POSSIBILITIES OPENED BY NANOTECHNOLOGY

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Nanotechnology is the study of controlling matter on the atomic and molecular level. General nanotechnology deals with structures the size of which is 100 nanometers or smaller in at least one dimension, and involves developing materials or devices within that size.

There has been much debate on the future implications of nanotechnology. Nanotechnology has the potential to create many new materials and devices with a vast range of applications, such as medicine, electronics and energy production.

Nanotechnology can create improved materials, devices, and systems that exploit these new properties. The impact and opportunities reach into every field — from chemistry to physics, from biotechnology to engineering.

There are different types of nanomaterials, named for their individual shapes and dimensions. Think of these simply as particles, tubes, and films that have one or more nanosized dimension.

Nanofilm is a development of nanotechnology-enables products using nanofilms in products. These products are used in precision optics, glass in transport vehicles, architectural glass, electronic display/technical glass, glass and ceramic tableware, homecare and other markets. These coatings add new properties to the surface of substrates, including strength, water resistance, contaminant resistance; scratch and mar resistance, energy control, electrical conductivity.

In future nanotechnology is enabling scientists to find ways to make our home, cars, and businesses more energy efficient through new fuel cells, batteries, and solar panels. They are also finding ways to purify drinking water and to detect and clean up environmental waste and damage. Nanosensors in packaging may soon be able to detect food borne pathogens. New nanomaterials will be stronger, lighter and more durable than the materials we use today in buildings, bridges, automobiles, and more. The possibilities seem limitless and the future of nanotechnology holds great potential.

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