University (ISAH), Germany
- PS-I.070** Sewerage Treatment with a Pilot Scale Anaerobic Waste Stabilisation Pond in a Greek Island
G.E. Alexiou¹, I.E. Alexiou², D.D. Mara³
¹ *Regional Operational Programme of South Aegean, Greece;* ² *Scientists International, UK;* ³ *University of Leeds, UK*
- PS-I.071** Performance of a Two-Stage Anaerobic Pilot Plant Treating Municipal Wastewater
J.A. Álvarez¹, E. Armstrong², M. Gómez², M. Soto¹
¹ *University of A Coruña, Spain;* ² *Aquagest S.A. EDAR Silvouta, Spain*
- PS-I.072** Municipal Wastewater Treatment in a Combined UASB-Digester System
J.A. Álvarez¹, E. Armstrong², M. Gómez², M. Soto¹
¹ *University of A Coruña, Spain;* ² *Aquagest S.A. EDAR Silvouta, Spain*
- PS-I.073** Evaluation and Modeling of Staged Anaerobic Digestion
R.H. Bucher¹, J.D. Zahller², A.S. Conklin², J.F. Ferguson², H.D. Stensel²
¹ *King County Department of Natural Resources and Parks, USA;* ² *University of Washington, USA*
- PS-I.074** Simple Dynamic Model of a UASB Reactor Submitted to Short Period Cyclical Hydraulic and Organic Loads
K.Q. de Carvalho, M.T. Salgado, R.C. Pires, E.C. Pires
Universidade de São Paulo, Brazil

- PS-I.075** Anaerobic Digester Process Equipment Selection
V. de Silva
PARSONS, USA
- PS-I.076** Post Treatment of Anaerobically Treated Municipal Sewage at Moderate Temperature
T. Elmitwalli¹, R. Raimundo², G. Zeeman²
¹ Benha High Institute of Technology, Egypt; ² Wageningen University, The Netherlands
- PS-I.077** Six-Year Monitoring Period of a Full-Scale UASB Reactor Treating Domestic Sewage under Tropical Conditions
J.C. Morais, S. Gavazza, L. Florencio, M.T. Kato
Federal University of Pernambuco, Brazil
- PS-I.078** Anaerobic Digestion of Carbohydrate Rich Wastewaters under Mesophilic and Thermophilic Conditions
C. Forbes, C. O'Reilly, E. Collieran
National University of Ireland, Ireland
- PS-I.079** AF/UASB and UASB/AF Systems for Strong Sewage Treatment
M. Halalsheh, Z. Sawajneh, A. Salhi, A. Omari, M. Fayyad
University of Jordan, Jordan
- PS-I.080** Anaerobic Biodegradation of Sewage in Jordan
M. Halalsheh¹, T. Smit², S. Kerstens², J. Tissingh², G. Zeeman², M. Fayyad¹, G. Lettinga²
¹ University of Jordan, Jordan; ² Wageningen University, The Netherlands
- PS-I.081** Anaerobic Treatment of Toilet Waste and Organic Household Waste for Energy and Nutrient Recovery
D. Hellström¹, F. Hesselgren¹, Å. Nordberg², L.-E. Olsson³
¹ Stockholm Water Company, Sweden; ² JTI - Swedish Institute of Agricultural and Environmental Engineering, Sweden; ³ ANOX AB, Sweden
- PS-I.082** Anaerobic Treatment of Municipal Wastewater - A Case Study of 60 MLD Multistage UASB WWTP at Ras Al Khaimah, United Arab Emirates
A. Khan
EarthCAD Inc., United Arab Emirates
- PS-I.083** Performance of UASB Reactors Treating Municipal Wastewater Under Hydraulic and Organic Shock Loads
R.C. Leitão¹, J.A.A. Silva², W. Sanders¹, A.C. van Haandel², G. Zeeman¹, G. Lettinga¹
¹ Wageningen University, The Netherlands; ² Federal University of Campina Grande, Brazil
- PS-I.084** Low-Temperature Anaerobic Treatment of Black Water and Dairy Parlour Wastewater in UASB-Septic Tanks and Post-Treatment in Moving Bed Biofilm Reactors
S.A. Luostarinen, J.A. Rintala
University of Jyväskylä, Finland

- PS-I.085** Operational Process Determinants of Solids Physical Removal in UASB Reactors: Development and Use of a Short-Term Reproducible Test
N. Mahmoud¹, R. M. Mulia¹, G. Zeeman², G. Lettinga¹
¹ Birzeit University, Israel; ² Wageningen University, The Netherlands
- PS-I.086** High-Rate Anaerobic Treatment of Low Strength Wastewaters at Psychrophilic Temperatures
P.K. Mohan¹, J. Winter², B.S. Thandaweswara³, T.S. Chandra³
¹ University of Western Ontario, Canada; ² University of Karlsruhe, Karlsruhe, Germany; ³ Indian Institute of Technology Madras, India
- PS-I.087** Comparison of the Performance of UASB Reactors for Treatment of Domestic Sewage under Mesophilic and Thermophilic Conditions
P.K. Mohan¹, J. Winter², B.S. Thandaweswara³, T.S. Chandra³
¹ University of Western Ontario, Canada; ² University of Karlsruhe, Germany; ³ Indian Institute of Technology Madras, India
- PS-I.088** A Comparative Study Between an Upflow Anaerobic Sludge Blanket (UASB) and an Upflow Anaerobic Hybrid Reactor (UAHB) Treating Domestic Wastewater
F.H. Passig, J.R. Campos
Universidade de São Paulo, Brazil
- PS-I.089** Treatment of Domestic Wastewater in Up Flow Anaerobic Filter
D.M. Paudel
Panipokhari Department of Water Supply and Sewerage, Nepal
- PS-I.090** Concentration Profile of Organic Matter in a UASB Reactor Used in the Combined Treatment of Domestic Sewage and Excess Aerobic Sludge from a Trickling Filter
P.P. Pontes¹, C.A.L. Chernicharo², M. Von Sperling²
¹ Federal Centre for Technological Education, Brazil; ² Federal University of Minas Gerais, Brazil
- PS-I.091** Effect of Temperature on the Dry Toilets Digestion Process and its Performance Evaluation: A Case Study of Nepal
M.R. Regmi
Kathmandu Department of Water Supply and Sewerage, Nepal
- PS-I.092** Anaerobic Biofilter from Treatment Domestic Wastewater
E. Rodríguez Rodríguez¹, J. Alvarez Malpica²
¹ Instituto Mexicano Del Petróleo, Mexico; ² Universidad Juárez Autónoma de Tabasco, Mexico
- PS-I.093** Assessment of the Sustainability of Anaerobic Sewage Treatment in Northwestern Argentina
L. Seghezzo¹, B. van Vliet², G. Zeeman², G. Lettinga²
¹ Universidad Nacional de Salta, Argentina; ² Wageningen University and Research Center, The Netherlands

- PS-I.094** Investigation on an ICAST System Used in Living Sewage Reuse Treatment
X.F. Shi, Y. Wei, D.F. Zhang
University of Shanghai for Science and Technology, China
- PS-I.095** Comparison of the Periodic Anaerobic Baffled Reactor with the Upflow Anaerobic Sludge Blanket Reactor for the Treatment of Municipal Wastewater
I.V. Skiadas^{1,2}, B.K. Ahring², G. Lyberatos¹
¹ University of Patras, Greece; ² Technical University of Denmark, Denmark
- PS-I.096** Development of Novel Wastewater Treatment Process by Activated Sulfur-Redox Action at Low Temperature
H. Sumino¹, Y. Bungo², T. Yamaguchi², A. Nagano³, N. Araki⁴, S. Yamazaki⁵, H. Harada⁶
¹ Gifu National College of Technology, Japan; ² Hiroshima Prefectural Institute of Industrial Science of Technology, Japan; ³ Sanki Engineering Co. Ltd., Japan; ⁴ Nagaoka National College of Technology, Japan; ⁵ Kochi National College of Technology, Japan; ⁶ Nagaoka University of Technology, Japan
- PS-I.097** The List System for Sewage Treatment in Developing Countries
S. Aiyuk¹, L. Raskin², A. van Haandel³, W. Verstraete¹
¹ Ghent University, Belgium; ² University of Illinois at Urbana-Champaign, USA; ³ Federal University of Campina Grande, Brazil

Tuesday, August 31, 2004

- 07:30-18:30** Registration
Foyer – Level 1
- 08:30-09:00** **Keynote Lecture 1:** Metabolic Interactions in Methanogenic and Sulfate-Reducing Bioreactors
A.J.M. Stams, Wageningen University, The Netherlands
Auditorium Le Grand Salon
- 09:00-09:30** **Keynote Lecture 2:** Fundamentals of the Fermentative Production of Hydrogen
P.C. Hallenbeck, Université de Montréal, Canada
Auditorium Le Grand Salon
- 09:30-10:00** **Keynote Lecture 3:** Simultaneous Wastewater Treatment and Biological Electricity Generation
B.E. Logan, Penn State University, USA
Auditorium Le Grand Salon
- 10:00-10:30** Coffee Break / Exhibition / Posters
Foyer – Levels 3 and 4

10:30-12:10	Session 3A: Agricultural Waste I Auditorium I	Session 3B: Inhibition Auditorium II	Session 3C: Control II (Telemac) Salon Cartier I-II	Session 3D: Nitrogen Salon International I, II
	Chaired by: <i>S. Barrington, R. Moletta</i>	Chaired by: <i>J.B. van Lier, D. Stuckey</i>	Chaired by: <i>E.F. Morgenroth, H. Spanjers</i>	Chaired by: <i>J.A. Oleszkiewicz, F. Fdz-Polanco</i>
10:30-10:50	<p>Environmental Aspects of the Anaerobic Digestion of the Organic Fraction of Municipal Solid Wastes and of Agricultural Wastes <i>W. Edelmann¹, U. Baier², H. Engeli³</i> ¹ <i>arbi GmbH, Switzerland;</i> ² <i>HSW Wädenswil, Switzerland;</i> ³ <i>engeli engineering, Switzerland</i></p>	<p>Toxicity and Biodegradation of Long-Chain Fatty Acids (LCFAs) in Thermophilic, Anaerobic Sludge <i>R. Bouwman¹, J.H. Langwaldt², J.F. Ferguson¹, R. Lepisto²</i> ¹ <i>University of Washington, USA;</i> ² <i>Tampere University of Technology, Finland</i></p>	<p>TELEMAC: An Integrated System to Remote Monitor and Control Anaerobic Wastewater Treatment Plants Through the Internet <i>O. Bernard¹, B. Chachuat¹, A. Hélias¹, B. Le Dantec², J.-P. Steyer³, L. Lardon³, P. Neveu³, S. Lambert⁴, P. Ratini⁵, S. Frattesi⁵, J. Lema⁶, E. Roca⁶, G. Ruiz⁶, J. Rodriguez⁶, A. Franco⁶, P. Vanrolleghem⁷, U. Zaher⁷, D.J.W. De Pauw⁷, K. De Neve⁸, K. Lievens⁸, D. Dochain⁹, O. Schoefs⁹, H. Fibrianto⁹, R. Farina¹⁰, V. Alcaraz Gonzalez¹¹, V. Gonzalez Alvarez¹¹, P. Lemaire¹², J.A. Martinez¹³, O. Duclaud¹⁴, J.F. Lavigne¹⁵</i> ¹ <i>COMORE, INRIA, France;</i> ² <i>GEIE-ERCIM, France;</i> ³ <i>INRA, France;</i> ⁴ <i>Council for the Central Laboratory of the Research Councils, UK;</i> ⁵ <i>SPES, Italy;</i> ⁶ <i>Universidade de Santiago de Compostela, Spain;</i> ⁷ <i>Ghent University, Belgium;</i> ⁸ <i>APPLITEK, Belgium;</i> ⁹ <i>UCL, Belgium;</i> ¹⁰ <i>ENEA, Italy;</i> ¹¹ <i>Universidad de Guadalajara, Mexico;</i> ¹² <i>Pierre Lemaire, France;</i> ¹³ <i>AGRALCO SOC. COOP, Spain;</i> ¹⁴ <i>Tequila Sauza S.A. de C.V. Mexico;</i> ¹⁵ <i>Allied Domecq, UK</i></p>	<p>Comparison of Chemo-, Hetero- and Mixotrophic Denitrification in Laboratory Scale UASBs <i>R. Sierra-Alvarez¹, F. Guerrero^{1,2}, P. Rowlette¹, S. Freeman¹, J. A. Field¹</i> ¹ <i>University of Arizona, USA;</i> ² <i>Universidad Autónoma de México, Mexico</i></p>

10:50-11:10	<p>Nitrogen Removal from Piggery Wastewater Using ANAMMOX Reactor <i>I.S. Hwang¹, K.S. Min¹, Y.O. Lee²</i> ¹ <i>Kyungpook National University, Korea;</i> ² <i>Daegu University, Korea</i></p>	<p>Phosphate Inhibition on Thermophilic Acetoclastic Methanogens: A Warning <i>P.L. Paulo¹, A.B. dos Santos², C.N. Ide¹, G. Lettinga²</i> ¹ <i>Federal University of Mato Grosso do Sul, Brazil;</i> ² <i>Wageningen University, The Netherlands</i></p>	<p>Modular Expert System for the Diagnosis of Operating Conditions of Industrial Anaerobic Digestion Plants <i>L. Lardon¹, A. Puñal¹, J.P. Steyer¹, J.A. Martinez²</i> ¹ <i>LBE-INRA, France;</i> ² <i>AGRALCO SOC. COOP, Spain</i></p>	<p>Effectiveness of a Plug Flow Granular Bed Multi-Stage Bioreactor for Carbon and Nitrate Removal <i>M.I. Baloch¹, J.C. Akunna², P.J. Collier²</i> ¹ <i>Wessex Water, UK;</i> ² <i>University of Abertay Dundee, UK</i></p>
11:10-11:30	<p>A Dispersion Based Model for Anaerobic Digestion of Solid Cattle Wastes in a Stratified Thermophilic Accumulation System <i>H.M. El-Mashad¹, W.K.P. van Loon², G. Zeeman², G.P.A. Bot², G. Lettinga²</i> ¹ <i>Mansoura University, Egypt;</i> ² <i>Wageningen University, The Netherlands</i></p>	<p>The Important Role of Mass Transfer Limitations Caused by Long Chain Fatty Acids Accumulation onto the Anaerobic Sludge <i>M.A. Pereira, M. Mota, M.M. Alves</i> <i>Universidade do Minho, Portugal</i></p>	<p>Titrimetric Monitoring of Anaerobic Digestion: VFA, Alkalinities and More <i>U. Zaher¹, J.C. Bouvier², J.P. Steyer², P.A. Vanrolleghem¹</i> ¹ <i>Ghent University, Belgium;</i> ² <i>Institut national de la recherche agronomique, France</i></p>	<p>Post-Treatment of a Slaughterhouse Wastewater - Biological Nitrogen Removal via Nitrite Using a Sequencing Batch Reactor <i>E. Castelló, L. Borzacconi</i> <i>University of the Republic, Uruguay</i></p>
11:30-11:50	<p>Effect of Operating Conditions and Reactor Configuration on Efficiency of Full-Scale Biogas Plants <i>I. Angelidaki¹, K. Boe¹, L. Ellegaard²</i> ¹ <i>Technical University of Denmark;</i> ² <i>Burmeister & Wain Scandinavian Contractor A/S, Denmark</i></p>	<p>Ammonia and pH Inhibition in Anaerobic Treatment <i>N. Eldem¹, I. Ozturk¹, E. Soyer¹, B. Calli², B. Mertoglu², O. Akgiray²</i> ¹ <i>Istanbul Technical University, Turkey;</i> ² <i>Marmara University, Turkey</i></p>	<p>Robust Interval-Based SISO Regulation in Anaerobic Digestion <i>V. Alcaraz-González¹, J. Harmand¹, A. Rapaport², J.P. Steyer¹, V. González-Álvarez³, C. Pelayo-Ortiz³</i> ¹ <i>INRA-LBE, France;</i> ² <i>INRA-Biométrie, France;</i> ³ <i>Universidad de Guadalajara, Mexico</i></p>	<p>Nitrogen Removal via Nitrite in a Sequential Immobilized Biomass Batch Reactor <i>L.M.C. Daniel, E. Foresti</i> <i>Universidade de São Paulo, Brazil</i></p>
11:50-12:10	<p>UASB Treatment of Liquid Residues from Grass Bioraffination <i>U. Baier, P. Delavy</i> <i>University of Applied Sciences, Switzerland</i></p>	<p>Inhibition of Anaerobic Biotransformation by Electrophilic Thiol-Reactive Compounds <i>N. Tepe, M. Duran</i> <i>Villanova University, USA</i></p>	<p>Modelling and Identification of a Partial Differential Equation Model for an Anaerobic Wastewater Treatment Process <i>O. Schoefs¹, D. Dochain², H. Fibrianto², J.P. Steyer³</i> ¹ <i>Université de technologie de Compiègne, France;</i> ² <i>Université Catholique de Louvain, Belgium;</i> ³ <i>LBE-INRA, France</i></p>	<p>A Cost Effective Denitrification System Using Saw Dust as the Energy Source, Treating Ground Water for a Sustainable Drinking Water Source in Rural Areas of South Africa <i>H.A. Greben, M.P. Tjatji, A.S. Talma</i> <i>CSIR, South Africa</i></p>

12:10-14:15	<p>Lunch Salon Mont-Royal I-II</p> <p>Exhibition Foyer – Level 3</p> <p>Poster Session II Foyer – Level 4</p>			
14:15-15:35	<p>Session 4A: Agricultural Waste II Auditorium I</p> <p>Chaired by: <i>D.H. Zitomer, C.A.L. Chernicharo</i></p>	<p>Session 4B: Organic Municipal Solid Wastes I Auditorium II</p> <p>Chaired by: <i>W. Verstraete, L. Borzacconi</i></p>	<p>Session 4C: Instrumentation Salon Cartier I-II</p> <p>Chaired by: <i>J. Keller, J.P. Steyer</i></p>	<p>Session 4D: Molecular Biology Salon International I-II</p> <p>Chaired by: <i>L. Raskin, A.J.M. Stams</i></p>
14:15-14:35	<p>Inactivation of <i>Escherichia coli</i> O157:H7 During Thermophilic Anaerobic Digestion of Manure from Dairy Cattle <i>M.D. Aitken, M.D. Sobsey, N.A. Van Abel, K.E. Blauth, P.L. Crunk, M.E. Meisch, C.C. Nichols</i> <i>University of North Carolina, USA</i></p>	<p>The Role of Anaerobic Digestion in the Treatment of MSW: State-of-the-Art <i>L. De Baere</i> <i>Organic Waste Systems NV, Belgium</i></p>	<p>Image Analysis as a Tool to Predict Washout in Sludge Bed Reactors Through the Quantification of Microbial Filamentous Structures <i>M.M. Alves¹, M.A. Pereira¹, A.L. Amaral^{1,2}, M.-N. Pons³, M. Mota¹, E.C. Ferreira¹</i> ¹ <i>Universidade do Minho, Portugal;</i> ² <i>present address: Instituto Politécnico de Bragança, Portugal;</i> ³ <i>CNRS-ENSIC-INPL, France</i></p>	<p>Hygienization by Anaerobic Digestion: Comparison Between Evaluation by Cultivation and Quantitative Real-Time PCR <i>M. Lebuhn¹, M. Effenberger², G. Garcés¹, A. Gronauer², P.A. Wilderer¹</i> ¹ <i>Institute of Water Quality Control and Waste Management, Germany;</i> ² <i>Bavarian State Research Center for Agriculture, Germany</i></p>
14:35-14:55	<p>Characterization and Monitoring of the Microbial Community of a Pig Manure Slurry Throughout its Handling and Management <i>P. Dabert¹, R. Snell-Castro¹, P. Peu², A.-M. Pourcher³, V. Bru¹, J.-P. Delgènes¹, J.-J. Godon¹</i> ¹ <i>Institut national de la recherche agronomique, France;</i> ² <i>present address: UR GERE – Cemagref, France;</i> ³ <i>Université d'Angers, France</i></p>	<p>Controlled Landfill Project, Yolo County, California <i>D.C. Augenstein¹, R. Yazdani², J. Kieffer², H. Akau², J.R. Benemann¹</i> ¹ <i>Institute for Environmental Management, Inc, USA;</i> ² <i>Yolo County Department of Public Works, USA</i></p>	<p>Online Headspace Chromatographic Method for Measuring VFA in Biogas Reactor <i>K. Boe, D.J. Batstone, I. Angelidaki</i> <i>Technical University of Denmark, Denmark</i></p>	<p>A Non-Sulfate-Reducing, Syntrophic Bacterial Group Within the Genus <i>Desulfotomaculum</i> is Ubiquitous in Anaerobic Wastewater and Waste Treatment Sludges <i>H. Imachi¹, Y. Sekiguchi², Y.-L. Qiu¹, Y. Kamagata², A. Ohashi¹, H. Harada¹</i> ¹ <i>Nagaoka University of Technology, Japan;</i> ² <i>National Institute of Advanced Industrial Science and Technology, Japan</i></p>

14:55-15:15	The Effect of Microfiltration upon Methanogenic Activity <i>L. Beal</i> ¹ , <i>L.O. Monteggia</i> ² ¹ <i>IPH/UFRGS, UCS, Brazil;</i> ² <i>IPH/UFRGS, Brazil</i>	Sanitary Landfill Design Improvement by Recycling Anaerobically Treated Lixiviates: Generation of Advances Design Criteria <i>M.C. Schiappacasse, J. Palma, P. Poirrier, R. Chamy</i> <i>Pontificia Universidad Catolica de Valparaiso, Chile</i>	Automated Equipment for Anaerobic Sludge Parameters Determination <i>F. Fdz-Polanco, P. Nieto, S. Pérez Elvira, F.P. van der Zee, P.A. García</i> <i>University of Valladolid, Spain</i>	Sequence-Specific Cleavage of 16S rRNA for Rapid and Quantitative Detection of a Particular Group of Anaerobes in Bioreactors <i>Y. Sekiguchi</i> ¹ , <i>Y. Uyeno</i> ^{1,2} , <i>A. Sunaga</i> ¹ , <i>H. Yoshida</i> ¹ , <i>Y. Kamagata</i> ¹ ¹ <i>National Institute of Advanced Industrial Science and Technology, Japan;</i> ² <i>The National Federation of Dairy Co-operative Associations, Japan</i>
15:15-15:35	Study on a Chinese Anti-Virus Sanitary Anaerobic Reactor Targeting to SARS Alike Disease <i>W. Libin, L. Ying, X. Chengyong, L. Binqiang, L. Jingrui</i> <i>China Biogas Society, China</i>	Anaerobic Bioreactor Landfill Technology – Challenges in Northern Regions <i>C. Zeiss</i> <i>Zirkon Research Inc., Canada</i>	Multi-Wavelength Fluorometry for Anaerobic Digestion Process Monitoring <i>E. Morel</i> ^{1,2} , <i>K. Santamaria</i> ¹ , <i>M. Perrier</i> ² , <i>S.R. Guiot</i> ¹ , <i>B. Tartakovsky</i> ¹ ¹ <i>National Research Council Canada, Canada;</i> ² <i>École Polytechnique de Montréal, Canada</i>	Analysis of Community Structures in Anaerobic Processes Using a Quantitative Real-Time PCR Method <i>Y. Yu, C. Lee, S. Hwang</i> <i>Pohang University of Science and Technology, Korea</i>
15:35-16:00	Coffee Break / Exhibition / Posters Foyer – Levels 3 and 4			
16:00-18:20	Workshop II: Round Table Discussion: Instrumentation, Control and Automation in Anaerobic Digestion (ICA/AD) Salon International I-II			

16:00-17:40	Session 5A: Sludges I Auditorium I	Session 5B: Organic Municipal Solid Wastes II Auditorium II	Session 5C: Agricultural Feedstock Salon Cartier I	Session 5D: Bioremediation I Salon Cartier II
16:00-16:20	Full-Scale Conversion of Hyperion Treatment Plant to Thermophilic Anaerobic Digestion for Class A Biosolids by Several Alternatives <i>R. Iranpour, H.H.J. Cox, S. Fan, J.E. Mundine</i> <i>Hyperion Plant/TSF, USA</i>	Full Scale Anaerobic Digestion of Source Separated Organics (SSO) in the City of Toronto, Ontario, Canada <i>R. Cluff</i> ¹ <i>REA Gesellschaft für Recycling von Energie und Abfall mbH, Germany;</i> ² <i>CCI-TBN Toronto Inc., Canada</i>	Biomethane from Energy Crops and Organic Wastes <i>D.P. Chynoweth</i> <i>University of Florida, USA</i>	Microbial Diversity in Anaerobic Enrichment Cultures Dechlorinating Tetrachloroethene and Trichloroethene to Ethene <i>M. Duhamel¹, K. Mo¹, P.C. Dennis², E.R. Hendrickson³, S. Dworatzek², X. Druar², D. Major⁴, E.A. Edwards¹</i> ¹ <i>University of Toronto, Canada;</i> ² <i>SiREM, Canada;</i> ³ <i>E.I. Du Pont de Nemours & Co., USA;</i> ⁴ <i>GeoSyntec Consultants Inc., Canada</i>
16:20-16:40	Solving Fecal Coliform Growth/Reactivation in Biosolids During Full-Scale Post-Digestion Processes <i>R. Iranpour, H.H.J. Cox, S. Fan, V. Abkian, R.J. Kearney</i> <i>City of Los Angeles, USA</i>	Biologically Catalyzed Mobilization of Arsenic from Granular Ferric Hydroxide in Continuous Anaerobic Flow-Through Columns <i>I. Cortinas, R. Sierra-Alvarez, D.A. Camacho, J.A. Field</i> <i>University of Arizona, USA</i>	Potential for Biohydrogen and Methane Production from Olive Pulp <i>H.N. Gavala^{1,2}, I.V. Skiadas^{1,2}, B.K. Ahring², G. Lyberatos¹</i> ¹ <i>University of Patras, Greece;</i> ² <i>Technical University of Denmark, Denmark</i>	Molecular Analysis of <i>Desulfitobacterium frappieri</i> PCP-1 Involved in Reductive Dehalogenation of Pentachlorophenol <i>R. Villemur, R. Beaudet, M. Lanthier, A. Gauthier, A. Boyer, J. Thibodeau, F. Lépine, M. Duguay, R. Pagé-Bélanger</i> <i>INRS-Institut Armand-Frappier, Canada</i>
	Chaired by: <i>F. Fdz-Polanco, D.M. Bagley</i>	Chaired by: <i>J. Mata-Alvarez, E. Colleran</i>	Chaired by: <i>S.V. Kalyuzhnyi, B.K. Ahring</i>	Chaired by: <i>S.G. Pavlosthatis, E. Razo-Flores</i>

16:40-17:00	<p>Pathogen Inactivation by Organic Acids in Sludge Digestion <i>B. Puchajda, J. Oleszkiewicz</i> <i>University of Manitoba, Canada</i></p>	<p>Comparison of Ammonia Inhibition Between the Mesophilic and Thermophilic Anaerobic Digestion of Municipal Solid Wastes <i>Y.Y. Li¹, I.B. Ko², T. Noike¹, K. Funaishi³, H. Sasaki³</i> ¹ <i>Tohoku University, Japan;</i> ² <i>Cheju National University, Korea;</i> ³ <i>ATAKA Construction & Engineering Co., Japan</i></p>	<p>Fates of Crops Nutrients During the Low Temperature Anaerobic Treatment of Swine Manure Slurries in Sequencing Batch Reactors <i>D.I. Massé, F. Croteau, L. Masse</i> <i>Agriculture and Agri-Food Canada, Canada</i></p>	<p>Anaerobic Transformation of Tetrachloroethane (TeCA), Perchloroethylene (PCE), and Their Mixtures by Mixed-Cultures Enriched from Contaminated Soils and Sediments <i>F. Aulenta¹, A. Fina¹, M. Potalivo¹, M. Petrangeli Papini¹, S. Rossetti², M. Majone¹</i> ¹ <i>University "La Sapienza", Italy;</i> ² <i>National Research Council (IRSA-CNR), Italy</i></p>
17:00-17:20	<p>The Effect of Volatile Fatty Acids on the Inactivation of <i>Clostridium Perfringens</i> in Advanced Anaerobic Digestion <i>H.R. Salsali¹, W.J. Parker¹, S.A. Sattar²</i> ¹ <i>Carleton University, Canada;</i> ² <i>University of Ottawa, Canada</i></p>	<p>Evaluation of Two-Phase Thermophilic Anaerobic Methane Fermentation for the Treatment of Garbage <i>Y.J. Park^{1,2}, H. Tsuno^{1,2}, T. Hidaka^{1,2}, F. Hong^{1,2}, J.H. Cheon^{1,2}</i> ¹ <i>Kyoto University, Japan;</i> ² <i>Japan Science and Technology Agency, Japan</i></p>	<p>Co-Digestion of Energy Crops and the Source-Sorted Organic Fraction of Municipal Solid Waste <i>Å. Nordberg, M. Edström</i> <i>JTI - Swedish Institute of Agricultural and Environmental Engineering, Sweden</i></p>	<p>Comparison of Perchloroethylene (PCE) Dechlorination Activities by Performing Microcosm Tests Using Groundwater from Four Different PCE-Contaminated Aquifers in Korea <i>Y. Kim¹, J.W. Kim¹, C.Y. Ha¹, H.W. Lee¹, J.S. Ha², H.W. Park², J.W. Lee³, S.Y. Kwon⁴</i> ¹ <i>Korea University, Korea;</i> ² <i>Greentech Environmental Consulting Co., Korea;</i> ³ <i>Dohwa Consulting Engineers Co., Ltd., Korea;</i> ⁴ <i>Korea National Open University, Korea</i></p>
17:20-17:40	<p>Advanced Anaerobic Digestion for Class A Pathogen Removal <i>P. Scanlan, H. Santha, S. Fronck Black & Veatch, USA</i></p>	<p>Trace Organic Compounds in Landfill Gas Produced During the Decomposition of Refuse and Individual Waste Components <i>M.A. Barlaz¹, S.J. Cowie¹, B.F. Staley¹, G.R. Hater²</i> ¹ <i>North Carolina State University, USA;</i> ² <i>Bioreactor & Biosites Technology, Waste Management Inc., USA</i></p>	<p>Emerging Trends in Small Scale Biogas Plants for Agro-Residues and Biomass Feedstocks – A Case Study from India <i>H.N. Chanakya¹, R. Moletta²</i> ¹ <i>Indian Institute of Science, India;</i> ² <i>INRA, France</i></p>	<p>Toxicity and Biodegradation of Insecticides in Methane Sludge Digestion <i>E.S. Kempa¹, Z. Sadecka²</i> ¹ <i>Private Consultant, Poland;</i> ² <i>University of Zielona Góra, Poland</i></p>

17:40-18:30	Exhibition / Posters Foyer – Levels 3 and 4
18:45	Bus Departure for the “Vieux Port” Main lobby level, Mansfield Street
19:15	Banquet – Dinner Cruise Le Cavalier Maxim
23:00	Return to Centre Mont-Royal

Poster Session II

PS-II.001	Biological Safety of Anaerobic Technologies for Environmental Treatments <i>S. Szoboszlai, B. Atzél, M. Cserháti, I. Szabó, B. Kriszt</i> <i>Szent István University, Hungary</i>
PS-II.002	Heavy Metals Correlation with Multi Drug Resistant Microbes Isolated from Vegetables (Spinach) Growing in Sewerage Places <i>R. Azmat¹, T. Khanum¹, K.M. Khan²</i> <i>¹ Jinnah University for Women, Pakistan; ² University of Karachi, Pakistan</i>
PS-II.003	Methanogenic Population Dynamics at Low Temperature in Laboratory and Pilot Scale Anaerobic Digestion <i>I. Bohn, L. Björnsson, B. Mattiasson</i> <i>Lund University, Sweden</i>
PS-II.004	Kinetic Evaluation of Microbial Interactions in an Anaerobic Sequencing Batch Reactor Treating Sulfate-Rich Wastewater <i>A.J. da Silva, A.C. Tavares, E. Foresti, M. Zaiat</i> <i>Universidade de São Paulo, Brazil</i>
PS-II.005	Microbial Ecology of Anaerobically Co-Digested Food Waste and Biosolids <i>B. Dearman¹, P. Marschner², R. Bentham¹</i> <i>¹ Flinders University of South Australia, Australia; ² University of Adelaide, Australia</i>
PS-II.006	Characterization of Microbial Community in Thermophilic Anaerobic Packed-Bed Reactor Under Extremely High Organic Loading <i>M. Goto, Y. Ueno, Y. Kitajima, M. Tatara, A. Yamazawa, H. Fukui</i> <i>Kajima Technical Research Institute, Japan</i>

- PS-II.007** Importance of Process Temperature for Degradation of Phenol and *p*-cresol in Biogas Reactors
L. Levén, A. Schnürer
Swedish University of Agricultural Sciences, Sweden
- PS-II.008** Microbial Community Structure and Dynamics During Long-Term Anaerobic Biological Treatment of Whey-Based Wastewaters at Psychrophilic Temperatures
S. McHugh, V. O'Flaherty
National University of Ireland, Ireland
- PS-II.009** The Relationship Between Methane Production and Methanogenic Population in Thermophilic Anaerobic Reactors
B. Montero, J.L. García-Morales, L.I. Romero, D. Sales, R. Solera
University of Cadiz, Spain
- PS-II.010** Determination of Acidogenic and Methanogenic Activity in Thermophilic Anaerobic Reactors. Application of Different Techniques for Biomass Quantification
B. Montero, R. Solera, L.I. Romero, D. Sales, J.L. García-Morales
University of Cadiz, Spain
- PS-II.011** Effect of the Medium Composition, Initial Methanogenic Activity and Initial Substrate to Microorganisms Ratio on the Anaerobic Biodegradability Test
I. Moreno-Andrade, G. Buitrón
National University of México, Mexico
- PS-II.012** Characterization and Phylogenetics of a New Species of Genus *Lactobacillus* in Biohydrogen Production
N. Ren¹, Y. Li¹, C. Yang², J. Li¹, Ying Chen¹, G. Zheng¹, H. Lin¹
¹ Harbin Institute of Technology, China; ² University of Northeast Forestry, China
- PS-II.013** Formation of an Acetic-Acid Type Microbial Metabolism Subjected to Sulfate-Reduction in an Acidogenic Reactor
N. Ren, A. Wang, G. Liu, D. Du, X. Xu, L. Wu
Harbin Institute of Technology, China
- PS-II.014** Archaeal Diversity of a Thermophilic Methanogenic Pilot Scale Digester Treating Poultry Farm Waste
A. Smith^{1,2}, H. Hubbard², D. Huber²
¹ University of Exeter, UK; ² West Virginia State University, USA

- PS-II.015** Microbial Activity and Population Structure of Anaerobic Sludge Alternately Exposed to Mesophilic and Thermophilic Conditions
Y.C. Song¹, J.H. Woo¹, S.J. Kwon¹, S.C. Koh¹, S.E. Lee¹, B.H. Kim¹, B.C. Paik²
¹ Korea Maritime University, Korea; ² Yosu National University, Korea
- PS-II.016** Molecular Monitoring of Bacterial and Archaeal Domains During the Anaerobic Mineralization of Biomass-Associated LCFA
D.Z. Sousa^{1,2}, M.A. Pereira^{1,2}, M. Altinbas², H. Smidt², A.J.M. Stams², M.M. Alves¹
¹ University of Minho, Portugal; ² Wageningen University, The Netherlands
- PS-II.017** Evaluation of Dispersed Biomass by Using Standardized Batch Methanogenic Activity Test at Different Initial Substrates and Biomass Ratios
L. Steil¹, J. Lucas Jr.², R.A. Oliveira², R.F. Vazoller¹
¹ Universidade de São Paulo, Brazil; ² UNESP, Brazil
- PS-II.018** Minimum Requirements for Trace Metals (Fe, Ni, Co and Zn) in Thermophilic Methane Fermentation from Glucose
M. Takashima, K. Shimada
Fukui University of Technology, Japan
- PS-II.019** Monitoring Microbial Diversity and Function in Swine Manure Anaerobic Digesters by Length Heterogeneity PCR (LH-PCR)
G. Talbot, C. Roy, E. Topp, M.-F. Palin, D. Massé
Agriculture and Agri-Food Canada, Canada
- PS-II.020** Production and Reduction of Intermediary Metabolite in Thermophilic Anaerobic Digestion
D. Tanikawa¹, T. Yamaguchi¹, K. Syutsubo², A. Miya³, Y. Nagaya³, H. Harada⁴
¹ Kure National College of Technology, Japan; ² National Institute for Environmental Studies, Japan; ³ Ebara Corp., Japan; ⁴ Nagaoka University of Technology, Japan
- PS-II.021** Microbial Aspects of Sulfate-Reducing Gas-Lift Reactors
B.H.G.W. van Houten, W. van Doesburg, A.J.M. Stams
Wageningen University, The Netherlands
- PS-II.022** Methanogenic Population Dynamics During Anaerobic Biodegradation of TCF Effluent by a System with Attached Biomass
A. Belmar, J. Decap, K. Sossa, H. Urrutia, G. Vidal
University of Concepcion, Chile
- PS-II.023** Role of Sulfate-Reducing Bacteria in an Acidogenic Reactor
A. Wang, N. Ren, D. Du, X. Xu, L. Wu
Harbin Institute of Technology, China
- PS-II.024** Influence of Lipid Concentration on the Hydrolysis and Biomethanation of Lipid Rich Wastes
D.G. Cirne^{1,2}, X. Paloumet¹, L. Björnsson¹, M. Alves², B. Mattiasson¹
¹ Lund University, Sweden; ² Universidade do Minho, Portugal

- PS-II.025** Anaerobic Digestion of Waste Biomass with Respect to Ammonia Inhibition
P. Jenicek, T. Rosenberg
Institute of Chemical Technology Prague, Czech Republic
- PS-II.026** High-Solid Feed Anaerobic Plug-Flow Reactor - Phase Separation, Dynamic, and Inhibition
Jack Liu
H&L Environmental Consultants Inc., USA
- PS-II.027** Over-Acidification Problem in the Methanogenic Reactor and its Recovery
M. Liu¹, N. Ren¹, Ying Chen², A. Wang¹, J. Ding¹
¹ Harbin Institute of Technology, China; ² Beijing University of Technology, China
- PS-II.028** Evaluation of Sodium Oleate and Estereate Concentration on the Performance of UASB e DAEB Reactors
L.A.S. Miranda, J.A.P. Henriques, L.O. Monteggia
UFRGS, Brazil
- PS-II.029** Anaerobic Batch Test to Evaluate Biodegradation and Toxicity - Case Study: Laundry Hospital Effluent
I.C.T. Silveira, L. Miranda, L.O. Monteggia
Federal University of Rio Grande do Sul, Brazil
- PS-II.030** Evaluation of Various Leachate Recycle Methods on the Methane Production and Nitrogen Control for Landfill Management
J.-H. Bae¹, K.-M. Cho¹, B.-S. Bum²
¹ Inha University, Korea; ² Kyungin Women's College, Korea
- PS-II.031** Psychrophilic Anaerobic Hydrolysis of Municipal Organic Wastes. Kinetic Considerations
D. Bolzonella¹, P. Pavan², L. Innocenti², F. Cecchi¹
¹ University of Verona, Italy; ² University Cà Foscari of Venice, Italy
- PS-II.032** Enhancement of Dry Anaerobic Digestion of OFMSW Under Thermophilic Conditions by Means of Thermo-Chemical Alkaline Pre-Treatment. Effect on the Solubilization of Organic Matter and on the Acidogenic Stage
L.A. Fernández Güelfo, C.J. Álvarez Gallego, L.I. Romero García, D. Sales Márquez
University of Cádiz, Spain
- PS-II.033** Co-Digestion of Organic Fraction of Municipal Solid Waste and Waste Activated Sludge in a Continuous Reactor
A. Flor, N. Coelho, L. Arroja, I. Capela
University of Aveiro, Portugal
- PS-II.034** Effect of Inoculum Source in the Dry Thermophilic Anaerobic Digestion of Municipal Solid Waste
T. Forster-Carneiro, M. Pérez, L.I. Romero, D. Sales
University of Cádiz, Spain

- PS-II.035** Performance of SEBAC Process for Anaerobic Treatment of Organic Fraction of Municipal Solid Waste: Study of the Mains Variables
T. Forster-Carneiro, L.A. Fernández, M. Pérez, L.I. Romero, C.A. Álvarez
University of Cádiz, Spain
- PS-II.036** Degradability of Poly(β -Hydroxybutyrate-co-16% Valerate) and Cellulose Acetates in Simulated Methanogenic Bioreactors
J.-D. Gu, Y.P. Wang, C.K. Wan
The University of Hong Kong, Hong Kong
- PS-II.037** Decomposition of OFMSW Using Leach Bed Anaerobic Digestion at Mesophilic, Thermophilic and Room Temperatures
S. Karnchanawong, A. Amprai
Chiang Mai University, Thailand
- PS-II.038** Anaerobic Treatment of Leachate with High COD/BOD Ratio in UASB Reactor Type
A.F.M.S. Santos, S. Gavazza, L. Florencio, M.T. Kato
Federal University of Pernambuco, Brazil
- PS-II.039** A Complete Resource Recovery of the Thermophilic Anaerobic Digestion
W.C. Kuo, H.Y. Lu
National Pingtung University of Science and Technology, Taiwan
- PS-II.040** Comparison of Start-Up Performances of Dry Anaerobic Mesophilic and Thermophilic Digestions of Organic Solid Wastes by Enzymatic Activity Assessment
S. Lu¹, S.W. Gibb¹, Y. Liu², W. Zhou², T. Imai², M. Ukita²
¹Environmental Research Institute, UK; ²Yamaguchi University, Japan
- PS-II.041** Investigation of the Microbial Diversity in Anaerobic Batch Reactors Treating the Organic Fraction of Urban Solid Wastes
J.C. Mendonça¹, M.T. Salgado¹, A.P. Picanço², G.D.B. Souto¹, J. Povinelli¹
¹Universidade de São Paulo, Brazil; ²Federal University Tocantins, Brazil
- PS-II.042** Optimal Anaerobic Treatment of Different Organic Wastes
L.-E. Olsson
ANOX AB, Sweden
- PS-II.043** Anaerobic Decomposition of BMSW in Landfills with Respect to the EU Landfill Directive in Istanbul
T.T. Onay¹, A.S. Erses¹, S. Kujiten², W.H. Craig²
¹Bogaziçi University, Turkey; ²Manchester Centre for Civil & Construction Engineering, UK
- PS-II.044** Anaerobic Digestion of Municipal Solid Waste: Development of a Thermophilic Inoculum
L. Ortega^{1,2}, S. Barrington¹, S.R. Guiot²
¹McGill University, Canada; ²National Research Council Canada, Canada

- PS-II.045** | New Management Concept of Bamako Municipal Solid Waste for Sustainability
A. Ouédraogo¹, S.B. Diallo², S. Sylla¹, F. Maïga², F. Berthé²
¹ University of Bamako, Mali; ² École Normale Supérieure, Mali
- PS-II.046** | A New Three-Phase Methane Fermentation System for Treating Food Wastes
M. Sakamoto¹, M. Suzuki², Y.-Y. Li³, T. Noike³
¹ Sanki Engineering Co., Ltd., Japan; ² Tokyo University of Agriculture, Japan; ³ Tohoku University, Japan
- PS-II.047** | Comparing the Digested Anaerobic Sludge of Isfahan and Shahin Shahr WWTP with the Requirements of Pathogen Reduction and Vector Attraction for Agricultural Reuse with Respect to Removing the Volatile Solids, Total and Fecal Salmonella and Parasite Ova
A. Takdastan^{1,2}, N. Jafarzoadeh¹, B. Bina³
¹ Ahvaz University, Iran; ² Tehran University, Iran; ³ Isfahan University, Iran
- PS-II.048** | Anaerobic Composting for Space Missions
D.P. Chynoweth, P. Haley, J. Owens, A. Teixeira
University of Florida, USA
- PS-II.049** | Use of Thermophilic Anaerobic Microbes for Municipal Solid Waste Hydrolysis and its Utilization to Methanogenesis
J. Tsubota¹, T. Tsubone², H. Tsuno³
¹ Osakagas Co., Ltd., Japan; ² JFE Engineering Co., Ltd., Japan; ³ Kyoto University, Japan
- PS-II.050** | Integrated Biological Treatment of Leachate from Sanitary Landfill in Ho Chi Minh City, Vietnam
H.T.D. Doanh¹, D.T.M. Hue¹, H.T. Duong¹, D.T. Duong¹, H.N.P. Mai², N.T. Viet²
¹ CENTEMA, Vietnam; ² Van Lang University, Vietnam
- PS-II.051** | Combined Anaerobic Digestion of Sewage Sludge and Pretreated Refuse
H. Deng¹, P. Griffin², A.D. Wheatley¹
¹ Loughborough University, UK; ² Severn Trent Water, UK
- PS-II.052** | Design of the Biogas Plant for Anaerobic Digestion of Chicken Manure
Z. Ayvaz , K. Kabadayi, O. Saatci
Ege University, Turkey
- PS-II.053** | Anaerobic Digestion Elutriated Phased Treatment of Slurry-Type Piggery Waste
J.Y. Bae, K.S. Min
Kyungpook National University, Korea
- PS-II.054** | Anaerobic Digestion of Swine Manure at Ambient Temperature
J.J. Cheng¹, J.G. Fleming²
¹ North Carolina State University, USA; ² National Institute for Water and Atmospheric Research, New Zealand

- PS-II.055** Interaction Effects of Hydrogen Sulfide and Ammonia on Anaerobic Digestion of Swine Manure
P.W. Cheung, H. Zhou, R. Hacker
University of Guelph, Canada
- PS-II.056** Bacterial Indicator Decimation in Flushed Dairy Manure Wastewater by Ambient Temperature Fixed-Film Anaerobic Digestion
J.A. Davis, S.R. Farrah, A.C. Wilkie
University of Florida, USA
- PS-II.057** Anaerobic Digestion of Dairy Manure with a Novel Hybrid Reactor Configuration
G.N. Demirer¹, S. Chen²
¹ Middle East Technical University, Turkey; ² Washington State University, USA
- PS-II.058** Performance of Three-Stage Anaerobic Digestion of Cattle Manure in a Full-Scale Agricultural Pilot Plant
M. Effenberger¹, J. Bachmaier¹, M. Lebuhn³, G. Garcés², A. Gronauer¹, P.A. Wilderer²
¹ Bavarian State Research Center for Agriculture, Germany; ² Institute of Water Quality Control and Waste Management, Germany; ³ Technical University of Munich, Germany
- PS-II.059** Ten Years of Operation of a Batch – Dry – Anaerobic Digestion Pilote Plant in Agriculture
H. Fruteau de Laclos, Y. Membrez
EREP SA, Switzerland
- PS-II.060** Optimizing Quantification of *Cryptosporidium parvum* Oocysts in Cattle Manure and Effluents from Anaerobic Digesters by Quantitative Real-Time PCR (qPCR)
G. Garcés¹, M. Effenberger², M. Najdrowski³, A. Gronauer², P.A. Wilderer¹, M. Lebuhn¹
¹ Technical University of Munich, Germany; ² Bavarian State Research Center for Agriculture, Germany; ³ University of Leipzig, Germany
- PS-II.061** Technical and Economic Feasibility of Manure Treatment with Low Temperature Anaerobic Digestion
D. Hodgkinson¹, C. Liu², M. Kubinec²
¹ Bio-Terre Systems Inc., Canada; ² DGH Engineering Ltd., Canada
- PS-II.062** Effect of Shear Rate on Hydrodynamics, Performance, and Microbial Community Dynamics for an Anaerobic Digester Treating Cow Waste
R. Hoffmann, R. Varma, M. Veskiar, K. Karim, M.H. Al-Dahhan, L.T. Angenent
Washington University, USA
- PS-II.063** Co-Digestion of Animal Wastes: Batch Studies
N. Intrachandra
Mahanakorn University of Technology, Thailand

- PS-II.064** Anaerobic Digestion of Agricultural Wastes as an Eco-Friendly Technique to Minimize the Environmental Pollution While Producing Biogas as an Alternative Energy Source and Residues as Fertilizer
G.Y. Jayasinghe, K.D.N. Weerasinghe, H.M.C.K. Bandara
University of Ruhuna, Sri Lanka
- PS-II.065** Comparison of Operational Characteristics of Anaerobic Bioreactors in Treating Swine Wastewaters
J.S. Kim¹, W.T. Shin²
¹ Sun Moon University, Korea; ² Korea Science and Engineering Foundation, Korea
- PS-II.066** Pilot Scale Two-Stage Anaerobic Digestion of Energy Crops
A. Lehtomäki^{1,2}, K. Christensson², L. Björnsson²
¹ University of Jyväskylä, Finland; ² Lund University, Sweden
- PS-II.067** Producing Energy and Soil Amendment from Combined Agricultural Waste
M. Macias-Corral, Z. Samani, A. Hanson, R. DelaVega
New Mexico State University, USA
- PS-II.068** A Revolution in Anaerobic Digestion
C. Maltin
Organic Power Ltd., UK
- PS-II.069** Anaerobic Mesophilic Treatment of Cattle Manure in a UASB Reactor with Prior Pasteurization
E. Marañón, L. Castrillón, J.J. Fernández, A.I. Peláez, J. Sánchez
University of Oviedo, Spain
- PS-II.070** Isolation and Characterization of an Obligate Anaerobic Naringinolytic *Clostridium* sp. LU-NL from Cow Rumen
S. Marichamy, B. Mattiasson
Lund University, Sweden
- PS-II.071** Port of Tillamook Bay Regional Digester
M. Moser, D. Salour
RCM Digesters, Inc., USA
- PS-II.072** Recycling of Manure Nutrients: Treatment of Anaerobically Digested Dairy Manure with Freshwater Algae
E. Westhead¹, C. Pizarro¹, W. Mulbry¹, A.C. Wilkie²
¹ USDA/ARS, USA; ² University of Florida, USA
- PS-II.073** An Evaluation of the Sustainability of the Anaerobic Digestion of Manure
C.N. Mulligan
Concordia University, Canada

- PS-II.074** Effect of Protein and Ammonia Pulses on the Biogas Process
H.B. Nielsen, B.K. Ahring
Technical University of Denmark, Denmark
- PS-II.075** Overcoming Stratification Problem During Anaerobic Digestion of Cattle-Manure Slurry in an Unmixed, Single-Stage Digester
H.K. Ong¹, P.F. Greenfield², P.C. Pullammanappallil³
¹ Malaysian Agricultural Research and Development Institute, Malaysia; ² The University of Queensland, Australia; ³ Murdoch University, Australia
- PS-II.076** Energy Production from Agricultural Residues: High Methane Yields in Pilot-Scale Two-Stage Anaerobic Digestion
W. Parawira^{1,2}, J.S. Read³, L. Björnsson¹, B. Mattiasson¹
¹ Lund University, Sweden; ² University of Zimbabwe, Zimbabwe; ³ NUST, Zimbabwe
- PS-II.077** Bioenergy Conversion of Cow Manure
D.L. Parry¹, J. Cole², J. Barra³, B. Barney³, B. McCarthy⁴
¹ Camp Dresser & McKee, USA; ² Konstrukt, USA; ³ Portland General Electric, USA; ⁴ Brown and Caldwell, USA
- PS-II.078** Biogas Production from Substrates with High Amounts of Organic Nitrogen
S. Prechtl, M. Faulstich
ATZ EVUS, Germany
- PS-II.079** Anaerobic Digestion in Two Phases of Citrus Solid Waste
L. Prévez Pascual, J.M. Ameneiro, C.M. Fernandez Kaba, G. Bango de Varona, M. Bello Alvarez
Research Institute on Tropical Fruits, Cuba
- PS-II.080** Comparative Treatment Study of Liquid Fraction from Dairy Cattle Manure in UASB Reactors with Flocculated and No Flocculated Biomass
J.L. Rico¹, H. García¹, P. García², C. Rico¹, V. González¹
¹ University of Cantabria, Spain; ² University of Valladolid, Spain
- PS-II.081** Biogas Production from Horticultural Wastes
F. Robles-Martínez, E. Durán-Páramo, M. Morales-Contreras
Unidad Profesional Interdisciplinaria de Biotecnología (UPIBI-IPN), Mexico
- PS-II.082** A Study of Three Thermophilic Anaerobic Digester Types with Poultry Substrate Feed
A. Saraswathy¹, D. Stafford², M. Chatfield¹, D. Huber¹
¹ West Virginia State University, USA; ² Enviro Control Ltd., UK
- PS-II.083** Digestion Gas Equalization Using Biomass of Aquatic Plants System in Advanced Wastewater Treatment Plant for Nutrients Removal
K. Sato¹, M. Minamiyama²
¹ Foundation of River & Watershed Environment Management, Japan; ² National Institute for Land and Infrastructure Management, Japan

- PS-II.084** Comparison of Anaerobic Digestion in Laboratory, Pilot and Full Scale Fermenters Loaded with Agricultural Substrates
*M. Schlattmann*¹, *M. Speckmaier*¹, *M. Lebuhn*², *A. Gronauer*¹
¹ *Bavarian State Research Center for Agriculture, Germany*; ² *Technical University of Munich, Germany*
- PS-II.085** Integrated Biological Treatment and Agricultural Reuse of Olive Mill Effluents with the Concurrent Recovery of Energy Sources (BIOTROLL)
I.V. Skiadas^{1,2}, *H.N. Gavala*^{1,2}, *G. Lyberatos*², *E. Pistikopoulos*³, *C. Ciavatta*⁴, *B.K. Ahring*¹
¹ *Technical University of Denmark, Denmark*; ² *University of Patras, Greece*; ³ *Imperial College of Science Technology and Medicine, UK*; ⁴ *University of Bologna, Italy*
- PS-II.086** Application of Phased Anaerobic Digestion for Animal Waste Management
*F. Soroushian*¹, *J. Gundlach*², *R. Sieger*¹, *B. Kitto*¹
¹ *CH2MHILL, Santa Ana, USA*; ² *Inland Empire Utilities Agency, USA*
- PS-II.087** Use of Anaerobic Plug Flow Biodigesters in Cuba's Guaniguanico Mountains
R. Sosa, R. Chao, A. Pérez, G. Cairo, A. García, M. Macías
Swine Research Institute, Cuba
- PS-II.088** The Important Control of Bacterial, Protozoal and Helminth Pathogens Using Thermophilic Anaerobic Digesters
*T. Ruhnke*¹, *D.A. Stafford*¹, *S. Wetzel*², *M. Easter*¹
¹ *West Virginia State College, USA*; ² *West Virginia Department of Agriculture, USA*
- PS-II.089** Utilization of Anaerobic Digestion Effluent of Swine Manure for Italian Ryegrass and Cabbage
*K. Suzuki*¹, *K. Haga*¹, *Y. Ikeuchi*², *M. Takeuchi*³, *M. Hara*³, *M. Wakita*²
¹ *National Institute of Livestock and Grassland Science, Japan*; ² *Mie University, Japan*; ³ *Mie Prefecture Science and Technology Promotion Center, Japan*
- PS-II.090** Study of the Stabilized Swine Residue for Agriculture
R. Dalla Costa, E.S. Cossich, C.R.G. Tavares
University State of Maringá, Brazil
- PS-II.091** Optimisation of the Co-Digestion of Waste at a Slaughterhouse Site by Dialysis-Based Ammonia Removal
*W. Platteau*¹, *D. Steenhoudt*¹, *J. Carpentier*¹, *I. De Bo*², *W. Verstraete*²
¹ *Hogeschool West-Vlaanderen, Belgium*; ² *Ghent University, Belgium*
- PS-II.092** Biogas Liberation Pattern from Cow Dung, Refuses of Vegetable Markets and Paddy Straw When Subjected to Biomethanation
K.D.N. Weerasinghe, G.Y. Jayasinghe, S. Wijethunga, S.R.W. Pathiranage, S. De Silva, H.M.C.K. Bandara
University of Ruhuna, Sri Lanka

- PS-II.093** Anaerobic Digestion of Dairy Manure with Fungal Cellulase Treatment
*Z. Wen*¹, *G.N. Demirer*², *W. Liao*¹, *S. Chen*¹
¹ *Washington State University, USA*; ² *Middle East Technical University, Turkey*
- PS-II.094** Anaerobic Digestion of Aqua-Plant in a Rumen Reactor
Z.-H. Hu, H.-Q. Yu
University of Science & Technology of China, China
- PS-II.095** Microbial Technology to Enhance Biogas Production at Low Temperature from Cattle Dung
T.Y. Yeole, N.S. Deshmukh, S. Patil, K.L. Lapsiya, D.R. Ranade
Agharkar Research Institute, India

Wednesday, September 1, 2004

- 07:30-18:30** Registration
Foyer – Level 1
- 08:30-09:00** **Keynote Lecture 4:** Microbial Community Structure of Anaerobic Granules by Molecular Tools
H. Harada, Nagaoka University of Technology, Japan
Auditorium Le Grand Salon
- 09:00-09:30** **Keynote Lecture 5:** Anaerobic Digestion: Impact of Future GHG Mitigation Policies on Methane Generation and Usage
P.F. Greenfield, University of Queensland, Australia
Auditorium Le Grand Salon
- 09:30-10:00** **Keynote Lecture 6:** Life Cycle Analysis of Municipal Organic Waste Management: Landfill Versus Bioreactor
R. Samson, École Polytechnique de Montréal, Canada
Auditorium Le Grand Salon
- 10:00-10:30** Coffee Break / Exhibition / Posters
Foyer – Levels 3 and 4

10:30-12:10	Session 6A: Sludge II Auditorium I	Session 6B: Hydrogen I Auditorium II	Session 6C: Organic Municipal Solid Wastes III Salon Cartier I-II	Session 6D: Industrial Wastewater I Salon International I-II
10:30-10:50	<p>Oxidative and Thermo-Oxidative Co-Treatment with Anaerobic Digestion of Excess Municipal Sludge</p> <p><i>J.A. Cacho Rivero¹, N. Madhavan¹, M.T. Suidan¹, P. Ginestet², J.-M. Audic²</i></p> <p>¹ University of Cincinnati, USA; ² CIRSEE, SUEZ, France</p>	<p>Suppression of Hydrogen Consuming Bacteria in Order to Increase H₂ Production Potential in Anaerobic Fermentation</p> <p><i>W.S. Park, M.H. Hwang, S.H. Hyun, I.S. Kim</i></p> <p><i>Gwangju Institute of Science and Technology, Korea</i></p>	<p>Leachate Pre-Treatment Strategies Before Recirculation in Landfill Bioreactors</p> <p><i>V. Vigneron¹, T. Bouchez¹, C. Bureau¹, N. Mailly¹, L. Mazeas¹, C. Duquennoi¹, J.M. Audic², I. Hébé³, N. Bernet⁴</i></p> <p>¹ Cemagref, France; ² Cirsee, France; ³ Ademe, France; ⁴ Inra-LBE, France</p>	<p>Influence of the Antibiotic Erythromycin on Anaerobic Treatment of a Pharmaceutical Wastewater</p> <p><i>M. Amin¹, J. Zilles¹, J. Greiner², S. Charbonneau², L. Raskin¹, E. Morgenroth¹</i></p> <p>¹ University of Illinois at Urbana-Champaign, USA; ² Abbott Laboratories, USA</p>
10:50-11:10	<p>Hydrolytic Activity of Alpha-Amylase in Anaerobic Digestion Sludge</p> <p><i>Y. Higuchi, H. Imachi, A. Ohashi, H. Harada</i></p> <p><i>Nagaoka University of Technology, Japan</i></p>	<p>Biohydrogen Production Behaviour and Molecular Characterization of a New Species of Anaerobic Bacterium</p> <p><i>Y. Li¹, N. Ren¹, C. Yang², Ying Chen¹, J. Li¹, G. Zheng¹</i></p> <p>¹ Harbin Institute of Technology, China; ² University of Northeast Forestry, China</p>	<p>Evaluation of Anaerobic Process Configuration on Food Waste and Municipal Solid Waste</p> <p><i>T.D. DiStefano¹, R.E. Speece², M. Hnatin³</i></p> <p>¹ Bucknell University, USA; ² Vanderbilt University, Nashville, USA; ³ Lycoming County Resources Management Services, Inc., USA</p>	<p>Anaerobic Biodecolorization of Textile Reactive Anthraquinone and Phthalocyanine Dye baths Under Hypersaline Conditions</p> <p><i>S.G. Pavlostathis¹, Y.H. Lee², R.D. Matthews³</i></p> <p>¹ Georgia Institute of Technology, USA; ² University of Maryland, USA; ³ Boyle Engineering Corporation, USA</p>
11:10-11:30	<p>Self-Sustainable and Integrated System for Sewage Treatment and Thermal Hygienization of Sludge</p> <p><i>C.A.L. Chernicharo¹, E.S.M. Borges¹, P.P. Pontes², E.C. Frade¹, V.M. Godinho¹</i></p> <p>¹ Federal University of Minas Gerais, Brazil; ² Federal Centre for Technological Education of Minas Gerais, Brazil</p>	<p>Biological Production of Hydrogen-Methane Mixtures for Clean Electricity</p> <p><i>J.R. Benemann^{1,2}, C.M. Cannizzaro², M. Cooney²</i></p> <p>¹ Benemann Associates, USA; ² University of Hawaii, USA</p>	<p>Response of a UASB Treating Landfill Leachate to Hydraulic Overload</p> <p><i>R.L. Droste, T. Gabr, K.J. Kennedy</i></p> <p><i>University of Ottawa, Canada</i></p>	<p>Feasibility of Refinery Effluents Treatment in UASB Reactors</p> <p><i>F. Ghavipanjeh, J. Shayegan Sharif</i></p> <p><i>University of Technology, Iran</i></p>

11:30-11:50	<p>The Effects of Hydraulic Retention Time and Feed COD Concentration on the Rate of Hydrolysis of Primary Sewage Sludge <i>N.E. Ristow, S.W. Sötemann, M.C. Wentzel, R.E. Loewenthal, G.A. Ekama</i> <i>University of Cape Town, South Africa</i></p>	<p>Biological Hydrogenogenic Carbon Monoxide Conversion at Elevated Temperatures with an Application in Biotechnological Desulfurization <i>J. Sipma, P.N.L. Lens, S.N. Parshina, A.J.M. Stams, G. Lettinga</i> <i>Wageningen University, The Netherlands</i></p>	<p>Anaerobic Digestion of Municipal Solid Waste - Main Reasons of the Recent Growing Industrial Application in Europe <i>C. Saint-Joly¹, J.F. Bourgoin²</i> ¹ <i>Valorga International SAS, France;</i> ² <i>EcoAction, France</i></p>	<p>Autotrophic Denitrification for Hydrogen Sulfide Removal from Petrochemical Wastewater <i>P. Melidis, E. Vaiopoulou, A. Aivasidis</i> <i>Democritus University of Thrace, Greece</i></p>
11:50-12:10	<p>Full-Scale Application of Anaerobic Digestion Process with Partial Ozonation of Digested Sludge <i>H. Yasui¹, K. Komatsu¹, R. Goel¹, Y.Y. Li², T. Noike²</i> ¹ <i>Kurita Water Industries, Japan;</i> ² <i>Tohoku University, Japan</i></p>	<p>Fermentative Hydrogen Production in a System Using Anaerobic Digester Sludge Without Heat-Treatment as a Biomass Source <i>I. Shizas, D.M. Bagley</i> <i>University of Toronto, Canada</i></p>	<p>A Hybrid Anaerobic Solid-Liquid (HASL) System for Food Waste Digestion <i>J.Y. Wang, H. Zhang, O. Stabnikova, S.S. Ang, J.H. Tay</i> <i>Nanyang Technological University, Singapore</i></p>	<p>Anaerobic Biodegradation of Acetoxime and the Effect of GAC Addition <i>P. Mijaylova Nacheva, L. Roman Salgado</i> <i>Mexican Institute of Water Technology, Mexico</i></p>
12:10-14:15	<p>Lunch Salon Mont-Royal I-II</p> <p>Exhibition Foyer – Level 3</p> <p>Poster Session III Foyer – Level 4</p>			
14:15-17:15	<p>Workshop III: Bioreactor Landfill vs. Industrial Anaerobic Digestion for Municipal Solid Waste (MSW) Salon International I-II</p>			

14:15-15:35	Session 7A: Sludge III Auditorium I	Session 7B: Hydrogen II Auditorium II	Session 7C: Bioremediation II Salon Cartier I	Session 7D: Industrial Wastewater II Salon Cartier II
14:15-14:35	<p>Enhanced Anaerobic Bioconversion of WWTP Sludge: An Efficient Way to Reduce Sludge Production <i>S. Graja¹, J. Chauzy¹, P. Fernandes¹, L. Patria¹, D. Cretenot²</i> ¹ Anjou Recherche, France; ² Veolia Water Systems, France</p>	<p>Development of an Innovative Two-Stage Process, a Combination of Acidogenic Hydrogenesis and Methanogenesis <i>S.-K. Han, H.-S. Shin</i> Korea Advanced Institute of Science and Technology, Korea</p>	<p>Long Term Evolution of an Anaerobic Fluidized Bed Reactor Treating Trichlorophenol <i>P.A. García-Encina, A. Vallecillo, M. Peña Miranda</i> University of Valladolid, Spain</p>	<p>An Anaerobic Fixed Bed Ultrafiltration Membrane Bioreactor for the Treatment of Wastewater from Milk Processing Industries: Responses Under Organic Shock Loadings <i>J.L. Böhm, L. Larpin, A. Charef, D. Hennequin, D. Barillier</i> Université de Caen, France</p>
14:35-14:55	<p>Membrane-Coupled Anaerobic Digestion of Municipal Sewage Sludge <i>A. Pierkiel, J. Lanting</i> Biothane Corporation, USA</p>	<p>Start-Up of Hydrogen Bio-Production Reactor Seeded with Sewage Sludge and its Microbial Community Dynamics <i>N.Q. Ren, M.L. Gong, D.F. Xing</i> Harbin Institute of Technology, China</p>	<p>Benzene Biodegradation Using an Anaerobic Column Coupled to Mn(IV) Reduction <i>W.R. Villatoro-Monzón^{1,2}, E.K. Velásquez-Mejía¹, M.G. Morales-Ibarria¹, E. Razo-Flores^{1,3}</i> ¹ Instituto Mexicano del Petróleo, Mexico; ² Escuela Nacional de Ciencias Biológicas, Mexico; ³ Instituto Potosino de Investigación Científica y Tecnológica, Mexico</p>	<p>Anaerobic Digestion of Spent Wash by Hybrid and UASB Reactors <i>Sunil K. Gupta, Sudhir K. Gupta</i> Indian Institute of Technology, India</p>
14:55-15:15	<p>Effects of Temperature Increases on Odor Production from Thermophilic Anaerobic Digestion <i>R.J. Kearney, F. Alatrliste-Mondragon, H.H.J. Cox, R. Iranpour</i> Hyperion Plant/TSF, USA</p>	<p>A Mixture Design Approach to Hydrogen-Producing Anaerobes Using Molasses <i>C.-H. Chau, J.-J. Lay</i> National Kaohsiung First University of Science and Technology, Taiwan</p>	<p>Benzene and Ethylbenzene Removal by Denitrifying Culture in a Horizontal Fixed Bed Anaerobic Reactor <i>V.R. Gusmão, F.A. Chinalia, I.K. Sakamoto, S.H. Cruz, O.H. Thiemann, M.B.A. Varesche</i> Universidade de São Paulo, Brazil</p>	<p>Microbial Sulphate Reduction During Anaerobic Digestion: EGSB Process Performance and Potential for Nitrite Suppression of SRB Activity <i>C. O'Reilly, E. Colleran</i> National University of Ireland, Ireland</p>

15:15-15:35	Modeling a Full-Scale Anaerobic Digester <i>U.G. Ozkan Yucel, C.F. Gokcay</i> <i>Middle East Technical University, Turkey</i>	Effect of Iron Concentration on Hydrogen-Producing Capacity of Mixed Culture in Acidogenic-Phase Reactor <i>N.Q. Ren¹, J. Ding¹, A.J. Wang¹, L. Ding², Y.N. Wu¹</i> <i>¹ Harbin Institute of Technology, China; ² Jilin University, China</i>	Anaerobic Biodegradability of Tween Surfactants Used as Carbon Source for the Microbial Reductive Dechlorination of Hexachlorobenzene <i>D.H. Yeh¹, S.G. Pavlostathis²</i> <i>¹ Stanford University, USA; ² Georgia Institute of Technology, USA</i>	Anaerobic Whey Treatment by a Stirred Sequencing Biofilm Batch Reactor (ASBBR): Effects of Organic Loading and Supplemented Alkalinity <i>G. Mockaitis¹, S.M. Ratusznei¹, J.A.D. Rodrigues¹, M. Zaiat², E. Foresti²</i> <i>¹ Instituto Mauá de Tecnologia, Brazil; ² Universidade de São Paulo, Brazil</i>
15:35-16:00	Coffee Break / Exhibition / Posters Foyer – Levels 3 and 4			
16:00-17:40	Session 8A: Sludge IV Auditorium I Chaired by: <i>H. Siegrist, D.C. Peng</i>	Session 8B: Hydrogen III Auditorium II Chaired by: <i>D.L. Hawkes, N.Q. Ren</i>	Session 8C: Bioremediation III Salon Cartier I Chaired by: <i>J.A. Field, C.N. Mulligan</i>	Session 8D: Post-Treatment Salon Cartier II Chaired by: <i>A. van Haandel, K. Singh</i>
16:00-16:20	Anaerobic Digestion of Secondary Sludge: Effect of Pretreatment and Post Treatment with the Presence of Xenobiotics <i>M. Fountoulakis, K. Stamatelatou, H.N. Gavala, I.V. Skiadas, A. Kampioti, G. Lyberatos</i> <i>University of Patras, Greece</i>	Continuous Hydrogen Production from Organic Waste <i>T. Noike¹, I.B. Ko², S. Yokoyama³, Y. Kohno⁴, Y.Y. Li¹</i> <i>¹ Tohoku University, Japan; ² Cheju National University, Korea; ³ Sanki Engineering CP., LTD., Japan; ⁴ EX CORPORATION City & Environment Planning, Research, Japan</i>	Reductive Decolourisation of Azo Dyes by Mesophilic and Thermophilic Methanogenic Consortia <i>F.J. Cervantes¹, A.B. dos Santos², M.P. de Madrid², A.J.M. Stams², J.B. van Lier²</i> <i>¹ Instituto Tecnológico de Sonora, Mexico; ² Wageningen University, The Netherlands</i>	Thermocatalytic Reactor to Convert Organic Residues from Wastewater Treatment and Rendering Plants to Bio-Fuels and Chemicals <i>E.A. Stadlbauer¹, S. Bojanowski¹, A. Fiedler¹, J. Hoogveldt¹, J. Rossmann¹, G. Schilling², A. Frank³, R. Lausmann³</i> <i>¹ University of Applied Sciences, Germany; ² University of Heidelberg, Germany; ³ W+F Grimmel Wassertechnik, Germany</i>

16:20-16:40	<p>Acetoclastic and Hydrolytic Activity in Anaerobic Digestion – Keys to Process Stability <i>A.S. Conklin¹, J.D. Zahller¹, R.H. Bucher², H.D. Stensel¹, J.F. Ferguson¹</i> ¹ University of Washington, USA; ² King County Department of Natural Resources and Parks, USA</p>	<p>Fermentative Hydrogen Production from Energy Crops and Food Processing Co-Products <i>I. Hussy, F.R. Hawkes, R. Dinsdale, D.L. Hawkes, G.C. Premier, A.J. Guwy</i> University of Glamorgan, UK</p>	<p>Anaerobic Degradation of Phthalic Acid Esters in Sewage Sludge <i>N. Christensen, C. Wang, D.J. Batstone, I. Angelidaki, J.E. Schmidt</i> Technical University of Denmark, Denmark</p>	<p>A Low-Cost Municipal Sewage Treatment System with a Combination of UASB and the “Fourth Generation” Downflow Hanging Sponge (DHS) Reactors <i>M. Tandukar¹, S. Uemura², I. Machdar¹, A. Ohashi¹, H. Harada¹</i> ¹ Nagaoka University of Technology, Japan; ² Kisarazu National College of Technology, Japan</p>
16:40-17:00	<p>Effect of Biological Additives and Micronutrients on the Anaerobic Digestion of Physicochemical Sludge <i>A. Noyola, A. Tinajero</i> National Autonomous University of Mexico (UNAM), Mexico</p>	<p>Influences of pH and Hydraulic Retention Time on Anaerobes Converting Beer Processing Wastes Into Hydrogen <i>J.J. Lay¹, C.J. Tsai¹, C.C. Huang², J.J. Chang², C.H. Chau¹, K.S. Fan¹, J.I. Chang¹, P.C. Hsu¹</i> ¹ National Kaohsiung First University of Science and Technology, Taiwan; ² National Chung Hsing University, Taiwan</p>	<p>A Case Study on the Behaviour of Selected Micropollutants During Anaerobic Sludge Digestion <i>M. Clara¹, B. Strenn¹, C. Fimml², E. Martinez¹, N. Kreuzinger¹</i> ¹ University of Technology, Austria; ² Abwasserverband Achenal-Inntal-Zillertal, Austria</p>	<p>Assessment of Electrochemical and Chemical Coagulation as Post Treatment for the Effluents of a UASB Reactor Treating Cellulose Pulp Mill Wastewater <i>A.P. Buzzini, A.J. Motheo, E.C. Pires</i> Universidade de São Paulo, Brazil</p>
17:00-17:20	<p>Biomass Characterization in UASB Reactors Used for Combined Treatment of Domestic Sewage and Excess Aerobic Sludge Produced in Trickling Filters <i>P.P. Pontes¹, C.A.L. Chernicharo², J.B.A. Miranda², R.M. Oliveira²</i> ¹ Federal Centre for Technological Education of Minas Gerais, Brazil; ² Federal University of Minas Gerais, Brazil</p>	<p>Hydrogen Generation via Anaerobic Fermentation of Paper Mill Wastes <i>I. Valdez-Vazquez¹, R. Sparling², D. Risbey², N. Rinderknecht-Seijas³, H.M. Poggi-Varaldo¹</i> ¹ CINESTAV-IPN, Mexico; ² University of Manitoba, Canada; ³ ESIQUE-IPN, Mexico</p>	<p>Thermophilic Treatment by Anaerobic Granular Sludge as an Effective Approach to Accelerate the Electron Transfer and Improve Decolourisation Rates in Bioreactors <i>A.B. dos Santos¹, J. Traverse¹, F.J. Cervantes², J.B. van Lier¹</i> ¹ Wageningen University, The Netherlands; ² Instituto Tecnológico de Sonora, Mexico</p>	<p>Treatment of Municipal Wastewater UASB Reactor Effluent by Unconventional Flotation and UV Disinfection <i>F. Tessele, L.O. Monteggia, J. Rubio</i> Universidade Federal do Rio Grande do Sul, Brazil</p>

17:20-17:40	The Effect of Shear Power on Anaerobic Sewage Sludge Digestion: A Pilot Study <i>A. Pierkiel, J. Lanting Biothane Corporation, USA</i>	Biological Hydrogen Production from Phytomass <i>J. Bartacek, J. Zabranska Institute of Chemical Technology, Czech Republic</i>	Monitoring Anaerobic Digestion Process of Pentachlorophenol (PCP) Degradation by Natural Sediments from a Very Polluted Estuarine Area of Brazil, in Order to Assist Anaerobic Remediation Strategy <i>F.T. Saia¹, C.R. Nakayama¹, M.B.A. Varesche¹, G.P. Manfio², R.F. Vazoller¹ ¹ Universidade de São Paulo, Brazil; ² State University of Campinas, Brazil</i>	Combined Biological and Physico-Chemical Treatment of Baker's Yeast Wastewater <i>S. Kalyuzhnyi¹, M. Gladchenko¹, E. Starostina², S. Shcherbakov², A. Versprille³ ¹ Moscow State University, Russia; ² Moscow State University of Food Industry, Russia; ³ Biothane Systems International, The Netherlands</i>
17:40-18:30	Exhibition / Posters Foyer – Levels 3 and 4			

Poster Session III

PS-III.001	Detection and Quantification of Methanogenic Bacteria in Anaerobic Fermenters Using Specific Oligonucleotide Probes <i>H. Arab, P.A. Wilderer Institute of Water Quality Control and Waste Management, Germany</i>
PS-III.002	Quantification of <i>Methanosaeta thermophila</i> During a Start-Up of Thermophilic UASB by Real-Time PCR <i>N. Araki¹, T. Tagawa², T. Yamaguchi³, H. Harada⁴ ¹ Nagaoka National College of Technology, Japan; ² Shinko Pantec Co., Ltd., Japan; ³ Kure National College of Technology, Japan; ⁴ Nagaoka University of Technology, Japan</i>
PS-III.003	Isolation of Sulfate-Reducing Bacteria from an Anaerobic Reactor Fed with Industrial Wastewater Using F.I.S.H. <i>P. Bajo¹, M.C. García-González¹, J.L. Sanz², P.A. García-Encina¹ ¹ University of Valladolid, Spain; ² Universidad Autónoma de Madrid, Spain</i>
PS-III.004	Archaeal Diversity in a Full-Scale Anaerobic Reactor Using 16s rDNA Based Techniques <i>O. Ince¹, A.T. Akarsubasi², N. Ayman Oz², O. Yenigun², O. Eyice¹, B. Kasapgil Ince² ¹ Istanbul Technical University, Turkey; ² Bogazici University, Turkey</i>
PS-III.005	PCR-Based DGGE Fingerprinting and Identification of 'Eubacteria' Present in Four Different UASB Granules <i>M. Keyser, R.C. Witthuhn, T.J. Britz Stellenbosch University, South Africa</i>

- PS-III.006** Applicability of Catalyzed Reporter Deposition and Fluorescence In Situ Hybridization (CARD-FISH) for Visualization of Methanogens
K. Kubota, A. Ohashi, H. Imachi, H. Harada
Nagaoka University of Technology, Japan
- PS-III.007** Updating and Optimisation of Oligonucleotide Probes Used for Fluorescence *In Situ* Hybridisation of Methanogens
M. Murto¹, G. Crocetti², L. Björnsson¹
¹ Lund University, Sweden; ² The University of New South Wales, Australia
- PS-III.008** Microbial Community Structure Evaluation in a UASB Reactor, Treating Black Liquor, by Denaturing Gradient Gel Electrophoresis Technique
I.K. Sakamoto, A.P. Buzzini, E.C. Pires, M.B. Varesche
Universidade de São Paulo, Brazil
- PS-III.009** Analysis of Methanogen Community Structure During Residential Food Waste Decomposition in a Simulated Landfill
B.F. Staley, M.A. Barlaz, F.L. de los Reyes III
North Carolina State University, USA
- PS-III.010** Utilisation of Molecular Biology Technologies to Study the Bacterial Populations in Swine Manure Anaerobic Digesters
G. Talbot, C. Roy, E. Topp, M.-F. Palin, D. Massé
Agriculture and Agri-Food Canada, Canada
- PS-III.011** An Anaerobic Fixed Bed Reactor with Cloisonyl: Study of the Colonisation of the Support and Microbial Monitoring Using Molecular Tools
P. Ouichanpagdee^{1,2}, M. Torrijos¹, P. Sousbie¹, E. Zumstein¹, J.J. Godon¹, R. Moletta¹
¹ INRA, France; ² Chiang Mai University, Thailand
- PS-III.012** Evaluation of Sulfidogenic Biofilm Microbial Consortia by Fluorescence *In Situ* Hybridization
J.S. Hirasawa, A.J. Silva, M. Zaiat, E. Foresti, M.B.A. Varesche
Universidade de São Paulo, Brazil
- PS-III.013** Image Analysis to Quantify Morphological Changes in Granular Sludge Induced by Nitrate in EGSB Reactors
P. Araya Kroff¹, A.L. Amaral², M. Mota¹, E.C. Ferreira¹, M.M. Alves¹
¹ Universidade do Minho, Portugal; ² present address: Instituto Politécnico de Bragança, Portugal
- PS-III.014** Exopolymeric Proteins Related to Sludge Settleability in a Denitrifying System
F.M. Cuervo-López, J. Gómez
Universidad Autónoma Metropolitana-Iztapalapa, Mexico
- PS-III.015** Relationship Between the Exopolymeric Substances of a Nitrifying Sludge in Presence of Organic Matter and its Settleability
O.F. Martínez, F.M. Cuervo-López, J. Gómez
Universidad Autónoma Metropolitana-Iztapalapa, Mexico

- PS-III.016** Bioreactor for Mass Culturing of UASB Granules in Twenty Days
E.R. Els, P.J. Van Zyl, T.J. Britz
University of Stellenbosch, South Africa
- PS-III.017** Anaerobic Biofilm Behaviour on Glass and Polyethylene Supports During the Start Up of Inverse Fluidized Bed Reactors
E. Houbron¹, A. Alvarado-Lassman², J.C. Ramirez¹, E. Rustrian¹
¹ Universidad Veracruzana, Mexico; ² Instituto Tecnológico de Orizaba, Mexico
- PS-III.018** Development of the Novel Method on Short-Term Granule Formation in UASB Process
T. Imai¹, M. Arakane¹, M. Ukita¹, M. Sekine¹, T. Higuchi¹, M. Fukagawa²
¹ Yamaguchi University, Japan; ² Ube National College of Technology, Japan
- PS-III.019** Microbiological and Structural Characteristics of Fixed and Granular Biofilms in Psychrophilic Anaerobic Bioreactors Treating Whey Wastewater
A. Kearney, V. O'Flaherty
National University of Ireland, Ireland
- PS-III.020** Positioning of *Methanosaeta* and *Methanosarcina* sp. Within the Microstructure of Carbohydrate-Fed Anaerobic Granules
M.-J. Lévesque, S.R. Guiot
National Research Council Canada, Canada
- PS-III.021** Hydrophobicity and Surface Tension Effect in Anoxic Sludge Flotation
M. Passeggi, L. Borzacconi
Universidad de la República, Uruguay
- PS-III.022** Aggregation of Hydrolytic/Acidogenic Biomass in Psychrophilic Conditions
P. Poirrier, J.M. Lema
University of Santiago de Compostela, Spain
- PS-III.023** Comparison of Granulation Enhancement in Different Substrates
W. Zhou, T. Imai, D. Arai, M. Ukita
Yamaguchi University, Japan
- PS-III.024** Psychrophilic Anaerobic Treatment of Phenolic and Chloroaromatic Wastewaters: Feasibility and Process Technology
G. Collins, V. O'Flaherty
National University of Ireland, Ireland
- PS-III.025** Toluene Mineralization by Denitrification in a Continuous Culture
S. Martínez, F.M. Cuervo-López, J. Gómez
Universidad Autónoma Metropolitana-Iztapalapa, Mexico

- PS-III.026** Evaluation of the Denitrification of a Mixture of Benzene, Toluene and *m*-Xylene
A. Peña-Calva, A. Olmos, F.M. Cuervo López, J. Gómez
Universidad Autónoma Metropolitana-Iztapalapa, Mexico
- PS-III.027** Phenol and Trichlorophenol Removal in a Fluidized Bed Bioreactor Under Methanogenic and Partially-Aerated Methanogenic Conditions
C. Garibay-Orijel, C. Estrada-Vázquez, E. Ríos-Leal, H.M. Poggi-Varaldo
CINVESTAV-IPN, Mexico
- PS-III.028** Biodegradation of Diesel Fuel in Soil by Bioaugmentation of Anaerobic Digested Sludge
H.C. Park, Y.O. Kim, S.Y. Choi, T.J. Park, T.H. Lee
Pusan National University, Korea
- PS-III.029** Biodegradation of the Micro-Pollutants in the Mesophilic and Thermophilic Anaerobic Sewage Sludge Digestion
T. Benabdallah, J. Dosta, J. Mata-Alvarez
University of Barcelona, Spain
- PS-III.030** Effect of Biosurfactants on the Biodegradation of Naphthalene in Sediments Under Anaerobic Conditions
P.K. Mohan, G. Nakhla, E.K. Yanful
University of Western Ontario, Canada
- PS-III.031** Advantages of Using Sequential Loading/Degradation Steps for the Anaerobic Mineralization of Long Chain Fatty Acids
M.A. Pereira, M. Mota, M.M. Alves
Universidade do Minho, Portugal
- PS-III.032** Estimation of Potential Biodegradation Kinetics of BTX and Microbial Diversity in Anaerobic Fixed-Bed Reactor Treating Contaminated Groundwater
F.A. Chinalia, R. Ribeiro, M.R. Domingues, M.B.A. Varesche, E. Foresti, M. Zaiat
Universidade de São Paulo, Brazil
- PS-III.033** Feasibility of Benzene Degradation in an Anaerobic Sequencing Batch Biofilm Reactor (ASBBR)
R. Ribeiro, S.C. Pinho, D.A. Souza, E. Foresti, M. Zaiat
Universidade de São Paulo, Brazil
- PS-III.034** Anaerobic Treatment and Co-Digestion for Recalcitrant Compound Recovery and Reuse of Secondary Pharmaceutical Sludge in a Fluidized Bed Reactor
R. Saravanane¹, V. Murugaiyan¹, M.A. Sivasankaran¹, R. Sivacoumar²
¹ Pondicherry Engineering College, India; ² National Environmental Engineering Research Institute, India
- PS-III.035** Effects of Temperature and Hydraulic Retention Time on Anaerobic Degradation of Xenobiotic Compounds in Stirred Tank Reactors
J.E. Schmidt, D.J. Batstone, N. Christensen
Technical University of Denmark, Denmark

- PS-III.036** Removal of Benzene and Toluene in Horizontal-Flow Anaerobic Immobilized Biomass Reactor (HAIBR) in the Presence of Sulfate
E.B.M. Cattony, F.A. Chinalia, M.A.T. Adorno, E.M. Moraes, M. Zaiat, E. Foresti, M.B.A. Varesche
Universidade de São Paulo, Brazil
- PS-III.037** Anaerobic Degradation of Benzoate by Sulfate-Reducing Bacteria
S.P. Silva, M.A.T. Adorno, E.M. Moraes, M.B.A. Varesche
Universidade de São Paulo, Brazil
- PS-III.038** A Review on Methanogenic-Denitrification Bioreactors for the Removal of Recalcitrant and Chlorinated Organic Pollutants
P. Zárate-Segura¹, N. Rinderknecht-Seijas², B.K. Ahring³, J.L. Sanz⁴, H.M. Poggi-Varaldo¹
¹CINVESTAV del IPN, Mexico; ²ESIQIE-IPN, Mexico; ³Technical University of Denmark, Denmark; ⁴Universidad Autónoma de Madrid, Spain
- PS-III.039** Perchloroethylene Removal in Two Continuous Methanogenic Systems
P. Zárate-Segura¹, E. Ríos-Leal¹, F. Esparza-García¹, J.L. Sanz², M. Zaiat³, H.M. Poggi-Varaldo¹
¹CINVESTAV del IPN, Mexico; ²Universidad Autónoma de Madrid, Spain; ³Universidade de São Paulo, Brazil
- PS-III.040** Influence of the Syntrophic Growth of Methanogens and Acetogens on the VFA Composition in Primary Sludge Fermentation Processes
A. Bouzas¹, J. Ribes², A. Seco¹, J. Ferrer²
¹Universitat de València, Spain; ²Universidad Politécnica de Valencia, Spain
- PS-III.041** Fate of Pharmaceuticals and Personal Care Products (PPCPs) During Anaerobic Treatment of Sewage Sludge
M. Carballa¹, F. Omil¹, J.M. Lema¹, T. Ternes²
¹University of Santiago de Compostela, Spain; ²Bundesanstalt für Gewässerkunde, Germany
- PS-III.042** Solubilization of Extracellular Polymers (EPS) Fractions of Anaerobic Sludge by Alkaline Hydrolysis
S.T.A. Cassini, M.C.F.E. Andrade, L.M. Lube, R.F. Gonçalves
Universidade Federal do Espírito Santo, Brazil
- PS-III.043** Thermophilic and Mesophilic Anaerobic Co-Digestion of Primary Sludge (PS) and the Fruit and Vegetable Fraction of Municipal Solid Wastes (FVFMWS)
M.J. Cuetos, X. Gómez, D. Blanco, A.I. García, A. Morán
University of León, Spain
- PS-III.044** Municipal Sludge Degradation Kinetic
M.A. de la Rubia, M. Pérez, L.I. Romero, D. Sales
University of Cádiz, Spain
- PS-III.045** Digested Sludge's Poor Settleability After the Conversion to BPNR Process at the 500 ml/d Bonnybrook Wastewater Treatment Plant
P. Do, P.L. Amatya
City of Calgary, Canada

- PS-III.046** Anaerobic Sludge Digestion Seen as a System
C. Ferat-Toscano¹, G. Moeller-Chávez², J. Carrera-Bolaños¹
¹ Nacional Autonomous University, Mexico; ² Mexican Institute of Water Technology, Mexico
- PS-III.047** Effect of Chemical and Thermal Pretreatments on Mesophilic and Thermophilic Anaerobic Digestion of Excess Sludge
I. Ferrer, O. Fornés, M.A. Gordillo, X. Font
Universitat Autònoma de Barcelona, Spain
- PS-III.048** Training in the Operation of Bench Scale Mesophilic Anaerobic Sludge Digesters at OUC
G.Y. Fu, R.W. Engman
Okanagan University College, Canada
- PS-III.049** Biodegradation of Polydimethylsiloxanes in Anaerobic Digester Reactors
M. Haberbauer, R. Hopf, M. Gruber, F. Accettola
PROFACTOR Produktionsforschungs GmbH, Austria
- PS-III.050** High-Rate Anaerobic Co-Digestion of Food Waste and Pretreated Waste Activated Sludge for the Recovery of Biogas
N.H. Heo¹, S.H. Kim¹, S.C. Park², H. Kang³
¹ Halla Energy & Environment, Korea; ² Korea Institute of Energy Research, Korea; ³ Chungnam National University, Korea
- PS-III.051** Pilot-Scale Tests on Disinfection of Biosolids by Thermophilic Anaerobic Digestion at Hyperion Treatment Plant
R. Iranpour, H.H.J. Cox, F. Alariste-Mondragon, M. Starr
Hyperion Plant/TSF, USA
- PS-III.052** Effect of COD/Sulfate Ratio in Anaerobic Digestion of Waste-Activated Sludge
T.-Y. Jeong¹, G.-C. Cha¹, D.-J. Kim², I.-K. Yoo³
¹ Yonsei University, Korea; ² Hallym University, Korea; ³ Ulsan University, Korea
- PS-III.053** Anaerobic Co-Digestion of Malt House Wastes with Biowaste and Sewage Sludge
J.P. Karjalainen, M.A.-L. Kymäläinen, H.K. Kautola
Häme Polytechnic, Finland
- PS-III.054** Feasibility Study: Codigestion of Sewage Sludge with Source Selected Organic Waste on Two Wastewater Treatment Plants in Germany
M. Krupp, J. Schubert, R. Widmann
University of Duisburg-Essen, Germany
- PS-III.055** WITHDRAWN - Adsorption of Ammonium on Anaerobic Digested Sludge
V. Kuehn
Dresden University of Technology, Germany

- PS-III.056** Use of the Aerobic Waste Activated Sludge as Seed in Start-Up of Thermophilic and Mesophilic Anaerobic Digesters Fed with a Sewage Sludge
T.B. El-Hadj, J. Mata-Álvarez
University of Barcelona, Spain
- PS-III.057** Full-Scale Experience with Co-Digestion of Sewage Sludge and Concentrated Grease Trap Waste at wwtp Amersfoort
A. Mulder¹, J. Ebbenhorst², J.P.M. de Grauw³
¹ Amecon Environmental Consultancy, The Netherlands; ² Waterboard Vallei & Eem, The Netherlands; ³ Van der Velden Rioleringsbeheer Buren BV, The Netherlands
- PS-III.058** Anaerobic Co-Digestion of Sewage Sludge and Food Waste Using Two-Stage Anaerobic Sequencing Batch Reactor Processes
H.-W. Kim¹, S.-K. Han¹, B.-U. Bae², H.-S. Shin¹
¹ Korea Advanced Institute of Science and Technology, Korea; ² Daejeon University, Korea
- PS-III.059** Two-Phase (Acidogenic – Methanogenic) Anaerobic Sludge Digestion for Producing Class A Biosolids of Municipal Sludge Under Thermophilic and Mesophilic Conditions
L.A. Rubio, A. Noyola
National Autonomous University of Mexico, Mexico
- PS-III.060** Application of Different Disintegration Methods to Enhance the Degradation of Organic Solids in Digested Sewage Sludge
V. Parravicini, O. Nowak, K. Svardal, H. Kroiss
Vienna University of Technology, Austria
- PS-III.061** Anaerobic Hydrolysis of Municipal Primary Sludge to Produce External Carbon Sources for Nutrient Removal
D. Peng¹, Y. Wu¹, Z. Wang¹, R. Moletta²
¹ Xi'an University of Architecture and Technology, China; ² INRA-LBE, France
- PS-III.062** Anaerobic Degradation of Sewage Sludge Generated by the Waste Water Treatment Plant of the University of Castilla-La Mancha, Spain
L. Rodríguez Mayor, F.J. Fernández Morales, J. Villaseñor Camacho, I. Buendía Ucendo
University of Castilla-La Mancha, Spain
- PS-III.063** Anaerobic Digestion of Activated Sludges from Malting Wastewaters Industrial-Organic Agriculture Cooperation - 1^o Part: Laboratory Stage
H. Campaña, A.A. Basaglia
Universidad Tecnológica Nacional, Argentina
- PS-III.064** Investigation Into the Removal of Pathogens by Anaerobic Sludge Digestion from Ahvaz Sewage Sludge
N. Jafarzoadeh¹, A. Takdastan^{1,2}, L. Rezaei¹
¹ Ahvaz University, Iran; ² Tehran University, Iran

- PS-III.065** Anaerobic Digestion of the Solid Residues of the Swine's Production
R. Dalla Costa, E.S. Cossich, C.R.G. Tavares
University State of Maringá, Brazil
- PS-III.066** Feasibility of Anaerobic Digestion of Low Loaded Activated Sludge, a Case Study
M. Weemaes, B. De Deken, C. Thoeve, G. De Gueldre
Aquaflin NV, Belgium
- PS-III.067** Occurrence and Prevention of High VFAs in Temperature Phased Digestion
D.H. Zitomer¹, D.L. Lynch², J.S. Kemp³, F. Kade¹
¹ Marquette University, USA; ² City of Janesville, USA; ³ Earth Tech, USA
- PS-III.068** Use of Ozone as a Pre-Treatment to Eliminate Pectin Gelling from Fruit Processing Wastewaters Before Anaerobic Digestion
T.J. Britz, G.O. Sigge, N. Van Schalkwyk
University of Stellenbosch, South Africa
- PS-III.069** Application of Ultrasonic Technology for Anaerobic Digestion
V. de Silva¹, K. Nickel²
¹ Parsons, USA; ² WAVES Water & Environment Technologies, Germany
- PS-III.070** Effect of a Thermal Pre-Treatment and the Temperature Range on Anaerobic Digestion of Water Hyacinth (*Eichornia crassipes*)
I. Ferrer¹, E. Campos², J. Palatsi², S. Porras², X. Flotats²
¹ Universitat Autònoma de Barcelona, Spain; ² Centre University of Lleida, Spain
- PS-III.071** The Pretreatment of Wastewater by Using a Continuous Reactor Without Seed (Part I)
S. González-Martínez, O. González-Barceló, V. Dionicio-García
National University of Mexico, Mexico
- PS-III.072** The Pretreatment of Wastewater by Using a Continuous Reactor with Waste Activated Sludge as Seed (Part II)
S. González-Martínez, O. González-Barceló, L.F. Uc-Nájera
National University of Mexico, Mexico
- PS-III.073** The Pretreatment of Wastewater by Using a SBR Reactor (Part III)
O. González-Barceló, S. González-Martínez, I. Pérez-Ramírez, Z. Pérez-Celaya, J. Herrera-Domínguez
National University of Mexico
- PS-III.074** Pre-Treatment of Sulphate-Rich Petrochemical Wastewater by Up-Flow Anaerobic Hybrid Reactor
M.H. Kim¹, S.H. Jung², M.G. Seo³, T.J. Park⁴
¹ BIOENTECH Co., Ltd., Korea; ² Nakdong River Research Institute of Silla University, Korea; ³ Busan Development Institute, Korea; ⁴ Pusan National University, Korea

- PS-III.075** Disintegration of Sewage Sludge for Better Anaerobic Biodegradation
*M.A. Vera*³, *K. Nickel*¹, *U. Neis*²
¹ *Ultrawaves Water & Environmental Technologies, Germany;* ² *Technical University of Hamburg-Harburg, Germany;* ³ *Biosolids Products, USA*
- PS-III.076** Impact Grinding as a Pre-Treatment Method for Biowaste and Sludge
R.J. Peltola, V.H. Laine, H. Kautola, M.A.-L. Kymäläinen
Häme Polytechnic, Finland
- PS-III.077** Anaerobic Pretreatment and Increased Solid Destruction of Organic Municipal Solid Waste and Secondary Sewage Sludge for Reuse and Recovery
*R. Saravanane*¹, *V. Murugaiyan*¹, *M.A. Sivasankaran*¹, *R. Sivacoumar*²
¹ *Pondicherry Engineering College, India;* ² *National Environmental Engineering Research Institute, India*
- PS-III.078** Anaerobic Digestion of Wood After Pretreatment by Ablative Flash Pyrolysis
*P.A. Scherer*¹, *D. Meier*²
¹ *Hamburg University of Applied Sciences, Germany;* ² *BFH-Institute of Wood Chemistry, Germany*
- PS-III.079** Ammonium Removal from a CEPT-UASB Effluent Using a Natural Ion Exchanger
*S. Aiyuk*¹, *A. van Haandel*², *W. Verstraete*¹
¹ *Ghent University, Belgium;* ² *Federal University of Campina Grande, Brazil*
- PS-III.080** Producing Class B Biosolids for Beneficial Use Through Low-Level Lime Dosing
*Z.K. Erdal*¹, *T.C. Mendenhall*¹, *S.K. Neely*², *D.L. Wagoner*¹, *C. Quigley*¹
¹ *CH2MHILL, USA;* ² *Charlotte-Mecklenburg Utilities, USA*
- PS-III.081** Marine Biomass Power Plant Using Methane Fermentation
T. Matsui, H. Saito, T. Amano, H. Sugawara, T. Seki, T. Abe
Tokyo Gas Co., Ltd., Japan
- PS-III.082** Fate of Dissolved Methane in DHS Reactor Receiving Effluent of UASB Sewage Treatment
A. Ohashi, T. Eguchi, M. Tandukar, H. Imachi, H. Harada
Nagaoka University of Technology, Japan
- PS-III.083** Post-Treatment of a Recalcitrant Anaerobic Effluent from a Kraft Mill in a Fungal Packed Bed Reactor
*A. Ortega-Clemente*¹, *F. Esparza-García*¹, *J. Barrera-Cortés*¹, *S. Caffarel-Méndez*², *N. Rinderknecht-Seijas*³, *H. M. Poggi-Varaldo*¹
¹ *CINVESTAV-IPN, Mexico;* ² *Ecatepec Institute of Technology, Mexico;* ³ *ESIQIE-IPN, Mexico*
- PS-III.084** Coagulation Diagrams of Effluent from an Anaerobic Expanded Bed Reactor
H.R. Santos, G.S. Prado, J.R. Campos
Universidade de São Paulo, Brazil

- PS-III.085** Evaluating Floating Aquatic Macrophytes in Improving the Water Quality of Anaerobically Digested Flushed Dairy Manure Wastewater
R.D. Sooknah¹, A.C. Wilkie²
¹ University of Mauritius, Mauritius; ² University of Florida, USA
- PS-III.086** Post-Treatment of an Expanded Bed Anaerobic Reactor Effluent Using Microfiltration and Disinfection by UV Radiation
J.B. Souza, C.M.S. Vidal, L.A. Daniel, J.R. Campos
Universidade de São Paulo, Brazil
- PS-III.087** Post-Treatment of Anaerobically Pre-Treated Domestic Sewage in a Novel Polyurethane Rotating Biological Contactor (PRBC)
A. Tawfik, G. Zeeman, A. Klapwijk, F. El-Gohary, G. Lettinga
Wageningen University & Research Center, The Netherlands
- PS-III.088** Aerobic Moving Bed Biofilm Reactor (MBBR) for Treatment of Anaerobically Pre-Treated Domestic Sewage
A. Tawfik
National Research Centre, Egypt
- PS-III.089** Process Integration of Biogas and Fuel Cell Technology via Simulation of the Gas Purification Process, Focused on Siloxane Removal
F. Accettola, J. Bergmair, M. Haberbauer
Profactor GmbH, Austria
- PS-III.090** Landfill Gas Cleaning Methodologies to Enhance Potential for Energy Generation
T. Chakraborty, A. Garg, G. Achari
University of Calgary, Canada
- PS-III.091** Biogas Production from a Covered Lagoon Digester and Utilization in a Microturbine
D.W. Williams, D. Gould-Wells
California Polytechnic State University, USA
- PS-III.092** Biogas Production and Utilization at the Stock-Breeder Farms, Integrated Environmental and Energetical Management
B.F. Tózsér¹, L.B. Tózsér², J. Katona²
¹ Envihorizont Ltd, Hungary; ² KÖFE, Hungary
- PS-III.093** Co-Reforming of Anaerobic Biogas and Biomass Gasification Syngas for Dimethyl Ether Synthesis
T. J. Wang, J. Chang
Chinese Academy of Sciences, China
- PS-III.094** Synergies in Co-Digestion of Sludge with Olive Oil Mill Effluent
S. Di Berardino
Instituto Nacional de Engenharia Tecnologia e Inovação, Portugal

- PS-III.095** | Bioreactors with Simultaneous Electron Acceptors: A Review on Methanogenic-Aerobic Systems for Removal of Chlorinated Compounds
C. Garibay-Orijel¹, C. Estrada-Vázquez¹, H. Macarie², M.T. Kato³, H.M. Poggi-Varaldo¹
¹ CINVESTAV-IPN, Mexico; ² Institut pour la recherche et développement, France; ³ Federal University of Pernambuco, Brazil
- PS-III.096** | Advanced Full-Scale Post Treatment Experiences of Anaerobically Pre-Treated Effluent from a Corn Milling Industry
C.Y. Gomec¹, E. Erdim¹, I. Ozturk¹, C. Bilge²
¹ Istanbul Technical University, Turkey; ² CARGILL, Turkey
- PS-III.097** | Practical Examples of DESAR Concepts in Urban Areas in The Netherlands
A. Mels¹, G. Zeeman^{1,2}
¹ Lettinga Associates Foundation, The Netherlands; ² Wageningen University, The Netherlands

Thursday, September 2, 2004

- 07:30-18:30** | Registration
 Foyer – Level 1
- 08:30-09:00** | **Keynote Lecture 7:** Anaerobic Processes for the Treatment of Pharmaceuticals, Hormones and Cosmetics Present in Sludges from Sewage Treatment Plants
J.M. Lema, University of Santiago de Compostela, Spain
 Auditorium Le Grand Salon
- 09:00-09:30** | **Keynote Lecture 8:** Integrated Energy Production and Reduction of the Environmental Impact at Alcohol Distillery Plants
A.C. van Haandel, Universidade Federal de Campina Grande, Brazil
 Auditorium Le Grand Salon
- 09:30-10:00** | **Keynote Lecture 9:** The Development and Application of Anaerobic Biotechnology in the Industrial and Agricultural Sectors in China
K. Wang, Beijing Municipal Research Institute of Environmental Protection, China
 Auditorium Le Grand Salon
- 10:00-10:30** | Coffee Break / Exhibition / Posters
 Foyer – Levels 3 and 4

10:30-12:10	Session 9A: Industrial Wastewater III Auditorium I Chaired by: <i>L. Hulshoff Pol, R. Chamy</i>	Session 9B: Pre-Treatment I Auditorium II Chaired by: <i>E. Foresti, S.G. Pavlostathis</i>	Session 9C: Integrated Systems Salon Cartier I-II Chaired by: <i>G. Zeeman, J.A. Oleszkiewicz</i>	Session 9D: Sustainability I Salon International I-II Chaired by: <i>B.K. Ahring, A. Noyola</i>
10:30-10:50	Anaerobic Pre-Treatment of Highly Loaded Split Flows from Textile Processing Industry (TPI) <i>R. Minke, U. Rott</i> <i>University of Stuttgart, Germany</i>	Effects of Various Pre-Treatments on Waste Activated Sludge in Order to Improve Matter Solubilisation and Anaerobic Digestion <i>C. Bougrier, H. Carrère, A. Battimelli, J.P. Delgenès</i> <i>Institut national de la recherche agronomique, France</i>	Combined Anaerobic Removal of COD, N and S from Industrial Waste Water <i>M. Mierzejewski¹, D. Lamarre², H. Dijkman³, G. Schouten³, A. Benschop³</i> <i>¹ USFilter, USA; ² John Meunier Inc, Canada; ³ Paques B.V., The Netherlands</i>	Greenhouse Gas Production: A Comparison Between Aerobic and Anaerobic Wastewater Treatment Technology <i>F.Y. Cakir, M.K. Stenstrom</i> <i>UCLA, USA</i>
10:50-11:10	Potato Processing Wastewater Plus Peel Waste Treated Anaerobically <i>R.C. Landine¹, D.R. Wilson¹, S.E. Norton¹, A.A. Cocci²</i> <i>¹ ADI Systems Inc., Canada; ² ADI Systems Inc., USA</i>	Improvement of Anaerobic Digestion Operation and Digested Sludge Characteristics Using a Chemical and a Thermal Pretreatment <i>M. Carballa, F. Omil, J.M. Lema</i> <i>University of Santiago de Compostela, Spain</i>	Treatment of Strong Domestic Sewage Using a Two Stage AF/UASB System and a Conventional UASB Reactor <i>M. Halalsheh¹, S. Kerstens², G. Zeeman², J. Van Lier², M. Fayyad¹, G. Lettinga²</i> <i>¹ University of Jordan, Jordan; ² Wageningen University, The Netherlands</i>	Large Scale System for Biogas Harvesting and Mitigation of Fugitive Methane Emissions <i>A. Cohen, H.N. Clarke</i> <i>Waste Solutions Ltd., New Zealand</i>
11:10-11:30	Feasibility Study of Fruit Canning Wastewater Methanisation in an Anaerobic Sequencing Batch Reactor (AnSBR) <i>P. Ouichanpagdee^{1,2}, M. Torrijos¹, P. Sousbie¹, R. Moletta¹</i> <i>¹ INRA, France; ² Chiang Mai University, Thailand</i>	Use of a High-Pressure Homogenizer to Pre-Treat Municipal Biosolids: Introducing the <i>MicroSludgeTM</i> Process <i>R.J. Stephenson, S. Laliberte, P. Elson</i> <i>Paradigm Environmental Technologies Inc, Canada</i>	The Use of Thermal Wet Oxidation for Enhanced Biogas Recovery from Raw and Digested Biowaste <i>G. Lissens¹, W. Verstraete¹, A.B. Thomsen², B.K. Ahring³</i> <i>¹ Gent University, Belgium; ² Risø National Lab, Denmark; ³ Technical University of Denmark, Denmark</i>	Psychrophilic Anaerobic Digestion as a Feasible, Sustainable Wastewater Treatment Alternative for Low- and Medium Strength Wastewaters <i>S. Connaughton, G. Collins, S. McHugh, V. O'Flaherty</i> <i>National University of Ireland, Ireland</i>

11:30-11:50	<p>Anaerobic Treatment of Palm Oil Mill Wastewater Under Mesophilic Condition <i>U. Puetpaiboon</i>¹, <i>J. Chotwattanasak</i>² ¹ Prince of Songkla University, Thailand; ² King's Mongkut University of Technology Thonburi, Thailand</p>	<p>Effect of Pre-Treatments on Methane Production Potential of Energy Crops and Crop Residues <i>A. Lehtomäki, T.A. Viinikainen, O.M. Ronkainen, R. Alen, J.A. Rintala</i> <i>University of Jyväskylä, Finland</i></p>	<p>Combined Anaerobic Treatment of Solid and Liquid Waste from Tanning Industry <i>E. Ravindranath, C. Kalyanaraman, S. Shamshath Begum, R. Suthanharajan, B. Umamaheswari, S. Rajamani</i> <i>Central Leather Research Institute, India</i></p>	<p>Anaerobic Digestion: Cornerstone and Workhorse of a Sustainable Bioenergy Technology Cluster <i>B.E. Holbein</i>¹, <i>D.B. Layzell</i>² ¹ Eastern Power Ltd./SUBBOR, Canada; ² BIOCAP Canada Foundation, Canada</p>
11:50-12:10	<p>Treatment of a Low Concentration Industrial Chemicals Mixture in a UASB Reactor <i>P. Castilla, A. Leyva, U. García, C. Fajardo, O. Monroy, M. Meraz</i> <i>Universidad Autónoma Metropolitana, Mexico</i></p>	<p>The Efficacy of Ozone as a Pre- and Post-Treatment Option for UASB Treated Food Processing Wastewaters <i>G.O. Sigge</i>¹, <i>T.J. Britz</i>¹, <i>P.C. Fourie</i>², <i>C.A. Barnardt</i>³ ¹ University of Stellenbosch, South Africa; ² ARC Infruitec-Nietvoorbij, South Africa; ³ Enviro Services, South Africa</p>	<p>A Novel Two-Stage Integrated Anaerobic-Aerobic Biotreatment System for Low-Strength Wastewater <i>C.S. Tai</i>¹, <i>K.S. Singh</i>¹, <i>S.R. Grant</i>² ¹ University of New Brunswick, Canada; ² ADI Systems Inc., Canada</p>	<p>Sustainable Wastewater Management and its Financial Aspects - A Case Study of Ras Al Khaimah (RAK), United Arab Emirates <i>A. Khan</i> <i>EarthCAD Inc, United Arab Emirates; IRAMconsult International Pvt Ltd, India</i></p>
12:10-14:15	<p>Lunch Salon Mont-Royal I – II</p> <p>Exhibition Foyer – Level 3</p> <p>Poster Session IV Foyer – Level 4</p>			

14:15-15:15	Session 10A: Gas Utilization Auditorium I	Session 10B: Pre-Treatment II Auditorium II	Session 10C: Granulation Salon Cartier I-II	Session 10D: Sustainability II Salon International I-II
14:15-14:35	<p>Chaired by: <i>J.F. Ferguson, K. Singh</i></p> <p>Treatment and Utilization of Wastewater Plant Biogas as Fuel for a Solid Oxide Fuel Cell <i>C. Caners¹, I. Wheeldon², B. Peppley², K. Karan¹</i> ¹ <i>Queen's University, Canada;</i> ² <i>Royal Military College, Canada</i></p>	<p>Chaired by: <i>T.J. Britz, M. Dohanyos</i></p> <p>Application of Mechanical Pre-Treatments for Improving the Digestibility of Waste Activated Sludge <i>E. Cartmell¹, S. Clay², R. Smith², S. Withey¹</i> ¹ <i>Cranfield University, UK;</i> ² <i>Severn Trent Water, UK</i></p>	<p>Chaired by: <i>M. Alves, L. Hulshoff Pol</i></p> <p>Multidimensional Modelling of Anaerobic Granules <i>C. Picioreanu¹, D.J. Batstone², M.C.M. van Loosdrecht¹</i> ¹ <i>Delft University of Technology, The Netherlands;</i> ² <i>Technical University of Denmark, Denmark</i></p>	<p>Chaired by: <i>W. Verstraete, D.C. Peng</i></p> <p>Redefining the Role of Anaerobic Digestion <i>B.K. Ahring, P. Westermann</i> <i>The Technical University of Denmark, Denmark</i></p>
14:35-14:55	<p>Biogas Usage in Fuel Cells as an Alternative Application: Results of the Field Trials <i>S. Trogisch¹, J. Bergmair¹, J. Hoffmann², L. Daza³</i> ¹ <i>Energy and Environmental Technologies, Profactor GmbH, Austria;</i> ² <i>MTU CFC Solutions GmbH, Germany;</i> ³ <i>CIEMAT, Spain</i></p>	<p>Thermal Hydrolysis Pre-Treatment for High Solids Anaerobic Digestion <i>D. Jolis¹, B. Jones¹, M. Marneri¹, H. Kan¹, S. Jones¹, K. Panter²</i> ¹ <i>Clean Water Program, USA;</i> ² <i>RDP Technologies, Inc., USA</i></p>	<p>Effect of Inoculum and Sludge Concentration on Viscosity Evolution of Anaerobic Granular Sludges <i>A. Pevere¹, G. Guibaud¹, E. van Hullebusch², P. Lens², M. Baudu¹</i> ¹ <i>Université de Limoges, France;</i> ² <i>Wageningen University, The Netherlands</i></p>	<p>Anaerobic Digestion as a Sustainable Solution for Biosolids Management by the Montreal Metropolitan Community <i>J.C. Frigon, S.R. Guiot</i> <i>National Research Council Canada, Canada</i></p>
14:55-15:15	<p>Life-Cycle Inventory Study of Biogas Production for Vehicles in Trollhättan, a Medium-Sized Swedish Town <i>C. Fredriksson, S. Bohlin</i> <i>University of Trollhättan/Uddevalla, Sweden</i></p>	<p>Thermal Pre-Treatment of Primary and Secondary Sludge at 70°C Prior to Anaerobic Digestion <i>I.V. Skiadas, H.N. Gavala, J. Lu, B.K. Ahring</i> <i>Technical University of Denmark, Denmark</i></p>	<p>Dynamics of Granules Physical Properties in UASB and EGSB Reactors for the Treatment of Medium and Low Concentrated Wastewaters <i>A. Puñal, R. Chamy</i> <i>Universidad Católica de Valparaíso, Chile</i></p>	<p>Assessing the Environmental Burdens of Anaerobic Digestion in Comparison to Alternative Options for Managing the Biodegradable Fraction of MSW <i>M. Haight</i> <i>University of Waterloo, Canada</i></p>
15:15-16:00	Coffee Break / Exhibition / Posters Foyer – Levels 3 and 4			
15:15-16:00	AD-SG Meeting and AD11 Proposals Salon Cartier I-II			

- 16:00-16:15** | Presentation of the Student Awards
K. Kennedy
University of Ottawa, Canada
Auditorium Le Grand Salon
- 16:15-16:45** | Presentation of the Lettinga Award
J.B. van Lier
Wageningen University, The Netherlands
Auditorium Le Grand Salon
- 16:45-17:30** | **Closing Lecture:** Anaerobic Digestion as a Core Technology in Sustainable Management of Organic Matter
W. Verstraete, Ghent University, Belgium
Auditorium Le Grand Salon
- 17:30-17:45** | Acknowledgments
S.R. Guiot, AD10 Congress Chair
Auditorium Le Grand Salon
- 17:45-19:00** | Farewell Drink
Salon Mont-Royal

Poster Session IV

- PS-IV.001** | Bio-Hydrogen Production by Anaerobic Fermentation of Waste
T. Løbner, Dawei Liu, Dapeng Liu, B. Cirauqui, D.J. Batstone, I. Angelidaki
Technical University of Denmark, Denmark
- PS-IV.002** | Hydrogen Gas and Methane Production in Bioelectrolysis in Anaerobic Solid Waste Leachate Treatment Process
A. Badkoubi, S. Fotoohi, G. Badkoubi, P. Baghoolizadeh
Tarbiat Modares University, Iran
- PS-IV.003** | Simulating Shock Operation of a Hydrogen Fermentor: Stop-Feeding and Re-Feeding
M.-D. Bai, S.-S. Cheng, H.-C. Chang, C.-J. Hsiao, S.-L. Li
National Cheng Kung University, Taiwan
- PS-IV.004** | Kinetic Study of Biohydrogen Production in Mixed Cultures
W.-H. Chen, S.K. Khanal, S. Sung
Iowa State University, USA

- PS-IV.005** | The Study on Hydrogen Fermentation Using Starch / Cellulose and Peptone as Multiple Substrates
S.-S. Cheng, M.-D. Bai, Y.-C. Chao
National Cheng-Kung University, Taiwan
- PS-IV.006** | Mesophilic and Thermophilic Biological Hydrogen Production in Conventional and High-Rate Anaerobic Reactor Systems
H.N. Gavala, I.V. Skiadas, B.K. Ahring
Technical University of Denmark, Denmark
- PS-IV.007** | Hydrogen Production by Anaerobic Digestion of Waste, State of the Art and Critical Assessment
M. Göttel¹, R.R. Sastre¹, L. Gautier², T. Dhainaut², C. Posten¹, G. Schaub¹
¹ University of Karlsruhe, Germany; ² European Institute for Energy Research, Germany
- PS-IV.008** | Two-Phase Anaerobic Process for the Recovery of Both Hydrogen and Methane
M.H. Hwang, N.J. Jang, I.S. Kim
Kwangju Institute of Science and Technology, Korea
- PS-IV.009** | Kinetics of Hydrogen Production by Hydrogen Producing Bacteria
T.Y. Jeong¹, G.C. Cha¹, I.K. Yoo², D.J. Kim³
¹ Yonsei University, Korea; ² Ulsan University, Korea; ³ Hallym University, Korea
- PS-IV.010** | Hydrogen Production from Biogas - A Sustainable Way to Produce a Premium Energy Carrier
H.-P. Kaballo
LINDE AG, Germany
- PS-IV.011** | Influence of HRT and Sand Substrate Concentration on the Continuous Hydrogen Production by Anaerobic Microflora
I.B. Ko¹, Y.Y. Li², H. Satoh², T. Noike²
¹ Cheju National University, Korea; ² Tohoku University, Japan
- PS-IV.012** | Biological Fermentative Hydrogen Production from Olive Pulp at 35°C
E.C. Koutrouli, H.N. Gavala, I.V. Skiadas, G. Lyberatos
University of Patras, Greece
- PS-IV.013** | Effects of Methanogenic Effluent Recycle on Fermentative Hydrogen Production
J.T. Kraemer, D.M. Bagley
University of Toronto, Canada
- PS-IV.014** | Anaerobic Hydrogen Fermentation of Glucose at Different Ratios of Substrate to Biomass Concentration
T.M. Liang^{1,2}, S.S. Cheng¹, M.D. Bai¹
¹ National Cheng Kung University, Taiwan; ² CESH, Taiwan

- PS-IV.015** Thermal Pretreatment Enhanced Fermentative Hydrogen Production Using Molasses Wastewater
J.H. Wu, C.Y. Lin
Feng Chia University, Taiwan
- PS-IV.016** Measurement of Dissolved Hydrogen and Hydrogen Gas Transfer in a Hydrogen-Producing Reactor
I. Shizas, D.M. Bagley
University of Toronto, Canada
- PS-IV.017** Diversity and Dynamics of Microbial Community in the Bio-Hydrogen Producing Reactor (CSTR)
D. Xing, N. Ren, M. Gong, Q. Li
Harbin Institute of Technology, China
- PS-IV.018** Hydrogen Production from Brewery Wastewater in an Upflow Anaerobic Reactor
H.-Q. Yu, Y. Mu
University of Science & Technology of China, China
- PS-IV.019** The Gas Chromatography Analysis of Acidic End Products of Hydrogen Producing Bacteria
G.X. Zheng, N.Q. Ren, Y.F. Li, H.X. Bao, J.X. Song
Harbin Institute of Technology, China
- PS-IV.020** A Comparative Study on the Preparing of Hydrogen Producing Seeds
H.G. Zhu, M. Béland
Environment Canada, Canada
- PS-IV.021** Treatment of Low-to-Medium Strength Dairy Wastewaters with Two Types of Sludge Granules in UASB Reactors
E.V. Ramasamy, S. Gajalakshmi, P. Sankar Ganesh, M.N. Jithesh, S.A. Abbasi
Pondicherry University, India
- PS-IV.022** Phenolic Refinery Wastewater Biodegradation by an Expanded Granular Sludge Bed (EGSB) Reactor
F.J. Almendariz, M. Meraz, A. Olmos, O. Monroy
Universidad Autónoma Metropolitana, Mexico
- PS-IV.023** Monitoring Granular Stability in an Industrial UASB Reactor Treating Brewery Wastewater
P. Araya Kroff¹, A.L. Amaral^{1,2}, E.C. Ferreira¹, P.M. Silva³, M. Mota¹, M.M. Alves¹
¹ Universidade do Minho, Portugal; ² present address: Instituto Politécnico de Bragança, Portugal; ³ UNICER-Bebidas de Portugal, Portugal
- PS-IV.024** Waste Sizing Solution as Co-Substrate for Anaerobic Decolourisation of Textile Dyeing Wastewaters
I. Bisschops¹, A.B. dos Santos², H. Spanjers¹
¹ Lettinga Associates Foundation, The Netherlands; ² Wageningen University, The Netherlands

- PS-IV.025** Anaerobic Co-Fermentation as an Ecological Treatment of Concentrates from the Textile Industry
D. Bock, R. Minke, U. Rott
University of Stuttgart, Germany
- PS-IV.026** Biotransformation of Azo Dyes Acid Orange 7 and Acid Blue 113 Using a Redox Mediator
G. Buitrón, B. Jiménez, G. Moreno
National University of Mexico, Mexico
- PS-IV.027** Low Strength Wastewater Treatment Under Low Temperature Condition by the Novel Sulfur Redox Action Process Consisting of an UASB and an Aerobic Reactor
Y. Bungo¹, T. Yamamoto¹, S. Ono¹, T. Yamaguchi¹, H. Sumino², A. Nagano³, N. Araki⁴, S. Yamazaki⁵, H. Harada⁶
¹ Kure National College of Technology, Japan; ² Hiroshima Prefectural Institute of Industrial Science of Technology, Japan; ³ Sanki Engineering Co. Ltd., Japan; ⁴ Nagaoka National College of Technology, Japan; ⁵ Kouchi National College of Technology, Japan; ⁶ Nagaoka University of Technology, Japan
- PS-IV.028** Anaerobic Biodegradation of Selected Organic Chemicals from the Petrochemical Industry
P. Castilla, R. Luévano, C. Fajardo, O. Monroy, M. Meraz
Universidad Autónoma Metropolitana, Mexico
- PS-IV.029** Treatment of Acrylate in UASB Reactors Acclimated to Ethanol, Propionate and Acetate
P. Castilla, D. Sandoval, C. Fajardo, O. Monroy, M. Meraz
Universidad Autónoma Metropolitana, Mexico
- PS-IV.030** Biosorption and Mineralization of a Dairy Wastewater Under Sequential Operation Mode
A.J. Cavaleiro¹, M.M. Alves²
¹ Escola Superior Agrária de Coimbra, Portugal; ² Universidade do Minho, Portugal
- PS-IV.031** Multifed Biogas Reactor for Coffee Waste Water and Biomass Wastes - Performance Under Highly Fluctuating Operating Conditions
H.N. Chanakya, G.B. Deepa, D. Vinutha, J.M. Modak
Indian Institute of Science, India
- PS-IV.032** Heavy Metals Removal from Effluents in an Anaerobic Bioreactor Using Stillage from Ethanol Distilleries as Carbon Source
M.M.M. Gonçalves^{1,2}, A.C.A. da Costa², S.G.F. Leite¹, G.L. Sant'Anna Jr¹
¹ Universidade Federal do Rio de Janeiro, Brazil; ² Universidade do Estado do Rio de Janeiro, Brazil
- PS-IV.033** Potential Use of an Anaerobic Fixed-Bed Reactor for Hazardous Organic Compounds Degradation
I.R. de Nardi¹, M.H.R.Z. Damianovic², R. Ribeiro², M.L.R. Bolaños², S.V.W.B. Oliveira², M. Zaiat², E. Foresti²
¹ Centro Universitário Central Paulista, Brazil; ² Universidade de São Paulo, Brazil

- PS-IV.034** Evaluation of Monitoring Parameters in a Full Scale UASB Reactor Treating Poultry Slaughterhouse Wastewater During a Long Term Operation
V. Del Nery¹, E.P. Gianotti², M.H.Z. Damianovic², F. Chinalia², I.R. de Nardi³, A.K.B. Cabral³, M. Zaiat²
¹ Granja Céu Azul Ltda, Brazil; ² Universidade de São Paulo, Brazil; ³ Centro Universitário Central Paulista, Brazil
- PS-IV.035** A UASB Reactor for the Greek Fruit Canning Industry
V.I. Diamantis, A. Aivasidis
Democritus University of Thrace, Greece
- PS-IV.036** Performance of a Dynamic, Pulsating Anaerobic Filter While Treating Industrial Wastewaters Including a Comparison with UASB Reactors
W. Edelmann¹, U.Baier², H. Engeli³
¹ arbi GmbH, Switzerland; ² HSW Wädenswil, Switzerland; ³ engeli engineering, Switzerland
- PS-IV.037** Metabolic Screening of Anaerobic Sludges for the Psychrophilic Anaerobic Treatment of Solvent-Containing Pharmaceutical-Like Wastewaters
A.M. Enright, S. McHugh, G. Collins, V. O'Flaherty
National University of Ireland, Ireland
- PS-IV.038** Hydrodynamic Characteristics of an Anaerobic Fixed Bed Reactor
R. Escudié, T. Conte, J.P. Steyer, J.P. Delgenès
Institut national de la recherche agronomique, France
- PS-IV.039** The Effect of Biomass Thickness on Chlorophenol Removal by Anaerobic Bioparticles Under Variable Conditions of Co-Substrate Supplementation and Oxygen Exposure
C. Estrada-Vázquez¹, E. Ríos-Leal¹, H. Macarie², M.T. Kato³, F. Esparza-García¹, H.M. Poggi-Varaldo¹
¹ CINVESTAV-IPN, Mexico; ² IRD, France; ³ Federal University of Pernambuco, Brazil
- PS-IV.040** Removal of 2,4,6-trichlorophenol by Anaerobic Bioparticles and Disperse Sludge Under Variable Conditions of Oxygen and Co-Substrate
C. Estrada-Vázquez¹, E. Ríos-Leal¹, H. Macarie², M.T. Kato³, H.M. Poggi-Varaldo¹
¹ CINVESTAV-IPN, Mexico; ² IRD, France; ³ Federal University of Pernambuco, Brazil
- PS-IV.041** Pilot Scale Anaerobic Sequencing Batch Reactor for Distillery Wastewater Treatment
R. Farina, C.M. Cellamare, L. Stante, A. Giordano
ENEA, Agency for New Technologies, Energy and Environment, Italy
- PS-IV.042** Decolorizing and Detoxifying Textile Wastewater in a Full-Scale Sequential Anaerobic/Aerobic System
C.T.M.J. Frijters¹, R.H. Vos¹, G. Scheffer², R. Mulder¹
¹ PAQUES BV, The Netherlands; ² Ten Cate Protect B.V., The Netherlands
- PS-IV.043** Yeast Fermentation-Anaerobic Digestion for the Treatment of Solid Waste Discharged from Dicarboxylic Acid Manufacturing Industry
A. Ganesh Kumar, G. Sekeran, B. Prasad Rao, K.V. Shylaja Priyadharshini, S. Swarnalatha, K. Victor Babu, S. Rajamani
Central Leather Research Institute, India

- PS-IV.044** Biodegradation of Acetic Acid Esters and Acrylic Acid Esters Under Sulfate Reducing Conditions
C. García, C. Fajardo, F. Ramirez, O. Monroy, M. Meraz
Universidad Autónoma Metropolitana-Iztapalapa, Mexico
- PS-IV.045** Anaerobic Degradation of Grease and Fats in Batch Tests
P.A. García-Encina, A. Mencia, S. Villaverde
University of Valladolid, Spain
- PS-IV.046** Influence of Operational Conditions on Removal Efficiency of a Fluidized Bed Reactor
J.L. García-Morales, L.I. Romero, D. Sales
University of Cádiz, Spain
- PS-IV.047** Optimization of Petrochemical Wastewater Treatment in Iran by Applying Anaerobic Systems
M. Ghaheri
Iranian Research Organization for Science & Technology, Iran
- PS-IV.048** Anaerobic Degradation of Proteins in Saline Media: Focusing in Intermediate Products
G.E. González, D.I. Vargas, H.E. Urrutia, M.D. Roeckel, E.R. Aspé
University of Concepción, Chile
- PS-IV.049** Feasibility of Organic Acids Productions and Recovery from Anaerobic Treatment of Wastewaters
J.A.C. Leite, M. Barboza, E. Foresti, M. Zaiat
Universidade de São Paulo, Brazil
- PS-IV.050** Anaerobic Bio-Treatability of Wash Water from Returned Beer Bottles
Pengjie Li, C.N. Mulligan
Concordia University, Canada
- PS-IV.051** UASB Treatment of Tapioca Processing Wastewater in South Vietnam
H.N.P. Mai¹, H.T. Duong², T.T.T. Trang², N.T. Viet¹
¹ Van Lang University, Vietnam; ² Center for Environmental Technology and Management, Vietnam
- PS-IV.052** Ferrous Ion Effect on the Operation of an Upflow Anaerobic Sludge Blanket (UASB) Reactor
A.G. Vlyssides, S.T. Mai, E.M.P. Barampouti
National Technical University of Athens, Greece
- PS-IV.053** Owner Chooses Anaerobic Digestion Over DAF for High Fat/High Solids Food Processing Wastewater
P. McCarthy, D. Wilson, A. Cocci, R. Landine
ADI Systems Inc., Canada

- PS-IV.054** Treatment of Alcohol Distillery Waste Water Using UASB Reactor
I.M. Mishra¹, S. Kumar², B. Prasad¹
¹ Indian Institute of Technology, India; ² National Institute of Engineering, India
- PS-IV.055** Evaluation of Chromium Toxicity Upon Anaerobic Digestion of Leather Finishing Industry Effluents
L.L. Beal¹, L.O. Monteggia²
¹ University of Caxias do Sul, Brazil; ² Federal University of Rio Grande do Sul, Brazil
- PS-IV.056** Feasibility of Development and Application of an Up-Flow Anaerobic/Aerobic Fixed Bed (UA/AFB) Combined Reactor to Treat High Strength Wastewater
G.R. Moosavi, A.R. Mesdaghinia, K. Naddafi, A.H. Mahvi
Tehran University of Medical Sciences, Iran
- PS-IV.057** Distribution of Organic Acids in an UASB Process Treating Dairy Wastewater
C. Polprasert, P. Fongsatitkul, K. Tantrakarnapa
Mahidol University, Thailand
- PS-IV.058** Microbial Populations Associated with Anaerobic Phthalate Isomers and Benzoate Degradation in Methanogenic Sludges Treating Wastewater from Terephthalate Manufacturing
Y.-L. Qiu¹, Y. Sekiguchi², H. Imachi¹, Y. Kamagata², A. Ohashi¹, H. Harada¹
¹ Nagaoka University of Technology, Japan; ² National Institute of Advanced Industrial Science and Technology, Japan
- PS-IV.059** Simultaneous Biological Phenol and Sulfide Oxidation by Denitrification
J. Reyes-Avila¹, F. Guerrero-Baquedano², J.A. Field³, R. Sierra-Alvarez³, J. Gómez H.², E. Razo-Flores^{1,4}
¹ Instituto Mexicano del Petróleo, Mexico; ² Universidad Autónoma Metropolitana-Iztapalapa, Mexico; ³ University of Arizona, USA; ⁴ Instituto Potosino de Investigación Científica y Tecnológica, Mexico
- PS-IV.060** Degradation of Phenols During the Biological Treatment of Water Separated from Extracted Crude Oil
N. Rincón¹, M. Torrijos², J. Marín¹, E. Behling¹, A. Díaz¹, E. Chacín¹, N. Fernández¹
¹ La Universidad del Zulia, Venezuela; ² INRA, France
- PS-IV.061** Performance of an Anaerobic Sequencing Batch Biofilm Reactor (ASBBR) Submitted to Different Influent Volume Fed and Cycle Time Period Maintaining Organic Loading
R.A. Bezerra¹, J.A.D. Rodrigues¹, S.M. Ratusznei¹, M. Zaiat², E. Foresti², W. Borzani¹
¹ Instituto Mauá de Tecnologia, Brazil; ² Universidade de São Paulo, Brazil
- PS-IV.062** Anaerobic Treatment of the Wastewaters of the Humid Benefit of the Coffee
S. Rodríguez Pérez¹, R.C. Bermúdez Savón¹, A.T. Brown¹, M. Fernández Boizán¹, I. Aguilera Rodríguez¹, Á. Almarales Arceo²
¹ Universidad de Oriente, Cuba; ² CITMA-Guantánamo, Cuba

- PS-IV.063** Reactor Performance and Microbial Community Dynamics During the Anaerobic Treatment of Synthetic Industrial Wastewater
C. Scully, G. Collins, V. O'Flaherty
National University of Ireland, Ireland
- PS-IV.064** Assessment of the Anaerobic Process on Treating Fatty Alcohols Mill Effluents (FAME)
T. Setiadi¹, E. Suprianto², T. Hutagaol², E. Sutanto²
¹ Institut Teknologi Bandung, Indonesia; ² PT Ecogreen Oleochemicals, Indonesia
- PS-IV.065** Treatment of Methanol Contained Wastewater Using an Anaerobic Sequencing Batch Reactor
X. Shao¹, D. Peng¹, R. Moletta²
¹ Xi'an University of Architecture and Technology, China; ² INRA-LBE, France
- PS-IV.066** The Effect of Influent COD and Upward Flow Velocity on the Behaviour of Sulphate Reducing Bacteria
J. Shayegan¹, F. Ghavipankeh², P. Mirjafari¹
¹ Sharif University of Technology, Iran; ² Material and Energy Research Institute, Iran
- PS-IV.067** A Case Study: Biogas Recovery from Wastewater Treatment of a Rice Starch Factory in Thailand
W. Songkasiri¹, A. Nopharatana², W. Rakruam², B. Suraraksa¹, P. Chairasert², S. Bhumiratana³, M. Tunticharoen³
¹ National Center for Genetic Engineering and Biotechnology, Thailand; ² King Mongkut's University of Technology Thonburi, Thailand; ³ National Science and Technology Development Agency, Thailand
- PS-IV.068** Anaerobic Digestion Pre-Treatment of Leachates from Bark Disposal
M.-L. Tremblay, G. Buelna
Centre de recherche industrielle du Québec, Canada
- PS-IV.069** Microbial Reduction of Sulphate from Tannery Wastewaters
B. Umamaheswari, T. Rema, K. Chitra, R. Suthanthararajan, E. Ravindranath, S. Rajamani
Central Leather Research Institute, India
- PS-IV.070** Evaluation of Essential Metals Speciation in Anaerobic Granular Sludges
E.D. van Hullebusch, S. Utomo, M.H. Zandvoort, P.N.L. Lens
Wageningen University, The Netherlands
- PS-IV.071** Kinetic of Phenol Degradation Using Anaerobic Batch Reactor
G.P. Sancinetti¹, M.B.A. Varesche², E.L. Silva¹
¹ Federal University of São Carlos, Brazil; ² Universidade de São Paulo, Brazil
- PS-IV.072** Removal of Organic Matter and Sulphate Contained in Kraft Mill Effluent by Mesophilic and Thermophilic Anaerobic Bacteria
P. Matamala, J. Decap, G. Vidal
University of Concepcion, Chile

- PS-IV.073** Acid Reactor Performance Assessment in Two-Phase Anaerobic Treatment of Dairy Wastewater
B. Demirel, O. Yenigun
Bogazici University, Turkey
- PS-IV.074** Treatment of Sulphate-Containing Wastewater in Packed-Bed Bioreactors with Vegetable Coal and Polyurethane Foam as Support for Biomass Immobilization
M.H.R.Z. Damianovic, M. Zaiat, E. Foresti
Universidade de São Paulo, Brazil
- PS-IV.075** Anaerobic Digestion of Industrial Wastewater: The Energy Option
A.G. Vlyssides, S.T. Mai, E.M.P. Barampouti
National Technical University of Athens, Greece
- PS-IV.076** Comparative Cost Analysis of Open vs Closed Anaerobic Systems for Treatment of Tannery Wastewater - A Case Study in India
K. Sri Bala Kameswari, E. Ravindranath, N. Periyambal, S.V. Srinivasan, S. Rajamani
Central Leather Research Institute, India
- PS-IV.077** Technical and Economic Analysis of Temperature-Phased Anaerobic Digestion for Waste Treatment and Resource Recovery
C. Li, S. Kumar Khanal, S. Sung
Iowa State University, USA
- PS-IV.078** Research and Engineering Practice in Anaerobic Digestion in China
L. Ying¹, W. Libin², S. Ping², Ping Li², H. Qichun³, L. Shulan³, L. Ping³, Y. Guangfu⁴
¹ Asia-Pacific Biogas Research and Training Center, China; ² China Biogas Society, China; ³ Biogas Research Institute of Ministry of Agriculture, China; ⁴ Bureau of Rural Energy Resources of Sichuan Province, China
- PS-IV.079** Application of the Life Cycle Assessment (LCA) Tool in the Comparison of Aerobic and Anaerobic Wastewater Treatment Systems
T. Ramjeawon
University of Mauritius, Mauritius
- PS-IV.080** Minimization of Greenhouse Gas Emission by Application of Anaerobic Digestion Process with Biogas Utilization
H. Yasui¹, K. Komatsu¹, R. Goel¹, A. Sato², R. Matsushashi², A. Ohashi³, H. Harada³
¹ Kurita Water Industries, Japan; ² The University of Tokyo, Japan; ³ University of Technology, Japan
- PS-IV.081** The Global Role of Anaerobic Digestion Through Various Governmental Waste and Energy Sustainability Policies
I.E. Alexiou¹, I. Angelidaki², S. Di Berardino³, G.E. Alexiou⁴, S.V. Kalyuzhnyi⁵
¹ Scientists International, UK; ² Denmark Technical University, Denmark; ³ INETI-DER, Portugal; ⁴ Regional Operational Programme of South Aegean, Greece; ⁵ Moscow State University, Russia

- PS-IV.082** | CO₂ Capture and Bioconversion to Biogas in an Anaerobic System Using an UASB Reactor
M. Alimahmoodi, C.N. Mulligan
Concordia University, Canada
- PS-IV.083** | Anaerobic Pretreatment of Municipal Wastewater - One Component of a Sustainable Wastewater Concept for Urbanized Areas
H. Herbst¹, H. Risse²
¹RWTH Aachen, Germany; ²VATECH WABAG ESMIL, Germany
- PS-IV.084** | Status and Prospects of Biogas Energy Use in Ukraine
G. Geletukha, Y. Matveev
Scientific Engineering Center "Biomass", Ukraine
- PS-IV.085** | Problems in the Operation of Anaerobic Digestion Tanks in Japan
H. Miyake, T. Mori
Japan Sewage Works Agency, Japan
- PS-IV.086** | An Examination of the Methanotrophic Population of an Irish Landfill Cover Soil; Factors Affecting Methane Oxidising Activity
R. Nevin, C. O'Reilly, E. Colleran
National University of Ireland, Ireland
- PS-IV.087** | Anaerobic Digestion: A Sustainable Answer for the Juice and Fruit-Processing Industries
L.M. Palmowski
Deakin University, Australia
- PS-IV.088** | Lab-Scale Anaerobic Treatment of Organic Waste Streams: An Australian Experience
L.M. Palmowski, H. Wilson, K. Baskaran
Deakin University, Australia

Friday, September 3, 2004

- 08:15** | Bus departure for technical tours
Main lobby level, Mansfield Street

Workshops

Monday, August 30, 2004, 14:15-18:30

Workshop I

Salon International I-II

Agricultural Waste and Manure Management: The Anaerobic Perspective

(organized in collaboration with the Program Committee of the Integrated Solutions to Manure Management National Conference and Exhibition)

Moderators:

D.I. Massé, Agriculture and Agri-Food Canada, Canada; D. Hilborn, Ontario Ministry of Agriculture and Food, Canada

14:15-14:30	Introduction and Overview
14:30-15:00	Canadian Experience with a Low Temperature Anaerobic Process <i>D. Hodgkinson</i> <i>Bio-Terre, Canada</i>
15:00-15:30	Overview of European Experiences with Centralised and Farm Scale Biogas Plants, Codigestion of Animal Manure, Industrial and Municipal Wastes <i>T. Böhni</i> <i>Energie & Umwelt, Switzerland</i>
15:30-16:00	Overview of US Experiences with Farm Scale Biogas Plants <i>P. Wright</i> <i>New York State, USA</i>
16:00-16:45	Networking Break
16:45-17:15	Energy Aspects of Anaerobic Digestion and Utility Grid Interest in Farm Renewable Biogas Energy <i>C. Laflamme</i> <i>Hydro-Québec, Canada</i>
17:15-17:45	Legislations in European and US Countries Regarding the Implementation of Anaerobic Digestion Technologies <i>A. Nordberg</i> <i>JTI-Swedish Inst of Agricultural & Environmental Engineering</i>
17:45-18:15	Additional On and Off Farm Feedstocks Materials for AD <i>D. Hilborn</i> <i>Ontario Ministry of Agriculture and Food, Canada</i>
18:15-18:30	Wrap-up

Tuesday, August 31, 2004, 16:00-18:20**Workshop II**

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Round Table Discussion: Instrumentation, Control and Automation in Anaerobic Digestion (ICA/AD)

Jing Liu, ICA/AD RT Committee Chair, Sweden; O. Bernard, TELEMAC coordinator, ICA/AD RT Committee member, France; H. Spanjers, Secretary IWA-ICA SG, RT Committee member, The Netherlands; J. Young, ICA/AD RT Committee member, USA

The application of Instrumentation, Control and Automation (ICA) in Anaerobic Digestion (AD) is receiving more and more interest. Lately, several research projects have been initiated that focus on this theme and an increasing number of ICA-related papers are being presented at conferences, including AD10. The purpose of this RT is to discuss recent developments in the application of ICA in anaerobic treatment processes and to identify potential future initiatives

16:00-16:10	Welcome and Short Introduction <i>Jing Liu</i> <i>Lund University, Sweden</i>
16:10-16:30	Sensor Robustness vs. Information Content <i>B. Tartakovsky</i> <i>National Research Council Canada, Canada</i>
16:30-16:50	Management of Uncertainty for Model Based Monitoring and Control <i>O. Bernard</i> <i>COMORE, INRIA, France</i>
16:50-17:10	Integrated Advanced Systems to Support the AD Plant Manager <i>J.-P. Steyer</i> <i>LBE-INRA, France</i>
17:10-17:30	Benchmarking Control Strategies for AD <i>D. Batstone</i> <i>Technical University of Denmark, Denmark</i>
17:30-17:50	EU Project TELEMAC (Telemonitoring and Advanced Telecontrol of High Yield Wastewater Treatment Plants): Example of a Research Consortium <i>O. Bernard</i> <i>COMORE, INRIA, France</i>
17:50-18:05	General Discussion
18:05-18:20	Potential Further Actions

Wednesday, September 1, 2004, 14:15-17:15

Workshop III

Salon International I-II

Bioreactor Landfill vs. Industrial Anaerobic Digester for Municipal Solid Waste (MSW)

Chair: *B.E. Holbein, Eastern Power Ltd./SUBBOR, Canada*

Panel Members: *M.A. Barlaz, North Carolina State University, USA; H. Bourque, CH4+3R Inc., Canada; L. De Baere, Organic Waste Systems NV, Belgium; M. Haight, University of Waterloo, Canada*

14:15-14:20	Introduction <i>B.E. Holbein</i> <i>Eastern Power Ltd./SUBBOR, Canada</i>
14:20-14:35	Current Practice in North America (NA) vs. European Union (EU); Comparative Scales and Economics of Industrial Anaerobic Digester (AD) vs. Landfill <i>B.E. Holbein</i> <i>Eastern Power Ltd./SUBBOR, Canada</i>
14:35-15:50	Technical Performance of Bioreactor Landfill <i>M.A. Barlaz</i> <i>North Carolina State University, USA</i>
14:50-15:05	Landfill Industry Perspective, Economic, Sustainability, Stakeholder Aspects of Bioreactor Landfill <i>H. Bourque</i> <i>CH4+3R Inc., Canada</i>
15:05-15:20	Technical and Economic Performance of AD – EU Perspective Primarily with Comparison to NA <i>L. De Baere</i> <i>Organic Waste Systems NV, Belgium</i>
15:20-15:35	Environmental Aspects of Landfill vs. AD: LCA Basis, GHG Emissions ... <i>M. Haight</i> <i>University of Waterloo, Canada</i>
15:35-16:00	Networking Break
16:00-17:00	Open Forum Among Audience and Panel Members
17:00-17:15	Wrap-up