



World of **MEPPh**

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One million for two

WE CONSIDER OURSELVES AS «PLANET MONITORS»

THE HEAD OF ROSATOM A. LIKHACHEV TELLS STUDENTS ABOUT THE FUTURE OF NUCLEAR INDUSTRY

The Director General of the State corporation Rosatom Alexey Likhachev has given a lecture to students of the basic for the corporation universities on the prospects of nuclear energy, Rosatom's place in the global technology agenda and who Rosatom is waiting for in its team.

The meeting with the head of Rosatom was held in the walls of the main building of MEPhI and was broadcast to the regional sites of basic universities. In total, more than 3,000 people participated in the event – among them were students of MEPhI, MSTU, D.Mendeleev University of Chemical Technology of Russia, MISIS, NSTU, etc.

Starting the conversation about the tasks of the nuclear industry, A. Likhachev invited students to reflect on the fundamental challenges humanity is facing today: energy poverty and clean water shortage, environmental problems, diseases and local wars. «Due to the tasks that industry was and is still facing, we consider ourselves as «planet monitors» and are confident that

the main Rosatom's mission is to help humanity cope with the main global threats. We work with colossal energies, it sets a special frame of responsiveness, if you want, globality is a part of our DNA.»

As Alexey Likhachev noted, in order to fill the shortage of electricity and prevent an environmental crisis, a new generation of nuclear scientists will have to launch a huge pipeline of nuclear power plants around the world. Solution of this large-scale problem will be within the power of professionals with a complex blend of knowledge and competences in the field of traditional, economic and digital sciences.

«The challenge to your generation is intellectual mobility. The world is changing so quickly that it is necessary to reorganize on the way and have all the necessary knowledge»

Another task the younger generation of Rosatom faces today is the increase of share of civilian and dual-use products in the military-industrial complex by 2025. In addition, Rosatom focuses attention on



the development of new areas of activity, in particular nuclear medicine, as well as formation of the digital economy. «Digital doubles» of nuclear power

the students' questions. «What are the opportunities to work for foreign students who studied at MEPhI? What is the stage of the Jordanian project?» – the 2nd year master degree student from Jordan asked the first question to A.E. Likhachev. First of all young people were interested in issues related to the construction of nuclear power plants, as well as the employment possibility, including at power units which are under construction abroad.

In the final of the meeting, Alexey Likhachev took part in the awarding ceremony of the best students in research in the field of nuclear energy and the winners of the University classification in the framework of the industry championship AtomSkills.

plants – databases that will allow to predict the needs for electricity and smart cities – will soon become a reality of the nuclear industry. «The challenge to your generation is intellectual mobility. The world is changing so quickly that it is necessary to reorganize on the way and have all the necessary knowledge," said Alexey Likhachev.

After the speech, the head of Rosatom answered

Reference:

Alexey Likhachev's lecture opened a cycle of career guidance activities of this year, organized by the state corporation in conjunction with the Academy of Rosatom. In 2018 and 2019, more than 60 enterprises of Rosatom is going to take about 1,500 graduates. Full list of vacancies and proposals about practices and internships at enterprises of nuclear power industry are presented at the Industry career portal of the State Corporation Rosatom - www.rosatom-career.ru





WE ARE SINGLE STUDENT FAMILY

MEPhI has celebrated the Russian Students Day, as always, in a gaily and bright way.

The history of this event harks back to 1755, when Empress Elizabeth I signed a decree to establish the Moscow University. Since then, this day was special both for those who was a student or just applies to the student fraternity. The important thing is that this day all difficult tests and exams are already behind, and you can celebrate the event and the successful completion of the winter term exams.

Traditionally, festivities started in the Park-Museum «Kolomenskoye». In the Theatre Mansion of the Palace of Tsar Alexei Mikhailovich 350 students of Pre-university MEPhI received the real grade-books. Then they showed that they can not only study, but are equal to University students in other skills. Students competed in arm wrestling, tried their hand in darts, orienteering, and other sports. Playing snowballs, fitting armor, porridge from the field kitchen – all this has additionally created a great festive mood!

A flash mob became a culmination of the festival in Kolomenskoye: students were so ready to plunge into the atmosphere of learning in the University that they wanted to give themselves to the University – they lined up in huge letters that compose the name of the home University – MEPhI!

The celebration continued in the University, where a rich program was waiting for them: concert, quizzes, fun games and quizzes prepared by the United Student Council of MEPhI. Having received seed capital in the form of game points, depending on the progress at the current session, the participants actively took part in competitions, where they were able to increase points. Moreover those who were more successful at term exams had clear advantages as their starting capital was significantly higher. At the end of the day game points could be spend on prizes – modern gadgets, fitness bracelets, movie tickets and ice-skating at the weekend, board games, souvenirs from partners and much more.

To award an exam pass “automatical-ly” without sitting the exam or to have a real gun in the hands is not absolutely the same! Students can see the difference themselves at the interactive site of the military department. Even girls came to look into an entire lineup of small arms and to «shoot blanks».



«The Alley of Friendship» became a place of communication for representatives of different nationalities. Today about 1,400 students from more than 50 countries study in the University, so exchange of cultural values has become an inevitable part of student life in MEPhI. Young people from Bolivia, Bangladesh, Egypt and other countries told about the history and cultural traditions of their countries, showed household objects, musical instruments, national costumes, and offered to taste specially prepared dishes of their cuisine. The audience showed a particular delight during the band's performance with national songs and dances.

ONE MILLION INVENTION

MEPHI POSTGRADUATES AWARDED MOSCOW GOVERNMENT PRIZE

The main hall of the State Kremlin Palace has hosted the presentation of the Moscow Government Prize to young scientists. Moscow Mayor Sergey Sobyenin and Government officials awarded employees of leading scientific organizations and universities who presented their developments.

For the fifth consecutive year, the Moscow Government has selected the best applications for the award to postgraduate students, candidates of science, researchers, specialists under the age of 35 and doctors of science under the age of 40. This year, diplomas have been awarded to the 48 young scientists from the Russian Academy of Sciences, Moscow State University, Ministry of Healthcare of the Russian Federation, MEPHI, Higher School of Economics, MISIS, etc.

The first diplomas were awarded by Moscow Mayor Sergey Sobyenin: «There are no fields of gas, oil, iron, and coal in Moscow, but Moscow has inexhaustible reserves of intelligence and knowledge, thanks to which our city rightfully occupies a leading position in domestic and world science.»

Also the winners were awarded diplomas and were congratulated by the Minister of Education and Science of the Russian Federation Olga Vasilyeva: «Today our science is one of the key resources of the national economy». Vasilyeva highlighted that outstanding research centers operate throughout Russia: Kazan, Novosibirsk, Nizhny Novgorod, the Far East, but the focus of science in Moscow.

The President of the Russian Academy of Sciences Alexander Sergeev presented the third block of diplomas: «Since 1934 the Russian Academy of Sciences has been

transferred to Moscow and since then it is inseparably connected with the city. It is the largest academic center of the country. If we compare it with the megacities of the world, we see that Moscow is as big political, cultural and financial center as New York, London and Tokyo. But if we consider science, Moscow is also a major scientific center. The concentration of intelligence is significantly higher than in other capitals.»

Postgraduate students of the Institute of Nanoengineering in Electronics, Spintronics and Photonics of the National Research Nuclear University MEPHI Stanislav Shostachenko and Roman Zakharchenko won in the category of «Electronics and Communications Tools» with the development of high-power microwave amplifier based on gallium nitride with a heat sink on the basis of graphene.

The device is intended for use in radio communication, power engineering, onboard equipment of spacecraft, and objects with the raised radiation level. To solve the problem of increasing the transistor's power, young scientists proposed a heat-distributing layer on the working surface of the device, which allows to significantly reduce the temperature in the channel of the device and thereby improve its functional characteristics.

For the first time the Moscow Government Prize was awarded in 2013 in 8 nominations. At that time young scientists of the Russian Academy of Sciences became winners of 7 nominations. This year 10 scientific organizations were represented in 18 nominations. One of the 33 awards can be taken by a young researcher or a research team of up to three people from Moscow.



MEDAL FOR SCIENCE

YOUNG SCIENTIST OF SEC NEVOD AWARDED MEDAL OF RUSSIAN ACADEMY OF SCIENCES



By the Decree of the RAS Presidium the employee of the SEC NEVOD Egor Zadeba has been awarded a medal of the Russian Academy of Sciences for young scientists in nuclear physics for the cycle of works «Coordinate-tracking detector based on drift chambers for registration of near-horizontal muon flux generated by ultra-high energy cosmic rays».

The development of a new coordinate-tracking detector began in 2013 in the framework of cooperation between MEPHI and the Institute for High Energy Physics. The University received multi-wire drift chambers, designed for a neutrino detector at the accelerator U-70. These cameras have a large effective area (~ 2 square meters) and high precision of charged particle tracks registration (1 mm) having only four measurement channels. Therefore it was proposed to use these unique qualities in a new installation for the registration of muons groups in the experimental complex NEVOD. Before that, drift chambers has never been applied in studies of cosmic rays.

The team of young staff and students under the leadership of Egor Zadeba managed to develop and design a new installation in four years, which records and processes systems, to implement a combined operation with the existing detectors of the experimental complex.

The first in the world coordinate tracking installation with the drift chambers for the registration of cosmic rays has been put into operation. It has registered events with a density of 15 particles per square meter, which today is a record for installations with very low number of measuring channels.

It should be noticed that E. Zadeba is already a laureate of the contest for medals of the Russian Academy of Sciences for University students in 2012.

