



16TH IWA World Conference on Anaerobic Digestion

 *Accelerating natural cycles with anaerobic digestion*

Preliminary program

Sunday 23-06-2019

16.00	Opening
16.20	AD in a social context: Kala Vairavamoorthy (IWA executive director)
17.00	AD in an economic context: Platinum sponsors
17.40	ANAEROBIC DIGESTION- BEYOND THE PARIS AGREEMENTS / LINKING UP WITH THE COMING HYDROGEN ECONOMY Willy Verstraete (University of Ghent)
18.20	Welcome cocktail

Monday 24-06-2019

Time	Session 1	Session 2	Session 3
8.45-9.10	Opening Session		
9.10-9.40	Plenary 3: Alfred Spormann, Stanford University		
9.40-10.10	Plenary 4: Lutgarde Raskin, University of Michigan		
10.10-10.40	Coffee break + posters		
	<i>Microbiology of anaerobic digestion / (meta) genomic research</i>	<i>Sulfur cycle technology</i>	<i>Post treatment (+ agricultural use)</i>
10.40-11.00	<p>Anna Schnürer Swedish University of Agricultural Sciences Sweden</p> <p><i>Title to be confirmed</i></p>	<p>Erik van Zessen Paques B.V. The Netherlands</p> <p><i>Title to be confirmed</i></p>	<p>Appropriateness of empirical models predicting the performance of rock-bed trickling filters following UASB reactors</p> <p>C.A.L. Chernicharo, T. Bressani-Ribeiro, E.I.P. Volcke, Brazil</p>
11.00-11.15	<p>Global reference database of microbes in anaerobic digesters</p> <p><u>V. Rudkjøbing</u>, M. Dueholm, S. Knutson, M. Nierychlo, J. Kristensen, F. Petriglieri, G. Dottorini, E. Yashiro, S. Karst, M. Albertsen, P. H. Nielsen, Denmark</p>	<p>Ni Stress to Sulphate Reducing Bacteria Enhances Ni Complexation: Opportunity for Ni-Co Separation from wastewater</p> <p><u>Y. Liu</u>, A. Serrano, V. Wyman, G. Southam, J. Vaughan, D. Villa-Gomez, Australia</p>	<p>A. practical solution for sludge stabilization from aerobic post treatment in the anaerobic pre treatment unit</p> <p>A. van Haandel, Brazil</p>

<p>11.15-11.30</p>	<p>Genomic insights into the syntrophic metabolism of propionate oxidation</p> <p><u>D.Z. Sousa</u>, M.K. Nobu, C.A.P. Hidalgo, T. Narihiro, H. Tamaki, W.-T. Liu, N.Q. Wofford, M.J. McInerney, Y. Kamagata, A.J.M. Stams, H. Imachi, The Netherlands</p>	<p>Developing a new thiosulfate-driven sulfur-cycle anammox process</p> <p>D.Wu, Hong Kong</p>	<p>Post-treatments and recirculation of agricultural solid digestates: impact on full-scale methane yield</p> <p><u>U. Brémond</u>, A. Bertrandias, J.P. Steyer, H. Carrere, France</p>
<p>11.30-11.45</p>	<p>Aerobic and facultative bacteria: working horses at the service of Anaerobic Digestion</p> <p><u>M. Alves</u>, S.Duarte, J. Vitor Oliveira, C. Pereira Magalhães, A. Salvador, A.R. Castro, A.J.M. Stams, A.J. Cavaleiro, M. Alcina Pereira, Portugal</p>	<p>Autotrophic denitrification via nitrite associated with microaeration for sulfide removal</p> <p><u>P.I.M. Firmino</u>, <u>G. Neto</u>, R.H.Lima, D.C. Hortêncio, M.E. Rodrigues da Silva, A.B.dos Santos, Brazil</p>	<p>Removal of dissolved methane and nitrogen from anaerobically treated sewage using the SIAM process</p> <p><u>J. M. Garrido</u>, J. Domínguez, L. Rodríguez, A. Silva-Teira, T. Serna, E. Sánchez, P. Simón, N. Moya, A. Arias, J. M. Lema, Spain</p>
<p>11.45-12.00</p>	<p>Microbial diversity, and biofilm growth, in size-resolved anaerobic granules</p> <p><u>A. Trego</u>, C. Morabito, S. Mills, S. Connelly, I. Bourven, G. Guibaud, C. Quince, U. Zeeshan Ijaz, G. Collins, Ireland</p>	<p>Potential of sulfide-based denitrification for municipal wastewater treatment</p> <p><u>A. Van den Hove</u>, J.E. Baeten, S.O. Decru, E.I.P. Volcke, Belgium</p>	<p>Hydrothermal carbonisation post-treatment of digestate from a municipal digester targeting solid reduction and increased methane yield</p> <p>J. Frigon, Canada</p>

12.00-12.15	<p>Meta-analysis of amplicon sequencing datasets to understand the ecology of Chloroflexi in methanogenic full scale reactors</p> <p>P. Bovio, A. Cabezas, <u>C. Etchebehere</u>, Uruguay</p>	<p>Electron Donor Influence in Metal Sulfide Removal and Recovery from Acid Mine Drainage</p> <p><u>R.Costa</u>, D. Bevilaqua, Brazil</p>	<p>Partial nitrification/anammox process using intermittent aeration as post-treatment of food waste effluent</p> <p>B. G. P. Carvalho, F. A. C. Warrener, H. M. C. Castro, A. Pereira, C. Chernicharo, <u>J. C. Araújo</u>, Brazil</p>
12.15-12.35	4 poster pitches	4 poster pitches	4 poster pitches
	<p>Thermal hydrolysis affects the microbiome structure and composition in sewage sludge anaerobic reactors</p> <p>G.H.R.. Braz, A. Taboada-Santos, N. Fernandez-González, M. Carballa and J. M. Lema, Spain</p> <hr/> <p>End-of-life of biodegradable plastics supports through anaerobic digestion: performance and microbial study</p> <p><u>C. Guillaume</u>, F. Monlau, R. Guyoneaud, C. Vasmara, C. Gassie, R. Marchetti, France</p>	<p>Performance and bacterial diversity of a bioreactor for oxidation of sulfide from UASB reactor treating sewage</p> <p><u>L. S. Azevedo</u>, J. C. Araújo, C. A. L. Chernicharo, Brazil</p> <hr/> <p>Use of magnetite for in-situ removal of hydrogen sulfide during anaerobic digestion</p> <p><u>H. Jung</u>, J. Kim, C.Lee, Republic of Korea</p>	<p>Filtration of municipal UASB effluent using a dynamic membrane immersed in anaerobic granular sludge</p> <p><u>A. Rodríguez-Medina</u>, A. Noyola, Mexico</p> <hr/> <p>Water treatment sludge as a filtration medium for post-treatment of UASB reactor effluent</p> <p>M. Ahammed, India</p>

	<p>Impact of operational parameters on reactor performance and microbial community development during pilot-scale low temperature anaerobic digestion wastewater treatment</p> <p><u>L.M. Paulo</u>, J. Castilla-Archilla, J. Ramiro-Garcia, J.A. Picón, D. Hughes, T. Mahony M. Murray, P. Wilmes, V. O’Flaherty, Ireland</p>	<p>Simultaneous biological treatment and REY (rare earth elements and yttrium) removal from an acid mine drainage</p> <p><u>E.W. Nogueira</u>, L.A.G. Godoi, G. Brucha, M.H.R.Z. Damianovic, Brazil</p>	<p>AlgaeBioGas: Algal-bacterial treatment of biogas digestate with biomass production and energy recovery</p> <p>A.Cerar, <u>R.Reinhardt</u>, M. B. Zrimec, B.Lazar, M. Slapnik, Slovenia</p>
	<p>How reproducible is the anaerobic digestion microbiome?</p> <p><u>M. Peces</u>, S. Astals, Denmark</p>	<p>A passive treatment system for bioremediation of sulfate rich mine affected waters</p> <p>S.Rossouw, C. Sheridan, South Africa</p> <p><i>To be confirmed</i></p>	<p>Impact of microaeration on dissolved sulfide and methane removals from anaerobic effluent</p> <p><u>C.S. Cabral</u>, C.A.L. Chernicharo, J.C. Araújo, Brazil</p>
12.35-14.00	Lunch + posters		
	<p><i>Microbiology of anaerobic digestion / (meta) genomic research</i></p>	<p><i>Nutrient removal/recovery linked to AD (anammox, struvite, N/P general)</i></p>	<p><i>Anaerobic high-rate/granular sludge</i></p>
14.00-14.20	<p>Application of synthetic microbial co-cultures for the conversion of syngas to bio-based chemicals</p> <p><u>M. Diender</u>, I. Parera-Olm, J.Koehorst, P. Schaap, A. J.M. Stams, D. Z. Sousa, The Netherlands</p>	<p>Ilje Pikaar Wageningen University and Research The Netherlands</p> <p><i>Title to be confirmed</i></p>	<p>Ana Soares Cranfield University United Kingdom</p> <p><i>Title to be confirmed</i></p>

14.20-14.35	<p>Identifying metabolic flexibility in syntrophic populations within anaerobic digesters using stable-isotope informed metagenomics</p> <p><u>R. Ziels</u>, D.Z. Sousa, Canada</p>	<p>A new UASB-gas-lift reactor design for the simultaneous production and recovery of calcium phosphate granules and methane from vacuum collected black water</p> <p>J.R. Cunha, R.D. van der Weijden, L. Hernández Leal, G. Zeeman, C. Buisman, The Netherlands</p>	<p>Anaerobic Granular Sludge Technology at High Salinity – Why Protein May be Crucial</p> <p><u>D. Sudmalis</u>, M.C.Gagliano, H.H.M.C. Rijnaarts, G. Zeeman, H. Temmink, The Netherlands</p>
14.35-14.50	<p>Shaping robust methanogenic communities for the treatment of domestic wastewater at 15oC</p> <p><u>E. Petropoulos</u>, Y. Yu, A. Yakubu, T.P. Curtis, J. Dolfing, United Kingdom</p>	<p>The potential for polyphosphate cycling in Archaea and extensive anaerobic polyphosphate formation in Methanosarcina mazei</p> <p><u>J.C. Connolly</u>, F. Paula, J. Chin, A. Schnurer, B. Muller, P. Manesiotis, N. Waters, K. Macintosh, F. Abram, J. McGrath, V. O’Flaherty, Ireland</p>	<p>Development of dynamic membrane bioreactor based on rumen physiology for efficient hydrolysis of lignocellulosic biomass</p> <p><u>X. Fonoll Almansa</u>, T. Meuwissen, L. Aley, S. Shrestha, L. Raskin, United States</p>
14.50-15.05	<p>Revealing the causal relationship between the anaerobic microbiome and co-digester performance using a common garden approach</p> <p><u>L.Wang</u>, J. J. Ducoste, F. L. de los Reyes III, United States</p>	<p>Treatment of thermal hydrolysis process pre-treated mesophilic digestion dewatering liquors via two different deammonification reactors</p> <p><u>P.O. Ochs</u>, B. Martin, E. Germain-Crips, T. Stephenson, M.C.M. van Loosdrecht, A. Soares, United Kingdom</p>	<p>High Rate Biomethanation Delivered by a Novel Plug Flow Biofilm Reactor</p> <p><u>S.Savvas</u>, J. Donnelly, T. Petterson, Z. Chong, S.Esteves, United Kingdom</p>

15.05-15.20	Transcriptome analysis of high ammonia biogas reactors <u>O.Karlsson-Lindsjö</u> , B. Müller, F. Leung, A. Schnürer, Sweden	Balancing physics, chemistry and microbiology in intensified biosolids and nutrient treatment systems <u>H. De Clippeleir</u> , Q. Zhang, B. Wett, S. Martinelli, M. Miranda, C. Cusic, S.M. Kharkar, R. Suzuki, N. Passarelli, A. Al-Omari and C. deBarbadillo, United States	Enhanced biogas production and in situ ammonia recovery using a novel gas-membrane absorption anaerobic reactor <u>X. Shi</u> , J. Zuo, Y. Wang, M. Zhang, China
15.20-15.35	Anaerobic Propionate Degradation: From Metagenomes to Kinetics <u>D. Popp</u> , D. Becker, T. Malycheva, F. Bonk, S. Kleinsteuber, H. Sträuber, F. Centler, Germany	Effect of N-NO₂-/N-NH₄⁺ ratio and organic carbon concentrations on N₂O production in biological batch reactors containing anammox-granular sludge <u>T.D.S. Pereira</u> , R.H. Spindola, E.C. Pires, M.H.R.Z. Damianovic, Brazil	Low-ambient temperature high-rate anaerobic wastewater treatment at full-scale: two case studies <u>L.M. Paulo</u> , J. Ramiro-Garcia, D. Hughes, T. Mahony, M. Murray, P. Wilmes, V. O'Flaherty, Ireland
15.35-16.00	Coffee break + posters		
16.00-16.15	Marker microbiomes and key taxa combinations are determined by operational parameters in anaerobic digestion <u>S. Theuerl</u> , J. Klang, M. Heiermann, J. De Vrieze, Germany	Effect of thermal hydrolysis pre-treatment of waste activated sludge on fate and solubilisation of nutrients, melanoidins formation and effects on anaerobic digestion <u>J.A. Pavez</u> , M.K de Kreuk, J.B van Lier, The Netherlands	VFA production using anaerobic granular sludge: product yield maximization by SRT control <u>M. Mulders</u> , R. Kleerebezem, M. Pronk, J. Tamis, G. Stouten, A.E. Alonso, The Netherlands

16.15-16.30	<p>Fungal pretreatment vs. Fungal bioaugmentation in lignocellulose-based anaerobic digesters: a metagenomic approach</p> <p><u>C. Akyol</u>, O. Ince, M. Bozan, E. Gozde Ozbayram, B. Ince, Turkey</p>	<p>N2O gas emissions estimated by water dissolved measurements: Robustness and financial opportunity in different configurations</p> <p>A. Fenu, <u>B. Saerens</u>, K. De Gussem, T. Wambecq, M. Weemaes, Belgium</p>	<p>Biopaq®ICX: The next generation high rate anaerobic reactor proves itself at full scale</p> <p><u>T.L.G. Hendrickx</u>, B. Pessotto, R. Prins, L. Habets, J. Vogelaar, The Netherlands</p>
16.30-16.45	<p>Response of anaerobic methanogenic biomass to immobilized C-nanotubes exposure</p> <p><u>B. Fernández</u>, J. Ruiz-Sánchez, F. Prenafeta-Boldú, M. Guivernau, Spain</p>	<p>Enhanced nitrogen removal from low COD/N tropical wastewater: low-dissolved-oxygen nitrification and slowly-biodegradable COD for denitrification</p> <p><u>A.S.M. Chua</u>, S.W.How, G.C. Ngoh, T.P. Curtis, Malaysia</p>	<p>Evaluation of microbial properties of the granular sludge developed in the psychrophilic UASB reactor fed with an electronics industry wastewater</p> <p><u>K. Syutsubo</u>, T. Danshita, H. Sumino, A. Iguchi, Y. Takemura, H. Sonaka, T. Yamaguchi</p>
16.45-17.00	<p>Comprehensive ecosystem specific 16S rRNA database illuminates the microbial dark matter in anaerobic digesters</p> <p><u>M.S Dueholm</u>, S. Knutson, V. Rudkjøbing, M. Nierychlo, J. Kristensen, F. Petriglieri, E. Yashiro, S.M. Karst, M. Albertsen, P.H. Nielsen, Denmark</p>	<p>Partial nitrification of anaerobically pre-treated sewage: pilot-scale experiences</p> <p><u>V. Kouba</u>, H.N.C. Thanh, B. Plutova, A. Paulu, B. Satkova, D. Vejmelkova, P. Dolejs, J. Hejnic, P. Jenicek, J. Bartacek, Czech Republic</p>	<p>Enhancing biogas recovery from municipal sewage using granular activated carbon amended UASB digestion</p> <p>Y. Zhang, L. Zhang, B. Guo, M.Gao, Y. Liu, Canada</p>

17.00-17.15	<p>Reduced lag time and archaeal community shift after bioaugmenting anaerobic co-digesters fed poly-hydroxybutyrate bioplastic</p> <p><u>N.Benn</u>, K. Venkiteshwaran, D. Zitomer, United States</p>	<p>Presentation by Dr. Bruce Logan</p> <p><i>Title to be confirmed</i></p>	<p>Phase separation hinders the bioenergy recovery from sugarcane vinasse anaerobic digestion: Contradicting the literature</p> <p><u>L.T. Fuess</u>, M. Zaiat, C. Augusto Oller do Nascimento, Brazil</p>
17.15-17.35	4 poster pitches	4 poster pitches	4 poster pitches
	<p>Lactic acid bacteria as key players in acidogenic fermentation as unveiled by flow cytometry and amplicon sequencing</p> <p><u>H. Sträuber</u>, J. Lambrecht, S. Kleinsteuber, S. Müller, Germany</p>	<p>Treatment of sidestream dewatering liquors from thermally hydrolized and anaerobically digested biosolids</p> <p><u>W.J.B.M. Driessen</u>, J.T.A. van Veldhoven, M. Janssen, M.C.M. van Loosdrecht, The Netherlands</p>	<p>AnSBBR Applied to Methane Production by Thermophilic Anaerobic Co-Digestion of Cheese Whey and Glycerin</p> <p><u>J.N. de Albuquerque</u>, A.P. Paulinetti, E. Kurita, J. Ventura, M.C. Hallak, S.M. Ratusznei, J.A.D. Rodrigues, Brazil</p> <p>-----</p> <p>Long-term performance of an ECSB reactor treating cheese industry wastewater</p> <p><u>V. Diamantis</u>, A. Aivasidis, Greece</p>
	<p>Enhanced resolution of ecological keystone populations in full-scale AD systems</p> <p><u>N. de Jonge</u>, T Sørensen, AC Pedersen, A Schnürer, JL Nielsen, Denmark</p>	<p>Enhanced anaerobic digestion for energy autonomy necessitates mainstream anammox technology</p> <p><u>S.E. Vlaeminck</u>, M. Van Tendeloo, D. Seuntjens, B. Bundervoet, A. Haan, I. Dekker, R. Jordaens, H. Mollen, E. Wypkema, J. Colsen, Belgium</p>	

	<p>Genome-centric metagenomics elucidates the microbial degradation metabolism of proteins in the anaerobic digestion process</p> <p><u>X. Zhu</u>, S. Campanaro, L. Treu, P.G. Kougias, I. Angelidaki, Denmark</p> <hr/> <p>Identification of novel foam-forming microbes in full-scale mesophilic digester at a wastewater treatment plant</p> <p><u>C. Jiang</u>, E. Yashiro, A.K. Corfitz Petersen, P. Halkjær Nielsen, Denmark</p>	<p>Towards enhanced nutrient recovery, biogas production and upgrading through AD and BES integration</p> <p><u>V. Koskue</u>, P. Ledezma, S. Freguia, M. Kokko, Finland</p> <hr/> <p>Operational strategies for a membrane biofilm reactor coupling DAMO and Anammox treating municipal landfill leachate to achieve a high rate nitrogen removal</p> <p>G.J.. Xie China</p>	<p>Hydrogen fermentation treatment of organic wastewater with high ammonia nitrogen concentration via electro dialysis bioreactor</p> <p><u>A. Xia</u>, P. Wei, C. Sun, Y. Huang, Q. Fu, China</p> <hr/> <p>Comparison of UASB and AnSCMR efficiency for the treatment of suspended solid (SS) rich starch wastewaters</p> <p><u>B. Jiang</u>, J. Wu, H. Chen, Y. Li, Japan</p>
17.35-19.30	Poster session I + drinks + fingerfood		

Tuesday 25-06-2019

Time	Session 1	Session 2	Session 3
9.00-9.30	Plenary 5: Kara Nelson, University of California		
9.30-10.00	Plenary 6: Raul Muñoz, University of Valladolid		
10.00-10.30	Coffee break + posters (CHANGE OVER)		
	<i>Low-tech solutions for developing countries/ Environmental Management</i>	<i>Biogas upgrading and management</i>	<i>Anaerobic biotransformations</i>
10.30-10.50	<p>S. Mutnuri Bits Pilani K K Birla Goa Campus India</p> <p><i>Title to be confirmed</i></p>	<p>E. McAdam Cranfield University United Kingdom</p> <p><i>Title to be confirmed</i></p>	<p>Biotransformation of organic micropollutants under anaerobic conditions: what do we know and what do we need to know</p> <p><u>M. Carballa</u>, Lorena Gonzalez-Gil, J.M. Lema, Spain</p>
10.50-11.05	<p>Quantifying methane emissions from anaerobic digesters</p> <p><u>J. Tauber</u>, V. Parravicini, K. Svardal, J. Krampe, Austria</p>	<p>From industrial wastewater to pure methane: bundling anaerobic technologies with biogas upgrade systems</p> <p><u>J. van der Lubbe</u>, D. Gerber, F. van der Zee, G. Kooijman, M. Baudry, The Netherlands</p>	<p>A wide perspective of carbon materials as catalysts for bioremediation of emerging pollutants and methanogenesis</p> <p><u>L. Pereira</u>, A. Salvador, G. Martins, A.R. Silva, A.J. Cavaleiro, M.A. Pereira, A. Stams, M.F. Pereira, M. Alves, Portugal</p>

<p>11.05-11.20</p>	<p>Simultaneous stabilization, methanation, and hygienization of faecal matter from poor urban settlements applying co-digestion in plug-flow digester systems.</p> <p>J.N. Riungu, M. Rontelap, J.B. van Lier, The Netherlands</p>	<p>Anaerobic thermophilic trickle bed reactor as a promising technology for flexible H₂/CO₂ biomethanation</p> <p>K. Koch, D. Strübing, A.B. Moeller, B. Mößnang, M. Lebuhn, J.E. Drewes, Germany</p>	<p>Potential for biodegradation of microplastics in thermophilic anaerobic digesters</p> <p>J.L. Nielsen, N.K. Pedersen, A. Peydaei, E. Baudu, W.E.Y. Fernando, L. Gurevich, P. Fojan, R. Wimmer, N. de Jonge, Denmark</p>
<p>11.20-11.35</p>	<p>Constraints, performance and perspectives of anaerobic sewage treatment: lessons from full-scale STPs in Brazil</p> <p>C.A.L Chernicharo, L.A. Chamhum-Silva, T. Bressani-Ribeiro, Brazil</p>	<p>Biological removal of siloxanes from biogas for biomethane injection in natural gas grid</p> <p>C.Pascual, E. Arnaiz, R. Muñoz, R. Lebrero, Spain</p>	<p>Combining Thermophilic Aerobic Reactor (TAR) with Mesophilic Anaerobic digestion (MAD) improves the degradation of pharmaceutical compounds</p> <p>Y. Bessiere, I. Gonzalez-Salgado, L. Cavaillé, S. Dubos, E. Mengelle, C. Khim, E. Paul, S. Pommier, France</p>
<p>11.35-11.50</p>	<p>Closing cycle in food waste treatment: by-products and energy recovery in a pilot-scale integrated system</p> <p>F. Passos, A. Torres, T. Ferreira, C. Souza, C. Mota, C.A.L. Chernicharo, Brazil</p>	<p>Ex-situ Biogas upgrading via hydrogenotrophic methanogenesis in anaerobic rotating reactor under extreme-thermophilic condition</p> <p>W. Zhu, N. Dong, Y. Zhou, L. Xie, China</p>	<p>The fate of micro-pollutants in an anaerobic-aerobic based system treating domestic sewage</p> <p>L. Vasalle de Castro, L.S. Azevedo, S.F. Aquino, C. Moreira, M.P. de Freitas, A.F.T. Franco, F. Passos and C.R. Mota, Brazil</p>

11.50-12.05	<p>Anaerobic-based biorefinery — A Techno-Economic Analysis</p> <p><u>J.E. Schmidt</u>, J.R. Bastidas-Oyanedel, Denmark</p>	<p>In-situ biomethanation: Effect of hydrogen on acetate production and consumption rates.</p> <p><u>N. dos Reis Vechi</u>, L.M. Agneessens, L. Ditlev M. Ottosen, A. Feilberg, M. Vedel Wegener Kofoed, Denmark</p>	<p>Hydrolysis or acidogenesis? Who plays a major role on the biotransformation of organic micropollutants?</p> <p>R. Carneiro, L. Gonzalez-Gil, M. Zaiat, M. Carballa, J. M. Lema, Spain</p>
12.05-12.25	<p>4 poster pitches</p>	<p>4 poster pitches</p>	<p>4 poster pitches</p>
	<p>Influence of the scale factor on environmental and economic indicators of anaerobic digestion</p> <p><u>A. Arias</u>, G. Feijoo, M.T. Moreira, Spain</p> <hr/> <p>Model-based analysis of greenhouse gas emission reduction potential through farm-scale digestion</p> <p><u>T. Vergote</u>, W. Vanrolleghem, C. Van der Heyden, A. De Dobbelaere, J. Buysse, E. Meers, E.I.P. Volcke, Belgium</p>	<p>Pilot-scale demonstration of a biomembrane for biogas desulfurization</p> <p><u>L. Pokorna-Krayzelova</u>, J. Bartacek, S. Nyawira Theuri, C.A.S.Gonzalez, J.Prochazka, E.I.P. Volcke, P. Jenicek, Czech Republic</p> <hr/> <p>Biogas upgrading using algal-bacterial processes in wastewater treatment plants</p> <p>M. Rodero Raya, Spain</p> <p><i>To be confirmed</i></p>	<p>Anaerobic treatment of hexachlorocyclohexane contaminated biomass in continuous stirred tank reactor</p> <p><u>M. Nikolausz</u>, I. Nijenhuis, U. N. da Rocha, B. Liu, F. B. Corrêa, H. H. Richnow, Germany</p> <hr/> <p>Comparative fate of antibiotic resistant <i>E. coli</i> and antibiotic resistance genes in anaerobically digested sludge from wastewater treatment plants</p> <p><u>S.C. Redhead</u>, J. Nieuwland, E. Hayhurst, United Kingdom</p>

	<p>Influence of aqueous phase supplementation on biofiltration of diffuse methane emissions</p> <p><u>E.M.F. Brandt</u>, J.C. Araújo, C.A.L. Chernicharo, Brazil</p>	<p>Ex-situ biogas upgrading in thermophilic reactors using membranes as gas diffusion device</p> <p><u>M. Peprah</u>, P. Kougiyas, P. Tsapekos, L. Treu, S. Campanaro, I. Angelidaki, Denmark</p>	<p>Azo dyes structure influencing it's own degradation: kinetics and redox conditions</p> <p>R. Brito, <u>S.Gavazza</u>, J.R.Carvalho, M. Paraiso, M. Kato, L. Florencio, Brazil</p>
	<p>Anaerobic codigestion of sludge and manure in low cost vertical digesters for developing countries context</p> <p><u>R. Valencia Vázquez</u>, L.J. Velázquez-Chávez, C.U. Moreno-Medina, R. Lucho-Chigo, M.D.J. Rodríguez-Rosales, Mexico</p> <p><i>To be confirmed</i></p>	<p>Innovative in-situ biological biogas upgrading using high rate up flow anaerobic polyfoam bioreactor (UAPB)</p> <p><u>K.B. Karkaby</u>, K. Yanuka-Golub, S. Muhsein, M. Hassanen, N. Massalha, I. Sabbah, Israel</p>	<p>Biodegradability and Toxicity of Ubiquitous Azoles to Anaerobic and Post-Treatment Processes</p> <p><u>R. Sierra-Alvarez</u>, K. Jog, C.H. Nguyen, E. Vanover, G. Li, J.A. Field, United States</p>
12.25-14.00	Lunch + posters		
	Anaerobic MBR, research & application	MFC / Bio-electrochemical systems	Pre-treatment
14.00-14.20	<p>J. Kim INHA University Republic of Korea</p> <p><i>Title to be confirmed</i></p>	<p>A. Ter Heijne Wageningen University and Research The Netherlands</p> <p><i>Title to be confirmed</i></p>	<p>Assessing the effect of enzyme application in anaerobic digestion: experiences from the DEMETER project</p> <p><u>L. de Beer</u>, F. Velghe, J. Liebetrau, L. Müller, Belgium</p>

14.20-14.35	<p>Challenging high salinity chemical wastewater treatment by applying anaerobic membrane bioreactors</p> <p><u>J.D. Muñoz Sierra</u>, H. Spanjers, J.B. van Lier, The Netherlands</p>	<p>Impact of applied voltage on methane production and microbial activity in anaerobic digesters in the presence of granular activated carbon (GAC)</p> <p><u>M. Harb</u>, N. Ermer †, A.L. Smith, United States</p>	<p>An innovative pre-treatment of poultry manure via Poul-AR technology enabling high yield thermophilic mono-digestion</p> <p><u>N. Carlier</u>, A. Kulagowska, R. Jordaens, J. Colsen, JW. Bijnagte, W. Fuchs, The Netherlands</p>
14.35-14.50	<p>Two-phase improves energy recovery from food waste at high organic loading rate in anaerobic membrane bioreactors</p> <p><u>Y.M. Amha</u>, W. Zhao, M. Corbett, A.L. Smith, Unites States</p>	<p>Microbial photoelectrochemical reactors for high rate wastewater treatment and energy recovery</p> <p><u>J.Ren</u>, Y Jiang, L Lu, X Chen, United States</p>	<p>Pushing organic loading rate in a full scale anaerobic digester with thermal hydrolysis pre-treatment</p> <p><u>Y. Bajon Fernandez</u>, A. Aimale-Troy, R. Villa, C. Carliell-Marquet, B. Digby, D. Polag, Y. Bajon Fernandez, United Kingdom</p>
14.50-15.05	<p>The first two years of operation of a semi-industrial AnMBR plant for urban wastewater treatment</p> <p>A. Robles, F. García-Bellón, A. Jiménez, F. Durán, J. Vazquez-Padín, J. Serralta, J. Ribes, J. Ferrer, F. Rogalla, A. Seco, Spain</p>	<p>Operation of a scaled-up BES prototype for electromethanogenesis</p> <p><u>D. Molognoni</u>, A. Ceballos-Escalera, P. Bosch-Jimenez, R. Rodriguez, E. Licon, D. Gali, C. Corbella, M. Aliaguilla, M.P. Bernicola, M. Della Pirriera, E. Borràs, Spain</p>	<p>Influence of individual phenols and furans released during thermal pre-treatment on anaerobic digestion</p> <p><u>A. Carvajal</u>, E. Caroca, A. Serrano, R. Borja, A. Jiménez, A.F.M. Braga, G. Rodriguez-Gutierrez, F. G. Feroso, Chile</p>

15.05-15.20	<p>Treatment of Domestic Wastewater with Recirculating Anaerobic Dynamic Membrane Bioreactor</p> <p><u>T. Fairley</u>, L. Raskin, S. Skerlos, United States</p>	<p>Long-term performance of TN removal and power generation in a single chamber MFC using a separator with pre-enriched nitrifying biofilm</p> <p><u>T. Watanabe</u>, A. Kawata, S. Tanno, S. Xue, K. Kubota, Japan</p>	<p>Potentials and challenges by implementing fine mesh sieving for primary treatment of wastewater</p> <p><u>L. Karstenskov Hughes</u>, L. Bailon, M. Lykkegaard, C.Jes la Cour Jansen</p>
15.20-15.35	<p>Anaerobic membrane bioreactor for direct COD capture and biogas production in mainstream wastewater treatment</p> <p><u>C. Park</u>, S. Kim, M. Cha, Republic of Korea</p> <p><i>To be confirmed</i></p>	<p>Modeling an environmental biorefinery scenario with anaerobic digestion coupled to bioelectrosynthesis: analyzing the requirements for profitability</p> <p><u>R. Moscoviz</u>, A. Huyard, E. Desmond-Le Quéméner, J.H. Tian, T. Bouchez, M. Crest, France</p>	<p>Exploring the complex role of pre-treatments in anaerobic digestion: from batch to continuous mode</p> <p><u>C.M. Braguglia</u>, A. Gallipoli, A. Gianico, D. Montecchio, P. Pagliaccia, Italy</p>
15.35-16.00	Coffee break + posters		
16.00-16.15	<p>AnMBR: Evaluation of three membranes and three substrates</p> <p><u>J.R.Vazquez-Padin</u>, Spain</p>	<p>Critical factors affecting biocathode development and bio-production from CO2 reduction in Microbial electrosynthesis (MES)</p> <p>P. Izadi, United Kingdom</p>	<p>Energetic and economic assessment of sludge thermal hydrolysis in novel configurations of wastewater treatment plants</p> <p><u>A. Taboada-Santos</u>, M. Carballa, J.M. Lema, Spain</p>

16.15-16.30	<p>Evaluating Antibiotic Resistance Proliferation in Anaerobic Membrane Bioreactors Under Different Antibiotic Exposure Conditions</p> <p><u>A.L. Smith</u>, P. Wang, M. Harb, L. Stadler, United States</p>	<p>Dreams are (only?) my reality - state of the art of microbial electrochemical sensors for AD process control</p> <p><u>J. Kretzschmar</u>, F. Harnisch, Germany</p>	<p>Steam explosion: A method for enhancing biogas production from lignocellulosic biomass on a semi-continuous system</p> <p><u>F. Kaldis</u>, D. Cysneiros, A. Chatzifragkou, A. Karatzas, United Kingdom</p>
16.30-16.45	<p>Fouling control by flocculant addition based on online measurement of sludge filterability in a pilot AnMBR</p> <p><u>M. Odriozola</u>, M. Lousada-Ferreira, N. Morales, H. Spanjers, J.B. van Lier, The Netherlands</p>	<p>On-line monitoring of biohythane fermentation system based on microbial electrochemical technology</p> <p><u>S. Huang</u>, S. Mengmeng, L. Zhidan, China</p>	<p>Electrochemical pretreatment for H₂S control of CEPT sludge</p> <p><u>Q. Zeng</u>, FX Zan, TW Hao, GH Chen, X. Weiqi, Hong Kong</p>
16.45-17.00	<p>Antibiotic Resistance Gene Fate during Co-digestion of Livestock Manure and Domestic Wastewater in an Anaerobic Membrane Bioreactor</p> <p><u>E. Lou</u>, L. Baker, A. Smith, L. Stadler, United States</p>	<p>Dynamic simulation of bioelectrical and electrical processes in microbial fuel cells operating with municipal wastewater</p> <p>T. Littfinski, H. Hiegemann, M. Lübken, T. Gehring, K.-G. Schmelz, D. Pant, M. Wichern, Germany</p>	<p>Optimization of methane production from cattle manure using steam explosion pretreatment</p> <p>M. Studer, S. Brethauer, <u>E. Cazier</u>, Switzerland</p>

17.00-17.20	4 poster pitches	4 poster pitches	4 poster pitches
	<p>Development of Electrospun Nanofiber Membranes for Anaerobic Membrane Bioreactors</p> <p><u>S.Gee</u>, A. Smith, United States</p> <hr/> <p>Protocol to Evaluate and Correlate Membrane Performance and Mixed-liquor Characteristics of Full-scale and Pilot-Scale AnMBRs</p> <p><u>M.M.J. Baudry</u>, T. Zhou, P. Van Gaelen, I. Smets, S. Pacheco-Ruiz, The Netherlands</p> <hr/> <p>Heavy metals effects and denitrifying process in an Anaerobic Swirling Fluidized Bed Membrane Bioreactor (ASFMBR)</p> <p><u>J.E. Ramírez</u>, S. Esquivel, G. Buitrón, F.J. Cervantes, Mexico</p> <hr/>	<p>Towards environmental biorefinery: upscaling of microbial electrosynthesis cell fueled with heterogeneous organic waste</p> <p><u>J.-H Tian</u>, E. Desmond-Le Quéméner, T. Bouchez, France</p> <p><i>To be confirmed</i></p> <hr/> <p>High carbon conversion rate to carboxylic acids through a bio-electrofermentation – ion substitution electro dialysis integrated system</p> <p><u>B. Yan</u>, M. Zhou, W. Zhao, Y. Zhang, China</p> <p><i>To be confirmed</i></p> <hr/> <p>Economic Evaluation Of Commercial Applications For Electrogenic Bioreactors Based On Experimental Results</p> <p><u>A. Szczupak</u>, R. Shechter, Israel</p> <p><i>To be confirmed</i></p> <hr/>	<p>Biorefinery approach for lignocellulosic biomass valorisation: combination of pretreatment with chemical recycling, phenols extraction and anaerobic digestion</p> <p><u>G. Cazaudehore</u>, C. Peyrelasse, M. Marques, B. Schraauwers, F. Monlau, France</p> <hr/> <p>Electrokinetic disintegration for an improvement in sludge digestion yield</p> <p><u>S. Houtmeyers</u>, R. Dewil, L. Appels, Belgium</p> <hr/> <p>Exogenous ligninases improve methane yields during anaerobic digestion of lignocellulosics: The case of corn stover</p> <p><u>J. E. Mendez-Hernández</u>, O. Loera, E. M. Méndez-Hernández, U. Duran, N. O. Soto-Cruz, Mexico</p> <hr/>

	Fouling behavior comparison of three membrane modules in anaerobic membrane bioreactor <u>Z. Liu</u> , X. Huang, China	Magnetic fields enhance power generation and shape exoelectrogenic microbiome in bioelectrochemical systems <u>H. Zhou</u> , D. Xing, China	The science of enzyme dosing in anaerobic digestion. <u>J. Jantova-Patel</u> , Y. Bajón Fernández, F. Ishaq, C. Marquet, R. Villa, United Kingdom
17.20-18.30	Posters with drinks and finger food		
18.30-19.30	Arts and Science		

Wednesday 26-06-2019

Time	Session 1	Session 2	Session 3
9.00-9.30	Plenary 7: Mark van Loosdrecht, Technical University of Delft		
9.30-10.00	Plenary 8: Elizabeth Edwards, University of Toronto		
10.00-10.30	Coffee break + posters		
	<i>Modelling and Control</i>	<i>Resource Recovery /Bio-polymer production using anaerobic systems</i>	<i>Sludge and slurry digestion</i>

10.30-10.50	<p>A revision of microbial growth yields in anaerobic digestion</p> <p><u>J. Rodríguez</u>, M. Paton, United Arab Emirates</p>	<p>A. Rotaru University of Southern Denmark Denmark</p> <p><i>Title to be confirmed</i></p>	<p>Co-digestion and pretreatment improve microalgae anaerobic digestion</p> <p><u>J. Ferrer</u>, M. Solé-Bundó, M. Garfí, Spain</p>
10.50-11.05	<p>Demand-driven biogas production by substrate management – Investigations in process stability at different scales</p> <p><u>E. Mauky</u>, S. Weinrich, H.J. Naegele, H.F. Jacobi, J. Liebetrau, M. Nelles, Germany</p>	<p>Integrating recovery of nutrients and energy: An economic assessment of fifteen scenarios for pig manure treatment</p> <p><u>J. de Vrieze</u>, G. Colica, C. Pintucci, C. Pedizzi, M. Spiller, M. Carballa, S.E. Vlaeminck, Belgium</p>	<p>High solids anaerobic digestion of lignocellulosic biomass via oxidation-reduction potential-based micro-aeration</p> <p><u>S. Khanal</u>, D. Nguyen, Z. Wu, S. Shrestha, P.H. Lee, L. Raskin, United States</p>
11.05-11.20	<p>Predictive models of AD inhibition can be built by integrating independent studies</p> <p><u>O. Chapleur</u>, S. Poirier, S. Déjean, K. Lê Cao, France</p>	<p>Chain oddity: understanding odd-chain elongation and why it behaves in an odd way</p> <p><u>R. Ganigué</u>, P. Candry, C. Petrognani, B. Ulčar, K. Rabaey, Belgium</p>	<p>Continuous stirred tank reactors in series: an approach to enhance the enzymatic hydrolysis and sludge reduction in anaerobic waste activated sludge digestion?</p> <p><u>H. Guo</u>, R. Nair, F. Tonin, A. Hendriks, J.B. van Lier, M. de Kreuk, The Netherlands</p>
11.20-11.35	<p>Moving window PCA based on NIRS spectra for anaerobic digestion (AD) process monitoring</p> <p><u>L. Awhangbo</u>, F. Béline, J. Roger, A. Gobrecht, R. Bendoula, France</p>	<p>Improvement of caproate synthesis from lactate through inoculum preparation and butyric acid supplementation</p> <p>C. Nzeteu, Ireland</p>	<p>Surprising requirements for anaerobic hydrolysis and acidification of proteins</p> <p><u>T.H. Duong</u>, M. van Eekert, K. Grolle, N.T.T. Viet, H. Temmink, G. Zeeman, The Netherlands</p>

11.35-11.50	<p>In-depth bioenergetic evaluation of propionate oxidation pathways</p> <p><u>M. Patón</u>, H.H, Hernandez, J. Rodríguez, United Arab Emirates</p>	<p>Effects of elevated pCO₂ in mixed culture fermentation</p> <p><u>P.S. Ceron Chafra</u>, R.E.F Lindeboom, R. Kleerebezem, K. Rabaey, J.B van Lier, The Netherlands</p>	<p>Linking microbial population dynamics in landfill bioreactors to food waste type and decomposition stage</p> <p><u>F.L. de los Reyes III</u>, L. Wang, E. Lee, M.A. Barlaz, United States</p>
11.50-12.05	<p>Long-term operation of a feedback control strategy for biohydrogen production from organic solid waste in a sequencing batch reactor</p> <p><u>I. Moreno-Andrade</u>, A. Vargas, S. Santiago, Mexico</p>	<p>Revamping the partition-release-recovery concept by thermal hydrolysis and internal carbon recycle: closing the carbon cycle</p> <p><u>D. Puyol</u>, I, Rodriguez, J.D. Marín-Batista, V. Monsalvo, T. Hülsen, D. Batstone, F. Martinez, J.A. Meleró, A.F. Mohedano, Spain</p>	<p>Feasibility of biomethane production by supplying H₂ into a pressurized digester of sewage sludge</p> <p><u>I. Diaz</u>, F. Fdz-Polanco, M. Fdz-Polanco, Spain</p>
12.05-12.25	<p>4 poster pitches</p>	<p>4 poster pitches</p>	<p>4 poster pitches</p>
	<p>Open-loop model-based optimisation method for start-up of anaerobic co-digestion processes</p> <p>S. García-Gen, Chile</p>	<p>From laboratory to continuous pilot scale VFA production: the challenge of up-scaling and process engineering</p> <p><u>J. Garcia-Aguirre</u>, M. Esteban-Gutiérrez, J. González Martínez de Goñi, I. Irizar, E. Aymerich, Spain</p>	<p>Influence of sorghum's structural composition for biomethane production using sequential cropping system</p> <p><u>M. Garuti</u>, P. Mantovi, M. Soldano, A. Immovilli, F. Ruozi, F. G. Feroso, A. J. Rodriguez, C. Fabbri, Italy</p>

	<p>Mixing characterisation in gas-mixed anaerobic digesters: scaled-down evaluation and scaled-up implication <u>P. Wei</u>, R. F. Mudde, W.S.J. Uijtewaal, H. Spanjers, J. B. van Lier and M. de Kreuk, The Netherlands</p>	<p>Continuous Production and Separation of Organic Acids from Biomass via Anaerobic Digestion, Filtration and Electrodialysis <u>J. Massanet-Nicolau</u>, R.J. Jones, R. Fernandez-Feito, A. Guwy, R. Dinsdale, United Kingdom</p>	<p>Contribution of acetogenesis to anaerobic digestion of sewage sludge <u>B. Fu</u>, R. Conrad, X. Jin, H. Liu, China</p>
	<p>Effects of carbon redirection on anaerobic digester performance of water resource recovery facilities <u>K. Solon</u>, M. Jia, E.I.P. Volcke, Belgium biogas</p>	<p>Enhancing biogas production and recovering volatile fatty acids with magnetic molecularly imprinted polymers M. Tonnuci, O. Adarme, B. Baeta, C. Tarley, <u>S. de Aquino</u></p>	<p>Anaerobic digestion in the kraft pulp and paper industry – benefits and strategies for implementation <u>E. Ekstrand</u>, A. Björn, A. Karlsson, B. Magnusson, M. Gustavsson, M. Larsson, X.B. Truong, B.H. Svensson, J. Ejlertsson, Sweden</p>
	<p>----- Stratification in anaerobic granules: A health measurement of the anaerobic digestion process <u>R. Gonzalez-Cabaleiro</u>, S. Connolly, United Kingdom</p>	<p>----- Steering microbiomes towards new biochemical production: iso-caproate <u>K. de Leeuw</u>, D. Strik, C. Buisman, The Netherlands</p>	<p>----- Semi-continuous anaerobic co-digestion of flotation sludge and sweet potato: Nutrients and energy recovery Sarolli S. de M. Costa</p>
12.25-14.00	Lunch + posters		

14.00-14.15	<p>Anaerobic sequential batch reactors for high-efficiency treatment of slow degradable industrial wastewater</p> <p>S.P.R. Pacheco-Ruiz, A.M. Ferreira, The Netherlands</p>	<p>Nitrogen recovery from anaerobically digested blackwaters using Bioelectrochemical systems</p> <p>E. Borràs, D. Molognoni, M. Aliaguilla, P. Bosch-Jimenez, M. P. Bernicola, J. García-Montaña, S. Sanchis, Spain</p>	<p>Dry anaerobic digestion of sewage sludge in small and medium WWTP</p> <p>J. Garcia-Aguirre, E. Aymerich, M. Esteban-Gutierrez, L. Pastor, J.E. Sánchez-Ramírez, S. Doñate, R. Romaguera, C. Lardin, E. Mino, Spain</p>
14.15-14.30	<p>Insights into the synergistic effects of the anaerobic co-digestion of sludge and food waste through the modelization of semi-continuous experimental tests</p> <p>D. Montecchio, P. Pagliaccia, V. Di Castro, A. Gallipoli, A. Gianico, S. Rossetti, B. Tonanzi, C. Braguglia, Italy</p>	<p>Evaluation of protein composition influence on yields and selectivity of volatile fatty acids production</p> <p>R. Bevilacqua, A. Regueira, M. Mauricio, J.M. Lema, M. Carballa, Spain</p>	<p>BioH₂ and bioCH₄ recovery by recirculated temperature-phased anaerobic co-digestion of food waste and paper waste</p> <p>Y. Qin, L. Li, J. Wu, B. Xiao, T. Hojo, K. Kubota, Y. Li, Japan</p>
14.30-14.45	<p>Using kinetic isotope effect to evaluate the significance of the sequential and parallel steps: formation of microbial consortium during reversible anaerobic methane oxidation coupled with sulfate reduction</p> <p>V.A. Vavilin, L.Y. Lokshina, S.V. Rytov, Russian Federation</p>	<p>Caproic acid production: process development, product recovery, microbiome characterization and techno-economic analysis</p> <p>P. Oleskowicz-Popiel, M. Lezyk, A. Duber, F. Brodowski, E. Jankowska, F. Walkiewicz, N. Gutowska, R. Zagrodnik, Poland</p>	<p>Enhanced anaerobic digestion of waste activated sludge using sludge incineration bottom ash</p> <p>Y. Shen, C. Yin, N. Zhu, China</p>

14.45-15.00	<p>Optimization of the agitation process in a full-scale anaerobic digester using computational fluid dynamics (CFD) and tracer experiment</p> <p>J. Claros, J.E.Sánchez-Ramírez, A.M. Maciá, C. Lardín, L. Pastor, Spain</p>	<p>Enrichment and characterisation of chain elongating communities</p> <p>P. Candry, J. Carvajal-Arroyo, S. Huang, K. Rabaey, R. Ganigue, Belgium</p>	<p>Seasonal Variation of the Digester Temperature: Using the Digester as Heat Storage</p> <p>B. Steiniger, C. Hubert C. Schaum, M. Michel, M. Spalleck, Germany</p>
15.00-15.15	<p>Modelling VFA production kinetics from protein-rich industrial wastes</p> <p>A. Regueira, R. Bevilacqua, J. M. Lema, M. Carballa, M. Mauricio-Iglesias, Spain</p>	<p>Chain elongation with lactate for producing medium-chain carboxylates: challenging the robustness of the reactor microbiome by introducing a temperature perturbation</p> <p>B. Liu, Germany</p>	<p>Effect of zeolite addition on the biogas production from chicken manure leachate</p> <p>A. Spyridonidis , I.A. Vasiliadou , K. Athanasiou, , K. Stamatelatou, Greece</p>
15.15-15.30	<p>Meta-analysis of dark fermentation in continuous stirred-tank reactors</p> <p>E. Razo-Flores, Mexico</p>	<p>High-rate production of caproic acid in a chain elongating granular reactor</p> <p>J.M Carvajal Arroyo, P. Candry, S.J. Andersen, R. Props, T. Seviour, R. Ganigué, K. Rabaey, Belgium</p>	<p>Methane recovery from ammonia-inhibited thermophilic reactors using bioaugmentation</p> <p>H. Tian, M. Yan, I. Angelidaki, I. A. Fotidis, Denmark</p>
15.30-16.00	Coffee break + posters		
16.00-17.30	Closing session: Paper award / Poster award Lettinga Award		

	Farewell address
17.30-19.00	Bus transport to Scheveningen
	Conference dinner at the beach!

Thursday 27 June: Excursions

