

## StudKon 2024 programme:

<b>MONDAY 24. 6. 2024</b>	
<b>Registration</b>	<b>8:00 - 9:00</b>
<b>Morning sessions</b>	<b>9:00 – 14:00</b>
9:00 – 9:15	Opening and welcome session
	<b>Talks session 1</b>
9:15 – 10:40	9:15 Oksana Batkivska 9:35 Ladislav Bříza 9:55 Lenka Vavrincová 10:15 Anna Kokavcová
10:35 – 11:10	Coffee break
	<b>Talks session 2</b>
11:10 – 12:30	11:10 Jan Čundrle 11:30 Abdulmannan Rouhani 11:50 Kristýna Šedivá 12:10 Václav Harrandt
12:30 – 14:00	Lunch break
<b>Afternoon sessions</b>	<b>14:00 – 18:00</b>
	<b>Talks session 3</b>
14:00 – 15:20	14:00 Jakub Neumann 14:20 Jiří Brejcha 14:40 Miroslava Sincak 15:00 Michaela Kocholatá
15:20 – 15:40	Taking photo together
16:00 – 18:00	<b>Poster session + light refreshment</b>
<b>Evening programme</b>	<b>18:00 – 22:00</b>
18:00 – 19:00	Invited talk: doc. Mgr. Martin Veselý, Ph.D.: Historical development of brewing and drinking beer in the region. (talk will be in Czech, slides in English).
19:00 – 22:00	Barbecue

TUESDAY 25. 6. 2024	
Morning sessions	9:30 – 14:00
	<b>Talks session 4</b>
9:30 – 10:50	9:30 Pavlína Mimrová 9:50 Robert Ato Newton 10:10 Kateřina Hamalová 10:30 Anna Paříková
10:50 – 11:20	Coffee break
	<b>Talks session 5</b>
11:20 – 12:40	11:20 Saddam Hussain Mubin 11:40 Eva Štěpanovská 12:00 Tereza Dušková 12:20 Jan Štěpka
12:40 – 13:40	Lunch break and technical break
13:40 – 14:00	The Miroslav Broul award ceremony and conclusion of the conference

## List of participating PhD students and their contributions:

### Talk session 1

- **Oksana Batkivska** (*1<sup>st</sup> year, Applied nanotechnology, PŘF UJEP*): Exosomal Galectins: Key Players in Cell Proliferation and Tumor Progression
- **Ladislav Bříza** (*1<sup>st</sup> year, Environmental chemistry and technology, FŽP UJEP*): Novel approach to recovery of Li<sub>2</sub>CO<sub>3</sub> from spent lithium batteries
- **Lenka Vavřincová** (*1<sup>st</sup> year, Applied analytical and bioanalytical chemistry, UCM Trnava, Slovakia*): Carbonized sewage sludge as a renewable source of phosphorus for plants
- **Anna Kokavcová** (*1<sup>st</sup> year, Computer modelling in science and technology, PŘF UJEP*): Modeling of Heat Transfer in Granular Media: Influence of mixing dynamics and material properties

### Talk session 2

- **Jan Čundrle** (*1<sup>st</sup> year, Environmental chemistry and technology, FŽP UJEP*): Study of hydrolysis of sulfonylurea herbicides on nanoceria
- **Abdulmannan Rouhani** (*1<sup>st</sup> year, Landscape reclamation and ecosystem services, FŽP UJEP*): Human health risk assessment of potentially toxic elements in urban green spaces (Case study: Ústí nad Labem-centrum)
- **Kristýna Šedivá** (*1<sup>st</sup> year, Landscape reclamation and ecosystem services, FŽP UJEP*): Enhancing Seed Germination and Photosynthetic Efficiency in Poppy (*Papaver somniferum* L.) Using Cold Plasma Treatment
- **Václav Harrandt** (*2<sup>nd</sup> year, Computer modelling in science and technology, PŘF UJEP*): Multiphase Flow Simulations: Exploring Bubble Dynamics with Volume of Fluid Method

### Talk session 3

- **Jakub Neumann** (*2<sup>nd</sup> year, Applied ion technology, PŘF UJEP*): Characterization of individual microscopic particles using a combination of micromanipulation, microscopy and microanalytical methods
- **Jiří Brejcha** (*3<sup>rd</sup> year, Engineering technology, FSI UJEP*): Evaluation of the influence of the elastomeric matrix on the properties of a rubber compound containing sustainable raw materials
- **Miroslava Sincak** (*3<sup>rd</sup> year, Biotechnology, UCM Trnava, Slovakia*): Impact of low-frequency electromagnetic field on yeast *Saccharomyces cerevisiae* growth
- **Michaela Kocholatá** (*3<sup>rd</sup> year, Applied nanotechnology, PŘF UJEP*): Isolation and Characterization of Plant Exosomes for Biomedical Applications

### Talk session 4

- **Pavλίna Mimrová** (*3<sup>rd</sup> year, Computer modelling in science and technology, PŘF UJEP*): Molecular modeling of alkali halides using phase-transferable models: aqueous solutions, anhydrous crystals, crystalline hydrates, molten salts
- **Robert Ato Newton** (*4<sup>th</sup> year, Environmental chemistry and technology, FŽP UJEP*): Biochar Assisted Phytoremediation with *Miscanthus × giganteus* in Trace Elements Contaminated Soil
- **Kateřina Hamalová** (*3<sup>rd</sup> year, Applied nanotechnology, PŘF UJEP*): Chitosan/alginate biofilms with deep eutectic solvents in Microbial Fuel Cells
- **Anna Paříková** (*3<sup>rd</sup> year, Applied nanotechnology, PŘF UJEP*): Computational Fluid Dynamics Studies for Optimizing Stem Cells Cultivation

### Talk session 5

- **Saddam Hussain Mubin** (*master student, Hydrosience and engineering, TU Dresden, Germany*): Assessment of Biochars Properties Prepared from Different Feedstocks and Their Prospects as Carbon-capturing and Sequestering Construction Materials
- **Eva Štěpanovská** (*3<sup>rd</sup> year, Applied ion technology, PŘF UJEP*): Modification of graphene-like materials and polymer thin films with energetic ions for their application in energy storage
- **Tereza Dušková** (*4<sup>th</sup> year, Applied nanotechnology, PŘF UJEP*): Harnessing Perfluorocarbon-Based Nanocarriers for Rhodium (III) NHC Complex Delivery: Synthesis, Characterization, and Cytotoxicity Evaluation
- **Jan Štěpka** (*4<sup>th</sup> year, Applied nanotechnology, PŘF UJEP*): Influence of CeO<sub>2</sub> nanoparticles and alginite particles on microbial communities in hemp rhizosphere and soil: DNA sequencing and bioinformatics approach

### Poster session

- **Slavomír Adamec** (*3<sup>rd</sup> year, Environmental chemistry and technology, FŽP UJEP*): Distinguishing of anthropogenic contamination and natural geogenic anomaly in soils in Northwestern Bohemia
- **Adeyemi Adejare** (*master student, Hydrosience and engineering, TU Dresden, Germany*): The Effect of Ryegrass on Enhancing Soil Carbon and Nutrients Storage
- **Gabriela Bílková** (*3<sup>rd</sup> year, Environmental chemistry and technology, FŽP UJEP*): Birch foliar analysis for mapping weak soil contamination by zinc
- **Katrien Boonen** (*3<sup>rd</sup> year, Environmental chemistry and technology, FŽP UJEP*): The effect of acidifying pollution on spruce growth
- **Šárka Dědičová** (*3<sup>rd</sup> year, Computer modelling in science and technology, PŘF UJEP*): External electric field induced structural change of oligo(ethylene glycol) in explicit solvents: A molecular dynamics study

- **Jaffar Iqbal** (1<sup>st</sup> year, *Landscape reclamation and ecosystem services, FŽP UJEP*): Effect of variety on the chemical composition of the grain of spelt (*Triticum. spelta* L.) wheat
- **Jaroslava Jarolímková** (2<sup>nd</sup> year, *Applied nanotechnology, PŘF UJEP*): Liquid exfoliation of molybdenum disulfide for hydrogen evolution reaction
- **Alexandra Kinder** (1<sup>st</sup> year, *Molecular biology, UCM Trnava, Slovakia*): Variability of durum wheat (*Triticum durum*) in intake and accumulation of zinc
- **Petr Panuška** (5<sup>th</sup> year, *Applied nanotechnology, PŘF UJEP*): A perfusion system for testing of the effects of electrical field on osteogenic differentiation of human mesenchymal stem cells
- **Muhammad Roman** (1<sup>st</sup> year, *Landscape reclamation and ecosystem services, FŽP UJEP*): Temporal Trends in Winter Wheat Yields: The Role of Fertilization, Preceding Crop and Weather Over Decades of Field Experiments
- **Michal Syrový** (3<sup>rd</sup> year, *Applied nanotechnology, PŘF UJEP*): Non-public topic
- **Martin Šulc** (4<sup>th</sup> year, *Environmental chemistry and technology, FŽP UJEP*): Gypsum technology of separation  $\text{Li}_2\text{CO}_3$  from Zinnwaldite mineral
- **Vojtěch Trnka** (1<sup>st</sup> year, *Applied nanotechnology, PŘF UJEP*): Microfluidic Blood-Brain-Barrier model for extracellular vesicles transport studies
- **Muhammad Zubair** (1<sup>st</sup> year, *Landscape reclamation and ecosystem services, FŽP UJEP*): *Miscanthus x giganteus*: An Industrial Crop for Phytoremediation of Pharmaceuticals from Hospital Wastewater in Soil