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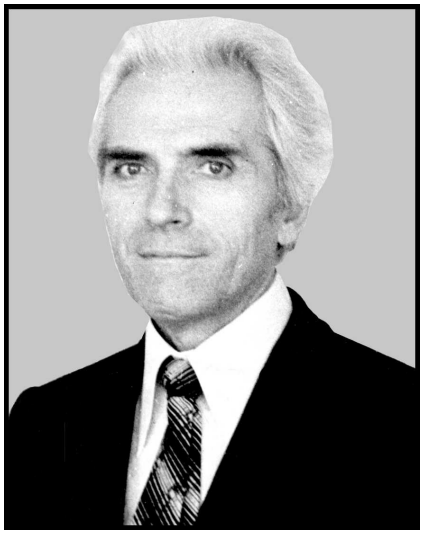
IN MEMORY OF MYKOLA GRYGOROVYCH NAKHODKIN (1925–2018)



On July 2, 2018, Mykola Grygorovych Nakhodkin, a prominent Ukrainian scientist-physicist, Academician of the National Academy of Sciences of Ukraine, the Honored Worker in science and engineering, a winner of the State Prizes of Ukraine in science and engineering, died at the age of 94. All his life was connected with the Taras Shevchenko University of Kyiv.

M.G. Nakhodkin was born on January 25, 1925 in the village of Prokhorivka near Kaniv, in the family of a physician. It is symbolic that the estate of M.O. Maksymovych, the first rector of Kyiv University, was in Prokhorivka in the middle of the nineteenth century.

Soon after the birth of the son, the Nakhodkin family moved to Kyiv. Before the war, the family lived in Mykilska Slobidka [1], where Mykola studied at school. When the war began, he saw with his own eyes how the bridges across the Dnieper were blown up together with the retreating military units of the Red Army. He was also a witness how the Old Arsenal [2] was exploded. During the occupation, Mykola worked as a blacksmith and studied at a river technical school.

After the war, M.G. Nakhodkin became a student of the Kyiv University. He entered the Faculty of Mechanics and Mathematics, but, after the first year, he was transferred to the Faculty of Physics. After graduating from the latter in 1950, Mykola Grygorovych became a post-graduate student. In 1954, he defended his Ph.D. thesis "Research of secondary emissions from some metals and semiconductors". The scientific supervisor of this work was N.D. Morgulis, Corresponding member of the Academy of Sciences of the Ukrainian SSR, the founder of the Kyiv scientific school of physical electronics. In 1966, Mykola Grygorovych defended his doctoral thesis "Interaction of electrons and soft X-rays with a substance in a thin layer". In 1973, he was elected Corresponding member of the Academy of Sciences of the Ukrainian SSR, and in 1990 a full member of the Academy of Sciences of Ukraine (in the speciality "Radiophysics").

As early as in 1952, M.G. Nakhodkin began to work as a lecturer at the Chair of Electronics headed by N.D. Morgulis. The same year, the Faculty of Radiophysics was created on the basis of this chair.

In 1972, M.G. Nakhodkin organized the Chair of Cryogenic and Microelectronics at the Faculty of Radiophysics (now, Chair of Nanophysics and Nanoelectronics) and had headed it for 26 years. On his ini-

[1] A suburb of Kyiv (translator's remark).

[2] An architectural monument of the end of the 18th century (translator's remark).

tiative, two research laboratories (the laboratory of electron spectroscopy and the laboratory of optical information processing and the theory of media) were organized at the Chair. In 1981, a Chair branch was created on the basis of S.P. Korolev Kyiv production association, and, in 1989, a Chair branch on high-temperature superconductivity on the basis of the Institute of Metal Physics of the Academy of Sciences of the Ukrainian SSR.

In 1972, M.G. Nakhodkin was elected the Dean of the Faculty of Radiophysics (since 2014, the Faculty of Radiophysics, Electronics, and Computer Systems) at T.G. Shevchenko Kyiv State University (now, Taras Shevchenko National University of Kyiv). He had held this position for 19 years. As a head of the Faculty, he created a highly efficient team of like-minded persons, which included, in particular, his deputies P.S. Kuts and P.V. Melnyk, the heads of chairs D.O. Gorodetskyi, V.V. Danylov, S.M. Levitsky, V.I. Strikha, and Yu.I. Chutov. On his initiative, the Chair of Medical Radiophysics was created at the Faculty of Radiophysics (the chair was headed by Mykola Grygorovych's disciple M.K. Novoselets). In addition, a special faculty aiming at the staff retraining in functional electronics and high-temperature superconductivity was organized. Leading experts of the Academy of Sciences of the Ukrainian SSR were engaged to lecture at this faculty, e.g., Academicians V.G. Bar'yakhtar, M.S. Brodyn, and A.G. Naumovets, Corresponding members M.O. Krivoglaz, V.G. Lytovchenko, E.G. Petrov, S.M. Ryabchenko, M.S. Soskin, P.I. Fomin, and M.K. Sheinkman. The faculty work style and traditions that were formed at that time survived, to a great extent, till now.

A lot of efforts were put by M.G. Nakhodkin, when organizing the educational, scientific and production association "Elektronika". The aim of the latter was to coordinate the activities of corresponding higher educational institutions, scientific institutes, and industrial enterprises in order to train highly skilled experts in electronics, perform relevant researches, and implement the obtained results into the industry.

Science was always in the focus of professional interests of Mykola Grygorovych. Being an excellent experimenter, he obtained a number of fundamental results in physical electronics, surface physics, and nanophysics. The many-year scientific work of Mykola Grygorovych resulted in the formation of a scientific school of emission electronics and electron spectroscopy, which he headed and which continued the traditions of the school of physical electronics created by his teacher N.D. Morgulis. Among his students, there are 5 Doctors of Science and 29 Ph.D's, the winners of the State Prizes of Ukraine in science and engineering.

M.G. Nakhodkin published more than 350 scientific works and had 41 author's certificates. He was a coauthor and an editor of 3 books.

In 1970, M.G. Nakhodkin won the State Prize of the Ukrainian SSR in science and engineering for a series of works dealing with the thermoplastic information recording. In 1997, he was awarded the State Prize of Ukraine in science and engineering for his researches of a number of new effects on the solid surface, in particular, the interference between the channels of elastic and inelastic medium-energy electron scattering. Its application allowed new methods of surface diagnostics to be developed.

M.G. Nakhodkin coordinated the teams of Ukrainian physicists who worked in the framework of the scientific program "Physico-chemical, structural, and emission properties of thin films and solid surface". During a long time, together with the Nobel Prize winner Zh.I. Alfyorov, he headed the Ukrainian-Russian program in nanoelectronics.

A lot of efforts and energy were given by M.G. Nakhodkin to a scientific-managerial activity. In so doing, he could think on the scale of the whole country rather than a separate scientific or educational institution. In the late 1950s, when performing the scientific research theme "Cathode" headed by N.D. Morgulis, he visited all plants in the USSR, where electronic tubes were fabricated. Specific recommendations elaborated as a result of the theme fulfillment were implemented at all Soviet enterprises with the corresponding specialization.

At the beginning of the 1960s, M.G. Nakhodkin actively worked in a working group, which gave rise to the creation of the Ministry of Electronic Industry of the USSR. On this issue, the members of the working group met with M.S. Khrushchev.

For six years, M.G. Nakhodkin had been the Deputy Chairman of the Scientific and Engineering Council of the Ministry of Higher and Secondary Special Education of the Ukrainian SSR. He was also a member of the section of the Committee on State Prizes of the Ukrainian SSR, the chairman of the section and the member of the Presidium of this Committee, one of

the founders and the first president of the Ukrainian Committee of the International Union of Radio Science (an URSI branch).

In the 1990s, Mykola Grygorovych was among those who initiated the creation of the National Council for Science and Engineering and became its chairman. He was a member of the Chief Council of the Higher Attestation Commission of the Cabinet of Ministers of Ukraine, the head and a member of the Expert council of the Higher Attestation Commission of Ukraine.

M.G. Nakhodkin was a member of the editorial board of the "Ukrainian Journal of Physics"; he was a member of the editorial boards of the "Journal of Scientific and Applied Photo- and Cinematography" (the edition of the Academy of Sciences of the USSR), the collections of works "Quantum electronics", "Physics of Semiconductors and Insulators", "Physical Electronics", the journal "Bulletin of Kyiv University". He was a founder and the editor-in-chief (for 20 years) of the interdepartmental collection of works "Fundamentals of Optical Memory and Media".

Mykola Grygorovych was a member of the Scientific Councils on Physical Electronics and Holography of the Academy of Sciences of the USSR, a few sections of the Academy of Sciences of the Ukrainian SSR, a scientific coordinator of a number of interdepartmental scientific programs and the programs of the Ministry of Education of Ukraine, a member of the Presidium of the Division of Physics and Astronomy of the National Academy of Sciences of Ukraine.

Till the last days of his life, Mykola Grygorovych lectur. Even the most complicated issue could be made clear for students by him. He constructed the educational process on the basis of a scientific work. A huge experience of M.G. Nakhodkin as a lecturer was embodied in three textbooks and two manuals, which are very popular among students and specialists.

The merits of Mykola Grygorovych were marked by the order "Sign of Honor" and a few medals, the Certificates of honor of the Presidium of the Supreme Council of the Ukrainian SSR and the Supreme Council of Ukraine (in 2002), the Certificate of honor of the Cabinet of Ministers of Ukraine (in 2004), the award of the National Academy of Sciences of Ukraine. M.G. Nakhodkin was a full cavalier of the order "For merits". In 1995, Mykola Grygorovych was awarded the title of the Honored worker in science and engineering. In 1999, he became the Honored Professor of Taras Shevchenko National University of Kyiv. One of the small planets was named after him in 1989 (8065 Nakhodkin=1979 FD3).

Mykola Grygorovych was an extremely strong and wise man, an excellent leader and organizer, a bearer of high moral qualities. He was a highly cultured person. He liked art and literature, in particular, poetry. When the mass demolition of pre-revolutionary buildings was begun in Kyiv, he made a unique series of photographs of old buildings, which do not exist anymore.

The blessed memory of Mykola Grygorovych Nakhodkin, a distinguished scientist, lecturer, talented organizer of science and higher education, wonderful person, and patriot, will remain forever in the hearts of his relatives, friends, numerous colleagues, students, and everybody who knew him.

I.O. Anisimov, L.V. Gubers'kyi, A.G. Zagorodny, V.G. Lytovchenko, V.M. Loktev, M.V. Makarets', A.G. Naumovets, S.M. Ryabchenko, M.V. Strikha