



RUSNANO

Fund for Infrastructure
and Educational Programs

PRESS RELEASE

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Laureates of RUSNANOPRIZE 2015 Announced

Among the laureates of the international nanotechnology prize RUSNANOPRIZE 2015 are Yury Gogotsi, Distinguished University Professor at Drexel University (USA), Director of the A.J. Drexel Nanotechnology Institute, and Patrice Simon, Professor at Paul Sabatier University (France). The grand award ceremony was held as part of the Open Innovations Forum.

The prize was awarded for the definition of the fundamental principles and creation of carbon nanomaterials for electrochemical supercapacitors which are actively used in energy, automotive and other industries.

Maxwell Technologies Inc. (USA) was awarded for the successful production implementation and commercialization of nanostructured carbon materials as well as for the implementation of the developed principles in supercapacitors mass production.

In 2006 professors Y. Gogotsi and P. Simon presented the fundamental principles of ions behavior in a self-contained system, ion desolvation in pores below 1 nm and intercalary capacity in longitudinal pores of two-dimensional metal carbides. Prior to Gogotsi and Simon's research the developers counted on increasing the surface area and using the nanocomposites based on carbon monoxide to gradually improve battery capacity performance. This continued until Dr. Simon and Dr. Gogotsi proposed a new solution to the problem. They produced nanoporous carbon compounds with predetermined parameters and monodisperse pores of 1 to 10 nm and studied their ability to adsorb ions in the supercapacitor's electrodes. Their findings contradicted the previous knowledge: when the pore size is decreased down to 1 nm and less, the capacity performance improves.

The aftermath of the research's commercialization reflects its particular significance as the capacitors have gained a considerable competitive edge on the market.

This research has led to a true breakthrough in the field of energy storage solutions serving as an incentive to form and subsequently develop the supercapacitors' market, the volume of which is estimated to be USD 1 bln at year-end 2014, while its predicted volume will average USD 3.5 bln in 2020 (according to 2014 Market Research Media Report).

Yury Gogotsi and Patrice Simon are recognized as international experts in applying nanotechnology to energy storage. Dr. Gogotsi was part of the team that discovered a family of fundamentally new two-dimensional nanomaterials, MXenes. He found and described new forms of carbon, such as conical and polygonal crystals, and uncovered a previously unknown metastable phase of silicon. Professor Patrice Simon is an expert in the fields of Material Sciences and Electrochemistry. He is in charge of French Network on Electrochemical Energy Storage including 17 laboratories and 15 companies which are working on creating a new generation of batteries and supercapacitors.

Maxwell Technologies Inc. is a world leader in the production of supercapacitors and was the first to make significant progress in commercialization of the nanostructured carbon materials' properties. The company launched mass production of the supercapacitors used in automotive, transport, energy and telecommunications industries as well as in the production of industrial and consumer electronics. Other solutions of the company, such as radiation-resistant microelectronics, are widely implemented in the aerospace industry. Maxwell Industries Inc. has the rights to or is in the process of patenting more than 100 unique projects. The company employs more than 450 people in the USA, Switzerland, Germany, China and Korea.

"Nanoindustry is a field that strongly influences the lifestyle and the way of thinking in modern society. That is why it is paramount to hold these events especially in times of crisis. I believe that their goal is, above all, to show the business community that Russian nanoindustry is actively developing and involving more and more projects and businesses. And this means that our country has a potential to develop and grow further in socially significant fields in spite of the current economic difficulties", commented Ilya Abrosimov, Vice President and Director of Corporate Banking Department at Otkritie Financial Corporation Bank.

About RUSNANOPRIZE:

The international nanotechnology prize RUSNANOPRIZE was established in 2009 by RUSNANO, which is one of the world's largest investment companies in the innovation industry. The prize is awarded to both Russian and foreign finalists for the nanotechnology developments and inventions put into mass production with the annual turnover of at least 10 million US dollars.

Since 2009 it has been awarded annually in one of the following fields: Nanomaterials and Surface Modification; Medicine, Pharmacology and Biotechnologies; Optics and Nanoelectronics; Energy Efficiency and Green Technologies. The laureate is selected by the International Award Committee. The RUSNANOPRIZE is established to promote:

- the encouragement of experimental and applied research and development in nanotechnology;
- integration of the needs of business with the interests of the scientific community;
- broader public awareness of developments and practical applications in the field of nanotechnology;
- international cooperation in the field.

In 2015 the award is sponsored by Otkritie Financial Corporation Bank.

Fund for Infrastructure and Educational Programs was established in 2010 under Federal Law No. 211-FZ "On Reorganization of Russian Corporation of Nanotechnologies". The Fund is aimed at the development of innovative infrastructure for nanotechnology industry and implementation of educational and infrastructure programs launched by RUSNANO. The highest governing body of the Fund is its Supervisory Council chaired by **Dmitry Livanov**, Minister of Education and Science of the Russian Federation. In accordance with the charter of the Fund, the Council determines priorities for the Fund's activities, establishes its strategies, and sets the budget. The Fund's Executive Board is chaired by **Anatoly Chubais**, who is also the Chairman of the Executive Board of RUSNANO Management Company LLC. **Andrey Svinarenko** is the Chief Executive Officer of the Fund.