

## Young Engineer of ICE SPbPU Won VIK.Nano-2017 Competition

PhD student of Institute of Civil Engineering (ICE of SPbPU) Vladimir PETROV became the one of three winners of all-Russian engineering student and candidate competition 'VIK. Nano-2017'. Young scientist invented an independent energy-conserving system for individual houses using special tile that accumulates solar energy.



Participants of the competition had to solve one of practical tasks that were offered by companies-competition partners or to present their own engineering project in one of eight areas: composite materials, flexible electronics, additive technologies, thin-film coating, biotechnologies, new energetic, increasing of comfort in urban environment and rubbish recycling.

Before getting through to the final participants had to win the selective round. Only 17 of 57 requests were allowed to take part in the final stage. Every finalist presented his project, its technology and commercial parts, the last one in the form of a business-plan.

PhD student of ICE Vladimir PETROV invented a way to enable a whole house with

electricity using special tile – a photoelectrical module which generates energy and functions as a roof. Such roofing material is produced by one of the competition partners – biggest Russian solar cell batteries making company ‘Hevel’. Young scientist decided to find out if such ‘smart’ tile can be used in Russia. There are many remote areas in our country where there is no centralized energy supply and diesel generators are used. Vladimir chose a village Yazula on Altai for his calculations. The research showed that ‘smart’ tile can easily enable a one-family house with electricity. Certainly, performance indicators in other regions will be different, but there are thousands of villages like Yazula in Russia. The employer liked the way Vladimir solved the task, so he has not only become a winner of ‘VIK. Nano-2017’ competition, but has also received a special prize – an internship in ‘Hevel’ company.

Apart from the practical study that will begin in March, 2018, for Vladimir and other two winners there will be organized three-day technological tour to Leven (Belgium) in one of the biggest European centers of researchers and innovations IMEC with visiting of laboratories and cleanrooms.

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