



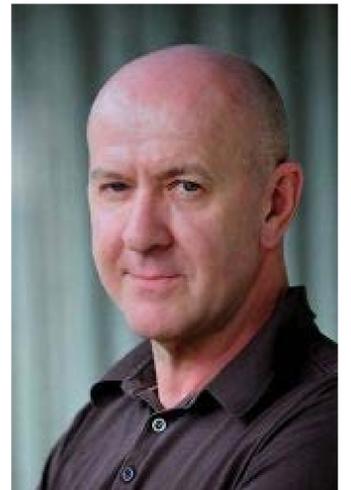
IP Sustainable Biotechnology and Bioeconomy Lecture

Prof. Polona Žnidaršič Plazl & Prof. Igor Plazl



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Friday, 13 September 2019, 14:00
Leipziger KUBUS, Lecture Hall 1A
Permoserstr. 15, 04318 Leipzig



Biocatalytic process development and intensification using microflow

Microscale technology offers several opportunities and challenges for more successful implementation of biocatalysis in the industry. Microflow devices remarkably accelerate biocatalyst screening and engineering, as well as evaluation of process parameters, and intensify biocatalytic processes in multiphase systems. The inherent feature of microfluidic devices to operate in a continuous mode brings additional interest for their use in chemoenzymatic cascade systems and in connection with the downstream processing units.

Recent results of Microprocess Engineering Research Group, established in 2004 at the Faculty of Chemistry and Chemical Technology of University of Ljubljana, on biocatalytic processes development and intensification will be presented. The use of various enzymatic and whole-cell microreactors, as well as integration with downstream processing will be shown. Model-based reactor design comprising multi-scale modelling approach and efficient scale-up of micro- towards meso-scale reactors enabling high productivities will be discussed.

Polona Žnidaršič-Plazl works as a professor at the Faculty of Chemistry and Chemical Technology, University of Ljubljana. Polona does research in Bioengineering, Chemical Engineering and Biotechnology with the emphasis on implementation of microflow systems in biocatalysis and downstream processing. She is initiator and Co-Chair of the series of conferences on Implementation of Microreactor Technology in Biotechnology (IMTB) and principal investigator in several EU-funded projects.

Igor Plazl also works as a professor at the Faculty of Chemistry and Chemical Technology, University of Ljubljana. Igor's research focusses on transport phenomena and kinetics, applications of microwaves in the chemical industry, mathematical modeling of chemical and biochemical processes, bioprocess engineering and microreactor technology.

All interested colleagues are kindly invited.