
IN MEMORY OF MAKSYM TYMOFIIOVYCH KOSTYSHIN



On October 13, 2011, Maksym Tymofiiiovych Kostyshin, one of the founders of the Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine, a world-wide known inventor, one of the outstanding scientists in Ukraine in the physics of semiconductors and dielectrics, optics, and spectroscopy, Laureate of State Prizes and decorations of the National Academy of Sciences of Ukraine, and Honored Inventor of the USSR, died at the age of 91.

M.T. Kostyshin was born on April 10, 1920 at the village of Pen'kivka of the Vinnytsa region in Ukraine.

After graduating the secondary school and the Vinnytsa pedagogical college, he worked as a teacher of mathematics and physics at a village school. In 1939, he was called up to the Red Army. After graduating from the Velykyi Ustyug Artillery School in November 1941, he joined the battle operations at the onset of the Great Patriotic War.

During the War, he went the way from a battery commander up to the Staff Chief of an artillery regiment. He took part in the defense of Moscow and in the Kursk-Orel and Bagration operations. Near Warsaw in October 1944, Maksym Tymofiiiovych was badly wounded and was under treatment in hospitals till January 1946. He was decorated with the following orders and medals: Order of Red Star, two Orders of Great Patriotic War of the first Degree and one second-degree Order, Order of Bogdan Khmel'nyts'kyi, as well as 23 medals.

After the demobilization, he entered the Faculty of Physics of T.G. Shevchenko Kyiv State University. After the University, he was a post-graduate at the Chair of Optics under the guidance of Prof. A.A. Shishlovskii and then defended the Ph.D. thesis. For several years, Maksym Tymofiiiovych worked as the Associate Professor at the Chair of Optics of the Faculty of Physics. Since 1964, his scientific and organizational activities were carried on at the Institute of Semiconductor Physics of the NAS of Ukraine.

The main task of his scientific researches became the creation and the development of a new scientific trend: the structural transformations stimulated by radiation and the solid-state interactions in thin layers of chalcogenide vitreous semiconductors (ChVS), halides, and thin-layer structures. This direction was initiated in the first years of his scientific activity, when he in cooperation with co-workers first revealed and studied a new physical phenomenon such as the photosensitivity of ChVS films and semiconductor-metal structures. These results were published in more than 200 scientific papers and a monograph. His applied developments are

defended in 50 author's certificates and Ukrainian and foreign patents (USA, Germany, France, *etc.*). The results of his applied studies were implemented at many leading enterprises of Ukraine and the CIS.

The new scientific trend that was initiated by M.T. Kostyshin aroused a considerable interest of the world scientific community. The investigations of photo-stimulated structural-phase processes in thin-layer structures were begun and are now in progress in many tens of laboratories at leading scientific centers in various countries. On the basis of the photo-stimulated processes in thin layers of ChVS, the high-resolution inorganic photoresists, media for the optical registration of information, including those for compact disks of up-to-date formats, media for the electric registration of information, which are based on structural phase transitions in ChVS, *etc.*, were developed and are used widely over the world.

M.T. Kostyshin carried out a great scientific-organizational work. In 1964–1966, he worked as a Deputy Director responsible for the scientific work at the Institute of Semiconductor Physics and made a large contribution to the formation and the development of the Institute. Due to his initiative, the Department of Photochemical Phenomena in Semiconductors was established in 1964. It was headed by Maksym Tymofi-

iovych up to 1987. M.T. Kostyshin trained 15 Candidates and two Doctors of Phys.-Math. Sci. who continue to develop the scientific direction initiated by him.

Maksym Tymofiiovych was a good tactful man. The co-workers and all who surrounded and contacted with him loved and respected him. The death of Maksym Tymofiiovych is a hard loss for the Ukrainian science. The memory of him will be kept forever in the hearts of those who had happiness to know Maksym Tymofiiovych and to work with him.

*V.G. Litovchenko, V.F. Machulin, S.V. Svechnikov,
O.Ye. Belyaev, A.A. Kryuchin, V.S. Lysenko,
P.F. Oleksenko, V.V. Petrov, V.A. Shyrokov,
F.F. Sizov, M.Ya. Valakh, Ye.F. Venger,
V.M. Babich, P.I. Baranskii, O.A. Bugai,
V.A. Dan'ko, M.L. Dmytruk, I.V. Fekeshgazi,
S.G. Gasan-zade, I.Z. Indutnyi, V.M. Komashenko,
S.O. Kostyukevych, O.O. Kudryavtsev, V.I. Mynko,
K.V. Mikhailovska, I.Yu. Nemish, L.V. Poperenko,
I.V. Prokopenko, V.V. Prorok, P.F. Romanenko,
I.A. Shaikevych, P.E. Shepeliavyyi, M.V. Sopinsky,
V.M. Sorokin, A.V. Stronski, M.I. Sypko,
V.M. Tomashik, N.A. Vlasenko, O.I. Vlasenko,
S.M. Yablochkov, S.S. Zhoumir*