LASER SCIENCE, TECHNOLOGY AND INNOVATIONS IN LITHUANIA

A.S.Dementjev, G.Raciukaitis
E-mail: aldement@ktl.mii.lt
State research institute Center for Physical Sciences and Technology, Department of Laser Technology, Savanoriu Ave. 231, LT-02300 Vilnius, Lithuania, http://www.ftmc.lt

Innovation is the principal driving force for economy growth that enables to achieve high operational productivity efficiency and adequate living standards of the population. In 2010 the Lithuanian Government approved the first large-scale Lithuanian innovation strategy, which sets vision, objectives, goals and results to be achieved in the field of Lithuanian Innovation up to 2020. The purpose is to mobilize and manage state resources effectively: to create competitive knowledge economy based on the latest technologies and qualified human resources.

In Lithuania there are developed five Integrated Science, Studies and Business Centers (Valleys) with a view to building up research, studies and knowledge economy clusters of international level, accelerating the development of knowledge society and consolidating the long term foundation for the competitiveness of Lithuania's economy. The Valleys are located in the three country's largest cities (Vilnius, Kaunas and Klaipeda). Strategic goal of Sauletekis Valley of (Vilnius) - to develop the scientific integration of Europe and to strengthen its international outreach, to ensure open access to high quality research infrastructure, to attract the best researchers from around the world in laser and light technologies, nanotechnologies, semiconductors technologies and electronics, civil engineering.

The aim of the High Technology Development Programme for 2011-2013 is to help to develop worldwide perspective high-tech trends with scientific potential, which makes it possible to create new products competitive in a global market. The main objectives are to develop five technology trends for research and experimental development activities: Biotechnology, Mechatronics, Laser technology, Information technology, Nanotechnology and electronics.

Laser science and industry are among the strongest areas of Lithuania's knowledge economy. Research and developments in laser science and technology are mainly concentrated in Vilnius University and Center for Physical Sciences and Technology. Scientific research covers a wide range of areas: from laser physics and optical technologies to laser biomedicine. Achievements of Lithuanian laser scientists have been recognized by significant international awards. By conducting world-class laser research for more than 40 years, Lithuanian science centers have gained extensive expertise and prepare a pool of highest-qualification specialists.

Products manufactured by Lithuanian laser companies hold nearly 10% of the global market of lasers used for scientific research. They export about 85% of their products to more than 100 countries around the world. The majority – three quarters of total production – si sold in Europe and North America. However, the rapidly growing Asian market is another target for the Lithuanian manufacturer.