Knowledge Base Nanomaterials

Latest research results on the effects of nanomaterials on humans and the environment

Scientifically profound and easy to understand

SPONSORED BY THE
Federal Ministry of Education and Research
within the Framework Programme „From Material to Innovation“

www.nanoobjects.info
What exactly are nanoparticles? What is meant by “exposure”? When do toxicologists speak of a risk? This and many more questions are answered by the new internet knowledge base www.nanoobjects.info.

Many consumers miss reliable and understandable information on nanomaterials and nanotechnology. In an interdisciplinary approach of human- and environmental toxicology, biology, physics, chemistry and pharmacy the DaNa².0 project team provides more transparency and processes results of research on nanomaterials and their influence on humans and the environment in an understandable way.

For this purpose, DaNa².0 processes results of completed and current projects, funded by the German Federal Ministry of Education and Research, analyses scientific publications, reports, and latest news on human and environmental toxicology, and wraps up the state of knowledge in the knowledge base.
Here you find:

- Relevant nanomaterials that are already being used
- Detailed explanations of important health and environmental aspects of nanomaterials
- Summaries and evaluation of safety studies of the respective materials (release, uptake, and behaviour of the materials)
- Facts relating to risk management

Thanks to the linking of material and application, you will find your information quickly

The texts are presented in such a way that they are understandable for interested citizens

Journalists, NGOs, politicians or scientists will find links to further literature

The page shows applications and products, which may contain nanomaterials and guide you directly to the relevant materials

The glossary and the FAQs contain valuable further information about nanotechnology

Webpages available in German and English

Open questions? dialog@nanopartikel.info
Find information on running and completed projects, funded by the German Federal Ministry of Education and Research, on nanosafety for humans and the environment:

- Project description and project goals
- Duration
- Project partners
- Results achieved and publications

CONTINOUS UPDATES

- Regular extension of the knowledge base with latest data
- News and Events on nanomaterials
- Additional data from scientific publications

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WHAT IS NANOTECHNOLOGY?

Nanotechnology is considered one of the key technologies of the 21st century. It uses methods and effects that allow for the analysis, controlled modification, or the manufacture of objects and structures in the range of a few nanometres. A nanometre is one billionth of a metre or one millionth of a millimetre and, hence, corresponds roughly to one fifty thousandth of the thickness of a human hair.

The success of this fascinating technology is particularly based on its versatility. It will bring about fundamental changes of basic research as well as many sectors of industry and of life from electronics to the health care system. On the nano level, physical or chemical properties like electrical conductivity, colour, melting point, and reactivity of materials may change dramatically.

These modified properties open up new technological opportunities, ranging from the conversion and storage of energy, to the lifespan of tyres, to surface protection and cosmetics, to the diagnosis and the fighting of diseases. Consequently, nanotechnology as a multi-disciplinary technology influences numerous new developments.
Ask an expert: dialog@nanopartikel.info

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The Partners

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Helmholtz Centre for Environmental Research - UFZ

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Baua: Bundesanstalt für Arbeitsschutz und Arbeitsmedizin

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