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Institute for Water Education



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TAMPERE
UNIVERSITY OF
TECHNOLOGY



Joint G16 – ABWET conference



Congress Center Federico II

Church of Saints Marcellino and Festo

Naples, Italy

December 6-7, 2018

CONFERENCE PROGRAMME

DAY 1 (Thursday, December 6, 2018)

#	Time	Programme
	8.30-9:00	Registration
	9:00-9:10	Opening and Welcome
Session 1. Chalcogen speciation, environmental fate and microbial interaction		
Chair person : PIET N.L. LENS		
1	9:10-9:30	Selenium in coal ashes: speciation, leachability and environmental fate (ERIC D. VAN HULLEBUSCH, <i>Institut de Physique du Globe de Paris, France</i>)
2	9:30-9:50	Bioproduction of selenium nanostructures and volatile compounds within the concept of deep geological repository (MIGUEL ANGEL RUIZ-FRESNEDA, <i>University of Granada, Spain</i>)
3	9:50 - 10:10	Bacillus safensis JG-B5T affect the fate of selenium by changing its speciation and mobility in the environment (ROHAN JAIN, <i>Helmholtz-Zentrum Dresden - Rossendorf, Germany</i>)
4	10:10-10:30	Biological evaluation of easy to handle, ready to use and bio-available chalcogen nanoparticles (WESAM ALI, <i>University of Saarland, Germany</i>)
5	10:30-10:50	Detection of the of sulphur containing nanoparticles with the electrochemical methods in the aquatic environment (MARIJA MARGUŠ, <i>Ruder Bošković Institute, Croatia</i>)
	10:50-11:20	COFFEE BREAK
Session 2. Chalcogen removal and recovery		
Chair person : ERIC D. VAN HULLEBUSCH		
6	11:20-11:40	Layered Double Hydroxide Sorbents for Removal of Selenium from Power Plant Wastewaters (CANDACE K. CHAN, <i>Arizona State University, USA</i>)
7	11:40-12:00	Simultaneous nitrate and sulfide removal using a bio-electrochemical system (BARIŞ ÇALLI, <i>Marmara University, Turkey</i>)
8	12:00-12:20	Selenate and sulfide removal in UASB and BTF bioreactors (STEFANO PAPIRIO, <i>University of Naples Federico II, Italy</i>)
9	12:20-12:40	Microaerobic biogas desulfurization at thermophilic temperatures: a full scale experience (FRANCESCO DI CAPUA, <i>University of Naples Federico II, Italy</i>)
	12:40-13:40	LUNCH BREAK
SESSION 3. Biorefinery of organic waste		
Chair person : AINO-MAIJA LAKANIEMI		
10	13:40-14:00	Bio-H ₂ production from cheese whey and wastewater sludge using a semi-continuous reactor (ANDREINA ROSSI, <i>University of Rome La Sapienza, Italy</i>)
11	14:00-14:15	Biohydrogen production from xylose and thermomechanical pulping wastewater under mesophilic and thermophilic conditions (PAOLO DESSI', <i>National University of Ireland, Ireland</i>)
12	14:15-14:30	Thermophilic dark fermentation: enhancing H ₂ production at elevated glucose-substrate concentrations via bioaugmentation (ONYINYE OKONKWO, <i>Tampere University of Technology, Finland</i>)
13	14:30-14:45	Effect of feed glucose and acetic acid concentration on continuous hydrogen production by <i>Thermotoga neapolitana</i> (GILBERT DRESCHKE, <i>University of Cassino and Southern Lazio, Italy</i>)
14	14:45-15:00	Biohydrogen production using the CO ₂ sequestering <i>Chlamydomonas reinhardtii</i> microalgal culture (NILESH R. BADGUJAR, <i>University of Cassino and Southern Lazio, Italy</i>)
15	15:00-15:15	Production of C2-C6 alcohols from CO and syngas by anaerobic sludge (SAMAYITA CHAKRABORTY, <i>IHE-Delft, The Netherlands</i>)
16	15:15-15:30	Resource recovery from methanol rich industrial gaseous and liquid effluents through acetogenesis (TEJASWINI EREGOWDA, <i>IHE-Delft, The Netherlands</i>)
	15:30-16:00	COFFEE BREAK
	16:00-18:00	Doctoral Defense of Anastasiia Kostrytsia
	18:00-20:30	Visit of the Historical Center and Christmas Markets
	20:30-22:30	GALA DINNER

DAY 2 (Friday, December 7, 2018)

#	Time	Programme
SESSION 4. Chalcogen-based applications for water and biogas purification		
Chair person : ELDON RAJ		
1	9:00-9:20	Arsenic removal from an acid mine drainage using sulfidogenic anaerobic membrane bioreactor (ERKAN ŞAHİNKAYA, <i>Istanbul Medeniyet University, Turkey</i>)
2	9:20-9:40	Bioleaching of phosphorus from sewage sludge ash using sulfur oxidizing bacteria (NESLİHAN SEMERÇİ, <i>Marmara University, Turkey</i>)
3	9:40 - 10:00	Nitrate and perchlorate removal from drinking water using elemental sulfur and thiosulfate based denitrifying membrane bioreactor (DENİZ UÇAR, <i>Harran University, Turkey</i>)
4	10:00-10:20	Theoretical investigations on the reduction of hydrogen peroxide by diselenide-based glutathione peroxidase mimics (RAGHU NATH BEHERA, <i>Birla Institute of Technology and Science, India</i>)
5	10:20-10:35	Removal of sulfide contaminated wastewater/gas stream in different anoxic biofilm reactor configurations (RAMITA KHANONGNUCH, <i>Tampere University of Technology, Finland</i>)
6	10:35-10:50	Denitrification with Biologically Produced Sulfur in a Moving-Bed Biofilm Reactor (ANASTASIIA KOSTRYTSIA, <i>University of Cassino and Southern Lazio, Italy</i>)
	10:50-11:20	COFFEE BREAK
SESSION 5. Bioprocess optimization for wastewater treatment		
Chair person : ERKAN ŞAHİNKAYA		
7	11:20-11:40	Effect of biomass features on oxygen transfer in Conventional Activated Sludge and Membrane BioReactor systems (DANIELE DI TRAPANI, <i>University of Palermo, Italy</i>)
8	11:40-12:00	Process optimization and filtration performance of an anaerobic dynamic membrane bioreactor treating textile wastewaters (ADEM YURTSEVER, <i>Hasan Kalyoncu University, Turkey</i>)
9	12:00-12:20	Biosorption of chromium (VI) contaminated water using dead fungal biomass (MARTHA ESPINOZA-SÁNCHEZ, <i>Universidad Autónoma de Nuevo León, Mexico</i>)
10	12:20-12:40	Enhancement of biological scrubber for the simultaneous abatement of GHGs and VOCs (GIUSEPPINA OLIVA, <i>University of Salerno, Italy</i>)
11	12:40-13:00	Heavy metals adsorption with Extracellular Polymeric Substances (EPS) extracted from AnAmmOx granular biomass (CLAUDIO LUBELLO, <i>University of Florence, Italy</i>)
12	13:00-13:15	Advantages and disadvantages of zeolite addition to a continuous-flow membrane photobioreactor used for microalgal cultivation (TAO RAN, <i>Tampere University of Technology, Finland</i>)
	13:15-14:15	LUNCH BREAK
SESSION 6. Enhancement and modeling of anaerobic digestion		
Chair person : BARIŞ ÇALLI		
13	14:15-14:35	Use of zero valent iron and granular activated carbon in the semi-continuous anaerobic digestion of orange peel waste (PAOLO CALABRO', <i>Mediterranea University of Reggio Calabria, Italy</i>)
14	14:35-14:55	Asbestos-cement wastes treatment by a combined biological and hydrothermal treatment train (DANILO SPASIANO, <i>Polytechnic University of Bari, Italy</i>)
15	14:55-15:10	Acetotrophic activity facilitates LCFA degradation at low temperature (SUNITI SINGH, <i>Tampere University of Technology, Finland</i>)
16	15:10-15:25	Speciation and mobility of trace elements in digestate exposed to aerobic conditions (ANDREINA LAERA, <i>University of Paris-Est Marne-la-Vallée, France</i>)
17	15:25-15:40	Sewage Sludge Digestate application for the Remediation of Weathered TPH contaminated Soils (ANNA GIELNIK, <i>University of Paris-Est Marne-la-Vallée, France</i>)
18	15:40-15:55	Sorption and oxidation of arsenic by chemically-treated biochar produced from sewage sludge digestate (SUCHANYA WONGROD, <i>University of Paris-Est Marne-la-Vallée, France</i>)
19	15:55-16:10	High-Solids Anaerobic Digestion of the Organic Fraction of Municipal Solid Waste: Model Development and Parameter Optimization (VICENTE PASTOR PIQUET, <i>University of</i>

		<i>Cassino and Southern Lazio, Italy</i>
20	16:10-16:25	ADM1-based model of trace element adsorption-desorption in anaerobic digestion processes (BIKASH CHANDRA MAHARAJ, <i>University of Cassino and Southern Lazio, Italy</i>)
	16:25-17:00	FAREWELL DRINK