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Events

PROFESSOR VASYL SHEVCHUK – 90th ANNIVERSARY

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Professor Vasyl Shevchuk – the outstanding scholar, Honored Scientist and Technician of Ukraine, academician of the Ukrainian Oil and Gas Academy, the current member of T. Shevchenko Scientific Society, Doctor of Technical Sciences, celebrates his 90th anniversary this year. He owns more than 290 scientific and methodological works, 72 inventions protected by copyright certificates and patents, including patents of foreign countries. 19 Ph.D. and 1 doctoral dissertation were defended under the guidance of V. Shevchuk.

He was born on July 13, 1928, in the village of Miziak, Vinnytsya region. After graduating the secondary school in 1947 he entered the Lviv Polytechnic Institute. After graduating it with honors in 1952 he became a post-graduate student and started to work out the problems of natural gas processing.

In 1956 he was offered a position of deputy director in a branch of the Research Institute of Organic Chemistry and Technology (Boryslav). Its scientific task was to develop new processes, including the production of acetylene from natural gas. Shevchuk created and headed a large team of young talanted scientists and engineers who worked fruitfully in the field of chemistry and technology of organic matter.

In 1958 V. Shevchuk defended his Ph.D. thesis, in 1974 – obtained Doctoral degree, in 1977 – became Professor. In 1978 Prof. Shevchuk was elected the Head of the Department of Analytical Chemistry of the Lviv Polytechnic Institute and in 1984 – the Head of the Department of Chemical Technology of Oil and Gas Processing. Since 1997 he has been working as a leading specialist at the JSC "Galol", while leading research work carried out by his students and postgraduates at the Lviv Polytechnic State University. In 2000 V. Shevchuk returned to "Lviv Polytechnic" holding the post of professor at the Department of Chemical Technology of Oil and Gas Processing.

The scientific work of Prof. Shevchuk is mainly focused on the study of pyrolysis and oxidation reactions of hydrocarbons and their halogen derivatives. He performed theoretical works in the field of thermodynamics and kinetics of chemical reactions, developed new methods for calculating the entropy of chemical compounds. Basic researches of kinetic regularities and mechanism of high-temperature homogeneous reactions of hydrocarbons oxidation and pyrolysis, including those in the combustion zone, have been carried out. He proved that the rate of pyrolysis reactions depends on the oxygen content in the initial mixture, which determines the concentration of radicals in the reaction zone.

The regularities of combustion physical phenomena of previously mixed and heated to high temperatures hydrocarbon-oxygen mixtures, self-inflammation, flashbacks and flame propagation in a turbulent stream have been studied by him. The established regularities of chemical reactions and physical phenomena of incomplete combustion of hydrocarbons with oxygen allowed to develop theoretical foundations and mathematical model of high-temperature homogeneous processes for the production of acetylene and ethylene from hydrocarbon raw materials.

Under the supervision of Prof. Shevchuk, a new original process for the production of acetylene via natural gas oxidation pyrolysis has been developed. Designed by his scientific group industrial pyrolysis reactors were twice as powerful as foreign ones; they were introduced into five production plants. These inventions were patented in Romania, England, Germany.

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On the basis of studies of decomposition and oxidation reaction of chemical compounds of various classes, new methods of obtaining multi-tonnage products of organic synthesis of hydrocyanic acid, fluoromonomers, propylene oxide and acetaldehyde, peracetic acid, low carboxylic acids, alkylphenols, and aerosil have been developed and protected by author's certificates. Most of the developed processes have been tested in industry.

At the Department of Chemical Technology of Oil and Gas Processing under the supervision of Prof. V. Shevchuk another direction of scientific research was developed – the technology of catalytic processes of hydrocarbon gases processing (natural gas, associated petroleum gas, refinery gases, coal and shale carbonization gases) in order to obtain unsaturated and aromatic hydrocarbons and high octane components of gasoline fractions.

The results of scientific research carried out by V. Shevchuk have been approved at international, all-union and republican conferences and congresses.

In addition to scientific and pedagogical activity, Prof. Shevchuk devoted a lot of time and efforts to social work. For many years he has been the Chairman of "Znannia" society at Lviv Polytechnic National University deputy Chairman of the specialized council at the same university, a member of the Editorial Board of the "Chemical Industry" journal.

V. Sevchuk's scientific, pedagogical and public activities were awarded the Order, Medals and Honorary Award "Inventor of the USSR", "Excellence in Chemical Industry".

On the occasion of the anniversary, all colleagues wish prof. V. Shevchuk sound health, boundless energy and prosperity for his family.