



## **Puzikov Viacheslav Mykhailovych**

**(14.08.1947 – 11.12.2014)**

Puzikov Viacheslav Mykhailovych was born on August 14, 1947 in Kupiansk (Kharkov Region, Ukraine). In 1970, after graduation from the Kharkov State University (Department of Radiophysics), he started working at the All-Union Institute for Single Crystals, Scintillation Materials and High-Purity Chemical Substances. In National Academy of Sciences of Ukraine V.M. Puzikov worked since 1991. He was Director of Department of Optical and Constructional Crystals at Scientific and Technological Complex "Institute for Single Crystals" (from 1995 to 2004), Director of the Institute for Single Crystals of SSI "Institute for Single Crystals (from 2004 to December, 2014). In 2003 V.M.Puzikov was elected Corresponding Member of National Academy of Sciences of Ukraine, in 2009 he became Academician of the National Academy of Sciences of Ukraine. He was awarded State Prize of Ukraine in the field of science and technology (in 2003) and I.M. Frantsevich Prize of National Academy of Sciences of Ukraine in the field of materials research (in 2009).

The scientific interests of V.M. Puzikov were bound up with investigations in the field of technologies for the obtaining of crystalline materials. He created a scientific school which activities were aimed at improvement and development of technologies for the obtaining of optical and laser single crystals for multipurpose use, scintillation single crystals, constructional crystalline materials, thin crystalline films. These works have had an essential influence on the up-to-date level of technologies in the field of materials science.

Under the guidance of V.M. Puzikov there was realized the technology for the growth of large-size optical sapphire crystals with the dimensions up to  $500 \times 350 \times 80 \text{ mm}^3$ , new-generation growth units were developed, their commercial production was organized in Lugansk, and one of the largest in Europe production areas for the growth of sapphire crystals was created. His significant achievement was upgrading of the Stepanov method for the growth of profiled sapphire of various geometric shapes and sizes: tubes, tapes, prisms, various profiles, to be used in chemical industry, metallurgy, articles for special destination, in particular, for the making of transparent armor, medical implants.

His scientific achievements include development and reduction to practice of the technology of high-rate growth of nonlinear optical crystals of KDP/DKDP group with  $\sim 500 \times 500 \text{ mm}^2$  aperture and a weight of 300 kg possessing high bulk laser damage threshold. This development is of international character in connection with creation of units for laser thermonuclear synthesis in USA, France, Great Britain, Japan, Russia and China: frequency multipliers in such facilities comprise elements based on KDP single crystals.

V.M. Puzikov's ideas are realized in the development of original equipment for the growth of large-size single crystals of A<sup>II</sup>B<sup>VI</sup> group compounds: semiconductor crystals of CdZnTe solid solutions for detection and spectrometry of X-ray and  $\gamma$ -radiation, laser ZnSe:Cr<sup>2+</sup> and ZnMgSe:Cr<sup>2+</sup> crystals for coherent radiation sources of middle IR region.

V.M. Puzikov is an author and co-author of more than 300 scientific works, including 8 monographs, 35 inventor's certificates and patents. Under his supervision there were defended the theses of 6 Doctors of Science and 3 Candidates of Science.

He was Executive Director of Ukrainian Crystal Growth Association, a member of specialized academic councils at STC "Institute for Single Crystals" of National Academy of Sciences of Ukraine, Department of Physics of the Karazin Kharkov National University, a member of editorial board of the journal "Functional Materials".

Fond memories of V.M. Puzikov, a famous scientist and wonderful man – will be forever in the hearts of those who knew him.

*Editorial board of the journal "Functional Materials"*