



## Introduction







**EMFUTUR** was founded in Vila-Real, Spain, in September 2001. We export to more than 100 countries around the globe.

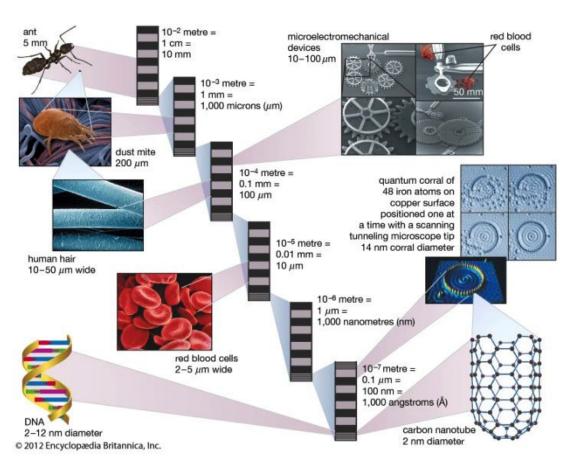
**EMFUTUR** is a high quality Nanomaterials Laboratory supplier for the Scientist Community providing also bulk nanoparticles for the end-products manufacturers of several fields located around the world.

**EMFUTUR** is specialized manufacturing: nanowires, quantum dots, graphene, nanotubes and other advanced materials. All these materials are taking part in all the important breakthroughs of science related to **Electronics** (Battery, Solar cells), **Biotechnology** (virus/bacteria testing and fighting) , **Optics** (displays, leds), **Aerospace** (textile and new materials), **Cosmetics** and **Pharma** (New drug development, nanoencapsulation) and a big so on.





## nanoMaterials



**Nanomaterials** are very tiny materials that are made up of particles called nanoparticles. These particles are incredibly small, usually measuring less than 100 nanometers in size. Just to give you an idea, one nanometer is one billionth of a meter!

What makes nanomaterials special is that their properties can be different from the same material at a larger scale. When materials are made into nanoparticles, they often exhibit new and unique characteristics. For example, they may become stronger, more reactive, or have different electrical or chemical properties.

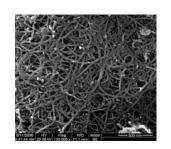
**Nanomaterials** can be found in various forms, such as powders, liquids, or even coatings. They are used in many different fields, including medicine, electronics, energy, and environmental applications. In medicine, nanomaterials can be used to deliver drugs to specific targets in the body. In electronics, they can help make smaller and more efficient devices. In energy, they can be used to improve the performance of batteries or solar cells.

The study and development of nanomaterials is a rapidly growing field called nanotechnology. Scientists and engineers are exploring new ways to create and use nanomaterials to improve our lives and advance technology.

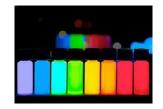




1. Carbon Nanotubes: These are cylindrical structures made of carbon atoms. They have exceptional strength and electrical conductivity. They are used in electronics, such as transistors and conductive films, and also show promise in energy storage and biomedical applications like drug delivery and tissue engineering.



2. Quantum Dots: These are tiny semiconductor particles that emit colorful light when excited. They are used in display technologies, like high-quality screens and TVs, as well as in biological imaging and solar cells.

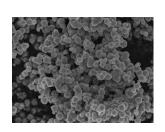


**3. Silver Nanoparticles:** These particles have antimicrobial properties, meaning they can kill or inhibit the growth of bacteria and other microorganisms. They are used in medical devices, wound dressings, and water purification systems.

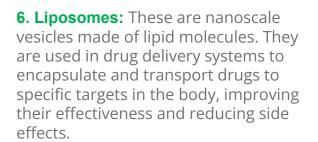


4. Titanium Dioxide Nanoparticles:

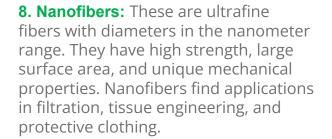
They have excellent UV absorption properties and are used in sunscreens and cosmetics to protect the skin from harmful UV radiation.



**5. Graphene:** This is a single layer of carbon atoms arranged in a hexagonal lattice. It is incredibly strong, lightweight, and has excellent electrical conductivity. Graphene is used in various applications such as flexible electronics, sensors, and energy storage devices.



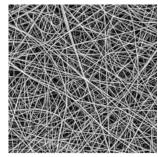




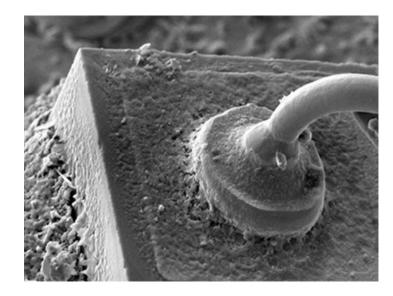














**EMFUTUR** offers (nanoparticles, nanopowders, micron powders, and CNTs (carbon nanotubes) in small quantity for researchers and also bulk orders for industrial groups) and also custom manufacturing nanoparticles with Sales to the main Technology and Corporation companies like Airbus, Nasa, Sony Corporation, Samsung, Sigma Aldrich, DSM, LONZA and some pharma companies like Sun Pharma.









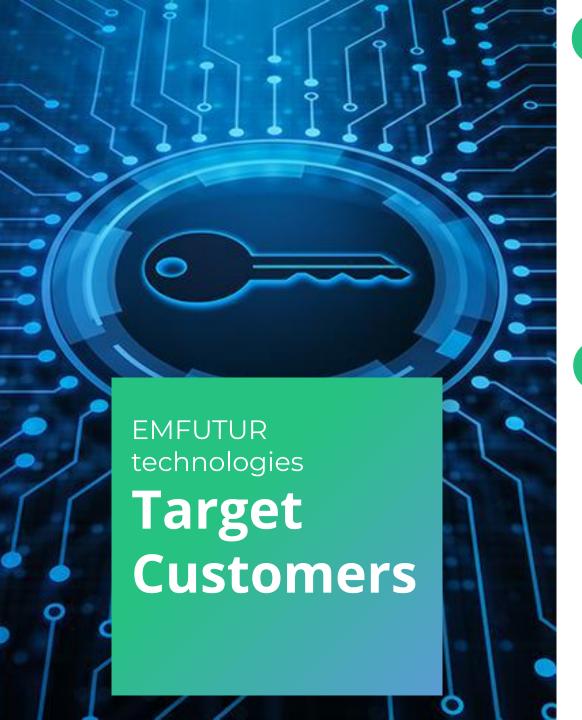


- Phosphonic Acids Derivatives
- Graphenes on transparent mica and other substrates, 3D
  Graphene, Graphene nanoplatelets
- Carbon Nanoparticles, Nanotubes, and Fullerenes.
- Nanodiamonds.
- Metal oxides nanoparticles and nanopowders.
- Nitrides, Carbides, Arsenide, Antimonides, Carbonitrides, Borides and Carbonates nanoparticles and nanopowders.
- Nanopowder mixtures of various compounds.
- Metal nanoparticles, nanopowders and nanowires.
- Quantum dots CdTe, CdSe/ZnS (core/shell), ZnCdSe/ZnS (core/shell).
- Tectomers, dendrimers
- PEG Derivatives



## **Products**









UNIVERSITIES (Chemical, physics, technological departments, lifescience, biotech, electronics,...) & TECH CENTERS



























→ Medicine (CANCER TREATMENT, DRUG DELIVERY, IMAGING)





→ Defense (ESKELETONS, BALLISTICS PROTECTION, LIGHTER **NANOFIBERS, AIRCRAFTS)** 

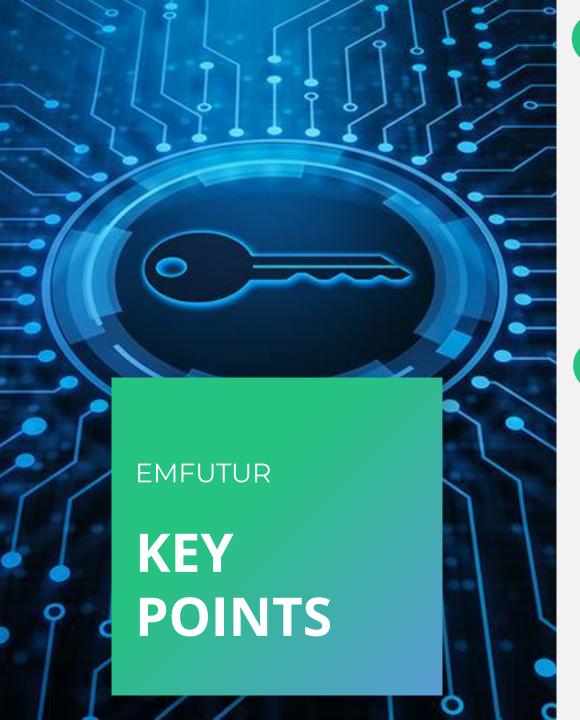




**→ Electronics** (TOUCHSCREENS, TV, SUPER-CAPACITORS)











**EMFUTUR** currently have hundred of Scientific Publications (Elsevier, Springer, IEEE,) done by third parties (Institutes, Universities, Research Centers) that have been using our nanomaterials. <u>Source</u>









ResearchGate







Also one important point is our situation in the market as a renown Supplier of nanoparticles compared with huge companies like BAYER, MERCK, BASF, SHOWA DENKO, EVONIK, SIGMA-ALDRICH. <u>Source</u>



















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## **High Tech Equipment**

**EMFUTUR** has the most important equipment for Production, Quality control, Packaging and measuring. Also we have a nanofab - nanofactory with the tools for manufacturing in nano. NMR, FESEM, XRD, AFM, TEM, UV-VIS, RAMAN, FTIR. All these equipment and workforce is obtained because EMFUTUR signed 2 agreements with <a href="Maintenance-LEMATEP">CEMATEP</a> Photonic institute in Greece and <a href="Maintenance-LEMATEP">IMT</a> Nanofab in Romania













