

*Press Release*

**The European project SMART-NANO is providing new tools to detect and identify nanoparticles in mass-consumer products**

## **The search for nanoparticles has begun!**

**Neuchâtel/Landquart, November 2<sup>nd</sup>, 2016 – The Indian summer will soon be over, so you can put away your sunscreen! But thanks to the European project SMART-NANO, you can be sure of learning more and more about the – sometimes controversial – tiny particles that are contained in these products. Coordinated by CSEM, the efforts of the eight partners in the consortium are enabling a considerable simplification of analytical methods for cosmetic or food products, while guaranteeing consistently reliable results.**

Since 2013, European legislation has required manufacturers to indicate the presence of nanoparticles on the packaging of their products, in addition to their composition. To ensure that these legal requirements are respected, simple and effective tools are required. Not an easy task when such minute elements are well concealed in cosmetic or food products! This is the goal of the European project SMART-NANO, launched four years ago, which is now delivering new and promising analytical methods.

### **Sunscreen used as a guinea-pig!**

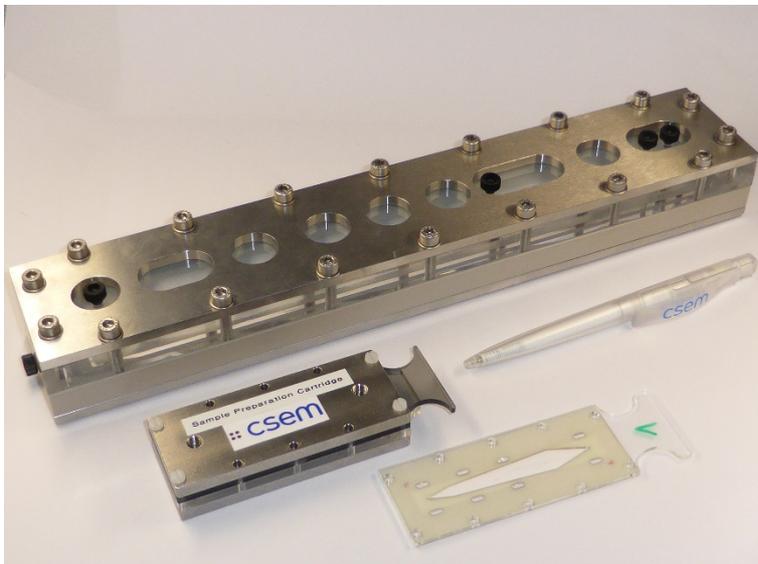
Sunscreen, often singled out for the high concentrations of nanoparticles it contains, was chosen to test the system developed by the Consortium. CSEM – the Swiss research and technology organization – and its seven partners had the possibility of working on an ointment specially developed for the tests, which had the advantage of ensuring the validity of the results obtained before testing the analytical methods on commercial products. Result: “The analytical methods we developed during the project turned out to be more effective than existing methods, while also being simpler, faster and cheaper”, enthuses David Müller, doctoral student at CSEM.

### **Improving the understanding of nanoparticles and their toxicity**

“These new analytical methods mean that consumers can now expect to find clear and reliable information on the presence of nanoparticles in the products they buy”, adds Stefano Cattaneo, Project Manager at CSEM Landquart, the company’s Grisons-based office. “They also represent a valuable tool for producers, who are increasingly aware of the attention they must pay to this issue, which health authorities are following closely.” Given the progress made, the European Union has no intention of resting on its laurels. For example, the ACE Nano project, in which CSEM is again involved, is about to begin, and will investigate the link between the physico-chemical properties of nanoparticles and their toxicity.



*A well-equipped laboratory like the one at CSEM Landquart is today essential for analyzing nanoparticles.*



*The new measuring channel (center) is much smaller, and therefore more cost-effective than those currently on the market (top). To take measurements faster, a system with disposable channels has also been developed (bottom).*

**Additional information**

**CSEM**

Stefano Cattaneo  
 Project Manager  
 Tel. +41 +41 81 3078180  
 E-mail: [stefano.cattaneo@csem.ch](mailto:stefano.cattaneo@csem.ch)

## About SMART-NANO

**SMART-NANO stands for Sensitive MeAsuRemenT, detection, and identification of engineered NANOparticles in complex matrices.** A collaborative project operating under the European Commission's 7th Framework Programme, SMART-NANO received € 3.5 M of funding. The consortium worked on the project for a duration of 48 months, the time required to develop a cost-effective technology platform providing a total solution for the detection, identification, and measurement of ENPs in complex matrices.

The project was led by Stefano Cattaneo of CSEM (Switzerland) and comprised a total of 8 partners across Europe: CSEM SA (Switzerland), JRC – Joint Research Centre – European Commission (Italy), FeyeCon Development & Implementation BV (the Netherlands), Postnova Analytics GmbH (Germany), Avid Nano Ltd (United Kingdom), AHAVA Dead Sea Laboratories Ltd (Israel), Ruđer Bošković Institute (Croatia), and ABICH Srl (Italy).

## About CSEM

### CSEM—technologies that make the difference

CSEM, founded in 1984, is a Swiss research and technology organization (public-private partnership) specializing in microtechnology, nanotechnology, microelectronics, system engineering, photovoltaics and communications technologies. Around 450 highly qualified specialists from various scientific and technical disciplines work for CSEM in Neuchâtel, Zurich, Muttenz, Alpnach, and Landquart.

Further information is available at [www.csem.ch](http://www.csem.ch)

Follow us on:    

## Media contact

### CSEM

Aline Bassin Di Iulio  
Strategic Communication Manager  
Tel. +41 32 720 5226  
Mobile: +41 76 577 4489  
Courriel: [aline.bassin@csem.ch](mailto:aline.bassin@csem.ch)

### CSEM

Florence Amez-Droz  
Corporate Communication Manager  
Tel. +41 32 720 5203  
Mobile: +41 79 311 5116  
Courriel: [florence.amez-droz@csem.ch](mailto:florence.amez-droz@csem.ch)