

**13.02.2017****The Development by RUSNANO Portfolio Company OptoSense Will Allow to Significantly Reduce Coal Mine Accidents**

OptoSense proceeds to delivery of hydrocarbon sensor with the lowest ever power consumption.

OptoSense, RUSNANO portfolio company, has begun commercial delivery of the most advanced infra red hydrocarbon sensors MIPEX-04, that, among other things, will be used for provision of the miners' personal safety. It is no secret that the miners still die as a result of methane explosions in coal mines. A revolutionary development by OptoSense will allow preventing the accidents much more effectively, thus saving lots of human lives.

Power consumption of the innovative sensors is 1000 times less than that of the competing analogues, which means that the devices in use can operate for over 2 years on a single charge instead of several hours. Leading international players in the market of industrial safety such as Honeywell Analytics, which has already started to sell personal gas analysers based on the sensor, are among the buyers of MIPEX-04.

New generation of sensors created by OptoSense consumes less than 100 microwatt of power which opens the door to multiple opportunities for development of the most advanced devices and solutions to detect and measure explosive gas concentrations, including the creation of the new market of portable clip gas analysers "from scratch".

The unique features of new sensors have become possible thanks to semi-conductive polycrystal nanoscale layers in the mass fabrication of the sensor key elements, namely light-emitting diode sources and photovoltaic detectors. It is the availability of MIPEX-04 that allowed achieving such outstanding parameters of time of operation of the final device without the need for maintenance during the service life for the first time in the international practice.

OptoSense specializes in manufacturing of infrared optical sensors to determine explosive gas concentrations, primarily, hydrocarbons. Up to now, almost 100 international and Russian producers of gas analysers are the company's customers. Furthermore, almost 70% of the company's products are sold in the USA and Europe.

Gas analysers based on OptoSense sensors are used to provide personal and industrial safety in oil and gas or petrochemical industry (extraction, transportation and processing of oil and gas), coal mining (in mines), power industry (gas-fired plants), telecommunications (maintenance of underground cable networks). The total scope of gas analyser market as estimated by Frost & Sullivan is about \$2 billion with potential increase to \$3 billion by 2018.

***About RUSNANO***



**RUSNANO** was founded as a joint stock company in March 2011, through reorganization of state corporation Russian Corporation of Nanotechnologies. RUSNANO is instrumental in realizing government policies for nanoindustry growth, investing in financially effective high-technology projects that guarantee the development of new manufacturing within the Russian Federation. The company invests in nanotechnology companies directly and through investment funds. 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. The Government of the Russian Federation owns 100 percent of the shares in RUSNANO. By the moment thanks to RUSNANO's investments 73 plants and R&D centers are launched in 28 regions of Russia.

**Management of the investment assets of RUSNANO** are carried out by a limited liability company established in December 2013, RUSNANO Asset Management. **Anatoly Chubais** is 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.

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