RUSNANO

PRESS RELEASE

11/02/2020

OCSiAl Launches World's Largest Production Facility of Graphene Nanotubes in Novosibirsk

On 11 February, OCSiAl, RUSNANO's portfolio company, announced the launch of a new graphene nanotube synthesis unit with a production capacity of 50 tons per year in Novosibirsk Akademgorodok (Academic Town). The unit, currently the largest in the world, is called Graphetron 50. The launch of Graphetron 50 helped strengthen OCSiAl's leading position in the global market: the company's graphene nanotube production capacity now makes up for more than 90% of the world's .

The announcement that OCSiAl's Graphetron 50 unit, which began operating in test mode in 2019, has reached its planned production capacity of 50 tons of graphene nanotubes per year came at its official opening, attended by the Governor of Novosibirsk Region, **Andrey Travnikov**, and Chairman of the Executive Board of RUSNANO MC LCC, **Anatoly Chubais**.

"Before our very eyes, a start-up from Novosibirsk Akademgorodok, which essentially began with one very ambitious idea: to create a completely new material of the future, has grown into a global market leader with its industrial-scale technologies for production of graphene nanotubes. And in 2019, it became the first and, for now, only 'unicorn' in the material based sector in our country. Today, as the world's largest nanotube synthesis unit is being launched, I am proud of the entire project team led by Yuri Koropachinskiy and Mikhail Predtechenskiy, as well as of the fact that RUSNANO became the first external investor that believed in the future of this project, its leaders and the unique material they created," Chairman of the Executive Board of RUSNANO MC LCC, Anatoly Chubais, said.

Currently, OCSiAl owns the world's only scalable technology for industrial synthesis of graphene nanotubes and is the world leader in terms of production capacity. The creator behind this unique technology is **Mikhail Predtechenskiy**, a Russian Physicist and Academician of the Russian Academy of Sciences.

In 2015, OCSiAl synthesized its first commercial batch of graphene nanotubes—1.2 tons, which exceeded the entire volume of this material produced since its discovery in 1991. Construction of the second synthesis unit, Graphetron 50, began in Novosibirsk in 2016. The construction work was funded with the help of a concessional loan from the Industrial Development Fund. The total cost of the project was RUB 1.3 bln.

Today, the first Graphetron 1.0 unit produces 25 tons per year, and Graphetron 50—50 tons. Currently, the total combined capacity of the two OCSiAl synthesis units is 75

tons of graphene nanotubes per year, which are sold on the global market under the TUBALL brand.

“At the moment, OCSiAl’s production capacity is 75 tons of graphene nanotubes per year. Growth in their consumption directly correlates to the evolution of electric transport. If we take into account official plans of the largest automobile manufacturers, lithium-ion batteries alone will require more than 250 tons of graphene nanotubes in 2025,” President of OCSiAl, **Yuri Koropachinskiy** said.

During the official opening of Graphetron 50, reporters were told about the company’s current projects in Russia and abroad. The main markets for TUBALL™ nanotubes and their concentrates are in Asia and Europe. Together with its Russian partners, OCSiAl is developing novel uses of graphene nanotubes so that they can then be utilized worldwide. For example, antistatic composite floors, fiberglass pipes and reinforced asphalt concrete are some of the unique products developed and first used in Russia.

“Today’s event would not have been possible without our joint collaboration with the academic community, scientists and the education system, or all the work to deal with the biggest challenge facing the current stage of scientific and technological development in Russia, i.e. that of transferring knowledge to businesses, and discoveries to industries. And the launch of the second unit for the synthesis of graphene nanotubes serves as a truly outstanding and successful example of solving this problem,” **Andrey Travnikov** stated.

RUSNANO Joint-Stock Company *was founded in March 2011 through reorganization of state corporation Russian Corporation of Nanotechnologies. JSC RUSNANO contributes to implementation of the state policy on the development of the nanotechnology industry by investing directly and through investment funds of nanotechnology in financially effective high-technology projects providing the development of new production facilities in the Russian Federation. Its primary investment focus is in electronics, optoelectronics and telecommunications, healthcare and biotechnology, metallurgy and metalwork, energy, mechanical engineering and instrument making, construction and industrial materials, chemicals and petrochemicals. 100 percent of RUSNANO’s shares are state owned. Thanks to RUSNANO’s investments, there are currently 115 factories and R&D Centers opened in 37 regions in Russia. JSC RUSNANO has profit for the last 5 years.*

Management of assets of RUSNANO JSC is carried out by Limited Liability Company established in December 2013, RUSNANO Management Company. Anatoly Chubais is the Chairman of its Executive Board.

Work to establish nanotechnology infrastructure and carry out educational programs is fulfilled by RUSNANO’s Fund for Infrastructure and Educational Programs, which was also established during the reorganization of the Russian Corporation of Nanotechnologies.

More information can be found at en.rusnano.com

Contact details: *10A, Prospect 60-letia Oktyabrya, Moscow, 117036 Tel.: +7 (495) 988-5677, Fax: +7 (495) 988-5399, e-mail: press@rusnano.com.*