

**Centenary of Professor Ivan Alexeyevich Yakovlev  
– Honored Professor of the Moscow State University,  
Member of the Editorial Board of the Journal  
“Uspekhi Fizicheskikh Nauk” (“Physics-Uspekhi”  
(Advances in Physical Sciences))  
(since 1966 until 2000).**

Ivan Alexeyevich Yakovlev was born 13 October 1912 in Moscow. His grandfather Ivan Yakovlevich Yakovlev was the famous enlightener of the Chuvash people and founder of the written language and the alphabet of the Chuvash language. He was a friend and an associate of Ilya Nickolayevich Ulyanov. He was closely acquainted with another family – the Keirinskies which was so connected with the fate of the country. His father Alexey Ivanovich was a student of Professor Klyuchevsky and Klyuchevsky’s successor as a professor-historian and a Correspondence Member of the USSR Academy of Sciences. His mother was an artist of the Kazan school of painting. One of his sisters – Olga was a specialist on ancient Russian history of the time of the reining of Tsar Ivan the Terrible. His other sister Natalia immigrated after the October revolution with the family of revolutionary Kropotkin to Italy. Later she studied at the Sorbonne and worked as a practitioner in France. Her granddaughter Françoise Vare became also a doctor and at one time she was a deputy Health Minister of France.

After graduating a school in 1929 Ivan Alexeyevich Yakovlev entered the Physics and Mathematics Faculty of the Moscow State University in 1932 and at the age of 20 ahead of the schedule he completed his studies. For one year he worked as an assistant at the Chair of Physics of the Institute of Railway Engineers. In 1934 he became an assistant at the Chair of General Physics of the Faculty of Physics of the Moscow State University. Since then up to the day when

he deceased his activities were linked with the Faculty of Physics of the Moscow State University.

In 1942 I.A. Yakovlev defended his Candidate's dissertation "Research on diffusion of light under low temperatures". During the war time he lived and worked in Moscow. In 1941 German pilots – "asses" targeting the Kremlin missed and often dropped their fire bombs on the territory of the University, which was near the Kremlin. By day and night being free of studies with students Ivan Alexeyevich along with other University faculty members was on duty on roofs of houses extinguishing fires set by arson bombs. At intervals he worked for the needs of the front. In the group of Professor V.V. Ilyin Ivan Alexeyevich was engaged in improving gas-masks. He worked on developing a smoke protecting filter which had to be humidity resistant. Previously in production of gas-mask filters only card-board was used. Moisture damaged filters of gas-masks and made them unfitted for use. A good filter was made.

In 1943-1946 while teaching at the University I.A. Yakovlev also worked in the P.L. Kapitza Institute for Physical Problems of the Russian Academy of Sciences.

In 1945 Yakovlev was sent to a defeated Germany to select science optical equipment which was handed over to the USSR as reparations. The Doctor's dissertation "Researches on phase transitions of the second kind in solid bodies" was defended by I.A. Yakovlev in 1957. In 1959 he was granted an academic Professorial Rank at the Chair of General Physics. In 1974 I.A. Yakovlev was elected the Head of the Chair of Physics of Crystals and held this position for 15 years. His main research works were made at the Faculty of Physics at the Moscow State University. During 1970-s I.A. Yakovlev's works made a fundamental contribution into experimental research of piezoelectrics,

ferroelectrics, semiconductors and diffusion of surface and pseudosurface resilient waves in solid bodies. Most substantial results achieved for the first time in the world are related to the absorption of ultra sound in solid bodies at phase transition. The abnormal absorption of sound was discovered in crystals of segnet salt near the upper and lower Curie points. Academician L.D. Landau explained the discovered anomaly theoretically and deduced an appropriate formula for a coefficient of absorption of sound in ferroelectrics and paraelectrics. These results won overwhelming recognition and gave a start of an abundant flow of research all over the world and now are widely cited.

I.A. Yakovlev along with research work also carried teaching and methodological activities. He delivered extremely interesting lectures in general course of physics, crystaloptics, holography and other divisions of physics which were highly commended as an invariable success by listeners.

After the University moved to Vorobyevy Gory to the new building in 1953 I.A. Yakovlev did a lot to establish at the Faculty of Physics a contemporary practical training session on optics (he conducted more than 40 tests). In 1974 Ivan Alexeyevich organized a completely new practical training session of physical basis of holography which became very popular.

Many efforts Ivan Alexeyevich gave to writing and publishing of numerous text books. To the 5<sup>th</sup> edition (1976) of the course of lectures "Optics" written by Academician G.S. Landsberg Ivan Alexeyevich contributed two new chapters "Physical Principles of Holography" and "Optical Quantum Generators" and actively participated in publishing "Elementary Textbook of Physics" in three volumes edited by G.S. Landsberg. He played a great role in creating a general collection of exercises, of general course of physics for universities which had 4

editions and was translated in many languages. He was among the authors of text-books of general physical training session and “Special Treating Session of Physics”. He made many lecture demonstrations and was an author of the book entitled “Lecture Demonstrations on Physics”.

Since the opening in the Moscow State University the Training Faculty for professors and instructors of Higher Education Ivan Alexeyevich worked as a curator for specialty General Physics and read lectures for listeners at this Faculty.

During almost 70 years of his work at the Faculty of Physics of the Moscow State University Ivan Alexeyevich carried tutorship over numerous student diploma works and Candidate dissertations. Some of his students became Doctors of Sciences. He always knew about work of his students at all stages and was ready at any time to extend a helping hand if life required it and it was not only in the case of scientific research.

Since 1966 for 35 years I.A. Yakovlev worked at the editorial board of the journal “Uspekhi Fizicheskikh Nauk” (“Physics-Uspekhi” (Advances in Physical Sciences)).

The importance of these activities by Ivan Alexeyevich for history and development of the magazine is very great. Ivan Alexeyevich was a comprehensively educated professional. He was competent in many fields of physics. Ivan Alexeyevich knew perfectly well the Fatherland’s history as well as history at large. He fully comprehended what importance the cognition of Nature means and how precious is the knowledge of Nature which is handed over from generation to generation. His memory was of very high capacity. He fluently quoted in several languages. He precisely used scientific facts,

historical analogues and biographical details. He highly valued the reputation of his journal “Uspekhi Fizicheskikh Nauk” (“Physics-Uspekhi”) and was very attentive and uncompromising reviewer. Up to his last days of life Ivan Alexeyevich actively took part in the work of the editorial board of “Uspekhi Fizicheskikh Nauk” (“Physics-Uspekhi”).

I.A. Yakovlev always carried a very extensive social and educative work. In 1965-1974 he was a chairman of the Council for Advancing Physics, Mathematics and Astronomy of “Znaniye” (“Knowledge”) Society of the USSR.

Widely educated in many fields of human knowledge as well as knowledge of English, French and German Ivan Alexeyevich possessed a perfect memory and a talent of a narrator. He was refined, noble, kind and responsive. He was a personality of high culture and many talents and rare purposefulness and capacity for work. He was a Merited Worker of Science of the Russian Federation, an Honored Professor of the Moscow State University, an Honored Professor of the Chuvash State University. I.A. Yakovlev had governmental awards including order “Znak Pocheta” (“Badge of Honor”) and medal “For Defense of Moscow”. As a wonderful man and an outstanding physicist-researcher Ivan Alexeyevich Yakovlev greatly contributed into science, teaching and building an image of the Faculty of Physics of the Moscow State University as well as into development of science and education in all our country.

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