

Now and the Future

It's tough to write an article about nanotechnology that doesn't come across as a laundry list of possibilities. Nanotechnology has great potential in the field of medicine, materials science, and electronics. Products currently on the market include cosmetics, sunscreen, water filters, solar panels, stain-resistant fabrics, and bread containing nanocapsules of nutrients. For a more complete list of products that make use of nanotechnologies, see the Project on Emerging Nanotechnologies' nanotechnology consumer products inventory

<http://www.nanotechproject.org/inventories/consumer> . The varied products on the consumer products list have one thing in common: they have all emerged from a new way of examining and manipulating the world.

It's difficult to spot the beginning of a technological revolution. If you had been at London's Great International Exhibition in 1862, you might have seen some objects made of a moldable material called Parkesine, the first synthetic plastic. No one who saw those samples predicted the uses to which plastics would later be put. Creation of the first integrated circuit in 1958 set off developments in the electronics industry that led to the modern information revolution. But back in 1958, no one would have predicted the cell phone, the laptop computer, the Gameboy, and the many other electronic devices that dominate our lives.

Like these earlier technological changes, nanotechnology has the potential to spark revolutionary changes in how people live their lives. This article describes just a few of the applications of nanotechnology that are currently being explored in laboratories worldwide. Talk to researchers, and for every application named here you'll get a hundred more. They won't all come to fruition, but even if one in a thousand does, the world will be a different place.