

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

[www.lifenanoexplore.eu](http://www.lifenanoexplore.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:

- NanoExplore project has reached the implementation actions and made great advances in the different work packages
- The design and development of the wireless sensor network is ongoing. The team is working on the manufacturing of the first prototype
- The consortium has made great progress in the development of the web-based platform and the beta release is planned to be available soon
- NanoExplore is working on the harmonized protocol for the human biomonitoring studies. The first draft of the study protocol is expected to be finalized by the next weeks
- For the conduction of background measurements, the consortium agreed on defining the best location with the manager/health & safety specialist of each company during the information visit
- In February, the NanoExplore Team held a successful project meeting in Lausanne, Switzerland. The project progress as well as next steps were discussed, specifically in regards to exposure measurement campaigns and the biomonitoring pilot case studies. The design and novelties of the measurement device has been presented and discussed

### NEXT EVENTS

**16-20 November, 2020**  
NANOSAFE  
Conference  
Minatec-Grenoble,  
France

### RELEVANT NEWS

In October, the project consortium met in Camplus Lingotto in Turin for an intensive exchange between the partners. The current status of the project was discussed and further steps had been planned. Besides the specification of the biomarkers, the design and technical requirements for the measurement device and the planned pilot study were discussed. Different locations and scenarios for the demonstration studies were weighted against each other.



- NanoExplore project was presented at several events, e.g. NanoSafety Cluster Week Oct 2019, and have collected feedback of stakeholders during the events and from one to one conversations
- NanoExplore took part at the last NanosafetyCluster Steering Committee meeting in Feb 2019
- Within the project, a collaborative book chapter (review) has been published, acknowledging NanoExplore: *Chapter 10 - Evaluation of potential engineered nanomaterials impacts on human health: from risk for workers to impact on consumers*. By M.G. Bianchi, O. Bussolati, M. Chiu, G. Taurino, E. Bergamaschi. In: *Exposure to Engineered Nanomaterials in the Environment - Micro and Nano Technologies, 2019, Pages 263-287*. Within the consortium, a paper has been published, acknowledging NanoExplore: *State of knowledge on the occupational exposure to carbon nanotubes*. By I. Guseva Canu, K. Batsungnoen, A. Maynard, N.B. Hopf. In: *Elsevier International Journal of Hygiene and Environmental Health, Volume 225, April 2020*
- The current situation with the Corona epidemic is also strongly affecting the progress of the project, and even more important –the lifes of all project partners. Delivery bottlenecks for necessary components for the wireless sensor network, closed laboratory facilities and the restriction of social contacts and travelling are a big challenge for reaching the desired goals. Nevertheless, the team is working hard on possible alternatives to fulfill the project deliveries in time, for example through engagement of companies and stakeholders remotely via conference calls, and more online webinars and trainings



## PAST EVENTS

**28-30 August 2019**  
11th International Symposium on Biological Monitoring in Occupational and Environmental Health (ISBM-11), Leuven, Belgium

**7-10 October 2019**  
NanoSafety Cluster Week Copenhagen, Denmark

**27-29 November 2019**  
Life Platform Meeting on Chemicals Vilnius, Lithuania

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