

Integrated approach for exposure and health effects monitoring of engineered nanomaterials in workplaces and urban areas

www.lifenanoeexplore.eu

The project NanoExplore uses an integrated approach containing biomonitoring studies and the characterisation of exposure levels of engineered nanomaterials (ENM) in indoor workplaces and urban areas. Data of ENMs concentrations, measured by a wireless sensor network, appropriate biomarkers and a web-based data management tool will help to minimise possible effects of ENMs to human health.

Status quo:

- **Survey**

Our device, the **NanoExploreR**, is now ready and we want to test its market potential! NanoExplore developed an **Indoor/Outdoor Ultra-Fine Particle and PM sensor** for air quality monitoring and exposure prevention. Are you working with nanoparticles in your company or research institution? Then we invite you to check the **NanoExploreR datasheet** ([PDF download](#)) and fill out our [survey](#) to share your opinion on the device.

The survey runs until May 31, 2022. The main features of the NanoExploreR include **real-time, high frequency continuous monitoring** of Ultra Fine Particles (UFP) and Particulate Matter (PM1, PM2.5, PM10), as well as particle sampling on TEM grids/filters for further analysis. The device is suitable for indoor and outdoor use.

[>>>>> You can find the survey here. <<<<<<<<](#)

NEXT EVENTS

July 2–9, 2022
NanoTechnology International Summer School (ISSON22)

NanoExplore will take part in ISSON22.

Location:
Thessaloniki, Greece

Website / Registration:
<https://www.nanotextology.com/>

May 15–20, 2022
Nanosafety Training School: Towards Safe and Sustainable by Design Advanced (Nano)Materials

Transferring state-of-the-art knowledge from key experts to the new generation of professionals.

Location:
Venice, Italy

Website / Registration:
www.h2020sunshine.eu/events/

- **Measurement Campaigns**

Within the framework of this project, two nanoparticle exposure measurement campaigns were carried out. The first campaign was carried out in Italy at four different plants of a company which focuses its production on Green Building materials and services. The plants were located in the following regions: Zimella (Verona), Brugine (Padua), Sassuolo (Modena), Rubiera (Reggio Emilia). The second measurement campaign was carried out in Spain in a Nanotechnology Institute, which is located close to Barcelona (Catalonia).

The objectives of all campaigns are the following:

- Characterization of nanoparticle emissions in the most representative production areas.
- Determination of the potential exposure to nanoparticles during the different processes, including quantitative data related to the levels of exposure of a particulate material in a range of 10 nm to 10 µm, therefore, in the inhalable and respirable ranges.
- Determination of the spatial variability of nanoparticles in the air.
- Determination of the dustiness of the material and the state of aggregation/agglomeration in air.

CONTACT US

Project Coordination:

ALCON Consultant
Engineers Ltd
Athens, Greece
Email: ap@axonenviro.gr

Dissemination:

Yordas Group
Forchheim, Germany
Email:
j.friesl@yordasgroup.com