



Evgenii Pavlovich Krasnov

Professor Evgenii Pavlovich Krasnov, a prominent Soviet scientist and an important specialist in the area of the physical chemistry and technology of man-made fibres, died on April 6, 1991, in the 54th year of his life after a severe and extended illness.

E. P. Krasnov was born September 11, 1937, in Vladimir to a working family. In 1954, after finishing middle school, he entered the physicochemical school of the Leningrad Polytechnic Institute and finished it in 1960, having specialized in "the technology of separating and using isotopes."

E. P. Krasnov began his working activity in 1960 in the Vladimir Scientific Research Institute of Synthetic Resins. His first scientific works were devoted to a study of processes of thermal decomposition of polyamides of various chemical structure – aliphatic and aromatic polyoxamides and isomeric aromatic polyamides prepared from meta- and para-phenylenediamines and iso- and terephthalic acids. The interesting relationships which were found were formed into a Candidate's Dissertation on the subject, "Thermal Decomposition of Polyoxamides and Isomeric Aromatic Polyamides," which was successfully defended in 1965.

In 1966, E. P. Krasnov was invited to work in the All-Union Scientific-Research Institute of Synthetic Fibres (the VNIISV, in Kalinin). And here, within the walls of the still young scientific institute, the truly superlative abilities and talent of E. P. Krasnov were demonstrated, both as a scientist and as an organizer of science.

Heading the laboratory and then the Division of Physicochemical Methods of Investigation, from the very start, Prof. Krasnov defined his fundamental position on the decisive role of fundamental, theoretical studies in developments of technological processes for preparing synthetic fibres and he maintained this point of view to the end of his life. And, in spite of great difficulties in this formative period, Krasnov found ways to develop a closely-knit highly-qualified set of physicochemical scientists, to set up a number of new investigative methods, and to equip his division with contemporary scientific equipment. All this helped to carry out physicochemical studies of solutions and melts of polymers and of fibres based on them at a high professional level. Of the large list of researches performed with his participation, we shall indicate only a few.

Thus, using a set of physicochemical and structural methods, they studied every stage in the process of preparing a thermally-resistant fibre from poly-m-phenylene isophthalamide. The results obtained were the basis for the development of a technological process for the manufacture of Fenilon fibre with subsequent introduction of this into the Kustanaisk "Khimvolokno" PO.

Studies performed under the personal direction of E. P. Krasnov involving the connection between the chemical structure of the macromolecular chain and ultimate thermal stability in the case of a large number of aromatic polymers of heterochain, heterocyclic, or ladder-like structure, have much scientific and practical importance. For the first time, the effect of intramolecular and intermolecular parameters of aromatic polymers on their physical behavior, structural organization, and properties was established.

A significant attainment in these studies was the development of a general structural-kinetic model of polymers of aromatic structure, the basic principle in which is a parallel-laminar organization of the phenylene and planar groups and the phenomenon of strong intermolecular retardation of twisting vibrations of these groups over a wide temperature range. Krasnov was one of the first to analyze and classify the types of structural organization in fibre-forming aromatic polymers. He subsequently generalized these fundamental studies in a Doctoral Dissertation entitled, "Studies in the Field of the Physical Chemistry of Thermally-Resistant Polymers and Fibres," which he brilliantly defended in 1976.

In 1978, E. P. Krasnov became Deputy Director of the VNIISVa for Scientific Work, and here his talent for scientific work and ability not only to clearly discern new promising scientific trends but also to connect up their solution with solution of applied problems was clearly revealed. Under his immediate direction an All-Union complex program system was made up and theoretical bases for preparing high-strength and high-modulus fibres based on flexible-chain polymers were developed. Practical realization of this program gave the national economy in our country an economic benefit of tens of millions of rubles.

A special place should be assigned to studies associated with the preparation of fibres based on polyethylene or polyacrylonitrile from a gel state of solutions, which were begun in the Institute under the initiative of E. P. Krasnov and were carried out under his direction.

A noteworthy feature of Prof. Krasnov was the fact that he was never shut up in the walls of the Institute, but had a wide range of scientific interests, had a many-sided creativeness, and was interested in scientific contacts with institutes of the Academy of Sciences, the Higher Institutes of Learning, and related organizations. This was his creative mannerism and caused a feeling of sympathy and respect for scientists in the field of polymers. His researches have largely an academic character, and in boldness in stating problems, depth of analysis, thoroughness and reliability in interpreting results, and in practical comprehension they may be placed without reservation among the number of outstanding works by Soviet workers.

The scientific-organizational activity of E. P. Krasnov was diverse. Evgenii Pavlovich gave much effort and energy to the preparation of scientific staffs, and pedagogical and scientific society activity as a member of various specialized scientific groups and sections. Even if one considers only his public appearances, one can never forget his irreproachable arguments, his clarity, his clearness in meaning, his penetration to the very depths of the subject, and finally, his surprising erudition. He was one of the active organizers of all five international symposia on man-made fibres which took place in Kalinin.

It was especially easy to work with Professor E. P. Krasnov in difficult situations, where, thanks to his extraordinary intellect, solutions were found to apparently insoluble positions. He was a true patriot of the Institute, he gave his work without reservation for the good of the country.

Ten candidate's dissertations were defended under the direction of E. P. Krasnov. His students are worthily continuing the efforts of their teacher, being directors of scientific associations and heading up many scientific efforts. Professor Krasnov was the author of more than 150 researches and ten inventor's certificates.

E. P. Krasnov was characterized by high principles, directness, and honesty. He was a good, sympathetic, fervent and life-loving man. He was a real friend and comrade for those who had the good luck of constant association with him.

The bright memory of Evgenii Pavlovich Krasnov, an outstanding scientist and fine man, will be retained forever in our hearts.