

17:00 – 22:00 POSTER SESSION

Chairperson: P. Krystyník, Ústí nad Labem

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**MATERIALS ENGINEERING**

- ME-P1** **Freeze-thaw durability of cement mortars with co-combustion municipal waste ash**
K. Betáková, M. Šídllová, K. Králová, L. Mauermann, P. Formáček (Prague)
- ME-P2** **Plasma treatment of various metal oxides: The pathway to preparing nanoparticles**
T. Hostinský^{1,2}, J. Zich^{1,2}, J. Fathi¹, A. Mašláni¹, S. Sharma¹, V. Sikarwar¹, P. Mošner², M. Bury¹
¹Prague, ²Pardubice
- ME-P3** **Microscopic characterization of NiAl/FeSi composites**
A. Michalcová¹, P. Novák¹, K. Skotnicová², V. Kaloc²
¹Prague, ²Ostrava
- ME-P4** **Corrosion resistance of 10 425 CSN/ S185 DIN prestressing steel reinforcement with basalt coatings**
P. Pokorný, V. Brožek, M. Janata, N. Prodanovič, V. Steinerová, L. Mastný (Prague)
- ME-P5** **Monitoring the immediate interaction of glass materials in demineralized water**
T. Přívracká, K. Pánová, T. Pipota (Prague)
- ME-P6** **Microstructure and properties of nitinol alloy reinforced with Ni-Ti intermetallics and carbides**
P. Salvetr, M. Brázda, J. Hájek (Dobřany)
- ME-P7** **Semi-IPN hydrogels for chemical delivery: tailoring transport and mechanical properties**
M. Trudicova (Pardubice)
- ME-P8** **Optimization of molybdenum and vanadium carbide synthesis for cantor alloy-based composite alloys**
I. Voňavková, P. Kratochvíl, F. Růžička, F. Průša (Prague)
- ME-P9** **Incorporation of TiC into NiTi alloys for the development of advanced ballistic protection materials**
T. Vrba, I. Voňavková, F. Růžička, P. Kratochvíl, J. Fathi², J. Zima, F. Průša (Prague)

ME-P10 Plasma assisted synthesis of magnesium and zinc-modified cesium lead bromide

J. Zich^{1,2}, T. Hostinský^{1,2}, J. Fathi¹, A. Mašláni¹, S. Sharma¹, V. Sikarwar¹, P. Mošner², M. Buryš¹
¹Prague, ²Pardubice

PROCESS ENGINEERING

PE-P11 Sample filling in rotational rheometry and conditions of rheological measurement and their effect on the free fall of a spherical particle in a non-Newtonian fluid

E. Korbek, B. Šiška (Pardubice)

INORGANIC TECHNOLOGY

IT-P12 MesopORIZATION of *BEA zeolite by hot liquid water and its mechanism

J. Dedeček¹, V. Tokarova², S. Stiborova², M. Urbanova¹
¹Prague, ²Ústí nad Labem

IT-P13 Functional perovskite-based cool pigments: Synthesis, Characterization, and NIR Reflectivity Evaluation

J. Stibral, J. Hroch, Ž. Dohnalová (Pardubice)

IT-P14 Optimization of the preparation of nucleation seeds intended for the production of rutile type TiO₂ and evaluation of their efficiency

T. Jurásek, T. Opravil (Brno)

IT-P15 The role of double salts and X-ray analysis in quality control of ASN fertilizers

Z. Štrbová, V. Jorik, J. Švorec, M. Kučera (Bratislava, SK)

IT-P16 Viscosity and crystal growth kinetics in GeSe₂ amorphous chalcogenide glass

D. Vaculík, J. Barták, P. Košťál (Pardubice)

APPLIED CATALYSIS AND ORGANIC TECHNOLOGY

COT-P17 Carbon-based catalysts in the oxidation of cyclopentanone by molecular oxygen

D. Gašparovičová, Z. Šilná, B. Horváth, K. Fulajtárová, T. Soták (Bratislava, SK)

COT-P18 Topochemically synthesized si and ge quantum dots for investigating porous networks in solid catalysts

S. Letzel, L. Koláčny, V. Svobodová Pavličková, I. Danylo, T. Hartman, M. Veselý (Prague)

COT-P19 Catalytic hydrogenation of glycerol: bio 1,2-propanediol production

J. Vostrá, A. Hoško, M. Zapletal, J. Trejbal (Prague)

COT-P20 MoO₃ and ZnO modified MCM-41 – effective catalyst in nopol synthesis

M. Zapletal, T. Berthová, E. Vyskočilová, E. Vrbková (Prague)

POLYMERS, COMPOSITES

- PC-P21 Predictive solvent screening for polymer additives using the COSMO-SAC model**
A. Bouz, M. Klajmon, J. Klimošek, K. Kosek (Prague)
- PC-P22 Upcycling of plastics and composites by the fractionation method**
D. Dendisová, J. Klimošek, K. Jindrová, J. Kosek (Prague)
- PC-P23 Tribological properties of materials for additive technologies**
A. Foitlová, M. Mészáros, J. Melichar, V. Steiner (Čelákovice)
- PC-P24 Termooxidation of natural rubber with iron admixtures**
M. J. Gregorová, D. Čadek, A. Kadeřábková (Prague)
- PC-P25 Hydrophilic epoxy resin and their properties**
A. Chodounská, R. Kalousková, T. Rosenkranz, A. Kuta (Prague)
- PC-P26 Effect of chain length of saturated fatty acids on vulcanization activation**
A. Kadeřábková, E. Klímenko (Prague)
- PC-P27 Crystallinity change of semi-crystalline polyethylene during the sorption of penetrants**
O. Melo, K. Jindrová, J. Klimošek, J. Kosek (Prague)
- PC-P28 3D printed gellan and pullulan enteric capsules**
A. Pospíšilová¹, K. Matzick¹, J. Macháčková¹, M. Nevyhoštěná¹, A. Komersová¹, J. Muselík²
¹Pardubice, ²Brno
- PC-P29 Innovative solvent-based recycling: Closing the loop on plastic waste**
L. Řiháková, J. Klimošek, K. Jindrová, J. Kosek (Prague)

CARBON NEUTRALITY

- CN-P30 Possibilities of implementing CCS technology in Slovakia**
P. Michálek, M. Variny (Bratislava, SK)
- CN-P31 Integration of sea water desalination into ammonium thiosulphate production**
N.F. Turinič, M. Variny, V. Buchan (Bratislava, SK)

SYNTHESIS AND PRODUCTION OF DRUGS

- PT-P32 Modulating antimicrobial efficacy through hybrid compounds: novel linkers and scaffold switching from isoniazid to 3,5-dinitrobenzohydrazide**
V. Pflégr¹, K. Konečná¹, O. Jandourek¹, M. Ambrož¹, J. Stolaříková², M. Krátký¹
¹Hradec Králové, ²Ostrava
- PT-P33 Modulation of drug release via FDM 3D-printed HPMC-starch capsules**
J. Macháčková, K. Matzick, M. Nevyhoštěná, A. Pospíšilová, A. Komersová (Pardubice)

- PT-P34 Streamlining the production of pharmaceutical mixtures containing rheologically problematic API involved for direct tablet compression**
D. Novák, P. Stasiak, P. Zámotný (Prague)
- PT-P35 Solubilization of hydrophobic drugs on polysaccharides**
M. Řihák, K. Říha, V. Enev, M. Pekař, Brno
- PT-P36 Assessing coating process quality for stability of active pharmaceutical substances**
M. Švichký, J. Patera, J. Heřt, J. Petřík, S. Römerová, I. Obadalova, J. Vyšohlíd (Prague)

OIL, GAS, COAL - ALTERNATIVE RAW MATERIALS, NEW TECHNOLOGIES, BIOREFINERIES, FUELS, BIOFUELS

- OP-P37 Impact of ammonium use in hydrotalcite synthesis on catalyst activity and stability in biodiesel preparation from waste cooking oil**
M. Bérešová, M. Horňáček (Bratislava, SK)
- OP-P38 Recycling of polypropylene waste from food packaging**
B. Vasilkovová, E. Hájeková, M. Bérešová (Bratislava, SK)
- OP-P39 Modeling and feasibility of various anaerobic digestion plant designs**
M. Danielič, M. Variny (Bratislava, SK)
- OP-P40 The use of hydrogen as a low-emission fuel in selected industrial processes**
D. Dúbravská, M. Variny, D. Kraviarová (Bratislava, SK)
- OP-P41 Blended coffee oil as a potential feedstock for the biodiesel preparation**
M. Horňáček, A. Peller, M. Bérešová (Bratislava, SK)
- OP-P42 Conversion of camelina sativa oil to fuels in FCC-process – Study in MAT**
P. Hudec, I. Schneider, A. Ház, M. Bérešová, M. Hadvinová, E. Hájeková, M. Horňáček, A. Peller (Bratislava, SK)
- OP-P43 A mini-review of an epoxidation process of various vegetable oils**
D. Kocián, M. Hájek, T. Hájek (Pardubice)
- OP-P44 Catalytic conversion of ethanol to 1-butanol via guerbet reaction using copper/lithium-aluminum mixed metal oxides**
*J. Malina¹, F. Karel¹, M. Hájek¹, J. Kocík²
¹Pardubice, ²Litvínov*
- OP-P45 Hydrotreated spent coffee grounds oil as SAF bio-component**
J. Mikulec, A. Peller, M. Slezáčková, M. Banič (Bratislava, SK)
- OP-P46 Waste upcycling and energy storage using thermal plasma gasification and pyrolysis**
J. Pilař, A. Mašláni, M. Buryi (Prague)

- OP-P47** **The effect of the addition of pyrolysis oil from used tires on the yield structure of products during fluid catalytic cracking**
M. Pšenička, A. Vráblík, K. Vondrášková (Litvínov)
- OP-P48** **Effect of co-processing used cooking oil and catalytic hydrocracking feedstock on product quality**
D. Schlehöfer^{1,2}, A. Vráblík¹
¹Litvínov, ²Prague
- OP-P49** **Optimizing zsm-5 zeolite for methanol-to-gasoline conversion: enhancing catalyst lifetime and selectivity**
A. Vondrová, R. Pilař, J. Pastvová, J. Morávková, D. Mauci, H. Schwarzová, D. Kubička, P. Sazama (Prague)*

ECONOMY OF THE CHEMICAL INDUSTRY IN NEW CONDITIONS

- E-P50** **Esg and project financing in the chemical industry**
J. Košťálová, K. Táborská, J. Vávra (Pardubice)

BIOTECHNOLOGY AND BIOREFINERY

- BIO-P51** **Effect of endophytic microorganisms isolated from wheat seeds on germination and plant growth**
T. Bočková, B. Vrchotová, J. Pecka, M. Lhotská, P. Lovecká (Prague)
- BIO-P52** **Optimization of brewery's spent grain processing for the cultivation of *Clostridium butyricum***
D. Doubkova, J. Valentova, P. Kastanek, B. Branska (Prague)
- BIO-P53** **Isolating biologically active? Glucans from the red yeast *Rhodotorula toruloides***
N. Gerspitzerová, J. Holub, D. Špačková, J. Obračaj, R. Mikulíková, I. Márová (Brno)
- BIO-P54** **Dilinoleic succinate based polymers – are they good enough to overcome the effects of bacterial action?**
P. Guziurová¹, J. Vodička¹, M. Trudičová¹, M. El Fray², S. Obruča¹
¹Brno, ²Sczczecin, PL
- BIO-P55** **Decoding polyhydroxyalkanoate synthase genes: insights from database searches**
K. Heřmánková, K. Sedlář (Brno)
- BIO-P56** **Valorisation of nitrogen-rich food waste materials for biomass production in basidiomycete and ascomycete yeasts**
J. Holub, E. Laššová, J. Obračaj, D. Špačková, N. Gerspitzerová, I. Márová (Brno)
- BIO-P57** **Separation and purification of *Monascus* pigments**
L. Jia, P. Patakova (Prague)
- BIO-P58** **Effect of enriched lignocellulosic wastes as a primary nutritional source on the biomass quality of selected yeast strains**
J. Obračaj, J. Holub, D. Čarnoká, D. Špačková, N. Gerspitzerová, I. Márová (Brno)

- BIO-P59 Can hydrogen and bioplastics be combined?**
V.A. Pacasova, M. Poulíček, J. Svec, J. Stetina, S. Obruca (Brno)
- BIO-P60 Animal waste as a source of valuable products**
M. Rousková¹, S. Šabata¹, R. Koprna², O. Solcová¹
¹Prague, ²Olomouc
- BIO-P61 More than P(3HB): Thermophilic aneurinibacillus bacteria as a source of unconventional PHA copolymers**
V. Řeháková, I. Buchtíková, P. Sedláček, M. Kalina, S. Obruča (Brno)
- BIO-P62 Transcriptomic insights into acid crash and non-sporulating cultivations of Clostridium beijerinckii NRRL B-598**
K. Sabatova¹, B. Branska², P. Patakova², K. Sedlar¹
¹Brno, ²Prague
- BIO-P63 Impact of genetic deletions on the biotechnological potential and stress robustness of caldimonas thermodepolymerans in PHA production**
K. Šlosárová, A. Ieremenko, I. Buchtíková, V.-A. Pacasová, M. Berger, P. Dvořák, S. Obruča (Brno)
- BIO-P64 Unlocking the potential of yeast EPS: Optimization strategies for industrial applications**
D. Špačková, J. Holub, N. Gerspitzerová, J. Obračaj, R. Mikulíková, I. Márová (Brno)
- BIO-P65 Comparative methylation analysis of caldimonas thermodepolymerans using third-generation sequencing**
M. Umair, M. Jakubickova, I. Buchtíková, M. Bezdíček, S. Obruca, H. Vítkova, K. Sedlar (Brno)

TECHNOLOGY FOR ENVIRONMENTAL PROTECTION

- TE-P66 Testing the ecotoxicity of cigarette butts and their impact on the environment**
M. Skalová¹, J. Kořínková¹, M. Roupčová²
¹Pardubice, ²Rybitví
- TE-P67 Technical solution for the disposal of liquid hazardous waste using thermal plasma**
J. Mück, T. Najser, J. Kielar, M. Marek, J. František (Ostrava)
- TE-P68 Automated calculation of the wastewater material balance in the wastewater treatment process**
K. Valiyeva, M. Variny, J.F. Chavez (Bratislava)