



PROGRAM

WEDNESDAY 22 OF SEPTEMBER 2021

Time	Session 1	Session 2	Session 3
11:00 – 11:15	Welcome		
11:15 – 11:45	Substrate pre-treatment – use of difficult substrates CHAIRMAN: Dr. Hans OECHSNER	Sponsoren CHAIRMAN: Michael KÖTTNER	Fermentation of biowaste and residues CHAIRWOMAN: Dr. Claudia MAURER
	KN – <i>Dr. Hans OECHSNER</i>	Efficient agitator technology for biogas plants, <i>Coline MILLER</i>	KN – <i>Dr. Claudia MAURER</i>
11:45 – 12:15	Effect of heat treatment at low temperature on the digestibility of dewatered sludge, <i>Gi-Beom KIM</i>	Mono-digestion of shrimp waste with the self-sufficiently stirred HoMethan® reactor - results from field trials in Brazil, <i>Montserrat LLUCH CUEVAS</i>	Anaerobic co-digestion of food waste and sewage sludge: effect of microaeration, <i>Wachiranon CHUENCHART</i>
12:15 – 12:45	Exploiting the biomethane production of grape pomace with hydrodynamic cavitation, <i>Erika SINISGALLI</i>		Anaerobic co-digestion of waste activated sludge and greasy sludge: performance of two-stage process, <i>Ass. Prof. Prawit KONGJAN</i>
12:45 – 14:00	BREAK		
14:00 – 14:30	Pretreatment of lignocellulosic residues by means of a ball mill, <i>Rene HELLER</i>	Biological processes, process stability CHAIRMAN: Dr. Andreas LEMMER	Optimal conditions for high solid digestion of municipal solid wastes, <i>Nadiia NIKULINA</i>
		KN – <i>Dr. Andreas LEMMER</i>	
14:30 – 15:00	Microaeration, a sustainable technology to improve the biomethane formation from fiber-rich biomass, <i>Prof. Urs BAIER</i>	Stability assessment of the anaerobic digestion process through CO ₂ partial pressure in the reactor slurry, <i>Prof. Marian KAZDA</i>	Development of a pilot plug flow reactor (0.5 m ³) for the optimization of the continuous dry anaerobic digestion of agricultural solid biomass, <i>Manuel HERNÁNDEZ-SHEK</i>
15:00 – 15:30	Comparison of novel vortex based hydrodynamic cavitation pre-treatment of milled and unchopped sugarcane bagasse: effect of operating parameters on biogas production, <i>Dr. Sanjay NAGARAJAN</i>	The effects of fungal toxins in biogas production – an evaluation of case studies, <i>Dr. Bettina FRAUZ</i>	Statistical optimization of waste mixture ratio and trace elements for the thermophilic anaerobic co-digestion of cattle manure with various organic wastes (organic fraction of solid wastes, waste bread and olive mill effluent), <i>Prof. Nuri AZBAR</i>
15:30 – 16:00	Effects of vapo-thermal pre-treatment on anaerobic degradability of reeds, <i>Marvin SCHERZINGER</i>	High-resolution monitoring reveals interactions between VFA, pCO ₂ and process performance in intermittently fed biogas reactors, <i>Kerstin MAURUS</i>	Optimal mixture determination, the first step of an expanded granular sludge bed reactor optimization, <i>Roberto HERNÁNDEZ-REGALADO</i>

16:00 – 16:30	BREAK		
16:30 – 17:00	ORAL-POSTER	Ammonia recovery during anaerobic digestion of food waste for performance enhancement, <i>Dr. Stefan GRIMBERG</i>	Co-fermentation of separated liquid components from household bio-waste with sewage sludge, <i>Jingjing HUANG</i>
17:00 – 17:30		Effects of anaerobic digestion process of maize contaminated with aflatoxin B1, <i>Mariangela SOLDANO</i>	
17:30 – 18:00			

ORAL-POSTER

NovoHTK – A novel process for anaerobic mono-digestion of chicken manure, <i>Franziska SCHÄFER</i>
Long-term Nitrification process of the liquid phase of digestate: experience from laboratory and pilot plant cstr reactor, <i>Dr. Pavel MICHAL</i>
Anaerobic degradation of individual substances from 5-hydroxymethylfurfural process-wastewater in continuously operated system, <i>Muhammad KHAN</i>
Prospects of poultry dung processing into biogas when using the probiotic product Amylocin in the diet of hens, <i>Irina MIROSHNICHENKO</i>
Effects of the organic loading rate on methane production from OFMSW, <i>Dr. Simón GONZÁLEZ MARTÍNEZ</i>
Influence of anaerobic digestion processes on the germination of weed seeds, <i>Lijun ZHOU</i>
Acid fermentation with different inocula and its effects on methane production, <i>Germán JOJOA UNIGARRO</i>
Methane production at two different temperatures using OFMSW silage as substrate, <i>Mario CASTELLÓN ZELAYA</i>
Kinetic analysis of mechanization of intermediaries from fermentation, <i>Germán JOJOA UNIGARRO</i>

THURSDAY 23 OF SEPTEMBER 2021

Time	Session 1	Session 2	Session 3
12:00 – 12:30	Economic concepts for the future without feed-in tariffs CHAIRMAN: Michael Stein	Alternative substrates CHAIRMAN: Heinz-Peter MANG	The role of biogas in the bio-economy CHAIRMAN: Dr. Ludger ELTROP
	Biogas in Europe for 2030. Sustainable biogas production, sustainable biomass like straw and lignocelluloses, low cost technologies. biogas full integration for transportation fuels and CO ₂ utilization. biogas as an important climate tool, <i>Prof. Jens Bo HOLM-NIELSEN</i>	KN - Co-Digestion of faecal and septic sludge with sorted organic wastes - in China, Bangladesh and Burkina Faso, <i>Heinz-Peter MANG</i>	KN - The role of biogas in the bioeconomy. The presentation covers the bioeconomy concept as a combination of processes around biomass provision and use, and the central focal point that biogas plants may have for this integrative role. <i>Dr. Ludger ELTROP</i>
12:30 – 13:00	Consumer preferences for biomethane and power-to-gas products in the heating sector, <i>Benedikt RILLING</i>	Biogas yield from different parts and varieties of banana plants, <i>Samatcha KRUNGKAEW</i>	Digestair – a novel anaerobic digester solution in air transport for on board safe and efficient waste management, <i>Jon GARCÍA AGUIRRE</i>

13:00 – 13:30	Multistage evaluation of follow-up concepts for agricultural biogas plants in Germany, <i>Katharina SCHERZINGER</i>	Accumulation of mineral plant nutrients, trace elements and rare earth elements by maize stubbles (zea mays l.), <i>Dr. Walter FRÖLICH</i>	Current status and future perspectives for biogas production in Romania, <i>Dr. Anamaria MĂLINAȘ</i>
13:30 – 14:00	Substrate mix optimisation and its conflicting goals regarding costs, ghg-emissions, process restrictions and demand-orientation, <i>Joshua GÜSEWELL</i>	Straw and manure – our fuel for the future, <i>Leo VAN BREE</i>	Influences of inhibitory substances on anaerobic digestion process and process influences on solid substances, <i>Stanislava MLINAR</i>
14:00 – 14:30	<i>Post EEG concepts calculations, Benedikt HÜLSEMANN</i>	Comparison of different analytical methods for determining biogas yield of biomass from lowland hay meadows, <i>Christina BRANDHORST</i>	Maximising climate protection through minimising gas leakage – the danish biogas measurement programme, <i>Prof. Charlotte SCHEUTZ</i>
14:30 – 15:00	KN - NN	Small-scale anaerobic mono-digestion of pig manure, <i>Sander VANDENDRIESSCHE</i>	Evaluation of an automatized lab scale leach bed reactor system for volatile fatty acid production with pH-control, <i>Jörg STEINBRENNER</i>
15:00 – 15:30	BREAK		
15:30 – 16:00	Systemintegration – H₂-methanation CHAIRMAN: Dr. Raúl MUÑOZ TORRE	Possibilities and limits of the energetic utilization of wild plant mixtures in biogas plants, <i>Diana ANDRADE</i>	Planning of biogas plants CHAIRMAN: Benedikt HÜLSEMANN
	KN - Potential and Limitations of Biological Biogas Upgrading Technology, <i>Dr. Raúl MUÑOZ TORRE</i>		Biogas planning tool to encourage farmers for farm-scale biogas production, <i>Ville PYYKKÖNEN</i>
16:00 – 16:30	Mass transfer-based selection of carrier material to enhance biogas upgrading in a methanogenic biotrickling filter, <i>Michael VEDEL WEGENER KOFOED</i>	On-demand biogas production CHAIRMAN: Dr. Simón MARTÍNEZ GONZÁLEZ	Evaluating the impact of substrate chemical structure on anaerobic digestion, <i>Sarah HUNTER</i>
		Estimating biomethane potentials (BMP) and degradation kinetics in anaerobic digestion, <i>Dr. Sören WEINRICH</i>	
16:30 – 17:00	Integration H ₂ injection and reactor mixing for low-cost in situ biomethanation: full-scale potential and limitations, <i>Dr. Mads JENSEN</i>	Automated feeding management of biogas plants for optimal system integration of bioenergy, <i>Dr. Johannes KRÜMPEL</i>	Effects of CO ₂ enrichment on the anaerobic digestion process, <i>Meriam MUNTAU</i>
17:00 – 17:30	Characterisation and optimisation of ex-situ biological methanation process, <i>Wolfgang MERKLE</i>	Seasonal flexibilisation of biogas production - effects on the German power sector, <i>Samah GOUYA</i>	Optimization of a flexible and robust algorithm for intelligent control of biogas CHP units performing simulations and tests at an agricultural experimental station, <i>Rainer MAIER</i>
17:30 – 18:00	Development of an innovative process chain generating resource efficient Biofuel based on methane, <i>Elena HOLL</i>	Investigating the mixing in a full-scale biogas plant, <i>Benjamin OHNMACHT</i>	

FRIDAY 24 OF SEPTEMBER 2021

Time	Session 1	Session 2	Session 3
12:00 – 12:30	Inhibition, process improvement		
	KN - Anaerobic biorefinery: some perspectives, <i>Prof. Samir KHANAL</i>		
	Improved biogas potential from stored cattle slurry using a novel methanogenic inhibitor, <i>Stephen NOLAN</i>		
12:30 – 13:00	Farm scale poultry litter anaerobic digestion (AD) combined nutrient capture system (NCS) and prototype ammonia scrubber for energy production and nutrients recovery from, <i>Ass. Prof. Stephanie LANSING</i>		
13:00 – 13:30			
13:30 – 14:00	BREAK		
14:00 – 14:30	Development of rapid tests for the detection and determination of inhibitors and mycotoxins in biogas plants, <i>Maike WALZ</i>	Contribution to climate protection through biogas production CHAIRWOMAN: Ass. Prof. Stephanie LANSING	Nutrient cycle, recovery CHAIRMAN: Prof. Walter STINNER
		KN - Carbon cycling and sequestration through digestion: Effects of policy, food waste and co-substrate inclusion, and leakage on climate change, <i>Ass. Prof. Stephanie LANSING</i>	KN – <i>Prof. Walter STINNER</i>
14:30 – 15:00	Revealing the negative effect of redundant use of trace elements during thermophilic anaerobic-codigestion of cattle manure in a pilot scale dry fermenter, <i>Prof. Nuri AZBAR</i>	Utilization of biogas digestate for seaweed (nori) cultivation, <i>Prof. Kana KURODA</i>	Biogas forming potential of pig faeces from inhouse faecal-urine segregation, <i>Helmut DÖHLER</i>
15:00 – 15:30	The Tlow Prozess, <i>Alfons HIMMELSTOSS</i>	Vortex extraction digester & biogas upgrading system, <i>Christoph EUSTERBROCK</i>	Recycled fertilizer products – a way to avoid digestate handling costs or a business opportunity?, <i>Dr. Elina TAMPIO</i>
15:30 – 16:00	BREAK		
16:00 – 16:30	ORAL-POSTER CHAIRMAN: Dr. Hans OECHSNER	Optimizing anaerobic co-digestion in existing wastewater treatment plants, <i>Karin FLORENCIO PÉREZ</i>	Adapted phosphate fractionation for an optimized phosphate recovery from digestate, <i>Konstantin DINKLER</i>
16:30 – 17:00		Wood fibers as an example for innovative sector coupling, <i>Dr. Britt SCHUMACHER</i>	Netz: nutrient and energy technology center for rural areas in alpine regions, <i>Dr. Hans-Joachim NÄGELE</i>

17:00 – 17:30			Influence of anaerobic digestion on the labile phosphorus in pig, chicken, and dairy manure, <i>Bowen LI</i>
17:30 – 18:00			

ORAL-POSTER

Quantifying copper and zinc flows in pig production with or without anaerobic digestion, <i>Emma GOURLEZ</i>
Sugar Beet vinasse into biogas solution, <i>Tetiana IVANOVA</i>
Effects of lignocellulolytic enzyme preparations on anaerobic digestion: a multi-method approach, <i>Marius CONRADY</i>
Assessment of areal methane yields from sugar beet in Ukraine, <i>Ievgeniia MOROZOVA</i>
Biogas plant in Germany. Revision and analysis, <i>Dr. Carlos MARTÍNEZ HERNÁNDEZ</i>
Online process monitoring using VFA measurement in biogas, <i>Hartmann HIEBER</i>
Influence of different operating temperatures on the in-situ CO ₂ methanation in anaerobic filter, <i>Lukas ILLI</i>
Energetic self-supply of german farms by means of a biogas plant, <i>Dr. Joachim PERTAGNOL</i>
Efficiency analysis of biological system of biogas plants: definition and accuracy, <i>Benedikt HÜLSEMANN</i>
Continuous flow bio-electrochemical system for organic wastewater treatment: steps for its practical implementation, <i>Anastasia OSKINA</i>
Business Development Package: centralized information for biogas plants to explore opportunities for nutrient recovery from digestate, <i>Marieke VERBEKE</i>

27.07.2021 - Program subject to change.
Germany time (UTC + 2)