1) Hello, my fellow workers. Today I am going to talk about nanomaterials

2) My talk will be only in parts and will take five minutes. Now let’s move to first part which is biography.

3) **Nanomaterials** is a material with single unit is sized (in at least one dimension) between 1 and 1000 nanometers (10−9 meter) but is usually 1—100 nm

Richard Feynman was the first who offered to move mechanically single atoms with the help of a manipulator of the appropriate size at the conference in 1959. Since that moment, the World have been changed significantly and now there are a lot of nanomaterials with fantastic properties.

Nanotubes have been constructed with length-to-diameter ratio of up to 32,000,000:1,[[1]](https://en.wikipedia.org/wiki/Carbon_nanotube" \l "cite_note-Longest-1) significantly larger than for any other material. These cylindrical [carbon](https://en.wikipedia.org/wiki/Carbon) [molecules](https://en.wikipedia.org/wiki/Molecule) have unusual properties, which are valuable for [nanotechnology](https://en.wikipedia.org/wiki/Nanotechnology), [electronics](https://en.wikipedia.org/wiki/Electronics), [optics](https://en.wikipedia.org/wiki/Optics) and other fields of [materials science](https://en.wikipedia.org/wiki/Materials_science) and technology.

For instance, Nanotubes can be used as ultra-strong threads for space lift. Nanotubes can theoretically hold great weight - up to one ton per square millimeter.

Another interesting application of carbon nanotubes is artificial muscles. By introducing the paraffin into a twisted thread of nanotubes international team of scientists from the University of Texas, have managed to create an artificial muscle, which is 85 times stronger than a human muscles.

But, to my mind, the most useful applications are power generators and motors. Threads of paraffin and carbon nanotubes can absorb heat and light energy and convert it into mechanical energy.

No less interesting nanomaterial is the graphene. **Graphene** (/ˈɡræf.iːn/)[[1]](https://en.wikipedia.org/wiki/Graphene#cite_note-1)[[2]](https://en.wikipedia.org/wiki/Graphene#cite_note-2) is an [allotrope](https://en.wikipedia.org/wiki/Allotrope) of [carbon](https://en.wikipedia.org/wiki/Carbon) in the form of a [two-dimensional](https://en.wikipedia.org/wiki/2D_Materials), atomic-scale, hexagonal lattice in which one atom forms each [vertex](https://en.wikipedia.org/wiki/Vertex_(geometry))

**Graphene** has the following properties: it has a perfect thermal conductivity, high electron mobility etc.

**Graphene** has a huge number of applications:

* flexible displays
* transistors
* solar cells

7) To sum up, **Nanomaterials** was discovered only ten years ago, but we have the variety of available applications now.

8) That is all, thank you for your attention!