Posters short oral presentations (by theme)

Low-tech solutions for developing countries/Environmental Management

Influence of the scale factor on environmental and economic indicators of anaerobic digestion
A. Arias, G. Feijoo, M.T. Moreira, Spain

Model-based analysis of greenhouse gas emission reduction potential through farm-scale digestion
T. Vergote, W. Vanrolleghem, C. Van der Heyden, A. De Dobbelaere, J. Buysse, E. Meers, E.I.P. Volcke, Belgium

Influence of aqueous phase supplementation on biofiltration of diffuse methane emissions
E.M.F. Brandt, J.C. Araújo, C.A.L. Chernicharo, Brazil

Sell your GC: Simple and accurate BMP measurement with a scale and syringe
S.D. Hafner, J.R. Mortensen, C.G. Justesen, R. Thorsen, J. M. Triolo, S. Astals, Denmark

Anaerobic MBR, research & application

Development of Electrospun Nanofiber Membranes for Anaerobic Membrane Bioreactors
S.Gee, A. Smith, United States

Protocol to Evaluate and Correlate Membrane Performance and Mixed-liquor Characteristics of Full-scale and Pilot-Scale AnMBRs
M.M.J. Baudry, T. Zhou, P. Van Gaelen, I. Smets, S. Pacheco-Ruiz, The Netherlands

Heavy metals effects and denitrifying process in an Anaerobic Swirling Fluidized Bed Membrane Bioreactor (ASFMBR)
J.E. Ramírez, S. Esquivel, G. Buitrón, F.J. Cervantes, Mexico

Fouling behavior comparison of three membrane modules in anaerobic membrane bioreactor
Z. Liu, X. Huang, China

Biogas upgrading and management

Pilot-scale demonstration of a biomembrane for biogas desulfurization
L. Pokorna-Krayzelova, J. Bartacek, S. Nyawira Theuri, C.A.S. Gonzalez, J. Prochazka, E.I.P. Volcke, P. Jenicek, Czech Republic

Biogas upgrading using algal-bacterial processes in wastewater treatment plants
M.R. Rodero, R. Lebrero, E. Serrano, E. Lara, Z. Arbib, R. Muñoz, Spain

Ex-situ biogas upgrading in thermophilic reactors using membranes as gas diffusion device
M. Peprah, P. Kougias, P. Tsapekos, L. Treu, S. Campanaro, I. Angelidaki, Denmark

Innovative in-situ biological biogas upgrading using high rate up flow anaerobic polyfoam bioreactor (UAPB)
K.B. Karkaby, K. Yanuka-Golub, S. Muhsein, M. Hassanen, N. Massalha, I. Sabbah, Israel

MFC / Bio-electrochemical systems

Towards environmental biorefinery: upscaling of microbial electrosynthesis cell fueled with heterogeneous organic waste
J.-H Tian, E. Desmond-Le Quéméner, T. Bouchez, France

Economic Evaluation Of Commercial Applications For Electrogenic Bioreactors Based On Experimental Results
A. Szczupak, R. Shechter, Israel

Magnetic fields enhance power generation and shape exoelectrogenic microbiome in bioelectrochemical systems
H. Zhou, D. Xing, China

Anaerobic biotransformations

Anaerobic treatment of hexachlorocyclohexane contaminated biomass in continuous stirred tank reactor
M. Nikolausz, I. Nijenhuis, U. N. da Rocha, B. Liu, F. B. Corrêa, H.H. Richnow, Germany

Comparative fate of antibiotic resistant *E. coli* and antibiotic resistance genes in anaerobically digested sludge from wastewater treatment plants
S.C. Redhead, J. Nieuwland, E. Hayhurst, United Kingdom

Azo dyes structure influencing it's own degradation: kinetics and redox conditions
R. Brito, S.Gavazza, J.R.Carvalho, M. Paraiso, M. Kato, L. Florencio, Brazil

Biodegradability and Toxicity of Ubiquitous Azoles to Anaerobic and Post-Treatment Processes
R. Sierra-Alvarez, K. Jog, C.H. Nguyen, E. Vanover, G. Li, J.A. Field, United States

Pre-treatment

Biorefinery approach for lignocellulosic biomass valorisation: combination of pretreatment with chemical recycling, phenols extraction and anaerobic digestion
G. Cazaudehore, C. Peyrelasse, M. Marques, B. Schraauwers, F. Monlau, France

Electrokinetic disintegration for an improvement in sludge digestion yield
S. Houtmeyers, R. Dewil, L. Appels, Belgium

Exogenous ligninases improve methane yields during anaerobic digestion of lignocellulosics: The case of corn stover
J. E. Mendez-Hernández, O. Loera, E. M. Méndez-Hernández, U. Duran, N. O. Soto-Cruz, Mexico

The science of enzyme dosing in anaerobic digestion
J. Jantova-Patel, Y. Bajón Fernández, F. Ishaq, C. Marquet, R. Villa, United Kingdom

Modelling and Control

Open-loop model-based optimisation method for start-up of anaerobic co-digestion processes
S. García-Gen, Chile

Mixing characterisation in gas-mixed anaerobic digesters: scaled-down evaluation and scaled-up implication
P.Wei, R.F. Mudde, W.S.J. Uijttewaal, H. Spanjers, J. B. van Lier, M. de Kreuk, The Netherlands

Effects of carbon redirection on anaerobic digester performance of water resource recovery facilities
K. Solon, M. Jia, E.I.P. Volcke, Belgium

Stratification in anaerobic granules: A health measurement of the anaerobic digestion process
R. Gonzalez-Cabaleiro, S. Connolly, United Kingdom

Resource Recovery /Bio-polymer production using anaerobic systems

From laboratory to continuous pilot scale VFA production: the challenge of up-scaling and process engineering
J. Garcia-Aguirre, M. Esteban-Gutiérrez, J. González Martínez de Goñi, I. Irizar, E. Aymerich, Spain

Continuous Production and Separation of Organic Acids from Biomass via Anaerobic Digestion, Filtration and Electrodialysis
J. Massanet-Nicolau, R.J. Jones, R. Fernandez-Feito, A. Guwy, R. Dinsdale, United Kingdom

Enhancing biogas production and recovering volatile fatty acids with magnetic molecularly imprinted polymers
M.C. Tonnuci, O. Adarme, B. Baeta, C. Tarley, S.F. de Aquino, Brazil

Steering microbiomes towards new biochemical production: iso-caproate
K. de Leeuw, D. Strik, C. Buisman, The Netherlands

Sludge and slurry digestion

Influence of sorghum's structural composition for biomethane production using sequential cropping system
M. Garuti, P. Mantovi, M. Soldano, A. Immovilli, F. Ruozzi, F. G. Fermoso, A. J. Rodriguez, C. Fabbri, Italy

Contribution of acetogenesis to anaerobic digestion of sewage sludge
B. Fu, R. Conrad, X. Jin, H. Liu, China

Anaerobic digestion in the kraft pulp and paper industry – benefits and strategies for implementation
E. Ekstrand, A. Björn, A. Karlsson, B. Magnusson, M. Gustavsson, M. Larsson, X.B. Truong, B.H. Svensson, J. Ejlertsson, Sweden

Semi-continuous anaerobic co-digestion of flotation sludge and sweet potato: Nutrients and energy recovery
F.M. Damaceno, M.S.S.M. Costa, J. Lucas Jr., L.A.M.Costa, E.L. Buligon, J.C.P.S. Restrepo, M. Chiarelotto, J. Bofinger, R.K. Niedzialkoski, Brazil

Microbiology of anaerobic digestion / (meta) genomic research

Thermal hydrolysis affects the microbiome structure and composition in sewage sludge anaerobic reactors
G.H.R. Braz, A. Taboada-Santos, N. Fernandez-González, M. Carballa, J.M. Lema, Spain

End-of-life of biodegradable plastics supports through anaerobic digestion: performance and microbial study
C. Guillaume, F. Monlau, R. Guyoneaud, C. Vasmara, C. Gassie, R. Marchetti, France

Impact of operational parameters on reactor performance and microbial community development during pilot-scale low temperature anaerobic digestion wastewater treatment
L.M. Paulo, J. Castilla-Archilla, J. Ramiro-Garcia, J.A. Picón, D. Hughes, T. Mahony, M. Murray, P. Wilmes, V. O'Flaherty, Ireland

How reproducible is the anaerobic digestion microbiome?
M. Peces, S. Astals, Denmark

Lactic acid bacteria as key players in acidogenic fermentation as unveiled by flow cytometry and amplicon sequencing
H. Sträuber, J. Lambrecht, S. Kleinsteuber, S. Müller, Germany

Enhanced resolution of ecological keystone populations in full-scale AD systems
N. de Jonge, T. Sørensen, A.C. Pedersen, A. Schnürer, J.L. Nielsen, Denmark

Genome-centric metagenomics elucidates the microbial degradation metabolism of proteins in the anaerobic digestion process
X. Zhu , S. Campanaro , L. Treu, P.G. Kougias, I. Angelidaki, Denmark

Identification of novel foam-forming microbes in full-scale mesophilic digester at a wastewater treatment plant
C. Jiang, E. Yashiro, A.K. Corfitz Petersen, P. Halkjær Nielsen, Denmark

Sulfur cycle technology

Performance and bacterial diversity of a bioreactor for oxidation of sulfide from UASB reactor treating sewage
L. S. Azevedo, J. C. Araújo, C.A.L. Chernicharo, Brazil

Use of magnetite for in-situ removal of hydrogen sulfide during anaerobic digestion
H. Jung, J. Kim, C. Lee, Republic of Korea

Simultaneous biological treatment and REY (rare earth elements and yttrium) removal from an acid mine drainage
E.W. Nogueira, L.A.G. Godoi, G. Brucha, M.H.R.Z. Damianovic, Brazil

Alleviating sulfide toxicity using biochar during anaerobic treatment of high-sulfate wastewater with sulfur recovery
S.K. Khanal F.R. Oliveira, K.C. Surendra, D.P. Jaisi, H. Lu, United States

Nutrient removal/recovery linked to AD (anammox, struvite, N/P general)

Treatment of sidestream dewatering liquors from thermally hydrolized and anaerobically digested biosolids
W.J.B.M. Driessen, J.T.A. van Veldhoven, M. Janssen, M.C.M. van Loosdrecht,
The Netherlands

Enhanced anaerobic digestion for energy autonomy necessitates mainstream anammox technology
S.E. Vlaeminck, M. Van Tendeloo, D. Seuntjens, B. Bundervoet, A. Haan, I. Dekker, R. Jordaens,
H. Mollen, E. Wypkema, J. Colsen, Belgium

Towards enhanced nutrient recovery, biogas production and upgrading through AD and BES integration
V. Koskue, P. Ledezma, S. Freguia, M. Kokko, Finland

Operational strategies for a membrane biofilm reactor coupling DAMO and Anammox treating municipal landfill leachate to achieve a high rate nitrogen removal
G.J. Xie, China

Post treatment (+ agricultural use)

Filtration of municipal UASB effluent using a dynamic membrane immersed in anaerobic granular sludge
A. Rodríguez-Medina, A. Noyola, Mexico

Water treatment sludge as a filtration medium for post-treatment of UASB reactor effluent
M. Ahammed, India

AlgaeBioGas: Algal-bacterial treatment of biogas digestate with biomass production and energy recovery
A.Cerar, R.Reinhardt, M.B. Zrimec, B. Lazar, M. Slapnik, Slovenia

Impact of microaeration on dissolved sulfide and methane removals from anaerobic effluent
C.S. Cabral, C.A.L. Chernicharo, J.C. Araújo, Brazil

Anaerobic high-rate/granular sludge

AnSBBR Applied to Methane Production by Thermophilic Anaerobic Co-Digestion of Cheese Whey and Glycerin
J.N. de Albuquerque, A.P. Paulinetti, E. Kurita, J. Ventura, M.C. Hallak, S.M. Ratusznei, J.A.D. Rodrigues, Brazil

Long-term performance of an ECSB reactor treating cheese industry wastewater
V. Diamantis, A. Aivasidis, Greece

Hydrogen fermentation treatment of organic wastewater with high ammonia nitrogen concentration via electrodialysis bioreactor
A. Xia, P. Wei, C. Sun, Y. Huang, Q. Fu, China

Comparison of UASB and AnSCMR efficiency for the treatment of suspended solid (SS) rich starch wastewaters
B. Jiang, J. Wu, H. Chen, Y. Li, Japan