

Vyacheslav Vasil'evich Osiko



An outstanding Russian scientist, Academician Vyacheslav Vasil'evich Osiko was 70 on 28 March 2002.

Vyacheslav Vasil'evich began his scientific studies at the Laboratory of Luminescence of P.N.Lebedev Physics Institute, Russian Academy of Sciences after graduating from D.I.Mendeleev Moscow Chemical Technological Institute in 1955. V.V.Osiko defended his candidate thesis in 1960, and in 1961 he became a head of the Department of Single Crystals pioneered by Academicians A.M.Prokhorov and N.G.Basov. Owing to the enthusiasm of the young scientist, who possessed the scientific and organising talents, the department quickly became one of the leading departments of P.N.Lebedev Physics Institute, which later gradually developed to a large Research Centre of Laser Materials and Technologies of General Physics Institute, Russian Academy of Sciences.

V.V.Osiko made an invaluable contribution to the foundation and development of a new scientific field in our country—the technology of laser materials, which forms the basis of the development of laser instrument making and applications of lasers in the national economy. Vyacheslav Vasil'evich and his pupils created several dozens of new laser crystals and glasses, which found wide applications both in our country and abroad. Under supervision of V.V.Osiko, new methods were developed for studying the structure of solids and processes of the excitation energy conversion in them, and

a variety of materials for solid-state lasers and lasers themselves based on these materials were created. The research team supervised by Vyacheslav Vasil'evich performed fundamental studies of energy relaxation processes in crystals and glasses doped with rare-earth and transition-metal ions. These studies resulted in the fabrication of highly concentrated laser media and were acknowledged all over the world.

One of the greatest achievements of Vyacheslav Vasil'evich, which won general acceptance over the world, was the development of a new method for melting and crystallisation of high-melting dielectrics using a direct induction melting in a cold container. This method led to the synthesis of a number of new crystal materials with unique properties. The most known of these materials, fianites, found very wide applications. V.V.Osiko was awarded the Lenin Prize for these studies in 1980.

V.V.Osiko and his collaborators developed in the last years a number of new active and passive laser and optical materials, including materials for tunable lasers and lasers emitting in the eye-safe wavelength range, as well as materials for the temporal and spectral conversion of laser radiation. Vyacheslav Vasil'evich and his collaborators made recently a great contribution to the development of new laser devices for surgery applications in otorhinolaryngology, urology, cosmetology, and ophthalmology.

V.V.Osiko pays much attention to the science organisation and education of young scientists. He is a scientific supervisor of the Scientific and Technical Centre 'Spektr' of RAS and Academy of Engineering Sciences of the Russian Federation, a founder and a scientific supervisor of the Teaching and Research Centre of Promising Materials and Technologies (D.I.Mendeleev University of Chemical Technology of the Ministry of Education of the Russian Federation and the Research Centre of Laser Materials and Technologies of General Physics Institute, Russian Academy of Sciences), a member of the Presidium of Academy of Engineering Sciences of the Russian Federation, a member of the D.S.Rozhdestvenskii Optical Society, and a member of many native and foreign scientific societies, scientific and qualification councils, and editorial boards of scientific journals.

Vyacheslav Vasil'evich Osiko is an outstanding scientist, who created a world-renowned school of laser materials technology. Among his pupils are known Russian and foreign scientists, members of RAS and UIS, many doctors and candidates of sciences. The author of more than 400 scientific papers, several dozens of patents and inventions, and several monographs, V.V.Osiko founded optical materials technology, which served as the basis for new fields of science and technology—laser physics and quantum electronics.

V.V.Osiko was awarded for his merits an Order of the Red Banner of Labour (1976), the Lenin Prize (1980), a Prize of the Council of Ministers of USSR (1991), and the Lodiz Prize of the International Organisation on the Crystal Growth (1992).

The pupils and colleagues cordially congratulate Vyacheslav Vasil'evich with his anniversary and wish him good health, happiness, and new scientific achievements.