

April 2025

Newsletter



NanoSafety

(Nano)particle exposure levels and characterization, toxicity mechanisms, health effects, and knowledge transfer



NanoSafety2 at Research2Business summit

On February 6, the Research2Business Summit was organized by the Royal Swedish Academy of Engineering Sciences (IVA), where projects from the IVA 100 List for 2024 were presented.

The R2B Summit brought together researchers, business leaders, and decision-makers to explore how research-driven innovation can benefit industry and society. The NanoSafety2 project was presented by Andi Alijagic, providing a great opportunity to engage in discussions on how research insights can be translated into business applications and innovation.

NanoSafety2 sampling campaigns

In early 2025, NanoSafety2 (SP1 and SP3) conducted sampling campaign at AMEXCI, collecting blood, urine, exhaled air, and measuring particle levels. Arbets- och miljömedicin (AMM), Region Östergötland, performed high-volume particle sampling in the post-processing room for in vitro exposure experiments in SP2.



Sampling at AMEXCI

Upcoming sampling

New sampling campaign is planned for the fall 2025 and early 2026.

Week 40 (2025): Lasertech

Week 46 (2025): Siemens Energy

Week 7 (2026): AMEXCI

Meet the new NanoSafety2 business partner: Lasertech AB

Lasertech (<https://lasertech.se/se>) is a pioneer in metal 3D printing, with over a decade of experience and a track record as one of the first adopters of this transformative technology in Sweden. Their deep expertise in laser processing has led to a unique understanding of how 3D printing can best be applied to meet demanding technical requirements and deliver efficient, high-quality solutions. They collaborate with leading companies across multiple industries, offering services that include laser welding, Laser Metal Deposition (LMD), laser hardening, laser marking, and non-destructive testing. As part of the XANO Industri AB group since 2020, Lasertech continues to expand its capabilities and market reach.

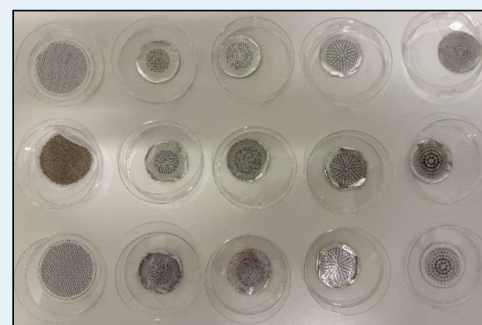


Business partner in:
Sub-projects 1, 3, and 4

NanoSafety2 lab testing in SP2

Currently, extensive in vitro testing is underway on filters collected in SP1 from various AM companies (photo on the right). We are analyzing how human lung cells respond to these particles in terms of cell survival, cellular stress, and any changes in cell morphology.

In addition, we are setting up a long-term skin exposure study using metal feedstock AM powders received from different partners, aiming to investigate the effects of repeated exposure over several weeks.



Filters containing particles with different size fractions, from <200 nm to >2.5 μ m