

## Electronics Industry; Highest Number of Nanotechnology Products in NPD

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Electronics industry has the largest share of nanotechnology products in Nanotechnology Products Database (NPD). A study on nanotechnology products in electronics industry shows that the largest shares of products in this industry are sensors or lasers.

A study on nanotechnology products in NPD shows that by the end of March 2018, 2027 products related to [electronics industry](#) have possessed the highest share among all products in NPD. In electronics industry, the largest share of products belongs to [sensors](#) (907 products), while [laser](#) (273 products) possesses the second rank. The next ranks belong to [integrated circuits](#), [processors](#), and [memories](#) by having 271, 228, and 137 products, respectively.

Sensors are among the hot subjects in the market, to the extent that they are to have a market value of more than \$241 billion in 2022, which shows an annual growth of 11.3%. Asia/Oceania had a share of 45% of the market in 2015 in this field. The reason is the existence of strong infrastructures in electronics industry in this part of the world. Increasing demands for electronics products such as mobiles and laptops is another reason resulting in the growth of sensors market in the world. Image processing sensors are among the developing technologies in the sensors market. MEMS technology had a share of more than 45% of the sensors market in 2015. Predictions show that NEMS technology will have the highest rate of growth among sensors technologies. More than 60% of products in the field sensors were related to electronics industry in 2015.

Among the products in NPD, 131 sensors are related to atomic force microscope (AFM) tips and 7 are related to biosensors. A study on nanomaterials used in sensors shows that aluminum nanostructures are the most commonly used nanostructures in this section by being used in 64 products. Chrome nanostructures rank second in this regard.

A study on the countries that produce sensors shows that the [United States](#) ranks first in this

regard by having 462 products. [Switzerland](#), [Japan](#), [China](#), and [UK](#) possess the next ranks by having 202, 135, 48, and 34 products in NPD, respectively.

[Amphenol Corporation](#) has produced the highest number of products by having 206 products in NPD while [NanoWorld Group](#) sits on the second rank by having 202 products. Studies on the properties of these sensors show that nanotechnology has increased the sensitivity of 290 products while it has decreased the required pressure in 172 products.

Laser is one of the most commonly used tools in various industries, which has numerous applications. Due to the vast range of application, its market is developing to the extent that a growth of 5.2% is predicted for laser market between 2017 and 2022. However, the demand for electronics industry is not the only reason for the development of this market. Health and hygiene, and production of nano-devices are among other effective parameters on the growth of laser market.