



POSTER PRESENTATIONS

SESSION A: ENZYMATIC MICROREACTORS

- AP1 *Multienzymatic and stereoselective cascade process for the synthesis of 2,3-disubstituted tetrahydrofuran precursors: preparation of the most odorous and pleasant roasted meat aroma*
Michele Crotti, Elisabetta Brenna, Daniela Monti, Ludovico Marinoni, Sara Quaiato, Francesco Gatti
Politecnico di Milano, Italy; Istituto di Chimica del Riconoscimento Molecolare C.N.R, Italy; Università degli Studi dell'Insubria, Italy
- AP2 *Use of silica nanosprings and electrospun nanofibers for the development of wall-coated enzyme microreactors*
Donya Valikhani, Juan M. Bolivar, Filip Strniša, David N. McIlroy, Polona Žnidaršič Plazl, Bernd Nidetzky
Graz University of Technology, Austria; University of Ljubljana, Slovenia; University of Idaho, USA
- AP3 *Synthesis of biodiesel from waste chicken oil using an immobilized methanol-stable lipase*
Shalev Gihaz, Moran Vilkin, Diána Weiser, László Poppe, **Ayelet Fishman**
Technion-Israel Institute of Technology, Israel; Budapest University of Technology and Economics, Hungary
- AP4 *Functionalized electrospun mats integration in a microreactor for ω -transaminase immobilization*
Polona Žnidaršič Plazl, Silvia Moreno, James L. Galman, Nicholas J. Turner, Antonio L. Medina-Castillo, **Jorge F. Fernández-Sánchez**
University of Ljubljana, Slovenia; University of Granada, Spain; University of Manchester, United Kingdom; NanoMyP[®], Spain
- AP5 *Study on scale-up of miniaturized packed bed reactor for ω -transaminase-catalyzed chiral amine synthesis*
Marijan Bajić, Igor Plazl, Radek Stloukal, Polona Žnidaršič Plazl
University of Ljubljana, Slovenia; LentiKat's a.s., Czech Republic
- AP6 *Bioreactor for the continuous purification of simvastatin by lovastatin esterase*
Waldemar Kurek, Anna Źądło – Dobrowolska, Domink Koszelewwki, **Ryszard Ostaszewski**
Institute of Organic Chemistry PAS, Poland
- AP7 *Simplified immobilisation of histidine-tagged enzymes in poly(methyl methacrylate) Microreactors*
Gulsim Kulsharova, Nikolay Dimov, Marco P.C. Marques, Nicolas Szita, Frank Baganz
University College London, United Kingdom
- AP8 *Substituent and catalyst effects on GAC lactonization of γ -hydroxy esters*
Francesco Distante, Giuseppe Gatti, Francesco Gatti
Politecnico di Milano, Italy; University of Urbino, Italy

- AP9 *Magnetic cross-linked enzyme aggregates (mCLEAs) in microreactors towards glycocompounds production*
 Samuel Martins, Sara Fonseca, Rita Guerreiro, Ana Filipa Conceição, Natália Osório, Lavínia Araujo, M. Manuel Lopes, **Maria H. Ribeiro**
 Universidade Lisboa, Portugal; Instituto Politécnico Setúbal, Portugal
- AP10 *Multivalency effects on the immobilization of sucrose phosphorylase in flow microchannels for the development of a high-performance biocatalytic microreactor*
Donya Valikhani, Juan M. Bolivar, Martin Pfeiffer, Bernd Nidetzky
 Graz University of Technology, Austria

SESSION B: CELLS WITHIN MICROREACTORS

- BP1 *Enantioselective desymmetrisation of achiral 2-substituted 1,3-diols by Acetobacter acetii: traditional approach and developments*
Francesca Tentori, Michele Crotti, Valerio De Vitis, Federica Dall'Oglio, Elisabetta Brenna
 Politecnico di Milano, Italy; Università degli Studi di Milano, Italy

SESSION C: ANALYTICAL MICRODEVICES

- CP1 *Glucose sensor employing optical oxygen transducer with tunable dynamic range for applications in microreactor*
Shiwen Sun, Nicola Altenhuber, Philipp Sulzer, Ulrich Krühne, Torsten Mayr
 Graz University of Technology, Austria; Technical University of Denmark, Denmark
- CP2 *Miniaturization of the Lemna minor toxicity test: application for testing of metals*
Gabriela Kalčíková, Andreja Žgajnar Gotvajn
 University of Ljubljana, Slovenia
- CP3 *The development of a biosensor with optical oxygen transduction based on a new multifunctional material made by coelectrospinning for determining uric acid in serum*
Teresa Ramon-Marquez, Antonio L. Medina-Castillo, Alberto Fernandez-Gutierrez, Jorge F. Fernandez-Sanchez
 University of Granada, Spain; NanoMyP®, Spain
- CP4 *Application of the biotin-streptavidin interaction to improve the immobilization of uricase on the development of optical biosensors*
Teresa Ramon-Marquez, Antonio L. Medina-Castillo, Alberto Fernandez-Gutierrez, Jorge F. Fernandez-Sanchez
 University of Granada, Spain; NanoMyP®, Spain
- CP5 *Fabrication and characterization of a microfluidic device to ultrapurify blood samples*
 Pushparani Micheal Raj, Marco Tallero, Francesca Pardeo, Maria Laura Coluccio, Patrizio Candeloro, Enzo Di Fabrizio, **Gerardo Perozziello**
 University of Catanzaro, Italy; King Abdullah University of Science and Technology, Kingdom of Saudi Arabia
- CP6 *Immobilization of microbial transglutaminase on carboxyl-functionalized magnetic iron oxide maghemite ($\gamma\text{-Fe}_2\text{O}_3$) nanoparticle clusters for application in microfluidic flow injection analysis*
Mojca Žorž, Slavko Kralj, Mladen Franko
 University of Nova Gorica, Slovenia; Jožef Stefan Institute, Slovenia

- CP7 *A microfluidic device with integrated coaxial nanofibre membranes for optical determination of glucose*
Teresa Ramon-Marquez, **Adama M. Sesay**, Peter Panjan, Antonio L. Medina-Castillo, Alberto Fernandez-Gutierrez, Jorge F. Fernandez-Sanchez
University of Granada, Spain; University of Oulu, Finland; NanoMyP®, Spain
- CP8 *Shaping of lipid membranes in a microfluidic diffusion chamber*
Mojca Mally, Saša Vrhovec, Bojan Božič, Saša Svetina, **Jure Derganc**
University of Ljubljana, Slovenia; Jožef Stefan Institute, Slovenia

SESSION D: BIOPROCESS INTENSIFICATION AND INTEGRATION

- DP1 *Study of plastics for 3D printing of microreactors*
Domagoj Vrsaljko, Zana Hajdari Gretić, Filip Car, Ivana Čevid, Tin Rahelić
University of Zagreb, Croatia
- DP2 *Theoretical and experimental evaluation of the Corning® AFR™ module for liquid-liquid extraction of ω -transaminase-catalyzed reaction product*
Martin Lubej, Daniela Lavric, Igor Plazl, Polona Žnidaršič Plazl
University of Ljubljana, Slovenia; Corning S.A.S. Corning European Technology Center, France
- DP3 *Simulations of immobilised enzyme microreactors with the lattice Boltzmann method*
Ivan Pribec, Igor Plazl, Tomaz Urbic
University of Ljubljana, Slovenia
- DP4 *A low cost 3D DLP stereolithography printer suitable for microfluidic features production*
Joško Valentinič, Matej Peroša, Marko Jerman, Andrej Lebar, Izidor Sabotin
University of Ljubljana, Slovenia
- DP5 *Monitoring of lactose hydrolysis in a microfluidic packed bed reactor using an integrated glucose oxidase biosensor*
Anže Belovič, Peter Panjan, Radek Stloukal, Adama Marie Sesay, Polona Žnidaršič Plazl
University of Ljubljana, Slovenia; University of Oulu, Finland; LentiKat's a.s., Czech Republic
- DP6 *The development of easy-to-make continuous flow micro-reactors for biological and chemical purposes*
Domenico Andrea Cristaldi, Pablo García-Manrique, Eugen Stulz, Xunli Zhang
University of Southampton, United Kingdom; University of Oviedo, Spain
- DP7 *Biodiesel purification in a microseparator: deep eutectic solvents vs water*
Anita Šalić, **Ana Jurinjak Tušek**, Bruno Zelić
University of Zagreb, Croatia
- DP8 *Experimental and theoretical evaluation of residence time distribution in miniaturized packed bed reactors with Novozym® 435*
Filip Strniša, Marijan Bajić, Peter Panjan, Tomaž Urbič, Polona Žnidaršič Plazl, Adama Marie Sesay, Igor Plazl
University of Ljubljana, Slovenia; University of Oulu, Finland
- DP9 *Implementation of aqueous micellar two-phase systems within a microfluidic device for protein purification*
Filipa A. Vicente, **Živa Brečko**, Mojca Seručnik, João A. P. Coutinho, Sónia P. M. Ventura, Polona Žnidaršič Plazl
Universidade de Aveiro, Portugal; University of Ljubljana, Slovenia

DP10 *Bio-lamina-plates bioreactor for enhanced mass and heat transfer*
Goran Jovanovic, Conor Zoebelein, Tanner Bushnell, Davis Weymann, Marina Cameron, Martin Lubej, Matthew Coblyn, Karl Schilke, Mark Dolan, Lew Semprini
Oregon State University, USA; University of Ljubljana, Slovenia