

52nd

*International Conference of
the Slovak Society of
Chemical Engineering*

May 26 - 29
2026

**CONFERENCE
PROGRAM**

Štrbské Pleso
Slovakia

#SSSCHE2026

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Program of the 52nd International Conference of SSCHE

Štrbské Pleso, May 26 - 29, 2026

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Program

Tuesday

13:00–20:00 **Arrival of participants; Registration**

17:00–18:00 **Hall A: Conference opening; Plenary lecture I (Chair: Mário Mihal, Ján Janošovský)**

17:00 **Conference opening**

17:15 From waste to value - Sustainable recycling of ashes and flu gas CO₂ by mineralization in an advanced pH shift process (*Voigt, A.**)

18:00–20:00 **Dinner**

20:00–23:00 **Poster session; Welcome drink**

- 1 A comparative study of various Pr(La)SrBaCeCo(Ni)O_x compounds for total oxidation of ethanol (*Balabánová, J.**, *Jiráťová, K.*, *Koštejn, M.*)
- 2 A comparison of the sorption properties of starch from Horse Chestnut (*Aesculus hippocastanum*) and London Plane tree (*Platanus acerifolia*) fruits. (*Ocieczek, A.**)
- 3 Advanced SiO₂-based adsorbent for CO₂ capture (*Setnickova, K.**, *Šabata, S.*)

- 4 Analysis of the Efficiency of Acid Thermochemical Hydrolysis of Lignocellulosic Biomass (Willow Chips) Using Conventional and Microwave Heating in the Biogas Production Process (*Nowicka, A.*, Dudek, M.*)
- 5 A Practical Approach to Anomaly Detection in Industrial Data (*Arbetová, P.*, Fáber, R., Lubušský, K., Paulen, R.*)
- 6 A Simplified Framework for Process Model Development in Industrial Simulation Environments (*Fáber, R.*, Lubušský, K., Paulen, R.*)
- 7 Batch Crystallisation Control Optimisation Using In-Line Monitoring and External Dynamic Nucleation Control (*Bolf, N.*, Sacher, J., Ujević Andrijić, Ž., Sejdić, M.*)
- 8 Biochar as an Effective Adsorbent for the Removal of Heavy Metals from Water (*Lukáč, T.**)
- 9 Biochar-supported materials for lithium recovery: Comparison of ion-imprinted polymers, lithium ion sieves, and MnOx composites (*Polčicová, V., Pipiška, M.*, Frišták, V., Ďuriška, L., Wang, R., Feng, Y.*)
- 10 Comparison of different approaches for improvement of nanofiltration of industrial effluent (*Žgajnar Gotvajn, A.*, Čehovin, M., Jurík, J., Drtil, M.*)
- 11 Comparison of the sorption properties of starch from Horse chestnut (*Castanea sativa* Mill.) and London plane tree (*Platanus acerifolia*) fruits (*Ocieczek, A.**)
- 12 Comprehensive Characterization of Steel Furnace Slag and Assessment of Pre-Treatment Efficiency for Wet Magnetic Separation: towards the valorization and reuse of magnetically isolated fractions (*Barraque, F.*, Montes, L., Životský, O., Matějka, V.*)
- 13 Comprehensive experimental characterization of NeXRing #0.7 random packing (*Rychlá, V., Valenz, L.**)
- 14 Continuous cultivation of *Chlorella vulgaris* using condensate derived from agricultural biogas digestate (*Dudek, M.*, Nowicka, A.*)
- 15 Controlling Trajectories of Iron Oxide Nanoparticles by Free-flow Electrophoresis for Bioapplications (*Sauer, L.*, Sklenář, A., Heinen, L., Tietze, R., Příbyl, M.*)

- 16 Design and development of a functionalized biochar sorbent with 2-(hydroxymethyl)-12-crown-4 ether for selective Li separation (*Frišták, V.**, *Beliančinová, K.*, *Chavhan, M.*, *Wang, R.*, *Feng, Y.*, *Pipíška, M.*)
- 17 Dual Catalytic Functions of Human Carbonic Anhydrase II in the Tandem Synthesis of Chiral Halohydrins and Epoxides from Alpha-Haloketones (*Scrob, D.**, *Baltat, A.*, *Paizs, C.*)
- 18 Electricity Consumption and Energy Efficiency Trends in Large Municipal Wastewater Treatment Plants in Slovakia (*Švorcová, L.**, *Jankovičová, B.*, *Bodík, I.*)
- 19 Electrodialysis for Zero Liquid Discharge: From Concept to Industrial Scale (*Fehér, J.**, *Tvrzník, D.*, *Václavíková, N.*, *Bobák, M.*, *Pindroch, O.*)
- 20 Encapsulation strategies for studying soil bacterial interactions (*Nováková, N.**, *Jansa, J.*, *Kašpar, O.*, *Tokárová, V.*)
- 21 Enhancing the safety of chemical processes using a dynamic digital system (*Herda, A.**, *Labovský, J.*, *Labovská, Z.*)
- 22 Enriching drinking yogurt with galactooligosaccharides (*Daško, K.*, *Brzozowski, B.*, *Adamczak, M.**)
- 23 Evaluation of MellapakPlus 252.Y: pressure drop and mass-transfer characteristics (*Valenz, L.**, *Rychlá, V.*, *Siuda, A.*)
- 24 Evaluation of the self-cleaning efficiency of g-CN surfaces as a function of temperature and humidity (*Foniok, K.**, *Matějka, V.*, *Barraque, F.*, *Polishchuk, B.*)
- 25 Extruded beetroot preparation as an enriching ingredient in gluten-free bread (*Niedziela, S.*, *Wojciechowski, K.*, *Witczak, T.*, *Liszka-Skoczylas, M.*, *Witczak, M.**)
- 26 Fabrication of PDMS Membranes with Hierarchical Tapered Pores for Advanced Organ-on-a-Chip Applications (*Hanžl, T.**, *Kašpar, O.*, *Kříž, F.*, *Nguyen, V.*)
- 27 From insect protein to functional ingredients: Spray-dried microencapsulation of bioactive peptides from *Tenebrio molitor* (*Knežević-Jugović, Z.**, *Tashev, T.*, *Mijalković, J.*, *Kolašinac, S.*, *Dajić Stevanović, Z.*, *Iannaccone, M.*, *Casella, P.*, *Sabatino, A.*, *Fedele, N.*, *Molino, A.*, *Liakos, I.*, *Hristova, H.*)

- 28 Greenness and whiteness evaluation of ex-situ small-sized electrothermal vaporization capacitively coupled microplasma optical emission spectrometry for on-site battery operated micro-solid phase extraction of Cu(II), Cd(II), Pb(II) and Zn(II) from river water (*Covaci, E.**, *Mot, A.*, *Dudu, A.*, *Frentiu, T.*)
- 29 High Entropy oxides as catalysts in advanced oxidation processes for wastewater treatment (*Žgajnar Gotvajn, A.**, *Legan, M.*, *Skalar, T.*, *Marinšek, M.*, *Djerdj, I.*)
- 30 Highly Enantioselective Continuous Flow Henry Reactions Enabled by Immobilised Hydroxynitrile Lyases (*Lambarska, A.**, *Hanefeld, U.*, *Brasselet, H.*, *van der Weel, L.*, *Szymańska, K.*)
- 31 Immobilized PET-degrading enzymes for microplastic control (*Baltat, A.**, *Nagy, B.*, *Biyik, E.*, *Tosa, M.*)
- 32 Impact of counter-ion properties on ion-exchange membrane behavior (*Vobecká, L.**, *Láznička, V.*, *Slouka, Z.*)
- 33 Impact of Environmentally Relevant Antibiotics and Heavy Metals on Anaerobic Digestion of Waste Activated Sludge (*Rusanowska, P.**, *Czatkowska, M.*)
- 34 Influence of waste feedstock composition on thermo-catalytic conversion products (*Koritár, M.**, *Nazari, M.*, *Haydary, J.*)
- 35 In Search of Suitable Amine Dehydrogenase: Identification and Development of AmDHs with Industrially Relevant Substrate Scope (*Hambalko, J.**, *Ali, Y.*, *Kuzmiaková, M.*, *Dobiašová, H.*, *Kozmon, S.*, *Both, P.*)
- 36 Inventory Monitoring in a Petrol Refinery via Data Reconciliation (*Gaborčík, J.**, *Lubušký, K.*, *Paulen, R.*)
- 37 Investigation of Membrane Distillation for the Recovery of Valuable Products (*Kataieva, O.*, *Ahmed, A.*, *Červeňanský, I.**)
- 38 Ionic liquid-tuned formate dehydrogenase-carbonic anhydrase enzyme cascades: temperature- and structure-dependent activity enhancement (*Gyuris-Bocska, B.**, *Nemestothy, N.*, *Koók, L.*)
- 39 Metallized membranes for membrane distillation (*Gryta, M.**)
- 40 Morphology-controlled crystallization of Mg(OH)₂ through ion-exchange membrane crystallization (*Sedláková, E.**, *Battaglia, G.*, *Sedlák, L.*, *Fehér, J.*, *Hlavatý, L.*, *Červeňanský, I.*, *Cipollina, A.*, *Markoš, J.*)

- 41 On-site battery-operated micro-solid phase extraction of Cu(II), Cd(II), Pb(II) and Zn(II) from river water followed by ex-situ small-sized electrothermal vaporization capacitively coupled microplasma optical emission spectrometry determination (*Covaci, E.**, *Mot, A.*, *Dudu, A.*, *Frentiu, T.*)
- 42 Optimization of the enzymatic synthesis of galactooligosaccharides (*Poborska, J.*, *Brzozowski, B.*, *Adamczak, M.**)
- 43 Overcoming Mass Transfer Limitations in hCAII-Catalyzed Bioreduction of Bulky Ketones via Pulsed Phenylsilane Addition (*Nagy, L.**, *Paizs, C.*)
- 44 Performance Analysis of Single to Triple-Stage Evaporation Crystallization Systems for Efficient Brine Processing (*Ahmed, A.**, *Hrúbik, D.*, *Variny, M.*, *Červeňanský, I.*)
- 45 Plasma-activated water: The Impact of Physicochemical Properties on its Antimicrobial Efficacy (*Gotvajn, A.**, *Prosen, H.*, *Pintarič, Š.*, *Jakovac Strajn, B.*)
- 46 Preparation of Microstructures and Their Integration into a Microfluidic Platform for Biofilm Assays (*Kříž, F.**, *Nguyen, V.*, *Hanžl, T.*, *Nováková, N.*, *Tokárová, V.*)
- 47 Purification of succinic acid from fermentation medium using membrane separation (*Stoláriková, Z.**, *Mihal, M.*, *Červeňanský, I.*, *Markoš, J.*)
- 48 Robust Stabilization of Discrete-Time Switched Systems with Application to a CSTR (*Kumar, B.**, *Paulen, R.*)
- 49 Self-Assembled Pectin-based Nano/Microcapsules in Fruit Pastilles: A Strategy for Clean-Label Nutraceuticals with Improved Stability and Bioactivity (*Khachatryan, G.*, *Khachatryan, K.**, *Woszczak, L.*)
- 50 Separation and Purification of Rapeseed Polyphenols (*Fromel, R.*, *Rondoš, A.*, *Janošovský, J.**)
- 51 Separation of Acidic Gases from Humid Flue Gas Using Advanced Membrane (*Žitková, A.**, *Čížek, J.*, *Izák, P.*, *Stanovský, P.*)
- 52 Spray-dried allicin/-cyclodextrin inclusion complexes for antimicrobial applications (*Dvořák, V.**, *Nováková, N.*, *Kašpar, O.*)
- 53 Structured Hydrogel Reactors for Continuous Enzymatic Production of Allicin (*Bukač, L.**, *Nováková, N.*, *Kašpar, O.*)

- 54 Surface Modification of Waste-Derived Hematite Pigments with Nano-Oxides for Enhanced Colloidal and Optical Properties (*Lendzion-Bieluń, Z. *, Splinter, K.*)
- 55 Sustainable LiOH Production by Bipolar Membrane Electrodialysis in a Closed-Loop Recycling Scheme (*Sedlák, L. *, Kúdelová, V., Sedláková, E., Fehér, J., Červeňanský, I., Hlavatý, L., Markoš, J.*)
- 56 Synthesis of hydroxyapatite-based bioceramics using a mechanochemical-thermal approach and biocompatibility testing (*Luptáková, L. *, Demčíšáková, Z., Hurníková, J., Pokorná, B., Rontova, F., Petrovová, E., Baláž, M.*)
- 57 Technical Optimization Techniques for Eliminating Systemic Errors in Data for Digital Construction of Bread Using Image Analysis (*Hoang, P. *, Moucha, T., Svoboda, T., Leitmannová, I.*)
- 58 The effect of unwanted H⁺ permeation through anion exchange membranes on the electrodialysis process with bipolar membranes (*Václavíková, N. *, Kubíčková, T.*)
- 59 The grinding process as a determinant of the chemical properties of freeze-dried fruits (*Pukszta, T. *, Kama, K., Mieszkowska, Z.*)
- 60 The influence of particle size on oil extraction yield: Kinetic study and assessment of physicochemical properties of cherry pit oil for biodiesel production (*Šekuljica, N., Jakovetić Tanasković, S., Skoufi, M., Angelopoulou, I., Špirović Trifunović, B., Dajić Stevanović, Z., Knežević-Jugović, Z. **)
- 61 The in vivo evaluation of RNase-A@PbS QDs based on avian embryo as an animal model (*Petrovová, E. *, Demčíšáková, Z., Hurníková, J., Luptáková, L., Shao, K.*)
- 62 The significance of hydrogen concentration monitoring in primary coolant circuits (*Moucha, T. *, Bouřa, A., Macas, J.*)
- 63 Toward Green NH₃ Electrosynthesis: Nanocatalysts, 3D-Printed Electrodes, and Electrolyzer Design (*Givirovskiy, G. *, Givirovskaia, D., Nadeem, U., Piili, H., Repo, E.*)
- 64 Waste biomass-to-electrode materials: biochar-based carbon for electrochemical flow systems (*Beliančínová, K. *, Frišták, V.*)

23:00 End of poster session

Wednesday

08:40–12:20 Hall A, Lectures: Separation processes and transport phenomena (Chair: Dr. Mário Mihal, Dr. Pavel Izák)

- 08:40 Determination of sorption selectivity in ion exchange membranes and its influence on ion transport (*Hlavatý, L.**, *Sedláková, E.*, *Sedlák, L.*, *Červeňanský, I.*, *Markoš, J.*)
- 09:00 Effect of non-ionic surfactants on velocity of single rising bubble (*Shirokov, V.**, *Orvalho, S.*, *Kosior, D.*, *Zawala, J.*, *Basarová, P.*)
- 09:20 Electrodialytic separation of bio-based volatile fatty acids (C2-C6) (*Rózsenszki, T.**, *Koók, L.*, *Bakonyi, P.*)
- 09:40 Free-Flow Electrophoresis: An experimental platform for continuous separation of enantiomers (*Sklenář, A.**, *Sauer, L.*, *Příbyl, M.*)
- 10:00 Gas Sorption in PEEK-Ionene Composite Membranes for Flue Gas Purification (*Izák, P.**, *Stanovský, P.*, *Friess, K.*)
- 10:20–10:40 Coffee break**
- 10:40 Investigation of the vapor-liquid phase equilibrium of a binary mixture of eucalyptol and various alcohols (*Vészi, A.**)
- 11:00 Separation of succinic acid from the mixture of organic acids using pertraction (*Mihal, M.**, *Stoláriková, Z.*, *Červeňanský, I.*, *Markoš, J.*)
- 11:20 Microfluidic systems for separation and preconcentration of ion species using the ion depleted zone (*Škrhák, M.**, *Slouka, Z.*)
- 11:40 Phytosterol isolation from vegetable oils: Methods and Valorization Potential (*Fromel, R.*, *Janošovský, J.**, *Mareček, L.*)
- 12:00 Study of Donnan Dialysis for the Recovery of Valuable Substances from Wastewater (*Tomášik, M.**, *Hlavatý, L.*, *Červeňanský, I.*, *Markoš, J.*)
- 12:20 End of session**

08:40–12:20 Hall B, Lectures: Bioprocess and biotechnology (Chair: Prof. GONCAGÜL SERDAROĞLU, Dr. László Koók)

- 08:40 Cellulose-based ionogels as novel membrane materials for microbial fuel cell applications (*Koók, L.**, *Szabolcs, S.*)
- 09:00 Chromatographic Purification of Polyphenolic Compounds from a By-Product of Rapeseed Protein Isolation (*Mazanová, M.**, *Koššuthová, A.*, *Antošová, M.*, *Polakovič, M.*)
- 09:20 Enhancing Caprolactone Production via Multienzyme Cascade in *E. coli* (*Holienka, K.**, *Illeová, V.*, *Polakovič, M.*)
- 09:40 Evaluating microbial desalination kinetics and efficiency at various substrate loadings and initial salinity (*Nagy, K.**, *Koók, L.*)
- 10:00 Hydrogel Microactuators for Laser-Induced Mechanical Stimulation in 3D Cell Culture (*Zlatník, J.**, *Mamedova, A.*, *Heidenberger, J.*, *Rothbauer, M.*, *Tokárová, V.*, *Řehoř, I.*)
- 10:20–10:40 Coffee break**
- 10:40 Preparative chromatographic separation of polyphenols from black chokeberry and sea buckthorn with macroporous resins (*Koššuthová, A.**, *Mazanová, M.*, *Macias - Garbett, R.*, *Antošová, M.*, *Jágr, M.*, *Polakovič, M.*)
- 11:00 The substitution group and solvent effect on the chemical behavior of chlorine-functionalized Ferulic acid (*SERDAROĞLU, G.**, *KARAKUŞ, N.*)
- 11:20 Spray-dried bioactive microparticles for antimicrobial applications (*Nováková, N.**, *Fířtová, Š.*, *Dvořák, V.*, *Maršík, D.*, *Mašková, L.*, *Mařátková, O.*, *Kašpar, O.*, *Tokárová, V.*)
- 11:40 Small-scale bioreactors: challenges in experimental determination of hydrodynamic stress in stirred vessels (*Behner, A.**, *Bursík, V.*, *Trunov, D.*, *Šoóš, M.*)
- 12:00 The 2-phenylacetic acid derivatives functionalized with NH₂ and -NO₂ groups: FMO, NBO, UV-Vis, Pharmacokinetics studies (*SERDAROĞLU, G.**)
- 12:20 End of session**

12:00–14:00 Lunch

14:00–15:20 Hall A, Lectures: Environmental chemical engineering (Chair: Prof. Tapio Salmi, Dr. Christof Lanzerstorfer)

14:00 Application of Natural Deep Eutectic Solvents for the Extraction of Bioactive Compounds from Rapeseed Meal (*Amjad, S.**, *Rabiej-Kozioł, D.*, *Szydłowska-Czerniak, A.*)

14:20 Combined Physicochemical Processes for Quaternary Wastewater Treatment (*Jurík, J.**, *Bodík, I.*)

14:40 Energy assessment of brine processing (*Hrbík, D.**, *Variny, M.*, *Červeňanský, I.*)

15:00 Zinc Speciation in Dust from a Secondary Dedusting System of the Basic Oxygen Furnace (*Lanzerstorfer, C.**)

15:20 End of session

15:20–15:40 Coffee break

15:40–17:00 Hall A, Lectures: Material engineering and design (Chair: Prof. Tapio Salmi, Dr. Christof Lanzerstorfer)

15:40 Crystal Engineering of Low-Dimensional Metal Halide Hybrids for In-Memory Computing Technologies (*Abdi, G.**, *Alizadeh, A.*, *Mazur, T.*, *Cechosz, E.*, *Stawek, A.*, *CAUS, D.*, *Szacilowski, K.*)

16:00 Electronic Structure and Reactivity Descriptors of BN-Doped Naphthalimide-Carbazole Bipolar OLED Emitters: A DFT/TD-DFT Study (*KARAKUŞ, N.**, *SERDAROĞLU, G.*)

16:20 Integration of microstructured surfaces into microfluidics for dynamic biofilm research (*Nguyen, V.**, *Kříž, F.*, *Nováková, N.*, *Kašpar, O.*, *Tokárová, V.*)

16:40 Processing-Driven Porosity Engineering in Resorcinol Formaldehyde-Derived Carbon Gels for High-Performance Supercapacitors (*Chavhan, M.**)

17:00 End of session

13:30–16:30 Hall B, Priemyselná sekcia (SK industry section)

- 13:30 Otvorenie priemyselnej sekcie**
- 13:40 Dekarbonizácia priemyslu: 6,4 MW strojovňa tepelných čerpadiel na odpadové teplo (*Míchalec, M. **)
- 14:00 Transformácia zemného plynu na zelenú energiu: Komplexné riešenie pre teplo, chlad a elektrinu (*ILLITH, R. **)
- 14:20 Získavanie energií zodpadných vod technológií HUBER ThermWin (*Musiľ, J. **)
- 14:40 Komplexná valorizácia vedľajších prúdov a odpadov: Od nápadu k realizácii (*Janošovský, J. **)
- 15:00 Zlievarenský piesok v cirkulárnej ekonomike: limity, príležitosti a reálna implementácia (*Cedzo, L. **)
- 15:20–15:45 Coffee break**
- 15:45–16:30 Panelová diskusia**
- 16:30 Koniec priemyselnej sekcie**

17:05–18:05 Hall A, Plenary lecture II, Poster award announcement (Chair: Dr. Mário Mihal)

- 17:05 Novel frontiers in circular and sustainable brine mining (*Cipollina, A. **)
- 17:50 Poster award announcement**

19:00–03:00 Conference party

Thursday

08:40–10:40 Hall A, Lectures: Energy transition and circular economy (Chair: Prof. Janusz Lasek, Dr. Petr Mazúr)

- 08:40 Carbon Capture, Utilization and Storage (CCUS) perspectives in Indonesia and Visegrád Countries (*Raymaldi, M.**, *Harangozo, G.*, *Variny, M.*)
- 09:00 Aqueous organic redox flow batteries for high-temperature operation (*Mazúr, P.**, *Spurný, M.*, *Števuliak, M.*, *Kubáč, L.*, *Černý, J.*)
- 09:20 Retrofitting and Optimization Strategies for Decarbonizing District Heating Systems (*Turinič, N.**, *Variny, M.*)
- 09:40 Analysis of hybrid energy storage systems using post-mining infrastructure, including day-ahead market (DAM) and system operating cycle characteristics (*Glód, K.*, *Supernok, K.*, *Czardybon, A.*, *Lasek, J.**)
- 10:00 Quantifying the digitalisation contribution to the management of increasing RES absorption in the electricity market: the case of Slovakia (*Szaryszová, P.*, *Kuhnová, L.*, *Variny, M.**)
- 10:20 Comparative Performance of Lithium-Ion, Sodium-Ion, and Lead-Acid Batteries in a Solar Photovoltaic System Using MATLAB/Simulink (*Bastos, I.**, *Quinelato, L.*, *Kienberger, T.*)
- 10:40 **End of session**
- 10:40–11:00 **Coffee break**

11:00–12:20 Hall A, Lectures: Reaction engineering and catalysis (Chair: Prof. Janusz Lasek, Dr. Petr Mazúr)

- 11:00 Co-solvent free conversion of biomass-originated levulinic acid to -valerolactone: from molecular level to process design (*Mika, L.**, *Árvai, C.*)
- 11:20 Continuous Xylitol Production on Solid Foam Catalyst: Mass Transport and Kinetic Modelling (*Araujo Barahona, G.**, *Ciaramella, M.*, *Eränen, K.*, *García Serna, J.*, *Russo, V.*, *Murzin, D.*, *Salmi, T.*)

11:40 Biomass to useful molecules From batch to continuous operation with the aid of structured catalysts and reactors (*Salmi, T.**, *Araujo Barahona, G.*, *Mastroianni, L.*)

12:00 Phosphine-free Heck coupling reaction, in 1,4-pentanediol as an alternative biomass-derived medium (*Árvai, C.**, *Mika, L.*)

12:20 End of session

12:00–14:00 Lunch

14:00–15:40 Hall A, Lectures: Risk management and process safety & Process design and process intensification (Chair: Prof. Michal Příbyl, Dr. Edit Cséfalvay)

14:00 Dynamic Modelling Approach to Identifying Critical Operating Conditions in Ammonia Synthesis (*Valiyeva, K.**, *Jelemenský, L.*, *Myšíak, J.*)

14:20 Influence of collision velocity on triboelectric charging of polyolefin particles (*Perner, J.**, *Jantač, S.*, *Sklenářová, J.*, *Drápela, M.*, *Pelcová, J.*, *Zubov, A.*)

14:40 Alignment of characteristic times in microfluidic systems for the preparation of enantiomers (*Sauer, L.*, *Sklenář, A.*, *Vobecká, L.*, *Slouka, Z.*, *Kralík, D.*, *Příbyl, M.**)

15:00 Make-up water production from laboratory-scale experiments and industrial-scale design (*Al-Madanat, Q.**, *Cséfalvay, E.*)

15:20 Application of GPU-Based Computation in Chemical and Safety Engineering (*Halabuk, L.**, *Labovský, J.*)

15:40 End of session

15:40–16:00 Coffee break

16:00–17:00 Hall A, Lectures: Pharmaceutical engineering and processes & Digitalization and process control ((Chair: Prof. Michal Příbyl, Dr. Edit Cséfalvay)

- 16:00 Characterization and identification of anthocyanins in natural extracts (*Karaba, S.**, *Pätoprstý, V.*, *Kopáčová, M.*, *Filčáková, A.*, *Tomash, J.*, *Rajniak, P.*)
- 16:20 Study of the Stochastic Nature of Nucleation in Freeze-Drying (*Filčáková, A.**, *Shepherd, J.*, *Annus, J.*, *Karaba, S.*, *Rajniak, P.*)
- 16:40 Multi-Emissivity Measurement Device for Monitoring and Control of Radiative Heating Systems (*Pipíška, A.**, *Rejl, F.*)
- 17:00 End of session**

17:05–18:00 Hall A, Plenary lecture III, Conference closing (Chair: Dr. Mário Mihal)

- 17:05 Chemical engineering of ion-exchange membranes: from biosensing to electro dialysis (*Slouka, Z.**)
- 17:50 Conference closing**
- 18:00–20:00 Dinner**

Friday

-
- 08:00–12:00 Departure of participants**

List of Participants

Austria

Bastos, Izabella, Leoben, Montanuniversität
Lanzerstorfer, Christof, Wels, University of Applied Sciences Upper Austria
Sleziakova, Petra, Leoben, Technical University of Leoben

Croatia

Bolf, Nenad, Zagreb, University of Zagreb Faculty of Chemical Engineering and Technology

Czechia

Balabánová, Jana, Prague, ÚCHP AV ČR
Barraque, Facundo, Ostrava-Poruba, VSB-Technical University of Ostrava
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Behner, Albert, Prague 6, University of Chemistry and Technology, Prague
Boháčová, Zuzana, Praha 1, Confis Conference s.r.o.
Bukač, Lukáš, Praha, Vysoká škola chemicko-technologická
Cedzo, Lucia, Praha, CYRKL
Chavhan, Madhav, Ostrava, University of Ostrava
Dvořák, Vojtěch, Prague, University of Chemistry and Technology in Prague
Fehér, Jakub, Stráž pod Ralskem, MemBrain
Foniok, Kryštof, Ostrava, Vysoká škola báňská – Technická univerzita Ostrava
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Hanžl, Tomáš, Praha, Vysoká škola chemicko-technologická
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