



INTERNATIONAL THERMOELECTRIC ACADEMY

LUKYAN IVANOVYCH ANATYCHUK

(DEDICATED TO 75-th BIRTHDAY)

July 15, 2012 is the date of 75-th anniversary of Lukyan Ivanovich Anatyshuk, director of Institute of Thermoelectricity, National Academy of Sciences and Ministry of Education and Science, Youth and Sports of Ukraine, academician of the NAS of Ukraine, president of the International Thermoelectric Academy.

L.I. Anatyshuk was born in the village of Kolinkivtsi, Khotyn district, Chernivtsi region, in the family of teachers Ivan Mikhailovych and Anastasiya Semenovna Anatyshuk.

On completing the secondary school, he entered Physics and Mathematics Faculty of Chernivtsi State University. Since his third year Lukyan Anatyshuk became absorbed in the world of scientific research. As a fourth-year student, he published his first scientific work, and in his fifth year he reported the results of scientific research to the conference in Leningrad. After graduation of Chernivtsi State University in 1960, L.I. Anatyshuk continued to pursue his active labour activity in it. In 1964 he maintained his candidate thesis and in 1974 – doctoral thesis. Already at that time, new concepts and ideas were introduced into his theses that allowed formulating the law of thermoelectric induction and creating on its basis the generalized theory of thermoelectricity. It opened up new large-scale opportunities for practical application of thermoelectricity. In that same year Lukyan Ivanovych chaired Department of Thermoelectricity at the University which is still headed by him today. The works on practical application of thermoelectricity were actively pursued at the Department. They were so successful that in 1978 for their further development a Special Design-Technological Bureau “Phonon” was created with professor L.I. Anatyshuk at the head.

In 1991 Special Design-Technological Bureau “Phonon” was reorganized into a research Institute of Thermoelectricity of double subordination – to the National Academy of Sciences and Ministry of Education and Science of Ukraine. Its permanent leader has been Lukyan Ivanovych Anatyshuk. Under his scientific supervision, the basic research in thermoelectricity has been expanded at the Institute: theory of functionally graded materials, dynamic theory of thermoelectric cooling, theory of reliability of thermoelectric devices and systems have been developed, the generalized theory of thermoelectric power conversion has been further developed. On its basis, a series of new thermoelement types have been devised.

L.I. Anatyshuk’s ideas provided the basis for creation of new technologies, connection methods and designs of a series of thermoelectric modules for thermal generators. The modules outperformed considerably the well-known world analogs and formed the basis for creation of manifold thermoelectric generators. Progress has been achieved in creation of efficient and highly reliable cooling and air-conditioning systems. Heat pumps in water regeneration systems for cosmonauts at orbital stations have been developed. Under the scientific supervision of L.I. Anatyshuk Institute of Thermoelectricity took part in the development of high-power air-conditioners for submarines of France. Particularly reliable cooling modules for the space system of microgravitation and cooling modules for sensitive sensors of tracking systems for European

satellites were created. Efficient units for domestic coolers were developed as an alternative to freon compressor assemblies. In the majority of cases L.I. Anatyshuk was a chief designer of the above developments. L.I. Anatyshuk has considerable achievements in creation of thermoelectric coolers and generators for medical equipment, measuring and metrological instruments.

In 1993 L.I. Anatyshuk organized publication of international research Journal of Thermoelectricity and became its editor-in-chief. The journal is published in three languages – Ukrainian, Russian and English, it is distributed in 43 countries worldwide.

L.I. Anatyshuk is the organizer of International Forums on Thermoelectricity. In 1994, on the initiative of Lukyan Ivanovych, International Thermoelectric Academy was created that united leading specialists from 20 countries – USA, United Kingdom, France, Japan, Italy, Russia, Ukraine and others. L.I. Anatyshuk has been permanently elected president of the Academy.

Lukyan Ivanovych is a scientist of world-wide reputation in thermoelectricity. He has discovered the law of thermoelectric induction of currents, on which basis a generalized theory of thermoelectric power conversion has been created. He has developed theory of functionally graded materials, theory of optimal control over thermoelectric materials and devices, theory and technology of new thermoelement types, theory of reliability of thermoelectric systems, the basics for information-energy theory of thermoelectric measuring instruments, material science of up-to-date thermoelectric structures and methods for achievement of their extreme characteristics, computer methods in material science and thermoelectric products design.

Under the scientific supervision of L.I. Anatyshuk 5 doctoral and 17 candidate theses have been maintained. He has published over 350 scientific papers and received more than 200 certificates of authorship and patents. He is the author of 8 monographs, three of them in the English language.

L.I. Anatyshuk is chairman of Specialized Academic Board of Institute of Thermoelectricity on maintenance of candidate and doctoral theses on the specialty 01.04.01 – “Physics of devices, elements and systems”, chairman of science coordination board of the Western scientific centre of the NAS and MESYS of Ukraine in Chernivtsi region, head of Department of Thermoelectricity of Yu.Fedkovych Chernivtsi National University, honoured professor of Yu.Fedkovych Chernivtsi National University and Wuhan University (China), honoured academician of the International Academy of Refrigeration.

Among his state awards are orders “The Badge of Honour”, of October Revolution, III, II and I class orders “For Meritorious Service”, the order of Yaroslav the Wise of V degree.

Lukyan Ivanovych Anatyshuk generously shares his rich experience and knowledge with his disciples, colleagues and young specialists.

The scientific community, International Thermoelectric Academy, Institute of Thermoelectricity NAS of Ukraine, “Journal of Thermoelectricity” Publishers sincerely congratulate Lukyan Ivanovych on his jubilee and wish him good health, happiness and many years of creative work.