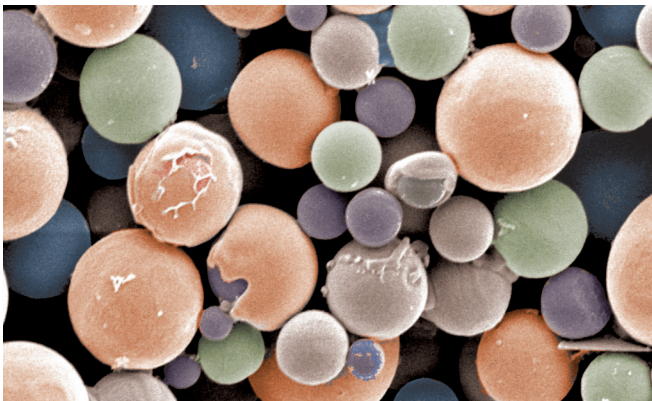


# Knowledge Base Nanomaterials



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

Scientifically profound  
and  
easy to understand

FUNDED BY THE



Federal Ministry  
of Education  
and Research

within the framework of the WING programme

# THE PROJECT

**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 toxicology, environmental toxicology, biology, physics, chemistry, and sociology the DaNa project team wishes to provide for more transparency and to process results of research on nanomaterials and their influence on humans and the environment in an understandable way.

For this purpose, we process results of completed and current projects, funded by the German Federal Ministry of Education and Research, analyse scientific publications, reports, and latest news on human and environmental toxicology, and wrap up the state of knowledge in the knowledge base.

The screenshot shows the DaNa 2.0 Knowledge Base website. The header includes the DaNa 2.0 logo and navigation links: HOME, PROJECTS, KNOWLEDGE BASE, GLOSSARY, FAQ, and DIALOGUE. A search bar is also present. The main content area is titled 'Knowledge Base' and features a table with three columns: Application, Material, and Information. The 'Application' column lists various uses like 'Abrasives and polishing agents' and 'Catalytic exhaust'. The 'Material' column lists corresponding materials like 'Aluminium oxides' and 'Carbon nanotubes'. The 'Information' column provides brief details. Below the table is a 'Brief Information' section and a 'Navigation' section with instructions on how to use the database. On the right side, there are links to 'Your questions to our experts', 'Knowledge Base Nanomaterials', and 'Nano Risk Research'.

**DaNa 2.0**

HOME PROJECTS KNOWLEDGE BASE GLOSSARY FAQ DIALOGUE

**Materials**

- Aluminium oxides
- Barium sulphate
- Carbon Black
- Carbon Nanotubes
- Cellulose
- Cerium dioxide
- Copper and Copper oxides
- Diamond
- Fullerenes
- Gold
- Graphene
- Iron and iron oxides
- ITO
- Platinum
- Quantum dots
- Silicon dioxide
- Silver
- Strontium carbonate
- Titanium dioxide
- Titanium nitride
- Tungsten carbide
- Tungsten carbide-Cobalt
- Zeolite/Nanoclays
- Zinc oxide
- Zirconium dioxide

**Specials**

- Coatings

Knowledgebase Nanomaterials • Knowledge Base

### Knowledge Base

Application	Material	Information
Abrasives and polishing agents	Aluminium oxides	
Anti-fogging agents	Barium sulphate	
Black pigments	Carbon Black	
Bone cement	Carbon nanotubes	
Cancer therapy	Cellulose	
Cat litter	Cerium dioxide	
Catalytic exhaust	Copper and copper oxides	

**Brief Information**

Our database contains information about products and applications with nanomaterials. Please select an application or a material.

**Navigation**

Please take a choice from "application" and you get the corresponding "material" with brief information about exposure, uptake and behaviour.

Please select a material and you will get information about its behaviour in the body and in the environment. The corresponding applications are highlighted in red.

You can get detailed information by following the link "For more information, click here".

Clicking on > [knowledge base](#) in the path bar takes you back to the default settings.

**Your questions to our experts**

Knowledge Base Nanomaterials  
DaNa Flyer for download  
English Version  
Japanese Version

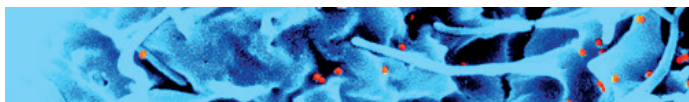
**Nano Risk Research**  
Opportunities and Risks of Nanomaterials  
BMF-Flyer for download

Screenshot from [www.nanoobjects.info](http://www.nanoobjects.info)

# THE KNOWLEDGE BASE

## Here you find:

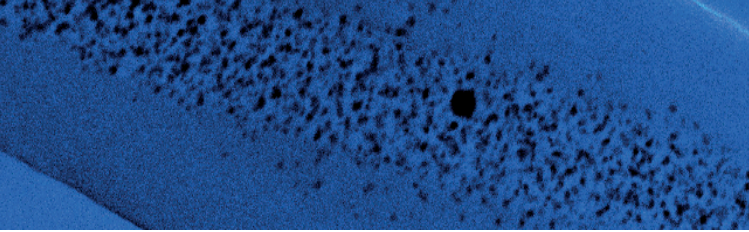
- Detailed **explanations of important health and environmental aspects** of nanomaterials
- **Relevant nanomaterials** that are **already being used**
- **Summaries and evaluation of safety studies** of the respective materials (release, uptake, and behaviour of the materials)
- Facts relating to **risk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



## SIMPLE NAVIGATION, UNDERSTANDABLE TEXTS

- 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 laymen**
- **Journalists, NGOs, politicians or scientists** will find links to further literature
- We show **applications and products** which may contain nanomaterials and guide you directly to the relevant materials
- The **glossary** contains **valuable further information** about technical terms and testing procedures

Open questions? [dialog@nanopartikel.info](mailto:dialog@nanopartikel.info)



## LATEST INFORMATION ABOUT NANO-SAFETY RESEARCH

Find information on running and completed projects, funded by the German Federal Ministry of Education and Research, on **nano-safety** for **humans and the environment**:

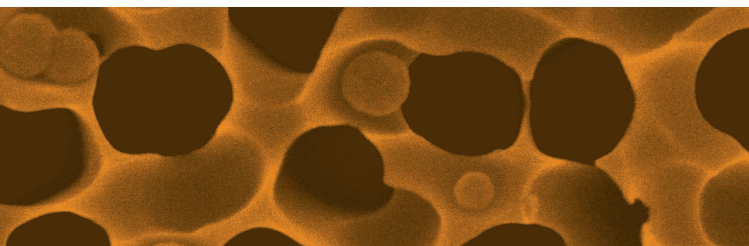
- Project description and project goals
- Duration
- Project partners
- Results achieved

## CONTINUOUS UPDATES

- Regular **extension** of the **knowledge base** with data of other nanomaterials
- **Press reports** and **news** on **nanomaterials**
- Additional data from scientific **publications**

**[www.nanoobjects.info](http://www.nanoobjects.info)**

The latest knowledge base on the topic of nanomaterials – scientifically profound and easy to understand





## WHAT IS NANOTECHNOLOGY?

Nanotechnology is considered one of the key technologies of the 21<sup>st</sup> 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.

### DaNa on Twitter



Follow DaNa on Twitter [@nano\\_info](https://twitter.com/nano_info)

## CONTACT

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picture credits: Macromolecular Chemistry / Philipps-Universität Marburg

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