
TO THE 75TH ANNIVERSARY OF PROFESSOR M.M. NOVYKOV'S BIRTHDAY (1933–2007) AND THE 50TH ANNIVERSARY OF HIS SCIENTIFIC ACTIVITY IN THE UKRAINIAN JOURNAL OF PHYSICS



On June 22, 2008, the well-known Ukrainian scientist, physicist, teacher, and historian of natural science, Doctor of Science in physics and mathematics, Professor, the winner of the State Prize of Ukraine in science and engineering M.M. Novykov would have been 75 years of age. On this occasion, the Ukrainian Library Association (President is Academician of the National Academy of Sciences of Ukraine (NASU) O.S. Onyshchenko) at the State Scientific Agricultural Library (SSAL) of the Ukrainian Academy of Agricultural Sciences (UAAS) – M.M. Novykov had been actively cooperating as a branch historian with this institution for several last years – organized a Memorial scientific reading. Vice-President of the NASU, Academician of the NASU A.G. Naumovets', Corresponding member

of the NASU V.A. Makara, Academician of the UAAS M.M. Musienko, Professors V.S. Kopan', Yu.O. Khramov, V.A. Vergunov, V.M. Novykov, and the Honored Journalist of Ukraine A.G. Veretyokhin made scientific reports for the participants of this meeting.

All aspects of the creative life of M.M. Novykov, both the scientific and educational ones, were associated with the Taras Shevchenko Kyiv National University (KNU). In 1951, after graduating from secondary school No. 1 in Chernigiv with a medal, he entered the Faculty of Physics of the University. In 1956, after graduating from the University with a distinction, he became a postgraduate student. The thesis of his Ph.D. dissertation "Studies of formation and yield of crystal-lattice defects in metals deformed and hardened at high temperatures", which was carried out under the supervision of the pioneer of Ukrainian metal physics Professor S.D. Gertsriken (1901–1968), was defended by M.M. Novykov in 1960. Since 1957 and till the end of his life, M.M. Novykov had been working at the Chair of Metal Physics of the KNU: first, as an assistant (1957–1960), then the senior lecturer (1960–1961) and the associate professor (1961–1975). After terminating the doctoral studies (1972–1974) and defending the dissertation "Study of regularities of the photoplasticization surface effect and the dislocation motion kinetics in some alkali halide and semiconductor crystals", he was awarded the rank of Professor in 1975.

M.M. Novykov's scientific activity for more than half a century made a sound contribution to the development of modern physical materials science both in our country and abroad. It mainly dealt with the study of structural defects and their influence on the physical properties of single crystals which were used in semiconductor and optoelectronic industry. M.M. Novykov was an author and a co-author of 630 papers. Thirty seven

of his works were defended by copyright certificates and patents, and he was awarded the rank "Inventor of the USSR". Along with studying the fundamental problems, M.M. Novykov was also engaged in applied researches, which allowed the Taras Shevchenko Kyiv State University to have an economic benefit of more than 2 million roubles in the 1980s. His scientific achievements were distinguished by the Prize of the Ministry of Higher and Secondary Special Education of Ukraine for the best scientific work (1983), the State Prize of Ukraine in science and engineering (1987), and the gold and silver medals of the USSR exhibition of economic achievements.

Professor M.M. Novykov created his own scientific school which now fruitfully cooperates with both domestic and foreign scientists and scientific institutions. He trained 11 Ph.D.'s and 2 Doctors of Science, including Corresponding member of the NASU V.A. Makara. He also published four tutorials, elaborated and implemented eight normative and special courses for the students of the KNU, and published a series of popular scientific papers. He also lectured a course of special issues in solid state physics for post-graduate students and employees of several universities abroad, in particular, at Santa Clara (Cuba), Brno (the Czech Republic), Leipzig (Germany), and Debrecen (Hungary).

In 2003, the Ministry of Education and Science of Ukraine awarded Professor M.M. Novykov the sign "Excellency of Education in Ukraine" for his long-term honest work, his personal contribution to training highly skilled experts, and his fruitful scientific and pedagogical activity. The Academic council of the University awarded him the rank "Honored Professor of the Taras Shevchenko Kyiv National University". For his particular services for the Ukrainian people, the Verkhovna Rada of Ukraine distinguished him by a Certificate of Honor as an outstanding scientist and teacher. The same circumstances were taken into consideration while awarding him the grants of the President of Ukraine and the Soros Professor (1997).

Professor M.M. Novykov spent plenty of his time for creative cooperation with leading scientific branch centers of the NASU. A number of mutual researches were carried out together with the profile laboratories and departments of the Institute of Metal Physics. As a member of Specialized council on Ph.D. and Dr.Sci. dissertation defence, as well as an official opponent, he was involved into the training and rating of high-level experts in the Academy. The group of known domestic physicists, whom M.M. Novykov gave a start in the

scientific life, includes, for instance, the chairman of the Higher Examination Board of Ukraine, Corresponding member of the NASU V.F. Machulin. Some of his disciples successfully continue the trend of their teacher at various institutions of the NASU and abroad.

In 2000, Professor M.M. Novykov started to work as a historian of natural sciences. In particular, he published a series of fundamental researches dealing with the Kyiv school of metal physics, its founder Professor S.D. Gertsriken, and its best representatives, such as Professor E.Y. Kharkov. He also pioneered in the periodization of X-ray diffraction researches in Ukraine. Unfortunately, a special monography devoted to those issues was not finished.

M.M. Novykov made a considerable contribution to the formation and development of the Center of agrarian science history at the SSAL of the UAAS and the Center of history of natural science of the Kyiv region at the Grygorii Skovoroda Pereyaslav-Khmelnitskyi Pedagogical University. He, as a member and an opponent in specialized councils on Ph.D.'s thesis defence on the speciality "History of science and engineering" and as a supervisor of post-graduate students also participated in the training of high-level experts.

It is worth mentioning separately the almost fifty-year cooperation of M.M. Novykov as an author with the Ukrainian Journal of Physics. His first three papers were written in co-authorship with his scientific supervisor Professor S.D. Gertsriken and were published in 1958. The first paper appeared in issue 2 of volume 3; it was entitled "Studies of small volume variations at annealing of deformed nickel". The two others—in issues 5 and 6 of the same volume—were devoted to the consideration of the problem of the density of dislocations on a deformation of nickel, aluminum, and silver. The last article of M.M. Novykov written in co-authorship with his post-graduate student P.O. Tesel'ko was published in 2006 (volume 51, issue 2); this paper was also devoted to the problem of dislocations in the strain ageing process. From 1958 to 2006, Professor M.M. Novykov published 53 articles on speciality in the Ukrainian Journal of Physics. One can say that the scientific school that represented the basic direction of M.M. Novykov's scientific activity in solid-state physics successfully passed the verification on pages of this journal recognized by the scientific community.

All the creative activity of Professor M.M. Novykov made him an example of true Ukrainian, true Professor, and true Expert – both by his origin and by what he



made for the future of Ukraine – in the best traditions of classical professors lectured as long ago as the age of the St. Volodymyr University. This is also evidenced by a bio-bibliographic index of M.M. Novykov's scientific

papers for 1956–2008 entitled “Honored Professor of the Taras Shevchenko Kyiv National University Novykov Mykola Mykolayovych (1933–2007)” (Kyiv University Publishing House, Kyiv, 2008, 194 pages), which was specially prepared by the Section of scientific bibliography and biographistics at the SSAL of the UAAS for the Memorial reading devoted to the 75-th anniversary of this outstanding person.

Taking into account a significant contribution of Professor M.M. Novykov to the evolution of scientific ideas in the branch of metal physics and, in particular, concerning the study of the capabilities offered by applications of Si, the closed joint-stock company “Pilar”, together with the Faculty of Physics of the Taras Shevchenko Kyiv National University, established three special monetary prizes with a medal engraved with the winner's name: 1) for the best scientific development, 2) for the best student work, and 3) for the popularization of domestic researches dealing with Si. Such a desire seems to be completely adequate to the belief that a person remains alive till we remember him!

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