

Circular Bioeconomy Symposium

20 Years of Offenburg/Olsztyn Collaboration

Poster Program Day 1, October 13th

10:40 **Biocatalytic Paths to Sustainable Nutrition - Linking Biorefineries and Food Tech**
Moderation: Sophie Stürmer and Lukas Burger | HSO

- P01 Effects of Pulsed Electric Field (PEF) Preservation on the Quality of Bovine Colostrum**
Dr. Adriana Łobacz (UWM), Cezary Domasiewicz (UWM), Katarzyna Staniewska (UWM) and Prof. Dr. Justyna Żulewska (UWM)
- P02 The Influence of the Homogenization Method on the Quality and Stability of the Emulsion**
Dr. Józef Warechowski (UWM) and Prof. Dr. Fabian Dajnowiec (UWM)
- P03 Development of Copper-Binding Artificial Metalloenzymes Based on β -Helix Mimicking Peptides for Biocatalysis**
Nele Schulte (University of Strasbourg), Nico Bruns (TU Darmstadt), Ivano Eberini (University of Milan), Prof. Dr. Peter Faller (University of Strasbourg), Dr. Vincent Lebrun (University of Strasbourg) and Dr. Maxime Naudé (University of Strasbourg)
- P04 Evaluation of Different Engineering Strategies for the Successful Expression of Precision Fermentation Targets in *Trichoderma reesei***
Samuel Zuber (HSO, Picea Biosolutions), Prof. Dr. Melanie Broszat (HSO), Prof. Dr. Thomas Eisele (HSO) and Tobias Stadelmann (Picea Biosolutions)
- P05 Recombinant Expression of β -fructofuranosidases in *T. reesei* for the Production of Fructooligosaccharides**
Christian Peter (HSO, Picea Biosolutions), Prof. Dr. Melanie Broszat (HSO), Prof. Dr. Thomas Eisele (HSO) and Tobias Stadelmann (Picea Biosolutions)
- P06 Investigation of the Possibility of *Listeria monocytogenes* Growth in Nitrite-Free Frankfurters**
Prof. Dr. Monika Modzelewska-Kapituła (UWM), Prof. Dr. Katarzyna Tkacz (UWM) and Prof. Dr. Anna Zadernowska (UWM)
- P07 Sporulation of *Trichoderma reesei* in Fermentations; Early Detection and Countermeasures**
Paul Wiesenthal (HSO), Joanna Lukasiewicz (HSO), Patricia Semke (HSO), Olga Zielinska (HSO) and Dr. Andreas Wilke (HSO)
- P08 Gamification-Based Study Promotion for Environmental Technology**
Lea Wattenberg (HSO), Alexander Weigand (HSO) and Prof. Dr. Susanne Gleißle (HSO)
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12:25 **Advanced Biogas & Power-to-Gas**

Moderation: Sophie Stürmer and Lukas Burger | HSO

P09 Anaerobic Digestion of Hemp and Sorghum Silages

Prof. Dr. Katarzyna Bułkowska (UWM), Prof. Dr. Tomasz Pokój (UWM),
Prof. Dr. Bogdan Dubis (UWM) and Prof. Dr. Cezary Purwin (UWM)

P10 Biogas Production from Municipal Sewage Sludge in a Microbiogas Plant at a Small Wastewater Treatment Plant: A Circular Economy Approach

Prof. Dr. Katarzyna Bernat (UWM), Prof. Dr. Magdalena Zaborowska (UWM), Prof. Dr. Mariusz Gusiatin (UWM) and Prof. Dr. Dorota Kulikowska (UWM)

P11 Two Stage Anaerobic Digestion of Marine Macroalgae: Implementation of Herbst Loop Reactor®

Harivignesh Senthilkumar (HSO, UWM)

P12 Development of a Parallelized Test Rig with a Circulating Gas Flow System for Biological Methanation

Irina Knosp (Hochschule Esslingen)

P13 Development of an Assay to Assess Specific Methanogenic Activity in Biological Methanation Reactors

Saskia Elbert (HSO), Katharina Röttele (HSO) und Prof. Dr. Christiane Zell (HSO)

P14 Microbiological Quality of Tvarog Cheeses in Relation to Their Packaging

Prof. Dr. Jarosław Kowalik (UWM), Dr. Anna Lis (UWM)
and Prof. Dr. Justyna Zulewska (UWM)



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- 14:00 Environmental Pollution | From Waste to Wealth**
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- P15 Tire-Derived Microparticles Drive Microbial Selection and Functional Adaptation in Aerobic Granular Sludge**
Prof. Dr. Agnieszka Cydzik-Kwiatkowska (UWM)
and Dr. Piotr Jachimowicz (VSB-Technical University of Ostrava)
- P16 Changes in the Mechanical Properties and Surface Topography of PLA Carriers Used as Supports for Nitrogen Removal from Reject Water in SBR**
Prof. Dr. Magdalena Zaborowska (UWM), Dr. Bartosz Pszczółkowski (UWM),
Prof. Dr. Dorota Kulikowska (UWM), Prof. Dr. Mariusz Gusiatin (UWM)
and Prof. Dr. Katarzyna Bernat
- P17 Improving the Extremophile Species Growth by Manipulating the Growth Conditions and Exploring the Accumulation of R-PC and EPS.**
Tarek Hamdoudi (Blue2) and Dr. Andreas Wilke (HSO)
- P18 Phosphorus Recovery from Hydrothermally Carbonized Sewage Sludge by Acid Leaching**
Ann Maria Bobby (HSO, blueFLUX Energy AG), Andreas Bechter (blueFLUX Energy AG)
and Prof. Dr. Melanie Broszat (HSO)
- P19 Standardization of the Planar Yeast Estrogen Screen (pYES) for the Detection of Estrogenic Activity in Environmental Samples**
Amerisa Corovic (HSO), Sophie Stürmer (HSO) and Prof. Dr. Melanie Broszat (HSO)
- P20 Elimination of Phosphonates and Phosphorus Speciation in Municipal Wastewater by Different Treatment Strategies**
Tim Meier (HSO), Johanna Neef (HOLINGER GmbH), Regina Brämer (HSO)
and Prof. Dr. Melanie Broszat (HSO)
- P21 Integrating HPTLC Fingerprinting, Effect-Directed Analysis and Machine Learning for the Characterization of Complex Environmental Matrices**
Lara Gutscher (HSO), Barbara Anders (HSO) and Prof. Dr. Melanie Broszat (HSO)
- P22 Prediction of PAH Degradation in Bioremediation Research: A Rule-Based Cheminformatics Analysis**
Ahmet Yazicioğlu (UWM) and Prof. Dr. Sławomir Ciesielski
- P23 Optimizing Biochar Selection for Heavy Metal Immobilization Using Multi-Criteria Decision Analysis Across Contrasting Soils**
Michael Biney (UWM), Prof. Dr. Mariusz Gusiatin (UWM)
and Prof. Dr. Lukáš Trakal (University of Life Sciences Prague)
- P24 Agronomic Evaluation of Biochar from Secondary Agricultural Biomass: The BC-LOOKUP Database**
Vishal Satheesh (HSO), Dr. Nikolas Hagemann (Ithaka Institute),
Prof. Dr. Heide Biollaz (HSO) and Prof. Dr. Daniel Kray (HSO)
- P25 Substrate-Specific Optimization of Macronutrient Ratios for Trichoderma reesei Cultivation**
Elisa Guerin (HSO), Joanna Lukasiewicz (HSO), Mark Oppong-Gyamfi (HSO),
Patricia Semke (HSO), Olga Zielinska (HSO) and Dr. Andreas Wilke (HSO)
- P26 ISO 10993-5/-12-Guided Cytotoxicity Evaluation of Molybdenum and Reference Materials for the Development of Novel Implants**
Vanessa Curtaz (HSO)



- P27 Establishment of a Measurement Method to Determine Cell Growth Under Micromovements**
Kristina Pudel (HSO)
- P28 Comparison of the Effectiveness of Microbiological Consortia and Bacterial Monocultures in Reducing Selected Synthetic Human Faeces Parameters – Chemical Oxygen Demand (COD), Total Nitrogen (Nt)**
Jolanta Maczugin (UWM), Emna Bahrouni (UWM)
and Prof. Dr. Sławomir Ciesielski (UWM)
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