

PRESS RELEASE OF THE FUND FOR INFRASTRUCTURE AND EDUCATIONAL PROGRAMS

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The Winner of the Award RUSNANOPRIZE-2017 Was the Creator of Highefficiency Solar Cells Michael Grätzel

The winner of RUSNANOPRIZE 2017, an international award in the field of nanotechnologies, for the development of nanomaterials and surface modification was the Swiss scientist **Michael Grätzel**. The solemn ceremony of awarding the laureate took place at the Forum "Open Innovations".

The RUSNANOPRIZE award was established in 2009 and is awarded annually for the best nanotechnology developments implemented in mass production in one of four directions: "Nanomaterials and Surface Modification", "Medicine, Pharmacology and Biotechnology", "Optics and Electronics", "Energy Efficiency and Green Technologies". The award can be received by a group of scientists (no more than three people) and a company that commercialized their development. The laureates are chosen by the International Committee, which includes scientists and business representatives who have achieved outstanding results in the field in which the award is presented this year. In 2017, the prize is awarded for developments in the field of nanomaterials and surface modification.

The RUSNANOPRIZE 2017 international award committee decided to award the prize to Michael Grätzel, professor of physical chemistry and head of the photonics laboratory and interfaces of the Institute of Chemical Sciences and Chemical Engineering at the Federal Polytechnic School of Lausanne. He is among the ten most cited chemists in the world: his Hirsch index is 228, and the number of citations exceeds 260,000.

"Today the whole world is intensively searching for new methods and materials that can improve the efficiency of solar energy. It is important that the solar cells, which his work helped create, can solve both strategic and everyday tasks: from the creation of high-performance power plants to recharging mobile devices. The development of today's laureate is the so-called perovskite technologies, the next generation of materials for solar cells. But there are also "Grätzel cells", named after the author. They, for example, are used in solar panels that can be built in and fit organically into modern residential buildings. Both perovskite technologies and the "Grätzel cells" are now leaving laboratories and becoming part of the industry. It is obvious that

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it is these technologies that the future of solar energy is connected with," said **Anatoly Chubais**, Chairman of the Board of Management Company RUSNANO, in the award ceremony.

Grätzel in the early 1990s created dye-sensitized solar cells, which are now known as "Grätzel cells". Their use allowed to increase the efficiency of solar cells from 3-8% to 22.1%. It was for this development that he was awarded the prize.

Today the name of Michael Grätzel is associated with a new direction in solar energy, which he headed - perovskite photovoltaics. It opened fundamentally new approaches to the creation of solar cells, which allows to significantly increase their efficiency and accordingly reduce their cost, which, in the end, creates a growing new global market, complementing the segment of silicon solar cells.

The scientific group of Professor Michael Grätzel owns several records in the field of creating perovskite solar cells, which revolutionized the field of photovoltaics, achieving efficiency of 22%. Such efficiencies currently exceed the efficiency values of silicon analogues, and their industrial production is planned to commence already in the very near future.

The prize was also awarded to Exeger, a company engaged in the commercialization of Grätzel's products.

The organizer of the RUSNANOPRIZE award is the Fund for Infrastructure and Educational Programs (RUSNANO Group). The monetary part of the Prize is 3 million roubles. The scientist, the author of the development, receives the monetary part of the Prize, the award symbol and the honorary diploma of the laureate. The company, which applied the development in mass production and achieved commercial success through its implementation, is awarded the honorary diploma and the award symbol.

The Fund for Infrastructure and Educational Programs was established in 2010 in accordance with Federal Law No. 211-FZ "On reorganization of the Russian Corporation of Nanotechnologies." The Fund aims to develop the innovative infrastructure in the sphere of nanotechnology and implement the educational and infrastructure programs already started by RUSNANO. The Chairman of the supreme collegial management body of the Fund — the Supervisory Board — is the State Secretary - Deputy Minister of Economic Development of the Russian Federation Oleg Fomichev. Under the Fund's Charter, the competence of the Supervisory Council, in particular, includes the issues of determining the priority directions of the Fund's activity, as well as its strategy and budget. The Chairman of the Fund's Executive Board, the collegial management body, is the Chairman of the Board of Management Company RUSNANO LLC Anatoly Chubais; the Chief Executive Officer of the Fund is Andrey Svinarenko.