Nanotechnology

The Cyberpunk Project

> Molecular nanotechnology : thorough, inexpensive control of the structure of matter based on molecule-by-molecule control of products and byproducts of molecular manufacturing.
> -- K.Eric Drexler, Chris Peterson, Gayle Pergamit

Nanotechnology is an anticipated manufacturing technology giving thorough, inexpensive control of the structure of matter. The term has sometimes been used to refer to any technique able to work at a submicron scale. Molecular nanotechnology means basically "a place for every atom and every atom in its place" (other terms, such as molecular engineering, molecular manufacturing, etc, are also often applied).

Molecular manufacturing will enable the construction of giga-ops computers smaller than a cubic micron, cell repair machines, personal manufacturing and recycling appliances, and much more.

Broadly speaking, the central thesis of nanotechnology is that almost any chemically stable structure that can be specified can in fact be built. This possibility was first advanced by Richard Feynman in 1959 when he said : "The principles of physics, as far as I can see, do not speak against the possibility of maneuvering things atom by atom". Feynman won the 1965 Nobel prize in physics.

Links

Nanotechnology
: Ralph C. Merkle's nanotechnology web site.

Nanomedicine FAQ
: A list of Frequently-Asked Questions (FAQ) in nanomedicine has been compiled by Robert Freitas.

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