

CONFERENCE PROGRAMME

7th International Scientific Conference **Biotechnology and Metals**,
October 8-9, 2026, Stará Lesná, High Tatras, Slovakia

WEDNESDAY, 7th October, 2026	
18:00 – 20:00	REGISTRATION
THURSDAY, 8th October, 2026	
8:00 – 9:00	REGISTRATION
9:00 – 9:15	OPENING SESSION
9:15 – 9:45	INTRODUCTION – Profiles of Conference Organizing Institutions Sedláková-Kaduková Jana - Science and Responsibility: The Place of Values in Environmental Biotechnology Luptáková Alena - Mineral biotechnology in Slovakia - past, present and future
9:45 – 10:45	SESSION 1 Chair- persons: Matušíková Ildikó, Agnieszka Fornalczyk INVITED LECTURE Ljudmilla Bokányi - Where we are in the bioprocessing after decades of research? LECTURES Izabela Michalak - Macroalgae-derived biochar for removal of metal ions and biogenic elements from wastewater: A sustainable environmental technology Daniel Kupka - Activated carbon-supported fluidized-bed reactor for iron oxidation by acidophilic autotrophs: Implications for bioleaching and AMD treatment.
10:45 – 11:15	COFFEE BREAK
11:15 – 12:45	SESSION 2 Chair- persons: Iva Janáková, Martin Urík INVITED LECTURE Christian Wolkersdorfer - Inside the Flooded Mine – Why Mine Water Research must look below the Water Table LECTURES Zuzana Bártová - Biological Iron Oxidation of Acid Mine Drainage for Mineral Pigment Precursor Recovery Lenka Hagarová, Daniel Kupka - Microbial Diversity and Biotechnological Potential of Mine Drainage from the Mária Mine, Slovakia

	Vira Velianyk - Microbial consortium dynamics in treated mine water from a former gold/copper mine Veronika Hlavackova - Survival strategies of indigenous arsenite-oxidizing bacteria in polluted mine waters
12:45 – 14:00	LUNCH
14:00 – 15:00	SESSION 3 Chair- persons: Agnieszka Sobianowska-Turek, Daniel Kupka PRESENTATION The Material Metamorphosis (students from Secondary Vocational School of J.A.Baťa, Svit) LECTURES Martin Urík, Marcel B. Miglierini - Iron Oxide Nanopowder Transformations Triggered by Aspergilli Mohsen Monirialamdari, Daniel Kupka, Eva Mačingová, Dávid Jáger, Claudia Čičáková - Characterization of Dissolved Organic Matter in Nižná Slaná Mine Water by HPLC-FLD, HPLC-HRMS and GC-MS Daniel Benek, Sofia Györiová, Martin Repček, Natália Zaťková, Adam Zeman - Microplastics and Synthetic Fibers in Aquatic Ecosystems
15:00 – 15:30	COFFEE BREAK
15:30 – 18:30	DISCUSSIONS, SOCIAL MIXER
	OPTIONAL WORKSHOP in Fister Crystal
From 19:00	SOCIAL EVENING – Hotel Academia

FRIDAY, 9 th October, 2026	
9:00 – 10:15	SESSION 4 Chair- persons: Magdaléna Bálintová, Magdalena Jablonska-Czapla
	INVITED LECTURE Vlad Paserin - Vapometallurgy and bioleaching - potential partners of a radically environmentally responsible mineral processing practice LECTURES Rebeka Kósaová , Bence Farkas, Marek Bujdoš, Martin Urík - Evaluation of Fungal Potential in Cadmium Bioleaching from Solid Mining Wastes and Its Removal Using Chemically Modified Manganese Oxides Miroslava Sinčák , Katarina Bendiktova, Jana Sedlakova-Kaduková - Growth and Ferrous-Iron Oxidation Kinetics of <i>Acidithiobacillus ferrooxidans</i> under a 5 mT Static Magnetic Field Rebeka Frueholz , Clemens Habermaier, Lena Heibl, Jiri Kucera, Christian Zafiu, Vladimir Brummer, Marianne Haberbauer - Phosphorus Recovery from Sewage Sludge Ash Using Biogenic Sulfuric Acid
10:15 – 10:45	COFFEE BREAK
10:45 – 11:45	SESSION 5 Chair- persons: Miroslava Sinčák, Veronika Hlaváčková
	INVITED LECTURE Lenka Demková - Bioindicators as a Tool for Monitoring Potentially Toxic Elements in Soil and Air LECTURES Ildikó Matušíková - Nitrogen Nutrition as a Modulator of Metal(loid) Accumulation and Defence Mechanisms in Wheat Jana Konečná , Helena Švarcová, Robo Švarc, Martin Frič - The Remediation Sculpture
11:45 – 12:15	CLOSING CEREMONY
12:15 – 14:00	LUNCH

LIST OF POSTERS (Posters will be displayed during the whole conference):

1. Magdaléna Bálintová, Lenka Demková, Adriana Eštoková, Alena Luptáková - FTIR And XRD Characterization of Silicate Soils from the Zlatá Baňa Mining Locality (Slovakia)
2. Claudia Čičáková, Daniel Kupka, Zuzana Bártová, Lenka Hagarová, Tomáš Faragó, Viktória Krajanová, Bronislava Lalinská, Slavomír Hredzák, Marek Matík, Vladimír Malý - Geochemical and Biological Kinetic Controls on Fe(II) Oxidation and Secondary Mineral Formation in Acid Sulfate Waters from a Siderite Deposit (Slovakia)
3. Bence Farkas, Rebeka Kósaová, Martin Urik - Bioextraction of Manganese from Waste Material Using an Adapted Strain of the Microscopic Filamentous Fungus *Aspergillus Niger*
4. Ľudmila Galuščáková, Libuša Lengyelová, Lucia Sporinová, Ildikó Matušíková, Radoslava Matúšová, Beáta Piršelová - Assessment of Cadmium Tolerance in Oat (*Avena Sativa*) and Its Potential for Remediation of Contaminated Soils
5. David Hrečin, Iva Janáková, Lenka Říhová Spěvácová - Using Adaptation Period to Enhance Bioleaching of Indium from LCD Screens
6. Ida Chojnacka - Purification of Copper Granulate Obtained in the Recycling Process of Lithium-Ion Batteries by Hydrometallurgical Methods
7. Simona Ilavská, Mária Pavlovičová, Peter Nemeček, Ildikó Matušíková, Anirban Deb Nath, Alexandra Hlavatá - Flax Cultivar Variability Under Metal Stress: Relevance to Phytoremediation of Contaminated Environments
8. Alena Luptáková, Magdaléna Bálintová, Adriana Eštoková, Eva Mačingová, Daniela Guglietta, Stefano Ubaldini, Miloslav Lupták - Possibilities of Mine Wastes Bioleaching from Old Mining Burdens
9. Tereza Kupka Chowaniecová, Lukáš Kupka, Hana Vojtková, Barbara Stalmachová - Effects of Temperature and pH on the Functional Diversity of Microscopic Fungi in a Thermally Active Spoil Heap
10. Valeria Mádainé Üveges, Shabnam Jameshourani, Ljudmilla Bokányi - Evaluation of *Acidithiobacillus ferridurans* Growth and Bioleaching Performance on Arsenic-Bearing Mine Tailings
11. Lenka Říhová Spěvácová, Iva Janáková, David Hrečin - Biodegradation of PET Microplastics in a Test Medium
12. Abidemi Sunmola, Daniel Kupka, Claudia Čičáková, Lenka Hagarová, Zuzana Bártová - Activated Carbon-Based Fluidized-Bed Reactor for Iron Oxidation by Acidophilic Autotrophs: Implications for Bioleaching and AMD Treatment
13. Vira Velianyk, Mirko Martin, Conny Kitzig, René Kahnt, Jakub Hruška, Stepanka Mrazova, Anna Lamacova, Klara Liskova, Jakub Riha, Alena Sevcu, Veronika

Hlavackova - MiReCC: Climate-resilient solutions for post-mining landscapes in the Czech–Saxon Ore Mountains

14. Joanna Willner, Agnieszka Fornalczyk, Magdalena Jabłońska-Czapla, George Yandem - *Photovoltaic Panels in the Environmental Context – Material Degradation and Recycling Challenges*
15. George Yandem, Katarzyna Grygoyć, Małgorzata Wawer-Liszka, Marcin Szuszkiewicz, Joanna Willner, Agnieszka Fornalczyk, Magdalena Jabłońska-Czapla - *Photovoltaic Panels as a Potential Source of Technology-Critical Elements in the Environment*
16. Zeinab Zamani, Eva Duborská - *Effect of Iodine Biofortification on Photosynthetic Pigments in Mint Plants*