TO THE 70-th ANNIVERSARY OF ACADEMICIAN LEONID BULAVIN'S BIRTHDAY

Issues Nos. 8 and 9 of the Ukrainian Journal of Physics are dedicated to the 70-th anniversary of Leonid Bulavin, Academician of the National Academy of Sciences of Ukraine, the outstanding Ukrainian scientist in the physics of liquids, phase transformations, critical phenomena, neutron spectroscopy of condensed systems, and medical physics.

Leonid Anatoliyovych started to demonstrate his creative capabilities, being a student at the Faculty of Physics of Taras Shevchenko National University of Kyiv, when he carried out his first scientific works dealing with the problems of a medium in the liquid state. His talent revealed itself especially brightly, when he worked at the Joint Institute for Nuclear Research (Dubna, Russia), where he studied the properties of liquids with the help of the neutron scattering method under the supervision of the Nobel Prize winner I.M. Frank. Those and further studies performed by L.A. Bulavin laid a basis for a new research direction, the neutron spectroscopy of liquids.

The creative contribution made by L.A. Bulavin to science is very sound. He substantially developed the experimental researches of critical phenomena in liquid systems, applied the low-energy neutron scattering to studying, for the first time, the equilibrium and transport properties of liquids and polymers, and found the effect of critical neutron opalescence. L.A. Bulavin studied the frequency spectra of liquids, the properties of liquids in small volumes, the mechanisms of sol–gel transformations in silicon gels, and the processes of micelle formation in solutions with surfactants. He developed a technique for finding the critical parameters of phase transformations and proposed a procedure to resolve collective and one-particle contributions to the self-diffusion coefficient, which was called the Bulavin–Ivanov method. At the same time, the experimental researches in medical physics, which were started by L.A.Bulavin's initiative at Taras Shevchenko National University of Kyiv, allowed a new way to determine the state of human organism to be proposed.

L.A. Bulavin created a scientific school on neutron researches of soft matter. Its representatives are working not only at Taras Shevchenko National University of Kyiv, but also at many academic institutes.

We sincerely wish Leonid Anatoliyovych the good health and long years of life and fruitful work for the benefit of the Ukrainian science and our State. His numerous disciples, friends, and colleagues – the contributors to this issue – join these wishes.

On behalf of the Editorial board
of the Ukrainian Journal of Physics,
Anatolii ZAGORODNY

Leonid Anatoliyovych BULAVIN