



NEWSLETTER

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THE SURRI NEWS

WINTER EDITION 2024

brings you the latest highlights and achievements from SURRI project activities. Stay in touch and don't miss any news.

Dear SURRI friends, welcome to the fourth edition of our SURRI team newsletter. We're here to update you on the latest highlights and results in our project. Curious about what's new? Let's dive in!

SURRI TEAM TOGETHER IN ROME

The SURRI project workshop at La Sapienza University tackled battery recycling, heavy metal decontamination, and AI in water purification.

From October 23 to 25, 2024, the SURRI Rome Workshop - Autumn 2024, Project Meeting, and Advisory Board Meeting took place at La Sapienza University in Rome, bringing together researchers and experts from across Europe.

The event focused on the progress of the SURRI project, which aims to advance innovations in decontamination, bioremediation, battery recycling, and other environmental technologies. Presentations highlighted developments such as arsenic removal adsorbents, microbial metal recovery, and new approaches to radionuclide stabilization. The program also featured insights from Italian experts at SOGIN and ISPRA, who shared experiences in radioactive waste management and compliance with European regulations.

In addition to the scientific program, the event provided opportunities for informal networking, including group dinners and a guided tour of St. Peter's Basilica. The workshop was not only a platform to share research achievements but also an opportunity to evaluate the project's progress and plan key activities for its final year. Participants left with fresh inspiration, valuable connections, and practical ideas for their future work.

Big thanks to our Italian team for their support and great hosting by Marco's team!



Photos by: CXI TUL

"Sustainable Remediation of Radionuclide Impacts on Land and Critical Materials Recovery" - GA No 101079345

SURRI TEAM SHINES AT THE SCIENTISTS' NIGHT

On Friday, 27 September, from 5 to 10 p.m., one of the most interesting scientific events of the year took place at CXI TUL and the entire Technical University of Liberec - the Night of Scientists and Women Scientists 2024. The theme of this year's event was **Transformation**, and the visitors had a unique opportunity to experience how science is changing and shaping the world around us.



Photo by: CXI TUL

We had two transformations from the SURRI team:

1. Microbial Transformation - Nhung Nguyen demonstrated how invisible microbes can purify heavy metals. It was a science show full of microorganisms and ecology. Nhung and Vira Velianyk and their students Martina and Anna were inspiring us and all coming science fans. Girls in science had fascinating presentation and making great promotion to our community in Liberec! 🙌🌍
2. The transformation of alkali metals by fire was shown by Martin Palušák in tandem with his student Michal. Visitors saw a show based on the colorful transformation of flame. This work is part of the SURRI project, which aims to create a virtual centre for radionuclide impact management. 🔄🌍

YOGA SCIENCE IN BEZDĚKOV: EXPLORING THE CONNECTION BETWEEN SCIENCE AND YOGA THROUGH THE SURRI PROJECT

On July 5, 2024, Bezděkov hosted a unique World Café event focused on Microbes Keep Us Healthy and Our Environment Clean. Led by Nhung Nguyen, participants exchanged ideas on how scientific insights can enhance yoga practice and vice versa. Thanks to the SURRI project, the event provided an inspiring platform for discussions and networking, bridging the worlds of science and personal development.



Photo by: CXI TUL

CXI RESEARCHERS VISIT UNIVERSITY OF SOUTHAMPTON FOR R&D

Thanks to the SURRI project, our young scientists Martin Palušák and Stanislava Vrchovecká took part in an R&D visit at the University of Southampton. The visit took place from 18-20 September 2024, and brought them valuable experience and the opportunity to collaborate with an international team of experts. This activity was aimed at enhancing research competencies and deepening knowledge in their field.

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Sabrin Abdallah Completed Internship at the University of Southampton Thanks to the SURRI Project.

From April to July 2024, our researcher Sabrin Abdallah successfully completed an internship at the prestigious University of Southampton. Thanks to the SURRI project, she had the opportunity to enhance her expertise, establish new connections, and engage in cutting-edge research within an international academic environment.

BIOTECHNOLOGIES AND METALS: ADVANCES IN BIOREMEDIATION AND RECOVERY

Stará Lesná, Slovakia – The recent “**Biotechnologies and Metals**” conference brought together scientists and experts to discuss cutting-edge biotechnological approaches for addressing challenges related to metal contamination and recovery. The event featured key contributions highlighting innovative solutions for mining-impacted sites.

-  **N. Nguyen:** “Can fungi unlock hidden potential and recover heavy metals at former Czech mining sites?” explored the use of fungi for recovering and stabilizing heavy metals from mining-impacted areas, showcasing their potential for eco-friendly remediation.
-  **V. Hlaváčková:** “Unveiling the Microbial Diversity Profile Shaped by Contaminated Waters at the Historic Silver/Zinc/Lead Mining Site in Kutná Hora” detailed how metal contamination shapes microbial communities and their bioremediation potential.
-  **V. Velianyk & A. Ševců:** “Metal-based nanoparticles immobilization using Pseudomonadota from Zlate Hory former mining site in CZ” demonstrated bacterial applications for controlling the mobility of metal nanoparticles in contaminated ecosystems.

The conference underscored the critical role of biotechnologies in sustainable environmental restoration and the recovery of valuable resources. For more details, visit the [official website](#).

ECOPOLE'24: INTERNATIONAL CONFERENCE SHOWCASES GROUNDBREAKING ENVIRONMENTAL RESEARCH

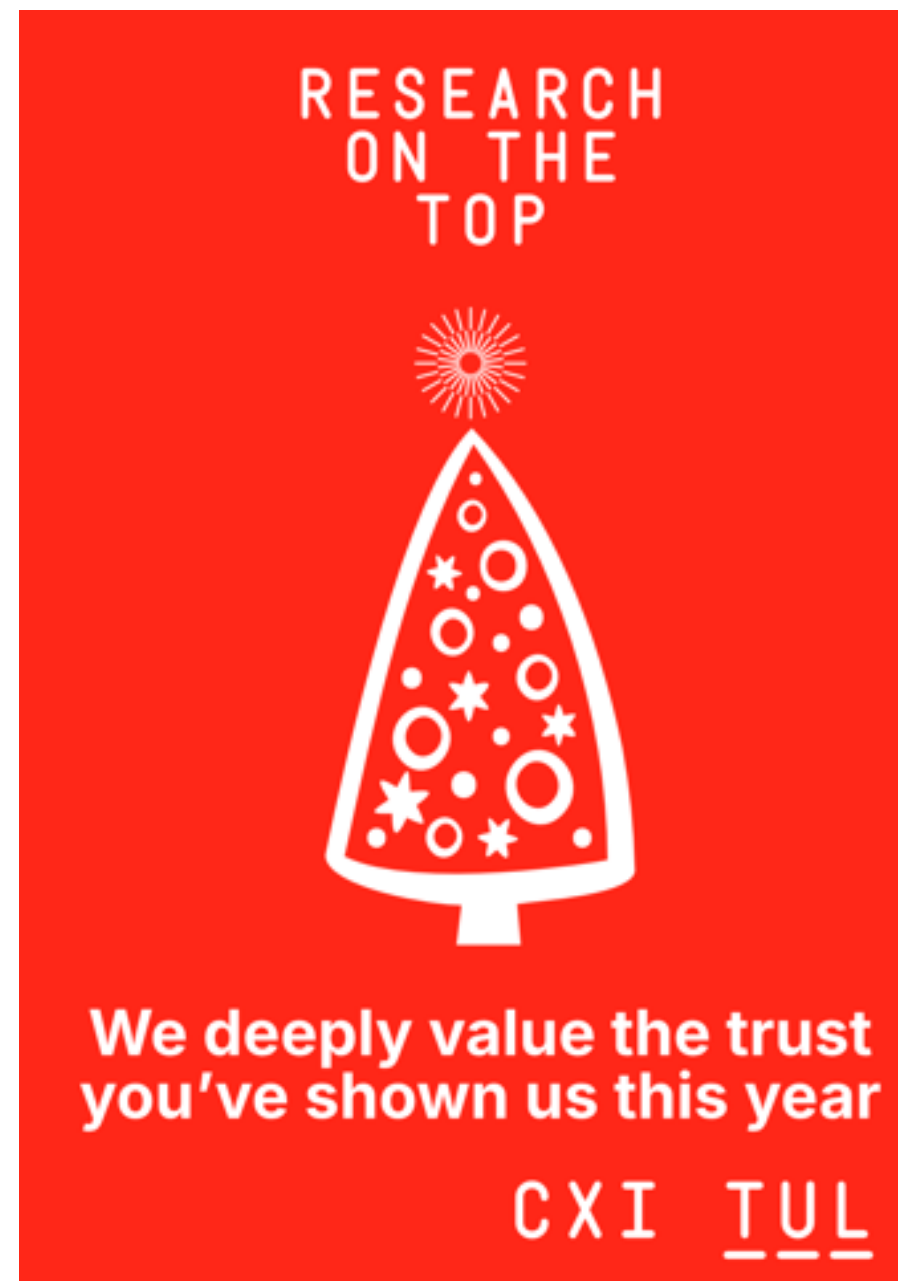
From October 16 to 19, 2024, Warsaw, Poland, became the epicenter of environmental science as it hosted “**ECOpole'24 - Pollutants in the Environment**”, an international conference organized by the ECESociety. This prestigious event brought together leading scientists, researchers, and industry professionals to present innovative solutions to address critical challenges related to environmental pollution.

Among the outstanding contributions were several impactful studies led by researchers from the Technical University of Liberec (CZ) and the Silesian University of Technology (PL). Their work highlighted innovative approaches to addressing key environmental issues:

-  **S. Wardejn, S. Wacławek, & G. Dudek.** “**ECO-FRIENDLY FOOD PACKAGING: A Comparative Study of Biodegradable Materials and Antimicrobial Activity**” This study explored the potential of biodegradable food packaging materials with antimicrobial properties, paving the way for sustainable solutions in food preservation.
-  **M. Palušák, D. Silvestri, & M. Černík.** “**Kinetic Analysis of Zn²⁺ Fate and Transport in Porous Media**” The research delves into the mechanisms of zinc ion migration in porous materials, offering insights relevant to soil and water pollution management.
-  **M. Palušák, D. Silvestri, & S. Wacławek.** “**Methodology Applied to Recovery of Co²⁺ from Water Resources**” This innovative approach demonstrates new methodologies for cobalt ion recovery from water systems, contributing to sustainable resource management.

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The above contributions underline the pivotal role of academic institutions like the Technical University of Liberec and Silesian University of Technology in tackling global environmental challenges through cutting-edge research.



WE WISH YOU A JOYFUL WINTER SEASON AND HAPPY HOLIDAYS.

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(<https://www.linkedin.com/showcase/surri>)

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(https://twitter.com/SURRI_2023)

Our work is crucial. The SURRI team, with members from Italy and the UK, is committed to advancing sustainable remediation practices and optimizing resource utilization. Our goal is to safeguard the environment while developing innovative methods to recover valuable raw materials from water sources.

#SURRI #project #mininglocality#bioprecipit #team #work #collaboration#research #cxiliberec #TeamWork#InternationalCollaboration

Thank you for staying connected with SURRI through our media channels. Keep following us for the latest updates on our projects and progress.



Kind regards
SURRI team | surri@tul.cz

Great job: Miroslav Černík, [Alena Ševců](#), [Martin Palušák](#), [Veronika Hlavackova](#), [Nhung H.A. Nguyen](#), [Marco Petrangeli Papini](#), [Andy Cundy](#), Mohamed L. Merroun, Milan Hokr, Zuzana Musilová, Lenka Hanušová, Rafael O. M. Torres, Trung le Duc, Rojina Shrestha, Kateřina Černá, Stanislava Vrchovecká, Stanislaw Waclawek, Olha Starostina, Pavla Švermová, Richard Marsh, and Cristina Povedano Priego and all other team members, including those not on LinkedIn.

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