

3rd International EUROMBR Training Course: Innovative microbioreactor applications in bioprocess development

If not stated otherwise, lectures will be held in lecture room 3 (3rd floor). Other lecture rooms are marked in black.

Monday, 19th September 2022

- 8:30 – 9:00** Registration (3rd floor - hall)
- 9:00 – 9:15** Opening
P. Žnidaršič Plazl, University of Ljubljana, Slovenia
T. Kokalj, University of Ljubljana, Slovenia
- 9:15 – 10:00** Introduction to innovative microbioreactor application in bioprocesses
P. Žnidaršič Plazl, University of Ljubljana, Slovenia
- 10:15 – 11:00** Introduction to micro/nano fluidics
A. Dietzel, TU Braunschweig, Germany
- 11:15 – 12:00** Microfabrication
T. Kokalj, University of Ljubljana, Slovenia
- 12:00 – 13:15** Lunch (Dining area)
- 13:15 – 14:00** Microfluidic single-cell cultivation: Introduction and application
J. Schmitz, University of Bielefeld, Germany
- 14:15 – 15:00** Whole cell cultivation in microbioreactors
R. Krull, TU Braunschweig, Germany
- 15:00 – 15:30** Coffee break (3rd floor - hall)
- 15:30 – 16:00** Safety instructions
- 16:00 – 19:00** *Lab I: Cell cultivation in a miniaturized reactor (1067 + lab 1062)*
Lab II: Ultrahigh-throughput screening with droplet microfluidics (1039 + lab 14)
Lab III: In line reaction monitoring with Flow IR sensor (1040 + lab 1042)
- 19:00** Welcome party (3rd floor - hall)

Tuesday, 20th September 2022

- 9:00 – 12:00** *Lab I: Cell cultivation in a miniaturized reactor (1067 + lab 1062)*
Lab II: Ultrahigh-throughput screening with droplet microfluidics (1039 + lab 14)
Lab III: In line reaction monitoring with Flow IR sensor (1040 + lab 1042)
- 12:00 – 13:15** Lunch (Dining area)
- 13:15 – 14:00** Modelling-based design of bioprocesses at the micro scale
I. Plazl, University of Ljubljana, Slovenia
- 14:15 – 15:00** An appetizer for CFD in chemical and biochemical engineering
U. Krühne, Technical University of Denmark, Denmark
- 15:00 – 15:30** Coffee break (3rd floor - hall)
- 15:30 – 18:30** *Lab I: Cell cultivation in a miniaturized reactor (1067 + lab 1062)*
Lab II: Ultrahigh-throughput screening using droplet microfluidics (1039 + lab 14)
Lab III: In line reaction monitoring with Flow IR sensor (1040 + lab 1042)
- 18:30 – 19:30** Poster session I (3rd floor - hall)

Wednesday, 21st September 2022

- 9:15 – 10:00** Nano and micromaterials for microbioreactors
J. Fernández-Sánchez, University of Granada, Spain
- 10:15 – 11:00** Biocatalysis in flow: Challenges and opportunities
M. Marques, University College London, United Kingdom
- 11:15 – 12:00** Immobilized enzymes as heterogeneous biocatalysts: Application in microreactors
J. Bolivar, Complutense University of Madrid, Spain
- 12:00 – 13:30** Lunch (Dining area)
- 13:30 – 14:40** Sensors in microfluidics
T. Mayr, Graz University of Technology, Austria
- 16:00 – 19:00** Excursion

Thursday, 22nd September 2022

- 9:00 – 13:00** *Lab IV: Single cell cultivation and cultivation in millibioreactor (1067 + lab 1062)*
Lab V: Biocatalysis and monitoring in microreactors (1039 + lab 14)
Lab VI: Microfabrication (1040 + lab 1042)
- 13:00 – 14:00** Lunch (Dining area)
- 14:00 – 18:00** *Lab IV: Single cell cultivation and cultivation in millibioreactor (1067 + lab 1062)*
Lab V: Biocatalysis and monitoring in microreactors (1039 + lab 14)
Lab VI: Microfabrication (1040 + lab 1042)
- 18:00 – 18:30** Coffee break (3rd floor - hall)
- 18:30 – 19:30** Poster session II (3rd floor - hall)

Friday, 23rd September 2022

- 9:00 – 13:00** *Lab IV: Single cell cultivation and cultivation in millibioreactor (1067 + lab 1062)*
Lab V: Biocatalysis and monitoring in microreactors (1039 + lab 14)
Lab VI: Microfabrication (1040 + lab 1042)
- 13:00 – 13:15** Closing remarks (1067)
P. Žnidaršič Plazl, University of Ljubljana, Slovenia
T. Kokalj, University of Ljubljana, Slovenia