New Advanced Nanomaterial: Active Force Material - AFM

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Faraday Ltd Company is developing new product, it is advanced nanomaterial named Active Force Material - AFM. Here is short review. You can get more details at my web page www.faraday.ru

Technology of this project use modern nanoscience surface engineering. It is planned to create material providing active propulsion force due to different air pressure, acting on the different sides of the plate. Then, it is planned to organize sales of license and production of AFM – Active Force Material for different customers. Innovation of the technology is possible in aerospace, ship building, auto car, power engineering industry.

Technical idea is simple: air molecules are moving. Special relief of nanomaterial can change kinetic energy of molecules on one side of the plate, to get gradient of air pressure and propulsion force. It can make machines work, for example, rotate electrogenerator.

There are several methods to get AFM effects. One method is micro relief with size elements about 50-500 nm on one surface of the plate. This art of work can be made by nanotechnology experts, also in chip and semiconductor elements laboratories. So, we need nanotech partner to produce special relief of surface. The idea is to use nanotechnology surface engineering to make their motion to be ordered and by this way to get gradient of air pressure.

Calculations let us see some real perspectives: for the first experimental level of the technology we can estimate 10% gradient of atmosphere pressure that is equivalent of 100 gram force acting onto 1 square cm.

Fig.1

Plate made of AF- material of 1 square meter size will produce propulsion force equal to 1,000 kg. Propulsion unit made of 100 AFM plates can be placed in volume of 1 cubic meter and it can produce lifting force about 100,000 kg. It can be applied in aerospace industry. No fuel, no input power is necessary to make it work.

Main method is micro relief with size elements about 50-500 nm on one surface of the plate. This art of work can be made by nanotechnology experts, in chip and semiconductor elements laboratories. So, we need nanotech partner in our new team. Also simple imprinting nanolithography can provide the relief of surface to get the effect, Fig.

Fig.2

The first demonstrable results can be small 50x50 mm plates of one-side relief matter, and we estimate to see 1 – 2 kg propulsion active force effects for this material. No fuel, no input... The air atmospheric pressure can produce work. Demonstration of workable, i.e. flying in air plates made of AF - materials, will convince future investors and Customers to buy the technology.

Application of the technology is aviation, transport, energy... Total size of market to sale licenses is 70 bil Euro. More profit can provide automotive market, its size is 2,000 bil. Euro.

Note: We need nanotechnology partner and investor to produce first samples of new material.

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