



## Prediction of Nanotechnology Subsectors Arrangements in Gartner Hype Cycle

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Taking into consideration the development of various sections in nanotechnology, a prediction can be presented for the arrangement of each subsector in Gartner hype cycle.

Hype cycles are presented for various sections of research and industry by [Gartner Research Institute](#). These charts show a graphical pattern of submission, maturity, and application of a technology, and inform the researcher and decision-makers of how the technology is developed. The chart helps business managers and strategists to make a decision about investment and development of a technology. The charts describe the five main steps of lifecycle of a technology. Technology trigger is the first step that starts from a new progress or an invention related to a technology. The media advertise the technology while nothing is proved yet. The second stage is peak of inflated expectation and the third one is trough of disillusionment where a lot of experiments fail. Slope of enlightenment is the fourth step where more samples appear about how the technology can give profit to organizations, and they are better comprehended. The fifth step is plateau of productivity where the public start to accept the technology and the industrial application begins in a wide range.

What can be said about nanotechnology for sure is that this technology has passed technology trigger step for a long time. However, nanotechnology should be divided into various subsectors in order to obtain a better understanding of its status, because each subsector has taken a different path.

Referring to products database such as Nanotechnology Products Database ([NPD](#)) is one of the indicators in the arrangement of nanotechnology in Gartner hype cycle. Statistical analysis of the products in databases gives a better prediction of status of nanotechnology subsectors.

Technologies in the first step; the birth:

Bio-chips, smart robots, 3D bio-printers, brain-computer interface (BCI), smart dust, quantum calculations;

Technologies in the second step; the peak:

Wearable electronic devices, nanotube based transistors;

Technologies in the third step; the slope:

Nano-lubricants, diagnosis kits, thermal controlling glass;

Technologies in the fourth step; the ascent:

Self-cleaning fabrics, antibacterial clothes;

Technologies in the fifth step; the entrance to the plateau:

Nano-filtration, make-up and sunscreen lotions;