

December 2024

Newsletter



NanoSafety

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



Små partiklar, stora risker?

CASE 27 NOVEMBER 2024 Knowledge Foundation

Nanopartiklar från 3D-printning kan utgöra en risk för människors hälsa, men mycket är ännu okänt. Forskare vid Örebro universitet leder nu projektet NanoSafety2, som ska göra tillverkningsindustrin både säkrare och mer hållbar.

SVENSKA DAGBLADET



Små partiklar från till exempel kosmetika, syntetkläder eller från nedbrutna plastföremål sprids ut i naturen.

NanoSafety2 project's recognition and visibility

NanoSafety2 is bestowed at the Royal Swedish Academy of Engineering Sciences (IVA) 100-List for 2024: <https://www.iva.se/det-iva-gor/utmarkelser/ivas-100-lista/nanosafety2--for-att-3d-printning-ska-bli-hallbar/>

KK-Stiftelsen's article about NanoSafety2 and IVA List 100: <https://www.kks.se/article/sma-partiklar-stora-risker/>

Debate article about microplastics in Svenska Dagbladet: <https://www.svd.se/a/VzaMRr/plastfororeningar-hotar-miljo-och-halsa-skriver-forskare>.

NanoSafety2 sampling campaigns

In fall 2024, NanoSafety2 conducted two sampling campaigns at Siemens Energy, collecting blood, urine, exhaled air, and measuring particle levels. Arbets- och miljömedicin (AMM), Region Östergötland, performed high-volume particle sampling for in vitro exposure experiments.

Sampling at AMEXCI is planned for early 2025.



Sampling at Siemens Energy

KEMI's recommendations

The Swedish Chemicals Agency (Kemi) has now proposed safety guidelines for working with 3D printing in home settings and public premises. Read more at the [link](#).



Business partner in:
Sub-projects 1, 2, 3, and 4

Meet one NanoSafety2 business partner: PEXA AB

PEXA AB (www.pexa.se) is a Swedish biomedical company that develops and commercializes a unique technology for non-invasive small-airway sampling from the deepest of the lung aimed for discovery of early biomarkers in the field of respiratory medicine. PEXA's purpose is to facilitate the development of reliable and more individualized diagnosis, monitoring and treatment of respiratory diseases. PEXA AB has both the equipment and experience on methodology and techniques to collect and identify biomarkers of respiratory disorders and will provide the project with knowledge for development of better biomarker identification methods.

NanoSafety2 researchers at EuroTox 2024

NanoSafety researchers Alexander Hedbrant and Andi Alijagic attended the EuroTox2024 conference in Copenhagen. It was a great opportunity to reconnect with both the academic and business sectors and explore collaborative opportunities. Alexander presented a poster titled [Particle Exposure in Metal Industries and its Impact on Biomarkers, Indicate Effects on Several Biological Systems](#). Andi gave a talk on [Comprehensive Chemical and Toxicological Screening of E-Waste Plastic Chemicals](#).



Alexander Hedbrant (left) and Andi Alijagic (right)