

## Our services

1. Physicochemical analysis and characterisation of nanoparticles
2. Investigation of cellular uptake of nanoparticles and high resolution microscopy
3. Analysis of cytotoxicity, ecotoxicity and molecular mechanisms of technical nanoparticles

The Particle Safety Laboratory aims to avoid and replace animal tests. Therefore, cellular models and accepted replacement methods, such as the fish embryo test, are applied. However, further investigations including animal test will be made by cooperating partners if required.

The consortium also offers **literature research and consulting** regarding adverse health and environmental effects of ultrafine and nanoscaled materials including carbon-nano-tubes and fullerenes (C60). Related legal aspects are considered as well.

In case of interest please contact one of the consortium members. We would be pleased to discuss further details and to prepare an offer for possible contract research and analyses.

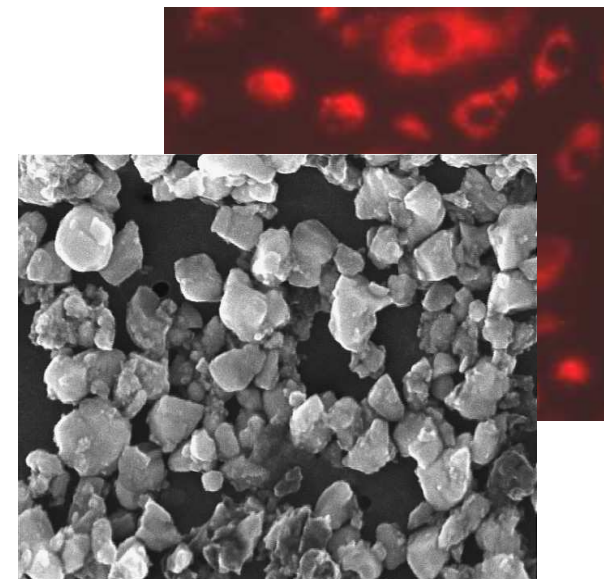
Further information and details on our services are available via our homepage:

<http://www.particlesafety.com>

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Responsible for the content:  
Stefan Scholz, UFZ

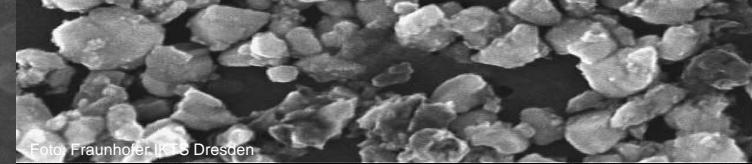
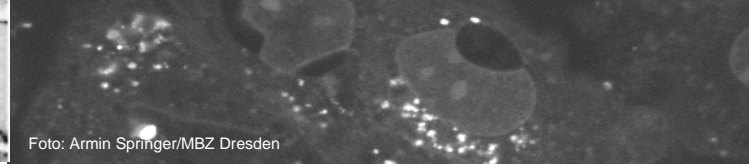
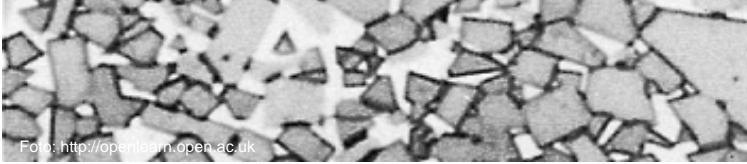
## Particle Safety Laboratory (PSL)



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ENVIRONMENTAL  
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## The Particle Safety Laboratory (PSL) supports the development of safe particles by contract research and consulting

Technical nanoparticles are increasingly used in several areas of industrial processes and for medical and household products. Wear protection, electronics, optics, pharmacy, medicine and environmental technologies represent fields in which ultra-fine or nanoscaled particles are of high importance. Hence, the development of new particles is of high economic interest. However, potential risks for humans and the environment have to be considered during production and application. An early risk assessment is indispensable for the commercial success of new developments and secures investments in a sustainable development, production and marketing.

## The PSL consortium

Research about potential hazards of nanoparticles can not be established in small and medium-sized enterprises. Therefore, the Particle Safety Laboratory (PSL) – a joint initiative of the Helmholtz Centre for Environmental Research, the Fraunhofer Institute and the University of Dresden - provides support and assistance for the investigation and assessment of potential adverse effects of particles on human and environmental health. The PSL is an interdisciplinary consortium of engineers, biologists and materials scientists with major competence fields in physical and chemical characterisation of particles, analyses of particle uptake into cells based on high resolution microscopy, and (eco)toxicology. The latter includes standard cellular tests as well as advanced molecular analyses. The PSL is a result of the BMBF (German Federal Ministry of Education and Research) funded project INOS (Identification and evaluation of possible health and environmental risks of technical nanoscaled particles, 2006-2009).

## Consortium members

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