

17:30–22.00 **POSTER SESSION, WELCOME DRINK**

Chair: Hanika J., Prague

We ask the authors to be present at their posters at least from 18:30 to 20:00.
The best poster will be awarded in Aurelius Hall at 21:00.

LIST OF POSTERS

BIOTECHNOLOGY AND BIOREFINERY

- BI-P1 Rotating photobioreactor for cultivation of snow microalgae under extreme climatic conditions**
Bélohav V., Jirout T., Prague
- BI-P2 Microalgae disintegration using a laboratory bead mill**
Krupica A., Jirout T., Prague
- BI-P3 Production of unique PHA copolymers by thermophilic Gram-positive bacteria of the genus *Aneurinibacillus***
Řeháková V., Pernicová I., Obruča S., Brno
- BI-P4 Biotransformation of ferulic acid using extremophilic bacteria**
Hrabalová V., Opial T., Pořízka J., Diviš P., Obruča S., Brno
- BI-P5 Application of animal waste hydrolysates as heavy metal remover from brownfields**
Rousková M., Šabata S., Kaštánek F., Demnerová K., Šolcová O., Prague
- BI-P6 Development of the ecological isolation technique of polyhydroxyalkanoates from selected extremophilic bacteria**
Nováčková I., Kouřilová X., Mrázová K., Sedláček P., Obruča S., Brno
- BI-P7 Antimicrobial activity of red pigments produced by the fungus *monascus***
Koppová K., Husáková M., Patáková P., Prague
- BI-P8 Effect of temperature, light cycle and media composition on PHA production in cyanobacterial genus *Synechocystis***
Šedrlová Z., Obruča S., Brno
- BI-P9 Modification of morphology and rheological properties of bacterial cellulose by production medium**
Stříž R., Černeková N., Sobková M., Kovalčík A., Brno
- BI-P10 Genomic and phenotypic analysis of *rhodospirillum rubrum* – wild type and mutant strain**
Nykrýnová M.¹, Jurečková K.¹, Musilová J.¹, Slaninová E.¹, Obruča S.¹, Hanslíková J.¹, Fleuriot-Blitman H.², Zinn M.², Sedlář K.¹, ¹Brno, ²Sion (Switzerland)

BIOTECHNOLOGY AND BIOREFINERY

- BI-P11 Chitin-degrading isolates potentially usable as the basis of a biopreparation**
Mach J., Halecký M., Prague
- BI-P12 Isolation and structural analysis of polysaccharides from cell walls of green microalgae**
Tkachenko N.¹, Babayeva T.¹, Sushytskyi L.¹, Bleha R.¹, Kubač D.², Sinica A.¹, Brányik T.¹, ¹Prague, ²Třeboň
- BI-P13 *In situ* study of pigments in metabolically versatile bacterium rhodospirillum rubrum**
Slaninova E., Janosec J., Sedlacek P., Obruca S., Brno
- BI-P14 Distinct pathways of guaiacol oxidation – theoretical study**
Biela M., Klein E., Bratislava
- BI-P15 The role of *Azotobacter vinelandii* as a bioinoculant and its capability of biopolymer production and biological activities**
Černayová D., Sukeník M., Slaninová E., Hrubanová K., Krzyzaneck V., Obruča S., Sedláček P., Brno
- BI-P16 Potential of enhanced microbial methanogenesis in the Czech Republic**
*Dostálková J.¹, Koutný M.², Krátká V.², Franců J.³, Řehoř M.⁴, Beneš V.¹, Minařík M.¹
¹Kunovice, ²Zlín, ³Brno, ⁴Most*
- BI-P17 Possibilities of processing waste coffee grounds using pyrolysis**
Klemencová K., Korpas J., Strakošová J., Grycová B., Leštinský P., Ostrava-Poruba
- BI-P18 Polynomial feeding strategy during an aerobic high cell density fed-batch cultivation as a tool to increase quality of the dry active wine yeast**
Blažek J., Montalbano M., Beneš V., Kunovice
- BI-P19 The effect of added green solvent on tyrosol β -D-galactoside synthesis by fungal β -galactosidase**
Košuthová A., Antošová M., Karkeszová K., Polakovič M., Bratislava
- BI-P20 Harvesting of microalgal biomass by oil flotation and sedimentation**
Potočár T., Brányik T., Prague
- BI-P21 Adhesion of *Pythium oligandrum* to model surfaces**
Klimentić M., Potočár T., Brányik T., Prague
- BI-P22 Redirection of metabolic fluxes in *Clostridium beijerinckii* as a response to lignocellulose inhibitors**
Branská B., Koppová K., Doubková D., Prague
- BI-P23 Cultivation of carotenogenic yeast on waste poultry fat with addition of cobalt as a stress factor**
Holub J., Chujanov O., Špačková D., Szotkowski M., Márová I., Brno

BIOTECHNOLOGY AND BIOREFINERY

BI-P24 The effect of different plum varieties on the composition and organoleptic properties of spirits

Balák J., Ilko V., Doležal M., Jarošová I., Prague

BI-P25 Biotechnological conversion of waste food substrates by selected carotenogenic yeasts

Szotkowski M., Plhalová Ž., Sniegořová P., Holub J., Chujanov O., Špačková D., Mářová I., Brno

BI-P26 Comparative genomic analysis of two *Schlegelella* species brings novel insights into polyhydroxyalkanoates production

*Musilova J.¹, Kourilova X.¹, Hermankova K.¹, Bezdicek M.¹, Obruca S.¹, Sedlar K.^{1,2},
¹Brno, ²Munich (Germany)*

INORGANIC TECHNOLOGY

IT-P27 The characterization of inorganic nanomaterials using adsorption technique

Lhotka M., Prague

DECARBONISATION AND THE ECONOMICAL ASPECTS OF THE CHEMICAL INDUSTRY TRANSFORMATION

D-P28 Initial analysis of integration of heavy residues gasification plant into oil refinery as a possible way of industry decarbonisation

Podolský S., Variny M., Bratislava

D-P29 Effects of electricity grid mix on carbon footprint of carbon capture and storage in hydrogen production

Detko J.S., Kraviarová D., Janošovský J., Bratislava

D-P30 Comparing actual simulation data with literature assumptions – case study of oxygen production for oxy-fuel combustion

Kraviarová D., Poláková N., Detko J.S., Janošovský J., Bratislava

D-P31 Operando DRIFTS setup for the complex study of CO₂ hydrogenation over MXenes

Danylo I., Poplštejn J., Kochan F., Sofer Z., Veselý M., Prague

ECONOMICS OF THE CHEMICAL INDUSTRY

E-P32 Implementation of energy saving projects in changing environment

Vytlačil D., Prague

E-P33 Current market needs in chemistry education in the field of business and economic innovation

Lisník A., Szecsenyiová L., Bratislava

CHEMICAL PROCESSES AND DEVICES

- CP-P34 Efficiency evolution and kinetics in the continuous screening and batch sieving process**
Ježsó K.¹, Peciar P.¹, Huhn V.², Peciar M.¹, ¹Bratislava, ²Remscheid (Germany)
- CP-P35 Physical properties of black liquor before and after the impregnation test of spruce chips**
Kohútová M., Peciar P., Juriga M., Fekete R., Bratislava
- CP-P36 Enhanced drying – heat-pumps, moisture monitoring, drying kinetics**
Řežucha M.^{1,2}, Lauer mann M.¹, Jentsch R.¹, Dahash A.¹, Variny M.², ¹Vienna (Austria), ²Bratislava
- CP-P37 Monitoring of pyrolysis environment during corrosion test with WEDM machined stainless steels**
Kuráň P., Midula P., Oravová L., Beneš L., Snow J., Ústí nad Labem
- CP-P38 30 years of hydroprocessing at uct prague: the transition from petroleum feedstocks to bio-oils from HTL and pyrolysis**
Straka P., Auersvald M., Lyko Vachková E., Blažek J., Prague

CIRCULATING ECONOMY

- CE-P39 Composting as an effective end of life method for biodegradable plastics recovery**
Vodička J., Papala F., Obruča S., Brno
- CE-P40 Simulation of oxygasification of plastic fraction of spent lithium ion batteries**
Polakovič M., Kissová E., Haydary J., Bratislava
- CE-P41 Sporosarcina pasteurii utilizing microbially induced calcite precipitation for the recycling of waste concrete fines**
Klíková K., Holeček P., Prošek Z., Konáková D., Nežerka V., Demnerova K., Stiborova H., Prague

GAS, COAL, FUEL

- G-P42 Operation analysis of a trigeneration unit**
Kšířanová M., Variny M., Bratislava
- G-P43 Pushing the boundaries of simulation-based optimization with parallel genetic algorithm interface**
Furda P., Variny M., Bratislava

MATERIALS ENGINEERING

- MI-P44** **New materials for H₂, CO₂ capturing**
Kolská Z.¹, Švorčík V.², Lyutakov O.², Hamalová K.¹, Neubertová V.¹, Vostiňáková M.¹, ¹Ústí nad Labem, ²Prague
- MI-P45** **Observation of the mass transfer zone during voc adsorption**
Gabrišová L., Macho O., Blaško J., Bratislava
- MI-P46** **Ecotoxicity and biodegradation of glue on the base of isocyanate**
Kobetičová K., Böhm M., Černý R., Prague
- MI-P47** **Bioaccumulation of zinc from waste tires for production of rubber recycle – a preliminary study**
Kobetičová K., Nábělková J., Fořt J., Černý R., Prague
- MI-P48** **The comparison of epoxidations of methyl esters of various vegetable oils**
Kocián D., Hájek M., Hájek T., Pardubice
- MI-P49** **VOC oxidation on nickel-cobalt oxide catalysts prepared by a combination of electrochemical process and plasma jet sputtering on stainless steel mesh**
Ostapenko A., Nairo I., Čada M., Jirátová K., Balabánová J., Koštejn M., Kovanda F., Prague
- MI-P50** **Effect of hydroxyapatite powder characteristics on the compaction process and resulting tablet tensile strength after compression**
Guštafík A., Peciar P., Janek M., Bača L., Veteška P., Thurzo A., Peciar M., Bratislava
- MI-P51** **Extrusion and spheronization process application**
Uličná M.¹, Peciar P.¹, Fekete R.¹, Kabát J.^{1,2}, Peciar M.¹, ¹Bratislava, ²Zlaté Moravce
- MI-P52** **Ceramic protection of anti-corrosion layers of organosilane**
Pokorný P., Prodanovič N., Janata M., Brožek V., Prague
- MI-P53** **Nickel-cobalt, nickel-manganese and nickel-cobalt-manganese mixed oxide catalysts in total oxidation of organic compounds**
Babii T., Balabánová J., Jirátová K., Kovanda F., Prague
- MI-P54** **Subsurface characterization of layered materials: preparation of TEM lamellae by the lift-out FIB-SEM method; correlation of TEM-EDX and FIB-SIMS depth profiles**
Koláčny L., Teichmanová A., Veselý M., Prague
- MI-P55** **Characterization of spark plasma sintered β Ti-30Nb alloy**
Voňavková I., Průša F., Nečas D., Vojtěch D., Prague
- MI-P56** **Degradation of zinc alloys in simulated body fluids**
Pokorný J., Hybášek V., Kubásek J., Fojt J., Prague
- MI-P57** **The effect of processing conditions on the behaviour of Zn-1Mg-1Si alloy**
Boukalová A., Kubásek J., Nečas D., Prague

MATERIALS ENGINEERING

- MI-P58** **Comparison of inorganic binders porosity measuring methods**
Pulcová K., Šidlová M., Šulc R., Formáček P., Prague
- MI-P59** **Advanced design of high-entropy alloys**
Růžička F., Kačenka Z., Kratochvíl P., Průša F., Prague
- MI-P60** **One-pot synthesis of emission tunable nanosized AgInS₂-ZnS heterostructures**
Loghina L., Chyliy M., Kaderavkova A., Vlcek M., Pardubice
- MI-P61** **The effect of Ag⁺ and Cu₂⁺ added to Bioglass® on results of in vitro test**
Opavová K., Peroutková K., Pánová K., Prague
- MI-P62** **The impact of fluorine source in the synthesis of CeF₃ nanocrystal on their morphology**
Chyliy M., Loghina L., Kaderavkova A., Vlcek M., Pardubice
- MI-P63** **Study of the alkali-silica reaction of processed fly ash and bottom ash**
Králová K., Pipota T., Šidlová M., Mauermann L., Prague

POLYMERS, COMPOSITES

- PC-P64** **PLGA nanoparticles for the local treatment of joint replacement infections**
Frolov V., Snejdrova E., Hradec Králové
- PC-P65** **Biopolymer filaments designed for FDM 3D printing of personalised orally administered dosage forms**
Macháčková J., Nevyhoštěná M., Matzick K., Komersová A., Pardubice
- PC-P66** **Coating materials based on acrylate latexes with dispersed La₂O₃ nanoparticles and TiO₂ pigment, their preparation and evaluation**
Pejchalová M., Sabová Š., Boščíková K., Machotová J., Kalendová A., Pardubice
- PC-P67** **Modification of a new printable material for tribological applications**
Foitlová A., Melichar J., Mészáros M., Steiner V., Čelákovice
- PC-P68** **Effect of catalytic system on structure of ethylene/propylene copolymers**
Kolomazník V., Buráň Z., Skoumal M., Brno
- PC-P69** **Modeling of gas-phase polymerization process of propylene – reaction kinetics**
Grůza J., Skoumal M., Brno
- PC-P70** **Isolation and analysis of grape seeds lignin for potential application in polymeric blends**
Vostrejs P., Hruskova L., Kovalcik A., Brno
- PC-P71** **Solvent based recycling of plastic waste: additives removal**
Klimošek J., Řiháková L., Dendisová D., Jindrová K., Kosek J., Prague

POLYMERS, COMPOSITES

- PC-P72** Mesoporous adsorbents for CO₂ capture based on amine-functionalized silica and organosilicas
Setničková K., Šabata S., Soukup K., Prague
- PC-P73** CO₂/CH₄ separation by hyperbranched and dendron-containing polymeric membranes
Setničková K., Edr T., Strašák T., Uchytíl P., Prague
- PC-P74** Sorting of plastic waste utilizing triboelectrification and subsequent electric field separation
Sklenářová J., Horký D., Kolářová L., Kosek J., Prague

ORGANIC TECHNOLOGY

- OT-P75** Study of uncatalyzed low temperature oxidation of cyclohexylamine with air in liquid phase – effect of reaction temperature and concentration of water
Valeš R., Kukučková A., Dvořák B., Krupka J., Prague
- OT-P76** Homogeneously catalyzed aldol condensation of campholenic aldehyde with butanal
Bížová V., Paterová I., Gorlova O., Prague
- OT-P77** Synthesis and fluorescence of push-pull substituted diphenylamino-diphenyldistyrylbenzenes
Teichmanová K.¹, Imramovský A.¹, Pauk K.¹, Chernenko D.¹, Vala M.², Luňák S.², ¹Pardubice, ²Brno
- OT-P78** Etherification of tetrahydrofurfuryl alcohol and ethanol in the presence of zeolite-based catalysts
Magyarová Z., Horváth B., Lopatka P., Soták T., Bratislava
- OT-P79** Gas-phase synthesis of cyclopentyl ethyl ether from cyclopentanol and ethanol
Magyarová Z., Hronec, M., Lopatka, P., Soták, T., Bratislava
- OT-P80** Synthesis and characterization of novel D- π -A molecules based on the skeleton of carbazol-diphenylstilbene
Chernenko D.¹, Imramovský A.¹, Pauk K.¹, Teichmanová K.¹, Vala M.², Luňák S.², ¹Pardubice, ²Brno
- OT-P81** Influence of the reaction conditions on 3-carene epoxidation
Rejzková A., Vyskočilová E., Prague
- OT-P82** Three types of π -stacking of 3,6-diaryl substituted furo[3,4-c]furanone polymorphs
Pauk K.¹, Imramovský A.¹, Teichmanová K.¹, Chernenko D.¹, Luňák S.², ¹Pardubice, ²Brno

ORGANIC TECHNOLOGY

- OT-P83 Cycloaddition of CO₂ over pyridinium and imidazolium based catalysts**
Zítová K., Hudcová M., Vyskočilová E., Prague
- OT-P84 Gas-phase oxidation of propylene with nitrous oxide over supported heterogeneous catalysts**
Horváth B., Soták T., Gašparovičová D., Fulajtárová K., Kuhn J., Kovárová P., Bratislava
- OT-P85 Carbonates as a replacement of acetone and cyclohexanone in explosive industry**
Skácel R., Jančík M., Říha L., Dudek K., Pardubice
- OT-P86 Evaluation of waste plastic pyrolysis oil as an alternative feedstock for steam-cracking**
Le T.A., Karaba A., Patera J., Zámotný P., Prague

TECHNOLOGY FOR ENVIRONMENTAL PROTECTION

- EP-P87 Diesel exhaust fluid quality impedance measurement system**
Seidl J., Černý P., Pelikán P., Scholtz V., Prague
- EP-P88 Correlative spectro-microscopy for identification and characterization of microplastics in wastewater and drinking water**
Danylo I., Marvan P., Kofroňová J., Sofer Z., Vurm R., Veselý M., Prague
- EP-P89 Ammonia abatement from livestock buildings using advanced oxidation processes**
Prostějovský T.¹, Kulišťáková A.¹, Reli M.¹, Žebrák R.², Kočí K.¹, ¹Ostrava-Poruba, ²Stehelčeves
- EP-P90 Recent progress in direct no decomposition over K/Co-based mixed oxides**
Bílková T., Pacultová K., Karásková K., Fridrichová D., Jirátová K., Obalová L., Ostrava
- EP-P91 Two stage pyrolysis/split product gasification of refused-derived fuel: product distribution**
Haydary J., Šuhaj P., Rapčanová E., Škulec M., Stellenpohl P., Bratislava
- EP-P92 Study of the kinetics of glyphosate sorption on granular activated carbon**
Bernauer M., Iablochkin K., Kantserova M., Zlámal M., Fila V., Prague
- EP-P93 Environmentally acceptable lubricants for stern tubes application**
Krčková S., Večeř M., Wichterle K., Ostrava
- EP-P94 Catalytic wet air oxidation of phenol waste water using the CoMnFe catalyst in continuous flow quarter-scale reactor and its potential use in industrial segment**
Peroutková K., Tišler Z., Ústí nad Labem

OIL, PETROCHEMICALS, BIOFUELS

- OP-P95** Extraction of cycloalkane–aromate system using ionic liquid
Graczová E., Steltenpohl P., Bratislava
- OP-P96** Tertiary recycling of waste polypropylene in the two-stage reactor system
Ondrovič T., Mikulec J., Banič M., Peller A., Hájeková E., Bratislava
- OP-P97** Biodiesel preparation by heterogenous transesterification of different types of non-food, waste and vegetable oils over mixed oxides
Mališová M., Horňáček M., Vasilková B., Izsák L., Hájeková E., Bratislava
- OP-P98** Aromatization of n-Hexane over hierarchical Ga- and Zn-ZSM-5 zeolites
Horňáček M., Mališová M., Hudec P., Bratislava

SYNTHESIS AND PRODUCTION OF DRUGS

- SP-P99** Synthesis of new potential drugs against Alzheimer's disease, their characterization and dissolution behaviour
Nevyhoštěná M., Komersová A., Macháčková J., Pejchal V., Štěpánková Š., Pardubice
- SP-P100** Molecularly imprinted polymers for SPE of biologically active compound thymol
Dolejšová Sekerová L., Křížová A., Vyskočilová E., Prague
- SP-P101** Mathematical model of prediction of mean particle size of granulate
Čierny M., Macho O., Gabrišová L., Peciar P., Fekete R., Bratislava
- SP-P102** Binding characteristics of multimodal adsorbents: effect of salt and pH
Rupčíková V., Kurák T., Molnár T., Polakovič M., Bratislava
- SP-P103** Expected and unexpected impurities in the production of chosen prostaglandin analogues and their intermediates
Imramovský A., Pauk K., Pardubice
- SP-P104** Study of biological activities of betulonic and platanic acid derivatives
Černá L., Lovecká P., Wimmer Z., Bildziukevich U., Prague
- SP-P105** Corticosteroid-loaded PLGA nanospheres for treatment of chronic inflammation
Boltnarová B., Holas O., Pávek P., Hradec Králové
- SP-P106** Preparation of CFTR modulator intermediates
Hašková L., Mácal L., Valovičová M., Vyskočilová E., Ridvan L., Prague
- SP-P107** Tablet microstructure influence on drug release from tablets containing materials with different deformability
Römerová S., Dammer O., Zámstný P., Prague
- SP-P108** Preparation and the application of drug micro-suspensions on porous carriers for enhanced drug delivery
Švehla O., Šembera F., Zámstný P., Prague
- SP-P109** Combining different powder uniaxial compression arrangements to better predict powder compressibility behaviour during the roller compaction process
Marinko N., Zámstný P., Budková V., Krpelan T., Prague