



# NEWSLETTER

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## THE SURRI NEWS

SPRING / SUMMER 2025

Dear SURRI fans,

Mining has shaped many regions in the Czech Republic – and left its mark. The SURRI project is here to turn those impacts into opportunities through sustainable remediation and smart resource recovery.

In recent months, we've trained young researchers, shared our work at major international events, and developed new ways to turn mining waste into valuable materials. Curious what we've achieved? Read on – the SURRI journey continues.



Photos by: CXI TUL

### SURRI SUMMER SCHOOL 2025 – SCIENCE THAT MAKES AN IMPACT

From June 16 – 20, 2025, the SURRI team gathered at CXI TUL in Liberec for the very first SURRI Summer School.

The focus was on sustainable remediation of mining sites and critical raw material recovery. The event brought together SURRI colleagues from across Europe and young researchers from our partner universities.

#### What did it include?

- 5 days of lectures, discussions, and excursions
- 2 field trips to DIAMO pilot sites in Stráž pod Ralskem and Kutná Hora
- Hands-on lab workshops on electrokinetics, bioremediation, nanotechnologies, and groundwater flow modelling

#### Participants presented research in:

- Microbial remediation
- Electrochemical methods
- Element recovery using laser technologies
- Use of waste materials to produce nanocatalysts

The Summer School was a great opportunity to connect with project partners from the University of Southampton, University of Granada, La Sapienza Rome, and more. Thank you all for joining us in Liberec!

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



## SURRI TEAM IN VIENNA – SETAC EUROPE 2025

In May, we attended the SETAC Europe 2025 conference in Vienna, alongside more than 2,900 scientists from around the world.

On May 12th, we led our own session: **“Sustainable Remediation of Mining Impacts and Critical Materials Recovery”** – a full room, excellent feedback, and a lively discussion. The next day, we met with partners from the University of Granada and University of Southampton to align next steps – with the Summer School being a key focus. Our international collaboration is in full swing, and it shows. Thanks to everyone contributing – science works best when people, knowledge, and shared goals come together.



Photo by: CXI TUL

## INTERNSHIPS – EXPERIENCES THAT MATTER

Internships are a core part of SURRI, offering new skills and strengthening cooperation.

### Sabrin Abdallah – UoS (UK)

Sabrin spent four months researching laser photoreduction of metal ions into nanoparticles at GAU-Radioanalytical and the Optoelectronics Research Centre. Her results contribute to the laser-based recycling of critical materials.

“Not just knowledge, but friendships, experience, and inspiration – that’s what this internship gave me,” she says.

### Trung Le Duc – UGR (ESP)

Trung completed a three-month internship focusing on bioremediation of arsenic-contaminated mining water using strains isolated from Zlaté Hory (e.g., *Herminiimonas arsenitoxidans*). He also explored biofilm formation and learned bacterial immobilization in alginate beads for continuous applications.

### Vira Velianyk – Slovak Academy of Sciences

Vira’s internship focused on microbial redox processes in high-metal environments, contributing valuable insight into biogeochemical processes in contaminated areas.



Photos by: Trung, Sabrin and Vira - CXI TUL

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## FROM WASTE TO INNOVATION - NANOMATERIALS FROM MINE WATER

A team led by Raffael Torres at CXI TUL demonstrated that Reactive Laser Ablation in Liquids (RLAL) can extract valuable metals from mining wastewater in Zlaté Hory and transform them into complex nanomaterials with unique properties.

The results:

- Recovery of critical metals from mine water
- Production of catalytically active and magnetically responsive nanoparticles
- An eco-friendly process aligned with circular economy principles

RLAL is more than a lab trick – it's a technology opening the door to smart material recovery from both industrial and natural sources.

"What we call waste today could be tomorrow's resource. That's the essence of a circular economy," says Torres.

📖 Learn more here:

<https://cxi.tul.cz/en/event/450/detail>

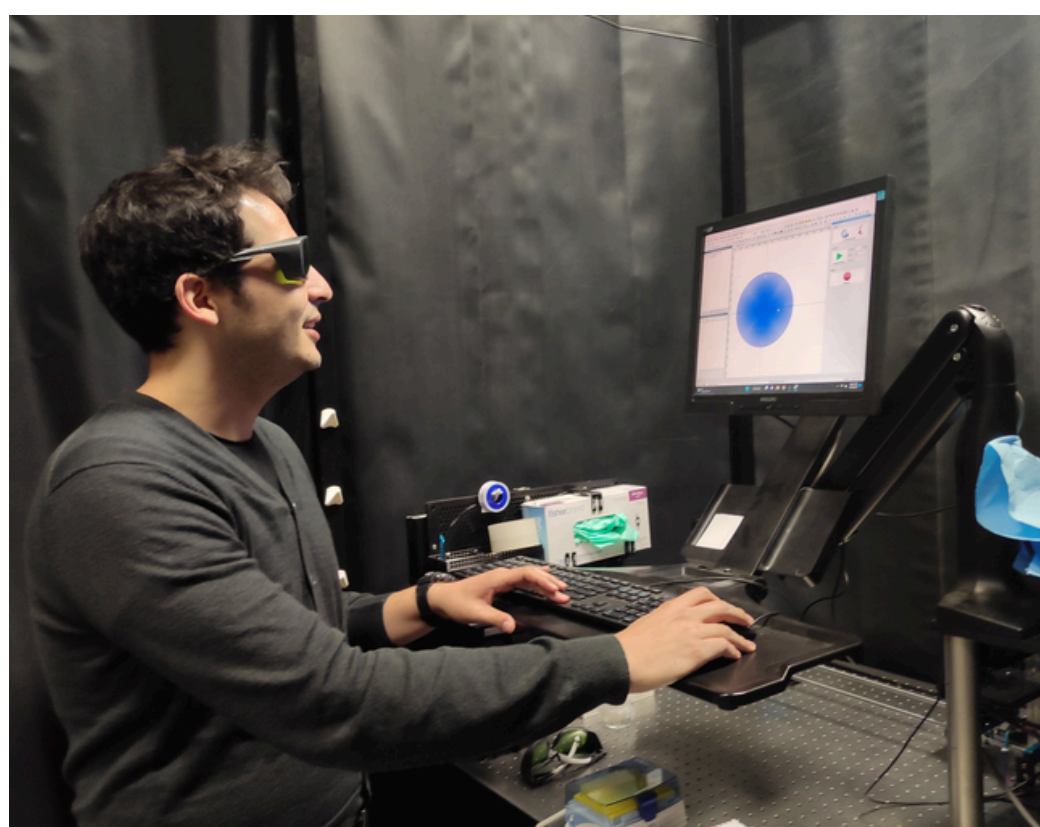
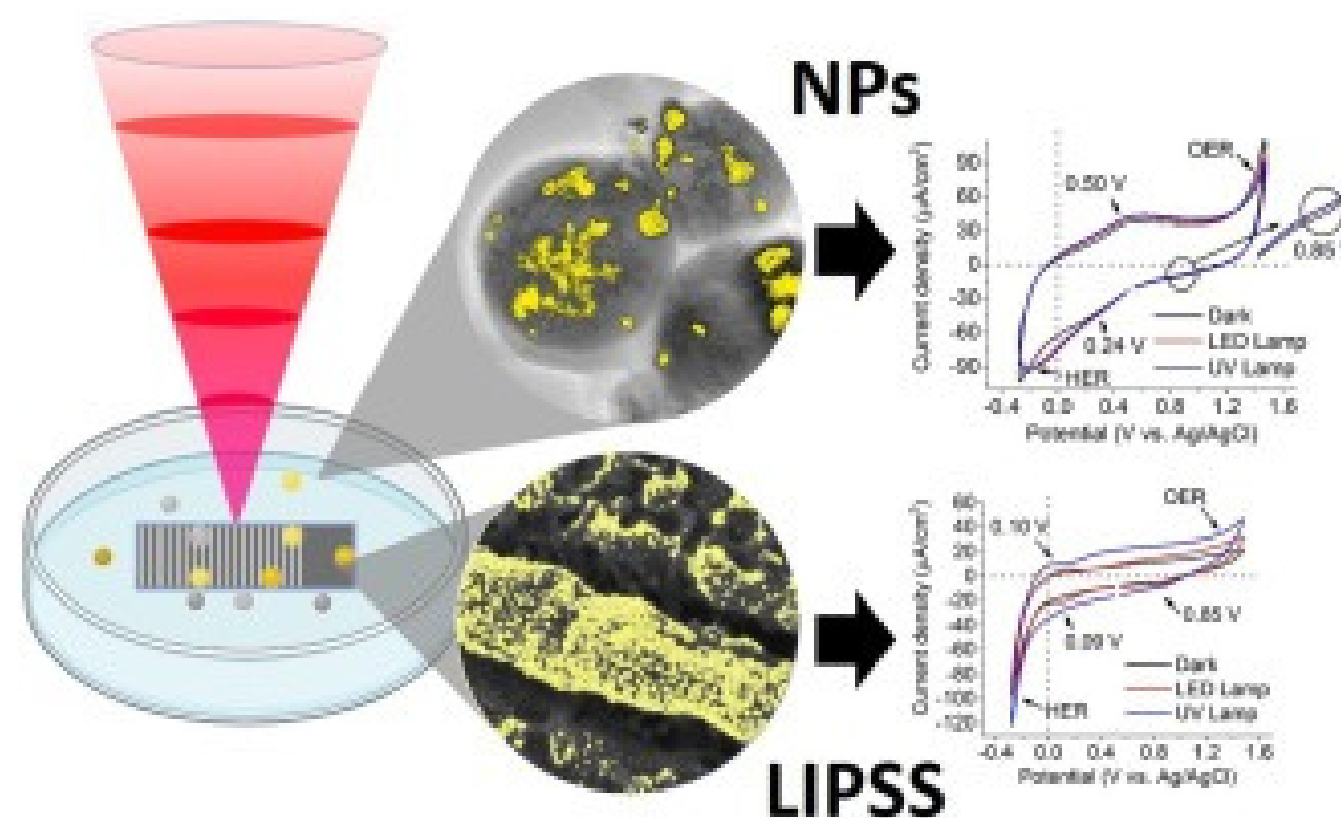


Photo by: CXI TUL



<https://doi.org/10.1016/j.apsusc.2025.162713>

Our work is very important. The whole SURRI team, including members from Italy and the UK are trying to contribute to sustainable remediation and integrate the available resources. We want to protect the environment while finding innovative ways to extract valuable raw materials from these water resources.

### Current news from the world of SURRI

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**WE WISH YOU A WONDERFUL SUMMER AND ENJOY YOUR HOLIDAYS**

Thank you for subscribing to the SURRI Newsletter.  
Stay tuned for more updates on our activities and progress.

Kind regards  
SURRI team | [surri@tul.cz](mailto:surri@tul.cz)



Great job, dear all SURRI members 🌟🌟🌟

Sabrin Abdallah, Mohammad Gheibi, Veronika Hlaváčková, Milan Hokr, Nataliia Horichenko, Stanislava Košková/Vrchovecká, Trung Le Duc, Marlita Marlita, Nhung Nguyen, Martin Palušák, Daniele Silvestri, Rafael Omar Torres Mendieta, Vira Velianyik, Stanislaw Wacławek, Miroslav Černík, Alena Ševců, Laura Lorini, Marco Petrangeli Papini, Rachid Chachboun Karimi, Fadwa Jroundi Mesbahi, María José Belén Juárez Jiménez, Mohamed Larbi Merroun, Cristina Povedano Priego, Miguel Angel Ruiz Fresneda, Frances Burrell, Andrew Cundy, Pawel Gaca, David Reading, Phillip Warwick, and all other team members, including those not on LinkedIn.

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