

| Utorok 1. októbra 2024  |  |  |
|-------------------------|--|--|
| 17:00 - 18:30           | Registrácia  |  |
| 19:00                   | Uvítacia večera                                    |  |
| Streda 2. októbra 2024  |  |  |
| 9:00 - 9:20             | Otvorenie konferencie                              |  |
| Sekcia 1                |  |  |
| Predsedanie             | Jaroslav Mosnáček                                  |  |
| 9:20 - 9:40             | L-01<br>Pavol Alexy                                | Ecological materials from bio-based and bio-degradable polymers  |
| 9:40 - 10:00            | L-02<br>Ivan Chodák                                | Modification of thermoplastic starch as a component in mixtures with biopolymers   |
| 10:00 - 10:20           | L-03<br>Ivan Kelnar                                | Processing, blending and modifications of chitin/glucan complex in ionic liquids   |
| 10:20 - 10:50           | Prestávka na kávu                                  |  |
| Sekcia 2                |  |  |
| Predsedanie             | Chih-Feng Huang                                    |  |
| 10:50 - 11:10           | L-04<br>Petr Štěpánek                              | Microfluidic preparation of polymer nanoparticles and giant polymer vesicles   |
| 11:10 - 11:30           | L-05<br>Jozef Kollár                               | Exploring various techniques to produce polymeric nanoparticles  |
| 11:30 - 11:50           | L-06<br>Vladimír Raus                              | Polysaccharide-synthetic polymer hybrids: from graft copolymers to blends and (nano)composites   |
| 11:50 - 12:10           | L-07<br>Jaroslav Mosnáček                          | Oxygen tolerant surface initiated photochemically induced ATRP   |
| 12:10 - 12:30           | L-08<br>Sachin Gupta                               | Functionality amplification for the straightforward synthesis of complex polymeric architectures   |
| 12:30 - 14:00           | Obed   |  |
| Sekcia 3                |  |  |
| Predsedanie             | Zdenko Špitálský                                   |  |
| 14:00 - 14:20           | L-09<br>Shiao-Wei Kuo                              | Construction archimedean tiling patterns based on soft materials   |
| 14:20 - 14:40           | L-10<br>Martin Danko                               | Dynamic polyester networks based on tulipalin a and ε-caprolactone crosslinked by thia-Michael reaction and activated by alkylation of thioether group |
| 14:40 - 15:00           | L-11<br>Katarína Borská                            | Polylactide-based dynamic networks   |
| 15:00 - 15:20           | L-12<br>Abolfazl Heydari                           | Dynamic networks in biomedical applications: connecting molecular behavior to macroscopic properties   |
| 15:20 - 15:40           | L-13<br>Chih-Feng Huang                            | Investigations of efficient reactions towards polymerizations to the preparations of novel functional polyesters                                       |
| 15:40 - 16:00           | L-14<br>Stepan Podzimek                            | Synthesis and molecular structure of acrylic copolymers containing bio-synthetic monomers  |
| 16:00 - 18:00           | Postrová sekcia                                    |  |
| 18:00 - 20:00           | Exkurzia na Astronomický ústav SAV, v.v.i., večera |  |
| Štvrtok 3. októbra 2024 |  |  |
| Sekcia 4                |  |  |
| Predsedanie             | Dušan Račko  |  |
| 9:00 - 9:30             | L-15<br>Peter Košovan                              | Acid-base equilibria and partitioning of solutes in two-phase systems containing charged polymers and colloids   |
| 9:30 - 9:50             | L-16<br>Pritam Guha                                | Tailoring 2-oxazoline based digradient copolymers for rifampicin delivery: synthesis, physicochemical properties, and colloidal behavior               |
| 9:50 - 10:10            | L-17<br>Rafal Poreba                               | Well-defined poly(2-isopropenyl-2-oxazoline) brushes provide fouling resistance and versatility in surface functionalization                           |
| 10:10 - 10:30           | L-18<br>Zuzana Benková                             | Interactions of proteins with poly(ethylene oxide) modified surfaces in two different setups studied by molecular dynamics                             |
| 10:30 - 10:50           | Prestávka na kávu                                  |  |
| Sekcia 5                |  |  |
| Predsedanie             | Martin Hrubý                                       |  |
| 10:50 - 11:10           | L-19<br>Igor Lacík                                 | Alginate-based microspheres for cell encapsulation in diabetes treatment   |
| 11:10 - 11:30           | L-20<br>Michal Babič                               | Polymer particles as contrast agents for photoacoustic tomography  |
| 11:30 - 11:50           | L-21<br>Krzysztof Jerczynski                       | Synthesis of molecular brushes with lubrication properties as component of novel injectable polymer gels for osteoarthritis treatment                  |
| 11:50 - 12:10           | L-22<br>Michal Pechar                              | Targeting of polymer drug delivery systems with recombinant proteins bound via tris(nitrilotriacetic acid)   |
| 12:10 - 12:30           | L-23<br>Jiří Pfleger                               | Electronic memory phenomena in polymers – from digital memory to memristors and simulation of neuronal synapses  |
| 12:30 - 14:00           | Obed   |  |
| Sekcia 6                |  |  |
| Predsedanie             | Zuzana Benková                                     |  |
| 14:00 - 14:20           | L-24<br>Peter Virnau                               | Knots in polymers, DNA and proteins  |
| 14:20 - 14:40           | L-25<br>Dušan Račko                                | Knots in polymers and biopolymer and chirality   |
| 14:40 - 15:00           | L-26<br>Renáta Rusková                             | DNA topology in Atomic Force Microscopy  |

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| 15:00 - 15:20 | L-27<br>Pawel Dabrowski-Tumanski | Borromean rings in proteins                       |
| 15:20 - 15:40 | L-28<br>Peter Cifra              | Cavity confinement of semiflexible macromolecules |
| 15:40 - 16:00 | L-29<br>Ján Smrek                | Active polymer melt                               |
| 16:00 - 16:15 | L-30<br>Stanislav Kukla          | Chapters in Green chemistry                       |
| 16.15 - 16.30 | Prestávka na kávu                |   |

**Sekcia 7**

| Predsedanie   | Zuzana Kroneková   |  |
|---------------|--|--|
| 16:30 - 16:45 | LS-01<br>Nafiseh Babaei                                      | Synthesis and characterization of biocompatible and 3D printable poly (OEGMA-stat-MMA) thermoplastic elastomers via ATRP polymerization suitable for tissue engineering applications |
| 16:45 - 17:00 | LS-02<br>Ankita Meena  | Propagation rate coefficient of methyl acrylate and 2-methoxy ethyl acrylate in water and ethanol/water mixtures   |
| 17:00 - 17:15 | LS-03<br>Omid Moghaddam                                      | Investigation of dynamic and static properties of cyclic polyacrylate melts  |
| 17:15 - 17:30 | LS-04<br>Silvia Mares Barbosa                                | Natural nanofillers from Aspergillus niger as a highly efficient reinforcement in novel elastomers based on waterborne polyurethane  |
| 17:30 - 17:45 | LS-05<br>Fereshteh Kazemi-Aghdam                             | Mechanical characterization of dual crosslinked alginate-based hydrogel formed via reversible covalent bonds   |
| 17:45 - 18:00 | LS-06<br>Aakash Sharma                                       | The unusual gelation in aspartate-based polyurea: effect of sniv salt on network structure   |
| 19:00         | Konferenčná večera<br>Special evening lecture<br>Ivan Chodák | Swing, an important part of jazz music, piano performance and comments   |

**Piatok 4. októbra 2024**

**Sekcia 8**

| Predsedanie   | Matej Mičušík              |   |
|---------------|----------------------------|---|
| 9:00 - 9:20   | L-31<br>Zdenko Špitalský   | Antibacterial activity of 3D printed thermoplastic elastomers for biomedical applications   |
| 9:20 - 9:40   | L-32<br>Radek Stocek       | A detailed study of the effect of cyclic loading on the thermal expansion coefficient of reinforced styrene-butadiene rubber as a function of different carbon black types" |
| 9:40 - 10:00  | L-33<br>Anastasiia Stepura | Study of properties of novel HAVOH-based polymeric nanocomposites with 2D MXene   |
| 10:00 - 10:20 | L-34<br>Mária Kováčová     | Hydrophobic carbon quantum dots as antimicrobial agent in polymer coatings and their eco-toxicity study   |
| 10.20 - 10.50 | Prestávka na kávu          |   |

**Sekcia 9**

| Predsedanie   | Igor Lacík               |   |
|---------------|--------------------------|---|
| 10:50 - 11:10 | L-35<br>Martin Hrubý     | Stimuli-responsive polymers for bioapplications: From drug delivery systems to sensor   |
| 11:10 - 11:30 | L-36<br>Juraj Kronek     | Poly(2-isopropenyl-2-oxazoline) as a versatile functional polymer for advanced materials  |
| 11:30 - 11:50 | L-37<br>Tibor Macko      | Advanced analytical characterization of synthetic polymers with chromatographic and spectroscopic methods   |
| 11:50 - 12:10 | L-38<br>Zuzana Kroneková | Cationic poly(2-ethyl-2-oxazoline)s as new class of biocompatible modifiers of montmorillonites for sorption and decontamination of organic molecules |
| 12:10 - 12:30 | L-39<br>Matej Mičušík    | Two-dimensional materials and hybrids for advanced application  |
| 12:30 - 13:00 | Záver konferencie        |   |
| 13:00 - 14:00 | Obed                     |   |