

Advanced Materials-JTJ s.r.o.

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Profile

The Advanced Materials-JTJ was one of the first nano technology businesses in the Czech Republic. It was founded in 2003 with the main focus on commercialization of photocatalysis, material chemistry and development of applications for new nano materials.

The Advanced Materials-JTJ is a parent company of a joint venture HE3DA, which develops an original lithium battery design based on 3 dimensional electrodes.

Advanced Materials-JTJ developed an industrial process for manufacturing of photocatalytic multifunctional paints for air depollution and purification. Our patents protect the technology in the Czech Republic, Canada, Cina, South Africa, USA, and patents are pending in many other countries.

Simultaneously the company has developed a large scale technology to make TiO₂ nanoparticles economically. The process is also patented in the Czech Republic, Cina, USA, and other patents are pending

Advanced Materials-JTJ, Inc builds new markets and expands rapidly. Working with several universities and international companies on variety of R&D and commercial projects, Advanced Materials-JTJ, Inc delivered many revolutionary technologies in the field of material science, photocatalysis and energy accumulation and participates in two EC grant consortiums working on photocatalytic water decontamination.

Advanced Materials-JTJ sells its products in more than 15 countries and on all continents.

Keywords

Nanotechnology, material science, emerging markets, air depollution, water purification, TiO₂ nano production, photocatalysis, photocatalytic sanitary coatings, nanoparticles of titanium dioxide, odor removal, catalyst support structure, environmental remediation, anti bacterial coatings, lithium ion battery.

Specialization 1

Photocatalytic TiO₂ coatings

Number of relevant employees, out of which involved in R&D

5 R&D 3

Main Projects

Sanitary deodorizing coatings for allergics and people with low immunity of organism. The coatings are applied in hospitals, schools; prevent the sick building syndrome, infection outbreaks and allergies. Stop mold. The patented FN® Coatings are distributed in Canada, China, Czech Republic, Ireland, Mexico, Nigeria and West Africa, New Zealand, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Vietnam, UAE and USA.

FN® coatings were awarded second prize in the 2010 Innovation of the Year competition, were nominated for the Ministry of Environment prize in the 2011 "Czech Brain" competition, The European Business Award 2012 or Czech Innovation 2014.

Photocatalytic products create anti microbiological layer on trees, vine and wood. The products for agriculture are going to be placed on the market soon, as well as a system for chlorine/chemicals free swimming pools.

Research solutions put into practice

The FN® coatings were developed to protect health of the people and create better environments. The function of the coatings was optimized for surface protection against UV and microorganisms, and the structure was designed for maximal air cleaning function (deodorizing, virus and bacteria elimination, mold prevention). The system is powered by light and can replace air purifier units. Fundamental properties of TiO₂ were transferred into the practical applications.

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Specialization 2

Nano TiO₂ manufacturing process

Number of relevant employees, out of which involved in R&D

3 R&D 2

Main Projects

Patented technology for economical mass production of TiO₂ nanoparticles. The process makes high quality TiO₂ nanoparticles with exceptional economy. The products are useable in cosmetics, photocatalytic applications, and environmental applications, such as depollution of air, water and as protective coatings. The inexpensive nano products will open markets for photocatalytic mass scale applications of nano TiO₂ coatings in agriculture, construction business and environmental applications.

Research solutions put into practice

Scale up techniques

Economical process for production of nano TiO₂

Turnover**Total yearly turnover (CZK)**

5 million

Part of the total turnover coming from foreign resources (%)

70 %

Expectations**Requires**

Looking for distributors.or parties interested in licensing the technologies

Offers

Participation on the market development results. Share in the company is an option for strategic partners.

Miscellaneous**Further comments**

Looking for partners that would license or implement our products into their technologies.
Looking for distributors.

Expected benefits

Increased value in use, delivering new quality.

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