



Photo by Virginija Valuckienė

This year, on 30 December, is the 60th anniversary of the outstanding physicist, Vilnius University professor, academician, president of the Lithuanian Academy of Sciences Jūras Banys. J. Banys graduated with honours from the Faculty of Physics of Vilnius University in 1985, defended his doctoral thesis in 1990. In 1989–1990, he worked at a professor Mike Glazer's laboratory at the University of Oxford (UK), studying the structural properties of ferroelectric crystals using X-ray diffraction methods. In 1993–1995, after receiving Alexander von Humboldt scholarship, he worked at the University of Leipzig, where he studied the local dynamics of phase transitions using electron paramagnetic spectroscopy. After returning to his Alma Mater, J. Banys took charge of the Laboratory of Microwave Spectroscopy, turning it into a modern centre for the study of the dielectric properties of ferroelectric materials. Over the years, he assembled here a group of highly qualified scientists who perform scientific experiments using unique materials developed in well-known foreign and Lithuanian laboratories. In 2000, J. Banys successfully defended his habilitation thesis, and in 2003 the title of Vilnius University professor was awarded to him.

Main scientific interests of prof. J. Banys are related to studies of lattice dynamics and structural phase transitions in ferroelectrics and related disordered materials (dipolar glasses, relaxor ferroelectrics, etc.). One of his most important achievements is the methodology he developed together with his colleagues to calculate and interpret the distribution of relaxation times in dipole glasses and relaxors. With his co-authors he has done a lot in analyzing the dielectric properties and percolation phenomena of polymer composites with various carbon inclusions. In recent years, marked by the increased interest in hybrid perovskites as promising materials for photovoltaic cells, prof. Banys' group has contributed to this field as well. They demonstrated that the analysis of the dielectric properties of these materials can explain the high stability of the photogenerated charge carriers and the photoactive phase. Studies of the dielectric properties of more exotic groups of materials, such as molecular sieves and metal-organic frameworks, should also be mentioned.

It is not surprising that the results of these significant studies often become top-level scientific publications, successfully completed projects, and invited presentations at international conferences. Professor J. Banys has published over 500 scientific articles, a considerable part of them in prestigious scientific journals. He is a member of World and European Ferroelectrics, Groupement AMPERE, European Polar Dielectrics Application, European Electroceramics committees and of IEEE FerroCom. Professor trained a large number of students, a score of doctoral students, who successfully defended their doctoral dissertations and continued his scientific work. Jūras Banys' scientific achievements were recognized with the Lithuania Science Prize in 2002 (together with co-authors), the 2019 year Baltic Assembly Science Prize, he is a laureate of the Lithuanian Academy of Sciences Povilas Brazdžiūnas and Vilnius University Rector's prizes.

The present issue, where the students and colleagues, gratefully remembering the Professor's mentorship, leadership and cooperation, publish the results of their latest scientific research, is intended to celebrate the honourable anniversary of professor J. Banys.