

Bayer Position on Nanotechnology

Bayer is an inventor company which operates globally with core competencies in the fields of health care, crop science and high-tech materials. We see nanotechnology as a key technology of 21st century. For Bayer it is an enabling science, which, through interdisciplinary research, can help us provide new and better product solutions in each of our business areas - from materials engineering and electronics to medical devices and drug delivery systems.

Nanotechnology

Bayer is setting its sights on products enabled through nanotechnology, including:

- Polymer and adhesive additives
- Nanocomposite thermoplastics
- Nano-modified coating systems
- Diagnostic imaging agents
- Nanoparticulate drug delivery systems

We are actively pursuing nanotechnology research and development with a focus on product performance enhancement in the areas of mechanical strength, durability, thermal stability, scratch and abrasion resistance, flame retardancy, barrier properties, electrical conductivity with maintained transparency, and imprinting technology for high density data storage.

We apply nanotechnology in nanomedicine where it offers the chance of enabling new routes, new regimens, and highly specific targeting for drug delivery, striving for optimized performance and treatment efficacy of tomorrow's drug products. For that purpose, we practice an intensive exchange between academia and industry and contribute to cutting edge research for future medical applications.

Health, Safety and Environment

Bayer is committed to being a leader in product stewardship and sustainable development practices. Our goal is to ensure that Bayer products are handled both safely and with concern for the environment at every stage of the products' life cycles. We are achieving this goal through our expertise in producing and handling chemicals safely and we are developing nanomaterials under the core principles and commitments of the chemical industry's Responsible Care[®] Global Charter.

In addition, as part of a responsible strategy for developing nanomaterials, Bayer has joined other members of the chemical industry in assessing nanomaterials from a Health, Safety and Environmental (HSE) perspective. Bayer contributes significantly to global industry nanomaterial HSE research projects such as NanoCare and TRACER, funded by the German Federal Ministry of Education and Research (BMBF). These research projects focus on nanomaterials characterization and the development of broad scientific consensus on measurement methods and testing procedures for nanomaterial safety assessments.

Stakeholder Dialogue

We believe societal acceptance is essential for technological innovation. Accordingly, the public sector together with industry has to ensure society's awareness of the benefits generated by nanotechnology. Bayer supports platforms that promote dialogue about the benefits as well as the concerns on risks of nanotechnology with civil society and the general public in a climate of openness. Globally, Bayer participates in associations such as the American Chemical Council (ACC), CHEMSTAR Nanotechnology Panel and CEFIC (European Chemical Industry Council), which engage in a transparent multistakeholder dialogue about nanotechnology.

At Bayer we support:

The application of product stewardship and sustainable development principles to the development of nanotechnology products as part of the chemical industry's Responsible Care Global Charter.

- Technical and advocacy activities that strive to convey the significant benefits of nanotechnology to all stakeholders.
- Continued efforts to appeal to global authorities to provide support for the development of both nanotechnology and related health and safety research.
- Global coordination of safety research, regulatory, and standard-setting activities.
- Ongoing stakeholder dialogue that integrates public and worker safety concerns with the development of innovative products and sustainable solutions under existing regulatory frameworks.
- The view that existing chemicals legislation offers a sufficient framework for the evaluation nanomaterials.